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# Results of the August 1977 Soviet and American Meteorological Rocketsonde Intercomparison Held at Wallops Island, Virginia

Francis J. Schmidlin, Joseph R. Duke,  
Andre I. Ivanovsky, and Y. M. Chernyshenko

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and American Meteorological  
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National Aeronautics  
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## PREFACE

Meteorological information on the structure and general circulation of the upper stratosphere and mesosphere was developed from data derived through certain indirect measurements and, in more recent years, from direct measurements such as obtained by meteorological rocketsondes. Obviously, atmospheric research requires reliable and sufficient measurements to specify parameter means and their variability, and to achieve an understanding of the various atmospheric phenomena and anomalies that contribute to the variability. Large-scale annual, semi-annual, and longer period (e.g., quasi-biennial) changes in the atmosphere can account for considerable differences between summer and winter seasons, for example, stratospheric pressure changes of over 100% has been observed near the poles. Furthermore, synoptic systems cause large temperature variations throughout the high latitude stratosphere which clearly influence the dynamics and climatology of the winter hemisphere, and aid in producing the observed variability. This variability is a principal characteristic of the upper stratosphere and lower mesosphere which makes acquisition of reliable data critically important. The value of the data lies in the representativeness of the profiles. Sensing systems for the measurement of temperature and wind have been developed by various countries, but to intelligently apply these different data to high altitude atmospheric studies it is extremely important that the measurements be compatible. To achieve compatibility a number of meteorological rocketsonde intercomparisons have been held and have been widely reported on. The most recent intercomparison was between the United States and the Union of Soviet Socialist Republics. This intercomparison was planned as part of the 1971 agreement between the National Aeronautics and Space Administration and the Soviet Academy of Sciences which called for an exchange of meteorological rocketsonde data from western and eastern hemisphere launch sites. This report provides final data and results from that intercomparison.

We are especially indebted to Dr. Morris Tepper of NASA and Dr. L. A. Alexandrov of the Hydrometeorological Service for their continuing interest in making this intercomparison a success. We greatly appreciate the efforts of Dr. Robert Krieger, Director of NASA Wallops Flight Center, Virginia, for hosting the intercomparison at Wallops Flight Center and to the personnel of NASA Wallops Flight Center and the USSR Research Vessel Akademik Korolev whose expertise made the mission such a great success.

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RESULTS OF THE AUGUST 1977 SOVIET AND AMERICAN  
METEOROLOGICAL ROCKETSONDE INTERCOMPARISON  
HELD AT WOLLOPS ISLAND, VA

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SUMMARY

In 1971, the National Aeronautics and Space Administration in the United States and the Academy of Sciences in the Union of Soviet Socialist Republics, agreed to a coordinated program of rocketsonde investigation. The two agencies agreed to meridional measurements in the stratosphere, theoretically from the North to South Poles, along about 60°E and 70°W Longitudes. The Americans agreed to coordinate launchings along 70°W with the Cooperative Meteorological Rocket Network (CMRN) in the US and the Experimental Inter-American Meteorological Rocketsonde Network (EXAMETNET) in the Southern Hemisphere and the NASA launch site at Wallops Flight Center, Virginia. The Hydrometeorological Service of the USSR, on behalf of the USSR Academy of Sciences, agreed to provide data from sites along 60°E. It was recognized early in these investigations that the rocketsonde instruments used by the US and USSR needed to be compared if useful results were to be obtained. An intercomparison of rocketsondes sponsored by the Committee on Instrumentation and Methods of Observation (CIMO) of the World Meteorological Organization (WMO) was held in 1972 and 1973 and satisfied this need. France, Great Britain, Japan, the Union of Soviet Socialist Republics, and the United States participated in this rocketsonde comparison. It was learned that large differences existed between the measurements obtained with the US and USSR instruments. After examination of the instruments and adjustments to techniques were



completed, it was agreed that an intercomparison of the US Super Loki Datasonde and the USSR M100B rocketsonde should be conducted. The time was set for August 1977 and the launchings took place at Wallops Flight Center.

It was agreed that 22 pairs of rocket instruments, each pair to be comprised of a US Datasonde and a USSR M100B, would be launched. Half of them were scheduled for daytime launching and half for nighttime. The actual launchings commenced on August 10, 1977, with the Soviets launching from their ship, the Research Vessel Akademik Korolev, and the Americans from the launch complex at NASA's Wallops Flight Center, Virginia. Except for minor variations in the launch schedule, all rocketsondes were launched as planned.

Results obtained indicate US/USSR rocketsonde measurement agreement improved since the 1973 intercomparisons. It was learned that the mean of the differences of the temperatures compare to within 6°C at about 60 km and to within 2°C near 50 km. However, the root-mean-square differences are much larger. Wind measurements were found to agree, in the mean, to within 3 ms<sup>-1</sup> up to 57 km.

Although this final report of the US/USSR Rocketsonde Intercomparison provides results which satisfy the need to understand how well each instrument agrees with the other, there is still a large number of studies which can be, and should be, carried out with the data sets provided in the Appendixes. Recommendations are given on how the instruments can be better understood.

## INTRODUCTION

During recent years the importance of meteorological rocketsondes for observing the stratosphere and mesosphere became evident. The data they produced since the late Fifty's provide valuable statistical information on the behavior of the upper stratosphere and mesosphere leading to a better understanding of: semi-annual and biennial wind variations in the equatorial regions, seasonal reversals, the variation of the stratopause. These data have also made possible the updating of Standard and Reference Atmospheres (ref. 1, 2), and led to the study of many, many more processes. The data have been especially valuable for deriving reliable quantitative estimates of the general circulation and its driving mechanisms. For example, there has been a continuing effort to document the development of stratospheric sudden warmings (ref. 3). These warmings were first reported in 1952 by Scherhag (ref. 4), and, understandably, are the major perturbation affecting the winter circulation. Hence an increasing number of reports using results of rocketsonde data became available in the scientific literature. Generally, these results include synoptic, dynamical, theoretical, climatological, and diagnostic studies (refs. 5, 6, 7, and 8). In order to conduct this viable research it is necessary that the investi-

gator be aware of the methods used to produce rocketsonde data, and that he be assured that all available data are uniform and compatible. It is important, therefore, if comparability is to be assured, that rocketsonde instruments of various countries be compared with each other from time to time.

In August 1971, the United States and the Union of Soviet Socialist Republics agreed to exchange data from launch sites along two meridional zones, one in the Eastern Hemisphere (near 60°E) and one in the Western Hemisphere (near 70°W). In this connection it was recognized that the measurements from the Eastern and Western Meridional Networks should be compatible if successful global analysis is to be accomplished. Indeed, the necessity for an intercomparison was soon realized when global stratospheric analysis of the temperature data revealed that the measurements made in the Eastern Hemisphere above about 40 km were consistently colder than those of the Western Hemisphere. This problem of data comparability had long been recognized by the Commission for Instrumentation and Methods of Observations (CIMO) of the World Meteorological Organization (WMO) and it recommended that rocketsondes be intercompared. Such an intercomparison test was planned for 1972 (ref. 9). However, because of the difficulty in choosing a site and a time which was mutually agreeable to all the interested participants, the intercomparison was conducted in two parts. The first, at Wallops Flight Center in March 1972, with France, Japan, and the United States participating, and the second in September 1973, at Kourou, French Guiana, with Great Britain, France, the Union of Soviet Socialist Republics, and the United States participating. The intercomparison held at Kourou satisfied the August 1971 requirement for a comparison of US and USSR rocketsonde systems.

The results of the 1973 phase of the CIMO-sponsored intercomparison (ref. 10) showed that at 65-70 km the difference between the US and USSR temperatures was approximately 15°C, after corrections were applied. Similarly, large wind differences were noted above 45 km. Thus, the intercomparison test was extremely valuable in identifying instrumental differences and determining the magnitude of the adjustment values. These adjustments could now be applied to the measurements so that the reported temperatures could be made comparable. After the intercomparison in Kourou, the US and USSR rocketsonde systems were carefully analyzed. It was determined that the shape of the Soviet M100 thermometer supporting arm was creating a shock wave which was influencing the temperature measurement. In addition, the existing parachute design allowed for a high fall velocity and a large oscillating spiral motion which also seriously influenced the temperature and wind measurements (ref. 11). Accordingly, changes were incorporated, such as, a new thermometer sensor mount and parachute design and an improved sample rate of the trajectory and telemetry measurement parameters. During this same period the US investigated its system. The sensors employed were considered satisfactory, and, therefore, no changes to either the thermistor or decelerator were undertaken. Investigation of the thermistor corrections suggested that additional work was needed. Two independent efforts were pursued, one to

determine the appropriateness of the temperature corrections and the second an error analysis of the temperature measurements. Results indicated that the temperature corrections (ref. 12) being applied up to 60 km were satisfactory, and those between 60 and 70 km, while quite large, were nevertheless reasonable. The error analysis study (ref. 13) showed that an uncertainty in the corrected measurement of about 6°C at 60 km existed. This uncertainty was more than two times as large (~15°C) at 70 km.

The various discrepancies described were discussed at the joint US/USSR Working Group meeting on Space Meteorology held at NASA's Goddard Space Flight Center during March 3-7, 1975. In view of the changes and improvements to the rocketsonde systems and reduction techniques that were planned or were being accomplished it was recognized that another intercomparison between the US and USSR rocketsondes was needed. It was agreed that one should be held during the summer of 1977. Wallops Flight Center, Virginia was considered to be the most practical location to hold the intercomparison since precision, "C"-band, tracking radars were available. The coastal location of Wallops made it convenient for a USSR Hydrometeorological Office research ship to anchor near Wallops, thus the intercomparison could be conducted in the same approximate space and time regime. Soviet shipboard equipment is identical to that used at the standard Soviet land-based station. A second meeting of the joint US/USSR Working Group was held in Moscow during November 1976 to discuss and jointly plan the operational aspects of the intercomparison.

## INTERCOMPARISON TEST PLAN

### Objectives

The primary objective of the intercomparison campaign was to identify measurement differences in the standard rocketsonde systems used by the US and USSR, and to improve the understanding and comparability of the temperature and wind measurements. Better understanding of the instruments' similarities and differences will lead to enhanced utilization of both sets of measurements, especially in the field of synoptic studies. Determination of the magnitude of the temperature difference allows the sides to make meaningful adjustments in order to analyze synoptic upper air charts. Adjustments to wind measurements are considered impracticable, but intercomparison results will indicate the altitude to which wind data can be effectively and jointly utilized.

## Scientific Consideration

In order to obtain statistically meaningful results it was necessary that a large data sample be available. The US and USSR each launched 22 operational rocketsonde systems. The systems were launched in pairs, with a US and a USSR system launched close together in time. The launch plan called for the US Super-Loki Datasonde and the USSR M100B observations to be made not more than 30 minutes apart. The objective of such a small time difference was to insure that a comparison of the measured temperatures and winds would be obtained with minimal interference from natural small-scale atmospheric changes. Similarly, the launchings were conducted so as to minimize the spatial separation between systems in order to reduce effects due to atmospheric gradients. This was of some concern since the US launched their systems from Wallops and the USSR launched their rocketsondes from the Research Vessel Akademik Korolev located about 10 km southeast of the Wallops facility. The trajectory of each system is different and ballistic wind effects on the launch vehicle and conditions existing in the launch and impact areas dictated different launch directions. It was agreed, however, that each system at its apogee should be within 50 km of each other. In order to minimize measurement differences due to radiation each pair was launched completely in sunlight, or completely in darkness. This insured similar radiation conditions on both instruments. This is important since temperature sensors are affected by both short- and long-wave radiation, and measurements made under different conditions may introduce differences in the measurements which are difficult to explain. Mission criteria were established that temperature data should be obtained between 30 and 65 km altitude and wind data between 30 and 60 km.

A third measurement system was included to provide an independent source for comparison. Six US Super-Loki Sphere systems were launched with selected pairs of rocketsonde systems. The Super-Loki Sphere is capable of providing density and wind data to about 90 km. Temperatures are then obtained using the perfect gas law. In addition, five sensors originally used on the M100 system were to be launched on the M100B. That is, five M100B systems would provide measurements from both the old USSR temperature sensor and the new temperature sensor. This permitted temperature differences between the old and new sensors to be reconciled since not many comparisons were available after the changes were made to the USSR's rocketsonde.

It was agreed when the intercomparison test plan was designed that the US would attempt to track at least four USSR payloads with one of the Wallops precision "C-band" radars so that a comparison of techniques would be possible. The US reduced its radar track data using the standard Wallops meteorological data reduction program and the USSR reduced their data using their standard program. Raw radar data and reduced wind data were exchanged. The results should reveal whether wind differences are induced by the

different radars, by the data reduction program, or by the decelerator performance.

One final and important aspect of the intercomparisons is to know the measurement precision of each type instrument. This is important in order to separate instrumental effects and atmospheric variability. It was agreed at the November 1976 meeting in Moscow, that repeatability launchings would be made to determine the variance of wind and temperature measurements from the Datasonde and M100B. A minimum of five pairs of instruments were launched with the time difference between each rocketsonde in a pair kept to a minimum. Results of the repeatability tests were exchanged prior to the intercomparison test.

## SYSTEMS DESCRIPTION

### US Flight Systems

Super-Loki Datasonde - The Super-Loki Datasonde System consists of the Super-Loki rocket motor with a heavy interstage adapter and the nonpropulsive Datasonde dart with a high ballistic coefficient. This system is launched from a 3.66 meter long helical rail launcher which provides support and imparts spin to the system during the launch phase. The rocket motor is a high-thrust, solid propellant unit with a short burning time of approximately 2 seconds. At rocket motor burnout, dart separation occurs. The dart consists of an ogive, body assembly (dart body), and tail assembly. The dart body contains the decelerator and instrument payload. The dart tail contains the delay and ejection system. After separation from the rocket motor the dart coasts to apogee (~30 km) where payload ejection from the dart body occurs at 120 seconds after liftoff. Upon ejection, the ram-air inflated decelerator controls the rate of payload descent. The Datasonde instrument transmits on a carrier frequency of 1680 MHz. Table 1 gives the operating characteristics of the Datasonde. Figure 1 is a drawing of the Super-Loki Datasonde System, and Figure 2 is a drawing of the payload expulsion.

The Datasonde Wind Sensor is a ram-air inflated decelerator called a "Starute." Portions of the "Starute" have been metalized to facilitate radar tracking. Figure 3 is a drawing of the "Starute" and instrument sections in descent mode. Atmospheric wind data are obtained from the positional data taken by the tracking radar.

The temperature sensor is a small, aluminized bead thermistor (about 0.25 mm in diameter) whose electrical resistance varies inversely with its temperature. The thermistor is attached to a mylar loop mount by means of short lead wires. The mylar loop is coated with thin aluminum on the side facing the transmitter and serves to reflect long-wave radiation from the instrument's body. Figure 4 shows the details of the loop amount. As the instrument descends, the thermistor resistance controls the modulation rate of the

Datasonde Dart                      Weights

|                                  |              |
|----------------------------------|--------------|
| Dart Hardware (kg)               | 4.04         |
| Parachute (kg)                   | 0.154        |
| Instrument (kg)                  | 0.040        |
| <b>Complete Dart (kg)</b>        | <b>4.53</b>  |
| <b>Booster Rocket Motor (kg)</b> | <b>22.68</b> |
| <b>Interstage (kg)</b>           | <b>3.06</b>  |

Rocket Motor Without  
Interstage Characteristics

|                        |        |
|------------------------|--------|
| Length (cm)            | 200.33 |
| Diameter (cm)          | 10.16  |
| Inert Weight (kg)      | 5.90   |
| Propellant Weight (kg) | 17.01  |

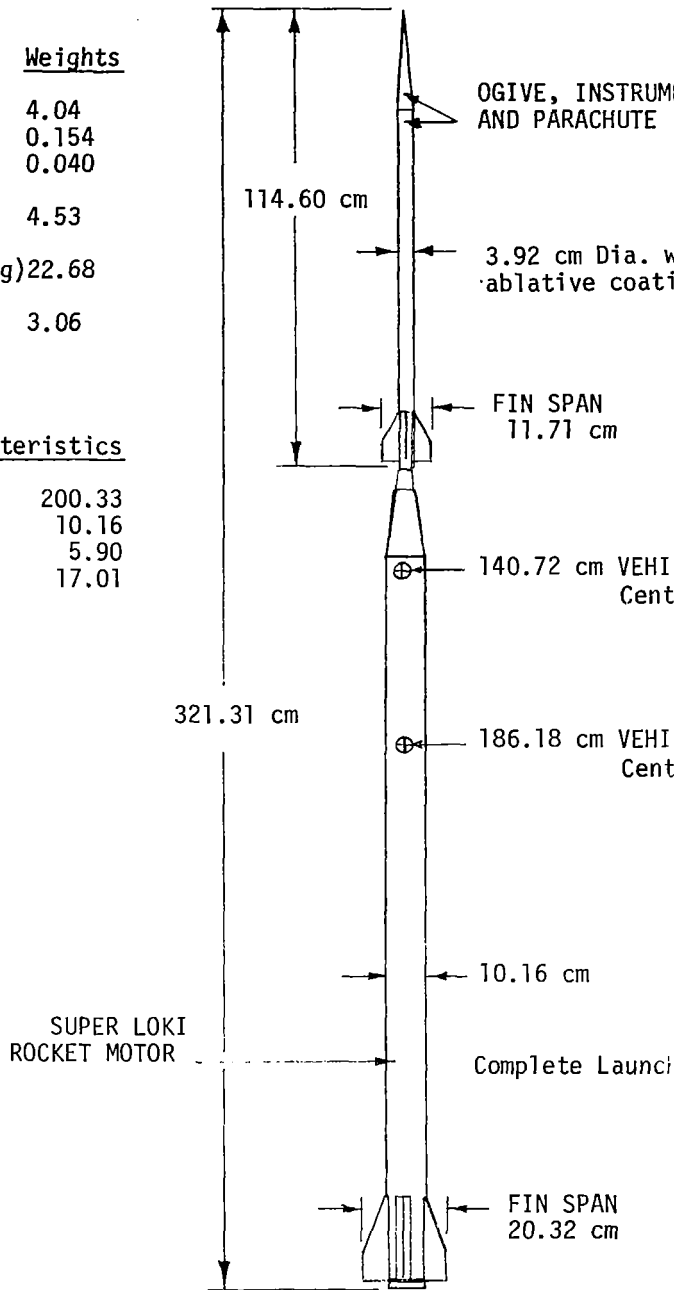


Figure 1. Schematic of the US Super-Loki Datasonde system showing dimensions and weights of the various components.

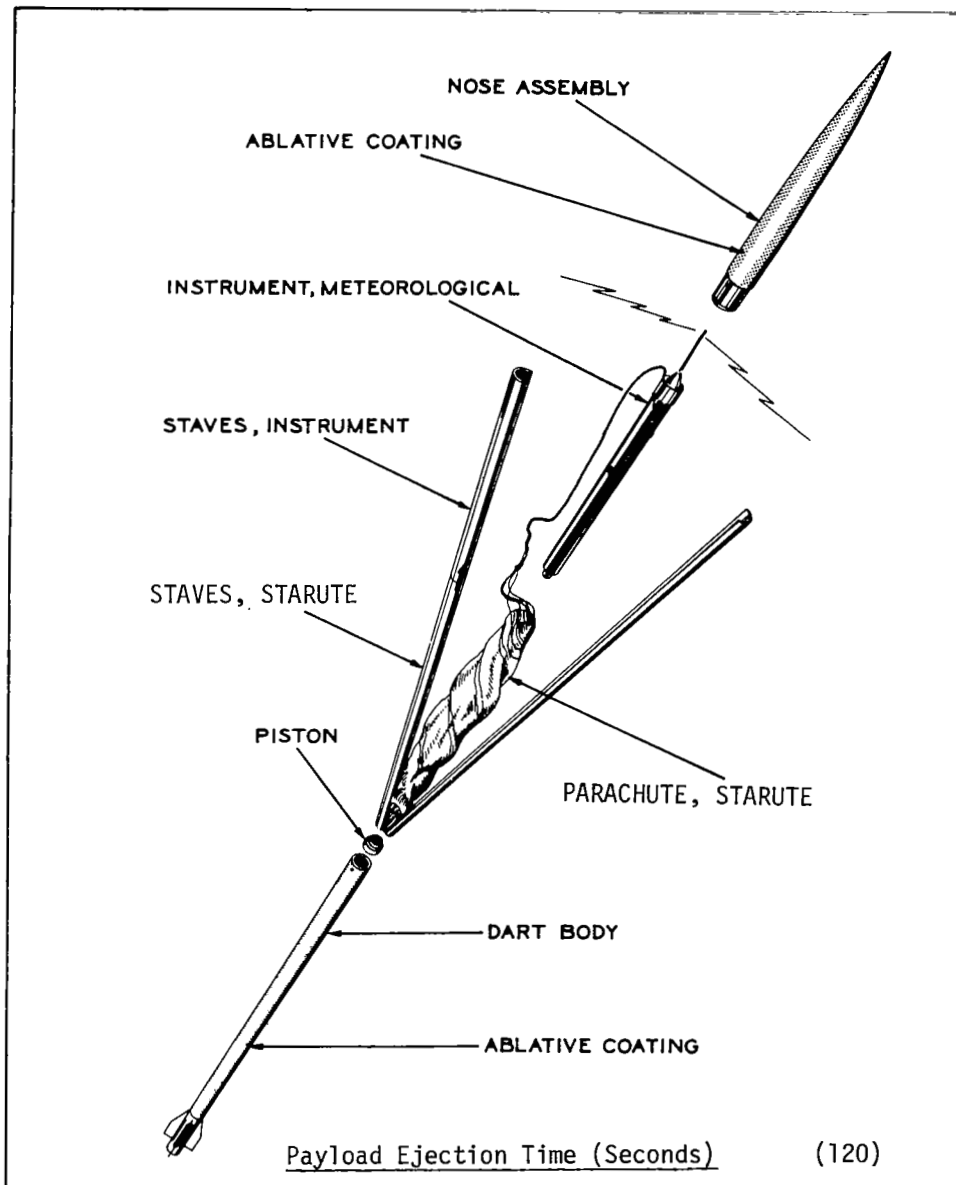


Figure 2. Sketch of Datasonde payload expulsion.

Descent System Characteristics

|  |                  |
|--|------------------|
| Parachute Type   | Ram-air inflated |
| Canopy Material  | 1/4 mil mylar    |
| Flying Width (m)   | 1.3              |
| Flying Area (m <sup>2</sup> )                              | 4.55             |
| Parachute Weight (grams)                                   | 155              |
| Parachute-Sonde Ballistic Coefficient (kg/m <sup>2</sup> ) | .146             |

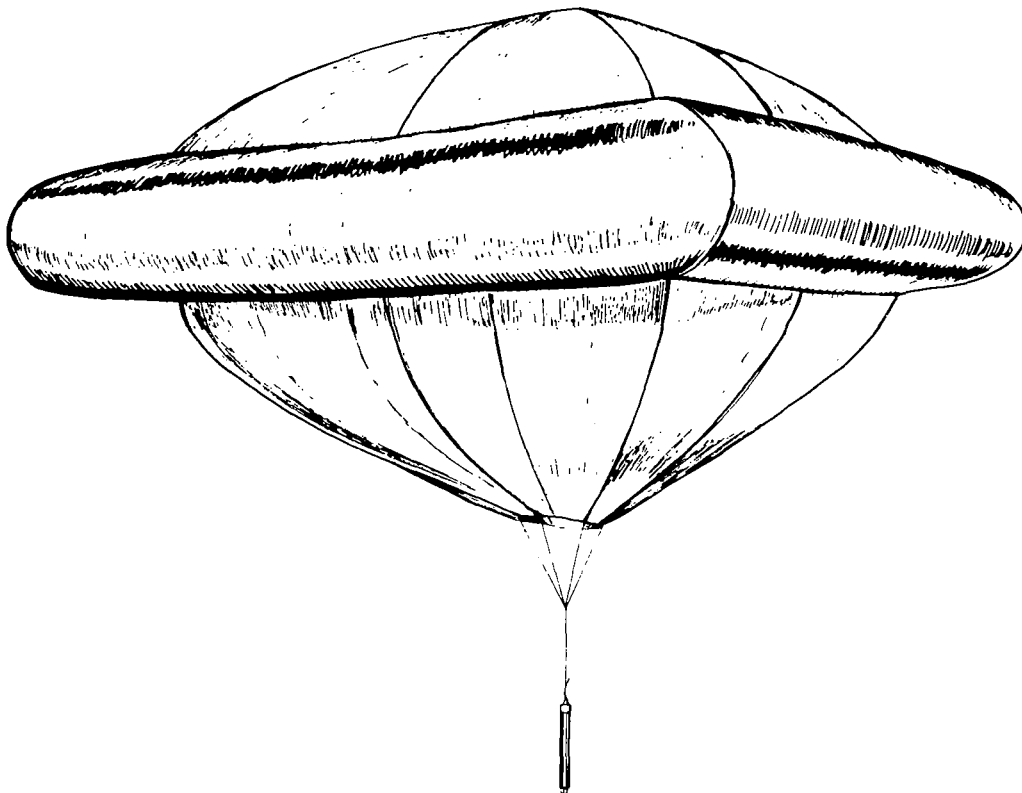


Figure 3. Super-Loki Datasonde Starute configuration.



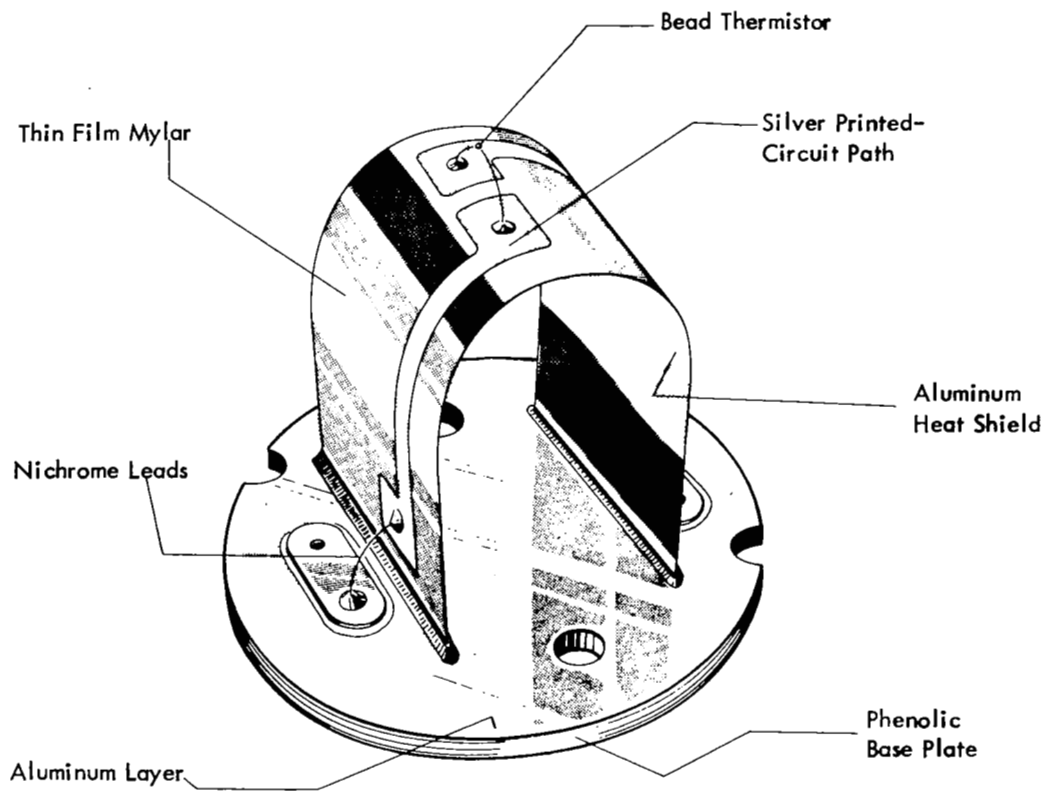


Figure 4. Details of thermistor loop mount.

TABLE 1. DATASONDE INSTRUMENT INFORMATION

|                                       |  |
|---------------------------------------|--|
| Power Output (mw)                     | 400                                      |
| Modulation                            | PFM                                      |
| Pulse Width ( $\mu$ s)                | 65-115                                   |
| Pulse Repetition Rate (PPS)           | 10-200                                   |
| Polarity of Modulation                | Negative                                 |
| Time Reference is Transmitted (sec)   | 6-10                                     |
| Time Temperature is Transmitted (sec) | 30-60                                    |
| Frequency (MHz)                       | 1660-1700                                |
| Reference Switching                   | Relay                                    |
| Batteries                             | Nickel Cadmium                           |
| Operating Time (minutes)              | 40-50                                    |
| Battery Voltage                       | 6.25                                     |
| Length (cm)                           | 28.2                                     |
| Diameter (cm)                         | 2.8                                      |
| Thermistor                            | 0.25 mm (10-mil)<br>Aluminum coated bead |

data circuit. The temperature data received at the ground are interrupted periodically through electronic switching to permit the transmission of a reference resistance.

Super-Loki Sphere System Description - The Super-Loki Sphere vehicle, as shown in Figure 5, consists of a 4.128 cm diameter dart second-stage and the Super-Loki rocket motor. The dart body is coated with an ablative material to reduce the effect of rather severe aerodynamic heating upon the sphere payload. The sphere inflator contains a percussion initiated time delay charge to initiate sphere inflation after deployment from the dart body at an altitude of 115 km. Table 2 contains sphere characteristics.

TABLE 2. SUPER-LOKI SPHERE CHARACTERISTICS

|                                |   |
|--------------------------------|---|
| Diameter                       | 1 meter                                       |
| Balloon Material               | Aluminized 1/2-mil mylar                      |
| Construction                   | 20 gores                                      |
| Sealing                        | 1.27 cm heat pressure<br>sensitive Mylar type |
| Inflation Gas                  | Cis-2-Butene                                  |
| Inflation Gas Weight           | 19.16 gm                                      |
| Balloon Weight                 | 66.50 gm                                      |
| Inflator Weight                | 82.50 gm                                      |
| Total Sphere System Weight     | 167.73 gm                                     |
| Radar Cross-Section ("C"-Band) | 0.785 m <sup>2</sup>                          |
| Design Deflation Altitude      | 32 km   |

The falling sphere payload is a 1-meter diameter inflatable spherical balloon. The balloon is made from 1/2-mil mylar which is aluminized for radar tracking. After ejection from the dart at apogee, a capsule of cis-2-Butene is used to inflate the sphere to a

Super-Loki Sphere

Weights

Dart Hardware  
Sphere System  
Complete Dart

5.954 kg  
.168 kg  
6.122 kg

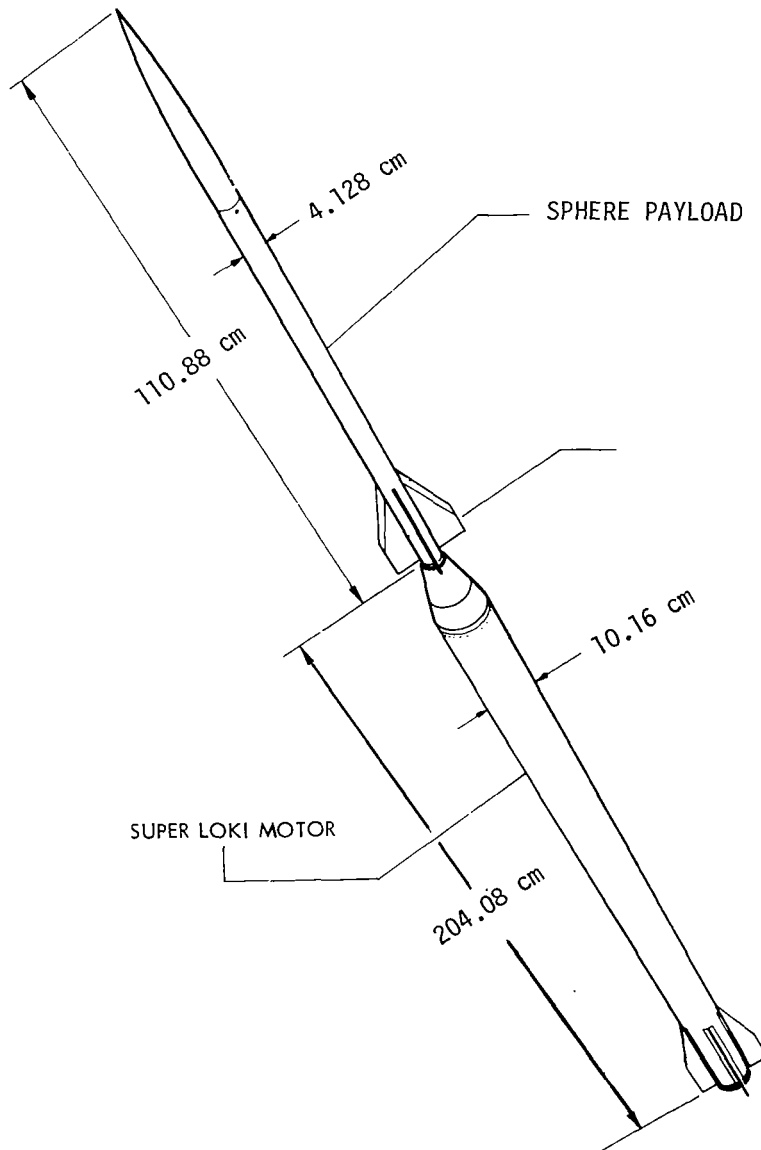


Figure 5. Schematic of the US Super-Loki Sphere system showing dimensions and weights of various components.

superpressure equivalent to 32 km altitude. The inflator has been designed to delay the initiation of inflation until six seconds after payload ejection. This has been done to protect the thin balloon skin from damage during the ejection process. The inflator also has a two-stage inflation feature to achieve a relatively slow and controlled inflation rate.

Atmospheric density and wind data are derived from a precise radar track of the descending inflated sphere. Temperature data are then obtained through the application of the perfect gas law.

#### US Ground Systems

FPS-16 and FPQ-6 Radars - The FPS-16 and FPQ-6 radars are high precision, "C-band" radars operating at a frequency of 5400-5900 MHz. The range precision of the FPQ-6 radar is  $\pm 3$  meters and angular precision is 0.05 mil or approximately 0.0028 degree. The range precision of the FPS-16 is also  $\pm 3$  meters with an angular precision of 0.1 mil or 0.0056 degree. Normal track data recording rates are at 10 per second. Data are recorded on magnetic tape in digital form for computer reduction.

Ground Meteorological Device - GMD - The GMD is a ground meteorological receptor which has been in use in the United States for approximately 40 years. Although old, the equipment has proven to be reliable, functional, and quite serviceable. The receiving system operates at 1680 MHz and is compatible with the flight system's frequency. The antenna tracking system operates automatically using error voltages developed by a scanner located on the antenna. Angular data from the antenna system are not used for rocketsonde tracking. The telemetry data are recorded continuously over a range of 0-200 Hz on a strip chart which moves at approximately 5 cm per minute. Telemetry data are also recorded on magnetic tape in digital form for computer reduction.

#### USSR Flight System

The M100B is a two-stage, solid propellant, fin stabilized rocket. The first stage rocket is 250 mm in diameter, 4100 mm long, and burns for approximately 5 seconds; the second stage, of the same diameter is 1600 mm long and burns for approximately 4.5 seconds. First-stage separation is achieved by mechanically cutting a special pin using second-stage exhaust gases at second-stage ignition.

The rocket is launched from a spiral rail launcher which imparts 3.5 rps initial spin. Protective coverings of the temperature and pressure sensors in the nose cone are released 60 seconds after launch through a pyrotechnical device activated by a mechanical

timer initiated at liftoff. The nose cone is separated from the second stage 76 seconds after launch by means of a small separation motor, activated by another mechanical timer also initiated at liftoff. The rocket and its basic characteristics are shown in Figure 6.

Nose Cone With Payload Description - A spire at the head of the payload contains the measurement sensors. Four resistance thermometers of 40 micron-diameter tungsten-rhenium wires of the type shown in Figure 7 are located on two folded posts which are brought into measurement position 60 seconds after liftoff. The resistance of each thermometer under room temperature conditions is approximately 200 ohms. Two Pirani heat manometers for measuring static pressure are located in the head of the spire. The entrance ports of the manometers are located at a distance of six diameters from the tip of the spire. All sensors are connected to an imbalanced Wheatstone Bridge circuit, using a voltage of 3.11 volts. The telemetric frequency is  $22.1 \text{ MHz} \pm 50 \text{ KHz}$ . The on-board telemetry system operates on a principle of change in generator frequency in proportion to a change in the output voltage of the measurement Wheatstone Bridges. Sensors are then scanned through a 60-channel commutator. All 60 channels are sampled in five seconds. Telemetry transmitters operate at a power of 1.8 watts. A super regenerative radar transponder located in the nose cone with a frequency of 1780 MHz and an output power of 0.4 watts is used for receiving trajectory data. Angular tracking is accomplished through a continuous transponder signal. Short pauses in the transponder response to radar signals give range measurements.

During the intercomparison five rockets were launched using a new system of transponder telemetry. In this case, the instrument bridge voltage output controls the width of the pulse.

The M100B payload descends on a parachute which is shown in Figure 8. Winds are determined on the basis of the radar track data. The parachute is deployed after nose cone separation 76 seconds after liftoff and contains a system of forced inflation of the "circumference tubing" with freon-22. The parachute cross-section area is  $50 \text{ m}^2$ , with a total area of  $120 \text{ m}^2$ .

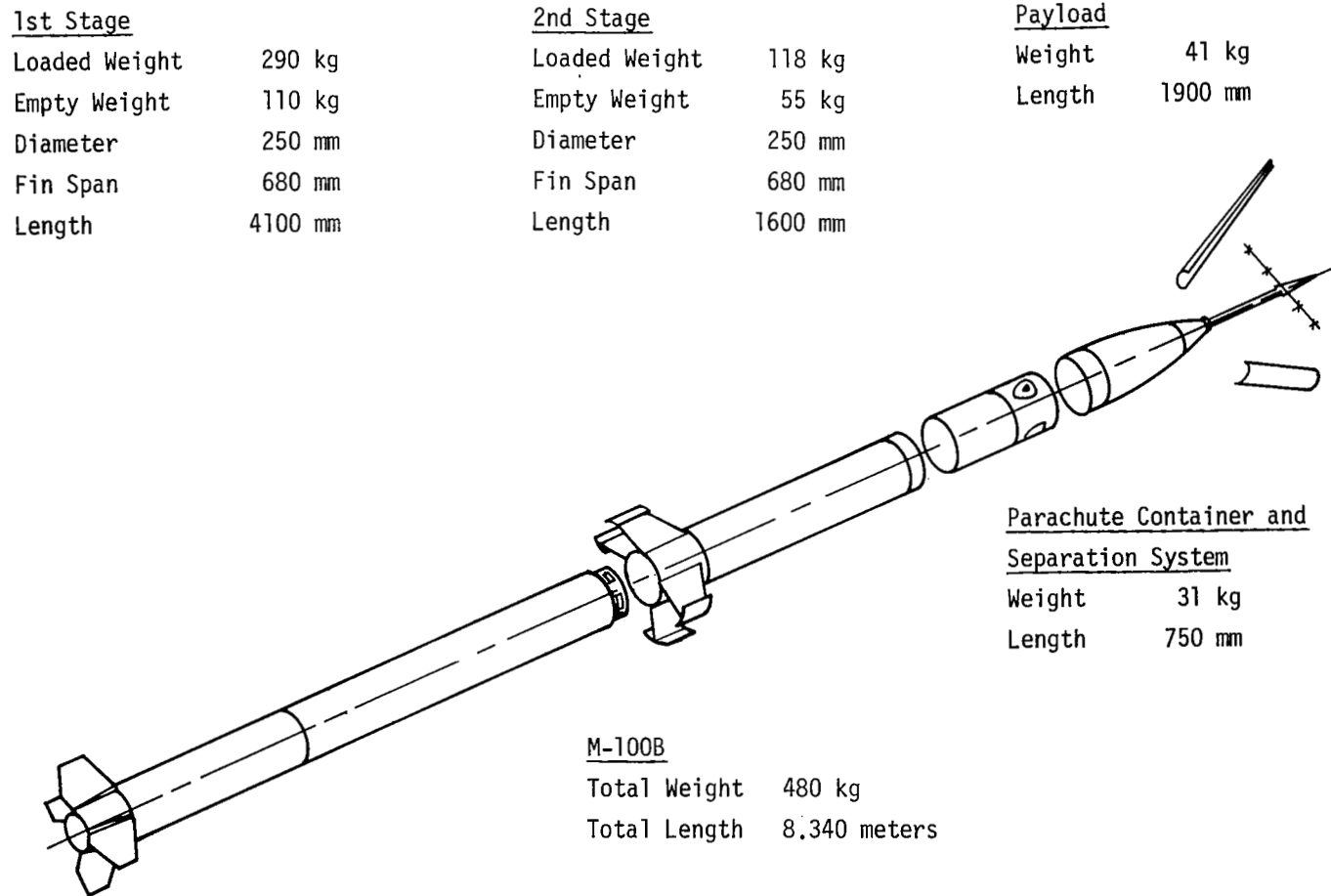


Figure 6. Schematic of the USSR M-100B rocketsonde system with dimensions and weights of various components indicated.

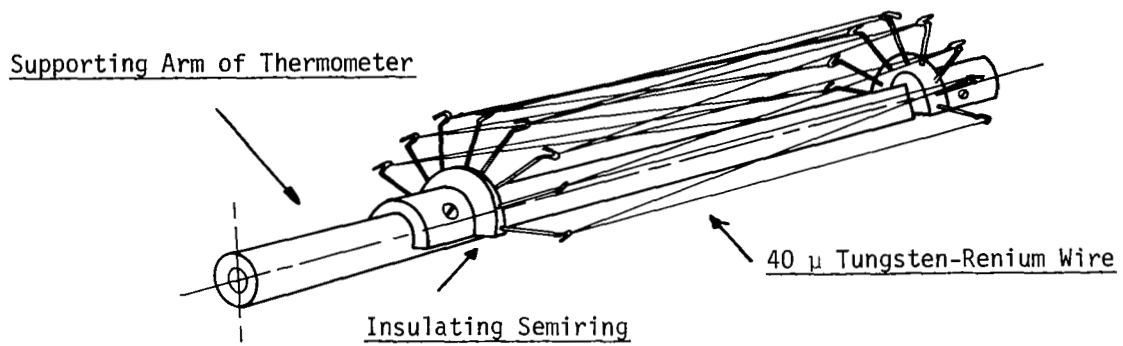


Figure 7. Sketch of USSR M-100B resistance temperature wire sensor.

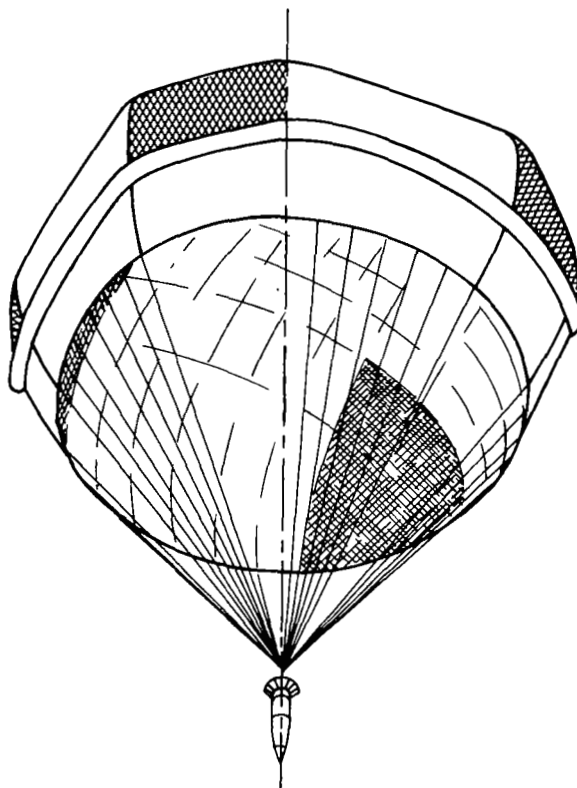


Figure 8. Sketch of USSR M-100B parachute system.

## USSR Shipboard Instrumentation

Radar - The radar used for rocket soundings is a most important element of the measurements. The USSR radar "Meteorit-R" operates at a wavelength of 17 cm (1780 MHz) with a pulse energy of 0.25 megawatts, a halfwidth angle of  $6^\circ$ , and a 1.8 meter antenna diameter. Angles and slant range data are either film recorded at a one per second frequency or put directly into an electronic computer with parallel tape recording at a frequency of four times per second.

Angle error dispersion for the radar is 7.2 seconds and the mean square range measurement error is 40 meters. On ships the "Meteorit-R" radar antenna is mounted on a stabilized post, the position of the post is gyro stabilized to maintain a vertical position. Mean square error of maintaining horizontal position is from 5 to 7.2 seconds.

These radar characteristics are mainly responsible for the temperature and wind measurement errors. Taking into consideration the presence of time error correlation in the radar channels with correlation radius up to 1.5-2.0 seconds, for secondary data processing a two second time step is used.

Telemetry Station - For increased reliability, two telemetry stations are utilized. Each station includes an ordinary superheterodyne receiver and panoramic monitor with transmission frequency changes shown on the screen as horizontally displaced light dots. The screen is photographed on moving film. Telemetry data deciphering is done by hand.

General Remarks on Instrumentation - Instrumentation on the Research Vessel Akademik Korolev is standard for all rocket stations of the USSR.

## OPERATIONS DESCRIPTION

The operations schedule for the intercomparison was determined by an exchange of correspondence many months prior to the dates of actual launchings. Many preliminary steps had to be arranged far in advance of the actual intercomparison and then finalized upon the arrival of the Soviet Research Vessel Akademik Korolev at Wallops Flight Center. For example, communications between the ship and the Wallops Flight Center control center were necessary in order to carry on a successful operation. Although communication frequencies were arranged, it was only learned after the arrival of the Akademik Korolev that problems in the communications equipment prevented use of this mode of contact. Consequently, a different method of communication was utilized. Similarly, air- and sea-lane clearances had to be worked out with the proper organizations as well as arrangements completed for customs and immigration clearances. Transportation of personnel between Wallops Flight Center and the Akademik Korolev was provided by the U.S. Coast Guard.



The Akademik Korolev anchored off Wallops Island, Virginia, at approximately 1300 GMT on August 5, 1977. Final details of the intercomparison plan and schedule were discussed on August 8 and 9, 1977 by the intercomparison managers and scientists. It was agreed that the launch schedule would commence on August 10th. These first launchings were to be used to insure satisfactory performance of the equipment, provide familiarity with each other's operations, and, in general, identify potential problems which could delay the successful completion of the operation.

In practice, the jointly agreed rocketsonde launch schedule was followed quite closely. However, weather events during the evening of August 17 prevented launchings. Severe thunder and lightning in the Wallops area caused two of the three scheduled pairs to be postponed. In order that the established number of desired night launchings would not be compromised these two pairs were rescheduled during the early morning of August 19th at about 0100 local time and the night of August 19th at 2100 local time.

Each side conducted its countdown independently. The liaison officers (the Soviet at Wallops Flight Center and American on board the Research Vessel Akademik Korolev) informed the launch supervisors of running countdowns and delay developments. The American liaison officer relayed messages from shore on the location of ships. Since the USSR personnel had responsibility for safety in the impact zone, and in fact, had sole cognizance of the Soviet launch operation and safety, they made all decisions whether to delay the launch, or change the launch azimuth. These mutual activities were conducted quickly and efficiently.

In accordance with a preliminary agreement five old-type Soviet thermometers were to be launched with new thermometers. The number of Soviet rocket launchings using both old and new thermometer structures was reduced from five to three. All three launchings were successful. Launchings of these Soviet rockets were accompanied by launchings of American Super-Loki Spheres. The American SPANDAR radar tracked all of the Soviet M100B rocket launchings while the precision FPQ-6 "C-band" radar tracked the previously agreed four rocket launches. Dates, times and other statistics of the successful launch pairs of the Super-Loki Datasondes, Super-Loki Spheres, and M100B are given in Table 3. Although failures of some systems occurred they are not included in Table 3. The reason for the failures is one of system reliability and, therefore, not directly related to the data comparison. Nevertheless, an engineering investigation was made to determine the cause of the failures and corrective action taken.

TABLE 3. INTERCOMPARISON LAUNCH DATES, TIMES, AND LAUNCH RESULTS OF THE VARIOUS US AND USSR ROCKETSONDE PAIRS.

| Pair No. | Date            | Time GMT | System | Apogee KM | Altitude Top Temp. KM | Altitude Bottom Temp. KM | Altitude Top Wind KM | Altitude Bottom Wind KM | Remarks |
|----------|-----------------|----------|--------|-----------|-----------------------|--------------------------|----------------------|-------------------------|---------|
| 1        | August 10, 1977 | 1400     | B      | 72.0      | 63                    | 24                       | 63                   | 24                      | Day     |
|          |                 | 1405     | A      | 81.8      | 74                    | 15                       | 65                   | 15                      |         |
| 2*       | August 12, 1977 | 0405     | A      | 81.7      | 50                    | 15                       | 50                   | 15                      | Night   |
|          |                 | 0419     | B      | 72.6      | 67                    | 25                       | 67                   | 25                      |         |
| 3*       | August 12, 1977 | 0606     | A      | 82.3      | 76                    | 15                       | 60                   | 14                      | Night   |
|          |                 | 0659     | B      | 74.6      | 70                    | 24                       | 70                   | 24                      |         |
| 4        | August 12, 1977 | 1100     | B      | 71.9      | 67                    | 24                       | 67                   | 24                      | Day     |
|          |                 | 1105     | A      | 81.0      | 74                    | 15                       | 62                   | 15                      |         |
|          |                 | 1111     | C      | 111.5     | 93                    | 39                       | 93                   | 39                      |         |
| 5        | August 15, 1977 | 1735     | A      | 84.0      | 72                    | 15                       | 60                   | 15                      | Day     |
|          |                 | 1744     | B      | 72.1      | 68                    | 24                       | 68                   | 24                      |         |
| 6        | August 15, 1977 | 1930     | B      | 78.9      | 70                    | 25                       | 73                   | 25                      | Day     |
|          |                 | 1935     | A      | 80.5      | 74                    | 15                       | 64                   | 15                      |         |
|          |                 | 1942     | C      | 112.7     | 94                    | 30                       | 94                   | 30                      |         |
| 7        | August 16, 1977 | 0105     | A      | 79.8      | 65                    | 15                       | 66                   | 15                      | Night   |
|          |                 | 0113     | B      | 77.0      | 70                    | 25                       | 72                   | 25                      |         |
|          |                 | 0123     | C      | 111.3     | 93                    | 44                       | 93                   | 44                      |         |
| 8        | August 16, 1977 | 1835     | B      | 76.1      | 70                    | 24                       | 70                   | 24                      | Day**   |
|          |                 | 1840     | A      | 85.3      | 77                    | 15                       | 70                   | 15                      |         |
| 9        | August 16, 1977 | 2000     | B      | 78.3      | 70                    | 24                       | 75                   | 24                      | Day     |
|          |                 | 2029     | A      | 84.0      | 54                    | 25                       | 64                   | 25                      |         |
|          |                 | 2032     | C      | 115.4     | 94                    | 30                       | 94                   | 30                      |         |
| 10       | August 17, 1977 | 2015     | A      | 85.8      | 80                    | 15                       | 65                   | 15                      | Day     |
|          |                 | 2025     | B      | 77.7      | 70                    | 31                       | 71                   | 31                      |         |
| 11       | August 19, 1977 | 0116     | B      | 79.2      | 70                    | 25                       | 72                   | 25                      | Night   |
|          |                 | 0120     | A      | 84.3      | 78                    | 15                       | 70                   | 15                      |         |
|          |                 | 0125     | C      | 112.7     | 93                    | 35                       | 93                   | 35                      |         |
| 12*      | August 19, 1977 | 0300     | B      | 77.0      | -                     | -                        | 70                   | 51                      | Night   |
|          |                 | 0308     | A      | 84.4      | -                     | -                        | 70                   | 12                      |         |
| 13       | August 19, 1977 | 0507     | A      | 83.1      | 76                    | 16                       | 65                   | 16                      | Night   |
|          |                 | 0524     | C      | 113.8     | 94                    | 34                       | 94                   | 34                      |         |
|          |                 | 0537     | B      | 76.0      | 69                    | 25                       | 69                   | 25                      |         |
| 14       | August 19, 1977 | 2000     | B      | 76.8      | 70                    | 25                       | 71                   | 25                      | Day     |
|          |                 | 2005     | A      | 83.0      | 78                    | 15                       | 60                   | 15                      |         |
| 15       | August 19, 1977 | 2205     | A      | 82.3      | 76                    | 15                       | 70                   | 15                      | Day     |
|          |                 | 2210     | B      | 80.0      | 70                    | 26                       | 74                   | 26                      |         |
| 16       | August 20, 1977 | 0100     | B      | 76.0      | 69                    | 23                       | 69                   | 23                      | Night   |
|          |                 | 0105     | A      | 83.1      | 77                    | 15                       | 68                   | 15                      |         |
| 17       | August 22, 1977 | 2308     | B      | 74.0      | 69                    | 24                       | 69                   | 24                      | Day     |
|          |                 | 2312     | A      | 83.4      | 76                    | 15                       | 70                   | 15                      |         |
| 18       | August 23, 1977 | 0100     | B      | 74.3      | 68                    | 24                       | 68                   | 24                      | Night   |
|          |                 | 0106     | A      | 83.9      | 77                    | 15                       | 70                   | 15                      |         |
| 19       | August 23, 1977 | 0339     | B      | 76.0      | 70                    | 25                       | 71                   | 25                      | Night   |
|          |                 | 0342     | A      | 83.7      | 78                    | 15                       | 70                   | 15                      |         |
| 20       | August 24, 1977 | 0107     | A      | 83.8      | 78                    | 15                       | 70                   | 15                      | Night   |
|          |                 | 0128     | B      | 72.7      | 67                    | 24                       | 67                   | 24                      |         |
| 21       | August 24, 1977 | 0300     | B      | 75.3      | 70                    | 29                       | 71                   | 29                      | Night   |
|          |                 | 0305     | A      | 84.0      | 78                    | 15                       | 70                   | 15                      |         |

A. USSR M100B  
 B. USA Super Loki Datasonde  
 C. US Super Loki Sphere

\* Did not meet objectives of time difference or altitude range. Results were used for evaluation of measurement compatibility.  
 \*\* Soviet radar lost track - USA Spandar provided position data.

## RESULTS OF REPEATABILITY INVESTIGATIONS

The repeatability investigations of the temperature and wind data which were agreed to be part of the intercomparison were carried out by the US and USSR. The tests included paired launchings with the most minimal time separation possible between launchings within a pair. Each side agreed to collect data on at least five pairs of launchings. Calculation of the root-mean-square differences provided an estimate of each instrument's precision. Six Super-Loki Datasonde pairs were obtained at Wallops Island during late May 1977; however, only three pairs successfully reached 70 km and four pairs reached 60 km, in all five pairs reached 54 km. Table 4 provides launch results. The USSR launched their repeatability test systems while enroute to Wallops Flight Center. Six pairs were obtained during July while the Research Vessel Akademik Korolev was in Pacific equatorial waters.

The US actually scheduled six pairs of Datasonde launchings within 24 hours. Since one pair was launched every four hours, an independent diurnal tidal analysis was possible but is not reported here since it was not part of the intercomparison plan. The USSR launched ten successful M100B systems which provided six pairs for analysis. Launch results are given in Table 5. Three launchings on July 25 were conducted during the day; the remainder were launched in darkness. Because of the long receipt time of the telemetry from the M100B payload the minimal interval between launchings was much longer than the interval possible for the US Datasondes. For instance, the shortest interval between systems within each pair was 80 minutes (on July 18). Generally, the majority of the time intervals between launchings was of the order of 90 minutes. The time interval between Datasondes launched within pairs averaged about eight minutes, with the longest separation being 17 minutes. This significant difference in the time intervals is basically due to only one Soviet launch rail being available on the mobile platform, while the US, launching from a fixed location, had multiple launchers and radars available. In general, the Soviet repeatability results indicate a greater variance than found with the American system; however, the launch separation of about one and one-half hours was relatively large and the results are expected to contain a contribution from natural atmospheric variability (ref. 14).

The computational methods used by the Americans and Soviets were different; however, examination of both data sets using both techniques revealed that for the most part approximately the same order of magnitude is obtained regardless of the computational procedure. The US originally calculated the root-mean-square difference at each altitude given by

$$\text{RMS}_{\text{diff}} = \left[ \frac{\sum (T_1 - T_2)^2}{n} \right]^{1/2}$$

TABLE 4. DATES AND TIMES OF US REPEATABILITY LAUNCHINGS FROM  
WALLOPS FLIGHT CENTER.

| Pair | Date         | Time (GMT) | Temperature<br>Top (KM) | Wind Top<br>(KM) |
|------|--------------|------------|-------------------------|------------------|
| 1    | May 27, 1977 | 1434       | 70                      | 70               |
|      |              | 1440       | 70                      | 70               |
| 2    | May 27, 1977 | 1839       | 70                      | 70               |
|      |              | 1845       | 70                      | 70               |
| 3    | May 27, 1977 | 2257       | 69                      | 68               |
|      |              | 2303       | 60                      | 60               |
| 4    | May 28, 1977 | 0230       | 53                      | 53               |
|      |              | 0240       | 70                      | 70               |
| 5    | May 28, 1977 | 0630       | 70                      | 70               |
|      |              | 0647       | 45                      | 45               |
| 6    | May 28, 1977 | 1042       | 70                      | 70               |
|      |              | 1047       | 70                      | 70               |

TABLE 5. DATES, TIMES, AND GEOGRAPHIC POSITIONS OF USSR RESEARCH  
VESSEL AKADEMIK KOROLEV DURING LAUNCHINGS FOR REPEATABILITY  
CHECK.

| No. | Date          | Time<br>(GMT) | Latitude<br>Degrees | Longitude<br>Degrees | Temperature<br>Top (KM) | Wind Top<br>(KM) |
|-----|---------------|---------------|---------------------|----------------------|-------------------------|------------------|
| 1   | July 18, 1977 | 0631          | 18°25'N             | 149°12'W             | 70                      | 65               |
| 2   |               | 0751          | 18°25'N             | 148°51'W             | 70                      | 65               |
| 3   | July 21, 1977 | 2030          | 14°17'N             | 126°15'W             | 70                      | 65               |
| 4   |               | 2200          | 14°17'N             | 126°07'W             | 70                      | 65               |
| 5   |               | 2330          | 14°15'N             | 125°54'W             | 70                      | 65               |
| 6   | July 25, 1977 | 0509          | 10°21'N             | 104°38'W             | 70                      | 65               |
| 7   |               | 0640          | 10°17'N             | 104°12'W             | 70                      | 65               |
| 8   | July 27, 1977 | 0810          | 10°13'N             | 103°48'W             | 70                      | 65               |
| 9   |               | 0304          | 07°53'N             | 93°03'W              | 70                      | 60               |
| 10  |               | 0435          | 07°46'N             | 92°45'W              | 70                      | 60               |

where  $T_1$  and  $T_2$  represent the first and second measurements of each pair and the sample size  $n$  is the total number of pairs at each altitude. The USSR on the other hand used the relationship

$$\delta^2 = \frac{\sum (T_1 - T_2)^2}{n-1}$$

where  $\delta$  represents the dispersion or standard deviation. The value  $\delta$  was next averaged in the vertical for 5 km by

$$\bar{\delta} = \frac{1}{5} \sum_{j=1}^5 \delta_j$$

and the mean value assigned to the mid-point of the 5 km layer. Finally, this mean value was used to determine

$$\sigma = \frac{\bar{\delta}}{\sqrt{2}}$$

where  $\sigma$  represents the repeatability value.

A comparison of the two techniques, e.g., submitting US data to the USSR technique and the USSR data to the US technique, revealed no significant differences. Therefore, in order to maintain consistency throughout the repeatability analysis, all data were calculated using the Soviet technique. The results are plotted on the graphs shown in Figures 9 and 10. It should be noted that computations from only five pair of USSR data were available, since radar tracking of the July 21, 1977, 2330 GMT launch was considered inconclusive.

#### EVALUATION OF INTERCOMPARISON DATA

The observations, obtained in pairs, as shown in Table 3, were evaluated in a relatively simple manner. Means, standard deviations, and root-mean-square differences of corresponding US and USSR data were calculated at each kilometer altitude. Table 6 lists the sample size, mean of the differences,  $\Delta(\ )^*$ , and root-mean-square differences,  $rms_{diff}$ , of the temperature and wind data. The same approach to the data analysis was used for both

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\* It should be noted that throughout this report the observation sample size is the same for the US and USSR in which case the mathematical result obtained from using mean of the differences or difference of the means is identical.

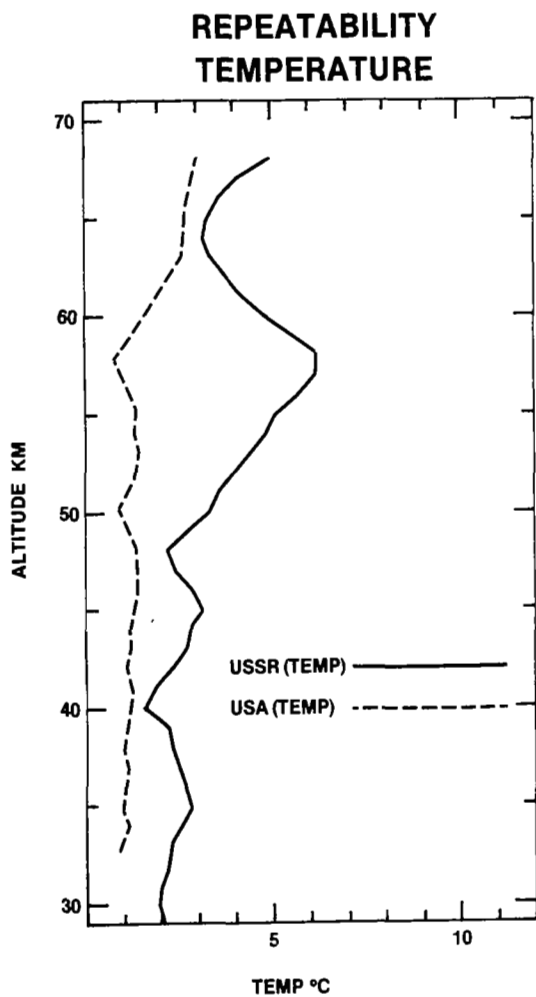


Figure 9. Profiles showing the temperature repeatability obtained from measurements with the US and USSR rocketsonde systems.

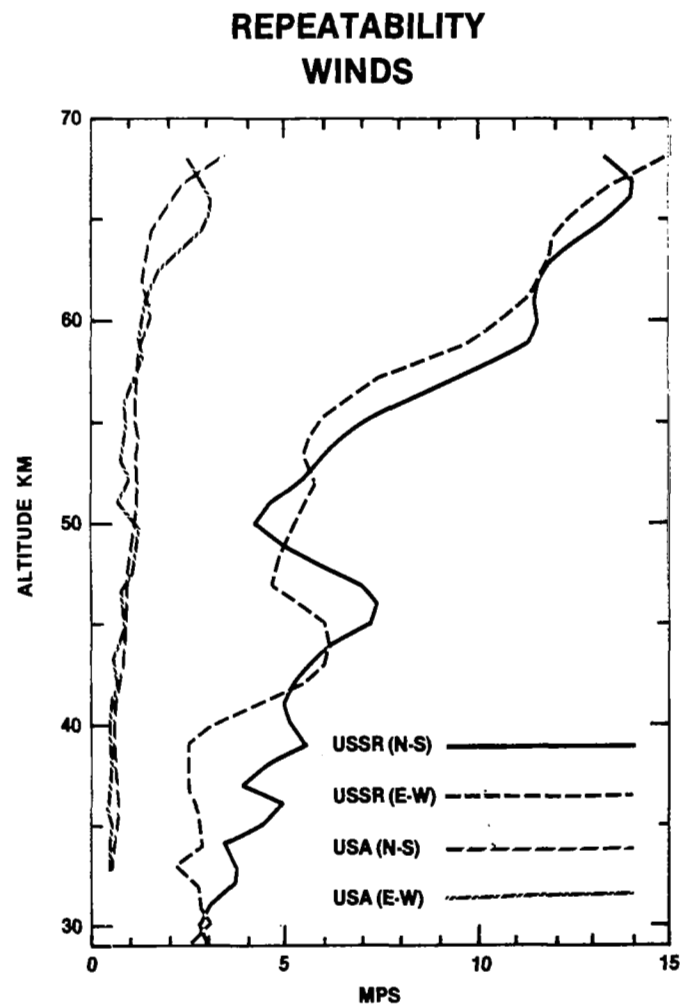


Figure 10. Profiles showing component wind repeatability obtained from measurements with the US and USSR rocketsonde systems.

TABLE 6. MEAN OF THE DIFFERENCES  $\Delta(\ )$ , AND ROOT-MEAN-SQUARE DIFFERENCES ( $rms_{diff}$ ) FOR THE USSR(STANDARD) METHOD MINUS THE US(STANDARD) METHOD.

| Altitude<br>km | Temperature (°C) |                         |      |       |                         |      | Wind             |                          |             |                          |      |
|----------------|------------------|-------------------------|------|-------|-------------------------|------|------------------|--------------------------|-------------|--------------------------|------|
|                | day              |                         |      | night |                         |      | Meridional (mps) |                          | Zonal (mps) |                          |      |
|                | n                | $\overline{\Delta T_d}$ | RMSD | n     | $\overline{\Delta T_n}$ | RMSD | n                | $\overline{\Delta(N-S)}$ | RMSD        | $\overline{\Delta(E-W)}$ | RMSD |
| 70             | 5                | -7.8                    | 10.8 | 4     | -14.3                   | 14.3 | 6                | -3.8                     | 26.3        | 7.3                      | 25.0 |
| 69             | 6                | -11.8                   | 15.2 | 6     | -14.3                   | 14.8 | 7                | -1.0                     | 18.5        | 1.1                      | 22.5 |
| 68             | 7                | -12.0                   | 16.4 | 6     | -16.2                   | 17.1 | 8                | 2.4                      | 13.0        | -5.6                     | 22.0 |
| 67             | 8                | -14.6                   | 18.3 | 8     | -17.4                   | 18.6 | 10               | 1.3                      | 11.9        | -8.7                     | 19.0 |
| 66             | 8                | -15.8                   | 18.9 | 8     | -18.4                   | 20.5 | 11               | -1.3                     | 12.5        | -1.7                     | 21.9 |
| 65             | 8                | -14.3                   | 16.7 | 9     | -14.6                   | 15.8 | 13               | -2.2                     | 11.4        | 3.2                      | 17.2 |
| 64             | 8                | -12.0                   | 14.8 | 9     | -10.8                   | 12.7 | 15               | 0.8                      | 13.6        | 6.1                      | 13.7 |
| 63             | 9                | -10.7                   | 13.3 | 9     | -9.1                    | 10.9 | 16               | 0.5                      | 12.3        | 8.2                      | 14.4 |
| 62             | 9                | -8.9                    | 11.7 | 9     | -7.8                    | 9.4  | 17               | -0.5                     | 9.5         | 8.4                      | 12.7 |
| 61             | 9                | -7.3                    | 10.3 | 9     | -6.4                    | 8.3  | 17               | -2.1                     | 8.8         | 8.2                      | 11.6 |
| 60             | 9                | -6.0                    | 8.4  | 9     | -6.1                    | 8.6  | 20               | -2.7                     | 10.0        | 9.7                      | 14.2 |
| 59             | 9                | -5.4                    | 7.7  | 9     | -4.9                    | 7.8  | 20               | -1.5                     | 10.1        | 8.0                      | 14.9 |
| 58             | 9                | -4.3                    | 6.3  | 9     | -3.8                    | 6.9  | 20               | -1.2                     | 9.6         | 5.1                      | 14.5 |
| 57             | 9                | -4.9                    | 6.5  | 9     | -3.6                    | 6.0  | 20               | -2.2                     | 10.3        | 2.5                      | 12.4 |
| 56             | 9                | -5.9                    | 5.9  | 9     | -3.8                    | 5.2  | 20               | -4.4                     | 12.1        | 1.7                      | 10.2 |
| 55             | 9                | -4.7                    | 5.7  | 9     | -5.1                    | 5.8  | 20               | -3.4                     | 8.7         | 1.9                      | 8.7  |
| 54             | 10               | -3.6                    | 4.7  | 9     | -4.9                    | 5.5  | 20               | -1.8                     | 7.3         | 2.0                      | 8.3  |
| 53             | 10               | -4.7                    | 6.0  | 9     | -3.4                    | 4.1  | 20               | 0.7                      | 7.5         | 1.3                      | 7.8  |
| 52             | 10               | -3.8                    | 5.2  | 9     | -2.2                    | 3.1  | 20               | 2.0                      | 8.6         | -0.3                     | 7.6  |
| 51             | 10               | -4.1                    | 5.3  | 9     | -0.9                    | 2.9  | 20               | 1.7                      | 8.2         | -1.1                     | 7.6  |
| 50             | 10               | -3.6                    | 5.3  | 10    | -0.7                    | 3.0  | 20               | 0.6                      | 8.0         | -1.9                     | 6.7  |
| 49             | 10               | -3.2                    | 4.7  | 10    | -0.7                    | 2.8  | 20               | 0.1                      | 6.2         | -1.9                     | 5.8  |
| 48             | 10               | -3.0                    | 4.3  | 10    | -1.1                    | 2.5  | 20               | 1.1                      | 4.0         | -2.5                     | 7.0  |
| 47             | 10               | -3.8                    | 5.4  | 10    | -1.3                    | 3.1  | 20               | 1.1                      | 3.6         | -2.6                     | 6.5  |
| 46             | 10               | -3.2                    | 4.9  | 10    | -1.8                    | 2.7  | 20               | -2.0                     | 6.3         | -0.9                     | 5.3  |
| 45             | 10               | -2.2                    | 3.9  | 10    | -2.4                    | 3.1  | 20               | -4.3                     | 8.9         | 0.8                      | 6.2  |
| 44             | 10               | -1.7                    | 3.8  | 10    | -2.9                    | 4.0  | 20               | -1.9                     | 6.6         | -0.3                     | 6.7  |
| 43             | 10               | -0.9                    | 2.8  | 10    | -1.5                    | 4.7  | 20               | 1.2                      | 4.8         | -1.8                     | 4.4  |
| 42             | 10               | -0.1                    | 3.2  | 10    | -1.0                    | 3.9  | 20               | -0.3                     | 4.7         | -1.2                     | 3.9  |
| 41             | 10               | 0.4                     | 2.2  | 10    | -1.3                    | 3.0  | 20               | 0.2                      | 3.6         | -0.3                     | 4.0  |
| 40             | 10               | -0.3                    | 2.0  | 10    | -0.6                    | 2.8  | 20               | 0.3                      | 4.6         | 0.6                      | 4.1  |
| 39             | 10               | -1.1                    | 3.4  | 10    | 0.1                     | 2.2  | 20               | -1.6                     | 4.3         | -1.3                     | 5.4  |
| 38             | 10               | -0.9                    | 3.1  | 10    | 1.4                     | 2.1  | 20               | -0.6                     | 5.7         | -1.3                     | 4.5  |
| 37             | 10               | -0.4                    | 2.8  | 10    | 2.0                     | 2.5  | 20               | -0.3                     | 2.7         | -1.5                     | 4.3  |
| 36             | 10               | 0.4                     | 2.8  | 10    | 1.7                     | 1.9  | 20               | -0.4                     | 3.9         | -1.5                     | 3.3  |
| 35             | 10               | 0.3                     | 2.5  | 10    | 1.3                     | 1.8  | 20               | 0.2                      | 3.2         | -2.1                     | 3.0  |
| 34             | 10               | 1.3                     | 3.3  | 10    | 1.3                     | 1.9  | 20               | -0.4                     | 3.2         | -0.5                     | 1.7  |
| 33             | 10               | 1.7                     | 3.0  | 10    | 1.6                     | 2.4  | 20               | -1.6                     | 3.3         | 0.5                      | 3.6  |
| 32             | 10               | 1.6                     | 3.0  | 10    | 1.1                     | 2.7  | 20               | -0.7                     | 3.2         | -0.1                     | 2.6  |
| 31             | 10               | 2.1                     | 2.7  | 10    | 1.9                     | 2.7  | 20               | -0.3                     | 2.5         | -0.1                     | 2.4  |
| 30             | 9                | 2.3                     | 3.0  | 10    | 2.5                     | 3.3  | 19               | -0.3                     | 2.5         | -0.2                     | 2.2  |
| 29             | 8                | 2.3                     | 3.3  | 9     | 2.0                     | 2.8  | 17               | -0.9                     | 1.6         | -1.6                     | 4.6  |

the temperature and component wind measurements. Because of new techniques being developed for the M100B instrument, two sets of data are made available for evaluation. These data sets, for purposes of identification in this report, are referred to as the USSR(standard) and USSR(pro prospective). This different treatment of the same data required that two comparisons be made with the USSR data set. Therefore, evaluations are provided for the US(standard)/USSR(standard) and the US(standard)/USSR(pro prospective) technique. Additionally, the data obtained with the US sphere system are compared with the US(standard) and both of the USSR techniques. Because of the length of the report required by so many individual data treatments only the US(standard) and USSR(standard) are resolved with any detail.

The USSR(standard) technique is defined (ref. 11) as the method of data processing according to the standard techniques used in the USSR during previous years. The USSR (pro prospective) technique is defined as having better characteristics of high-altitude resolution of temperature data which is planned for the future processing of rocketsonde data in the USSR. This change of the data processing technique is connected with the improvement of the thermometer design, aimed at eliminating systematic measurement errors caused by aerodynamic disturbances found with the previous design, and a new parachute which stabilizes the descent.

#### US(Standard) Technique vs USSR(Standard) Technique

The comparison between the US(standard) and USSR(standard) techniques is interesting. A considerable improvement in agreement between the US and USSR rocketsonde temperature measurements over that obtained during the 1973 Intercomparison held in Kourou, Fr. Guiana is immediately apparent. Results of that study (ref. 10) revealed differences between the US and USSR systems which reached a magnitude of about 15°C at 60 km. These values are indicated by the crosses on Figure 11. Above 50 km the results of the 1977 Intercomparison are in much better agreement than was found in the 1973 intercomparison. It is important to note that the relative similarity of the differences during day and night suggests that the corrections being applied for radiation are consistent in both US and USSR techniques. Obviously, the day and night radiation characteristic is the only element of the correction technique (refs. 15 and 16) which changes, i.e., the aerodynamic heating, lag, emissivity, and self heating terms are the same regardless of whether the observations are obtained during day or night. Nonetheless, the scatter in the measurement differences as shown by the root-mean-square difference curves in Figure 12, begins to grow above, about 55-56 km, indicating that unexplained instrumental effects may be contaminating the measurements, or, more likely, noise in the measurements are being introduced by natural atmospheric variability. Corresponding studies of the instruments' repeatability conducted as part of the intercomparison test, has determined that the



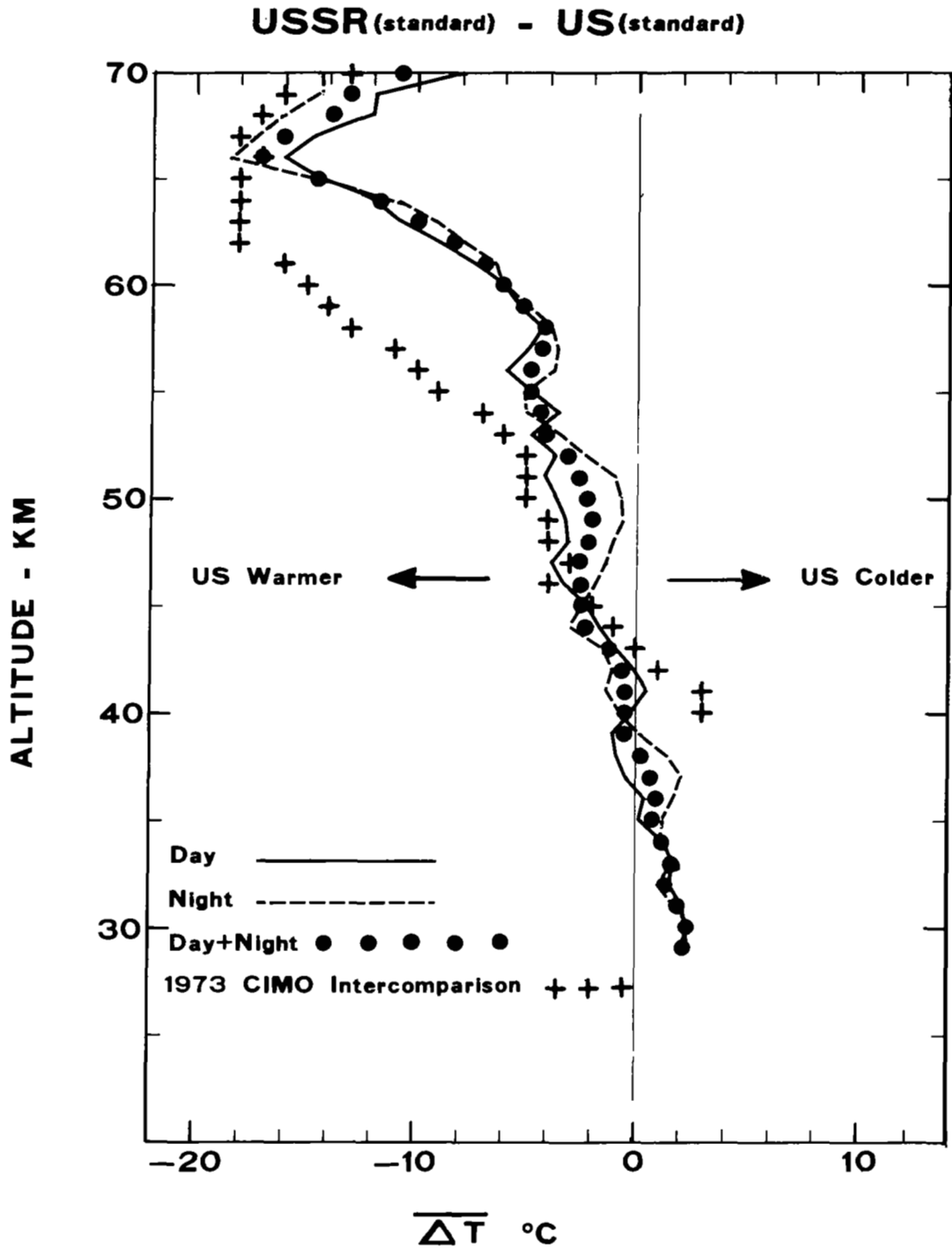


Figure 11. Profiles showing the mean of the differences of the measured temperature ( $\Delta T$ ) obtained from the US(standard) and USSR(standard) techniques for daytime and nighttime and a comparison of the results obtained from the 1973 CIMO-sponsored intercomparison with the present data.

### USSR(standard) - US(standard)

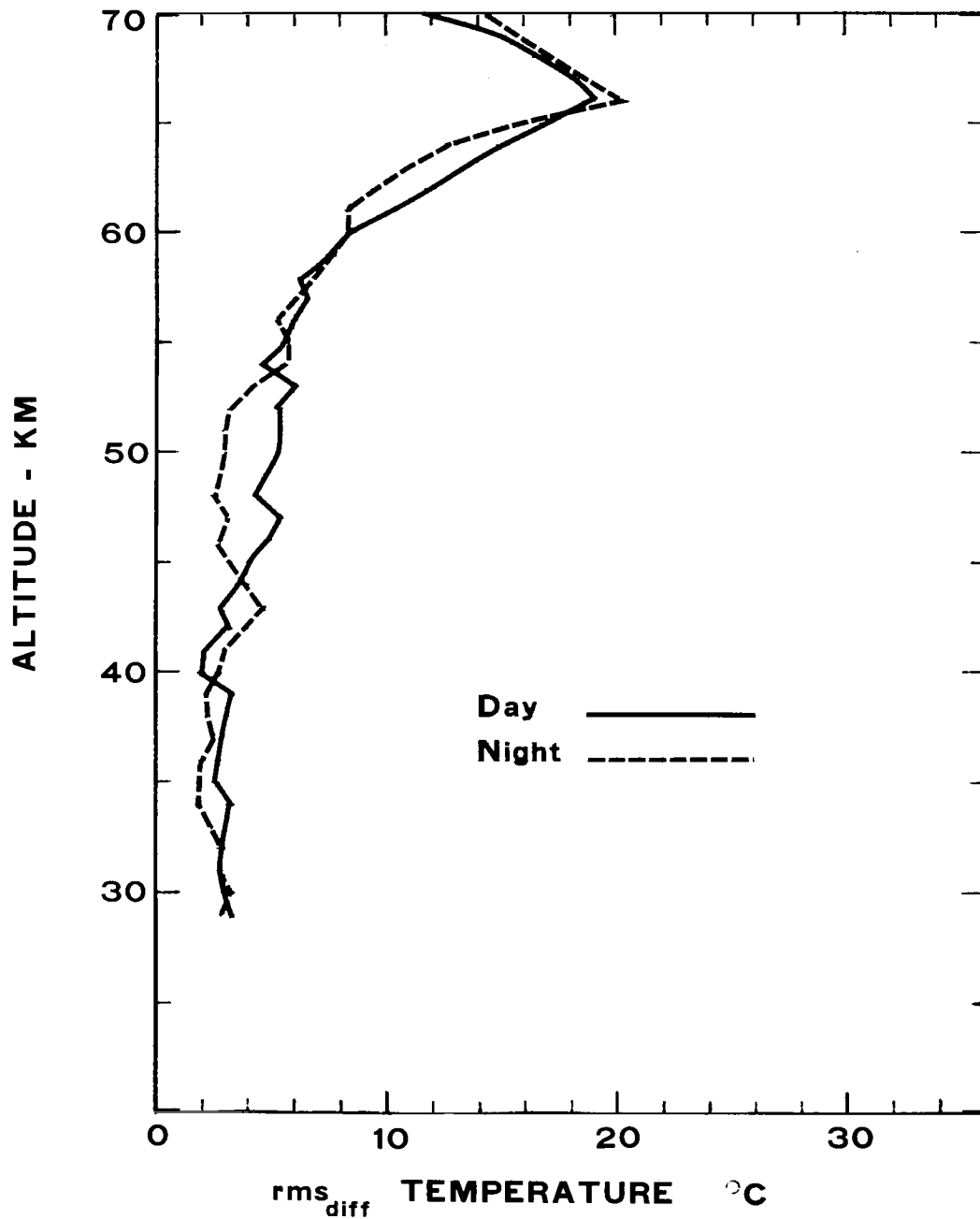


Figure 12. Root-Mean-Square differences (rms(diff)) of the temperatures obtained from the US(standard) and USSR(standard) techniques during day and night.

instruments cannot be expected to obtain measurements with a precision better than 2-3°C between 60-70 km.

A comparison of the temperature measurements would not be complete without examining the actual profiles. These can be found in the Appendixes. It is apparent that each instrument responds quite well to changes of the lapse rate of the actual atmospheric temperature as shown by the level of detail present. Many temperature features were seen in both the Datasonde and M100B profiles. This suggests that both instruments can provide a valuable contribution to atmospheric research in spite of the bias which has been found to exist. Thus, synoptic use of the temperature data requires that this bias be taken into account. Since the bias is very similar for day and night measurements the value obtained from the total number of temperature measurements are listed in Table 7. These values, listed by altitude, are the adjustments which need to be applied to the reported measurements (assuming individual instrument corrections are made) which will bring the US and USSR temperatures into general agreement. The approach used in determining these values was to subtract the US measurements from the USSR measurements, thus, all adjustments are toward the US values. However, it cannot be assumed that the US measurements are absolutely correct. There is no way of determining which measurement is providing truth. The approach used here only provides a relative, but consistent way of determining what differences may exist.

TABLE 7

Adjustments to USSR reported temperatures considered necessary to achieve compatibility to US values. The USSR(standard) and USSR(perspective) techniques are listed. Use of these adjustments assumes that the measurement data corrections have been applied.

| Alt. | USSR(STANDARD) | USSR(PROSPECTIVE) |
|------|----------------|-------------------|
| 70   | + 11           | + 9               |
| 65   | + 14           | + 12              |
| 60   | + 6            | + 10              |
| 55   | + 5            | + 6               |
| 50   | + 2            | + 2               |
| 45   | + 2            | + 3               |
| 40   | 0              | + 1               |
| 35   | - 1            | - 1               |
| 30   | - 2            | - 2               |

Comparison of the wind differences is simply accomplished. Means of the differences and the root-mean-square differences of the meridional and zonal components are listed in Table 6. The comparison of the measured mean wind components, Figure 13, indicates that except for minor exceptions, differences of about  $3 \text{ ms}^{-1}$  exist below 57 km. Above this altitude, differences in the zonal component grow rapidly. Nevertheless, the root-mean-square differences, Figure 14, although not small, are still smaller than what would be expected from instrument repeatability alone. It must be concluded that agreement of the wind measurements is good to about 57 km, and, since phase differences with altitude were not found, are probably usable, in the mean, to higher altitudes.

#### US(Standard) Technique vs USSR(Prospective) Technique

Following the intercomparison data exchange, new data reduction techniques were investigated in the USSR. As a result of the new data this produced an additional evaluation with the standard US data was conducted. One aspect of such an outlook is that future data obtained from the M100B system can be brought into agreement with the US system's data, and indeed, with data from rocketsonde systems launched by countries participating in previous intercomparisons, such as the one held in Kourou. Table 8 provides a listing of the mean of the differences of the temperature and wind data for each kilometer between 24 and 70, and of the root-mean-square differences ( $\text{rms}_{\text{diff}}$ ) of the same data. It can be seen in Figure 15 that for altitudes above 60 kilometers both the daytime and nighttime temperatures show differences larger than 10 degrees, while the  $\text{rms}_{\text{diff}}$ , Figure 16, suggest that the variation is relatively large. The mean temperature differences finally become less than about  $5^\circ\text{C}$  only below 54 kilometers. Comparison of the results obtained during the CIMO-sponsored Intercomparison in 1973 are plotted as crosses on Figure 15. It is obvious that some improvement has been made, but not as great an improvement as shown by the comparison of the standard methods shown in Figure 11. Table 7 lists the amount of adjustment to be applied to the measurements to achieve compatibility. By comparing Figures 11 and 15 it is easily seen that the prospective technique shows improvement in the temperature agreement only above 64 km.

The direct comparison of the US and USSR standard techniques conducted here is very important since these techniques are currently used to provide data for international exchange. However, such a simple comparison can lead to a misinterpretation of the mean differences because the degree of smoothing used with the USSR(standard) technique is much different than that used with the US(standard) technique. If it is assumed that the temperature profile will remain largely unchanged during the period of the comparison, a bias may arise which is caused by the different height resolutions of the techniques applied. This will obviously give rise to somewhat different values of the adjustments

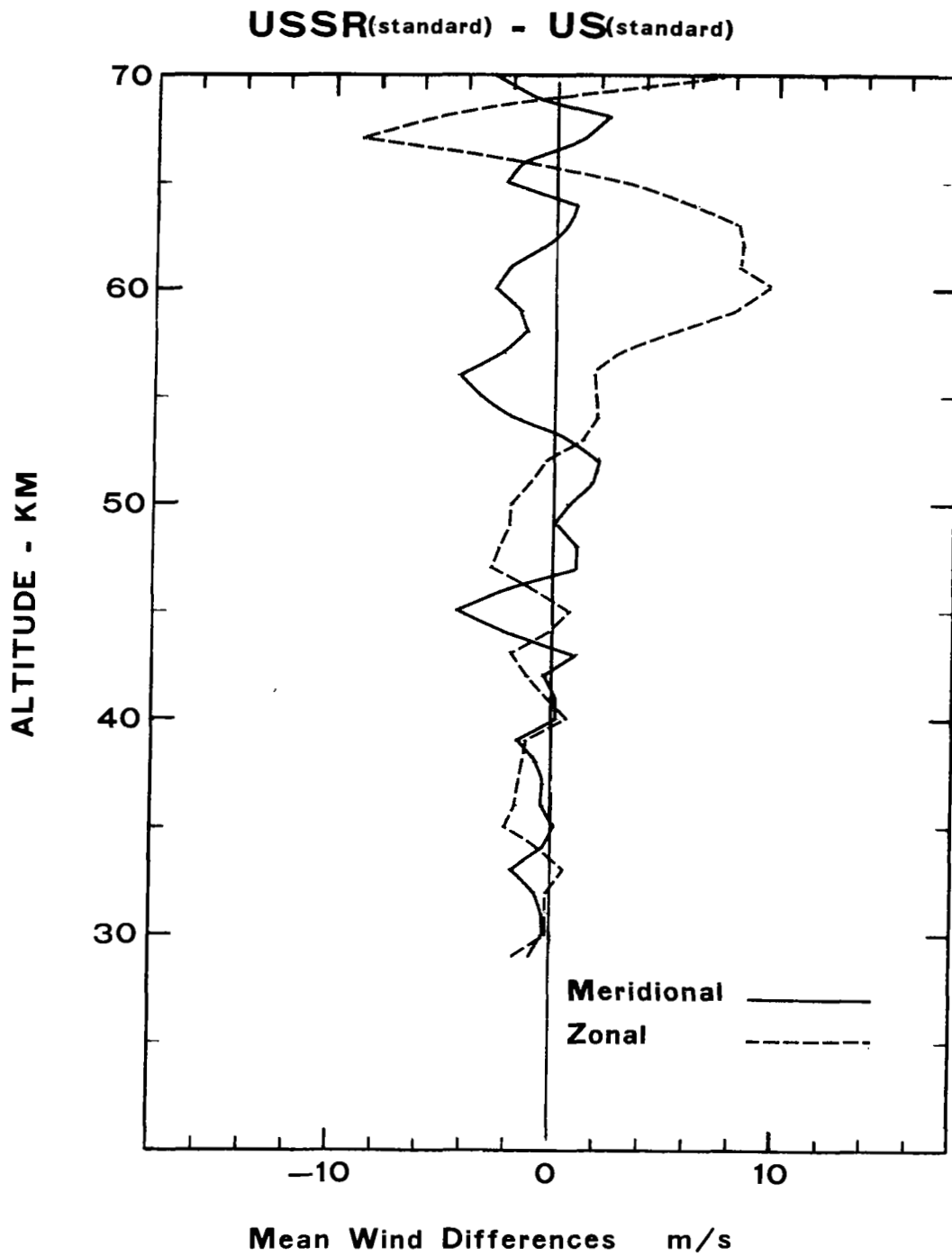


Figure 13. Mean of the differences component winds obtained from the US(standard) and USSR(standard) techniques.

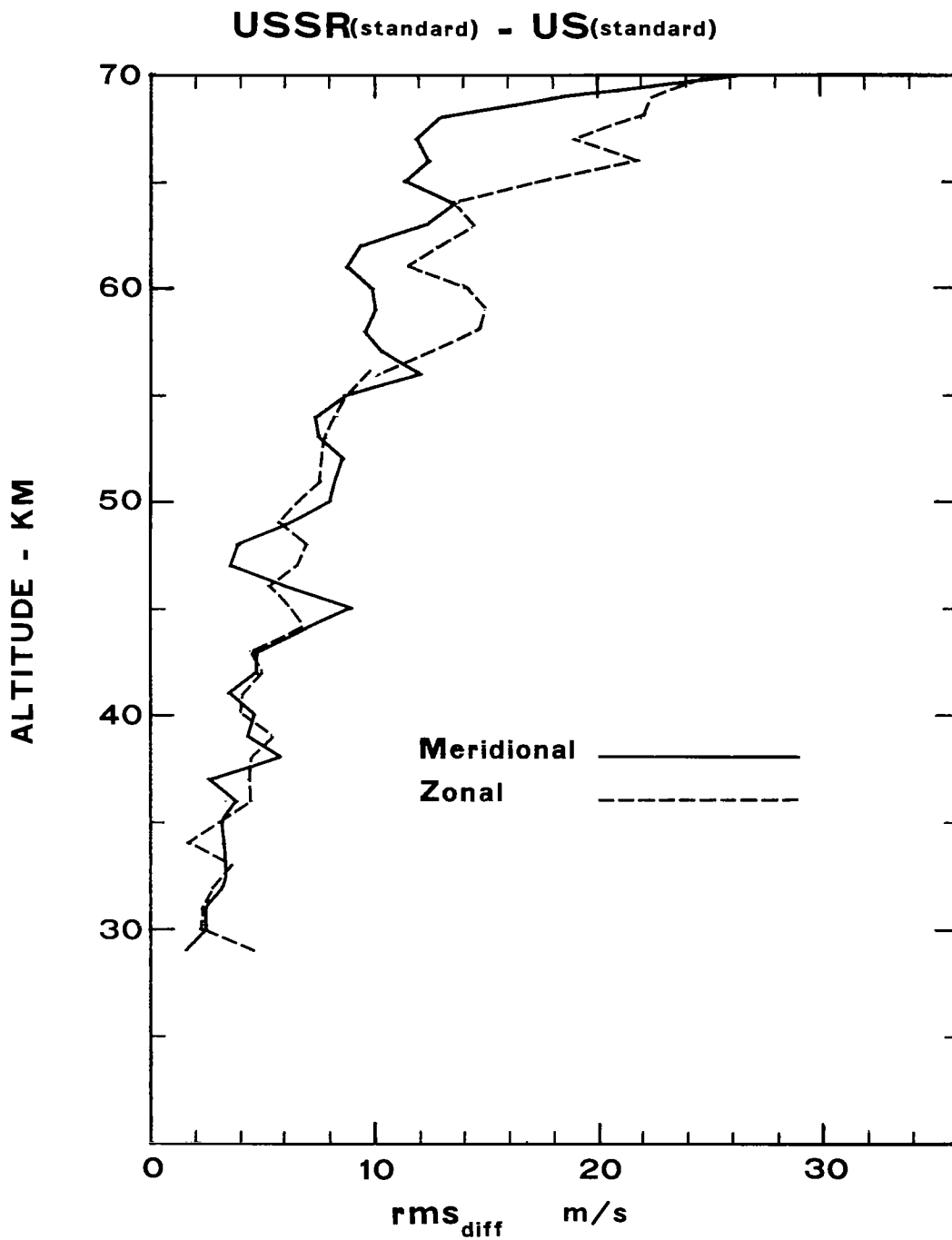


Figure 14. Root-Mean-Square differences ( $rms_{diff}$ ) of the component winds obtained from the US(standard) and USSR(standard) techniques.

TABLE 8. MEAN OF THE DIFFERENCES  $\Delta(\ )$ , AND ROOT-MEAN-SQUARE DIFFERENCES ( $rms_{diff}$ ) FOR THE USSR(PROSPECTIVE) METHOD MINUS THE US(STANDARD) METHOD.

| Altitude<br>km | Temperature (°C) |                         |      |       |                         |      | Wind             |                          |             |                          |      |
|----------------|------------------|-------------------------|------|-------|-------------------------|------|------------------|--------------------------|-------------|--------------------------|------|
|                | day              |                         |      | night |                         |      | Meridional (mps) |                          | Zonal (mps) |                          |      |
|                | n                | $\overline{\Delta T_d}$ | RMSD | n     | $\overline{\Delta T_n}$ | RMSD | n                | $\overline{\Delta(N-S)}$ | RMSD        | $\overline{\Delta(E-W)}$ | RMSD |
| 70             | 5                | -7.8                    | 12.5 | 4     | -10.5                   | 11.4 | 6                | -8.7                     | 29.3        | 10.3                     | 24.3 |
| 69             | 6                | -8.8                    | 14.3 | 6     | -11.2                   | 12.7 | 7                | -5.0                     | 21.0        | 6.0                      | 21.7 |
| 68             | 7                | -6.9                    | 14.9 | 7     | -14.4                   | 15.8 | 9                | -4.0                     | 15.9        | 0.4                      | 20.1 |
| 67             | 8                | -9.0                    | 16.2 | 8     | -15.0                   | 16.4 | 10               | -2.3                     | 13.3        | -1.5                     | 17.7 |
| 66             | 8                | -10.6                   | 17.4 | 8     | -16.8                   | 19.2 | 11               | -3.3                     | 11.7        | 2.7                      | 17.7 |
| 65             | 8                | -10.4                   | 16.2 | 9     | -13.4                   | 14.6 | 13               | -4.2                     | 10.0        | 7.2                      | 15.4 |
| 64             | 8                | -10.1                   | 15.2 | 9     | -10.8                   | 13.0 | 15               | -1.1                     | 12.2        | 9.1                      | 14.3 |
| 63             | 9                | -10.3                   | 13.9 | 9     | -10.2                   | 12.1 | 16               | -0.9                     | 11.4        | 9.9                      | 15.4 |
| 62             | 9                | -10.4                   | 12.7 | 9     | -10.2                   | 11.7 | 16               | -2.1                     | 9.8         | 8.1                      | 12.4 |
| 61             | 9                | -10.6                   | 12.0 | 9     | -9.8                    | 11.1 | 16               | -3.9                     | 8.8         | 7.3                      | 10.6 |
| 60             | 9                | -10.1                   | 11.0 | 9     | -10.2                   | 11.2 | 19               | -4.7                     | 10.9        | 9.7                      | 14.3 |
| 59             | 9                | -10.1                   | 11.1 | 9     | -9.1                    | 10.1 | 19               | -2.6                     | 9.9         | 7.8                      | 15.0 |
| 58             | 9                | -8.8                    | 9.9  | 9     | -7.2                    | 9.1  | 19               | -0.8                     | 8.3         | 4.7                      | 14.8 |
| 57             | 9                | -8.3                    | 10.3 | 9     | -5.9                    | 8.7  | 19               | -1.7                     | 7.0         | 1.7                      | 13.2 |
| 56             | 9                | -7.2                    | 9.1  | 9     | -5.1                    | 7.9  | 19               | -3.6                     | 8.4         | 1.1                      | 10.9 |
| 55             | 9                | -6.1                    | 7.4  | 9     | -5.8                    | 7.5  | 19               | -3.8                     | 9.7         | 1.6                      | 7.9  |
| 54             | 10               | -4.5                    | 5.2  | 9     | -5.1                    | 6.2  | 20               | -2.0                     | 7.1         | 2.3                      | 6.1  |
| 53             | 10               | -5.7                    | 7.1  | 9     | -3.8                    | 5.4  | 20               | 0.7                      | 7.2         | 1.8                      | 5.6  |
| 52             | 10               | -5.1                    | 6.7  | 9     | -3.6                    | 5.3  | 20               | 1.7                      | 7.0         | 0.2                      | 4.8  |
| 51             | 10               | -5.1                    | 5.9  | 10    | -1.8                    | 5.4  | 20               | 1.6                      | 7.3         | -1.6                     | 5.7  |
| 50             | 10               | -4.1                    | 5.9  | 10    | -0.7                    | 4.4  | 20               | -0.1                     | 7.6         | -2.9                     | 5.5  |
| 49             | 10               | -3.9                    | 5.5  | 10    | -0.6                    | 2.6  | 20               | -0.5                     | 6.8         | -3.0                     | 5.1  |
| 48             | 10               | -3.2                    | 4.6  | 10    | -1.8                    | 3.0  | 20               | -0.1                     | 4.6         | -2.3                     | 5.6  |
| 47             | 10               | -4.0                    | 5.9  | 10    | -1.9                    | 3.3  | 20               | 0.1                      | 3.2         | -2.0                     | 5.8  |
| 46             | 10               | -3.8                    | 5.3  | 10    | -2.1                    | 2.9  | 20               | -1.5                     | 5.1         | -1.5                     | 5.4  |
| 45             | 10               | -2.8                    | 4.5  | 10    | -3.1                    | 3.9  | 20               | -3.3                     | 6.7         | -0.6                     | 5.1  |
| 44             | 10               | -2.1                    | 4.1  | 10    | -3.1                    | 4.5  | 20               | -2.9                     | 6.4         | -0.3                     | 5.5  |
| 43             | 10               | -1.1                    | 3.6  | 10    | -1.6                    | 5.5  | 20               | -0.6                     | 4.3         | -1.3                     | 4.5  |
| 42             | 10               | -0.7                    | 3.4  | 10    | -1.6                    | 4.2  | 20               | -0.1                     | 2.9         | -1.2                     | 2.8  |
| 41             | 10               | -0.5                    | 2.6  | 10    | -2.3                    | 3.8  | 20               | 0.5                      | 3.2         | -0.7                     | 3.4  |
| 40             | 10               | -0.6                    | 2.2  | 10    | -1.2                    | 3.5  | 20               | -0.3                     | 3.4         | -0.5                     | 2.9  |
| 39             | 10               | -1.7                    | 3.5  | 10    | -0.8                    | 2.7  | 20               | -1.0                     | 3.2         | -1.2                     | 3.4  |
| 38             | 10               | -1.2                    | 3.0  | 10    | 0.9                     | 1.9  | 20               | -1.2                     | 3.8         | -1.9                     | 3.6  |
| 37             | 10               | -0.5                    | 2.5  | 10    | 1.6                     | 2.2  | 20               | -0.9                     | 2.2         | -1.9                     | 3.8  |
| 36             | 10               | 0.3                     | 2.5  | 10    | 1.6                     | 1.8  | 20               | -0.9                     | 3.2         | -1.8                     | 3.5  |
| 35             | 10               | 0.3                     | 3.2  | 10    | 1.2                     | 1.8  | 20               | -0.5                     | 3.1         | -1.9                     | 2.5  |
| 34             | 10               | 1.1                     | 3.2  | 10    | 1.2                     | 1.8  | 20               | -0.7                     | 2.8         | -1.0                     | 1.4  |
| 33             | 10               | 1.4                     | 2.8  | 10    | 1.6                     | 2.4  | 20               | -1.9                     | 3.3         | -0.2                     | 3.9  |
| 32             | 10               | 1.3                     | 2.7  | 10    | 1.1                     | 2.8  | 20               | -1.2                     | 2.9         | -0.6                     | 2.6  |
| 31             | 10               | 1.9                     | 2.8  | 10    | 1.4                     | 2.6  | 20               | -0.8                     | 2.1         | -0.8                     | 3.1  |
| 30             | 9                | 1.3                     | 2.7  | 10    | 2.1                     | 3.2  | 19               | -0.7                     | 2.7         | -0.6                     | 2.3  |
| 29             | 9                | 0.1                     | 3.1  | 10    | 1.7                     | 3.0  | 19               | -0.3                     | 6.5         | -0.2                     | 6.1  |
| 28             | 9                | 2.2                     | 3.3  | 9     | 2.9                     | 3.4  | 18               | -0.9                     | 2.9         | -0.7                     | 1.6  |
| 27             | 9                | 2.7                     | 3.4  | 9     | 2.4                     | 3.1  | 18               | -1.1                     | 2.2         | -0.8                     | 2.4  |
| 26             | 9                | 2.6                     | 3.1  | 9     | 1.7                     | 2.5  | 18               | -0.9                     | 2.8         | -0.6                     | 2.4  |
| 25             | 9                | 2.6                     | 3.9  | 8     | 1.3                     | 2.4  | 16               | -0.6                     | 2.7         | -0.2                     | 2.4  |
| 24             | 5                | 2.0                     | 3.6  | 4     | 1.5                     | 2.1  | 9                | -1.4                     | 2.4         | -0.4                     | 2.3  |

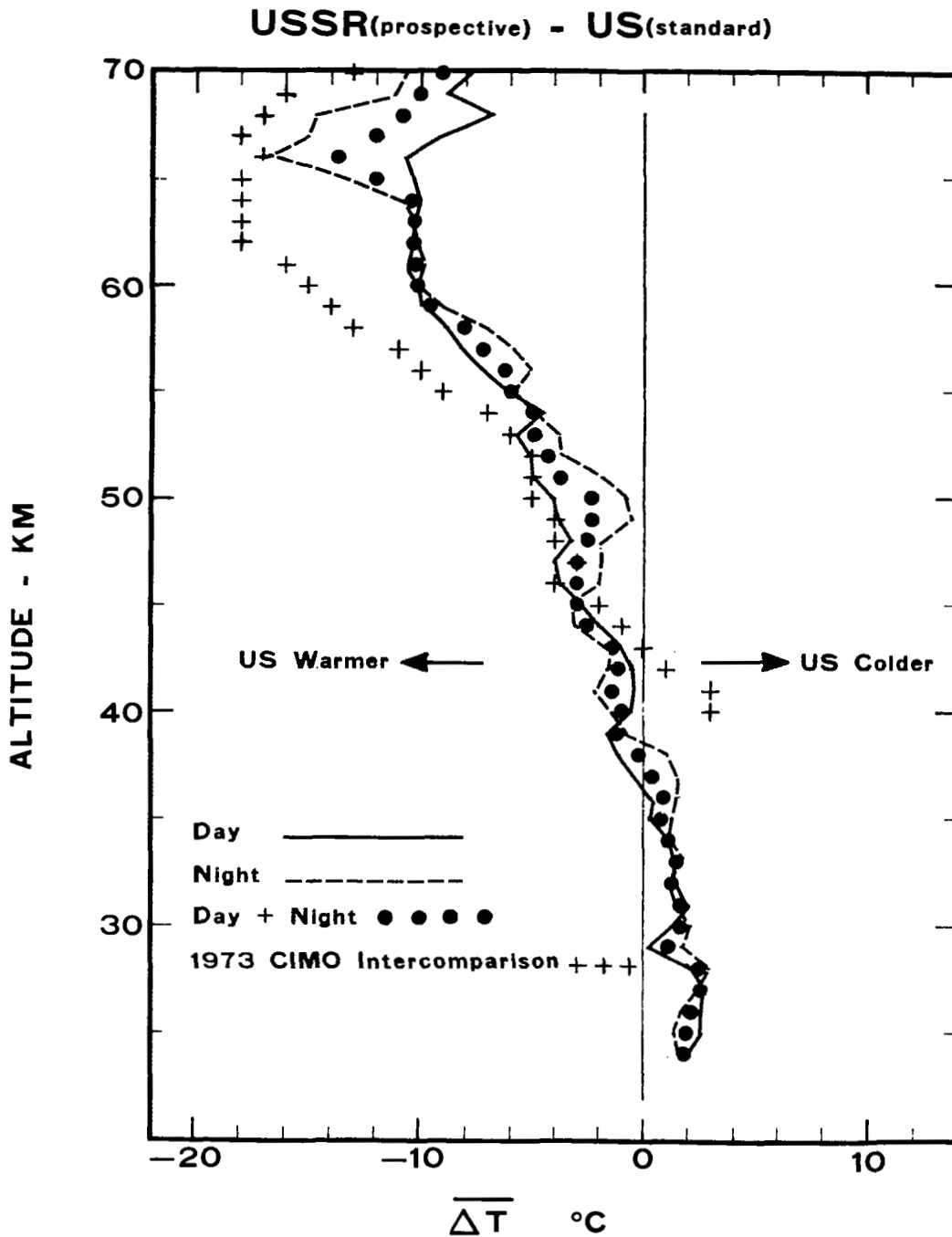


Figure 15. Profiles showing the mean of the differences of the measured temperature ( $\Delta T$ ) obtained from the US(standard) and USSR(pro prospective) techniques for daytime and nighttime and a comparison of the results obtained from the 1973 CIMO-sponsored intercomparison with the present data.



### USSR(prospective) - US(standard)

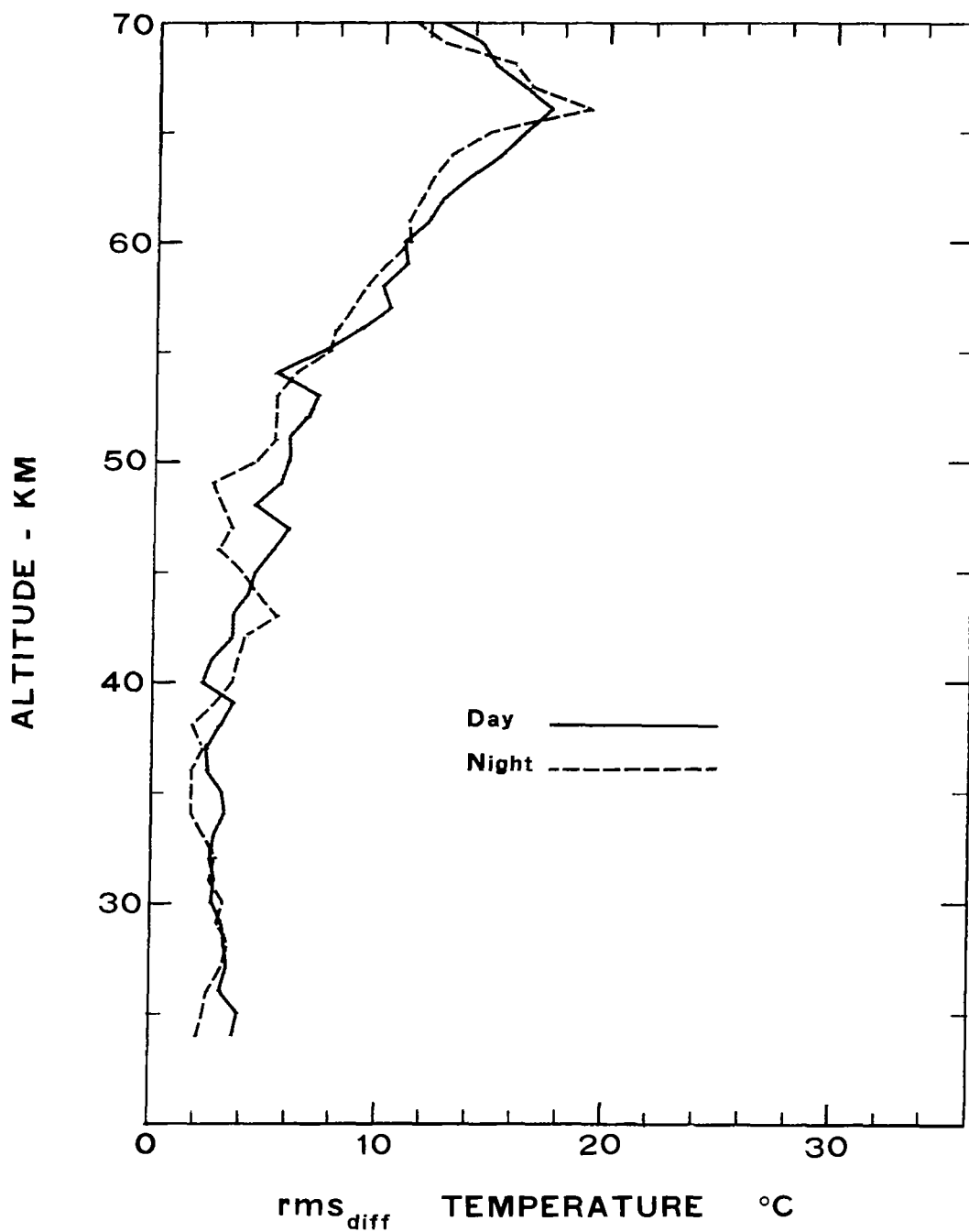


Figure 16. Root-Mean-Square differences (rms(diff)) of the temperatures obtained from the US(standard) and USSR(prospective) techniques during day and night.

for the USSR(prospective) technique as well, since a higher sample rate and greater smoothing is used. It is possible also that discrepancies found for the US(standard) technique vs the USSR(prospective) technique are of some importance as well for the adjustment of data obtained in the past using the standard techniques. Since the smoothing applied to either system should fit the vertical response capability of the measurement this possibility for achieving compatible results should be examined further. For example, it is possible to smooth Datasonde data to the M100B standard data level and then to compare the profiles.

The mean difference of the component winds is relatively small below about 58 kilometers. Analysis of the measurement differences in the wind components, Figure 17, indicate that differences, in the mean, exist above the 58 km layer. Again the  $rms_{diff}$  for both components, Figure 18, indicate rapidly increasing variability in the measurements above about 56 km. It appears that the wind differences between the US(standard) and USSR (prospective) are less than those obtained when comparing the US(standard) and USSR(standard) techniques.

The complete data set is available in Appendix B, additional computations and analyses of these data may be of interest. This may be especially true, when the prospective method is finally used at all USSR rocketsonde sites.

#### Intercomparison with Spheres

Part of the intercomparison plan included six US Super-Loki Spheres to be launched in conjunction with the Datasondes and M100B. The dates and times of the launchings are given in Table 3. It should be noted that three spheres were launched during daytime and three during night. However, the comparison uses the data from the six spheres in order to provide a larger sample. Data listings, differences, and plots are given in Appendixes C, D, and E, for the US(Sphere) vs US(standard), US(Sphere) vs USSR(standard), and US(Sphere) vs USSR(prospective) techniques, respectively. The figures which follow present plots of the mean of the differences in the temperature and wind data and the root-mean-square differences.

Figure 19, the mean difference of the temperatures, represents the three techniques: USSR(standard) minus US(Sphere), USSR(prospective) minus US(Sphere), and US(standard) minus US(Sphere). It is obvious that the comparison of both USSR techniques with the US(sphere) technique reveals differences which are quite similar. Large differences between the sphere and M100B occur above 60 km but cannot be explained at this time. Below 60 km the sphere derived temperatures and the USSR temperatures agree to within 8°C. Generally agreement of the US(Sphere) and US(standard) techniques are less than 6°C below 66 km. This figure tends to point out that above about 65 km a large discrepancy in the

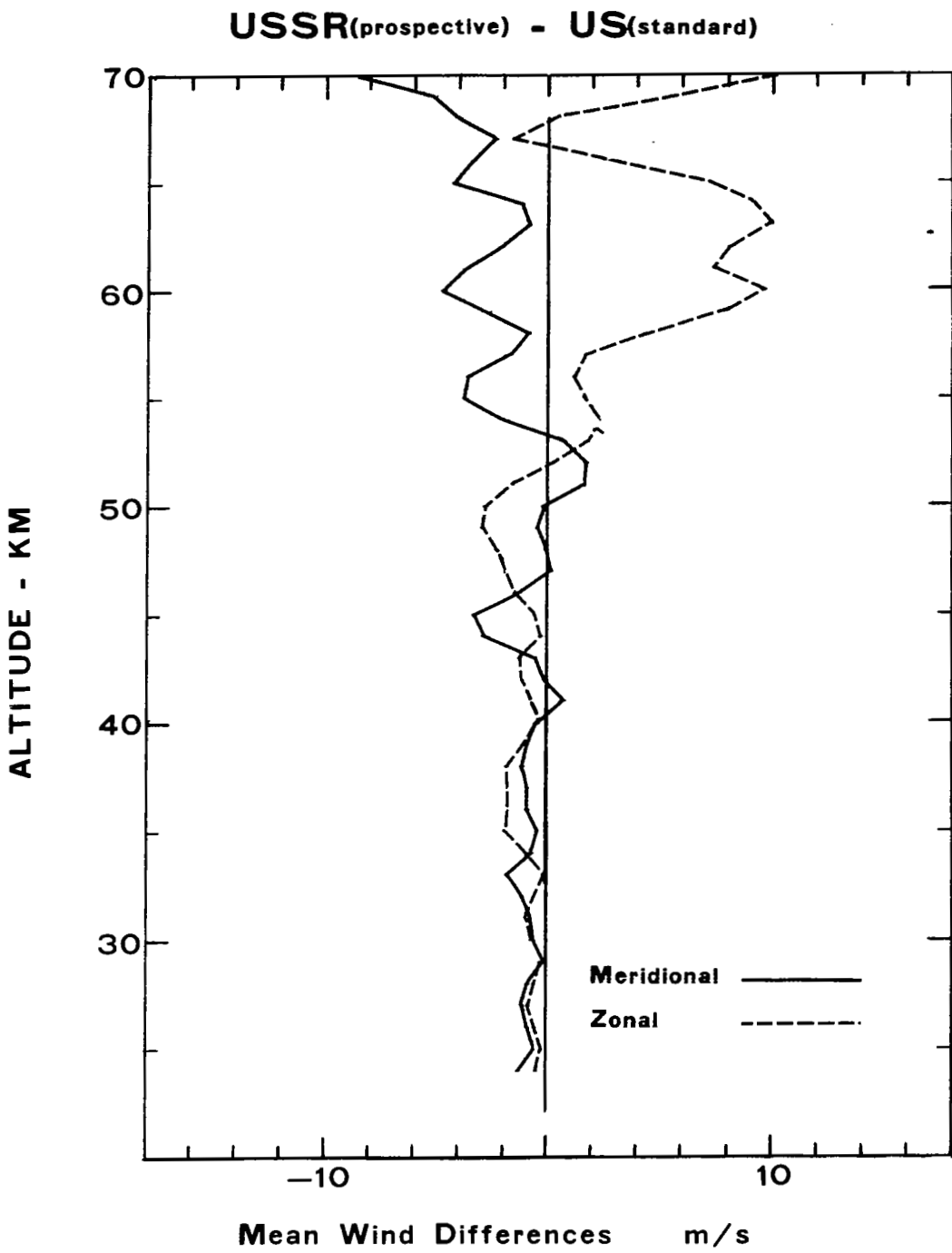


Figure 17. Mean of the differences component winds obtained from the US(standard) and USSR(prospective) techniques.

USSR(prospective) - US(standard)

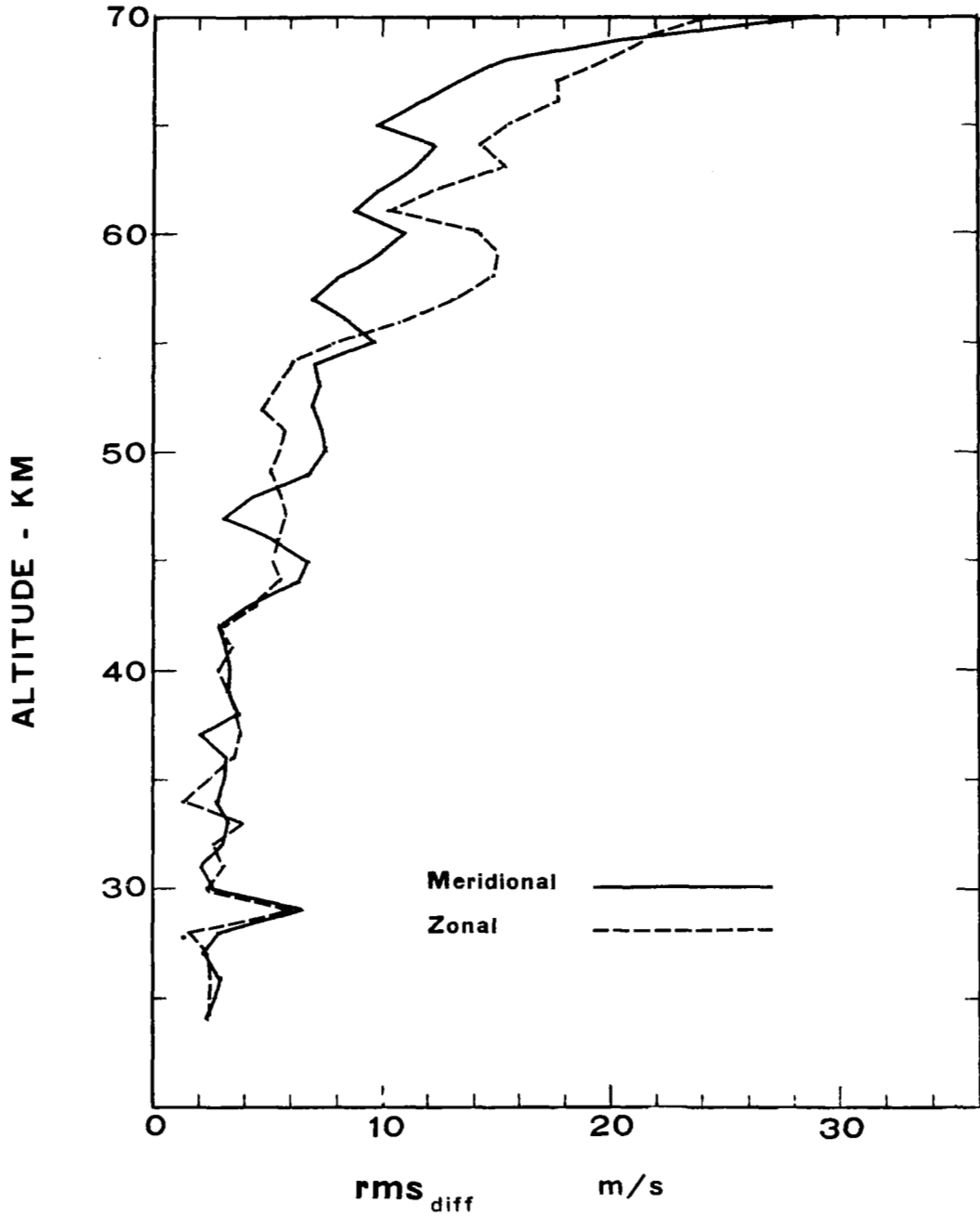


Figure 18. Root-Mean-Square differences ( $rms_{diff}$ ) of the component winds obtained from the US(standard) and USSR(prospective) techniques.

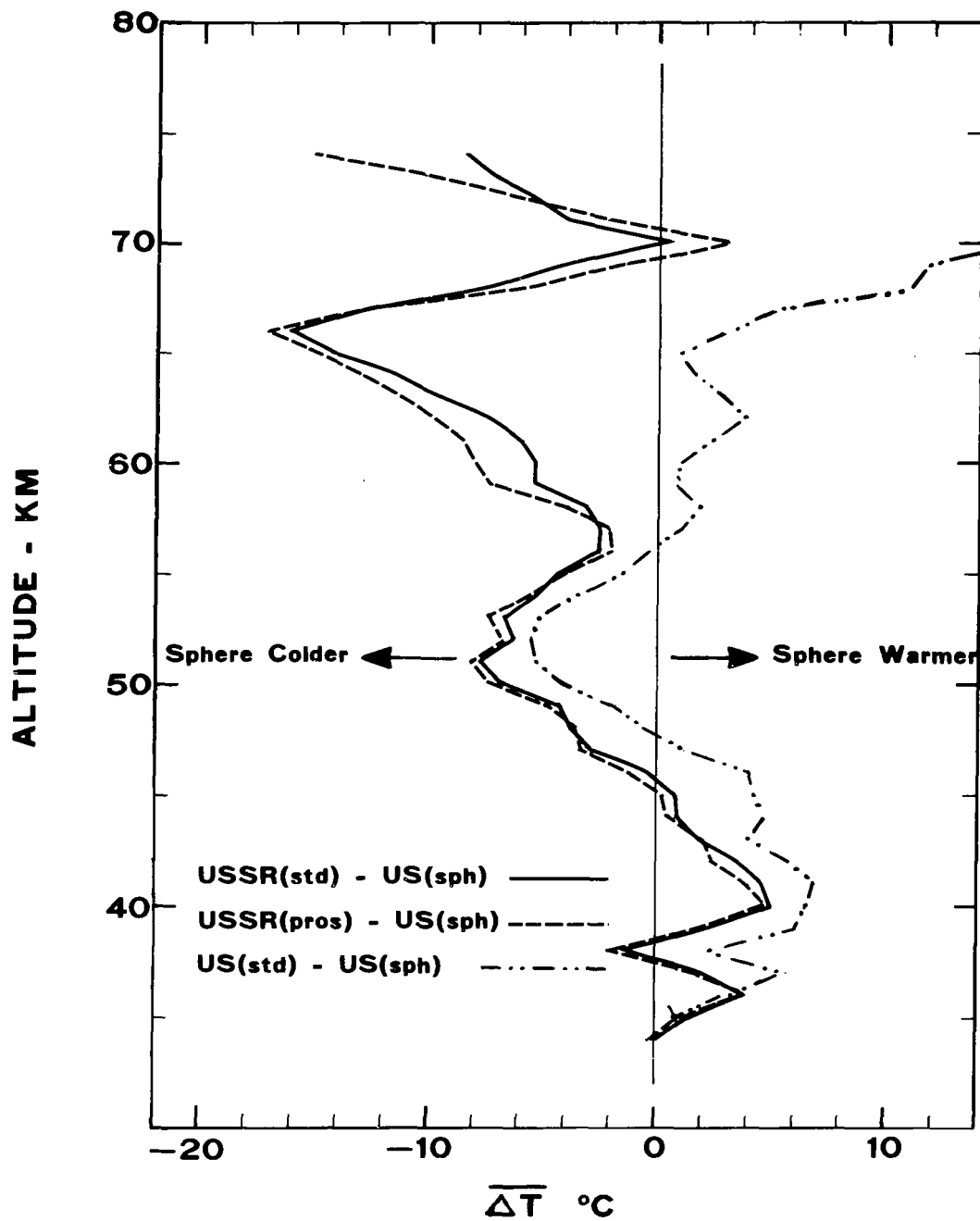


Figure 19. Profiles showing the mean of the differences of the measured temperatures ( $\Delta T$ ) obtained from the US(sphere technique and the US(standard), USSR(standard), and USSR(prospective) techniques.

measurements exists. Since the completion of the intercomparison, additional work has been done on the falling sphere technique, and the bias found in the area of the strato-pause, has been reduced considerably, but additional sphere and Datasonde comparisons are now necessary. Figure 20 suggests that the variability encountered may be coming from the sphere measurements; however, the small sample size can not be overlooked as a possible cause for the large variability.

Comparison of the wind components indicates that large differences in the mean meridional wind exist above 64 km, Figure 21, but below this altitude winds derived from both USSR techniques and the US technique agree quite well with winds derived from the spheres. The root-mean-square differences, Figure 22, in the meridional wind between the sphere and USSR techniques are quite similar, however smaller root-mean-square differences were noted to exist between the sphere and US(standard) technique. This is consistent with the results for the zonal component root-mean-square differences shown in Figure 24. Differences in the mean zonal wind, Figure 23, are less than  $6 \text{ ms}^{-1}$  below 61 km for both the USSR techniques vs the US(Sphere) and are less than  $6 \text{ ms}^{-1}$  below 66 km for the US(Sphere) vs US(standard) techniques.

#### CONCLUSIONS AND RECOMMENDATIONS

The intercomparison test conducted in 1977, offshore Wallops Flight Center, between the US and USSR, was successfully concluded. The launch sequence, except for minor schedule changes, followed the experimental design quite well. It was planned to launch 22 pairs of rocketsonde instruments, each pair to consist of a US Datasonde and a USSR M100B rocketsonde instrument. These 22 pair were split with half being launched during day and half during night. The results obtained were extraordinarily good. Twenty pairs of temperature data and 21 pairs of wind data were obtained, however, 22 pairs were successfully launched. The difference between those data pairs evaluated and the actual number launched is primarily due to altitudes that do not overlap in each case.

The results of the temperature comparison are very encouraging. American and Soviet temperature data, obtained using the standard techniques, agree in the mean to within  $6^\circ\text{C}$  to about 60 km altitude. However, the  $\text{rms}_{\text{diff}}$  is larger, being about  $\pm 8^\circ\text{C}$  at 60 km. The agreement in temperature measurement when using the USSR(pro prospective) technique is slightly worse. Wind data comparisons obtained using the US(standard) and USSR(prospec-tive) technique is better than that obtained when using the USSR(standard) technique. Nevertheless, agreement within  $3 \text{ ms}^{-1}$  is possible to 57 km, but wind data agreement to higher altitudes could be considered acceptable. Overall, the results of the 1977 comparison provides considerably more confidence in the joint use of the two data sets than

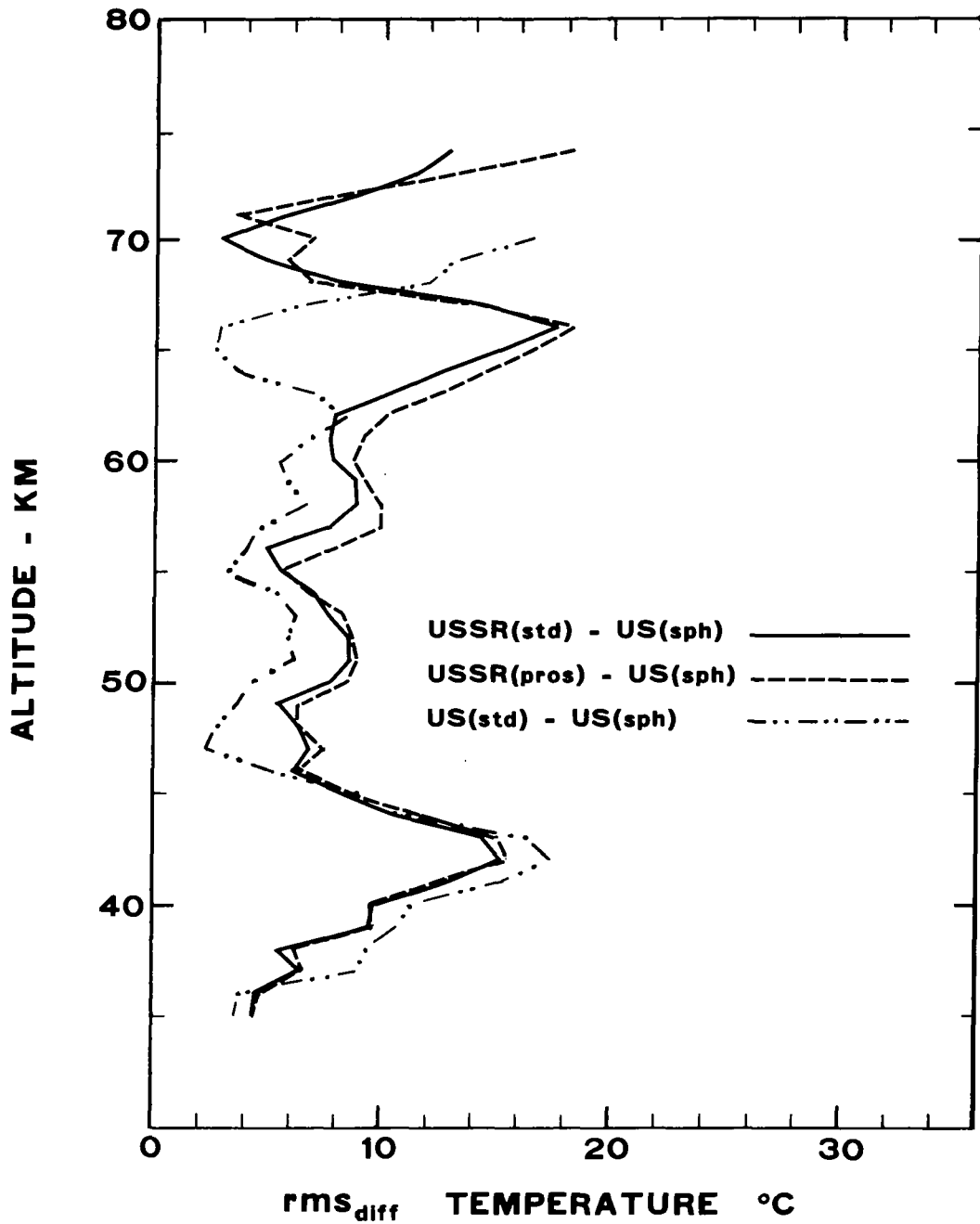


Figure 20. Root-Mean-Square differences ( $rms_{diff}$ ) of the temperatures obtained from the US(sphere) technique and the US(standard), USSR(standard), and the USSR(prospective) techniques.

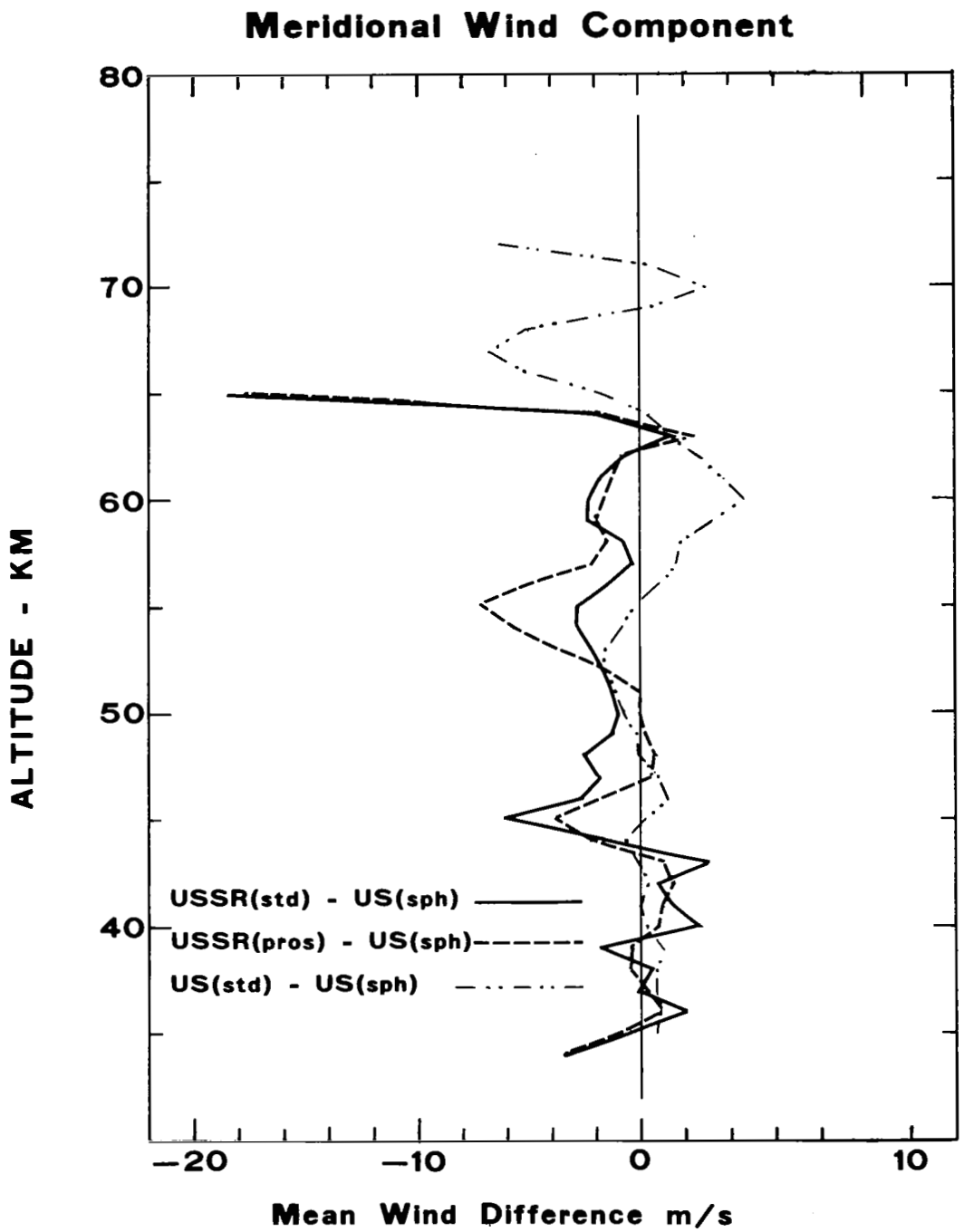


Figure 21. Mean of the differences of the meridional wind components obtained from the US(sphere) technique and the US(standard), USSR(standard), and USSR(prospective) techniques.



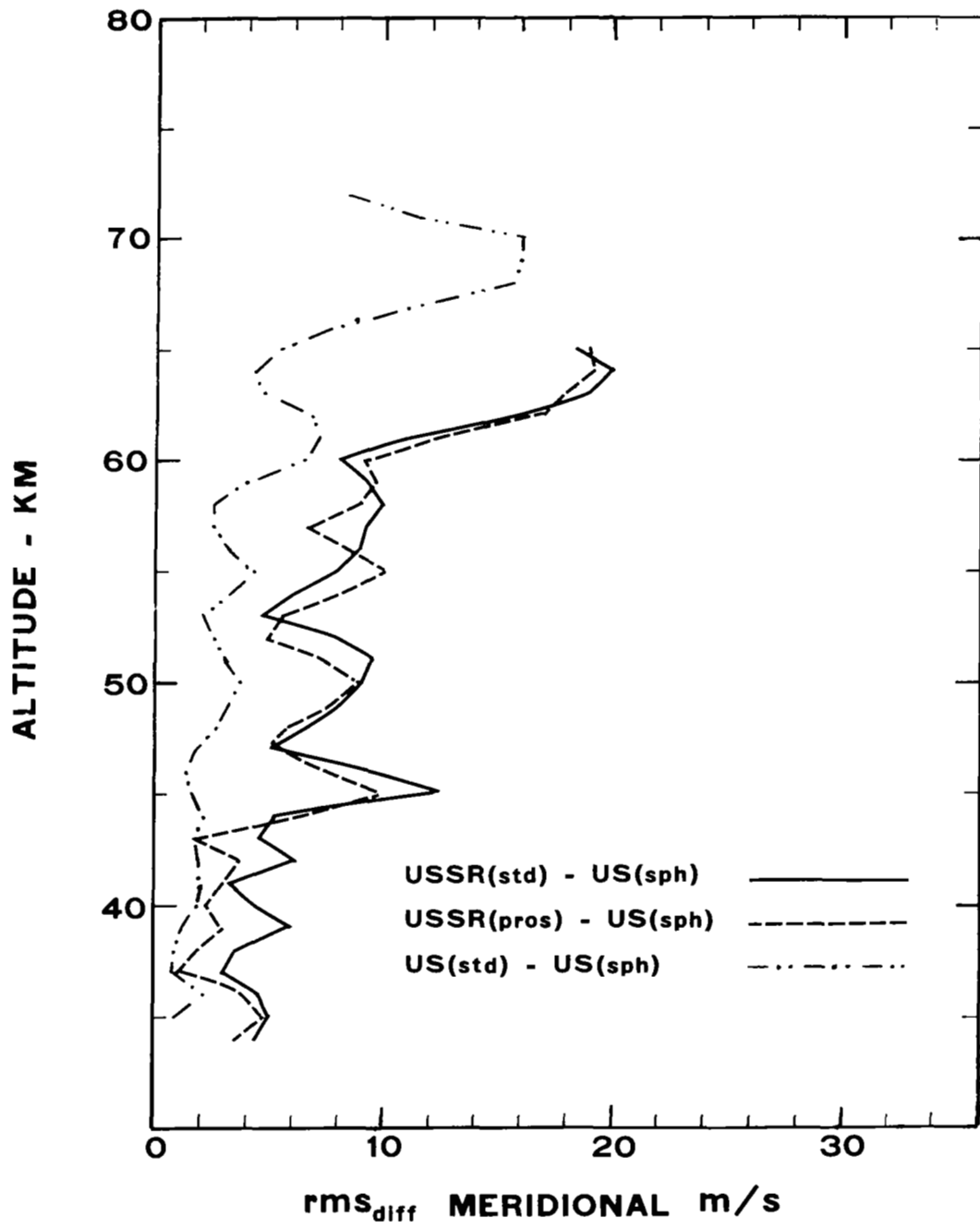


Figure 22. Root-Mean-Square differences ( $rms_{diff}$ ) of the meridional wind component obtained from the US(sphere) technique and the US(standard), USSR(standard), and USSR(prospective) techniques.

## Zonal Wind Component

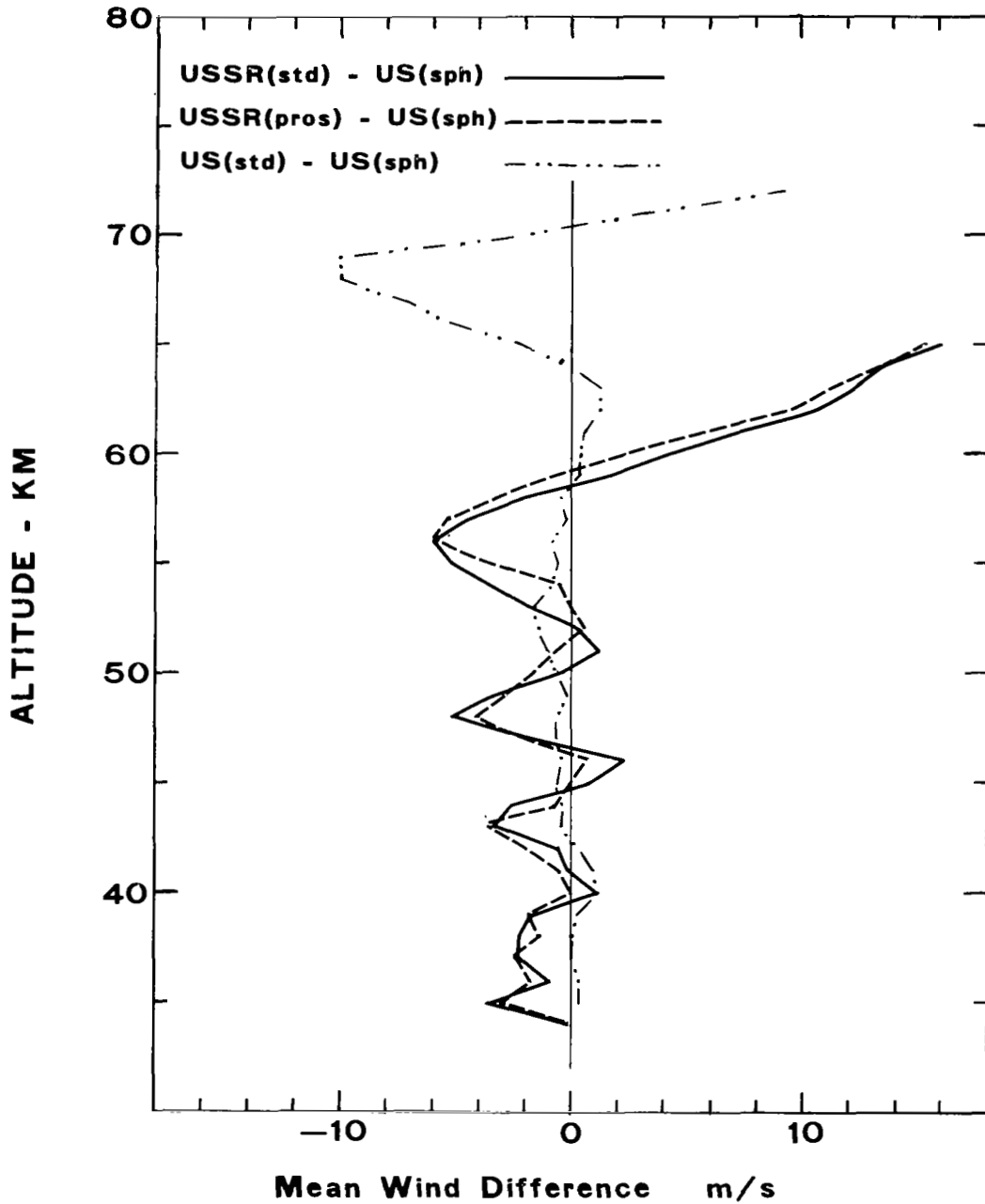


Figure 23. Mean of the differences of the zonal wind components obtained from the US(sphere) technique and the US(standard), USSR(standard), and USSR(prospective) techniques.

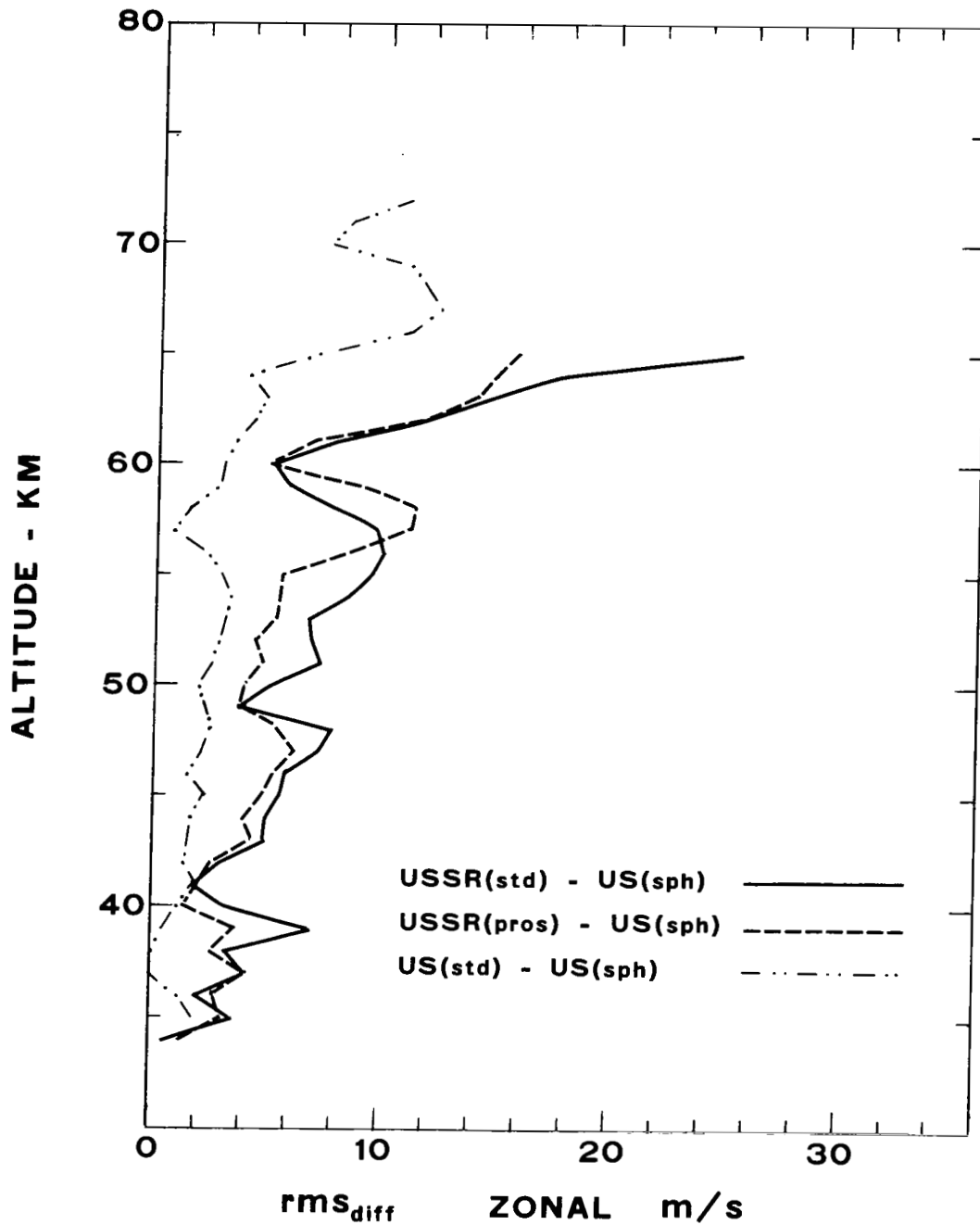


Figure 24. Root-Mean-Square differences ( $rms_{diff}$ ) of the zonal wind component obtained from the US(sphere) technique and the US(standard), USSR(standard), and USSR(prospective) techniques.

was possible after the 1973 intercomparison.

Comparison of the standard techniques with the falling sphere technique creates questions which will not be answered in this report. We find that the sphere derived temperature and, especially the winds, are in reasonable agreement below 66 km with the US(standard) technique. But this is to be expected since development of the sphere and Datasonde reduction results must be consistent with each other if either or both of these techniques are used jointly as is often the case in the United States. Nevertheless, the intercomparison results do suggest that additional investigation of the sphere compared to the standard technique is highly desirable.

Based on the results obtained from this intercomparison it is concluded that temperatures obtained with the USSR(standard) technique are in reasonable agreement (less than 4°C) up to 58 km, while temperatures obtained with the USSR(prospective) technique are only reasonable to 52 km. It is recommended that additional effort be undertaken to identify why the new technique does not provide as good agreement as the standard technique. It is clear that even the root-mean-square differences obtained between the US (standard) and USSR(prospective) begin to grow large at a much lower altitude than those obtained using standard techniques.

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## APPENDIX A

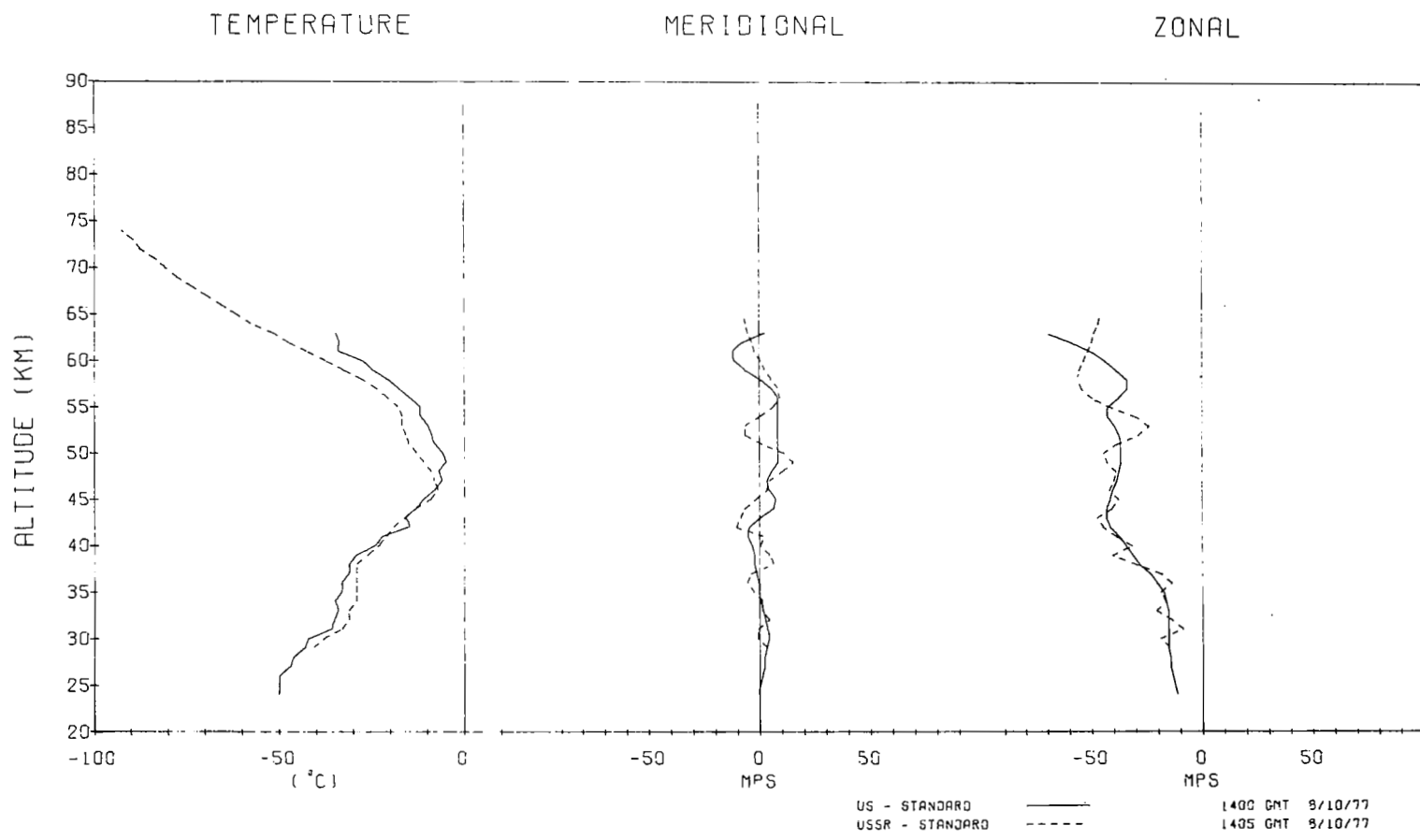
### LISTINGS AND PLOTS OF US(STANDARD) AND USSR(STANDARD) DATA

This appendix contains listings of the rocketsonde data obtained using the US(standard) and the USSR(standard) data reduction techniques. The differences (USSR-US) in the temperature and wind data are listed in their corresponding places. At altitudes where data are not available a group of nines (999) are entered. The plots, shown on the pages facing the tabulated data, are for convenience, and enhances individual pair comparison.



|     |       | US - STANDARD<br>AUG 10 1977<br>1400 GMT |     |       | USSR - STANDARD<br>AUG 10 1977<br>1405 GMT |     |       | DIFFERENCES<br>USSR-US   |     |  |
|-----|-------|--|-----|-------|--|-----|-------|--------------------------|-----|--|
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1                 |     | TEMP  | COMPONENT<br>WINDS<br>-1                   |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     |  |
| KM  | DEG C | M  | S   | DEG C | M  | S   | DEG C | M                        | S   |  |
|     |       | NS                                       | EW  |       | NS   | EW  |       | NS                       | EW  |  |
| 74  | 999   | 999                                      | 999 | -93   | 999  | 999 |       |                          |     |  |
| 73  | 999   | 999                                      | 999 | -90   | 999  | 999 |       |                          |     |  |
| 72  | 999   | 999                                      | 999 | -88   | 999  | 999 |       |                          |     |  |
| 71  | 999   | 999                                      | 999 | -84   | 999  | 999 |       |                          |     |  |
| 70  | 999   | 999                                      | 999 | -81   | 999  | 999 |       |                          |     |  |
| 69  | 999   | 999                                      | 999 | -78   | 999  | 999 |       |                          |     |  |
| 68  | 999   | 999                                      | 999 | -74   | 999  | 999 |       |                          |     |  |
| 67  | 999   | 999                                      | 999 | -70   | 999  | 999 |       |                          |     |  |
| 66  | 999   | 999                                      | 999 | -66   | 999  | 999 |       |                          |     |  |
| 65  | 999   | 999                                      | 999 | -62   | -8   | -46 |       |                          |     |  |
| 64  | 999   | 999                                      | 999 | -58   | -7   | -47 |       |                          |     |  |
| 63  | -35   | 2  | -70 | -52   | -6   | -49 | -17   | -8                       | 21  |  |
| 62  | -34   | -8                                       | -59 | -48   | -4   | -50 | -14   | 4                        | 9   |  |
| 61  | -34   | -13                                      | -50 | -43   | -3   | -52 | -9    | 10                       | -2  |  |
| 60  | -28   | -12                                      | -44 | -38   | 0  | -54 | -10   | 12                       | -10 |  |
| 59  | -25   | -7                                       | -39 | -33   | 2  | -56 | -8    | 9                        | -17 |  |
| 58  | -21   | 0  | -34 | -28   | 5  | -57 | -7    | 5                        | -23 |  |
| 57  | -18   | 5  | -34 | -24   | 8  | -55 | -6    | 3                        | -21 |  |
| 56  | -15   | 8  | -38 | -21   | 9  | -50 | -6    | 1                        | -12 |  |
| 55  | -12   | 8  | -43 | -18   | 6  | -41 | -6    | -2                       | 2   |  |
| 54  | -12   | 8  | -43 | -17   | 0  | -30 | -5    | -8                       | 13  |  |
| 53  | -10   | 8  | -40 | -17   | -7   | -24 | -7    | -15                      | 16  |  |
| 52  | -9    | 8  | -38 | -16   | -7   | -29 | -7    | -15                      | 9   |  |
| 51  | -8    | 8  | -37 | -15   | 1  | -39 | -7    | -7                       | -2  |  |
| 50  | -6    | 8  | -37 | -13   | 11   | -45 | -7    | 3                        | -8  |  |
| 49  | -5    | 8  | -37 | -11   | 15   | -43 | -6    | 7                        | -6  |  |
| 48  | -7    | 5  | -38 | -9    | 10   | -39 | -2    | 5                        | -1  |  |
| 47  | -6    | 3  | -39 | -8    | 4  | -40 | -2    | 1                        | -1  |  |
| 46  | -8    | 4  | -41 | -7    | 3  | -42 | 1     | -1                       | -1  |  |
| 45  | -11   | 7  | -42 | -9    | -2   | -38 | 2     | -9                       | 4   |  |
| 44  | -13   | 6  | -44 | -13   | -7   | -41 | 0     | -13                      | 3   |  |
| 43  | -16   | 0  | -44 | -16   | -9   | -48 | 0     | -9                       | -4  |  |
| 42  | -15   | -5                                       | -42 | -19   | -11  | -45 | -4    | -6                       | -3  |  |
| 41  | -22   | -6                                       | -38 | -21   | 2  | -39 | 1     | 8                        | -1  |  |

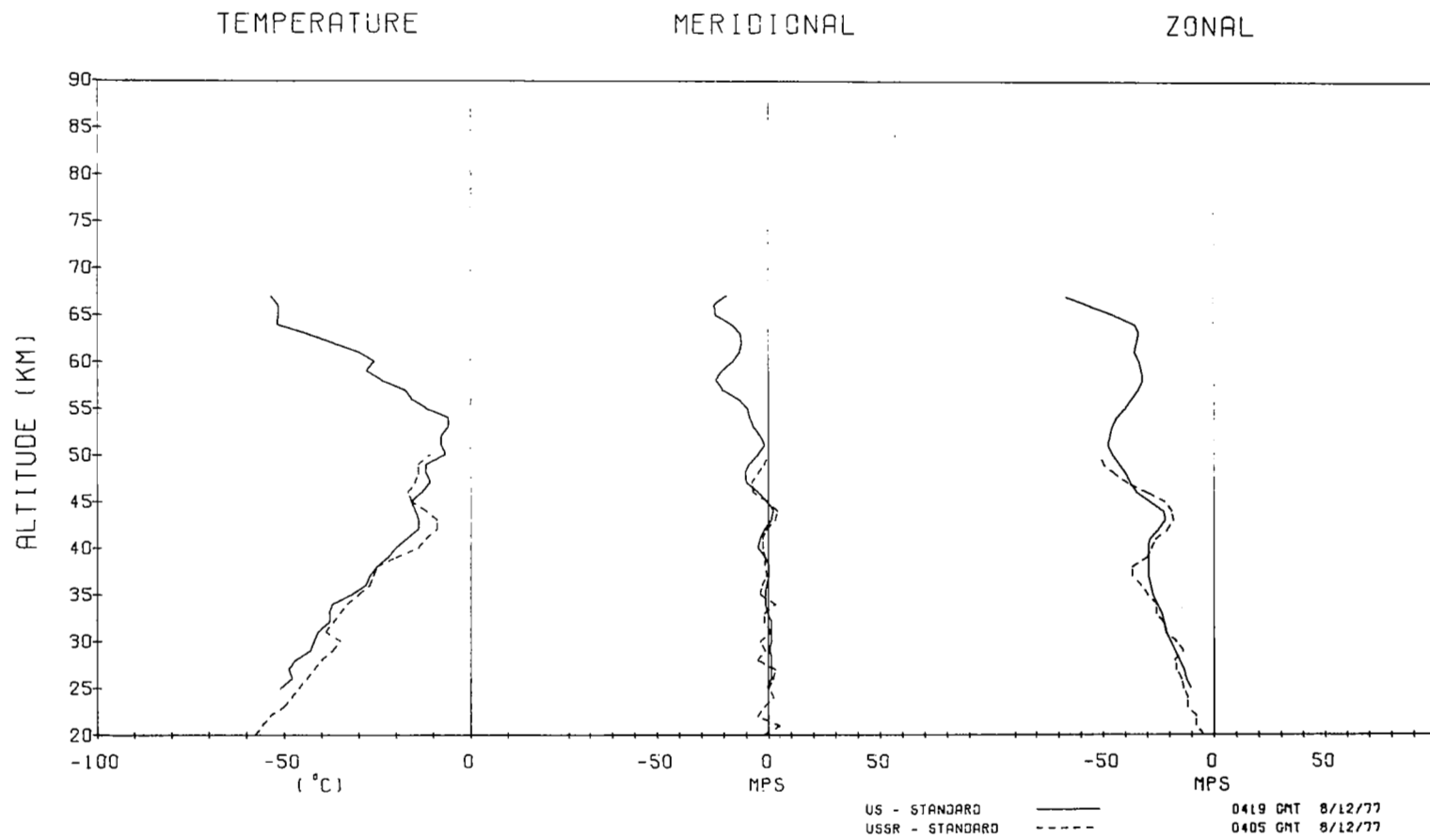
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |    |
|-----|-------|--------------------------|-----|-------|--------------------------|-----|-------|--------------------------|----|
| KM  | DEG C | M                        | S   | DEG C | M                        | S   | DEG C | M                        | S  |
|     |       | NS                       | EW  |       | NS                       | EW  |       | NS                       | EW |
| 40  | -24   | -4                       | -35 | -23   | 0                        | -32 | 1     | 4                        | 3  |
| 39  | -29   | -3                       | -32 | -26   | 4                        | -41 | 3     | 7                        | -9 |
| 38  | -31   | -3                       | -29 | -29   | 6                        | -30 | 2     | 9                        | -1 |
| 37  | -31   | -2                       | -24 | -29   | -4                       | -19 | 2     | -2                       | 5  |
| 36  | -33   | -1                       | -21 | -29   | -6                       | -14 | 4     | -5                       | 7  |
| 35  | -33   | -1                       | -18 | -29   | -3                       | -19 | 4     | -2                       | -1 |
| 34  | -35   | 0                        | -17 | -29   | 1                        | -17 | 6     | 1                        | 0  |
| 33  | -34   | 1                        | -16 | -31   | 1                        | -21 | 3     | 0                        | -5 |
| 32  | -35   | 2                        | -16 | -31   | 4                        | -14 | 4     | 2                        | 2  |
| 31  | -36   | 3                        | -16 | -33   | -1                       | -9  | 3     | -4                       | 7  |
| 30  | -42   | 4                        | -16 | -38   | -1                       | -19 | 4     | -5                       | -3 |
| 29  | -43   | 3                        | -16 | -41   | 3                        | -15 | 2     | 0                        | 1  |
| 28  | -46   | 2                        | -15 | 999   | 999                      | 999 |       |                          |    |
| 27  | -47   | 2                        | -15 | 999   | 999                      | 999 |       |                          |    |
| 26  | -50   | 1                        | -14 | 999   | 999                      | 999 |       |                          |    |
| 25  | -50   | 0                        | -13 | 999   | 999                      | 999 |       |                          |    |
| 24  | -50   | -1                       | -12 | 999   | 999                      | 999 |       |                          |    |



| ALT<br>KM | US - STANDARD<br>AUG 12 1977<br>0419 GMT |                          |     | USSR - STANDARD<br>AUG 12 1977<br>0405 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |    |
|-----------|--|--------------------------|-----|--|--------------------------|-----|------------------------|--------------------------|----|
|           | TEMP.<br>DEG C                           | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |    |
|           |  | M                        | S   |  | M                        | S   |                        | M                        | S  |
| 67        | -54                                      | -19                      | -67 | 999  | 999                      | 999 |                        |                          |    |
| 66        | -52                                      | -25                      | -56 | 999  | 999                      | 999 |                        |                          |    |
| 65        | -52                                      | -24                      | -45 | 999  | 999                      | 999 |                        |                          |    |
| 64        | -52                                      | -17                      | -36 | 999  | 999                      | 999 |                        |                          |    |
| 63        | -44                                      | -13                      | -34 | 999  | 999                      | 999 |                        |                          |    |
| 62        | -37                                      | -12                      | -35 | 999  | 999                      | 999 |                        |                          |    |
| 61        | -30                                      | -13                      | -36 | 999  | 999                      | 999 |                        |                          |    |
| 60        | -26                                      | -16                      | -34 | 999  | 999                      | 999 |                        |                          |    |
| 59        | -28                                      | -21                      | -33 | 999  | 999                      | 999 |                        |                          |    |
| 58        | -24                                      | -24                      | -32 | 999  | 999                      | 999 |                        |                          |    |
| 57        | -18                                      | -21                      | -34 | 999  | 999                      | 999 |                        |                          |    |
| 56        | -16                                      | -14                      | -37 | 999  | 999                      | 999 |                        |                          |    |
| 55        | -12                                      | -10                      | -40 | 999  | 999                      | 999 |                        |                          |    |
| 54        | -6                                       | -9                       | -44 | 999  | 999                      | 999 |                        |                          |    |
| 53        | -6                                       | -7                       | -46 | 999  | 999                      | 999 |                        |                          |    |
| 52        | -8                                       | -4                       | -47 | 999  | 999                      | 999 |                        |                          |    |
| 51        | -8                                       | -2                       | -48 | 999  | 999                      | 999 |                        |                          |    |
| 50        | -7                                       | -5                       | -46 | -11  | 0                        | -52 | -4                     | 5                        | -6 |
| 49        | -12                                      | -9                       | -43 | -14  | -2                       | -50 | -2                     | 7                        | -7 |
| 48        | -12                                      | -11                      | -40 | -14  | -5                       | -45 | -2                     | 6                        | -5 |
| 47        | -11                                      | -10                      | -38 | -15  | -8                       | -39 | -4                     | 2                        | -1 |
| 46        | -13                                      | -5                       | -35 | -17  | -7                       | -30 | -4                     | -2                       | 5  |
| 45        | -16                                      | -1                       | -29 | -16  | -1                       | -22 | 0                      | 0                        | 7  |
| 44        | -15                                      | 2                        | -23 | -12  | 4                        | -19 | 3                      | 2                        | 4  |
| 43        | -14                                      | 1                        | -22 | -9   | 3                        | -18 | 5                      | 2                        | 4  |
| 42        | -14                                      | -2                       | -25 | -9   | -1                       | -21 | 5                      | 1                        | 4  |
| 41        | -17                                      | -4                       | -29 | -12  | -3                       | -26 | 5                      | 1                        | 3  |
| 40        | -20                                      | -5                       | -30 | -14  | -3                       | -28 | 6                      | 2                        | 2  |
| 39        | -22                                      | -2                       | -30 | -20  | -2                       | -30 | 2                      | 0                        | 0  |
| 38        | -25                                      | 0                        | -30 | -25  | -2                       | -37 | 0                      | -2                       | -7 |
| 37        | -27                                      | 0                        | -30 | -26  | -1                       | -37 | 1                      | -1                       | -7 |
| 36        | -28                                      | -1                       | -29 | -27  | -3                       | -33 | 1                      | -2                       | -4 |
| 35        | -32                                      | -2                       | -28 | -30  | -4                       | -30 | 2                      | -2                       | -2 |
| 34        | -37                                      | -2                       | -26 | -33  | 3                        | -26 | 4                      | 5                        | 0  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | M                        | S   |               | M                        | S   |               | M                        | S  |
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 33        | -38           | -1                       | -24 | -35           | -2                       | -26 | 3             | -1                       | -2 |
| 32        | -38           | 1                        | -23 | -37           | -2                       | -23 | 1             | -3                       | 0  |
| 31        | -41           | 1                        | -22 | -39           | 1                        | -22 | 2             | 0                        | 0  |
| 30        | -42           | 1                        | -20 | -35           | -4                       | -17 | 7             | -5                       | 3  |
| 29        | -43           | 0                        | -18 | -37           | -2                       | -14 | 6             | -2                       | 4  |
| 28        | -47           | 1                        | -16 | -40           | -5                       | -18 | 7             | -6                       | -2 |
| 27        | -49           | 1                        | -14 | -42           | 3                        | -17 | 7             | 2                        | -3 |
| 26        | -48           | 1                        | -13 | -44           | 2                        | -15 | 4             | 1                        | -2 |
| 25        | -51           | -1                       | -11 | -46           | 0                        | -14 | 5             | 1                        | -3 |
| 24        | 999           | 999                      | 999 | -48           | 2                        | -12 |               |                          |    |
| 23        | 999           | 999                      | 999 | -50           | -2                       | -12 |               |                          |    |
| 22        | 999           | 999                      | 999 | -54           | -5                       | -8  |               |                          |    |
| 21        | 999           | 999                      | 999 | -56           | 5                        | -8  |               |                          |    |
| 20        | 999           | 999                      | 999 | -58           | -2                       | -5  |               |                          |    |

53



|     |      | US - STANDARD<br>AUG 12 1977<br>0659 GMT |     |     | USSR - STANDARD<br>AUG 12 1977<br>0605 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |   |
|-----|------|--|-----|-----|--|--------------------------|-----|------------------------|--------------------------|-----|---|
| ALT | TEMP | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |                        | COMPONENT<br>WINDS<br>-1 |     |   |
|     |      | DEG C                                    | M   | S   |  | DEG C                    | M   | S                      | DEG C                    | M   | S |
| KM  |      | NS                                       | S   | EW  | NS   | S                        | EW  | NS                     | S                        | EW  |   |
| 76  | 999  | 999                                      | 999 | 999 | -78  | 999                      | 999 |                        |                          |     |   |
| 75  | 999  | 999                                      | 999 | 999 | -75  | 999                      | 999 |                        |                          |     |   |
| 74  | 999  | 999                                      | 999 | 999 | -71  | 999                      | 999 |                        |                          |     |   |
| 73  | 999  | 999                                      | 999 | 999 | -68  | 999                      | 999 |                        |                          |     |   |
| 72  | 999  | 999                                      | 999 | 999 | -65  | 999                      | 999 |                        |                          |     |   |
| 71  | 999  | 999                                      | 999 | 999 | -62  | 999                      | 999 |                        |                          |     |   |
| 70  | -48  | -1                                       | -29 |     | -60  | 999                      | 999 | -12                    |                          |     |   |
| 69  | -50  | 1  | -39 |     | -58  | 999                      | 999 | -8                     |                          |     |   |
| 68  | -49  | -3                                       | -50 |     | -56  | 999                      | 999 | -7                     |                          |     |   |
| 67  | -51  | -14                                      | -58 |     | -55  | 999                      | 999 | -4                     |                          |     |   |
| 66  | -54  | -24                                      | -61 |     | -54  | 999                      | 999 | 0                      |                          |     |   |
| 65  | -50  | -29                                      | -61 |     | -53  | 999                      | 999 | -3                     |                          |     |   |
| 64  | -45  | -28                                      | -60 |     | -52  | 999                      | 999 | -7                     |                          |     |   |
| 63  | -42  | -26                                      | -59 |     | -50  | 999                      | 999 | -8                     |                          |     |   |
| 62  | -42  | -26                                      | -56 |     | -48  | 999                      | 999 | -6                     |                          |     |   |
| 61  | -40  | -27                                      | -51 |     | -45  | 999                      | 999 | -5                     |                          |     |   |
| 60  | -34  | -26                                      | -46 |     | -42  | -10                      | -22 | -8                     | 16                       | 24  |   |
| 59  | -32  | -20                                      | -42 |     | -38  | -8                       | -24 | -6                     | 12                       | 18  |   |
| 58  | -31  | -13                                      | -40 |     | -34  | -7                       | -27 | -3                     | 6                        | 13  |   |
| 57  | -26  | -6                                       | -39 |     | -29  | -6                       | -30 | -3                     | 0                        | 9   |   |
| 56  | -22  | -4                                       | -41 |     | -24  | -6                       | -32 | -2                     | -2                       | 9   |   |
| 55  | -17  | -4                                       | -42 |     | -19  | -7                       | -34 | -2                     | -3                       | 8   |   |
| 54  | -13  | -7                                       | -42 |     | -15  | -8                       | -34 | -2                     | -1                       | 8   |   |
| 53  | -11  | -9                                       | -40 |     | -11  | -10                      | -33 | 0                      | -1                       | 7   |   |
| 52  | -10  | -7                                       | -39 |     | -8   | -10                      | -32 | 2                      | -3                       | 7   |   |
| 51  | -9   | -4                                       | -39 |     | -6   | -10                      | -35 | 3                      | -6                       | 4   |   |
| 50  | -7   | -3                                       | -40 |     | -5   | -10                      | -39 | 2                      | -7                       | 1   |   |
| 49  | -5   | -5                                       | -41 |     | -5   | -10                      | -43 | 0                      | -5                       | -2  |   |
| 48  | -5   | -9                                       | -40 |     | -7   | -11                      | -44 | -2                     | -2                       | -4  |   |
| 47  | -3   | -9                                       | -39 |     | -9   | -13                      | -46 | -6                     | -4                       | -7  |   |
| 46  | -10  | -4                                       | -38 |     | -11  | -14                      | -49 | -1                     | -10                      | -11 |   |
| 45  | -11  | -1                                       | -36 |     | -13  | -11                      | -48 | -2                     | -10                      | -12 |   |
| 44  | -10  | 0  | -33 |     | -14  | -4                       | -39 | -4                     | -4                       | -6  |   |
| 43  | -10  | 0  | -30 |     | -14  | 4                        | -33 | -4                     | 4                        | -3  |   |

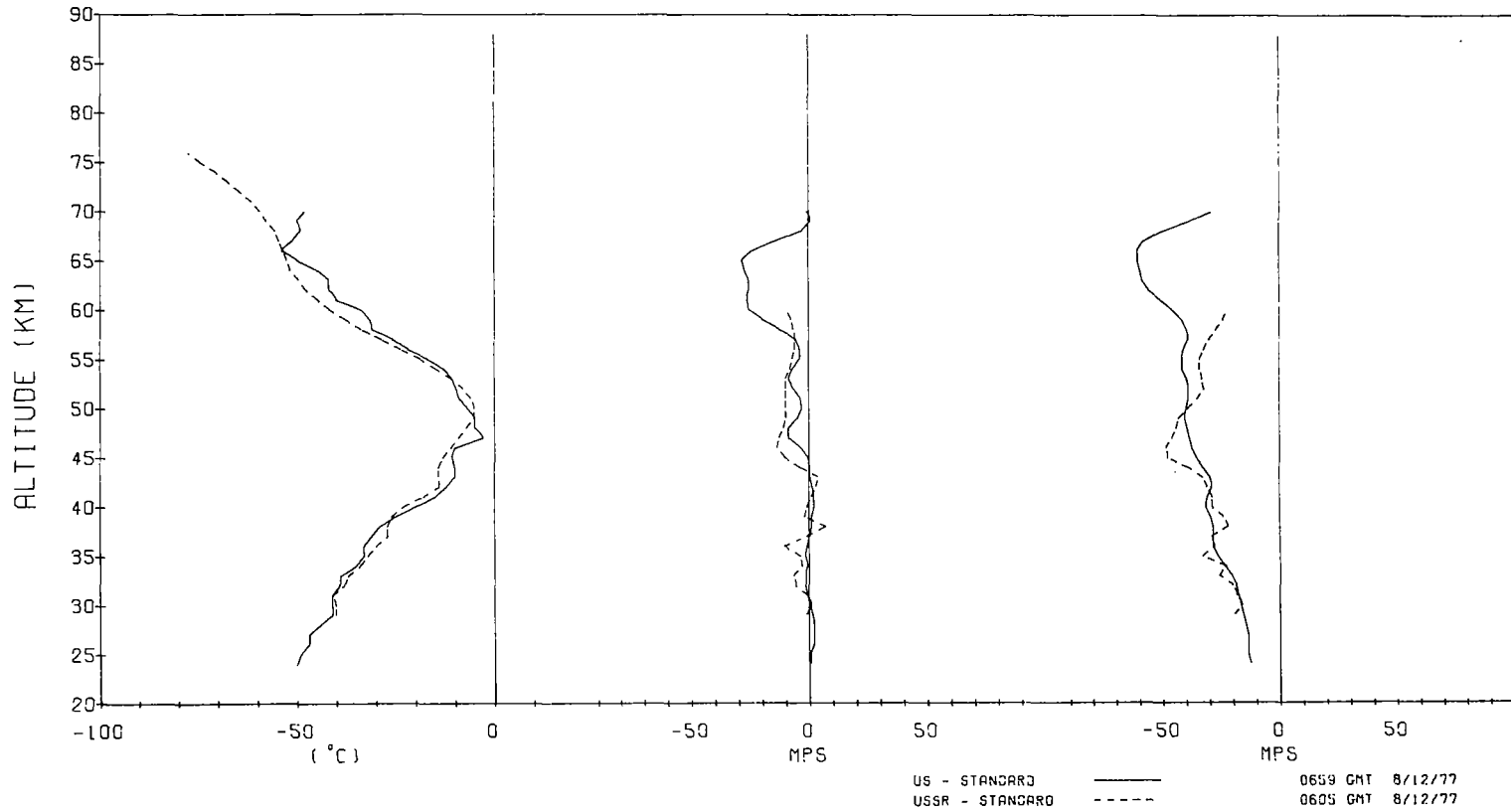
| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | COMPONENT<br>WINDS<br>-1 |    |   |
|-----|------|--------------------------|-----|----|------|--------------------------|-----|----|--------------------------|----|---|
|     |      | DEG C                    | M   | S  |      | DEG C                    | M   | S  | DEG C                    | M  | S |
| KM  |      | NS                       | S   | EW | NS   | S                        | EW  | NS | S                        | EW |   |
| 42  | -12  | 1                        | -29 |    | -14  | 3                        | -31 | -2 | 2                        | -2 |   |
| 41  | -15  | 2                        | -31 |    | -18  | 1                        | -29 | -3 | -1                       | 2  |   |
| 40  | -20  | 2                        | -32 |    | -23  | -1                       | -29 | -3 | -3                       | 3  |   |
| 39  | -25  | 1                        | -30 |    | -26  | -2                       | -24 | -1 | -3                       | 6  |   |
| 38  | -29  | 1                        | -29 |    | -27  | 7                        | -22 | 2  | 6                        | 7  |   |
| 37  | -31  | 0                        | -29 |    | -27  | -1                       | -29 | 4  | -1                       | 0  |   |
| 36  | -33  | -1                       | -29 |    | -30  | -11                      | -28 | 3  | -10                      | 1  |   |
| 35  | -33  | -2                       | -27 |    | -32  | -4                       | -33 | 1  | -2                       | -6 |   |
| 34  | -35  | -1                       | -24 |    | -34  | -3                       | -23 | 1  | -2                       | 1  |   |
| 33  | -39  | -2                       | -21 |    | -37  | -7                       | -26 | 2  | -5                       | -5 |   |
| 32  | -39  | -2                       | -19 |    | -38  | -6                       | -20 | 1  | -4                       | -1 |   |
| 31  | -41  | -1                       | -18 |    | -41  | -1                       | -18 | 0  | 0                        | 0  |   |
| 30  | -41  | 0                        | -17 |    | -40  | 1                        | -16 | 1  | 1                        | 1  |   |
| 29  | -41  | 1                        | -16 |    | -40  | -1                       | -19 | 1  | -2                       | -3 |   |
| 28  | -44  | 2                        | -15 |    | 999  | 999                      | 999 |    |                          |    |   |
| 27  | -47  | 2                        | -14 |    | 999  | 999                      | 999 |    |                          |    |   |
| 26  | -47  | 2                        | -14 |    | 999  | 999                      | 999 |    |                          |    |   |
| 25  | -49  | 0                        | -14 |    | 999  | 999                      | 999 |    |                          |    |   |
| 24  | -50  | 0                        | -13 |    | 999  | 999                      | 999 |    |                          |    |   |

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TEMPERATURE

MERIDIONAL

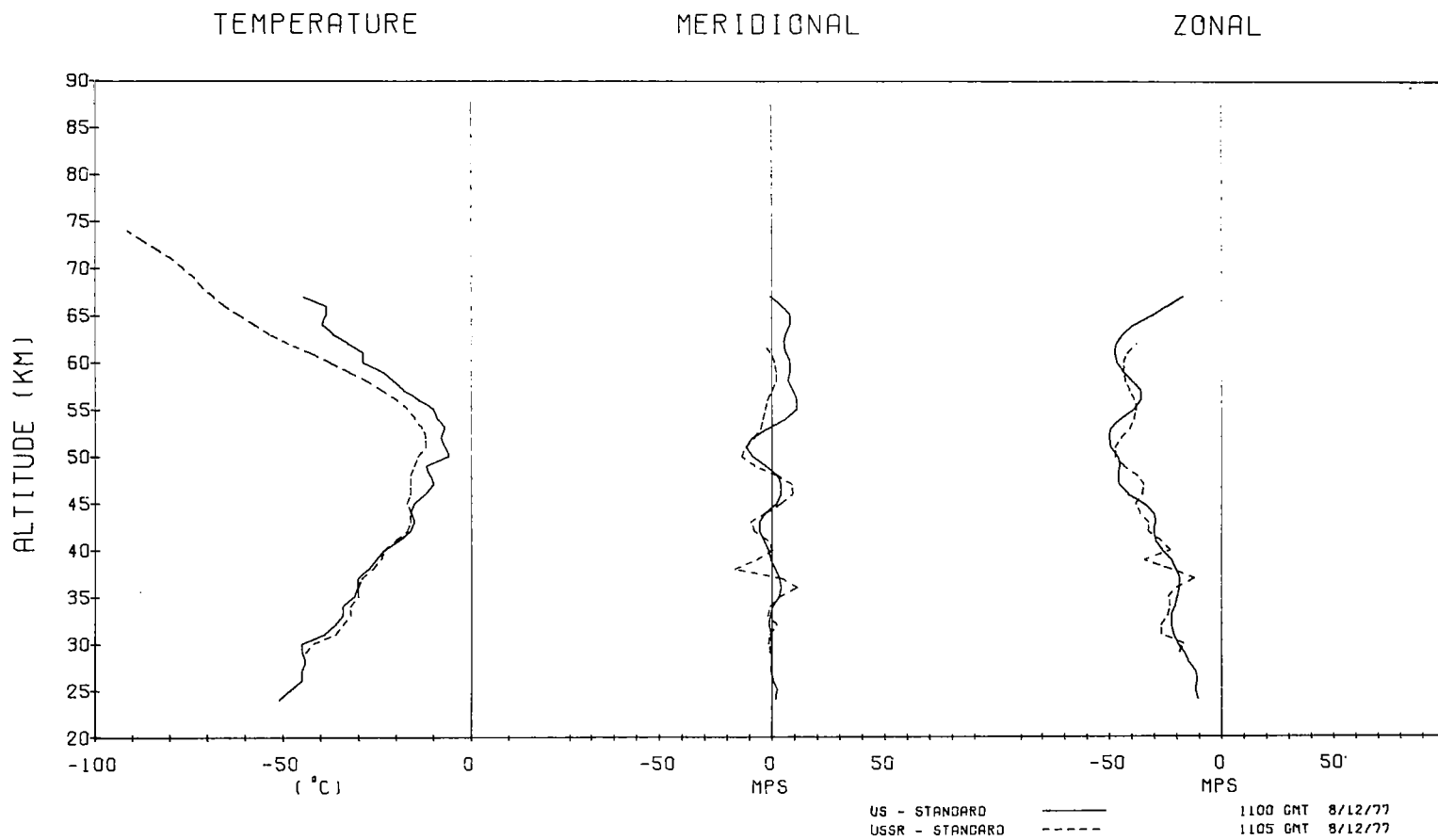
ZONAL



96

|     |       | US - STANDARD<br>AUG 12 1977<br>1100 GMT |     |     | USSR - STANDARD<br>AUG 12 1977<br>1105 GMT |                          |     | DIFFERENCES<br>USSR-US |       |                          |    |    |
|-----|-------|--|-----|-----|--|--------------------------|-----|------------------------|-------|--------------------------|----|----|
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP  | COMPONENT<br>WINDS<br>-1 |    |    |
| KM  | DEG C | M  | S   | EW  | DEG C                                      | M                        | S   | EW                     | DEG C | M                        | S  | EW |
| 74  | 999   | 999                                      | 999 | 999 | -92  | 999                      | 999 | 999                    |       |                          |    |    |
| 73  | 999   | 999                                      | 999 | 999 | -88  | 999                      | 999 | 999                    |       |                          |    |    |
| 72  | 999   | 999                                      | 999 | 999 | -84  | 999                      | 999 | 999                    |       |                          |    |    |
| 71  | 999   | 999                                      | 999 | 999 | -80  | 999                      | 999 | 999                    |       |                          |    |    |
| 70  | 999   | 999                                      | 999 | 999 | -77  | 999                      | 999 | 999                    |       |                          |    |    |
| 69  | 999   | 999                                      | 999 | 999 | -74  | 999                      | 999 | 999                    |       |                          |    |    |
| 68  | 999   | 999                                      | 999 | 999 | -72  | 999                      | 999 | 999                    |       |                          |    |    |
| 67  | -45   | -1                                       | -17 |     | -69  | 999                      | 999 |                        | -24   |                          |    |    |
| 66  | -39   | 4  | -24 |     | -66  | 999                      | 999 |                        | -27   |                          |    |    |
| 65  | -39   | 8  | -31 |     | -62  | 999                      | 999 |                        | -23   |                          |    |    |
| 64  | -40   | 8  | -39 |     | -58  | 999                      | 999 |                        | -18   |                          |    |    |
| 63  | -37   | 6  | -44 |     | -54  | 999                      | 999 |                        | -17   |                          |    |    |
| 62  | -33   | 5  | -47 |     | -49  | -4                       | -38 |                        | -16   | -9                       | 9  |    |
| 61  | -29   | 6  | -48 |     | -43  | -1                       | -42 |                        | -14   | -7                       | 6  |    |
| 60  | -29   | 8  | -47 |     | -38  | 1                        | -44 |                        | -9    | -7                       | 3  |    |
| 59  | -24   | 8  | -44 |     | -33  | 2                        | -44 |                        | -9    | -6                       | 0  |    |
| 58  | -21   | 7  | -40 |     | -28  | 2                        | -43 |                        | -7    | -5                       | -3 |    |
| 57  | -18   | 9  | -36 |     | -24  | 0                        | -41 |                        | -6    | -9                       | -5 |    |
| 56  | -14   | 11                                       | -36 |     | -20  | -2                       | -39 |                        | -6    | -13                      | -3 |    |
| 55  | -10   | 11                                       | -39 |     | -17  | -3                       | -38 |                        | -7    | -14                      | 1  |    |
| 54  | -9    | 6  | -45 |     | -15  | -4                       | -39 |                        | -6    | -10                      | 6  |    |
| 53  | -7    | -2                                       | -50 |     | -13  | -5                       | -41 |                        | -6    | -3                       | 9  |    |
| 52  | -8    | -9                                       | -51 |     | -12  | -8                       | -45 |                        | -4    | 1                        | 6  |    |
| 51  | -7    | -12                                      | -50 |     | -12  | -12                      | -48 |                        | -5    | 0                        | 2  |    |
| 50  | -6    | -9                                       | -47 |     | -14  | -14                      | -48 |                        | -8    | -5                       | -1 |    |
| 49  | -12   | -3                                       | -46 |     | -15  | -8                       | -44 |                        | -3    | -5                       | 2  |    |
| 48  | -11   | 2  | -47 |     | -16  | 2                        | -38 |                        | -5    | 0                        | 9  |    |
| 47  | -10   | 4  | -46 |     | -16  | 9                        | -35 |                        | -6    | 5                        | 11 |    |
| 46  | -12   | 4  | -42 |     | -16  | 9                        | -36 |                        | -4    | 5                        | 6  |    |
| 45  | -15   | 2  | -35 |     | -17  | 4                        | -39 |                        | -2    | 2                        | -4 |    |
| 44  | -16   | -3                                       | -31 |     | -16  | -3                       | -37 |                        | 0     | 0                        | -6 |    |
| 43  | -15   | -6                                       | -30 |     | -16  | -10                      | -33 |                        | -1    | -4                       | -3 |    |
| 42  | -16   | -6                                       | -31 |     | -17  | -8                       | -33 |                        | -1    | -2                       | -2 |    |
| 41  | -19   | -4                                       | -30 |     | -20  | -2                       | -27 |                        | -1    | 2                        | 3  |    |

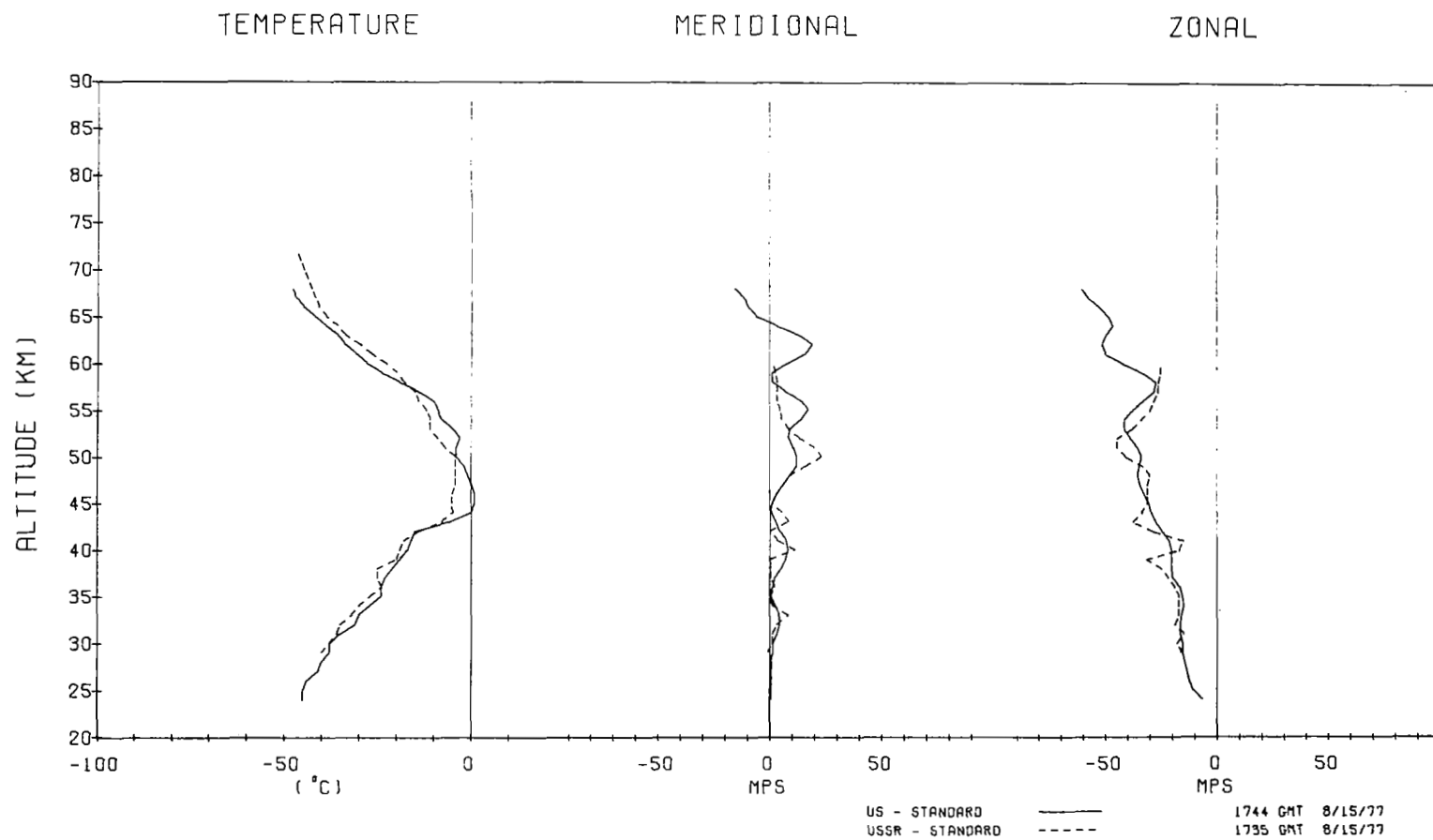
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1 |     |    | TEMP  | COMPONENT<br>WINDS<br>-1 |     |    | TEMP  | COMPONENT<br>WINDS<br>-1 |     |    |
|-----|-------|--------------------------|-----|----|-------|--------------------------|-----|----|-------|--------------------------|-----|----|
| KM  | DEG C | M                        | S   | EW | DEG C | M                        | S   | EW | DEG C | M                        | S   | EW |
| 40  | -23   | -2                       | -27 |    | -23   | 0                        | -23 |    | 0     | 2                        | 4   |    |
| 39  | -25   | -1                       | -23 |    | -24   | -7                       | -35 |    | 1     | -6                       | -12 |    |
| 38  | -27   | 1                        | -21 |    | -26   | -17                      | -23 |    | 1     | -18                      | -2  |    |
| 37  | -30   | 3                        | -19 |    | -29   | 4                        | -12 |    | 1     | 1                        | 7   |    |
| 36  | -30   | 4                        | -19 |    | -30   | 11                       | -20 |    | 0     | 7                        | -1  |    |
| 35  | -31   | 3                        | -20 |    | -30   | 3                        | -24 |    | 1     | 0                        | -4  |    |
| 34  | -34   | 0                        | -21 |    | -32   | -1                       | -23 |    | 2     | -1                       | -2  |    |
| 33  | -34   | -1                       | -23 |    | -32   | -2                       | -24 |    | 2     | -1                       | -1  |    |
| 32  | -36   | -2                       | -23 |    | -34   | 2                        | -27 |    | 2     | 4                        | -4  |    |
| 31  | -39   | -1                       | -22 |    | -36   | -1                       | -27 |    | 3     | 0                        | -5  |    |
| 30  | -45   | -1                       | -20 |    | -42   | -2                       | -17 |    | 3     | -1                       | 3   |    |
| 29  | -45   | -1                       | -17 |    | -44   | -1                       | -19 |    | 1     | 0                        | -2  |    |
| 28  | -44   | -1                       | -15 |    | 999   | 999                      | 999 |    |       |                          |     |    |
| 27  | -45   | -1                       | -12 |    | 999   | 999                      | 999 |    |       |                          |     |    |
| 26  | -45   | 0                        | -11 |    | 999   | 999                      | 999 |    |       |                          |     |    |
| 25  | -48   | 2                        | -12 |    | 999   | 999                      | 999 |    |       |                          |     |    |
| 24  | -51   | 1                        | -11 |    | 999   | 999                      | 999 |    |       |                          |     |    |





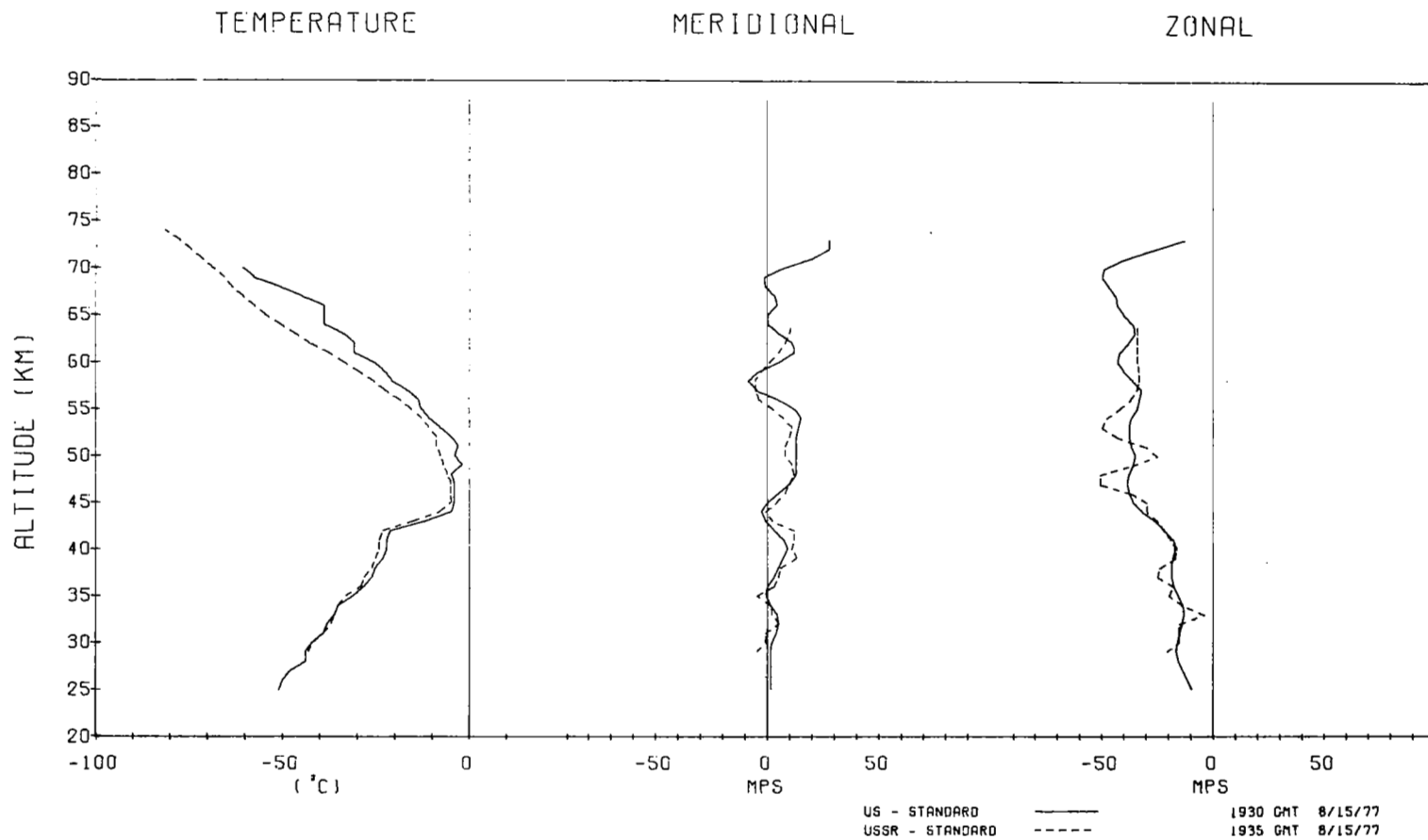
|           |               | US - STANDARD<br>AUG 15 1977<br>1744 GMT |     |     | USSR - STANDARD<br>AUG 15 1977<br>1735 GMT |                          |     | DIFFERENCES<br>USSR-US |               |                          |   |    |
|-----------|---------------|--|-----|-----|--|--------------------------|-----|------------------------|---------------|--------------------------|---|----|
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |
|           |               | NS                                       | S   | EW  |  | NS                       | S   | EW                     |               | NS                       | S | EW |
| 72        | 999           | 999                                      | 999 | 999 | -47  | 999                      | 999 |                        |               |                          |   |    |
| 71        | 999           | 999                                      | 999 | 999 | -46  | 999                      | 999 |                        |               |                          |   |    |
| 70        | 999           | 999                                      | 999 | 999 | -45  | 999                      | 999 |                        |               |                          |   |    |
| 69        | 999           | 999                                      | 999 | 999 | -44  | 999                      | 999 |                        |               |                          |   |    |
| 68        | -48           | -16                                      | -61 |     | -43  | 999                      | 999 | 5                      |               |                          |   |    |
| 67        | -47           | -12                                      | -58 |     | -42  | 999                      | 999 | 5                      |               |                          |   |    |
| 66        | -45           | -10                                      | -53 |     | -41  | 999                      | 999 | 4                      |               |                          |   |    |
| 65        | -42           | -6                                       | -49 |     | -39  | 999                      | 999 | 3                      |               |                          |   |    |
| 64        | -39           | 3  | -47 |     | -36  | 999                      | 999 | 3                      |               |                          |   |    |
| 63        | -36           | 13                                       | -50 |     | -34  | 999                      | 999 | 2                      |               |                          |   |    |
| 62        | -34           | 19                                       | -52 |     | -30  | 999                      | 999 | 4                      |               |                          |   |    |
| 61        | -31           | 16                                       | -50 |     | -27  | 999                      | 999 | 4                      |               |                          |   |    |
| 60        | -28           | 8  | -42 |     | -23  | 1                        | -25 | 5                      | -7            | 17                       |   |    |
| 59        | -24           | 1  | -33 |     | -20  | 2                        | -25 | 4                      | 1             | 8                        |   |    |
| 58        | -19           | 1  | -27 |     | -18  | 3                        | -26 | 1                      | 2             | 1                        |   |    |
| 57        | -14           | 7  | -28 |     | -15  | 3                        | -26 | -1                     | -4            | 2                        |   |    |
| 56        | -10           | 14                                       | -33 |     | -14  | 3                        | -28 | -4                     | -11           | 5                        |   |    |
| 55        | -9            | 17                                       | -38 |     | -12  | 4                        | -30 | -3                     | -13           | 8                        |   |    |
| 54        | -8            | 14                                       | -42 |     | -11  | 5                        | -34 | -3                     | -9            | 8                        |   |    |
| 53        | -5            | 9  | -42 |     | -11  | 8                        | -38 | -6                     | -1            | 4                        |   |    |
| 52        | -3            | 8  | -39 |     | -9   | 13                       | -45 | -6                     | 5             | -6                       |   |    |
| 51        | -4            | 10                                       | -36 |     | -7   | 20                       | -45 | -3                     | 10            | -9                       |   |    |
| 50        | -4            | 12                                       | -34 |     | -4   | 23                       | -41 | 0                      | 11            | -7                       |   |    |
| 49        | -2            | 12                                       | -35 |     | -4   | 16                       | -33 | -2                     | 4             | 2                        |   |    |
| 48        | -1            | 9  | -36 |     | -4   | 9                        | -30 | -3                     | 0             | 6                        |   |    |
| 47        | 0             | 6  | -35 |     | -4   | 6                        | -31 | -4                     | 0             | 4                        |   |    |
| 46        | 1             | 3  | -33 |     | -5   | 3                        | -31 | -6                     | 0             | 2                        |   |    |
| 45        | 1             | 1  | -31 |     | -5   | 1                        | -31 | -6                     | 0             | 0                        |   |    |
| 44        | 0             | 0  | -30 |     | -5   | 5                        | -34 | -5                     | 5             | -4                       |   |    |
| 43        | -6            | 2  | -28 |     | -8   | 8                        | -38 | -2                     | 6             | -10                      |   |    |
| 42        | -15           | 4  | -25 |     | -14  | 0                        | -29 | 1                      | -4            | -4                       |   |    |
| 41        | -16           | 7  | -22 |     | -18  | 3                        | -15 | -2                     | -4            | 7                        |   |    |
| 40        | -17           | 8  | -21 |     | -19  | 11                       | -17 | -2                     | 3             | 4                        |   |    |
| 39        | -19           | 7  | -21 |     | -20  | 0                        | -32 | -1                     | -7            | -11                      |   |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|----|----|
|           |               | NS                       | S   | EW |               | NS                       | S   | EW |               | NS                       | S  | EW |
| 38        | -21           | 5                        | -21 |    | -25           | 0                        | -25 |    | -4            | -5                       | -4 |    |
| 37        | -23           | 2                        | -20 |    | -25           | 0                        | -22 |    | -2            | -2                       | -2 |    |
| 36        | -24           | 1                        | -17 |    | -24           | 2                        | -19 |    | 0             | 1                        | -2 |    |
| 35        | -24           | 0                        | -16 |    | -27           | 0                        | -17 |    | -3            | 0                        | -1 |    |
| 34        | -27           | 2                        | -15 |    | -30           | 1                        | -17 |    | -3            | -1                       | -2 |    |
| 33        | -30           | 4                        | -16 |    | -32           | 8                        | -17 |    | -2            | 4                        | -1 |    |
| 32        | -31           | 4                        | -17 |    | -35           | 3                        | -19 |    | -4            | -1                       | -2 |    |
| 31        | -35           | 3                        | -17 |    | -36           | 1                        | -15 |    | -1            | -2                       | 2  |    |
| 30        | -38           | 1                        | -16 |    | -38           | 1                        | -18 |    | 0             | 0                        | -2 |    |
| 29        | -38           | 1                        | -16 |    | -40           | -1                       | -16 |    | -2            | -2                       | 0  |    |
| 28        | -40           | 0                        | -15 |    | 999           | 999                      | 999 |    |               |                          |    |    |
| 27        | -41           | 0                        | -14 |    | 999           | 999                      | 999 |    |               |                          |    |    |
| 26        | -44           | 0                        | -13 |    | 999           | 999                      | 999 |    |               |                          |    |    |
| 25        | -45           | 0                        | -11 |    | 999           | 999                      | 999 |    |               |                          |    |    |
| 24        | -45           | 0                        | -7  |    | 999           | 999                      | 999 |    |               |                          |    |    |



| US - STANDARD<br>AUG 15 1977<br>1930 GMT |               |                          |     | USSR - STANDARD<br>AUG 15 1977<br>1935 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |     |  |  |
|--|---------------|--------------------------|-----|--|--------------------------|-----|---------------|--------------------------|-----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  |  |
|  |               | NS                       | EW  |  | NS                       | EW  |               | NS                       | EW  |  |  |
| 74                                       | 999           | 999                      | 999 | -82  | 999                      | 999 |               |                          |     |  |  |
| 73                                       | 999           | 28                       | -13 | -78  | 999                      | 999 |               |                          |     |  |  |
| 72                                       | 999           | 28                       | -27 | -75  | 999                      | 999 |               |                          |     |  |  |
| 71                                       | 999           | 20                       | -40 | -72  | 999                      | 999 |               |                          |     |  |  |
| 70                                       | -61           | 7                        | -49 | -69  | 999                      | 999 | -8            |                          |     |  |  |
| 69                                       | -58           | -2                       | -50 | -66  | 999                      | 999 | -13           |                          |     |  |  |
| 68                                       | -51           | -1                       | -47 | -64  | 999                      | 999 | -8            |                          |     |  |  |
| 67                                       | -45           | 3                        | -44 | -61  | 999                      | 999 | -16           |                          |     |  |  |
| 66                                       | -39           | 4                        | -43 | -58  | 999                      | 999 | -19           |                          |     |  |  |
| 65                                       | -39           | 0                        | -40 | -55  | 999                      | 999 | -16           |                          |     |  |  |
| 64                                       | -39           | 0                        | -36 | -51  | 11                       | -34 | -12           | 11                       | 2   |  |  |
| 63                                       | -34           | 5                        | -35 | -47  | 10                       | -34 | -13           | 5                        | 1   |  |  |
| 62                                       | -31           | 11                       | -38 | -43  | 8                        | -34 | -12           | -3                       | 4   |  |  |
| 61                                       | -31           | 12                       | -42 | -38  | 5                        | -34 | -7            | -7                       | 8   |  |  |
| 60                                       | -26           | 5                        | -43 | -34  | 1                        | -34 | -8            | -4                       | 9   |  |  |
| 59                                       | -23           | -4                       | -40 | -30  | -3                       | -33 | -7            | 1                        | 7   |  |  |
| 58                                       | -21           | -9                       | -36 | -26  | -6                       | -33 | -5            | 3                        | 3   |  |  |
| 57                                       | -17           | -5                       | -32 | -23  | -6                       | -34 | -6            | -1                       | -2  |  |  |
| 56                                       | -14           | 5                        | -33 | -19  | -4                       | -37 | -5            | -9                       | -4  |  |  |
| 55                                       | -13           | 12                       | -34 | -16  | 2                        | -42 | -3            | -10                      | -8  |  |  |
| 54                                       | -11           | 15                       | -37 | -13  | 7                        | -48 | -2            | -8                       | -11 |  |  |
| 53                                       | -8            | 14                       | -38 | -11  | 11                       | -50 | -3            | -3                       | -12 |  |  |
| 52                                       | -5            | 13                       | -38 | -9   | 10                       | -43 | -4            | -3                       | -5  |  |  |
| 51                                       | -3            | 13                       | -37 | -9   | 8                        | -30 | -6            | -5                       | 7   |  |  |
| 50                                       | -4            | 13                       | -35 | -8   | 8                        | -25 | -4            | -5                       | 10  |  |  |
| 49                                       | -2            | 13                       | -36 | -7   | 11                       | -36 | -5            | -2                       | 0   |  |  |
| 48                                       | -5            | 13                       | -38 | -6   | 12                       | -51 | -1            | -1                       | -13 |  |  |
| 47                                       | -4            | 10                       | -39 | -5   | 10                       | -51 | -1            | 0                        | -12 |  |  |
| 46                                       | -4            | 5                        | -38 | -5   | 8                        | -37 | -1            | 3                        | 1   |  |  |
| 45                                       | -4            | 0                        | -36 | -5   | 4                        | -30 | -1            | 4                        | 6   |  |  |
| 44                                       | -5            | -3                       | -32 | -8   | -1                       | -30 | -3            | 2                        | 2   |  |  |
| 43                                       | -12           | -1                       | -26 | -15  | 2                        | -25 | -3            | 3                        | 1   |  |  |
| 42                                       | -21           | 3                        | -22 | -23  | 12                       | -22 | -2            | 9                        | 0   |  |  |
| 41                                       | -22           | 7                        | -18 | -24  | 12                       | -19 | -2            | 5                        | -1  |  |  |

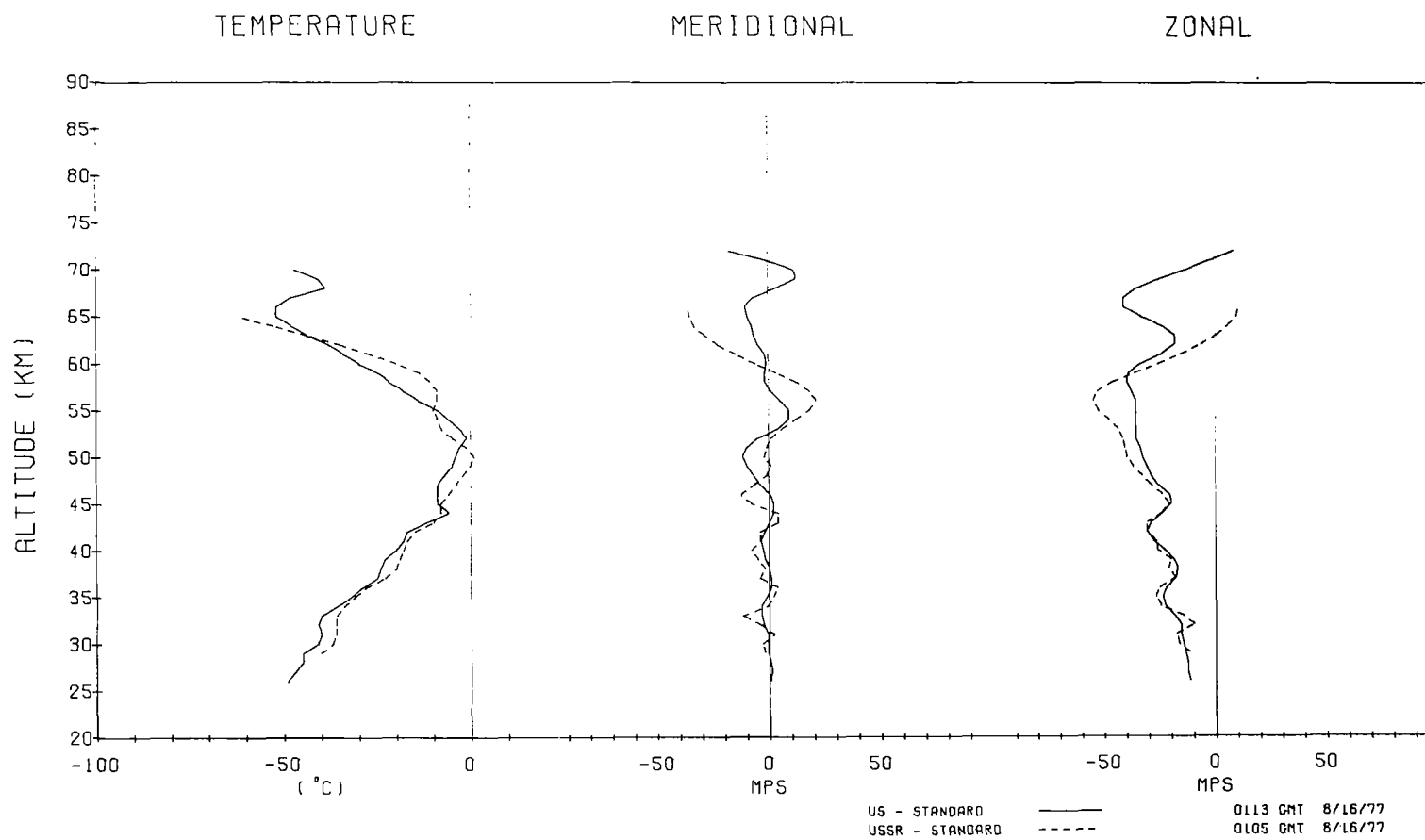
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 40        | -22           | 9                        | -17 | -24           | 11                       | -16 | -2            | 2                        | 1  |
| 39        | -23           | 7                        | -18 | -25           | 13                       | -17 | -2            | 6                        | 1  |
| 38        | -25           | 5                        | -19 | -26           | 6                        | -24 | -1            | 1                        | -5 |
| 37        | -26           | 3                        | -19 | -28           | 5                        | -25 | -2            | 2                        | -6 |
| 36        | -28           | 0                        | -18 | -29           | 3                        | -18 | -1            | 3                        | 0  |
| 35        | -31           | -1                       | -16 | -33           | -5                       | -20 | -2            | -4                       | -4 |
| 34        | -35           | 1                        | -14 | -35           | 1                        | -14 | 0             | 0                        | 0  |
| 33        | -36           | 4                        | -13 | -36           | 2                        | -4  | 0             | -2                       | 9  |
| 32        | -38           | 5                        | -14 | -37           | 5                        | -15 | 1             | 0                        | -1 |
| 31        | -39           | 4                        | -15 | -39           | -1                       | -15 | 0             | -5                       | 0  |
| 30        | -42           | 2                        | -16 | -42           | -1                       | -15 | 0             | -3                       | 1  |
| 29        | -44           | 1                        | -17 | -43           | -5                       | -21 | 1             | -6                       | -4 |
| 28        | -44           | 1                        | -16 | 999           | 999                      | 999 |               |                          |    |
| 27        | -48           | 1                        | -14 | 999           | 999                      | 999 |               |                          |    |
| 26        | -50           | 1                        | -12 | 999           | 999                      | 999 |               |                          |    |
| 25        | -51           | 1                        | -10 | 999           | 999                      | 999 |               |                          |    |



| ALT | US - STANDARD<br>AUG 16 1977<br>0113 GMT |                    |     |     | USSR - STANDARD<br>AUG 16 1977<br>0105 GMT |                    |     |     | DIFFERENCES<br>USSR-US |     |    |       |                    |    |  |
|-----|--|--------------------|-----|-----|--|--------------------|-----|-----|------------------------|-----|----|-------|--------------------|----|--|
|     | TEMP                                     | COMPONENT<br>WINDS |     |     | TEMP                                       | COMPONENT<br>WINDS |     |     | COMPONENT<br>WINDS     |     |    | TEMP  | COMPONENT<br>WINDS |    |  |
|     |  | DEG C              | -1  |     |  | DEG C              | -1  |     | DEG C                  | -1  |    |       | DEG C              | -1 |  |
| KM  |  | NS                 | M S | EW  | DEG C                                      | NS                 | M S | EW  | DEG C                  | M S | EW | DEG C | M S                | EW |  |
| 72  | 999                                      | -18                |     | 9   | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 71  | 999                                      | -1                 |     | -2  | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 70  | -47                                      | 11                 |     | -13 | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 69  | -41                                      | 12                 |     | -25 | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 68  | -39                                      | 3                  |     | -35 | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 67  | -48                                      | -7                 |     | -41 | 999  | 999                | 999 |     |                        |     |    |       |                    |    |  |
| 66  | -52                                      | -11                |     | -41 | 999  | -37                |     | 11  |                        |     |    |       |                    |    |  |
| 65  | -52                                      | -10                |     | -33 | -62  | -36                |     | 10  | -10                    | -26 |    | 43    |                    |    |  |
| 64  | -48                                      | -8                 |     | -24 | -53  | -34                |     | 6   | -5                     | -26 |    | 30    |                    |    |  |
| 63  | -44                                      | -7                 |     | -18 | -44  | -29                |     | 1   | 0                      | -22 |    | 19    |                    |    |  |
| 62  | -38                                      | -5                 |     | -18 | -35  | -23                |     | -6  | 3                      | -18 |    | 12    |                    |    |  |
| 61  | -34                                      | -2                 |     | -24 | -27  | -15                |     | -15 | 7                      | -13 |    | 9     |                    |    |  |
| 60  | -30                                      | -1                 |     | -33 | -20  | -6                 |     | -25 | 10                     | -5  |    | 8     |                    |    |  |
| 59  | -25                                      | -2                 |     | -39 | -14  | 3                  |     | -36 | 11                     | 5   |    | 3     |                    |    |  |
| 58  | -22                                      | -2                 |     | -40 | -11  | 12                 |     | -46 | 11                     | 14  |    | -6    |                    |    |  |
| 57  | -18                                      | 1                  |     | -38 | -9   | 18                 |     | -53 | 9                      | 17  |    | -15   |                    |    |  |
| 56  | -14                                      | 5                  |     | -36 | -9   | 21                 |     | -55 | 5                      | 16  |    | -19   |                    |    |  |
| 55  | -9                                       | 9                  |     | -36 | -10  | 18                 |     | -53 | -1                     | 9   |    | -17   |                    |    |  |
| 54  | -6                                       | 9                  |     | -36 | -9   | 12                 |     | -48 | -3                     | 3   |    | -12   |                    |    |  |
| 53  | -3                                       | 4                  |     | -36 | -8   | 6                  |     | -44 | -5                     | 2   |    | -8    |                    |    |  |
| 52  | -1                                       | -5                 |     | -36 | -5   | 1                  |     | -42 | -4                     | 6   |    | -6    |                    |    |  |
| 51  | -3                                       | -10                |     | -34 | -1   | -1                 |     | -41 | 2                      | 9   |    | -7    |                    |    |  |
| 50  | -4                                       | -12                |     | -33 | 1  | -2                 |     | -40 | 5                      | 10  |    | -7    |                    |    |  |
| 49  | -5                                       | -10                |     | -31 | 0  | 1                  |     | -37 | 5                      | 11  |    | -6    |                    |    |  |
| 48  | -7                                       | -7                 |     | -29 | -2   | -1                 |     | -33 | 5                      | 6   |    | -4    |                    |    |  |
| 47  | -9                                       | -4                 |     | -26 | -4   | -7                 |     | -29 | 5                      | -3  |    | -3    |                    |    |  |
| 46  | -9                                       | 0                  |     | -21 | -6   | -13                |     | -24 | 3                      | -13 |    | -3    |                    |    |  |
| 45  | -9                                       | 2                  |     | -20 | -8   | -8                 |     | -21 | 1                      | -10 |    | -1    |                    |    |  |
| 44  | -6                                       | 2                  |     | -24 | -8   | 4                  |     | -24 | -2                     | 2   |    | 0     |                    |    |  |
| 43  | -12                                      | 0                  |     | -29 | -10  | 4                  |     | -31 | 2                      | 4   |    | -2    |                    |    |  |
| 42  | -17                                      | -2                 |     | -31 | -15  | -4                 |     | -31 | 2                      | -2  |    | 0     |                    |    |  |
| 41  | -18                                      | -4                 |     | -28 | -17  | -4                 |     | -27 | 1                      | 0   |    | 1     |                    |    |  |
| 40  | -20                                      | -3                 |     | -23 | -18  | -8                 |     | -26 | 2                      | -5  |    | -3    |                    |    |  |
| 39  | -23                                      | -2                 |     | -19 | -19  | -5                 |     | -20 | 4                      | -3  |    | -1    |                    |    |  |

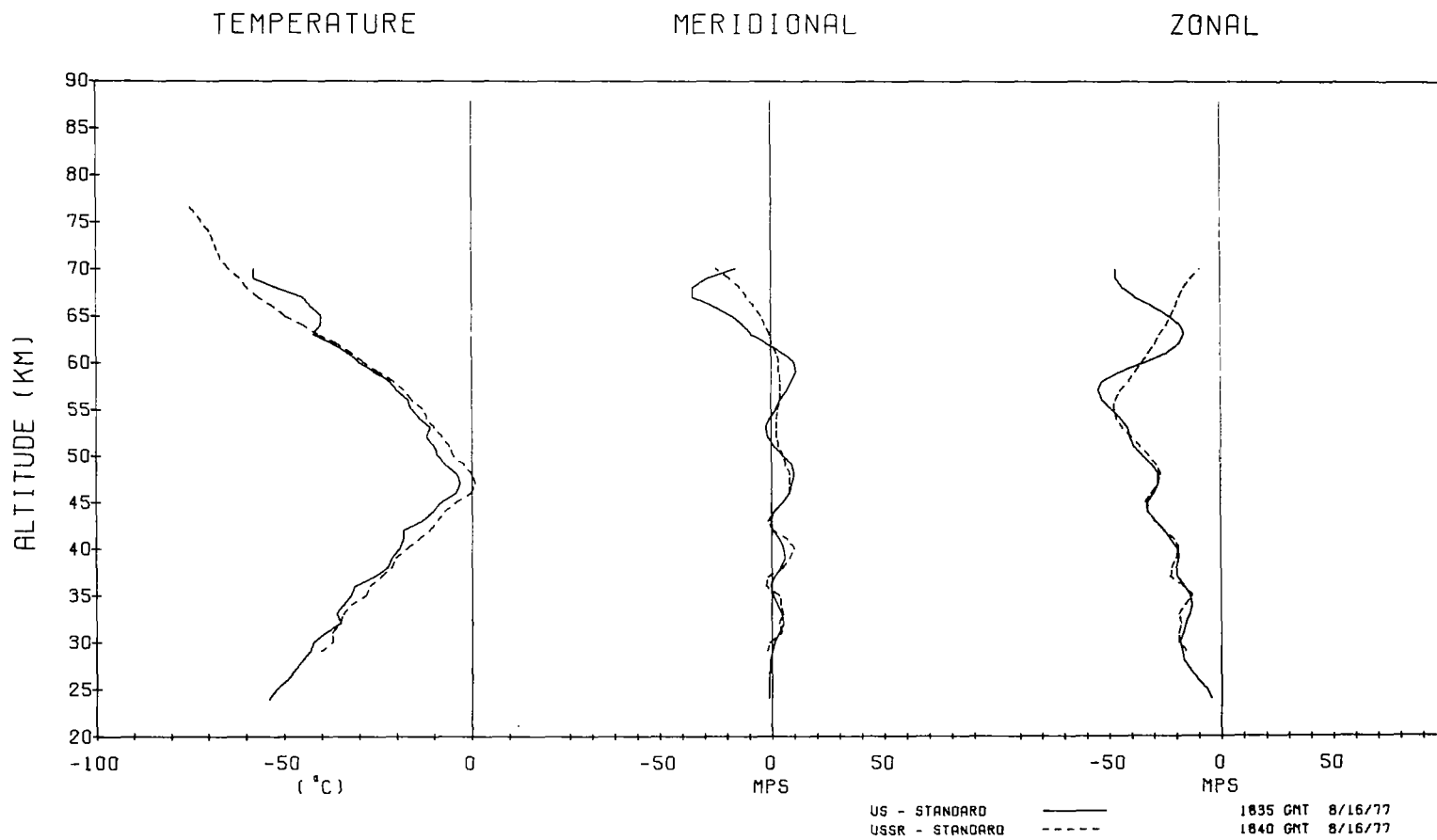
| ALT | TEMP | COMPONENT<br>WINDS |     |     | TEMP | COMPONENT<br>WINDS |     |     | TEMP | COMPONENT<br>WINDS |     |    |
|-----|------|--------------------|-----|-----|------|--------------------|-----|-----|------|--------------------|-----|----|
|     |      | -1                 |     |     |      | -1                 |     |     |      | -1                 |     |    |
|     |      | DEG C              | M S | EW  |      | DEG C              | M S | EW  |      | DEG C              | M S | EW |
| 38  | -24  | 0                  |     | -17 | -20  | -2                 |     | -21 | 4    | -2                 |     | -4 |
| 37  | -25  | 1                  |     | -18 | -23  | -4                 |     | -18 | 2    | -5                 |     | 0  |
| 36  | -29  | 1                  |     | -22 | -28  | 4                  |     | -25 | 1    | 3                  |     | -3 |
| 35  | -32  | -1                 |     | -24 | -31  | 2                  |     | -27 | 1    | 3                  |     | -3 |
| 34  | -36  | -4                 |     | -23 | -34  | -1                 |     | -25 | 2    | 3                  |     | -2 |
| 33  | -40  | -4                 |     | -19 | -36  | -12                |     | -15 | 4    | -8                 |     | 4  |
| 32  | -41  | -3                 |     | -16 | -36  | -4                 |     | -10 | 5    | -1                 |     | 6  |
| 31  | -40  | -1                 |     | -16 | -36  | 2                  |     | -18 | 4    | 3                  |     | -2 |
| 30  | -41  | -1                 |     | -15 | -37  | -3                 |     | -17 | 4    | -2                 |     | -2 |
| 29  | -45  | -1                 |     | -14 | -40  | -2                 |     | -12 | 5    | -1                 |     | 2  |
| 28  | -45  | 0                  |     | -13 | 999  | 999                |     | 999 |      |                    |     |    |
| 27  | -47  | 1                  |     | -13 | 999  | 999                |     | 999 |      |                    |     |    |
| 26  | -49  | 0                  |     | -12 | 999  | 999                |     | 999 |      |                    |     |    |

63



| ALT | US - STANDARD<br>AUG 16 1977<br>1835 GMT |                          |     | USSR - STANDARD<br>AUG 16 1977<br>1840 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |
|-----|--|--------------------------|-----|--|--------------------------|-----|------------------------|--------------------------|-----|
|     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |
|     |  | NS                       | EW  |  | NS                       | EW  |                        | NS                       | EW  |
| 77  | 999                                      | 999                      | 999 | -76  | 999                      | 999 |                        |                          |     |
| 76  | 999                                      | 999                      | 999 | -74  | 999                      | 999 |                        |                          |     |
| 75  | 999                                      | 999                      | 999 | -72  | 999                      | 999 |                        |                          |     |
| 74  | 999                                      | 999                      | 999 | -70  | 999                      | 999 |                        |                          |     |
| 73  | 999                                      | 999                      | 999 | -69  | 999                      | 999 |                        |                          |     |
| 72  | 999                                      | 999                      | 999 | -68  | 999                      | 999 |                        |                          |     |
| 71  | 999                                      | 999                      | 999 | -67  | 999                      | 999 |                        |                          |     |
| 70  | -58                                      | -16                      | -47 | -65  | -25                      | -9  | -7                     | -9                       | 38  |
| 69  | -58                                      | -28                      | -47 | -62  | -19                      | -13 | -4                     | 9                        | 34  |
| 68  | -52                                      | -35                      | -44 | -60  | -14                      | -16 | -8                     | 21                       | 28  |
| 67  | -45                                      | -35                      | -38 | -57  | -11                      | -18 | -12                    | 24                       | 20  |
| 66  | -43                                      | -26                      | -30 | -53  | -8                       | -20 | -10                    | 18                       | 10  |
| 65  | -40                                      | -18                      | -23 | -50  | -5                       | -22 | -10                    | 13                       | 1   |
| 64  | -40                                      | -13                      | -18 | -45  | -3                       | -24 | -5                     | 10                       | -6  |
| 63  | -42                                      | -9                       | -16 | -41  | -1                       | -27 | 1                      | 8                        | -11 |
| 62  | -37                                      | -2                       | -18 | -36  | 0                        | -29 | 1                      | 2                        | -11 |
| 61  | -33                                      | 5                        | -24 | -32  | 2                        | -32 | 1                      | -3                       | -8  |
| 60  | -30                                      | 10                       | -34 | -29  | 3                        | -35 | 1                      | -7                       | -1  |
| 59  | -26                                      | 11                       | -45 | -25  | 3                        | -38 | 1                      | -8                       | 7   |
| 58  | -22                                      | 9                        | -53 | -21  | 4                        | -41 | 1                      | -5                       | 12  |
| 57  | -20                                      | 7                        | -55 | -18  | 4                        | -45 | 2                      | -3                       | 10  |
| 56  | -17                                      | 4                        | -53 | -16  | 4                        | -47 | 1                      | 0                        | 6   |
| 55  | -16                                      | 2                        | -49 | -13  | 3                        | -48 | 3                      | 1                        | 1   |
| 54  | -14                                      | -1                       | -45 | -12  | 2                        | -47 | 2                      | 3                        | -2  |
| 53  | -11                                      | -3                       | -42 | -10  | 2                        | -44 | 1                      | 5                        | -2  |
| 52  | -12                                      | -2                       | -41 | -8   | 2                        | -40 | 4                      | 4                        | 1   |
| 51  | -10                                      | 1                        | -39 | -6   | 3                        | -36 | 4                      | 2                        | 3   |
| 50  | -9                                       | 5                        | -35 | -5   | 5                        | -32 | 4                      | 0                        | 3   |
| 49  | -7                                       | 9                        | -31 | -2   | 6                        | -29 | 5                      | -3                       | 2   |
| 48  | -4                                       | 10                       | -28 | 0  | 8                        | -27 | 4                      | -2                       | 1   |
| 47  | -3                                       | 9                        | -28 | 1  | 8                        | -28 | 4                      | -1                       | 0   |
| 46  | -4                                       | 8                        | -30 | 0  | 8                        | -31 | 4                      | 0                        | -1  |
| 45  | -8                                       | 5                        | -33 | -4   | 5                        | -34 | 4                      | 0                        | -1  |
| 44  | -10                                      | 1                        | -33 | -7   | 1                        | -33 | 3                      | 0                        | 0   |

| ALT | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|     |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
|     |               | 43                       | -13 |               | -1                       | -30 |               | -9                       | -2 |
| 42  | -18           | 0                        | -26 | -11           | 0                        | -26 | 7             | 0                        | 0  |
| 41  | -18           | 3                        | -23 | -14           | 7                        | -21 | 4             | 4                        | 2  |
| 40  | -19           | 5                        | -20 | -17           | 10                       | -19 | 2             | 5                        | 1  |
| 39  | -21           | 6                        | -19 | -20           | 8                        | -20 | 1             | 2                        | -1 |
| 38  | -22           | 4                        | -20 | -21           | 5                        | -22 | 1             | 1                        | -2 |
| 37  | -26           | 1                        | -20 | -24           | -2                       | -23 | 2             | -3                       | -3 |
| 36  | -31           | -1                       | -17 | -27           | -3                       | -17 | 4             | -2                       | 0  |
| 35  | -32           | 0                        | -14 | -28           | 3                        | -13 | 4             | 3                        | 1  |
| 34  | -34           | 2                        | -13 | -32           | 4                        | -16 | 2             | 2                        | -3 |
| 33  | -36           | 4                        | -14 | -34           | 5                        | -19 | 2             | 1                        | -5 |
| 32  | -35           | 5                        | -16 | -35           | 3                        | -18 | 0             | -2                       | -2 |
| 31  | -39           | 3                        | -17 | -37           | 4                        | -19 | 2             | 1                        | -2 |
| 30  | -42           | 1                        | -19 | -37           | -1                       | -19 | 5             | -2                       | 0  |
| 29  | -43           | 0                        | -18 | -40           | -2                       | -16 | 3             | -2                       | 2  |
| 28  | -45           | -1                       | -17 | 999           | 999                      | 999 |               |                          |    |
| 27  | -47           | -1                       | -14 | 999           | 999                      | 999 |               |                          |    |
| 26  | -49           | -2                       | -11 | 999           | 999                      | 999 |               |                          |    |
| 25  | -52           | -2                       | -7  | 999           | 999                      | 999 |               |                          |    |
| 24  | -54           | -2                       | -5  | 999           | 999                      | 999 |               |                          |    |





| ALT<br>KM | US - STANDARD<br>AUG 16 1977<br>2000 GMT |                          |     |     | USSR - STANDARD<br>AUG 16 1977<br>2029 GMT |                          |    |    | DIFFERENCES<br>USSR-US   |     |     |    |  |
|-----------|--|--------------------------|-----|-----|--|--------------------------|----|----|--------------------------|-----|-----|----|--|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |    |    | COMPONENT<br>WINDS<br>-1 |     |     |    |  |
|           |  | M S                      |     | EW  |  | M S                      |    | EW | DEG C                    | M S |     | EW |  |
|           |  | NS                       | EW  | NS  |  | EW                       | NS | EW |                          |     |     |    |  |
| 72        | 999                                      | -17                      | -15 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 71        | 999                                      | -8                       | -27 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 70        | -58                                      | -2                       | -39 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 69        | -55                                      | -2                       | -47 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 68        | -49                                      | -7                       | -47 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 67        | -45                                      | -11                      | -42 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 66        | -42                                      | -13                      | -36 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 65        | -37                                      | -17                      | -31 | 999 | 999  | 999                      |    |    |                          |     |     |    |  |
| 64        | -36                                      | -23                      | -26 | 999 | 6  | -16                      |    |    | 29                       | 10  |     |    |  |
| 63        | -33                                      | -24                      | -22 | 999 | 6  | -19                      |    |    | 30                       | 3   |     |    |  |
| 62        | -32                                      | -14                      | -20 | 999 | 6  | -20                      |    |    | 20                       | 0   |     |    |  |
| 61        | -31                                      | 1                        | -21 | 999 | 5  | -22                      |    |    | 4                        | -1  |     |    |  |
| 60        | -28                                      | 15                       | -26 | 999 | 4  | -24                      |    |    | -11                      | 2   |     |    |  |
| 59        | -23                                      | 20                       | -33 | 999 | 2  | -26                      |    |    | -18                      | 7   |     |    |  |
| 58        | -21                                      | 18                       | -41 | 999 | 1  | -28                      |    |    | -17                      | 13  |     |    |  |
| 57        | -16                                      | 13                       | -44 | 999 | 0  | -30                      |    |    | -13                      | 14  |     |    |  |
| 56        | -14                                      | 9                        | -45 | 999 | -1   | -33                      |    |    | -10                      | 12  |     |    |  |
| 55        | -11                                      | 6                        | -43 | 999 | -2   | -36                      |    |    | -8                       | 7   |     |    |  |
| 54        | -9                                       | 4                        | -42 | -9  | -3   | -37                      |    |    | 0                        | -7  | 5   |    |  |
| 53        | -6                                       | 1                        | -40 | -4  | -4   | -35                      |    |    | 2                        | -5  | 5   |    |  |
| 52        | -5                                       | -3                       | -38 | -5  | -4   | -34                      |    |    | 0                        | -1  | 4   |    |  |
| 51        | -3                                       | -5                       | -35 | -9  | -3   | -34                      |    |    | -6                       | 2   | 1   |    |  |
| 50        | -5                                       | -4                       | -32 | -10 | -2   | -35                      |    |    | -5                       | 2   | -3  |    |  |
| 49        | -4                                       | -1                       | -30 | -8  | 1  | -38                      |    |    | -4                       | 2   | -8  |    |  |
| 48        | -3                                       | 1                        | -28 | -9  | 3  | -39                      |    |    | -6                       | 2   | -11 |    |  |
| 47        | -2                                       | 4                        | -28 | -13 | 5  | -37                      |    |    | -11                      | 1   | -9  |    |  |
| 46        | -4                                       | 6                        | -29 | -14 | 7  | -33                      |    |    | -10                      | 1   | -4  |    |  |
| 45        | -7                                       | 6                        | -32 | -10 | 7  | -32                      |    |    | -3                       | 1   | 0   |    |  |
| 44        | -8                                       | 5                        | -34 | -9  | 6  | -33                      |    |    | -1                       | 1   | 1   |    |  |
| 43        | -9                                       | 3                        | -33 | -10 | 4  | -32                      |    |    | -1                       | 1   | 1   |    |  |
| 42        | -14                                      | 3                        | -28 | -12 | 2  | -28                      |    |    | 2                        | -1  | 0   |    |  |
| 41        | -17                                      | 4                        | -22 | -13 | 2  | -22                      |    |    | 4                        | -2  | 0   |    |  |
| 40        | -17                                      | 5                        | -18 | -16 | 4  | -20                      |    |    | 1                        | -1  | -2  |    |  |
| 39        | -18                                      | 6                        | -17 | -28 | 3  | -21                      |    |    | -10                      | -3  | -4  |    |  |

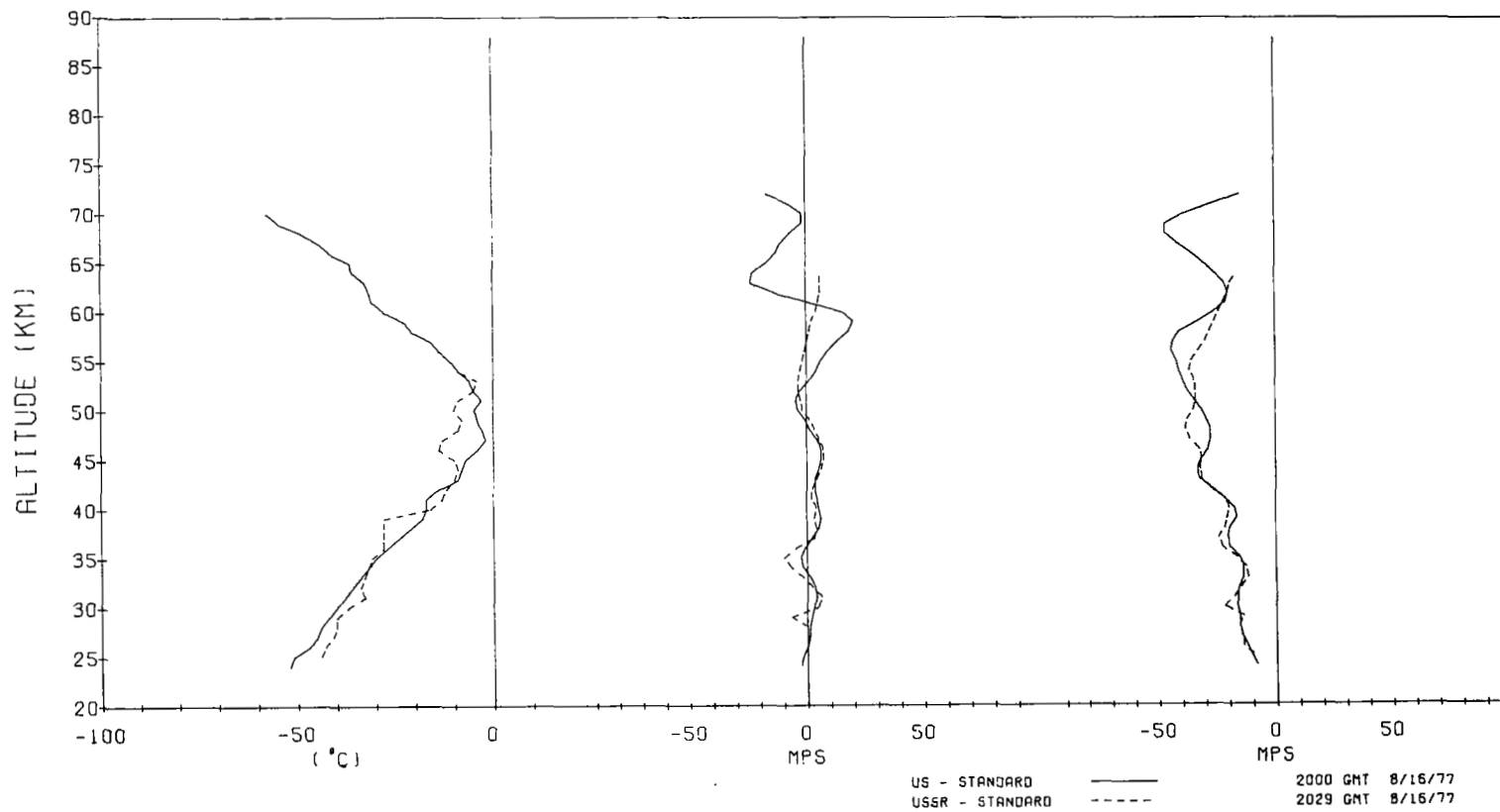
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|----|----|---------------|--------------------------|-----|--|----|
|           |               | M S                      |     | EW  |               | M S                      |    | EW |               | DEG C                    | M S |  | EW |
|           |               | NS                       | EW  | NS  |               | EW                       | NS | EW |               |                          |     |  |    |
|           |               | NS                       | EW  | NS  |               | EW                       | NS | EW |               | NS                       | EW  |  |    |
| 38        | -21           | 5                        | -20 | -28 | 4             | -22                      |    |    | -7            | -1                       | -2  |  |    |
| 37        | -24           | 2                        | -21 | -28 | 3             | -25                      |    |    | -4            | 1                        | -4  |  |    |
| 36        | -27           | -1                       | -20 | -28 | -5            | -23                      |    |    | -1            | -4                       | -3  |  |    |
| 35        | -30           | -3                       | -16 | -31 | -10           | -17                      |    |    | -1            | -7                       | -1  |  |    |
| 34        | -32           | -2                       | -14 | -32 | -7            | -13                      |    |    | 0             | -5                       | 1   |  |    |
| 33        | -34           | 1                        | -14 | -33 | -2            | -12                      |    |    | 1             | -3                       | 2   |  |    |
| 32        | -36           | 3                        | -16 | -34 | 2             | -15                      |    |    | 2             | -1                       | 1   |  |    |
| 31        | -38           | 4                        | -17 | -33 | 6             | -18                      |    |    | 5             | 2                        | -1  |  |    |
| 30        | -40           | 3                        | -17 | -37 | 5             | -22                      |    |    | 3             | 2                        | -5  |  |    |
| 29        | -42           | 2                        | -16 | -40 | -7            | -14                      |    |    | 2             | -9                       | 2   |  |    |
| 28        | -44           | 1                        | -16 | -40 | 0             | -16                      |    |    | 4             | -1                       | 0   |  |    |
| 27        | -45           | 1                        | -15 | -41 | 0             | -15                      |    |    | 4             | -1                       | 0   |  |    |
| 26        | -47           | 0                        | -13 | -43 | 0             | -14                      |    |    | 4             | 0                        | -1  |  |    |
| 25        | -51           | -2                       | -11 | -44 | 0             | -10                      |    |    | 7             | 2                        | 1   |  |    |
| 24        | -52           | -3                       | -9  | 999 | 999           | 999                      |    |    |               |                          |     |  |    |

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TEMPERATURE

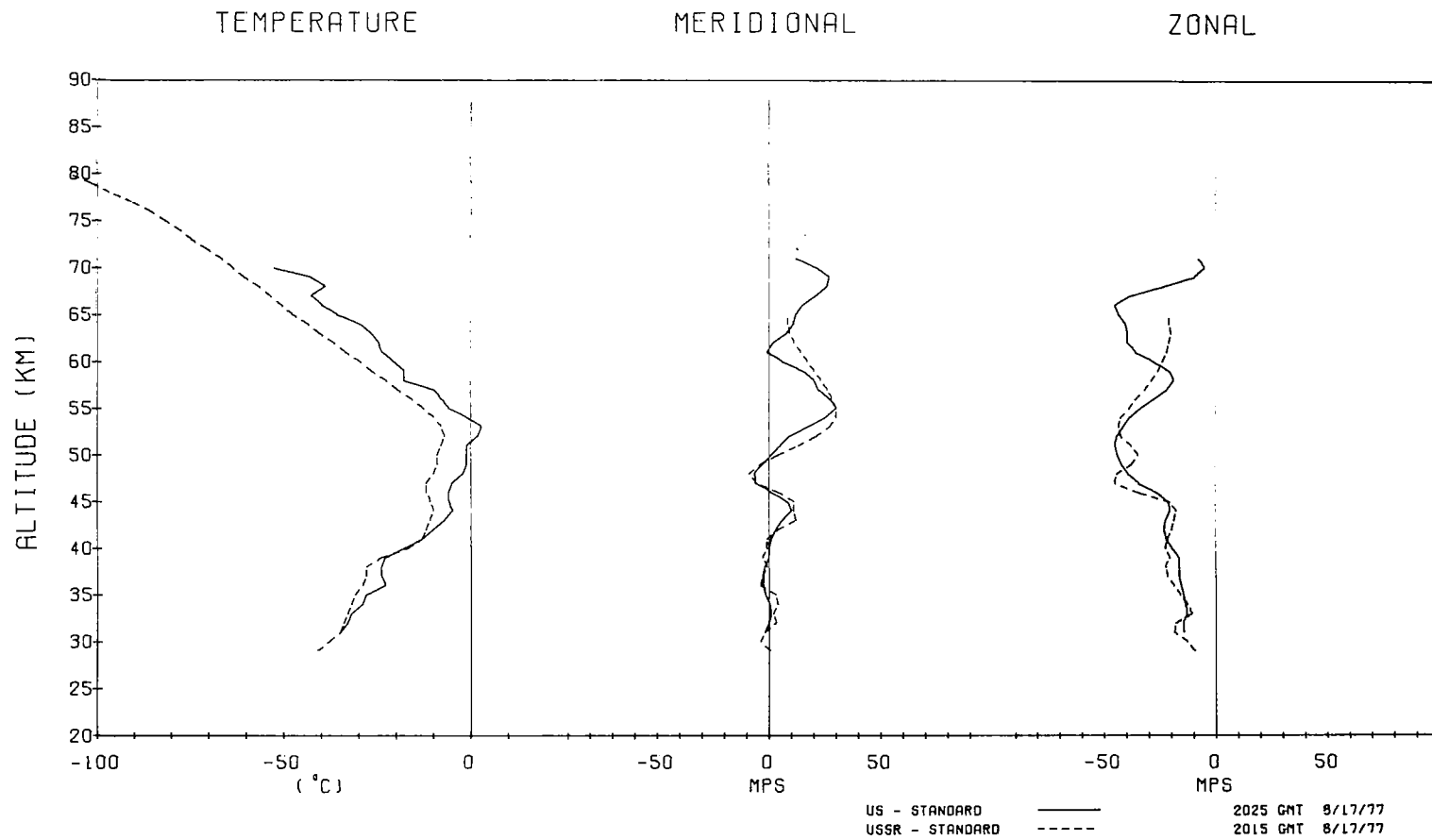
MERIDIONAL

ZONAL



| ALT<br>KM | US - STANDARD<br>AUG 17 1977<br>2025 GMT |                          |     | USSR - STANDARD<br>AUG 17 1977<br>2015 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |
|-----------|--|--------------------------|-----|--|--------------------------|-----|------------------------|--------------------------|-----|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |
|           |  | NS                       | M S |  | NS                       | M S |                        | NS                       | M S |
| 80        | 999                                      | 999                      | 999 | -108                                       | 999                      | 999 |                        |                          |     |
| 79        | 999                                      | 999                      | 999 | -102                                       | 999                      | 999 |                        |                          |     |
| 78        | 999                                      | 999                      | 999 | -97  | 999                      | 999 |                        |                          |     |
| 77        | 999                                      | 999                      | 999 | -91  | 999                      | 999 |                        |                          |     |
| 76        | 999                                      | 999                      | 999 | -86  | 999                      | 999 |                        |                          |     |
| 75        | 999                                      | 999                      | 999 | -82  | 999                      | 999 |                        |                          |     |
| 74        | 999                                      | 999                      | 999 | -78  | 999                      | 999 |                        |                          |     |
| 73        | 999                                      | 999                      | 999 | -75  | 999                      | 999 |                        |                          |     |
| 72        | 999                                      | 999                      | 999 | -71  | 999                      | 999 |                        |                          |     |
| 71        | 999                                      | 12                       | -8  | -67  | 999                      | 999 |                        |                          |     |
| 70        | -53                                      | 21                       | -5  | -64  | 999                      | 999 | -11                    |                          |     |
| 69        | -43                                      | 27                       | -10 | -61  | 999                      | 999 | -18                    |                          |     |
| 68        | -39                                      | 26                       | -24 | -57  | 999                      | 999 | -18                    |                          |     |
| 67        | -43                                      | 21                       | -39 | -54  | 999                      | 999 | -11                    |                          |     |
| 66        | -40                                      | 15                       | -46 | -51  | 999                      | 999 | -11                    |                          |     |
| 65        | -36                                      | 12                       | -44 | -48  | 8                        | -21 | -12                    | -4                       | 23  |
| 64        | -30                                      | 11                       | -41 | -44  | 8                        | -21 | -14                    | -3                       | 20  |
| 63        | -27                                      | 8                        | -40 | -41  | 9                        | -20 | -14                    | 1                        | 20  |
| 62        | -25                                      | 2                        | -40 | -37  | 11                       | -21 | -12                    | 9                        | 19  |
| 61        | -24                                      | -1                       | -36 | -34  | 14                       | -22 | -10                    | 15                       | 14  |
| 60        | -21                                      | 6                        | -28 | -30  | 17                       | -24 | -9                     | 11                       | 4   |
| 59        | -18                                      | 15                       | -21 | -27  | 20                       | -26 | -9                     | 5                        | -5  |
| 58        | -18                                      | 20                       | -19 | -23  | 23                       | -29 | -5                     | 3                        | -10 |
| 57        | -10                                      | 22                       | -22 | -20  | 26                       | -32 | -10                    | 4                        | -10 |
| 56        | -8                                       | 27                       | -28 | -16  | 28                       | -36 | -8                     | 1                        | -8  |
| 55        | -6                                       | 30                       | -34 | -13  | 30                       | -39 | -7                     | 0                        | -5  |
| 54        | -1                                       | 25                       | -39 | -10  | 30                       | -43 | -9                     | 5                        | -4  |
| 53        | 3  | 17                       | -42 | -8   | 27                       | -44 | -11                    | 10                       | -2  |
| 52        | 2  | 9                        | -45 | -7   | 21                       | -43 | -9                     | 12                       | 2   |
| 51        | -1                                       | 5                        | -46 | -8   | 13                       | -38 | -7                     | 8                        | 8   |
| 50        | -1                                       | 1                        | -45 | -9   | 4                        | -35 | -8                     | 3                        | 10  |
| 49        | -1                                       | -3                       | -43 | -9   | -4                       | -38 | -8                     | -1                       | 5   |
| 48        | -2                                       | -7                       | -40 | -10  | -9                       | -45 | -8                     | -2                       | -5  |
| 47        | -5                                       | -6                       | -35 | -12  | -6                       | -46 | -7                     | 0                        | -11 |

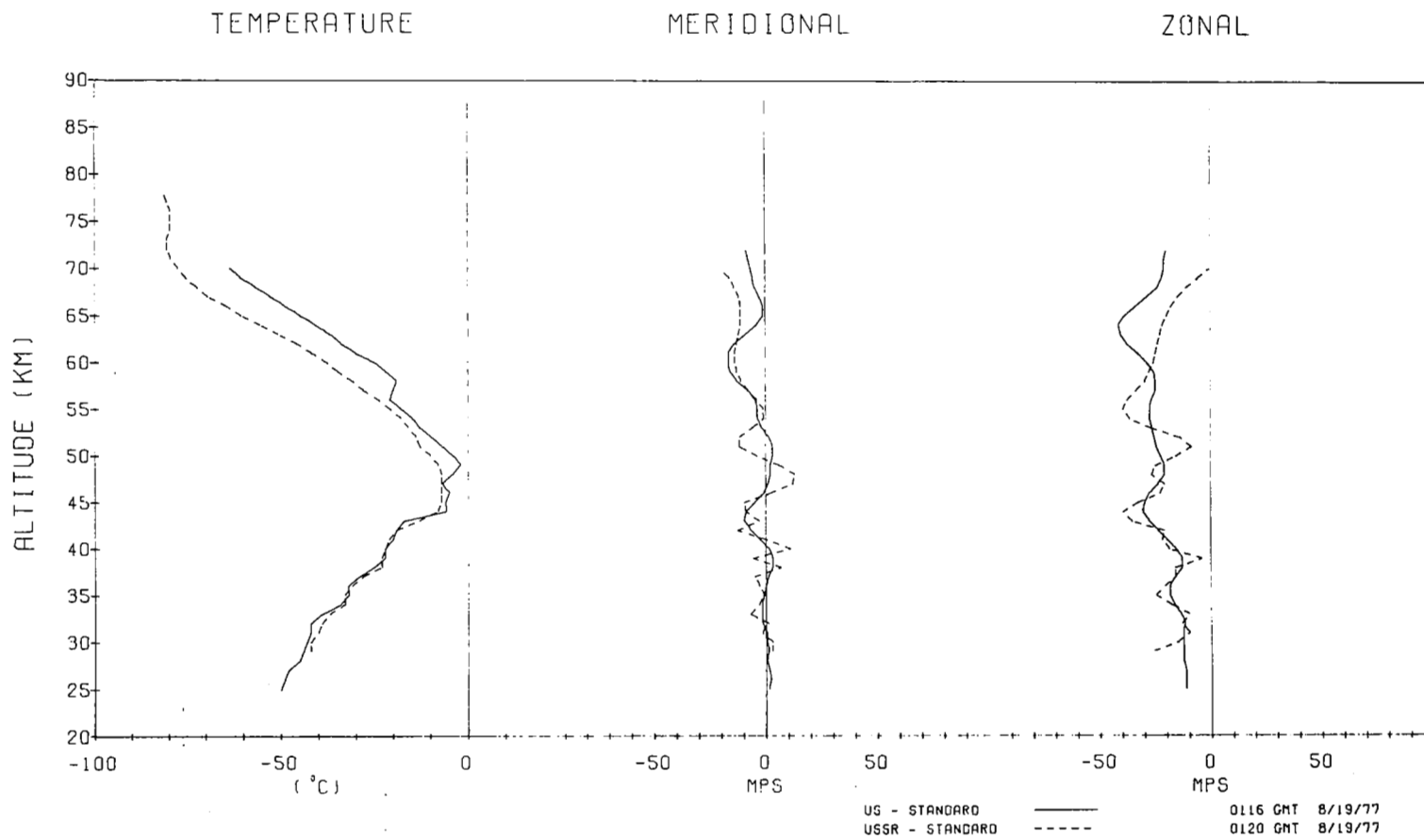
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|
|           |               | NS                       | M S | EW |               | NS                       | M S | EW |               | NS                       | M S | EW |
|           |               |                          |     |    |               |                          |     |    |               |                          |     |    |
| 46        | -6            | 1                        | -27 |    | -12           | 4                        | -35 |    | -6            | 3                        | -8  |    |
| 45        | -6            | 8                        | -22 |    | -11           | 11                       | -21 |    | -5            | 3                        | 1   |    |
| 44        | -5            | 10                       | -21 |    | -10           | 11                       | -18 |    | -5            | 1                        | 3   |    |
| 43        | -7            | 6                        | -23 |    | -11           | 12                       | -19 |    | -4            | 6                        | 4   |    |
| 42        | -10           | 3                        | -24 |    | -12           | 4                        | -20 |    | -2            | 1                        | 4   |    |
| 41        | -13           | 1                        | -23 |    | -13           | -1                       | -22 |    | 0             | -2                       | 1   |    |
| 40        | -18           | 0                        | -20 |    | -17           | -1                       | -23 |    | 1             | -1                       | -3  |    |
| 39        | -23           | 0                        | -17 |    | -24           | -3                       | -21 |    | -1            | -3                       | -4  |    |
| 38        | -24           | -2                       | -17 |    | -28           | -1                       | -23 |    | -4            | 1                        | -6  |    |
| 37        | -24           | -3                       | -17 |    | -28           | -3                       | -22 |    | -4            | 0                        | -5  |    |
| 36        | -23           | -3                       | -16 |    | -29           | -4                       | -19 |    | -6            | -1                       | -3  |    |
| 35        | -28           | -2                       | -15 |    | -31           | 3                        | -16 |    | -3            | 5                        | -1  |    |
| 34        | -29           | 0                        | -14 |    | -32           | 4                        | -13 |    | -3            | 4                        | 1   |    |
| 33        | -32           | 1                        | -13 |    | -33           | 2                        | -11 |    | -1            | 1                        | 2   |    |
| 32        | -33           | 0                        | -15 |    | -34           | 3                        | -18 |    | -1            | 3                        | -3  |    |
| 31        | -35           | -2                       | -15 |    | -35           | -2                       | -19 |    | 0             | 0                        | -4  |    |
| 30        | 999           | 999                      | 999 |    | -38           | -4                       | -13 |    |               |                          |     |    |
| 29        | 999           | 999                      | 999 |    | -41           | 0                        | -10 |    |               |                          |     |    |



| ALT | US - STANDARD<br>AUG 19 1977<br>0116 GMT |                          |     |     | USSR - STANDARD<br>AUG 19 1977<br>0120 GMT |                          |     |     | DIFFERLNCLS<br>USSR-US   |   |   |
|-----|--|--------------------------|-----|-----|--|--------------------------|-----|-----|--------------------------|---|---|
|     | TEMP                                     | COMPONENT<br>WINDS<br>-1 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |     | COMPONENT<br>WINDS<br>-1 |   |   |
|     |  | DEG C                    | M   | S   |  | DEG C                    | M   | S   | DEG C                    | M | S |
| KM  |  | NS                       | EW  |     | NS   | EW                       |     | NS  | EW                       |   |   |
| 78  | 999                                      | 999                      | 999 | -82 | 999  | 999                      |     |     |                          |   |   |
| 77  | 999                                      | 999                      | 999 | -81 | 999  | 999                      |     |     |                          |   |   |
| 76  | 999                                      | 999                      | 999 | -80 | 999  | 999                      |     |     |                          |   |   |
| 75  | 999                                      | 999                      | 999 | -80 | 999  | 999                      |     |     |                          |   |   |
| 74  | 999                                      | 999                      | 999 | -80 | 999  | 999                      |     |     |                          |   |   |
| 73  | 999                                      | 999                      | 999 | -81 | 999  | 999                      |     |     |                          |   |   |
| 72  | 999                                      | -9                       | -20 | -81 | 999  | 999                      |     |     |                          |   |   |
| 71  | 999                                      | -8                       | -21 | -80 | 999  | 999                      |     |     |                          |   |   |
| 70  | -64                                      | -7                       | -21 | -78 | -20  | -1                       | -14 | -13 | 20                       |   |   |
| 69  | -61                                      | -6                       | -22 | -76 | -16  | -6                       | -15 | -10 | 16                       |   |   |
| 68  | -57                                      | -5                       | -24 | -73 | -14  | -11                      | -16 | -9  | 13                       |   |   |
| 67  | -53                                      | -3                       | -29 | -70 | -12  | -15                      | -17 | -9  | 14                       |   |   |
| 66  | -49                                      | -1                       | -34 | -65 | -11  | -18                      | -16 | -10 | 16                       |   |   |
| 65  | -45                                      | -1                       | -39 | -61 | -11  | -20                      | -16 | -10 | 19                       |   |   |
| 64  | -41                                      | -4                       | -42 | -56 | -11  | -22                      | -15 | -7  | 20                       |   |   |
| 63  | -37                                      | -9                       | -41 | -51 | -12  | -23                      | -14 | -3  | 18                       |   |   |
| 62  | -34                                      | -14                      | -38 | -46 | -13  | -24                      | -12 | 1   | 14                       |   |   |
| 61  | -30                                      | -17                      | -33 | -42 | -14  | -25                      | -12 | 3   | 8                        |   |   |
| 60  | -25                                      | -17                      | -29 | -38 | -14  | -26                      | -13 | 3   | 3                        |   |   |
| 59  | -22                                      | -16                      | -26 | -35 | -13  | -28                      | -13 | 3   | -2                       |   |   |
| 58  | -19                                      | -13                      | -25 | -31 | -11  | -30                      | -12 | 2   | -5                       |   |   |
| 57  | -20                                      | -8                       | -25 | -28 | -8   | -34                      | -8  | 0   | -9                       |   |   |
| 56  | -21                                      | -5                       | -27 | -24 | -4   | -38                      | -3  | 1   | -11                      |   |   |
| 55  | -18                                      | -4                       | -28 | -21 | -1   | -40                      | -3  | 3   | -12                      |   |   |
| 54  | -15                                      | -4                       | -28 | -18 | -1   | -37                      | -3  | 3   | -9                       |   |   |
| 53  | -13                                      | -2                       | -27 | -16 | -6   | -27                      | -3  | -4  | 0                        |   |   |
| 52  | -10                                      | 1                        | -26 | -14 | -12  | -14                      | -4  | -13 | 12                       |   |   |
| 51  | -7                                       | 3                        | -25 | -13 | -12  | -9                       | -6  | -15 | 16                       |   |   |
| 50  | -4                                       | 3                        | -23 | -10 | -4   | -16                      | -6  | -7  | 7                        |   |   |
| 49  | -2                                       | 2                        | -21 | -8  | 6  | -25                      | -6  | 4   | -4                       |   |   |
| 48  | -4                                       | 2                        | -21 | -7  | 13   | -27                      | -3  | 11  | -6                       |   |   |
| 47  | -7                                       | 1                        | -24 | -7  | 12   | -21                      | 0   | 11  | 3                        |   |   |
| 46  | -5                                       | -1                       | -28 | -7  | 2  | -23                      | -2  | 3   | 5                        |   |   |
| 45  | -6                                       | -5                       | -30 | -7  | -10  | -33                      | -1  | -5  | -3                       |   |   |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |     | TEMP | COMPONENT<br>WINDS<br>-1 |    |    | TEMP | COMPONENT<br>WINDS<br>-1 |   |   |
|-----|------|--------------------------|-----|-----|------|--------------------------|----|----|------|--------------------------|---|---|
|     |      | DEG C                    | M   | S   |      | DEG C                    | M  | S  |      | DEG C                    | M | S |
|     |      |                          |     |     |      |                          |    |    |      |                          |   |   |
| KM  |      |                          |     |     |      |                          |    |    |      |                          |   |   |
| 44  | -6   | -9                       | -31 | -8  | -9   | -40                      | -2 | 0  | -9   |                          |   |   |
| 43  | -17  | -10                      | -28 | -13 | -3   | -36                      | 4  | 7  | -8   |                          |   |   |
| 42  | -19  | -7                       | -24 | -19 | -13  | -21                      | 0  | -6 | 3    |                          |   |   |
| 41  | -20  | -3                       | -20 | -21 | 0    | -22                      | -1 | 3  | -2   |                          |   |   |
| 40  | -22  | 1                        | -16 | -22 | 11   | -19                      | 0  | 10 | -3   |                          |   |   |
| 39  | -22  | 3                        | -13 | -23 | -6   | -4                       | -1 | -9 | 9    |                          |   |   |
| 38  | -25  | 3                        | -13 | -23 | 7    | -16                      | 2  | 4  | -3   |                          |   |   |
| 37  | -29  | 1                        | -16 | -28 | -5   | -16                      | 1  | -6 | 0    |                          |   |   |
| 36  | -32  | 0                        | -19 | -31 | -3   | -21                      | 1  | -3 | -2   |                          |   |   |
| 35  | -32  | -1                       | -19 | -33 | -1   | -25                      | -1 | 0  | -6   |                          |   |   |
| 34  | -34  | -2                       | -17 | -33 | -3   | -18                      | 1  | -1 | -1   |                          |   |   |
| 33  | -39  | -2                       | -14 | -37 | -7   | -10                      | 2  | -5 | 4    |                          |   |   |
| 32  | -42  | -2                       | -12 | -39 | 1    | -13                      | 3  | 3  | -1   |                          |   |   |
| 31  | -42  | 0                        | -13 | -40 | -2   | -10                      | 2  | -2 | 3    |                          |   |   |
| 30  | -43  | 0                        | -13 | -42 | 3    | -15                      | 1  | 3  | -2   |                          |   |   |
| 29  | -44  | 1                        | -13 | -42 | 3    | -26                      | 2  | 2  | -13  |                          |   |   |
| 28  | -45  | 0                        | -13 | 999 | 999  | 999                      |    |    |      |                          |   |   |
| 27  | -48  | 1                        | -12 | 999 | 999  | 999                      |    |    |      |                          |   |   |
| 26  | -49  | 2                        | -12 | 999 | 999  | 999                      |    |    |      |                          |   |   |
| 25  | -50  | 1                        | -12 | 999 | 999  | 999                      |    |    |      |                          |   |   |

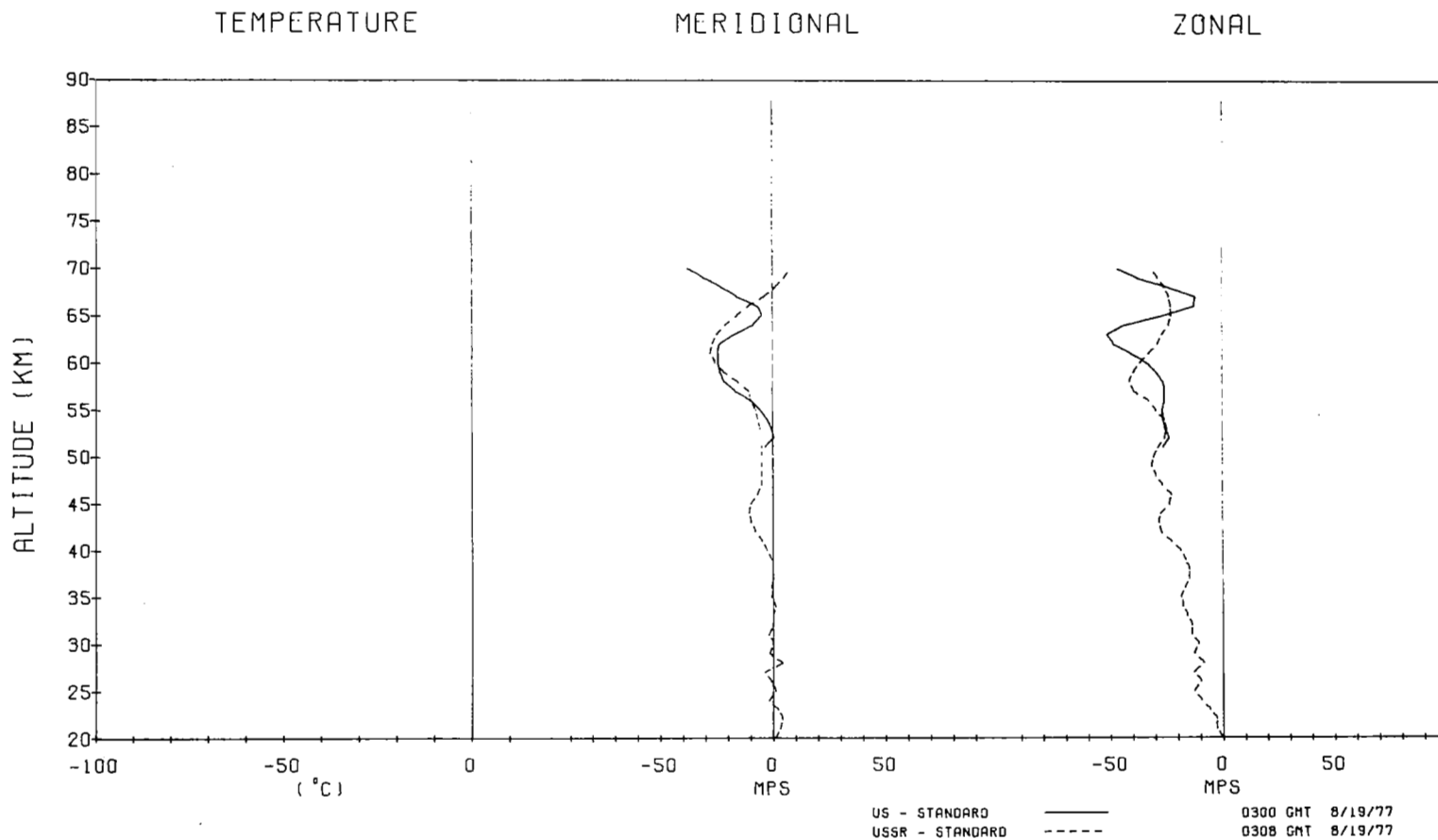
17



| US - STANDARD<br>AUG 19 1977<br>0300 GMT |               |                          |     | USSR - STANDARD<br>AUG 19 1977<br>0308 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |    |  |  |
|--|---------------|--------------------------|-----|--|--------------------------|-----|---------------|--------------------------|----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |  |  |
|  |               | M S                      | EW  |  | M S                      | EW  |               | M S                      | EW |  |  |
| 70                                       | 999           | -38                      | -47 | 999  | 8                        | -32 | 46            | 15                       |    |  |  |
| 69                                       | 999           | -31                      | -38 | 999  | 5                        | -29 | 36            | 9                        |    |  |  |
| 68                                       | 999           | -23                      | -24 | 999  | 1                        | -26 | 24            | -2                       |    |  |  |
| 67                                       | 999           | -16                      | -12 | 999  | -4                       | -24 | 12            | -12                      |    |  |  |
| 66                                       | 999           | -7                       | -13 | 999  | -11                      | -23 | -4            | -10                      |    |  |  |
| 65                                       | 999           | -5                       | -27 | 999  | -16                      | -23 | -11           | 4                        |    |  |  |
| 64                                       | 999           | -9                       | -44 | 999  | -21                      | -24 | -12           | 20                       |    |  |  |
| 63                                       | 999           | -17                      | -52 | 999  | -25                      | -27 | -8            | 25                       |    |  |  |
| 62                                       | 999           | -24                      | -49 | 999  | -27                      | -29 | -3            | 20                       |    |  |  |
| 61                                       | 999           | -25                      | -41 | 999  | -28                      | -33 | -3            | 8                        |    |  |  |
| 60                                       | 999           | -25                      | -34 | 999  | -26                      | -37 | -1            | -3                       |    |  |  |
| 59                                       | 999           | -24                      | -30 | 999  | -22                      | -40 | 2             | -10                      |    |  |  |
| 58                                       | 999           | -22                      | -27 | 999  | -16                      | -42 | 6             | -15                      |    |  |  |
| 57                                       | 999           | -17                      | -26 | 999  | -11                      | -40 | 6             | -14                      |    |  |  |
| 56                                       | 999           | -10                      | -26 | 999  | -10                      | -33 | 0             | -7                       |    |  |  |
| 55                                       | 999           | -6                       | -27 | 999  | -8                       | -30 | -2            | -3                       |    |  |  |
| 54                                       | 999           | -3                       | -27 | 999  | -7                       | -26 | -4            | 1                        |    |  |  |
| 53                                       | 999           | -1                       | -26 | 999  | -6                       | -25 | -5            | 1                        |    |  |  |
| 52                                       | 999           | 0                        | -24 | 999  | -6                       | -26 | -6            | -2                       |    |  |  |
| 51                                       | 999           | -4                       | -27 | 999  | -5                       | -29 | -1            | -2                       |    |  |  |
| 50                                       | 999           | 999                      | 999 | 999  | -5                       | -31 |               |                          |    |  |  |
| 49                                       | 999           | 999                      | 999 | 999  | -5                       | -32 |               |                          |    |  |  |
| 48                                       | 999           | 999                      | 999 | 999  | -5                       | -30 |               |                          |    |  |  |
| 47                                       | 999           | 999                      | 999 | 999  | -5                       | -27 |               |                          |    |  |  |
| 46                                       | 999           | 999                      | 999 | 999  | -7                       | -23 |               |                          |    |  |  |
| 45                                       | 999           | 999                      | 999 | 999  | -10                      | -24 |               |                          |    |  |  |
| 44                                       | 999           | 999                      | 999 | 999  | -11                      | -28 |               |                          |    |  |  |
| 43                                       | 999           | 999                      | 999 | 999  | -10                      | -29 |               |                          |    |  |  |
| 42                                       | 999           | 999                      | 999 | 999  | -8                       | -28 |               |                          |    |  |  |
| 41                                       | 999           | 999                      | 999 | 999  | -5                       | -23 |               |                          |    |  |  |
| 40                                       | 999           | 999                      | 999 | 999  | -3                       | -19 |               |                          |    |  |  |
| 39                                       | 999           | 999                      | 999 | 999  | -1                       | -17 |               |                          |    |  |  |
| 38                                       | 999           | 999                      | 999 | 999  | 0                        | -15 |               |                          |    |  |  |
| 37                                       | 999           | 999                      | 999 | 999  | 0                        | -15 |               |                          |    |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | M S                      | EW  |               | M S                      | EW  |               | M S                      | EW |
| 36        | 999           | 999                      | 999 | 999           | -1                       | -17 |               |                          |    |
| 35        | 999           | 999                      | 999 | 999           | -1                       | -19 |               |                          |    |
| 34        | 999           | 999                      | 999 | 999           | 1                        | -18 |               |                          |    |
| 33        | 999           | 999                      | 999 | 999           | 0                        | -16 |               |                          |    |
| 32        | 999           | 999                      | 999 | 999           | 0                        | -14 |               |                          |    |
| 31        | 999           | 999                      | 999 | 999           | -2                       | -14 |               |                          |    |
| 30        | 999           | 999                      | 999 | 999           | 0                        | -11 |               |                          |    |
| 29        | 999           | 999                      | 999 | 999           | -2                       | -13 |               |                          |    |
| 28        | 999           | 999                      | 999 | 999           | 4                        | -9  |               |                          |    |
| 27        | 999           | 999                      | 999 | 999           | -4                       | -13 |               |                          |    |
| 26        | 999           | 999                      | 999 | 999           | -1                       | -10 |               |                          |    |
| 25        | 999           | 999                      | 999 | 999           | 1                        | -13 |               |                          |    |
| 24        | 999           | 999                      | 999 | 999           | -2                       | -10 |               |                          |    |
| 23        | 999           | 999                      | 999 | 999           | 2                        | -6  |               |                          |    |
| 22        | 999           | 999                      | 999 | 999           | 4                        | -3  |               |                          |    |
| 21        | 999           | 999                      | 999 | 999           | 3                        | -3  |               |                          |    |
| 20        | 999           | 999                      | 999 | 999           | 1                        | -1  |               |                          |    |

73





| ALT | US - STANDARD<br>AUG 19 1977<br>0537 GMT |                    |     |     | USSR - STANDARD<br>AUG 19 1977<br>0507 GMT |                    |     |     | DIFFERENCES<br>USSR-US |                    |   |   |  |
|-----|--|--------------------|-----|-----|--|--------------------|-----|-----|------------------------|--------------------|---|---|--|
|     | TEMP                                     | COMPONENT<br>WINDS |     |     | TEMP                                       | COMPONENT<br>WINDS |     |     | TEMP                   | COMPONENT<br>WINDS |   |   |  |
|     |  | -1                 |     |     |  | -1                 |     |     |                        | -1                 |   |   |  |
|     |  | DEG C              | M   | S   |  | DEG C              | M   | S   |                        | DEG C              | M | S |  |
| KM  | NS                                       | EW                 | NS  | EW  | NS   | EW                 | NS  | EW  |                        |                    |   |   |  |
| 76  | 999                                      | 999                | 999 | -83 | 999  | 999                |     |     |                        |                    |   |   |  |
| 75  | 999                                      | 999                | 999 | -81 | 999  | 999                |     |     |                        |                    |   |   |  |
| 74  | 999                                      | 999                | 999 | -78 | 999  | 999                |     |     |                        |                    |   |   |  |
| 73  | 999                                      | 999                | 999 | -77 | 999  | 999                |     |     |                        |                    |   |   |  |
| 72  | 999                                      | 999                | 999 | -75 | 999  | 999                |     |     |                        |                    |   |   |  |
| 71  | 999                                      | 999                | 999 | -74 | 999  | 999                |     |     |                        |                    |   |   |  |
| 70  | 999                                      | 999                | 999 | -73 | 999  | 999                |     |     |                        |                    |   |   |  |
| 69  | -61                                      | -34                | -56 | -72 | 999  | 999                | -11 |     |                        |                    |   |   |  |
| 68  | -59                                      | -39                | -47 | -70 | 999  | 999                | -11 |     |                        |                    |   |   |  |
| 67  | -53                                      | -38                | -36 | -68 | 999  | 999                | -15 |     |                        |                    |   |   |  |
| 66  | -49                                      | -28                | -29 | -65 | 999  | 999                | -16 |     |                        |                    |   |   |  |
| 65  | -48                                      | -14                | -33 | -62 | -23  | -31                | -14 | -9  | 2                      |                    |   |   |  |
| 64  | -46                                      | -6                 | -47 | -58 | -24  | -38                | -12 | -18 | 9                      |                    |   |   |  |
| 63  | -43                                      | -7                 | -61 | -54 | -26  | -44                | -11 | -19 | 17                     |                    |   |   |  |
| 62  | -40                                      | -11                | -67 | -49 | -28  | -48                | -9  | -17 | 19                     |                    |   |   |  |
| 61  | -36                                      | -13                | -64 | -44 | -30  | -51                | -8  | -17 | 13                     |                    |   |   |  |
| 60  | -30                                      | -13                | -55 | -39 | -31  | -51                | -9  | -18 | 4                      |                    |   |   |  |
| 59  | -27                                      | -14                | -46 | -35 | -31  | -50                | -8  | -17 | -4                     |                    |   |   |  |
| 58  | -25                                      | -19                | -40 | -31 | -30  | -48                | -6  | -11 | -8                     |                    |   |   |  |
| 57  | -22                                      | -23                | -36 | -28 | -27  | -43                | -6  | -4  | -7                     |                    |   |   |  |
| 56  | -21                                      | -23                | -33 | -25 | -22  | -37                | -4  | 1   | -4                     |                    |   |   |  |
| 55  | -19                                      | -19                | -32 | -24 | -16  | -31                | -5  | 3   | 1                      |                    |   |   |  |
| 54  | -18                                      | -13                | -32 | -22 | -9   | -29                | -4  | 4   | 3                      |                    |   |   |  |
| 53  | -18                                      | -8                 | -33 | -20 | -2   | -31                | -2  | 6   | 2                      |                    |   |   |  |
| 52  | -15                                      | -3                 | -34 | -18 | 4  | -36                | -3  | 7   | -2                     |                    |   |   |  |
| 51  | -11                                      | -1                 | -35 | -15 | 6  | -39                | -4  | 7   | -4                     |                    |   |   |  |
| 50  | -10                                      | -1                 | -35 | -12 | 4  | -38                | -2  | 5   | -3                     |                    |   |   |  |
| 49  | -7                                       | -3                 | -34 | -9  | -3   | -35                | -2  | 0   | -1                     |                    |   |   |  |
| 48  | -6                                       | -6                 | -32 | -8  | -8   | -33                | -2  | -2  | -1                     |                    |   |   |  |
| 47  | -8                                       | -7                 | -30 | -8  | -12  | -27                | 0   | -5  | 3                      |                    |   |   |  |
| 46  | -9                                       | -5                 | -29 | -10 | -24  | -18                | -1  | -19 | 11                     |                    |   |   |  |
| 45  | -10                                      | -4                 | -30 | -13 | -30  | -20                | -3  | -26 | 10                     |                    |   |   |  |
| 44  | -10                                      | -5                 | -30 | -15 | -15  | -31                | -5  | -10 | -1                     |                    |   |   |  |
| 43  | -14                                      | -4                 | -29 | -16 | 3  | -36                | -2  | 7   | -7                     |                    |   |   |  |

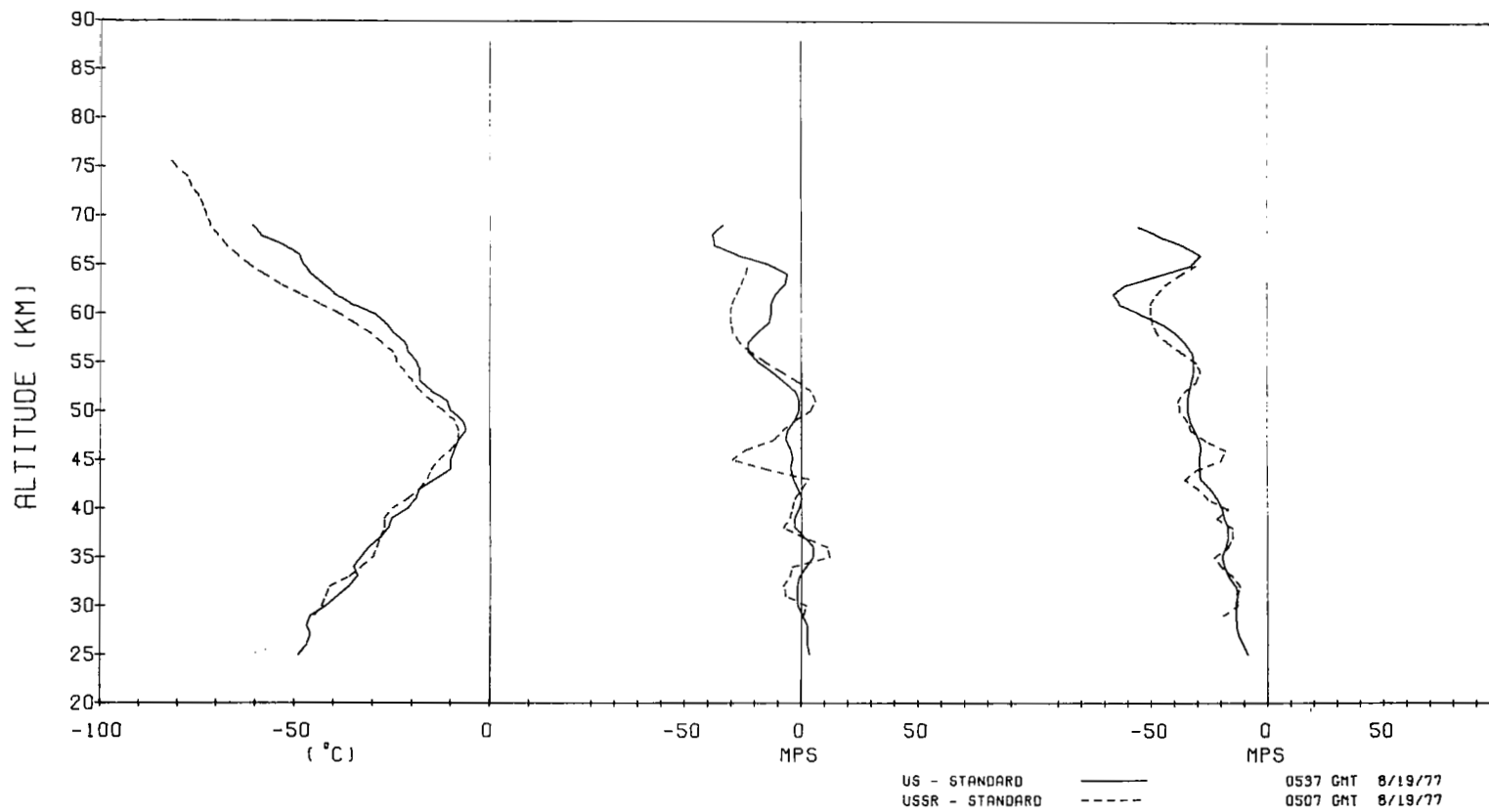
| ALT | TEMP | COMPONENT<br>WINDS |     |     | TEMP | COMPONENT<br>WINDS |    |    | TEMP | COMPONENT<br>WINDS |   |   |  |
|-----|------|--------------------|-----|-----|------|--------------------|----|----|------|--------------------|---|---|--|
|     |      | -1                 |     |     |      | -1                 |    |    |      | -1                 |   |   |  |
|     |      | DEG C              | M   | S   |      | DEG C              | M  | S  |      | DEG C              | M | S |  |
|     |      | KM                 | NS  | EW  |      | NS                 | EW | NS |      | EW                 |   |   |  |
| 42  | -18  | -2                 | -25 | -18 | 0    | -30                | 0  | 2  | -5   |                    |   |   |  |
| 41  | -19  | 0                  | -22 | -21 | -3   | -26                | -2 | -3 | -4   |                    |   |   |  |
| 40  | -21  | -1                 | -20 | -25 | -4   | -17                | -4 | -3 | 3    |                    |   |   |  |
| 39  | -25  | -3                 | -19 | -27 | -5   | -22                | -2 | -2 | -3   |                    |   |   |  |
| 38  | -26  | -3                 | -17 | -27 | -8   | -15                | -1 | -5 | 2    |                    |   |   |  |
| 37  | -28  | 1                  | -17 | -28 | 1    | -15                | 0  | 0  | 2    |                    |   |   |  |
| 36  | -31  | 5                  | -18 | -29 | 11   | -17                | 2  | 6  | 1    |                    |   |   |  |
| 35  | -33  | 5                  | -20 | -30 | 12   | -23                | 3  | 7  | -3   |                    |   |   |  |
| 34  | -35  | 2                  | -19 | -33 | -4   | -20                | 2  | -6 | -1   |                    |   |   |  |
| 33  | -34  | -1                 | -17 | -36 | -5   | -15                | -2 | -4 | 2    |                    |   |   |  |
| 32  | -36  | -2                 | -14 | -41 | -8   | -12                | -5 | -6 | 2    |                    |   |   |  |
| 31  | -39  | -2                 | -13 | -42 | -7   | -13                | -3 | -5 | 0    |                    |   |   |  |
| 30  | -42  | -2                 | -14 | -43 | 2    | -13                | -1 | 4  | 1    |                    |   |   |  |
| 29  | -46  | 0                  | -14 | -45 | 1    | -19                | 1  | 1  | -5   |                    |   |   |  |
| 28  | -47  | 2                  | -14 | 999 | 999  | 999                |    |    |      |                    |   |   |  |
| 27  | -46  | 2                  | -13 | 999 | 999  | 999                |    |    |      |                    |   |   |  |
| 26  | -47  | 2                  | -11 | 999 | 999  | 999                |    |    |      |                    |   |   |  |
| 25  | -49  | 3                  | -9  | 999 | 999  | 999                |    |    |      |                    |   |   |  |

75

TEMPERATURE

MERIDIONAL

ZONAL



US - STANDARD  
USSR - STANDARD

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0537 GMT 8/19/77  
0507 GMT 8/19/77

|     |       | US - STANDARD<br>AUG 19 1977<br>2000 GMT |     |     | USSR - STANDARD<br>AUG 19 1977<br>2005 GMT |                          |     | DIFFERENCES<br>USSR-US |       |                          |   |   |    |
|-----|-------|--|-----|-----|--|--------------------------|-----|------------------------|-------|--------------------------|---|---|----|
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP  | COMPONENT<br>WINDS<br>-1 |   |   |    |
| KM  | DEG C | NS                                       | M   | S   | DEG C                                      | NS                       | M   | S                      | DEG C | NS                       | M | S | EW |
| 78  | 999   | 999                                      | 999 | 999 | -71  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 77  | 999   | 999                                      | 999 | 999 | -67  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 76  | 999   | 999                                      | 999 | 999 | -64  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 75  | 999   | 999                                      | 999 | 999 | -61  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 74  | 999   | 999                                      | 999 | 999 | -58  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 73  | 999   | 999                                      | 999 | 999 | -55  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 72  | 999   | 999                                      | 999 | 999 | -53  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 71  | 999   | 28                                       | -13 |     | -51  | 999                      | 999 | 999                    |       |                          |   |   |    |
| 70  | -54   | 29                                       | -14 |     | -49  | 999                      | 999 | 999                    | 5     |                          |   |   |    |
| 69  | -50   | 28                                       | -14 |     | -47  | 999                      | 999 | 999                    | 3     |                          |   |   |    |
| 68  | -46   | 26                                       | -16 |     | -45  | 999                      | 999 | 999                    | 1     |                          |   |   |    |
| 67  | -40   | 24                                       | -17 |     | -44  | 999                      | 999 | 999                    | -4    |                          |   |   |    |
| 66  | -33   | 22                                       | -19 |     | -43  | 999                      | 999 | 999                    | -10   |                          |   |   |    |
| 65  | -32   | 19                                       | -21 |     | -41  | 999                      | 999 | 999                    | -9    |                          |   |   |    |
| 64  | -35   | 16                                       | -23 |     | -40  | 999                      | 999 | 999                    | -5    |                          |   |   |    |
| 63  | -36   | 13                                       | -27 |     | -38  | 999                      | 999 | 999                    | -2    |                          |   |   |    |
| 62  | -35   | 11                                       | -30 |     | -35  | 999                      | 999 | 999                    | 0     |                          |   |   |    |
| 61  | -34   | 8  | -34 |     | -33  | 999                      | 999 | 999                    | 1     |                          |   |   |    |
| 60  | -30   | 6  | -37 |     | -30  | 1                        | -30 | 0                      | -5    | 7                        |   |   |    |
| 59  | -29   | 6  | -39 |     | -28  | 5                        | -31 | 1                      | -1    | 8                        |   |   |    |
| 58  | -29   | 9  | -41 |     | -26  | 9                        | -30 | 3                      | 0     | 11                       |   |   |    |
| 57  | -25   | 15                                       | -43 |     | -24  | 13                       | -28 | 1                      | -2    | 15                       |   |   |    |
| 56  | -20   | 18                                       | -45 |     | -22  | 17                       | -26 | -2                     | -1    | 19                       |   |   |    |
| 55  | -16   | 17                                       | -45 |     | -21  | 20                       | -23 | -5                     | 3     | 22                       |   |   |    |
| 54  | -16   | 11                                       | -42 |     | -19  | 23                       | -21 | -3                     | 12    | 21                       |   |   |    |
| 53  | -11   | 4  | -35 |     | -18  | 21                       | -23 | -7                     | 17    | 12                       |   |   |    |
| 52  | -12   | 2  | -30 |     | -15  | 15                       | -31 | -3                     | 13    | -1                       |   |   |    |
| 51  | -12   | 2  | -29 |     | -12  | 4                        | -42 | 0                      | 2     | -13                      |   |   |    |
| 50  | -11   | 4  | -32 |     | -10  | -4                       | -50 | 1                      | -8    | -18                      |   |   |    |
| 49  | -8    | 6  | -36 |     | -8   | 0                        | -43 | 0                      | -6    | -7                       |   |   |    |
| 48  | -4    | 7  | -38 |     | -7   | 10                       | -34 | -3                     | 3     | 4                        |   |   |    |
| 47  | 0     | 6  | -35 |     | -6   | 11                       | -35 | -6                     | 5     | 0                        |   |   |    |
| 46  | -2    | 3  | -31 |     | -5   | 5                        | -34 | -3                     | 2     | -3                       |   |   |    |
| 45  | -4    | 0  | -28 |     | -4   | 1                        | -22 | 0                      | 1     | 6                        |   |   |    |

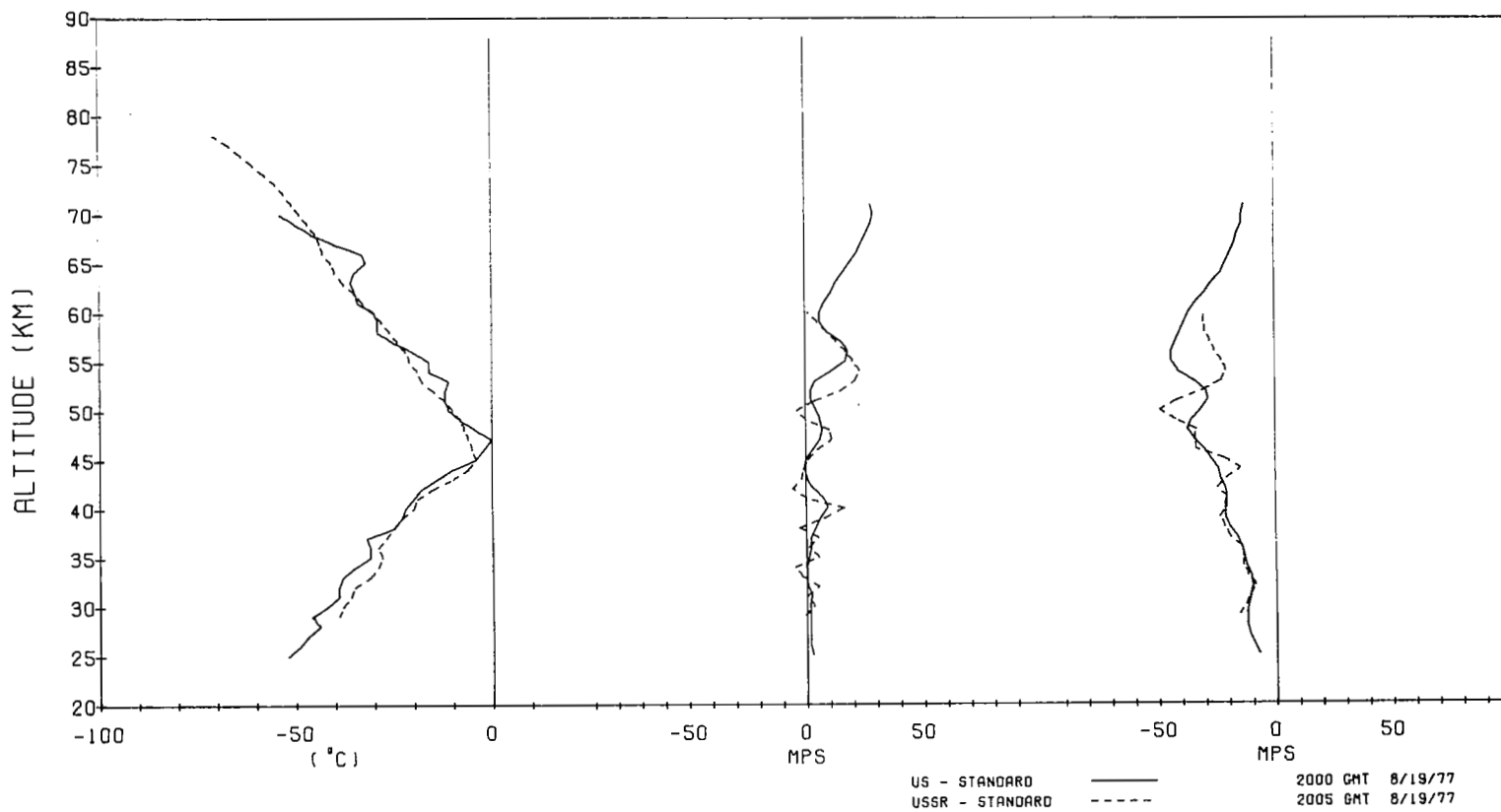
| ALT | TEMP  | COMPONENT<br>WINDS<br>-1 |     |   | TEMP  | COMPONENT<br>WINDS<br>-1 |     |   | TEMP  | COMPONENT<br>WINDS<br>-1 |    |   |    |
|-----|-------|--------------------------|-----|---|-------|--------------------------|-----|---|-------|--------------------------|----|---|----|
| KM  | DEG C | NS                       | M   | S | DEG C | NS                       | M   | S | DEG C | NS                       | M  | S | EW |
| 44  | -10   | -1                       | -25 |   | -6    | -1                       | -15 |   | 4     | 0                        | 10 |   |    |
| 43  | -14   | 0                        | -24 |   | -10   | -2                       | -21 |   | 4     | -2                       | 3  |   |    |
| 42  | -18   | 3                        | -22 |   | -15   | -6                       | -25 |   | 3     | -9                       | -3 |   |    |
| 41  | -20   | 7                        | -21 |   | -19   | 0                        | -21 |   | 1     | -7                       | 0  |   |    |
| 40  | -22   | 9                        | -22 |   | -20   | 16                       | -21 |   | 2     | 7                        | 1  |   |    |
| 39  | -23   | 6                        | -22 |   | -23   | 8                        | -24 |   | 0     | 2                        | -2 |   |    |
| 38  | -25   | 4                        | -20 |   | -25   | -3                       | -22 |   | 0     | -7                       | -2 |   |    |
| 37  | -32   | 2                        | -17 |   | -27   | 5                        | -20 |   | 5     | 3                        | -3 |   |    |
| 36  | -31   | 2                        | -15 |   | -29   | 1                        | -15 |   | 2     | -1                       | 0  |   |    |
| 35  | -31   | 1                        | -14 |   | -28   | 5                        | -14 |   | 3     | 4                        | 0  |   |    |
| 34  | -35   | 0                        | -13 |   | -29   | -5                       | -14 |   | 6     | -5                       | -1 |   |    |
| 33  | -38   | 0                        | -11 |   | -31   | -2                       | -12 |   | 7     | -2                       | -1 |   |    |
| 32  | -39   | 0                        | -10 |   | -35   | 5                        | -9  |   | 4     | 5                        | 1  |   |    |
| 31  | -39   | 2                        | -11 |   | -36   | 5                        | -11 |   | 3     | -2                       | 0  |   |    |
| 30  | -42   | 1                        | -12 |   | -38   | 3                        | -13 |   | 4     | 2                        | -1 |   |    |
| 29  | -46   | 1                        | -13 |   | -39   | -1                       | -16 |   | 7     | -2                       | -3 |   |    |
| 28  | -44   | 1                        | -13 |   | 999   | 999                      | 999 |   |       |                          |    |   |    |
| 27  | -47   | 1                        | -12 |   | 999   | 999                      | 999 |   |       |                          |    |   |    |
| 26  | -49   | 1                        | -10 |   | 999   | 999                      | 999 |   |       |                          |    |   |    |
| 25  | -52   | 2                        | -8  |   | 999   | 999                      | 999 |   |       |                          |    |   |    |

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TEMPERATURE

MERIDIONAL

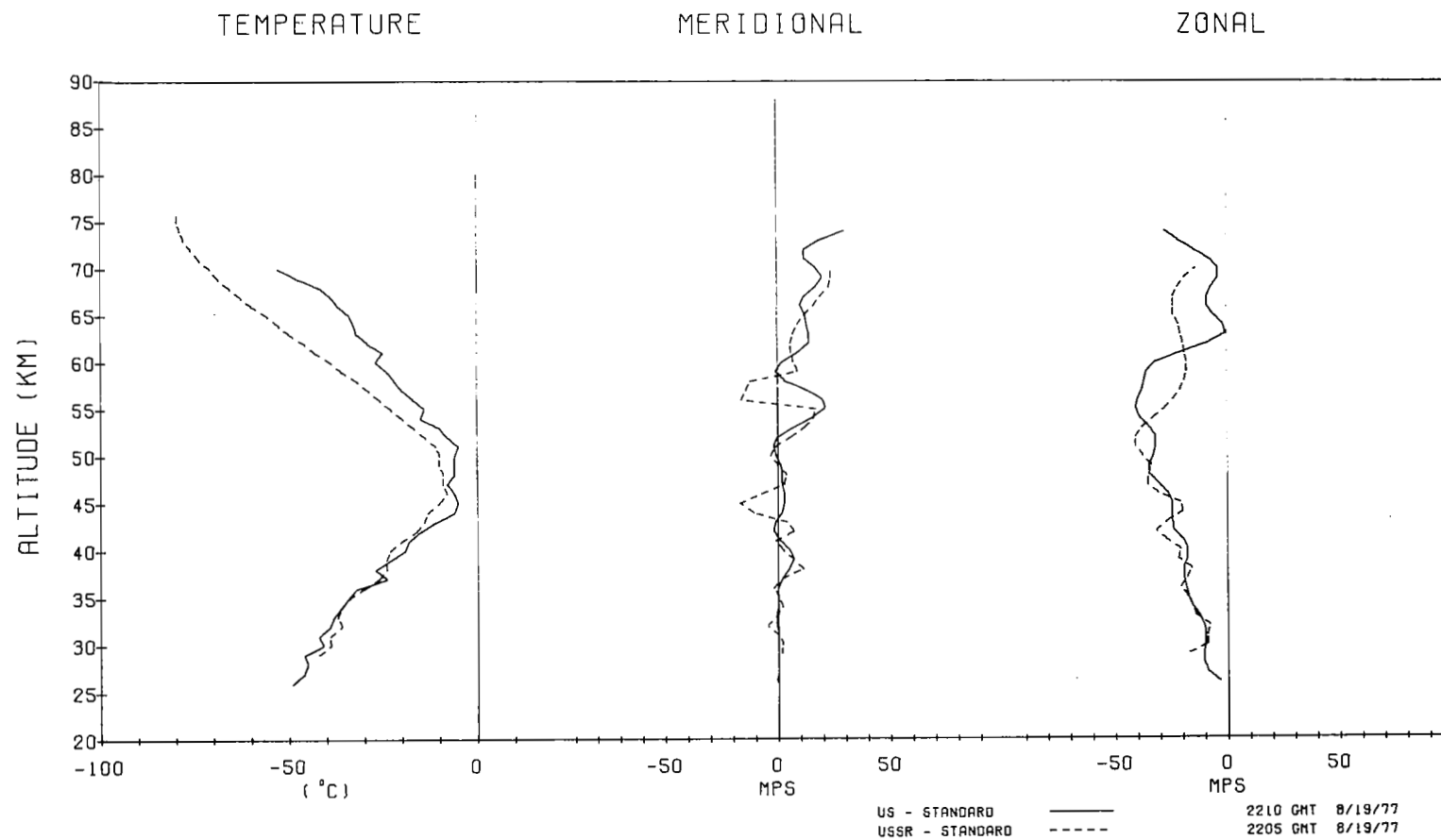
ZONAL



|           |               | US - STANDARD<br>AUG 19 1977<br>2210 GMT |     |     | USSR - STANDARD<br>AUG 19 1977<br>2205 GMT |                          |     | DIFFERENCES<br>USSR-US |               |                          |     |    |
|-----------|---------------|--|-----|-----|--|--------------------------|-----|------------------------|---------------|--------------------------|-----|----|
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|           |               | NS                                       | S   | EW  |  | NS                       | S   | EW                     |               | DLG C                    | M S | EW |
| 76        | 999           | 999                                      | 999 | 999 | -80  | 999                      | 999 |                        |               |                          |     |    |
| 75        | 999           | 999                                      | 999 | 999 | -80  | 999                      | 999 |                        |               |                          |     |    |
| 74        | 999           | 30                                       | -28 |     | -79  | 999                      | 999 |                        |               |                          |     |    |
| 73        | 999           | 19                                       | -22 |     | -78  | 999                      | 999 |                        |               |                          |     |    |
| 72        | 999           | 12                                       | -15 |     | -76  | 999                      | 999 |                        |               |                          |     |    |
| 71        | 999           | 12                                       | -8  |     | -74  | 999                      | 999 |                        |               |                          |     |    |
| 70        | -53           | 17                                       | -4  |     | -71  | 24                       | -14 | -18                    | 7             | -10                      |     |    |
| 69        | -48           | 20                                       | -4  |     | -69  | 24                       | -19 | -21                    | 4             | -15                      |     |    |
| 68        | -42           | 17                                       | -7  |     | -66  | 23                       | -22 | -24                    | 6             | -15                      |     |    |
| 67        | -39           | 12                                       | -9  |     | -63  | 19                       | -24 | -24                    | 7             | -15                      |     |    |
| 66        | -37           | 10                                       | -9  |     | -60  | 16                       | -24 | -23                    | 6             | -15                      |     |    |
| 65        | -34           | 12                                       | -6  |     | -56  | 12                       | -24 | -22                    | 0             | -18                      |     |    |
| 64        | -33           | 13                                       | -2  |     | -53  | 9                        | -22 | -20                    | -4            | -20                      |     |    |
| 63        | -32           | 14                                       | -1  |     | -50  | 7                        | -21 | -18                    | -7            | -20                      |     |    |
| 62        | -29           | 14                                       | -9  |     | -46  | 6                        | -20 | -17                    | -8            | -11                      |     |    |
| 61        | -25           | 9  | -21 |     | -43  | 6                        | -19 | -18                    | -3            | 2                        |     |    |
| 60        | -27           | 2  | -32 |     | -39  | 7                        | -18 | -12                    | 5             | 14                       |     |    |
| 59        | -24           | -1                                       | -36 |     | -36  | 9                        | -18 | -12                    | 10            | 18                       |     |    |
| 58        | -22           | 3  | -37 |     | -32  | -12                      | -19 | -10                    | -15           | 18                       |     |    |
| 57        | -20           | 13                                       | -38 |     | -29  | -14                      | -21 | -9                     | -27           | 17                       |     |    |
| 56        | -17           | 20                                       | -40 |     | -26  | -16                      | -24 | -9                     | -36           | 16                       |     |    |
| 55        | -14           | 21                                       | -41 |     | -23  | 17                       | -28 | -9                     | -4            | 13                       |     |    |
| 54        | -15           | 15                                       | -39 |     | -20  | 16                       | -33 | -5                     | 1             | 6                        |     |    |
| 53        | -10           | 7  | -35 |     | -17  | 12                       | -38 | -7                     | 5             | -3                       |     |    |
| 52        | -8            | 0  | -32 |     | -14  | 6                        | -41 | -6                     | 6             | -9                       |     |    |
| 51        | -5            | -2                                       | -32 |     | -11  | -1                       | -41 | -6                     | 1             | -9                       |     |    |
| 50        | -6            | -1                                       | -33 |     | -10  | -3                       | -38 | -4                     | -2            | -5                       |     |    |
| 49        | -6            | 1  | -35 |     | -10  | 0                        | -34 | -4                     | -1            | 1                        |     |    |
| 48        | -6            | 2  | -35 |     | -9   | 4                        | -35 | -3                     | 2             | 0                        |     |    |
| 47        | -8            | 2  | -31 |     | -9   | 3                        | -36 | -1                     | 1             | -5                       |     |    |
| 46        | -6            | 3  | -27 |     | -8   | -7                       | -31 | -2                     | -10           | -4                       |     |    |
| 45        | -5            | 3  | -25 |     | -10  | -17                      | -21 | -5                     | -20           | 4                        |     |    |
| 44        | -6            | 2  | -25 |     | -13  | -11                      | -20 | -7                     | -13           | 5                        |     |    |
| 43        | -11           | -1                                       | -25 |     | -14  | 4                        | -27 | -3                     | 5             | -2                       |     |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|
|           |               | NS                       | S   | EW |               | NS                       | S   | EW |               | DEG C                    | M S | EW |
| 42        | -15           | -2                       | -24 |    | -16           | 7                        | -32 | -1 | 9             | -8                       |     |    |
| 41        | -18           | 1                        | -20 |    | -20           | -1                       | -27 | -2 | -2            | -7                       |     |    |
| 40        | -19           | 5                        | -18 |    | -23           | 2                        | -21 | -4 | -3            | -3                       |     |    |
| 39        | -23           | 7                        | -18 |    | -24           | 7                        | -22 | -1 | 0             | -4                       |     |    |
| 38        | -27           | 5                        | -20 |    | -24           | 11                       | -16 | 3  | 6             | 4                        |     |    |
| 37        | -24           | 2                        | -20 |    | -26           | 2                        | -18 | -2 | 0             | 2                        |     |    |
| 36        | -32           | 0                        | -19 |    | -30           | -2                       | -21 | 2  | -2            | -2                       |     |    |
| 35        | -34           | 0                        | -18 |    | -34           | 0                        | -18 | 0  | 0             | 0                        |     |    |
| 34        | -36           | 0                        | -16 |    | -36           | 2                        | -16 | 0  | 2             | 0                        |     |    |
| 33        | -38           | -1                       | -13 |    | -37           | -1                       | -14 | 1  | 0             | -1                       |     |    |
| 32        | -39           | -1                       | -11 |    | -36           | -5                       | -8  | 3  | -4            | 3                        |     |    |
| 31        | -42           | 0                        | -10 |    | -39           | 0                        | -9  | 3  | 0             | 1                        |     |    |
| 30        | -41           | 0                        | -10 |    | -39           | 2                        | -9  | 2  | 2             | 1                        |     |    |
| 29        | -46           | 0                        | -11 |    | -42           | 1                        | -17 | 4  | 1             | -6                       |     |    |
| 28        | -45           | 0                        | -11 |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 27        | -46           | 0                        | -9  |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 26        | -49           | -1                       | -4  |    | 999           | 999                      | 999 |    |               |                          |     |    |

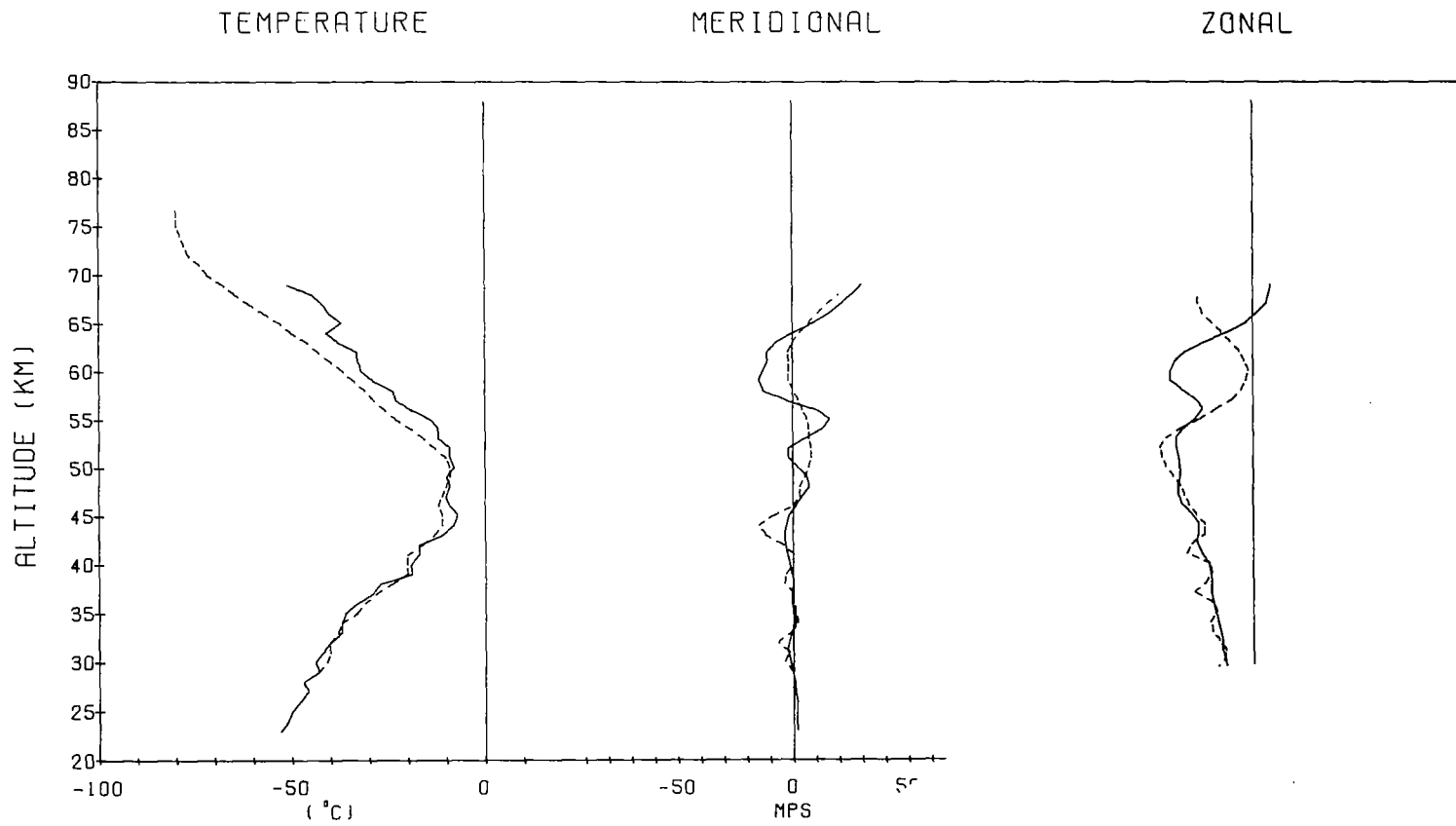
79



| ALT | US - STANDARD<br>AUG 20 1977<br>0100 GMT |                          |     |     | USSR - STANDARD<br>AUG 20 1977<br>0105 GMT |                          |     |     | DIFFERENCES<br>USSR-US |                          |     |    |  |  |
|-----|--|--------------------------|-----|-----|--|--------------------------|-----|-----|------------------------|--------------------------|-----|----|--|--|
|     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |    |  |  |
|     |  | NS                       | M   | EW  |  | NS                       | M   | EW  |                        | NS                       | M   | EW |  |  |
| 77  | 999                                      | 999                      | 999 | 999 | -80  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 76  | 999                                      | 999                      | 999 | 999 | -80  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 75  | 999                                      | 999                      | 999 | 999 | -80  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 74  | 999                                      | 999                      | 999 | 999 | -79  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 73  | 999                                      | 999                      | 999 | 999 | -78  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 72  | 999                                      | 999                      | 999 | 999 | -77  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 71  | 999                                      | 999                      | 999 | 999 | -74  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 70  | 999                                      | 999                      | 999 | 999 | -72  | 999                      | 999 | 999 |                        |                          |     |    |  |  |
| 69  | -51                                      | 30                       | 8   |     | -68  | 999                      | 999 |     | -17                    |                          |     |    |  |  |
| 68  | -45                                      | 26                       | 7   |     | -65  | 20                       | -24 |     | -20                    | -6                       | -31 |    |  |  |
| 67  | -42                                      | 21                       | 6   |     | -61  | 15                       | -24 |     | -19                    | -6                       | -30 |    |  |  |
| 66  | -40                                      | 16                       | 2   |     | -57  | 11                       | -22 |     | -17                    | -5                       | -24 |    |  |  |
| 65  | -37                                      | 9                        | -3  |     | -53  | 7                        | -18 |     | -16                    | -2                       | -15 |    |  |  |
| 64  | -41                                      | 0                        | -11 |     | -50  | 3                        | -14 |     | -9                     | 3                        | -3  |    |  |  |
| 63  | -38                                      | -7                       | -21 |     | -46  | 0                        | -10 |     | -8                     | 7                        | 11  |    |  |  |
| 62  | -33                                      | -11                      | -29 |     | -43  | -2                       | -6  |     | -10                    | 9                        | 23  |    |  |  |
| 61  | -33                                      | -11                      | -34 |     | -40  | -2                       | -4  |     | -7                     | 9                        | 30  |    |  |  |
| 60  | -32                                      | -13                      | -36 |     | -37  | -2                       | -2  |     | -5                     | 11                       | 34  |    |  |  |
| 59  | -29                                      | -15                      | -36 |     | -34  | -2                       | -3  |     | -5                     | 13                       | 33  |    |  |  |
| 58  | -24                                      | -13                      | -31 |     | -31  | 0                        | -5  |     | -7                     | 13                       | 26  |    |  |  |
| 57  | -23                                      | -3                       | -25 |     | -29  | 2                        | -9  |     | -6                     | 5                        | 16  |    |  |  |
| 56  | -19                                      | 10                       | -22 |     | -26  | 4                        | -16 |     | -7                     | -6                       | 6   |    |  |  |
| 55  | -14                                      | 16                       | -25 |     | -23  | 6                        | -23 |     | -9                     | -10                      | 2   |    |  |  |
| 54  | -12                                      | 13                       | -30 |     | -19  | 7                        | -31 |     | -7                     | -6                       | -1  |    |  |  |
| 53  | -12                                      | 5                        | -34 |     | -16  | 7                        | -38 |     | -4                     | 2                        | -4  |    |  |  |
| 52  | -9                                       | -2                       | -34 |     | -13  | 8                        | -41 |     | -4                     | 10                       | -7  |    |  |  |
| 51  | -9                                       | -2                       | -33 |     | -10  | 8                        | -40 |     | -1                     | 10                       | -7  |    |  |  |
| 50  | -8                                       | 2                        | -32 |     | -9   | 7                        | -38 |     | -1                     | 5                        | -6  |    |  |  |
| 49  | -10                                      | 6                        | -32 |     | -9   | 5                        | -35 |     | 1                      | -1                       | -3  |    |  |  |
| 48  | -9                                       | 7                        | -33 |     | -10  | 3                        | -32 |     | -1                     | -4                       | 1   |    |  |  |
| 47  | -10                                      | 4                        | -33 |     | -11  | 3                        | -30 |     | -1                     | -1                       | 3   |    |  |  |
| 46  | -9                                       | 1                        | -31 |     | -12  | 0                        | -28 |     | -3                     | -1                       | 3   |    |  |  |
| 45  | -7                                       | -2                       | -27 |     | -11  | -9                       | -25 |     | -4                     | -7                       | 2   |    |  |  |
| 44  | -8                                       | -3                       | -24 |     | -11  | -15                      | -21 |     | -3                     | -12                      | 3   |    |  |  |

| ALT | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    |    |   |
|-----|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|----|----|----|---|
|     |               | NS                       | M   | EW |               | NS                       | M   | EW |               | NS                       | M  | EW |    |   |
|     |               |                          |     |    |               |                          |     |    |               |                          |    |    | NS | M |
| 43  | -11           | -4                       | -24 |    | -13           | -12                      | -21 |    | -2            | -8                       | 3  |    |    |   |
| 42  | -17           | -4                       | -25 |    | -16           | -5                       | -27 |    | 1             | -1                       | -2 |    |    |   |
| 41  | -17           | -3                       | -23 |    | -20           | 0                        | -29 |    | -3            | 3                        | -6 |    |    |   |
| 40  | -19           | -2                       | -20 |    | -20           | 0                        | -19 |    | -1            | 2                        | 1  |    |    |   |
| 39  | -19           | -1                       | -19 |    | -20           | -3                       | -18 |    | -1            | -2                       | 1  |    |    |   |
| 38  | -27           | 0                        | -19 |    | -24           | -4                       | -21 |    | 3             | -4                       | -2 |    |    |   |
| 37  | -29           | -1                       | -19 |    | -28           | 0                        | -26 |    | 1             | 1                        | -7 |    |    |   |
| 36  | -33           | -1                       | -18 |    | -31           | 0                        | -18 |    | 2             | 1                        | 0  |    |    |   |
| 35  | -36           | 0                        | -17 |    | -33           | 1                        | -16 |    | 3             | 1                        | 1  |    |    |   |
| 34  | -37           | 1                        | -16 |    | -37           | 2                        | -19 |    | 0             | 1                        | -3 |    |    |   |
| 33  | -37           | -1                       | -15 |    | -38           | -1                       | -18 |    | -1            | 0                        | -3 |    |    |   |
| 32  | -40           | -2                       | -14 |    | -40           | -7                       | -15 |    | 0             | -5                       | -1 |    |    |   |
| 31  | -42           | -3                       | -14 |    | -40           | -2                       | -12 |    | 2             | 1                        | 2  |    |    |   |
| 30  | -44           | -2                       | -13 |    | -41           | -4                       | -13 |    | 3             | -2                       | 0  |    |    |   |
| 29  | -43           | -1                       | -12 |    | -43           | -1                       | -17 |    | 0             | 0                        | -5 |    |    |   |
| 28  | -47           | 0                        | -11 |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |
| 27  | -46           | 0                        | -10 |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |
| 26  | -48           | 1                        | -10 |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |
| 25  | -50           | 1                        | -9  |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |
| 24  | -51           | 1                        | -7  |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |
| 23  | -53           | 1                        | -5  |    | 999           | 999                      | 999 |    |               |                          |    |    |    |   |

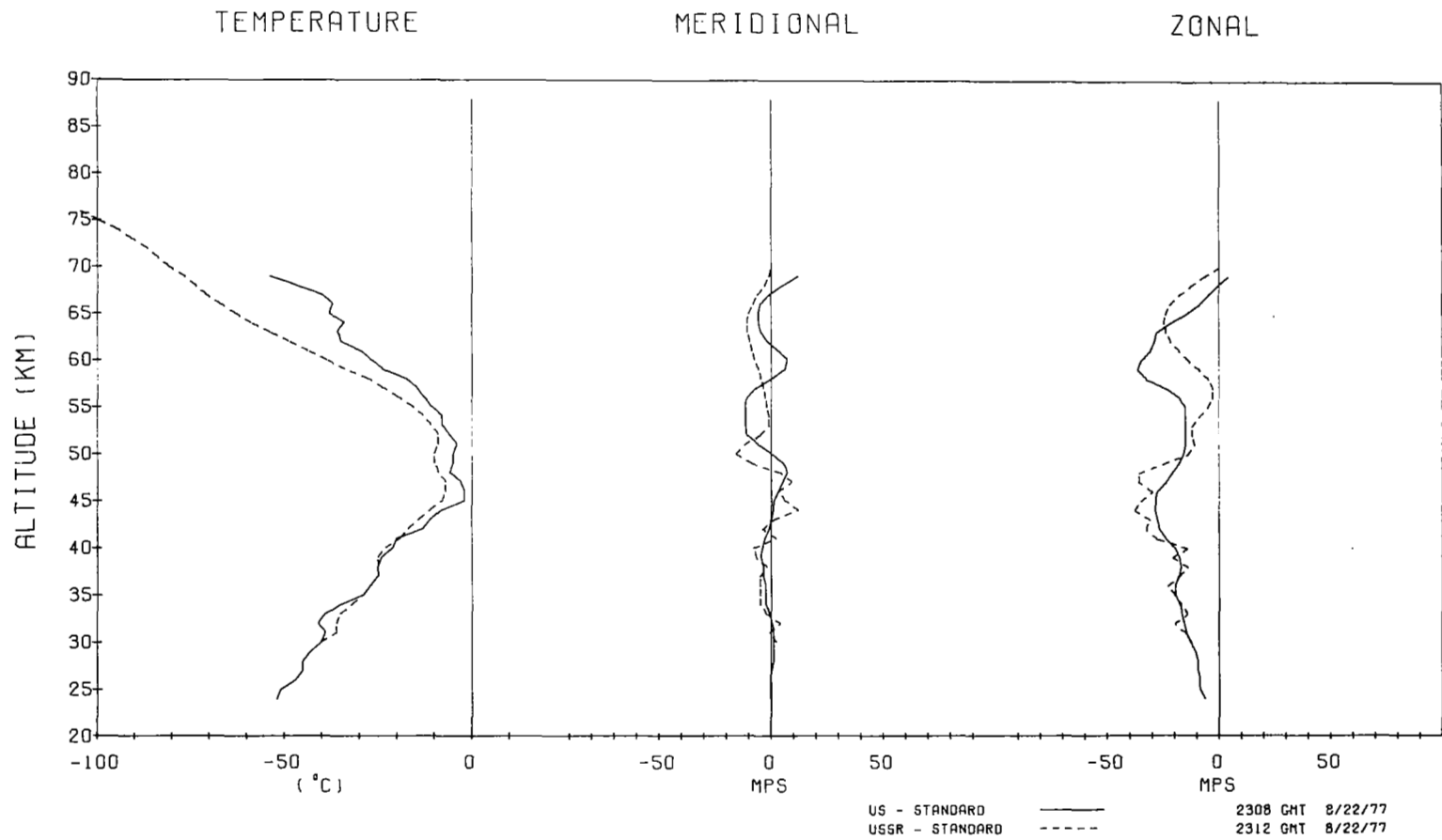
18





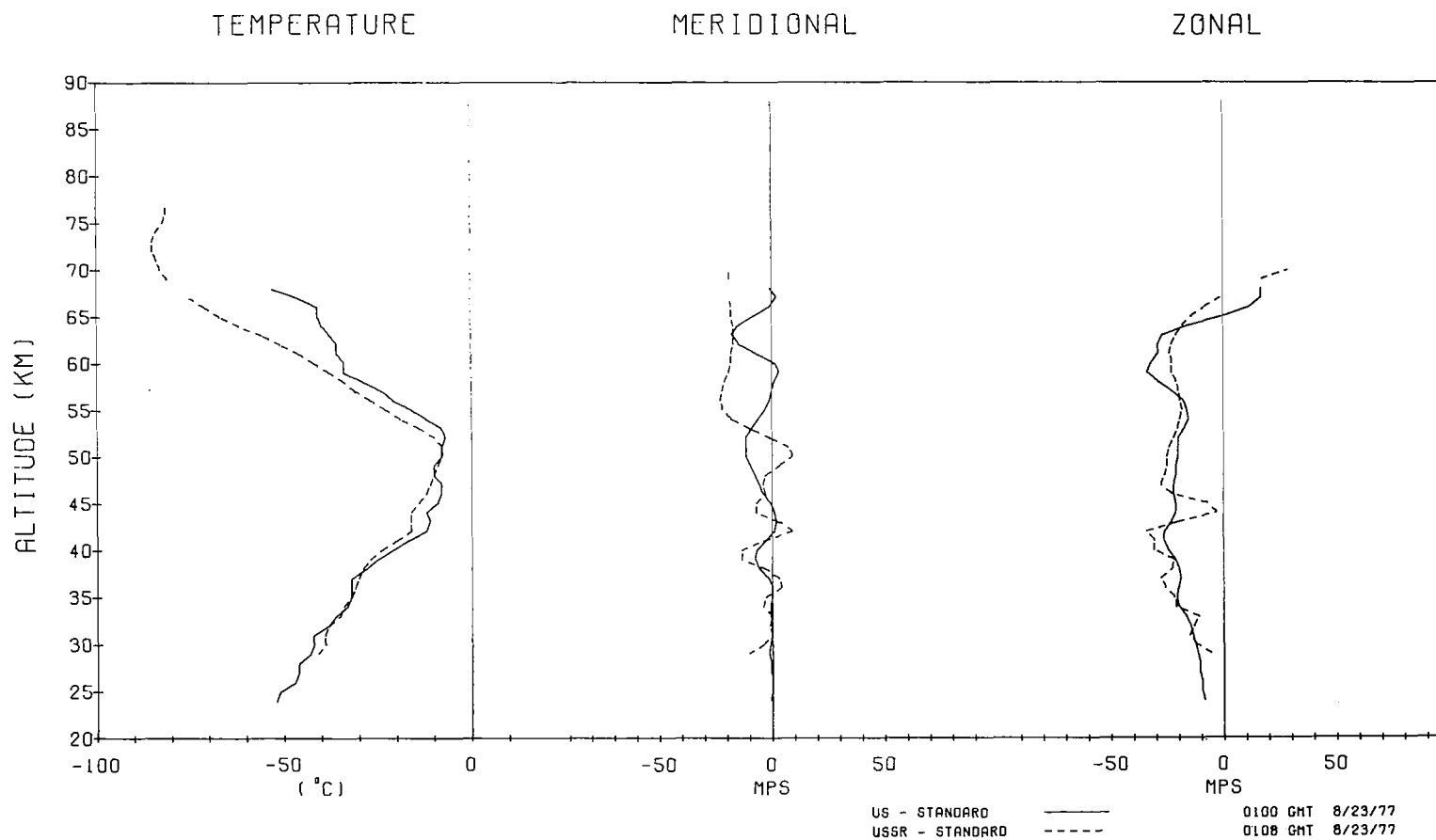
| US - STANDARD<br>AUG 22 1977<br>2308 GMT |               |                          |     | USSR - STANDARD<br>AUG 22 1977<br>2312 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |     |  |  |
|--|---------------|--------------------------|-----|--|--------------------------|-----|---------------|--------------------------|-----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  |  |
|  |               | NS                       | EW  |  | NS                       | EW  |               | NS                       | EW  |  |  |
| 76                                       | 999           | 999                      | 999 | -105                                       | 999                      | 999 |               |                          |     |  |  |
| 75                                       | 999           | 999                      | 999 | -100                                       | 999                      | 999 |               |                          |     |  |  |
| 74                                       | 999           | 999                      | 999 | -95  | 999                      | 999 |               |                          |     |  |  |
| 73                                       | 999           | 999                      | 999 | -91  | 999                      | 999 |               |                          |     |  |  |
| 72                                       | 999           | 999                      | 999 | -87  | 999                      | 999 |               |                          |     |  |  |
| 71                                       | 999           | 999                      | 999 | -84  | 999                      | 999 |               |                          |     |  |  |
| 70                                       | 999           | 999                      | 999 | -81  | 0                        | 0   |               |                          |     |  |  |
| 69                                       | -54           | 12                       | 4   | -77  | -1                       | -7  | -23           | -13                      | -11 |  |  |
| 68                                       | -47           | 5                        | -1  | -74  | -3                       | -13 | -27           | -8                       | -12 |  |  |
| 67                                       | -40           | -1                       | -5  | -71  | -6                       | -18 | -31           | -5                       | -13 |  |  |
| 66                                       | -37           | -5                       | -9  | -67  | -8                       | -22 | -30           | -3                       | -13 |  |  |
| 65                                       | -38           | -6                       | -15 | -63  | -10                      | -24 | -25           | -4                       | -9  |  |  |
| 64                                       | -34           | -6                       | -22 | -59  | -11                      | -25 | -25           | -5                       | -3  |  |  |
| 63                                       | -36           | -5                       | -28 | -54  | -11                      | -24 | -18           | -6                       | 4   |  |  |
| 62                                       | -35           | -2                       | -29 | -49  | -10                      | -22 | -14           | -8                       | 7   |  |  |
| 61                                       | -30           | 3                        | -31 | -44  | -9                       | -18 | -14           | -12                      | 13  |  |  |
| 60                                       | -27           | 7                        | -35 | -39  | -8                       | -14 | -12           | -15                      | 21  |  |  |
| 59                                       | -24           | 6                        | -37 | -34  | -6                       | -9  | -10           | -12                      | 28  |  |  |
| 58                                       | -18           | 0                        | -33 | -28  | -5                       | -5  | -10           | -5                       | 28  |  |  |
| 57                                       | -15           | -7                       | -24 | -24  | -4                       | -3  | -9            | 3                        | 21  |  |  |
| 56                                       | -13           | -11                      | -18 | -20  | -3                       | -3  | -7            | 8                        | 15  |  |  |
| 55                                       | -11           | -12                      | -15 | -16  | -2                       | -5  | -5            | 10                       | 10  |  |  |
| 54                                       | -8            | -12                      | -15 | -13  | -1                       | -9  | -5            | 11                       | 6   |  |  |
| 53                                       | -8            | -12                      | -15 | -11  | -1                       | -12 | -3            | 11                       | 3   |  |  |
| 52                                       | -6            | -11                      | -15 | -9   | -5                       | -12 | -3            | 6                        | 3   |  |  |
| 51                                       | -4            | -6                       | -15 | -9   | -12                      | -11 | -5            | -6                       | 4   |  |  |
| 50                                       | -5            | 0                        | -16 | -10  | -16                      | -14 | -5            | -16                      | 2   |  |  |
| 49                                       | -5            | 5                        | -18 | -10  | -9                       | -25 | -5            | -14                      | -7  |  |  |
| 48                                       | -6            | 7                        | -21 | -9   | 4                        | -36 | -3            | -3                       | -15 |  |  |
| 47                                       | -3            | 5                        | -24 | -7   | 9                        | -36 | -4            | 4                        | -12 |  |  |
| 46                                       | -2            | 3                        | -28 | -7   | 3                        | -30 | -5            | 0                        | -2  |  |  |
| 45                                       | -2            | 1                        | -29 | -8   | 6                        | -35 | -6            | 5                        | -6  |  |  |
| 44                                       | -8            | 1                        | -29 | -11  | 12                       | -38 | -3            | 11                       | -9  |  |  |
| 43                                       | -11           | 0                        | -28 | -14  | 1                        | -31 | -3            | 1                        | -3  |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 42        | -13           | -1                       | -27 | -17           | -4                       | -33 | -4            | -3                       | -6 |
| 41        | -20           | -3                       | -24 | -19           | 2                        | -28 | 1             | 5                        | -4 |
| 40        | -21           | -4                       | -20 | -23           | -8                       | -14 | -2            | -4                       | 6  |
| 39        | -24           | -5                       | -18 | -25           | -7                       | -21 | -1            | -2                       | -3 |
| 38        | -25           | -4                       | -17 | -25           | -2                       | -14 | 0             | 2                        | 3  |
| 37        | -25           | -4                       | -18 | -25           | -5                       | -18 | 0             | -1                       | 0  |
| 36        | -27           | -3                       | -20 | -27           | -5                       | -23 | 0             | -2                       | -3 |
| 35        | -29           | -3                       | -20 | -29           | -5                       | -20 | 0             | -2                       | 0  |
| 34        | -35           | -3                       | -18 | -32           | -5                       | -17 | 3             | -2                       | 1  |
| 33        | -39           | -1                       | -17 | -35           | -2                       | -14 | 4             | -1                       | 3  |
| 32        | -41           | 0                        | -16 | -36           | 4                        | -20 | 5             | 4                        | -4 |
| 31        | -39           | 1                        | -15 | -36           | -1                       | -15 | 3             | -2                       | 0  |
| 30        | -40           | 1                        | -13 | -40           | 2                        | -13 | 0             | 1                        | 0  |
| 29        | -43           | 1                        | -11 | 999           | 999                      | 999 |               |                          |    |
| 28        | -45           | 1                        | -10 | 999           | 999                      | 999 |               |                          |    |
| 27        | -45           | 0                        | -10 | 999           | 999                      | 999 |               |                          |    |
| 26        | -47           | -1                       | -9  | 999           | 999                      | 999 |               |                          |    |
| 25        | -51           | -1                       | -9  | 999           | 999                      | 999 |               |                          |    |
| 24        | -52           | -1                       | -7  | 999           | 999                      | 999 |               |                          |    |



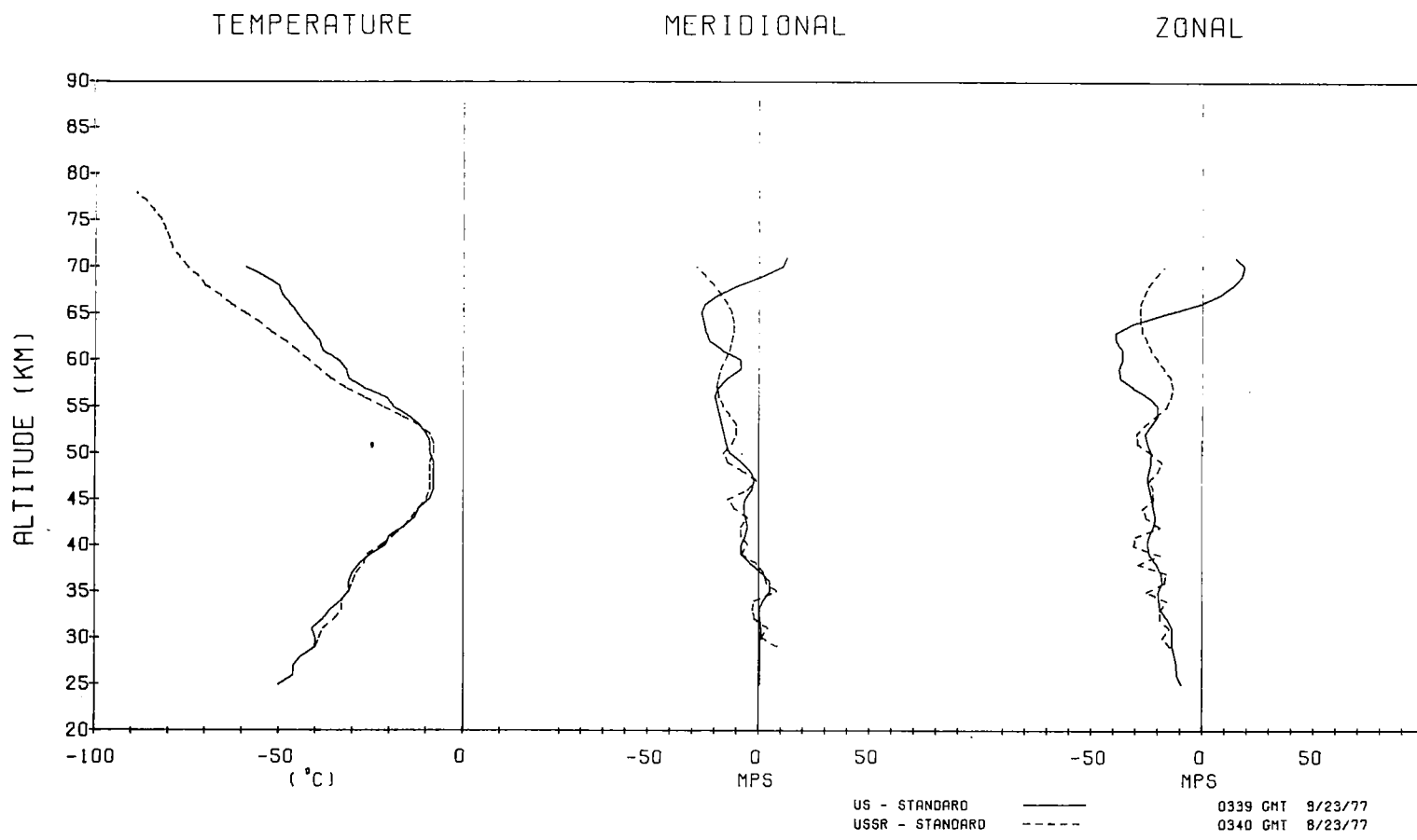
|           |               | US - STANDARD<br>AUG 23 1977<br>0100 GMT |     |     | USSR - STANDARD<br>AUG 23 1977<br>0108 GMT |                          |     | DIFFERENCES<br>USSR-US |               |                          |     |    |
|-----------|---------------|--|-----|-----|--|--------------------------|-----|------------------------|---------------|--------------------------|-----|----|
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|           |               | NS                                       | M S | EW  |  | NS                       | M S | EW                     |               | NS                       | M S | EW |
| 77        | 999           | 999                                      | 999 | 999 | -81  | 999                      | 999 |                        |               |                          |     |    |
| 76        | 999           | 999                                      | 999 | 999 | -81  | 999                      | 999 |                        |               |                          |     |    |
| 75        | 999           | 999                                      | 999 | 999 | -82  | 999                      | 999 |                        |               |                          |     |    |
| 74        | 999           | 999                                      | 999 | 999 | -84  | 999                      | 999 |                        |               |                          |     |    |
| 73        | 999           | 999                                      | 999 | 999 | -85  | 999                      | 999 |                        |               |                          |     |    |
| 72        | 999           | 999                                      | 999 | 999 | -85  | 999                      | 999 |                        |               |                          |     |    |
| 71        | 999           | 999                                      | 999 | 999 | -84  | 999                      | 999 |                        |               |                          |     |    |
| 70        | 999           | 999                                      | 999 | 999 | -83  | -19                      | 29  |                        |               |                          |     |    |
| 69        | 999           | 999                                      | 999 | 999 | -81  | -14                      | 17  |                        |               |                          |     |    |
| 68        | -53           | -1                                       | 17  |     | 999  | 999                      | 999 |                        |               |                          |     |    |
| 67        | -46           | 2  | 17  |     | -75  | -19                      | -1  | -29                    | -21           | -18                      |     |    |
| 66        | -41           | -1                                       | 12  |     | -71  | -18                      | -8  | -30                    | -17           | -20                      |     |    |
| 65        | -41           | -8                                       | 0   |     | -67  | -18                      | -14 | -26                    | -10           | -14                      |     |    |
| 64        | -40           | -15                                      | -16 |     | -62  | -17                      | -18 | -22                    | -2            | -2                       |     |    |
| 63        | -38           | -18                                      | -27 |     | -56  | -17                      | -21 | -18                    | 1             | 6                        |     |    |
| 62        | -36           | -15                                      | -29 |     | -51  | -17                      | -23 | -15                    | -2            | 6                        |     |    |
| 61        | -36           | -7                                       | -29 |     | -46  | -18                      | -24 | -10                    | -11           | 5                        |     |    |
| 60        | -34           | 1  | -32 |     | -42  | -18                      | -23 | -8                     | -19           | 9                        |     |    |
| 59        | -34           | 3  | -34 |     | -38  | -19                      | -23 | -4                     | -22           | 11                       |     |    |
| 58        | -29           | 1  | -29 |     | -34  | -21                      | -21 | -5                     | -22           | 8                        |     |    |
| 57        | -24           | 0  | -23 |     | -31  | -22                      | -20 | -7                     | -22           | 3                        |     |    |
| 56        | -21           | -1                                       | -18 |     | -27  | -23                      | -19 | -6                     | -22           | -1                       |     |    |
| 55        | -16           | -3                                       | -16 |     | -23  | -22                      | -18 | -7                     | -19           | -2                       |     |    |
| 54        | -12           | -6                                       | -15 |     | -19  | -18                      | -19 | -7                     | -12           | -4                       |     |    |
| 53        | -8            | -9                                       | -17 |     | -14  | -10                      | -20 | -6                     | -1            | -3                       |     |    |
| 52        | -7            | -12                                      | -20 |     | -10  | -1                       | -22 | -3                     | 11            | -2                       |     |    |
| 51        | -8            | -12                                      | -20 |     | -8   | 7                        | -24 | 0                      | 19            | -4                       |     |    |
| 50        | -8            | -12                                      | -20 |     | -8   | 9                        | -25 | 0                      | 21            | -5                       |     |    |
| 49        | -10           | -10                                      | -21 |     | -9   | 3                        | -25 | 1                      | 13            | -4                       |     |    |
| 48        | -10           | -8                                       | -21 |     | -10  | -3                       | -26 | 0                      | 5             | -5                       |     |    |
| 47        | -8            | -6                                       | -22 |     | -11  | -4                       | -28 | -3                     | 2             | -6                       |     |    |
| 46        | -8            | -4                                       | -22 |     | -12  | -3                       | -23 | -4                     | 1             | -1                       |     |    |
| 45        | -9            | -1                                       | -21 |     | -14  | -7                       | -7  | -5                     | -6            | 14                       |     |    |
| 44        | -12           | 1  | -21 |     | -16  | -7                       | -3  | -4                     | -8            | 18                       |     |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|
|           |               | NS                       | M S | EW |               | NS                       | M S | EW |               | NS                       | M S | EW |
| 43        | -11           | 2                        | -23 |    | -16           | 3                        | -20 | -5 | 1             | 3                        |     |    |
| 42        | -12           | 1                        | -26 |    | -16           | 9                        | -34 | -4 | 8             | -8                       |     |    |
| 41        | -17           | -3                       | -27 |    | -20           | -4                       | -31 | -3 | -1            | -4                       |     |    |
| 40        | -21           | -7                       | -25 |    | -24           | -14                      | -31 | -3 | -7            | -6                       |     |    |
| 39        | -25           | -8                       | -22 |    | -27           | -14                      | -22 | -2 | -6            | 0                        |     |    |
| 38        | -28           | -6                       | -20 |    | -29           | -3                       | -23 | -1 | 3             | -3                       |     |    |
| 37        | -32           | -2                       | -19 |    | -30           | 3                        | -28 | 2  | 5             | -9                       |     |    |
| 36        | -32           | 0                        | -20 |    | -31           | 4                        | -26 | 1  | 4             | -6                       |     |    |
| 35        | -32           | 0                        | -21 |    | -32           | -3                       | -22 | 0  | -3            | -1                       |     |    |
| 34        | -33           | -1                       | -20 |    | -34           | -4                       | -21 | -1 | -3            | -1                       |     |    |
| 33        | -36           | -1                       | -17 |    | -35           | 0                        | -11 | 1  | 1             | 6                        |     |    |
| 32        | -38           | 0                        | -15 |    | -38           | -1                       | -13 | 0  | -1            | 2                        |     |    |
| 31        | -42           | 0                        | -14 |    | -39           | 0                        | -15 | 3  | 0             | -1                       |     |    |
| 30        | -42           | -1                       | -13 |    | -39           | -4                       | -12 | 3  | -3            | 1                        |     |    |
| 29        | -43           | -2                       | -12 |    | -41           | -11                      | -6  | 2  | -9            | 6                        |     |    |
| 28        | -46           | -1                       | -11 |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 27        | -46           | -1                       | -11 |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 26        | -47           | 0                        | -10 |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 25        | -51           | 0                        | -10 |    | 999           | 999                      | 999 |    |               |                          |     |    |
| 24        | -52           | -1                       | -9  |    | 999           | 999                      | 999 |    |               |                          |     |    |



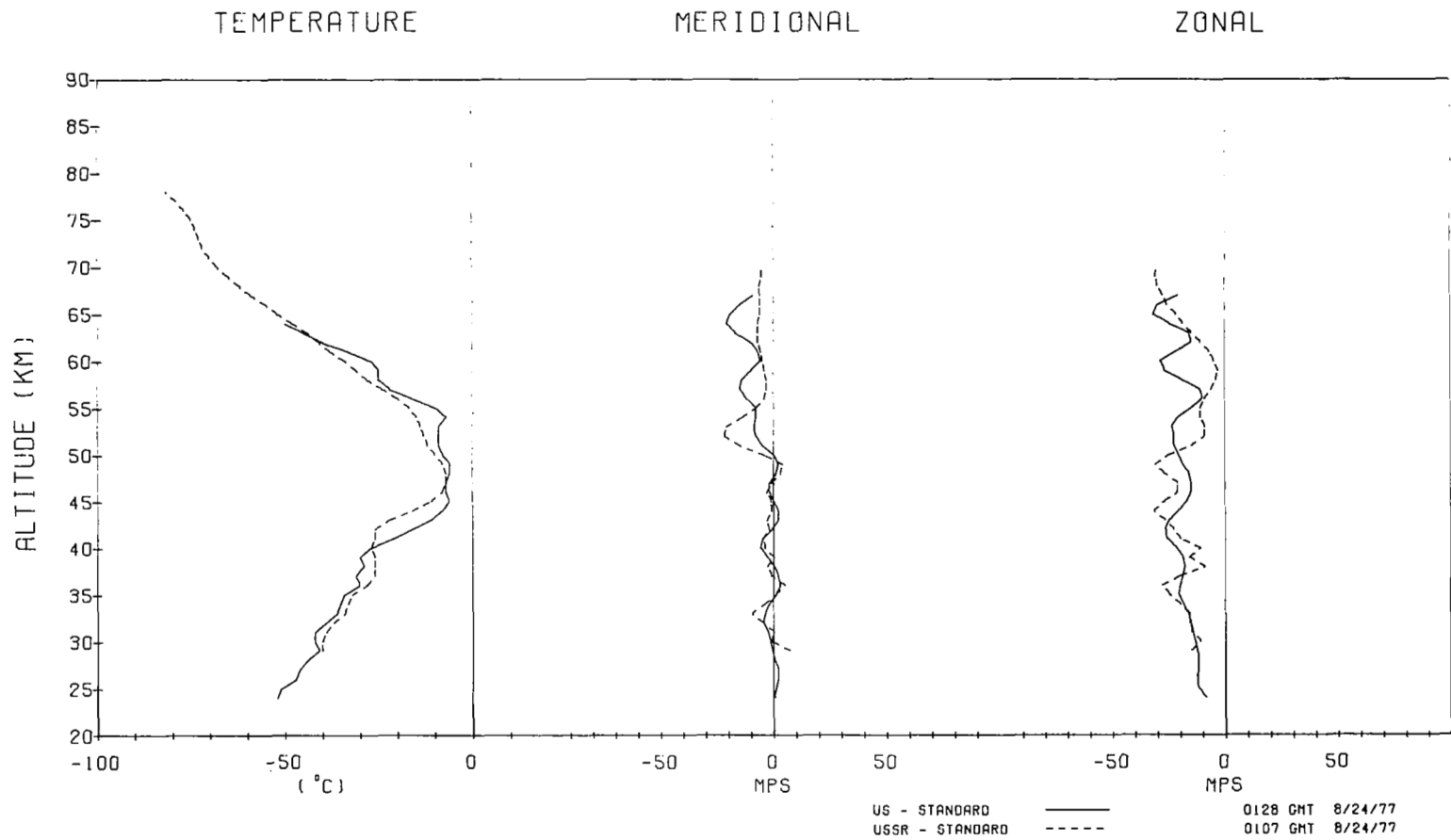
| ALT | US - STANDARD<br>AUG 23 1977<br>0339 GMT |                          |     |     | USSR - STANDARD<br>AUG 23 1977<br>0340 GMT |                          |     |     | DIFFERENCLS<br>USSR-US |                          |    |    |
|-----|--|--------------------------|-----|-----|--|--------------------------|-----|-----|------------------------|--------------------------|----|----|
|     | TEMP                                     | COMPONENT<br>WINDS<br>-1 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |     | TEMP                   | COMPONENT<br>WINDS<br>-1 |    |    |
|     |  | DEG C                    | M   | S   |  | DEG C                    | M   | S   |                        | DEG C                    | M  | S  |
|     |  | NS                       | EW  |     | NS   | EW                       |     | NS  | EW                     |                          | NS | EW |
| 78  | 999                                      | 999                      | 999 | 999 | -89  | 999                      | 999 |     |                        |                          |    |    |
| 77  | 999                                      | 999                      | 999 | 999 | -86  | 999                      | 999 |     |                        |                          |    |    |
| 76  | 999                                      | 999                      | 999 | 999 | -84  | 999                      | 999 |     |                        |                          |    |    |
| 75  | 999                                      | 999                      | 999 | 999 | -82  | 999                      | 999 |     |                        |                          |    |    |
| 74  | 999                                      | 999                      | 999 | 999 | -81  | 999                      | 999 |     |                        |                          |    |    |
| 73  | 999                                      | 999                      | 999 | 999 | -80  | 999                      | 999 |     |                        |                          |    |    |
| 72  | 999                                      | 999                      | 999 | 999 | -79  | 999                      | 999 |     |                        |                          |    |    |
| 71  | 999                                      | 13                       | 15  | 999 | -77  | 999                      | 999 |     |                        |                          |    |    |
| 70  | -59                                      | 11                       | 19  |     | -75  | -28                      | -17 | -16 | -39                    | -36                      |    |    |
| 69  | -54                                      | 2                        | 18  |     | -72  | -24                      | -21 | -18 | -26                    | -39                      |    |    |
| 68  | -50                                      | -9                       | 14  |     | -70  | -20                      | -24 | -20 | -11                    | -38                      |    |    |
| 67  | -49                                      | -18                      | 8   |     | -66  | -17                      | -26 | -17 | 1                      | -34                      |    |    |
| 66  | -47                                      | -24                      | -2  |     | -63  | -14                      | -28 | -16 | 10                     | -26                      |    |    |
| 65  | -45                                      | -26                      | -17 |     | -59  | -12                      | -28 | -14 | 14                     | -11                      |    |    |
| 64  | -43                                      | -25                      | -31 |     | -55  | -11                      | -26 | -12 | 14                     | 3                        |    |    |
| 63  | -41                                      | -24                      | -39 |     | -52  | -11                      | -27 | -11 | 13                     | 12                       |    |    |
| 62  | -39                                      | -22                      | -39 |     | -48  | -12                      | -25 | -9  | 10                     | 14                       |    |    |
| 61  | -38                                      | -16                      | -36 |     | -45  | -13                      | -23 | -7  | 3                      | 13                       |    |    |
| 60  | -34                                      | -8                       | -36 |     | -42  | -15                      | -20 | -8  | -7                     | 16                       |    |    |
| 59  | -32                                      | -8                       | -38 |     | -39  | -17                      | -17 | -7  | -9                     | 21                       |    |    |
| 58  | -31                                      | -14                      | -37 |     | -36  | -18                      | -14 | -5  | -4                     | 23                       |    |    |
| 57  | -27                                      | -18                      | -31 |     | -32  | -19                      | -13 | -5  | -1                     | 18                       |    |    |
| 56  | -21                                      | -20                      | -24 |     | -27  | -18                      | -14 | -6  | 2                      | 10                       |    |    |
| 55  | -19                                      | -19                      | -20 |     | -22  | -16                      | -16 | -3  | 3                      | 4                        |    |    |
| 54  | -15                                      | -18                      | -20 |     | -17  | -13                      | -21 | -2  | 5                      | -1                       |    |    |
| 53  | -12                                      | -17                      | -23 |     | -12  | -10                      | -26 | 0   | 7                      | -3                       |    |    |
| 52  | -10                                      | -16                      | -26 |     | -9   | -10                      | -30 | 1   | 6                      | -4                       |    |    |
| 51  | -9                                       | -15                      | -25 |     | -8   | -12                      | -29 | 1   | 3                      | -4                       |    |    |
| 50  | -9                                       | -13                      | -23 |     | -8   | -16                      | -23 | 1   | -3                     | 0                        |    |    |
| 49  | -8                                       | -8                       | -23 |     | -9   | -14                      | -18 | -1  | -6                     | 5                        |    |    |
| 48  | -8                                       | -4                       | -24 |     | -9   | -7                       | -20 | -1  | -3                     | 4                        |    |    |
| 47  | -8                                       | -2                       | -25 |     | -9   | -1                       | -24 | -1  | 1                      | 1                        |    |    |
| 46  | -8                                       | -3                       | -24 |     | -9   | -5                       | -22 | -1  | -2                     | 2                        |    |    |
| 45  | -9                                       | -6                       | -23 |     | -10  | -14                      | -22 | -1  | -8                     | 1                        |    |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |   | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | TEMP | COMPONENT<br>WINDS<br>-1 |   |   |
|-----|------|--------------------------|-----|---|------|--------------------------|-----|----|------|--------------------------|---|---|
|     |      | DEG C                    | M   | S |      | DEG C                    | M   | S  |      | DEG C                    | M | S |
|     |      |                          |     |   |      |                          |     |    |      |                          |   |   |
| 44  | -12  | -7                       | -22 |   | -12  | -11                      | -27 | 0  | -4   | -5                       |   |   |
| 43  | -13  | -6                       | -21 |   | -14  | -5                       | -25 | -1 | 1    | -4                       |   |   |
| 42  | -16  | -5                       | -22 |   | -16  | -8                       | -19 | 0  | -3   | 3                        |   |   |
| 41  | -20  | -6                       | -24 |   | -19  | -8                       | -30 | 1  | -2   | -6                       |   |   |
| 40  | -21  | -8                       | -25 |   | -22  | -5                       | -31 | -1 | 3    | -6                       |   |   |
| 39  | -25  | -8                       | -24 |   | -26  | -8                       | -19 | -1 | 0    | 5                        |   |   |
| 38  | -28  | -4                       | -21 |   | -27  | -1                       | -29 | 1  | 3    | -8                       |   |   |
| 37  | -30  | 1                        | -19 |   | -29  | 2                        | -16 | 1  | 1    | 3                        |   |   |
| 36  | -31  | 5                        | -18 |   | -30  | 3                        | -17 | 1  | -2   | 1                        |   |   |
| 35  | -31  | 5                        | -20 |   | -31  | 8                        | -25 | 0  | 3    | -5                       |   |   |
| 34  | -33  | 2                        | -20 |   | -33  | -2                       | -16 | 0  | -4   | 4                        |   |   |
| 33  | -36  | 0                        | -19 |   | -33  | -3                       | -19 | 3  | -3   | 0                        |   |   |
| 32  | -38  | 0                        | -16 |   | -35  | -2                       | -19 | 3  | -2   | -3                       |   |   |
| 31  | -41  | 1                        | -14 |   | -38  | 4                        | -15 | 3  | 3    | -1                       |   |   |
| 30  | -40  | 1                        | -14 |   | -39  | 1                        | -18 | 1  | 0    | -4                       |   |   |
| 29  | -40  | 0                        | -14 |   | -40  | 8                        | -15 | 0  | 8    | -1                       |   |   |
| 28  | -44  | 0                        | -13 |   | 999  | 999                      | 999 |    |      |                          |   |   |
| 27  | -46  | 0                        | -12 |   | 999  | 999                      | 999 |    |      |                          |   |   |
| 26  | -46  | 0                        | -12 |   | 999  | 999                      | 999 |    |      |                          |   |   |
| 25  | -50  | 0                        | -10 |   | 999  | 999                      | 999 |    |      |                          |   |   |



|     |      | US - STANDARD<br>AUG 24 1977<br>0128 GMT |     |     | USSR - STANDARD<br>AUG 24 1977<br>0107 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |     |    |
|-----|------|--|-----|-----|--|--------------------------|-----|------------------------|--------------------------|-----|-----|----|
| ALT | TEMP | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |                        | COMPONENT<br>WINDS<br>-1 |     |     |    |
|     |      | DEG C                                    | M   | S   |  | DEG C                    | M   | S                      | DEG C                    | M   | S   |    |
| KM  |      | NS                                       | S   | EW  | DEG C                                      | NS                       | S   | EW                     | DEG C                    | M   | S   | EW |
| 78  | 999  | 999                                      | 999 | 999 | -82  | 999                      | 999 | 999                    |                          |     |     |    |
| 77  | 999  | 999                                      | 999 | 999 | -79  | 999                      | 999 | 999                    |                          |     |     |    |
| 76  | 999  | 999                                      | 999 | 999 | -77  | 999                      | 999 | 999                    |                          |     |     |    |
| 75  | 999  | 999                                      | 999 | 999 | -75  | 999                      | 999 | 999                    |                          |     |     |    |
| 74  | 999  | 999                                      | 999 | 999 | -74  | 999                      | 999 | 999                    |                          |     |     |    |
| 73  | 999  | 999                                      | 999 | 999 | -73  | 999                      | 999 | 999                    |                          |     |     |    |
| 72  | 999  | 999                                      | 999 | 999 | -72  | 999                      | 999 | 999                    |                          |     |     |    |
| 71  | 999  | 999                                      | 999 | 999 | -70  | 999                      | 999 | 999                    |                          |     |     |    |
| 70  | 999  | 999                                      | 999 | 999 | -68  | -5                       | -30 |                        |                          |     |     |    |
| 69  | 999  | 999                                      | 999 | 999 | -65  | -5                       | -31 |                        |                          |     |     |    |
| 68  | 999  | 999                                      | 999 | 999 | -62  | -6                       | -30 |                        |                          |     |     |    |
| 67  | 999  | -9                                       | -21 |     | -59  | -6                       | -28 |                        | 3                        |     | -7  |    |
| 66  | 999  | -15                                      | -30 |     | -55  | -6                       | -26 |                        | 9                        |     | 4   |    |
| 65  | 999  | -19                                      | -32 |     | -52  | -6                       | -22 |                        | 13                       |     | 10  |    |
| 64  | -50  | -21                                      | -25 |     | -48  | -7                       | -19 |                        | 2                        | 14  | 6   |    |
| 63  | -45  | -17                                      | -16 |     | -44  | -7                       | -15 |                        | 1                        | 10  | 1   |    |
| 62  | -40  | -10                                      | -15 |     | -41  | -7                       | -11 |                        | -1                       | 3   | 4   |    |
| 61  | -33  | -7                                       | -22 |     | -38  | -6                       | -7  |                        | -5                       | 1   | 15  |    |
| 60  | -27  | -6                                       | -29 |     | -34  | -5                       | -5  |                        | -7                       | 1   | 24  |    |
| 59  | -25  | -10                                      | -27 |     | -31  | -4                       | -3  |                        | -6                       | 6   | 24  |    |
| 58  | -25  | -14                                      | -19 |     | -28  | -3                       | -4  |                        | -3                       | 11  | 15  |    |
| 57  | -22  | -15                                      | -11 |     | -24  | -3                       | -6  |                        | -2                       | 12  | 5   |    |
| 56  | -16  | -12                                      | -10 |     | -20  | -4                       | -9  |                        | -4                       | 8   | 1   |    |
| 55  | -10  | -8                                       | -15 |     | -17  | -8                       | -11 |                        | -7                       | 0   | 4   |    |
| 54  | -7   | -8                                       | -21 |     | -15  | -14                      | -11 |                        | -8                       | -6  | 10  |    |
| 53  | -9   | -9                                       | -24 |     | -14  | -21                      | -9  |                        | -5                       | -12 | 15  |    |
| 52  | -9   | -8                                       | -23 |     | -13  | -22                      | -9  |                        | -4                       | -14 | 14  |    |
| 51  | -9   | -5                                       | -23 |     | -12  | -15                      | -15 |                        | -3                       | -10 | 8   |    |
| 50  | -8   | 0  | -21 |     | -10  | -4                       | -25 |                        | -2                       | -4  | -4  |    |
| 49  | -6   | 2  | -19 |     | -8   | 4                        | -31 |                        | -2                       | 2   | -12 |    |
| 48  | -6   | 1  | -16 |     | -7   | 3                        | -27 |                        | -1                       | 2   | -11 |    |
| 47  | -7   | -2                                       | -15 |     | -7   | -1                       | -21 |                        | 0                        | 1   | -6  |    |
| 46  | -7   | -2                                       | -15 |     | -8   | -3                       | -21 |                        | -1                       | -1  | -6  |    |
| 45  | -6   | 0  | -17 |     | -11  | -1                       | -27 |                        | -5                       | -1  | -10 |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | TEMP  | COMPONENT<br>WINDS<br>-1 |     |    | COMPONENT<br>WINDS<br>-1 |    |     |    |
|-----|------|--------------------------|-----|----|-------|--------------------------|-----|----|--------------------------|----|-----|----|
|     |      | DEG C                    | M   | S  |       | DEG C                    | M   | S  | DEG C                    | M  | S   |    |
| KM  |      | NS                       | S   | EW | DEG C | NS                       | S   | EW | DEG C                    | M  | S   | EW |
| 44  | -8   | 2                        | -21 |    | -16   | -1                       | -32 |    | -8                       | -3 | -11 |    |
| 43  | -11  | 2                        | -25 |    | -22   | -3                       | -27 |    | -11                      | -5 | -2  |    |
| 42  | -16  | -1                       | -27 |    | -26   | -2                       | -23 |    | -10                      | -1 | 4   |    |
| 41  | -21  | -5                       | -26 |    | -26   | -5                       | -20 |    | -5                       | 0  | 6   |    |
| 40  | -27  | -6                       | -22 |    | -27   | -4                       | -11 |    | 0                        | 2  | 11  |    |
| 37  | -30  | -3                       | -19 |    | -26   | 0                        | -16 |    | 4                        | 3  | 3   |    |
| 38  | -29  | 0                        | -18 |    | -26   | -3                       | -9  |    | 3                        | -3 | 9   |    |
| 37  | -31  | 2                        | -19 |    | -26   | -1                       | -20 |    | 5                        | -3 | -1  |    |
| 36  | -30  | 3                        | -20 |    | -28   | 5                        | -28 |    | 2                        | 2  | -8  |    |
| 35  | -34  | 1                        | -21 |    | -32   | 1                        | -25 |    | 2                        | 0  | -4  |    |
| 34  | -35  | -2                       | -19 |    | -33   | -4                       | -20 |    | 2                        | -2 | -1  |    |
| 33  | -36  | -4                       | -17 |    | -34   | -10                      | -16 |    | 2                        | -6 | 1   |    |
| 32  | -39  | -5                       | -16 |    | -37   | -5                       | -16 |    | 2                        | 0  | 0   |    |
| 31  | -42  | -3                       | -15 |    | -39   | 0                        | -15 |    | 3                        | 3  | 0   |    |
| 30  | -42  | -2                       | -14 |    | -40   | -1                       | -11 |    | 2                        | 1  | 3   |    |
| 29  | -41  | -1                       | -13 |    | -40   | 7                        | -15 |    | 1                        | 8  | -2  |    |
| 28  | -44  | 0                        | -12 |    | 999   | 999                      | 999 |    |                          |    |     |    |
| 27  | -46  | 2                        | -12 |    | 999   | 999                      | 999 |    |                          |    |     |    |
| 26  | -47  | 2                        | -13 |    | 999   | 999                      | 999 |    |                          |    |     |    |
| 25  | -51  | 1                        | -12 |    | 999   | 999                      | 999 |    |                          |    |     |    |
| 24  | -52  | 0                        | -9  |    | 999   | 999                      | 999 |    |                          |    |     |    |

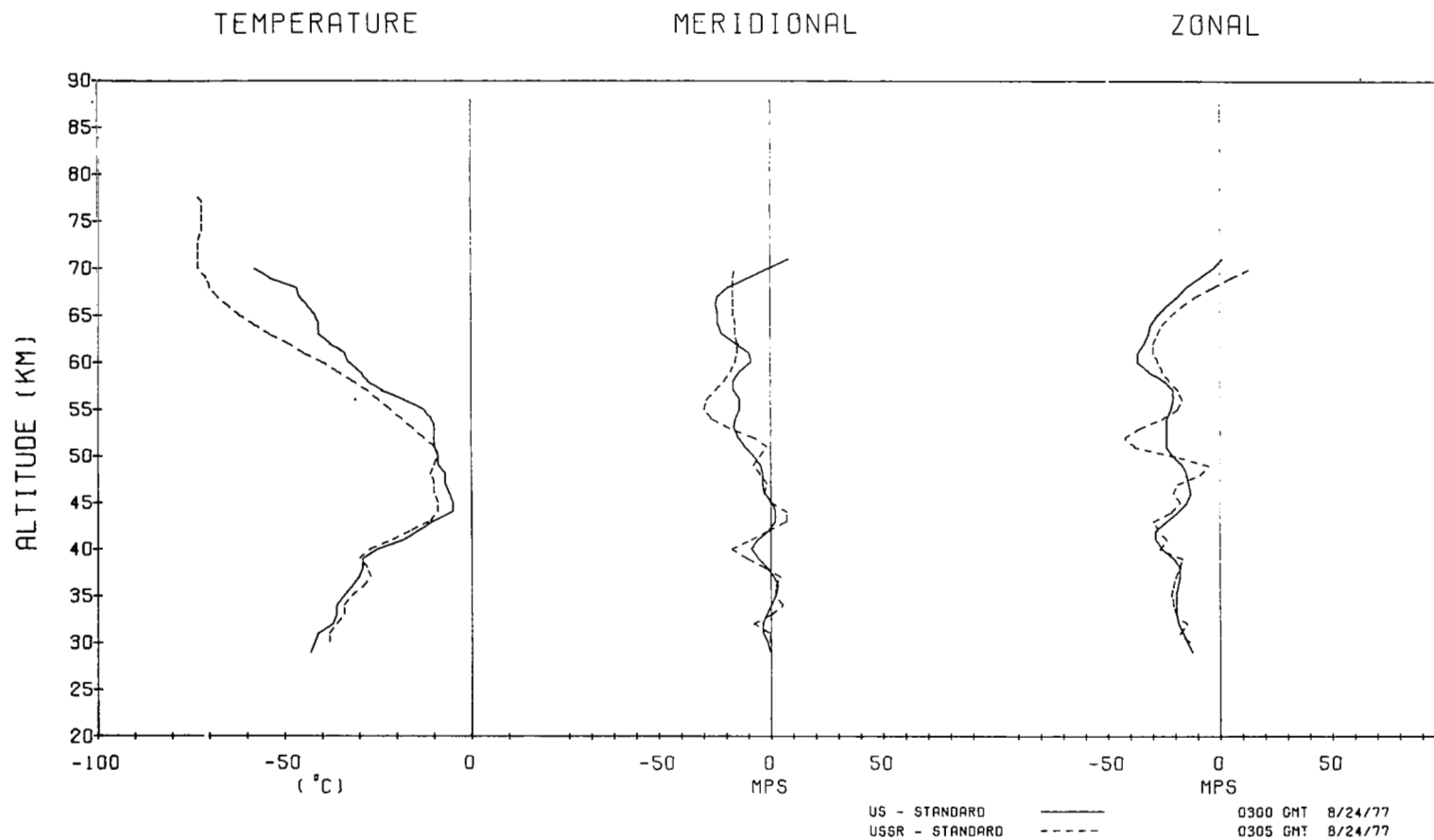




| ALT | US - STANDARD<br>AUG 24 1977<br>0300 GMT |                    |       | USSR - STANDARD<br>AUG 24 1977<br>0305 GMT |                    |       | DIFFERENCES<br>USSR-US |                    |     |
|-----|--|--------------------|-------|--|--------------------|-------|------------------------|--------------------|-----|
|     | TEMP                                     | COMPONENT<br>WINDS |       | TEMP                                       | COMPONENT<br>WINDS |       | TEMP                   | COMPONENT<br>WINDS |     |
|     |  | -1                 |       |  | -1                 |       |                        | -1                 |     |
|     |  | DEG C              | M S   |  | DEG C              | M S   |                        | DEG C              | M S |
| KM  | NS                                       | EW                 | DEG C | NS   | EW                 | DEG C | NS                     | EW                 |     |
| 78  | 999                                      | 999                | 999   | -74  | 999                | 999   |                        |                    |     |
| 77  | 999                                      | 999                | 999   | -72  | 999                | 999   |                        |                    |     |
| 76  | 999                                      | 999                | 999   | -72  | 999                | 999   |                        |                    |     |
| 75  | 999                                      | 999                | 999   | -72  | 999                | 999   |                        |                    |     |
| 74  | 999                                      | 999                | 999   | -72  | 999                | 999   |                        |                    |     |
| 73  | 999                                      | 999                | 999   | -73  | 999                | 999   |                        |                    |     |
| 72  | 999                                      | 999                | 999   | -73  | 999                | 999   |                        |                    |     |
| 71  | 999                                      | 8                  | 1     | -73  | 999                | 999   |                        |                    |     |
| 70  | -58                                      | -1                 | -3    | -73  | -16                | 14    | -15                    | -15                | 17  |
| 69  | -54                                      | -10                | -9    | -71  | -17                | 5     | -17                    | -7                 | 14  |
| 68  | -47                                      | -19                | -15   | -70  | -17                | -3    | -23                    | 2                  | 12  |
| 67  | -46                                      | -24                | -19   | -68  | -17                | -11   | -22                    | 7                  | 8   |
| 66  | -44                                      | -25                | -24   | -65  | -17                | -17   | -21                    | 8                  | 7   |
| 65  | -42                                      | -24                | -28   | -62  | -17                | -22   | -20                    | 7                  | 6   |
| 64  | -41                                      | -24                | -31   | -58  | -16                | -26   | -17                    | 8                  | 5   |
| 63  | -41                                      | -22                | -32   | -54  | -16                | -28   | -13                    | 6                  | 4   |
| 62  | -38                                      | -16                | -34   | -49  | -15                | -30   | -11                    | 1                  | 4   |
| 61  | -34                                      | -10                | -37   | -45  | -15                | -30   | -11                    | -5                 | 7   |
| 60  | -33                                      | -9                 | -37   | -40  | -16                | -28   | -7                     | -7                 | 9   |
| 59  | -30                                      | -14                | -32   | -36  | -16                | -26   | -6                     | -4                 | 6   |
| 58  | -28                                      | -17                | -25   | -32  | -21                | -23   | -4                     | -4                 | 2   |
| 57  | -24                                      | -17                | -21   | -28  | -25                | -19   | -4                     | -8                 | 2   |
| 56  | -18                                      | -14                | -21   | -25  | -24                | -17   | -7                     | -15                | 4   |
| 55  | -13                                      | -14                | -22   | -22  | -30                | -19   | -9                     | -16                | 3   |
| 54  | -11                                      | -16                | -24   | -19  | -27                | -26   | -8                     | -11                | -2  |
| 53  | -10                                      | -17                | -24   | -16  | -19                | -36   | -6                     | -2                 | -12 |
| 52  | -10                                      | -15                | -24   | -13  | -8                 | -43   | -3                     | 7                  | -19 |
| 51  | -10                                      | -12                | -24   | -10  | -2                 | -38   | 0                      | 10                 | -14 |
| 50  | -9                                       | -8                 | -21   | -9   | -5                 | -20   | 0                      | 3                  | 1   |
| 49  | -9                                       | -5                 | -17   | -10  | -8                 | -5    | -1                     | -3                 | 12  |
| 48  | -7                                       | -4                 | -15   | -11  | -5                 | -9    | -4                     | -1                 | 6   |
| 47  | -7                                       | -4                 | -14   | -10  | -2                 | -19   | -3                     | 2                  | -5  |
| 46  | -6                                       | -3                 | -13   | -10  | -3                 | -21   | -4                     | 0                  | -8  |
| 45  | -5                                       | 0                  | -15   | -9   | 0                  | -18   | -4                     | 0                  | -3  |

| ALT | TEMP | COMPONENT<br>WINDS |     | TEMP | COMPONENT<br>WINDS |       | TEMP | COMPONENT<br>WINDS |     |
|-----|------|--------------------|-----|------|--------------------|-------|------|--------------------|-----|
|     |      | -1                 |     |      | -1                 |       |      | -1                 |     |
|     |      | DEG C              | M S |      | DEG C              | M S   |      | DEG C              | M S |
|     |      | KM                 | NS  |      | EW                 | DEG C |      | NS                 | EW  |
| 44  | -5   | 2                  | -19 | -9   | 7                  | -22   | -4   | 5                  | -3  |
| 43  | -10  | 2                  | -24 | -11  | 7                  | -30   | -1   | 5                  | -6  |
| 42  | -14  | -1                 | -29 | -16  | -1                 | -28   | -2   | 0                  | 1   |
| 41  | -18  | -6                 | -29 | -21  | -9                 | -24   | -3   | -3                 | 5   |
| 40  | -25  | -9                 | -26 | -27  | -18                | -27   | -2   | -9                 | -1  |
| 39  | -29  | -6                 | -21 | -30  | -11                | -17   | -1   | -5                 | 4   |
| 38  | -29  | -2                 | -18 | -28  | -3                 | -18   | 1    | -1                 | 0   |
| 37  | -30  | 1                  | -18 | -27  | 4                  | -20   | 3    | 3                  | -2  |
| 36  | -32  | 3                  | -19 | -29  | 2                  | -21   | 3    | -1                 | -2  |
| 35  | -34  | 2                  | -20 | -32  | 2                  | -22   | 2    | 0                  | -2  |
| 34  | -36  | 0                  | -20 | -34  | 5                  | -21   | 2    | 5                  | -1  |
| 33  | -36  | -2                 | -20 | -34  | 0                  | -20   | 2    | 2                  | 0   |
| 32  | -37  | -4                 | -19 | -36  | -8                 | -15   | 1    | -4                 | 4   |
| 31  | -41  | -4                 | -17 | -38  | -1                 | -18   | 3    | 3                  | -1  |
| 30  | -42  | -2                 | -15 | -38  | -1                 | -14   | 4    | 1                  | 1   |
| 29  | -43  | -1                 | -13 | 999  | 999                | 999   |      |                    |     |

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## APPENDIX B

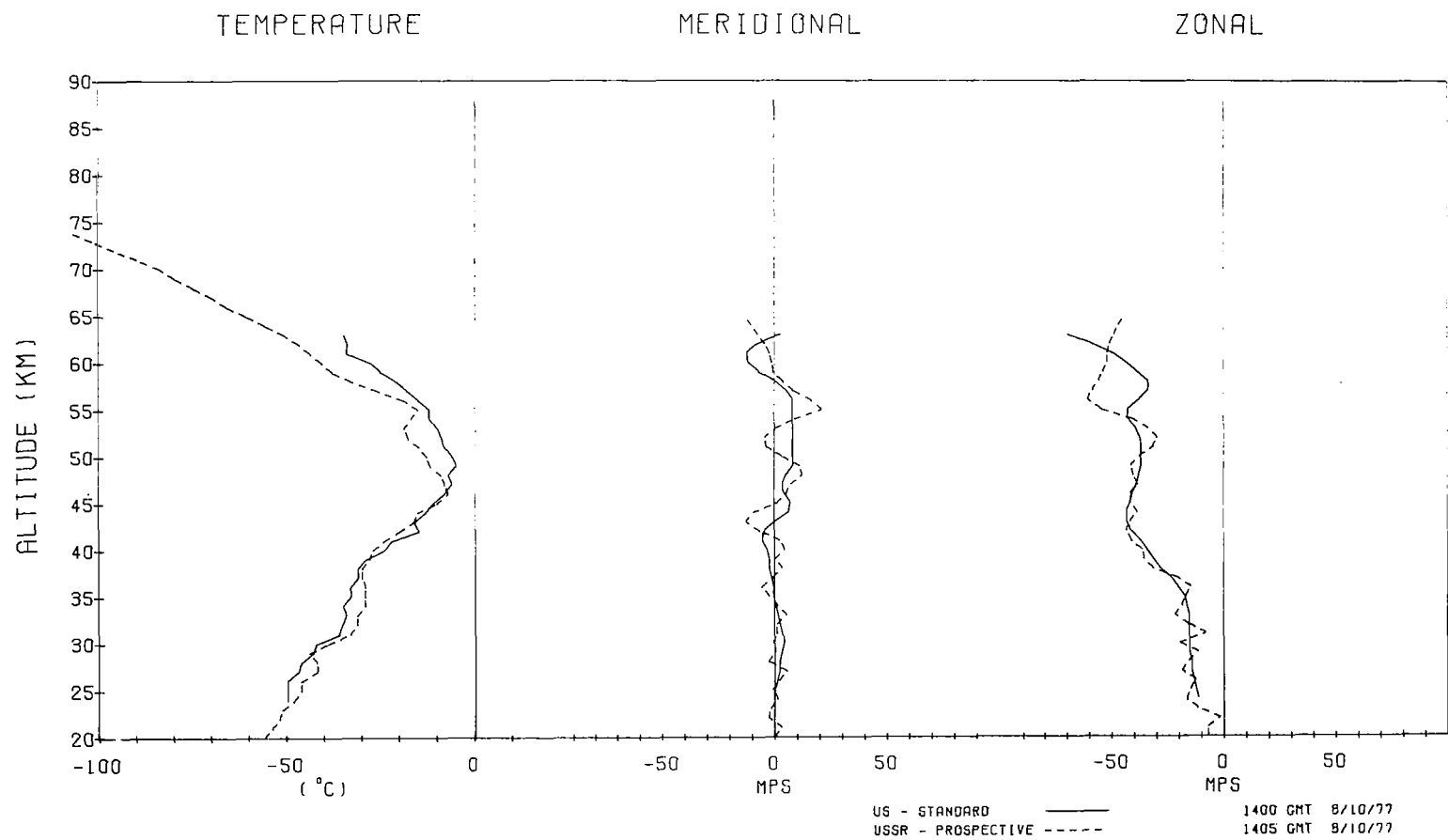
### LISTINGS AND PLOTS OF US(STANDARD) AND USSR(PROSPECTIVE) DATA

The information presented in Appendix B is similar to that presented in Appendix A with the exception that the USSR data were reduced using a proposed data reduction technique. This technique is labeled USSR(prospective) for identification.

| US - STANDARD<br>AUG 10 1977<br>1400 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 10 1977<br>1405 GMT |               |                          |     | DIFFERENCES<br>USSR-US |               |                          |   |    |  |  |
|--|---------------|--------------------------|-----|---|---------------|--------------------------|-----|------------------------|---------------|--------------------------|---|----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |   | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |  |  |
|  |               | NS                       | S   | EW  |               | NS                       | S   | EW                     |               | NS                       | S | EW |  |  |
| 74                                       | 999           | 999                      | 999 | 999   | -108          | 999                      | 999 |                        |               |                          |   |    |  |  |
| 73                                       | 999           | 999                      | 999 | 999   | -102          | 999                      | 999 |                        |               |                          |   |    |  |  |
| 72                                       | 999           | 999                      | 999 | 999   | -96           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 71                                       | 999           | 999                      | 999 | 999   | -90           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 70                                       | 999           | 999                      | 999 | 999   | -84           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 69                                       | 999           | 999                      | 999 | 999   | -80           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 68                                       | 999           | 999                      | 999 | 999   | -75           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 67                                       | 999           | 999                      | 999 | 999   | -70           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 66                                       | 999           | 999                      | 999 | 999   | -66           | 999                      | 999 |                        |               |                          |   |    |  |  |
| 65                                       | 999           | 999                      | 999 | 999   | -61           | -14                      | -44 |                        |               |                          |   |    |  |  |
| 64                                       | 999           | 999                      | 999 | 999   | -56           | -11                      | -47 |                        |               |                          |   |    |  |  |
| 63                                       | -35           | 2                        | -70 |   | -51           | -8                       | -49 | -16                    | -10           | 21                       |   |    |  |  |
| 62                                       | -34           | -8                       | -59 |   | -47           | -5                       | -51 | -13                    | 3             | 8                        |   |    |  |  |
| 61                                       | -34           | -13                      | -50 |   | -44           | -3                       | -52 | -10                    | 10            | -2                       |   |    |  |  |
| 60                                       | -28           | -12                      | -44 |   | -41           | -2                       | -52 | -13                    | 10            | -8                       |   |    |  |  |
| 59                                       | -25           | -7                       | -39 |   | -38           | -1                       | -54 | -13                    | 6             | -15                      |   |    |  |  |
| 58                                       | -21           | 0                        | -34 |   | -33           | 3                        | -56 | -12                    | 3             | -22                      |   |    |  |  |
| 57                                       | -18           | 5                        | -34 |   | -26           | 8                        | -59 | -8                     | 3             | -25                      |   |    |  |  |
| 56                                       | -15           | 8                        | -38 |   | -19           | 16                       | -61 | -4                     | 8             | -23                      |   |    |  |  |
| 55                                       | -12           | 8                        | -43 |   | -15           | 21                       | -55 | -3                     | 13            | -12                      |   |    |  |  |
| 54                                       | -12           | 8                        | -43 |   | -17           | 9                        | -41 | -5                     | 1             | 2                        |   |    |  |  |
| 53                                       | -10           | 8                        | -40 |   | -19           | 0                        | -34 | -9                     | -8            | 6                        |   |    |  |  |
| 52                                       | -9            | 8                        | -38 |   | -18           | -5                       | -30 | -9                     | -13           | 8                        |   |    |  |  |
| 51                                       | -8            | 8                        | -37 |   | -15           | -4                       | -32 | -7                     | -12           | 5                        |   |    |  |  |
| 50                                       | -6            | 8                        | -37 |   | -13           | 3                        | -38 | -7                     | -5            | -1                       |   |    |  |  |
| 49                                       | -5            | 8                        | -37 |   | -12           | 11                       | -42 | -7                     | 3             | -5                       |   |    |  |  |
| 48                                       | -7            | 5                        | -38 |   | -9            | 12                       | -41 | -2                     | 7             | -3                       |   |    |  |  |
| 47                                       | -6            | 3                        | -39 |   | -8            | 7                        | -39 | -2                     | 4             | 0                        |   |    |  |  |
| 46                                       | -8            | 4                        | -41 |   | -7            | 5                        | -42 | 1                      | 1             | -1                       |   |    |  |  |
| 45                                       | -11           | 7                        | -42 |   | -10           | 1                        | -42 | 1                      | -6            | 0                        |   |    |  |  |
| 44                                       | -13           | 6                        | -44 |   | -15           | -10                      | -39 | -2                     | -16           | 5                        |   |    |  |  |
| 43                                       | -16           | 0                        | -44 |   | -16           | -13                      | -42 | 0                      | -13           | 2                        |   |    |  |  |
| 42                                       | -15           | -5                       | -42 |   | -20           | -7                       | -44 | -5                     | -2            | -2                       |   |    |  |  |
| 41                                       | -22           | -6                       | -38 |   | -24           | 2                        | -42 | -2                     | 8             | -4                       |   |    |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |  |  |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|---|----|--|--|
|           |               | NS                       | S   | EW |               | NS                       | S   | EW |               | NS                       | S | EW |  |  |
| 40        | -24           | -4                       | -35 |    | -27           | 4                        | -37 | -3 | 8             | -2                       |   |    |  |  |
| 39        | -29           | -3                       | -32 |    | -28           | 0                        | -36 | 1  | 3             | -4                       |   |    |  |  |
| 38        | -31           | -3                       | -29 |    | -30           | 3                        | -32 | 1  | 6             | -3                       |   |    |  |  |
| 37        | -31           | -2                       | -24 |    | -30           | -1                       | -21 | 1  | 1             | 3                        |   |    |  |  |
| 36        | -33           | -1                       | -21 |    | -29           | -6                       | -15 | 4  | -5            | 6                        |   |    |  |  |
| 35        | -33           | -1                       | -18 |    | -29           | -3                       | -17 | 4  | -2            | 1                        |   |    |  |  |
| 34        | -35           | 0                        | -17 |    | -29           | 1                        | -19 | 6  | 1             | -2                       |   |    |  |  |
| 33        | -34           | 1                        | -16 |    | -31           | 5                        | -22 | 3  | 4             | -6                       |   |    |  |  |
| 32        | -35           | 2                        | -16 |    | -31           | 1                        | -16 | 4  | -1            | 0                        |   |    |  |  |
| 31        | -36           | 3                        | -16 |    | -33           | 1                        | -8  | 3  | -2            | 8                        |   |    |  |  |
| 30        | -42           | 4                        | -16 |    | -39           | -1                       | -20 | 3  | -5            | -4                       |   |    |  |  |
| 29        | -43           | 3                        | -16 |    | -44           | 0                        | -12 | -1 | -3            | 4                        |   |    |  |  |
| 28        | -46           | 2                        | -15 |    | -42           | -3                       | -16 | 4  | -5            | -1                       |   |    |  |  |
| 27        | -47           | 2                        | -15 |    | -42           | 5                        | -19 | 5  | 3             | -4                       |   |    |  |  |
| 26        | -50           | 1                        | -14 |    | -46           | 2                        | -13 | 4  | 1             | 1                        |   |    |  |  |
| 25        | -50           | 0                        | -13 |    | -46           | -1                       | -15 | 4  | -1            | -2                       |   |    |  |  |
| 24        | -50           | -1                       | -12 |    | -48           | 1                        | -17 | 2  | 2             | -5                       |   |    |  |  |
| 23        | 999           | 999                      | 999 |    | -51           | -2                       | -12 |    |               |                          |   |    |  |  |
| 22        | 999           | 999                      | 999 |    | -52           | -3                       | -2  |    |               |                          |   |    |  |  |
| 21        | 999           | 999                      | 999 |    | -54           | 3                        | -7  |    |               |                          |   |    |  |  |
| 20        | 999           | 999                      | 999 |    | -56           | 0                        | -7  |    |               |                          |   |    |  |  |

96



| ALT<br>KM | US - STANDARD<br>AUG 12 1977<br>0419 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 12 1977<br>0405 GMT |                          |     | DIFFERENCES<br>USSR-US |             |    |
|-----------|--|--------------------------|-----|---|--------------------------|-----|------------------------|-------------|----|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DLG C          | WINDS<br>-1 |    |
|           |  | M                        | S   |   | M                        | S   |                        | M           | S  |
| 67        | -54                                      | -19                      | -67 | 999   | 999                      | 999 |                        |             |    |
| 66        | -52                                      | -25                      | -56 | 999   | 999                      | 999 |                        |             |    |
| 65        | -52                                      | -24                      | -45 | 999   | 999                      | 999 |                        |             |    |
| 64        | -52                                      | -17                      | -36 | 999   | 999                      | 999 |                        |             |    |
| 63        | -44                                      | -13                      | -34 | 999   | 999                      | 999 |                        |             |    |
| 62        | -37                                      | -12                      | -35 | 999   | 999                      | 999 |                        |             |    |
| 61        | -30                                      | -13                      | -36 | 999   | 999                      | 999 |                        |             |    |
| 60        | -26                                      | -16                      | -34 | 999   | 999                      | 999 |                        |             |    |
| 59        | -28                                      | -21                      | -33 | 999   | 999                      | 999 |                        |             |    |
| 58        | -24                                      | -24                      | -32 | 999   | 999                      | 999 |                        |             |    |
| 57        | -18                                      | -21                      | -34 | 999   | 999                      | 999 |                        |             |    |
| 56        | -16                                      | -14                      | -37 | 999   | 999                      | 999 |                        |             |    |
| 55        | -12                                      | -10                      | -40 | 999   | 999                      | 999 |                        |             |    |
| 54        | -6                                       | -9                       | -44 | 999   | 999                      | 999 |                        |             |    |
| 53        | -6                                       | -7                       | -46 | 999   | 999                      | 999 |                        |             |    |
| 52        | -8                                       | -4                       | -47 | 999   | 999                      | 999 |                        |             |    |
| 51        | -8                                       | -2                       | -48 | 999   | 999                      | 999 |                        |             |    |
| 50        | -7                                       | -5                       | -46 | -11   | 0                        | -52 | -4                     | 5           | -6 |
| 49        | -12                                      | -9                       | -43 | -14   | -2                       | -50 | -2                     | 7           | -7 |
| 48        | -12                                      | -11                      | -40 | -14   | -5                       | -45 | -2                     | 6           | -5 |
| 47        | -11                                      | -10                      | -38 | -15   | -8                       | -39 | -4                     | 2           | -1 |
| 46        | -13                                      | -5                       | -35 | -17   | -7                       | -30 | -4                     | -2          | 5  |
| 45        | -16                                      | -1                       | -29 | -16   | -1                       | -22 | 0                      | 0           | 7  |
| 44        | -15                                      | 2                        | -23 | -12   | 4                        | -19 | 3                      | 2           | 4  |
| 43        | -14                                      | 1                        | -22 | -9  | 3                        | -18 | 5                      | 2           | 4  |
| 42        | -14                                      | -2                       | -25 | -9  | -1                       | -21 | 5                      | 1           | 4  |
| 41        | -17                                      | -4                       | -29 | -12   | -3                       | -26 | 5                      | 1           | 3  |
| 40        | -20                                      | -5                       | -30 | -14   | -3                       | -28 | 6                      | 2           | 2  |
| 39        | -22                                      | -2                       | -30 | -20   | -2                       | -30 | 2                      | 0           | 0  |
| 38        | -25                                      | 0                        | -30 | -25   | -2                       | -37 | 0                      | -2          | -7 |
| 37        | -27                                      | 0                        | -30 | -26   | -1                       | -37 | 1                      | -1          | -7 |
| 36        | -28                                      | -1                       | -29 | -27   | -3                       | -33 | 1                      | -2          | -4 |
| 35        | -32                                      | -2                       | -28 | -30   | -4                       | -30 | 2                      | -2          | -2 |
| 34        | -37                                      | -2                       | -26 | -33   | 3                        | -26 | 4                      | 5           | 0  |

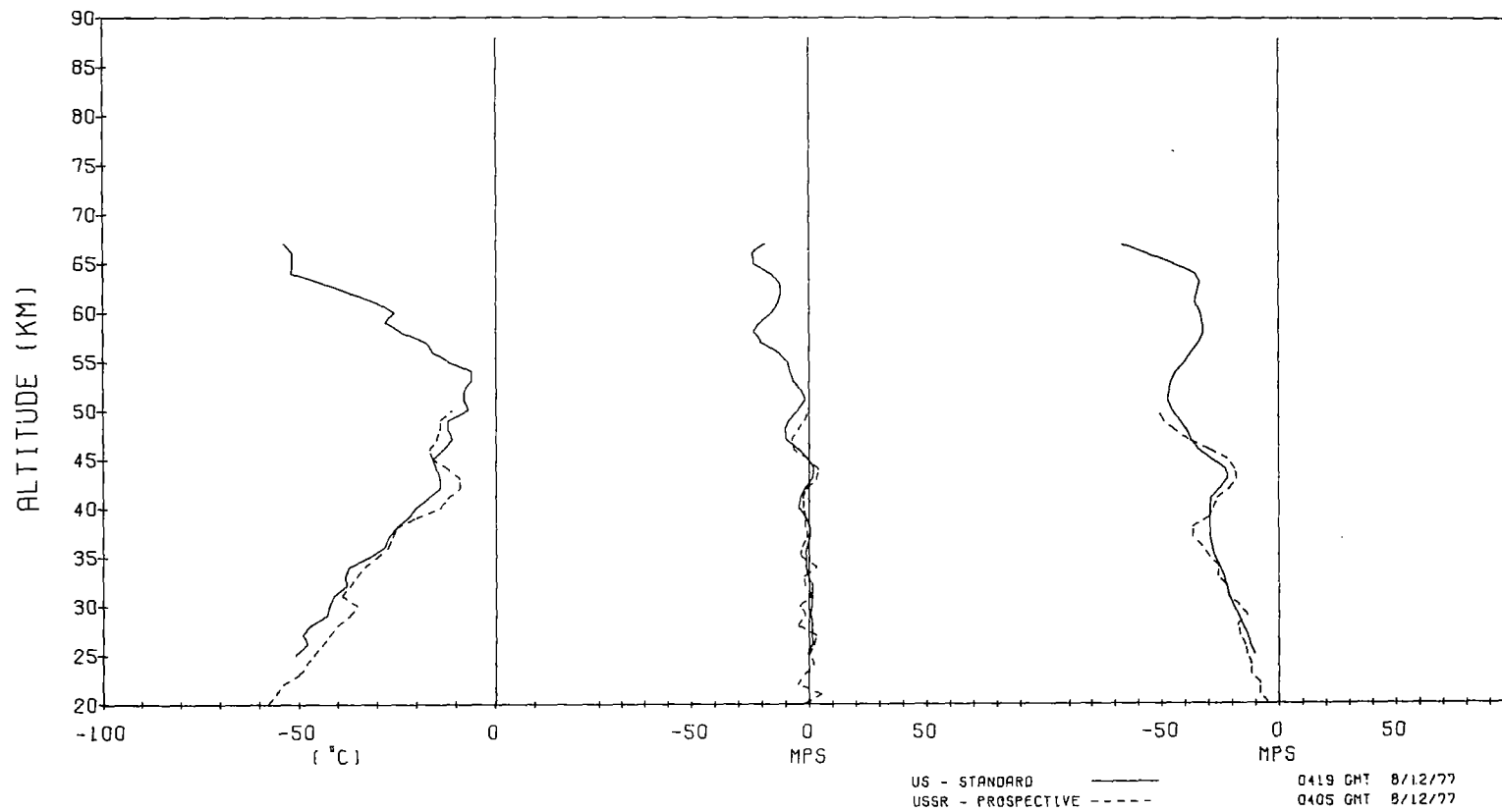
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | WINDS<br>-1 |    |     |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|-------------|----|-----|
|           |               | M                        | S   |               | M                        | S   |               | M           | S  | EW  |
|           |               | 33                       | -38 |               | -1                       | -24 |               | -35         | -2 | -26 |
| 32        | -38           | 1                        | -23 | -37           | -2                       | -23 | 1             | -3          | 0  |     |
| 31        | -41           | 1                        | -22 | -39           | 1                        | -22 | 2             | 0           | 0  |     |
| 30        | -42           | 1                        | -20 | -35           | -4                       | -17 | 7             | -5          | 3  |     |
| 29        | -43           | 0                        | -18 | -37           | -2                       | -14 | 6             | -2          | 4  |     |
| 28        | -47           | 1                        | -16 | -40           | -5                       | -18 | 7             | -6          | -2 |     |
| 27        | -49           | 1                        | -14 | -42           | 3                        | -17 | 7             | 2           | -3 |     |
| 26        | -48           | 1                        | -13 | -44           | 2                        | -15 | 4             | 1           | -2 |     |
| 25        | -51           | -1                       | -11 | -46           | 0                        | -14 | 5             | 1           | -3 |     |
| 24        | 999           | 999                      | 999 | -48           | 2                        | -12 |               |             |    |     |
| 23        | 999           | 999                      | 999 | -50           | -2                       | -12 |               |             |    |     |
| 22        | 999           | 999                      | 999 | -54           | -5                       | -8  |               |             |    |     |
| 21        | 999           | 999                      | 999 | -56           | 5                        | -8  |               |             |    |     |
| 20        | 999           | 999                      | 999 | -58           | -2                       | -5  |               |             |    |     |

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TEMPERATURE

MERIDIONAL

ZONAL

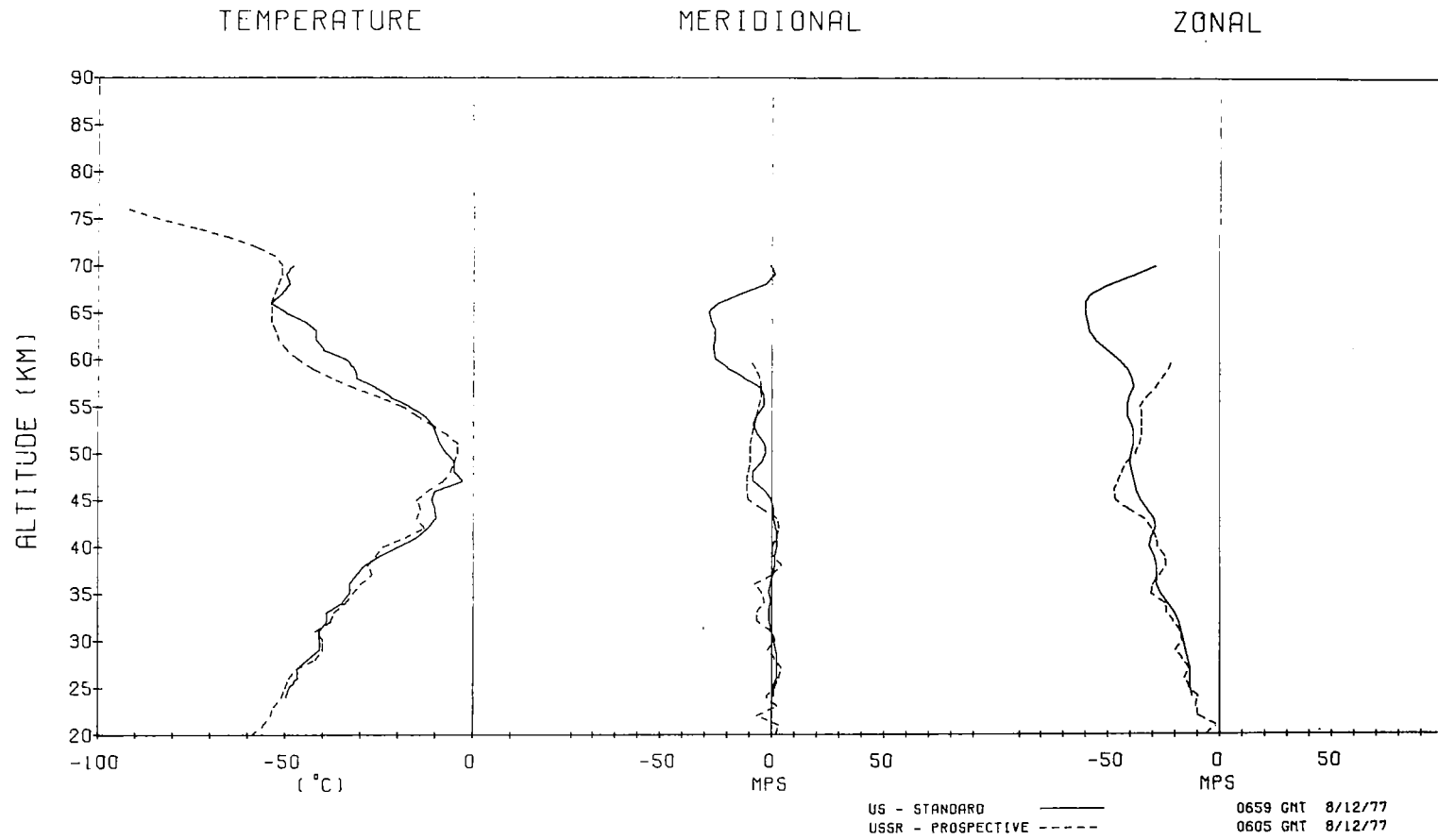




|     |       | US - STANDARD<br>AUG 12 1977<br>0659 GMT |     |     | USSR - PROSPECTIVE<br>AUG 12 1977<br>0605 GMT |                       |     | DIFFERENCES<br>USSR-US |       |                       |     |    |
|-----|-------|--|-----|-----|---|-----------------------|-----|------------------------|-------|-----------------------|-----|----|
| ALT | TEMP  | COMPONENT WINDS<br>-1                    |     |     | TEMP  | COMPONENT WINDS<br>-1 |     |                        | TEMP  | COMPONENT WINDS<br>-1 |     |    |
| KM  | DEG C | NS                                       | M   | EW  | DEG C   | NS                    | M   | EW                     | DEG C | M                     | S   | EW |
| 76  | 999   | 999                                      | 999 | 999 | -92   | 999                   | 999 | 999                    |       |                       |     |    |
| 75  | 999   | 999                                      | 999 | 999 | -84   | 999                   | 999 | 999                    |       |                       |     |    |
| 74  | 999   | 999                                      | 999 | 999 | -74   | 999                   | 999 | 999                    |       |                       |     |    |
| 73  | 999   | 999                                      | 999 | 999 | -65   | 999                   | 999 | 999                    |       |                       |     |    |
| 72  | 999   | 999                                      | 999 | 999 | -58   | 999                   | 999 | 999                    |       |                       |     |    |
| 71  | 999   | 999                                      | 999 | 999 | -53   | 999                   | 999 | 999                    |       |                       |     |    |
| 70  | -48   | -1                                       | -29 |     | -51   | 999                   | 999 | 999                    | -3    |                       |     |    |
| 69  | -50   | 1  | -39 |     | -51   | 999                   | 999 | 999                    | -1    |                       |     |    |
| 68  | -49   | -3                                       | -50 |     | -52   | 999                   | 999 | 999                    | -3    |                       |     |    |
| 67  | -51   | -14                                      | -58 |     | -53   | 999                   | 999 | 999                    | -2    |                       |     |    |
| 66  | -54   | -24                                      | -61 |     | -54   | 999                   | 999 | 999                    | 0     |                       |     |    |
| 65  | -50   | -29                                      | -61 |     | -54   | 999                   | 999 | 999                    | -4    |                       |     |    |
| 64  | -45   | -28                                      | -60 |     | -54   | 999                   | 999 | 999                    | -9    |                       |     |    |
| 63  | -42   | -26                                      | -59 |     | -53   | 999                   | 999 | 999                    | -11   |                       |     |    |
| 62  | -42   | -26                                      | -56 |     | -52   | 999                   | 999 | 999                    | -10   |                       |     |    |
| 61  | -40   | -27                                      | -51 |     | -50   | 999                   | 999 | 999                    | -10   |                       |     |    |
| 60  | -34   | -26                                      | -46 |     | -47   | -11                   | -21 |                        | -13   | 15                    | 25  |    |
| 59  | -32   | -20                                      | -42 |     | -43   | -8                    | -23 |                        | -11   | 12                    | 19  |    |
| 58  | -31   | -13                                      | -40 |     | -38   | -6                    | -26 |                        | -7    | 7                     | 14  |    |
| 57  | -26   | -6                                       | -39 |     | -32   | -5                    | -29 |                        | -6    | 1                     | 10  |    |
| 56  | -22   | -4                                       | -41 |     | -25   | -5                    | -33 |                        | -3    | -1                    | 8   |    |
| 55  | -17   | -4                                       | -42 |     | -19   | -6                    | -36 |                        | -2    | -2                    | 6   |    |
| 54  | -13   | -7                                       | -42 |     | -15   | -7                    | -35 |                        | -2    | 0                     | 7   |    |
| 53  | -11   | -9                                       | -40 |     | -11   | -8                    | -35 |                        | 0     | 1                     | 5   |    |
| 52  | -10   | -7                                       | -39 |     | -7  | -9                    | -35 |                        | 3     | -2                    | 4   |    |
| 51  | -9    | -4                                       | -39 |     | -4  | -10                   | -36 |                        | 5     | -6                    | 3   |    |
| 50  | -7    | -3                                       | -40 |     | -4  | -10                   | -38 |                        | 3     | -7                    | 2   |    |
| 49  | -5    | -5                                       | -41 |     | -5  | -10                   | -42 |                        | 0     | -5                    | -1  |    |
| 48  | -5    | -9                                       | -40 |     | -6  | -11                   | -44 |                        | -1    | -2                    | -4  |    |
| 47  | -3    | -9                                       | -39 |     | -8  | -12                   | -46 |                        | -5    | -3                    | -7  |    |
| 46  | -10   | -4                                       | -38 |     | -12   | -12                   | -48 |                        | -2    | -8                    | -10 |    |
| 45  | -11   | -1                                       | -36 |     | -15   | -11                   | -47 |                        | -4    | -10                   | -11 |    |
| 44  | -10   | 0  | -33 |     | -14   | -5                    | -41 |                        | -4    | -5                    | -8  |    |
| 43  | -10   | 0  | -30 |     | -15   | 2                     | -34 |                        | -5    | 2                     | -4  |    |

| ALT | TEMP  | COMPONENT WINDS<br>-1 |     |    | TEMP  | COMPONENT WINDS<br>-1 |     |    | TEMP  | COMPONENT WINDS<br>-1 |    |    |
|-----|-------|-----------------------|-----|----|-------|-----------------------|-----|----|-------|-----------------------|----|----|
| KM  | DEG C | NS                    | M   | EW | DEG C | NS                    | M   | EW | DEG C | M                     | S  | EW |
| 42  | -12   | 1                     | -29 |    | -13   | 3                     | -31 |    | -1    | 2                     | -2 |    |
| 41  | -15   | 2                     | -31 |    | -18   | 2                     | -29 |    | -3    | 0                     | 2  |    |
| 40  | -20   | 2                     | -32 |    | -24   | 0                     | -28 |    | -4    | -2                    | 4  |    |
| 39  | -25   | 1                     | -30 |    | -26   | 0                     | -25 |    | -1    | -1                    | 5  |    |
| 38  | -29   | 1                     | -29 |    | -28   | 4                     | -24 |    | 1     | 3                     | 5  |    |
| 37  | -31   | 0                     | -29 |    | -27   | 0                     | -27 |    | 4     | 0                     | 2  |    |
| 36  | -33   | -1                    | -29 |    | -30   | -8                    | -30 |    | 3     | -7                    | -1 |    |
| 35  | -33   | -2                    | -27 |    | -32   | -5                    | -31 |    | 1     | -3                    | -4 |    |
| 34  | -35   | -1                    | -24 |    | -34   | -4                    | -25 |    | 1     | -3                    | -1 |    |
| 33  | -39   | -2                    | -21 |    | -37   | -7                    | -24 |    | 2     | -5                    | -3 |    |
| 32  | -39   | -2                    | -19 |    | -38   | -7                    | -21 |    | 1     | -5                    | -2 |    |
| 31  | -41   | -1                    | -18 |    | -42   | -1                    | -18 |    | -1    | 0                     | 0  |    |
| 30  | -41   | 0                     | -17 |    | -40   | 1                     | -17 |    | 1     | 1                     | 0  |    |
| 29  | -41   | 1                     | -16 |    | -40   | -2                    | -20 |    | 1     | -3                    | -4 |    |
| 28  | -44   | 2                     | -15 |    | -42   | 1                     | -17 |    | 2     | -1                    | -2 |    |
| 27  | -47   | 2                     | -14 |    | -47   | 4                     | -14 |    | 0     | 2                     | 0  |    |
| 26  | -47   | 2                     | -14 |    | -49   | 3                     | -16 |    | -2    | 1                     | -2 |    |
| 25  | -49   | 0                     | -14 |    | -50   | 1                     | -14 |    | -1    | 1                     | 0  |    |
| 24  | -50   | 0                     | -13 |    | -51   | -3                    | -10 |    | -1    | -3                    | 3  |    |
| 23  | 999   | 999                   | 999 |    | -53   | 2                     | -11 |    |       |                       |    |    |
| 22  | 999   | 999                   | 999 |    | -54   | -7                    | -10 |    |       |                       |    |    |
| 21  | 999   | 999                   | 999 |    | -56   | 3                     | -2  |    |       |                       |    |    |
| 20  | 999   | 999                   | 999 |    | -59   | 2                     | -6  |    |       |                       |    |    |

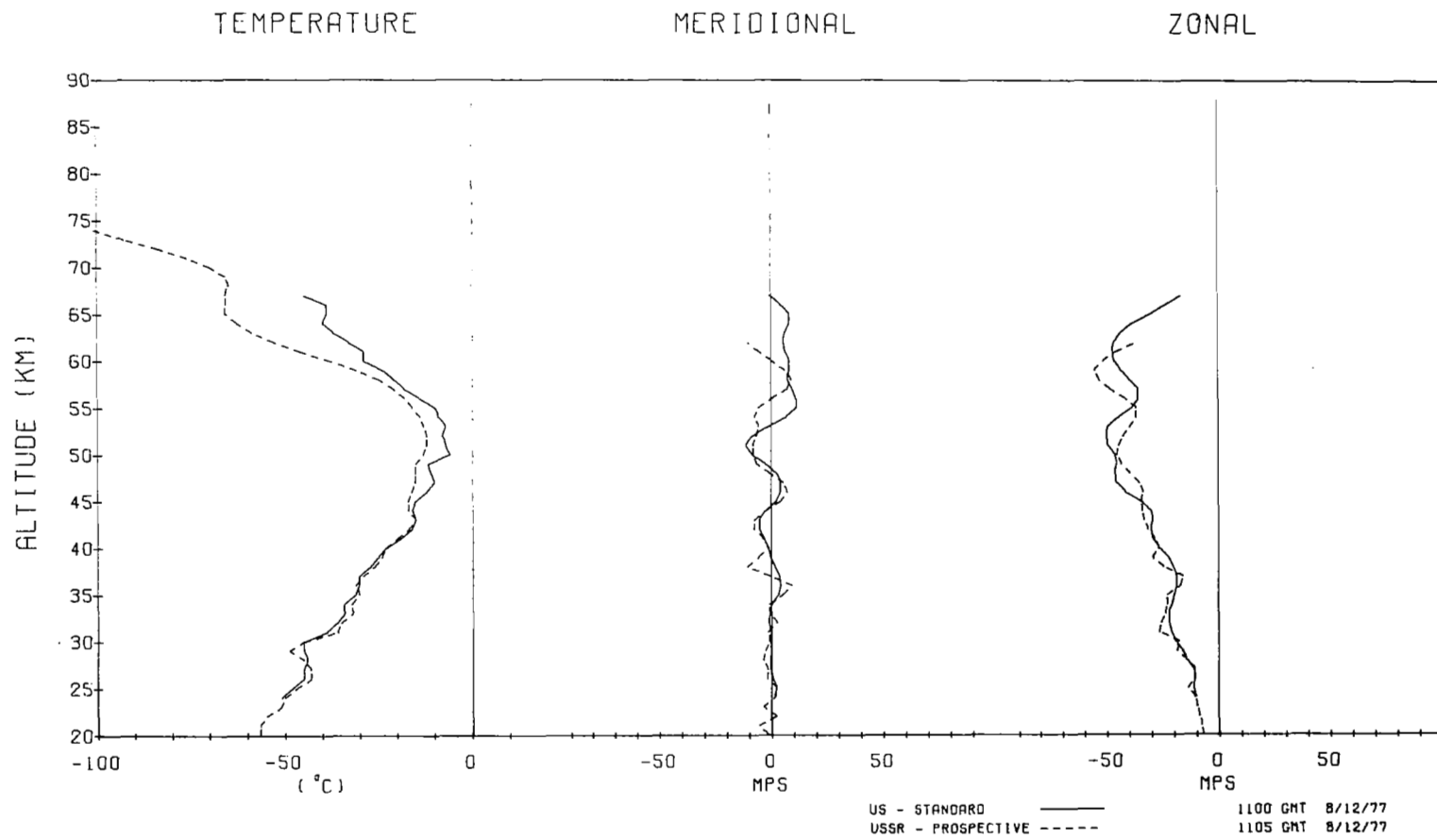
66



| ALT | US - STANDARD<br>AUG 12 1977<br>1100 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 12 1977<br>1105 GMT |                          |       | DIFFERENCES<br>USSR-US |                          |     |
|-----|--|--------------------------|-----|---|--------------------------|-------|------------------------|--------------------------|-----|
|     | TEMP                                     | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |       | TEMP                   | COMPONENT<br>WINDS<br>-1 |     |
|     |  | DEG C                    | M   |   | S                        | DEG C |                        | M                        | S   |
| KM  |  | NS                       | EW  |   | NS                       | EW    |                        | NS                       | EW  |
| 74  | 999                                      | 999                      | 999 | -101  | 999                      | 999   |                        |                          |     |
| 73  | 999                                      | 999                      | 999 | -93   | 999                      | 999   |                        |                          |     |
| 72  | 999                                      | 999                      | 999 | -84   | 999                      | 999   |                        |                          |     |
| 71  | 999                                      | 999                      | 999 | -76   | 999                      | 999   |                        |                          |     |
| 70  | 999                                      | 999                      | 999 | -70   | 999                      | 999   |                        |                          |     |
| 69  | 999                                      | 999                      | 999 | -66   | 999                      | 999   |                        |                          |     |
| 68  | 999                                      | 999                      | 999 | -65   | 999                      | 999   |                        |                          |     |
| 67  | -45                                      | -1                       | -17 | -66   | 999                      | 999   | -21                    |                          |     |
| 66  | -39                                      | 4                        | -24 | -66   | 999                      | 999   | -27                    |                          |     |
| 65  | -39                                      | 8                        | -31 | -66   | 999                      | 999   | -27                    |                          |     |
| 64  | -40                                      | 8                        | -39 | -63   | 999                      | 999   | -23                    |                          |     |
| 63  | -37                                      | 6                        | -44 | -59   | 999                      | 999   | -22                    |                          |     |
| 62  | -33                                      | 5                        | -47 | -53   | -11                      | -37   | -20                    | -16                      | 10  |
| 61  | -29                                      | 6                        | -48 | -46   | -6                       | -46   | -17                    | -12                      | 2   |
| 60  | -29                                      | 8                        | -47 | -38   | 0                        | -52   | -9                     | -8                       | -5  |
| 59  | -24                                      | 8                        | -44 | -31   | 6                        | -56   | -7                     | -2                       | -12 |
| 58  | -21                                      | 7                        | -40 | -25   | 9                        | -54   | -4                     | 2                        | -14 |
| 57  | -18                                      | 9                        | -36 | -21   | 7                        | -49   | -3                     | -2                       | -13 |
| 56  | -14                                      | 11                       | -36 | -18   | 0                        | -42   | -4                     | -11                      | -6  |
| 55  | -10                                      | 11                       | -39 | -16   | -6                       | -37   | -6                     | -17                      | 2   |
| 54  | -9                                       | 6                        | -45 | -14   | -8                       | -37   | -5                     | -14                      | 8   |
| 53  | -7                                       | -2                       | -50 | -13   | -6                       | -40   | -6                     | -4                       | 10  |
| 52  | -8                                       | -9                       | -51 | -12   | -7                       | -43   | -4                     | 2                        | 8   |
| 51  | -7                                       | -12                      | -50 | -12   | -9                       | -45   | -5                     | 3                        | 5   |
| 50  | -6                                       | -9                       | -47 | -13   | -9                       | -46   | -7                     | 0                        | 1   |
| 49  | -12                                      | -3                       | -46 | -15   | -7                       | -44   | -3                     | -4                       | 2   |
| 48  | -11                                      | 2                        | -47 | -15   | -1                       | -40   | -4                     | -3                       | 7   |
| 47  | -10                                      | 4                        | -46 | -15   | 5                        | -36   | -5                     | 1                        | 10  |
| 46  | -12                                      | 4                        | -42 | -16   | 7                        | -34   | -4                     | 3                        | 8   |
| 45  | -15                                      | 2                        | -35 | -17   | 4                        | -35   | -2                     | 2                        | 0   |
| 44  | -16                                      | -3                       | -31 | -17   | -3                       | -35   | -1                     | 0                        | -4  |
| 43  | -15                                      | -6                       | -30 | -15   | -8                       | -34   | 0                      | -2                       | -4  |
| 42  | -16                                      | -6                       | -31 | -17   | -8                       | -32   | -1                     | -2                       | -1  |
| 41  | -19                                      | -4                       | -30 | -20   | -4                       | -29   | -1                     | 0                        | 1   |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     | TEMP | COMPONENT<br>WINDS<br>-1 |       | TEMP | COMPONENT<br>WINDS<br>-1 |    |       |   |   |
|-----|------|--------------------------|-----|------|--------------------------|-------|------|--------------------------|----|-------|---|---|
|     |      | DEG C                    | M   |      | S                        | DEG C |      | M                        | S  | DEG C | M | S |
|     |      |                          |     |      |                          |       |      |                          |    |       |   |   |
| 40  | -23  | -2                       | -27 | -23  | -2                       | -27   | 0    | 0                        | 0  |       |   |   |
| 39  | -25  | -1                       | -23 | -24  | -6                       | -30   | 1    | -5                       | -7 |       |   |   |
| 38  | -27  | 1                        | -21 | -26  | -11                      | -25   | 1    | -12                      | -4 |       |   |   |
| 37  | -30  | 3                        | -19 | -29  | -1                       | -16   | 1    | -4                       | 3  |       |   |   |
| 36  | -30  | 4                        | -19 | -31  | 9                        | -17   | -1   | 5                        | 2  |       |   |   |
| 35  | -31  | 3                        | -20 | -30  | 5                        | -23   | 1    | 2                        | -3 |       |   |   |
| 34  | -34  | 0                        | -21 | -32  | -1                       | -23   | 2    | -1                       | -2 |       |   |   |
| 33  | -34  | -1                       | -23 | -32  | -1                       | -24   | 2    | 0                        | -1 |       |   |   |
| 32  | -36  | -2                       | -23 | -35  | 2                        | -26   | 1    | 4                        | -3 |       |   |   |
| 31  | -39  | -1                       | -22 | -36  | -2                       | -27   | 3    | -1                       | -5 |       |   |   |
| 30  | -45  | -1                       | -20 | -45  | -1                       | -18   | 0    | 0                        | 2  |       |   |   |
| 29  | -45  | -1                       | -17 | -49  | -3                       | -19   | -4   | -2                       | -2 |       |   |   |
| 28  | -44  | -1                       | -15 | -45  | -4                       | -15   | -1   | -3                       | 0  |       |   |   |
| 27  | -45  | -1                       | -12 | -43  | -2                       | -11   | 2    | -1                       | 1  |       |   |   |
| 26  | -45  | 0                        | -11 | -43  | -2                       | -11   | 2    | -2                       | 0  |       |   |   |
| 25  | -48  | 2                        | -12 | -47  | 2                        | -14   | 1    | 0                        | -2 |       |   |   |
| 24  | -51  | 1                        | -11 | -50  | 1                        | -11   | 1    | 0                        | 0  |       |   |   |
| 23  | 999  | 999                      | 999 | -51  | -4                       | -10   |      |                          |    |       |   |   |
| 22  | 999  | 999                      | 999 | -55  | 2                        | -9    |      |                          |    |       |   |   |
| 21  | 999  | 999                      | 999 | -57  | -6                       | -8    |      |                          |    |       |   |   |
| 20  | 999  | 999                      | 999 | -57  | -2                       | -7    |      |                          |    |       |   |   |

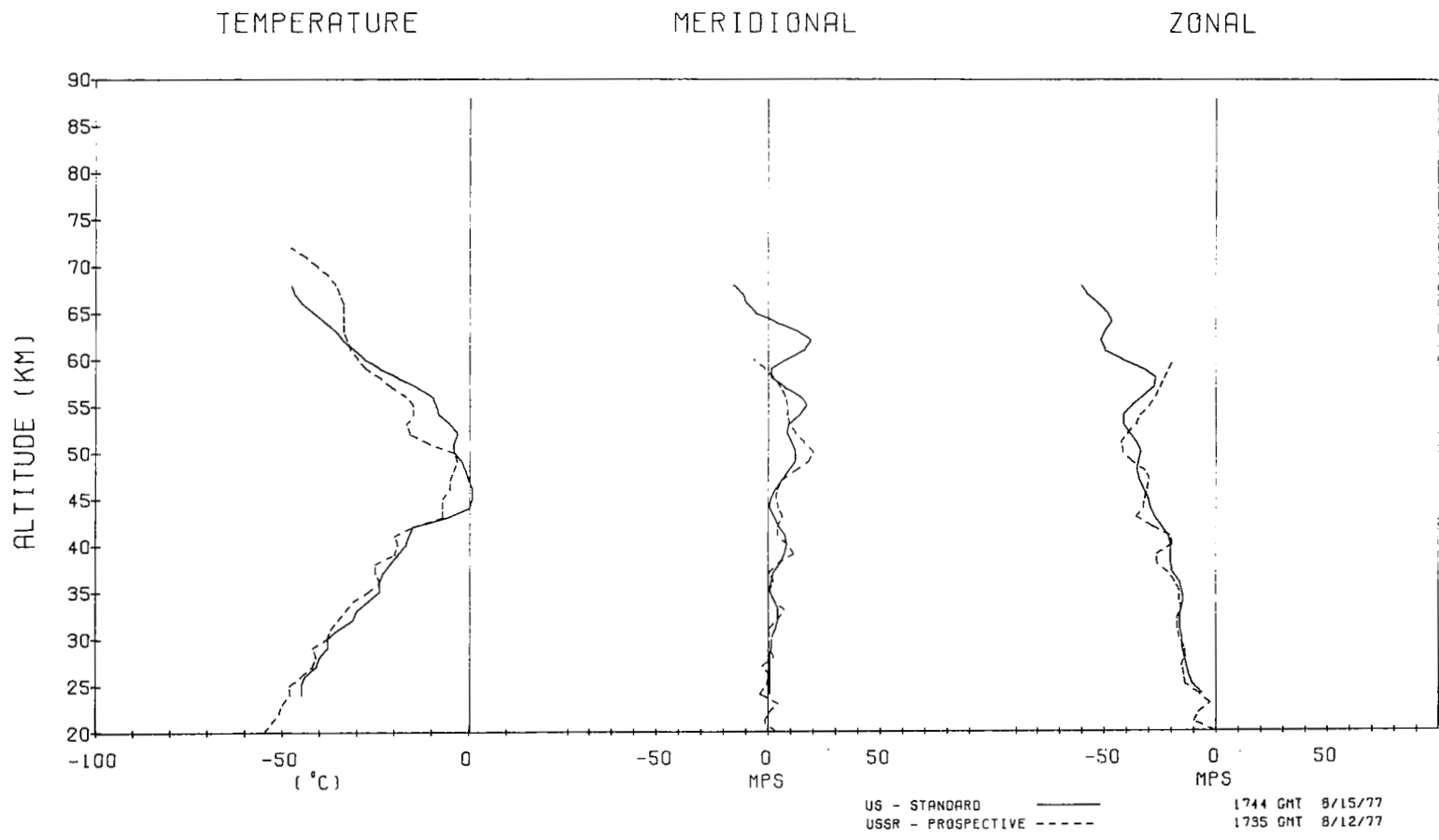
101



|     |      | US - STANDARD<br>AUG 15 1977<br>1744 GMT |     |     | USSR - PROSPECTIVE<br>AUG 12 1977<br>1735 GMT |                       |     | DIFFERENCES<br>USSR-US |      |                       |    |    |
|-----|------|--|-----|-----|---|-----------------------|-----|------------------------|------|-----------------------|----|----|
| ALT | TEMP | COMPONENT WINDS<br>-1                    |     |     | TEMP  | COMPONENT WINDS<br>-1 |     |                        | TEMP | COMPONENT WINDS<br>-1 |    |    |
|     |      | DEG C                                    | M   | S   |   | DEG C                 | M   | S                      |      | DEG C                 | M  | S  |
| KM  |      | NS                                       | EW  |     | NS  | EW                    |     | NS                     | EW   |                       | NS | EW |
| 72  | 999  | 999                                      | 999 | 999 | -48   | 999                   | 999 |                        |      |                       |    |    |
| 71  | 999  | 999                                      | 999 | 999 | -44   | 999                   | 999 |                        |      |                       |    |    |
| 70  | 999  | 999                                      | 999 | 999 | -41   | 999                   | 999 |                        |      |                       |    |    |
| 69  | 999  | 999                                      | 999 | 999 | -38   | 999                   | 999 |                        |      |                       |    |    |
| 68  | -48  | -16                                      | -61 |     | -36   | 999                   | 999 | 12                     |      |                       |    |    |
| 67  | -47  | -12                                      | -58 |     | -35   | 999                   | 999 | 12                     |      |                       |    |    |
| 66  | -45  | -10                                      | -53 |     | -34   | 999                   | 999 | 11                     |      |                       |    |    |
| 65  | -42  | -6                                       | -49 |     | -34   | 999                   | 999 | 8                      |      |                       |    |    |
| 64  | -39  | 3  | -47 |     | -34   | 999                   | 999 | 5                      |      |                       |    |    |
| 63  | -36  | 13                                       | -50 |     | -34   | 999                   | 999 | 2                      |      |                       |    |    |
| 62  | -34  | 19                                       | -52 |     | -33   | 999                   | 999 | 1                      |      |                       |    |    |
| 61  | -31  | 16                                       | -50 |     | -32   | 999                   | 999 | -1                     |      |                       |    |    |
| 60  | -28  | 8  | -42 |     | -30   | -7                    | -19 | -2                     | -15  | 23                    |    |    |
| 59  | -24  | 1  | -33 |     | -28   | -2                    | -21 | -4                     | -3   | 12                    |    |    |
| 58  | -19  | 1  | -27 |     | -24   | 2                     | -23 | -5                     | 1    | 4                     |    |    |
| 57  | -14  | 7  | -28 |     | -21   | 5                     | -25 | -7                     | -2   | 3                     |    |    |
| 56  | -10  | 14                                       | -33 |     | -17   | 7                     | -27 | -7                     | -7   | 6                     |    |    |
| 55  | -9   | 17                                       | -38 |     | -15   | 8                     | -30 | -6                     | -9   | 8                     |    |    |
| 54  | -8   | 14                                       | -42 |     | -15   | 8                     | -34 | -7                     | -6   | 8                     |    |    |
| 53  | -5   | 9  | -42 |     | -17   | 9                     | -36 | -12                    | 0    | 6                     |    |    |
| 52  | -3   | 8  | -39 |     | -16   | 12                    | -40 | -13                    | 4    | -1                    |    |    |
| 51  | -4   | 10                                       | -36 |     | -11   | 16                    | -43 | -7                     | 6    | -7                    |    |    |
| 50  | -4   | 12                                       | -34 |     | -4  | 20                    | -42 | 0                      | 8    | -8                    |    |    |
| 49  | -2   | 12                                       | -35 |     | -3  | 18                    | -38 | -1                     | 6    | -3                    |    |    |
| 48  | -1   | 9  | -36 |     | -4  | 12                    | -32 | -3                     | 3    | 4                     |    |    |
| 47  | 0    | 6  | -35 |     | -5  | 6                     | -30 | -5                     | 0    | 5                     |    |    |
| 46  | 1    | 3  | -33 |     | -5  | 4                     | -31 | -6                     | 1    | 2                     |    |    |
| 45  | 1    | 1  | -31 |     | -7  | 3                     | -32 | -8                     | 2    | -1                    |    |    |
| 44  | 0    | 0  | -30 |     | -7  | 4                     | -33 | -7                     | 4    | -3                    |    |    |
| 43  | -6   | 2  | -28 |     | -7  | 6                     | -36 | -1                     | 4    | -8                    |    |    |
| 42  | -15  | 4  | -25 |     | -15   | 4                     | -29 | 0                      | 0    | -4                    |    |    |
| 41  | -16  | 7  | -22 |     | -20   | 4                     | -21 | -4                     | -3   | 1                     |    |    |
| 40  | -17  | 8  | -21 |     | -19   | 8                     | -20 | -2                     | 0    | 1                     |    |    |
| 39  | -19  | 7  | -21 |     | -20   | 11                    | -27 | -1                     | 4    | -6                    |    |    |

| ALT | TEMP | COMPONENT WINDS<br>-1 |     |   | TEMP | COMPONENT WINDS<br>-1 |     |    | TEMP | COMPONENT WINDS<br>-1 |    |    |
|-----|------|-----------------------|-----|---|------|-----------------------|-----|----|------|-----------------------|----|----|
|     |      | DEG C                 | M   | S |      | DEG C                 | M   | S  |      | DEG C                 | M  | S  |
| KM  |      | NS                    | EW  |   | NS   | EW                    |     | NS | EW   |                       | NS | EW |
| 38  | -21  | 5                     | -21 |   | -25  | 4                     | -27 | -4 | -1   | -6                    |    |    |
| 37  | -23  | 2                     | -20 |   | -25  | 0                     | -22 | -2 | -2   | -2                    |    |    |
| 36  | -24  | 1                     | -17 |   | -24  | 2                     | -19 | 0  | 1    | -2                    |    |    |
| 35  | -24  | 0                     | -16 |   | -27  | 0                     | -17 | -3 | 0    | -1                    |    |    |
| 34  | -27  | 2                     | -15 |   | -31  | 2                     | -17 | -4 | 0    | -2                    |    |    |
| 33  | -30  | 4                     | -16 |   | -33  | 7                     | -16 | -3 | 3    | 0                     |    |    |
| 32  | -31  | 4                     | -17 |   | -35  | 4                     | -18 | -4 | 0    | -1                    |    |    |
| 31  | -35  | 3                     | -17 |   | -37  | 0                     | -18 | -2 | -3   | -1                    |    |    |
| 30  | -38  | 1                     | -16 |   | -38  | 0                     | -17 | 0  | -1   | -1                    |    |    |
| 29  | -38  | 1                     | -16 |   | -42  | 0                     | -15 | -4 | -1   | 1                     |    |    |
| 28  | -40  | 0                     | -15 |   | -41  | 2                     | -14 | -1 | 2    | 1                     |    |    |
| 27  | -41  | 0                     | -14 |   | -42  | -3                    | -16 | -1 | -3   | -2                    |    |    |
| 26  | -44  | 0                     | -13 |   | -45  | 0                     | -15 | -1 | 0    | -2                    |    |    |
| 25  | -45  | 0                     | -11 |   | -48  | -1                    | -14 | -3 | -1   | -3                    |    |    |
| 24  | -45  | 0                     | -7  |   | -48  | -4                    | -8  | -3 | -4   | -1                    |    |    |
| 23  | 999  | 999                   | 999 |   | -50  | 4                     | -3  |    |      |                       |    |    |
| 22  | 999  | 999                   | 999 |   | -51  | 0                     | -8  |    |      |                       |    |    |
| 21  | 999  | 999                   | 999 |   | -53  | -2                    | -10 |    |      |                       |    |    |
| 20  | 999  | 999                   | 999 |   | -55  | 3                     | -1  |    |      |                       |    |    |

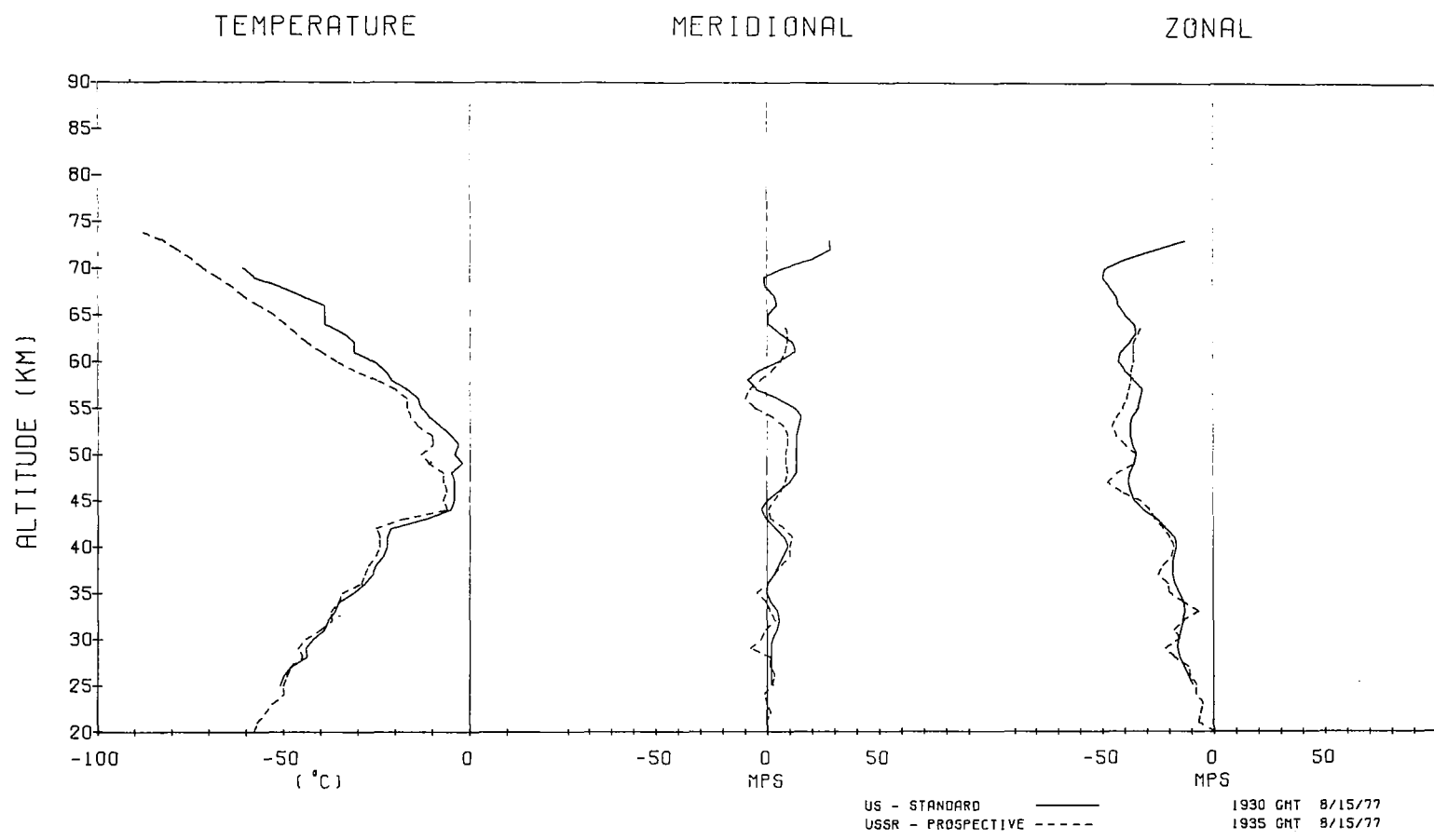
103



| ALT<br>KM | US - STANDARD<br>AUG 15 1977<br>1930 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 15 1977<br>1935 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |    |
|-----------|--|--------------------------|-----|---|--------------------------|-----|------------------------|--------------------------|----|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |    |
|           |  | M S                      |     |   | M S                      |     |                        | M S                      |    |
|           |  | NS                       | EW  |   | NS                       | EW  |                        | NS                       | EW |
| 74        | 999                                      | 999                      | 999 | -89   | 999                      | 999 |                        |                          |    |
| 73        | 999                                      | 28                       | -13 | -83   | 999                      | 999 |                        |                          |    |
| 72        | 999                                      | 28                       | -27 | -79   | 999                      | 999 |                        |                          |    |
| 71        | 999                                      | 20                       | -40 | -75   | 999                      | 999 |                        |                          |    |
| 70        | -61                                      | 7                        | -49 | -72   | 999                      | 999 | -11                    |                          |    |
| 69        | -58                                      | -2                       | -50 | -68   | 999                      | 999 | -10                    |                          |    |
| 68        | -51                                      | -1                       | -47 | -64   | 999                      | 999 | -13                    |                          |    |
| 67        | -45                                      | 3                        | -44 | -61   | 999                      | 999 | -16                    |                          |    |
| 66        | -39                                      | 4                        | -43 | -57   | 999                      | 999 | -18                    |                          |    |
| 65        | -39                                      | 0                        | -40 | -53   | 999                      | 999 | -14                    |                          |    |
| 64        | -39                                      | 0                        | -36 | -50   | 7                        | -32 | -11                    | 7                        | 4  |
| 63        | -34                                      | 5                        | -35 | -47   | 9                        | -34 | -13                    | 4                        | 1  |
| 62        | -31                                      | 11                       | -38 | -44   | 9                        | -36 | -13                    | -2                       | 2  |
| 61        | -31                                      | 12                       | -42 | -40   | 8                        | -36 | -9                     | -4                       | 6  |
| 60        | -26                                      | 5                        | -43 | -36   | 6                        | -36 | -10                    | 1                        | 7  |
| 59        | -23                                      | -4                       | -40 | -31   | 2                        | -37 | -8                     | 6                        | 3  |
| 58        | -21                                      | -9                       | -36 | -25   | -3                       | -37 | -4                     | 6                        | -1 |
| 57        | -17                                      | -5                       | -32 | -20   | -8                       | -38 | -3                     | -3                       | -6 |
| 56        | -14                                      | 5                        | -33 | -17   | -10                      | -39 | -3                     | -15                      | -6 |
| 55        | -13                                      | 12                       | -34 | -17   | -6                       | -41 | -4                     | -18                      | -7 |
| 54        | -11                                      | 15                       | -37 | -16   | 2                        | -44 | -5                     | -13                      | -7 |
| 53        | -8                                       | 14                       | -38 | -14   | 7                        | -46 | -6                     | -7                       | -8 |
| 52        | -5                                       | 13                       | -38 | -10   | 9                        | -44 | -5                     | -4                       | -6 |
| 51        | -3                                       | 13                       | -37 | -10   | 9                        | -40 | -7                     | -4                       | -3 |
| 50        | -4                                       | 13                       | -35 | -13   | 8                        | -35 | -9                     | -5                       | 0  |
| 49        | -2                                       | 13                       | -36 | -11   | 8                        | -36 | -9                     | -5                       | 0  |
| 48        | -5                                       | 13                       | -38 | -7  | 9                        | -44 | -2                     | -4                       | -6 |
| 47        | -4                                       | 10                       | -39 | -7  | 8                        | -48 | -3                     | -2                       | -9 |
| 46        | -4                                       | 5                        | -38 | -6  | 6                        | -42 | -2                     | 1                        | -4 |
| 45        | -4                                       | 0                        | -36 | -7  | 3                        | -33 | -3                     | 3                        | 3  |
| 44        | -5                                       | -3                       | -32 | -6  | 0                        | -29 | -1                     | 3                        | 3  |
| 43        | -12                                      | -1                       | -26 | -18   | 1                        | -27 | -6                     | 2                        | -1 |
| 42        | -21                                      | 3                        | -22 | -25   | 7                        | -23 | -4                     | 4                        | -1 |
| 41        | -22                                      | 7                        | -18 | -24   | 11                       | -20 | -2                     | 4                        | -2 |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | M S                      |     |               | M S                      |     |               | M S                      |    |
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
|           |               | 40                       | -22 |               | 9                        | -17 |               | -24                      | 10 |
| 39        | -23           | 7                        | -18 | -25           | 10                       | -19 | -2            | 3                        | -1 |
| 38        | -25           | 5                        | -19 | -27           | 6                        | -23 | -2            | 1                        | -4 |
| 37        | -26           | 3                        | -19 | -28           | 3                        | -25 | -2            | 0                        | -6 |
| 36        | -28           | 0                        | -18 | -29           | 0                        | -21 | -1            | 0                        | -3 |
| 35        | -31           | -1                       | -16 | -34           | -5                       | -20 | -3            | -4                       | -4 |
| 34        | -35           | 1                        | -14 | -35           | -1                       | -14 | 0             | -2                       | 0  |
| 33        | -36           | 4                        | -13 | -37           | 1                        | -7  | -1            | -3                       | 6  |
| 32        | -38           | 5                        | -14 | -37           | 3                        | -14 | 1             | -2                       | 0  |
| 31        | -39           | 4                        | -15 | -40           | -1                       | -18 | -1            | -5                       | -3 |
| 30        | -42           | 2                        | -16 | -44           | -3                       | -16 | -2            | -5                       | 0  |
| 29        | -44           | 1                        | -17 | -46           | -8                       | -22 | -2            | -9                       | -5 |
| 28        | -44           | 1                        | -16 | -45           | 1                        | -18 | -1            | 0                        | -2 |
| 27        | -48           | 1                        | -14 | -48           | 1                        | -12 | 0             | 0                        | 2  |
| 26        | -50           | 1                        | -12 | -49           | 3                        | -11 | 1             | 2                        | 1  |
| 25        | -51           | 1                        | -10 | -50           | 2                        | -8  | 1             | 1                        | 2  |
| 24        | 999           | 999                      | 999 | -50           | -2                       | -8  |               |                          |    |
| 23        | 999           | 999                      | 999 | -53           | -1                       | -5  |               |                          |    |
| 22        | 999           | 999                      | 999 | -55           | 1                        | -6  |               |                          |    |
| 21        | 999           | 999                      | 999 | -57           | -1                       | -7  |               |                          |    |
| 20        | 999           | 999                      | 999 | -58           | -1                       | 0   |               |                          |    |

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| ALT<br>KM | US - STANDARD<br>AUG 16 1977<br>0113 GMT |                          |     |    | USSR - PROSPECTIVE<br>AUG 16 1977<br>0105 GMT |                          |     |    | DIFFERENCES<br>USSR-US |                          |     |     |    |  |
|-----------|--|--------------------------|-----|----|---|--------------------------|-----|----|------------------------|--------------------------|-----|-----|----|--|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |     |    |  |
|           |  | M                        | S   | EW |   | M                        | S   | EW |                        | M                        | S   | EW  |    |  |
| 72        | 999                                      | -18                      | 9   |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 71        | 999                                      | -1                       | -2  |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 70        | -47                                      | 11                       | -13 |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 69        | -41                                      | 12                       | -25 |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 68        | -39                                      | 3                        | -35 |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 67        | -48                                      | -7                       | -41 |    | 999   | 999                      | 999 |    |                        |                          |     |     |    |  |
| 66        | -52                                      | -11                      | -41 |    | 999   | -26                      | -9  |    |                        |                          | -15 | 32  |    |  |
| 65        | -52                                      | -10                      | -33 |    | -60   | -24                      | -13 |    |                        |                          | -8  | -14 | 20 |  |
| 64        | -48                                      | -8                       | -24 |    | -52   | -23                      | -13 |    |                        |                          | -4  | -15 | 11 |  |
| 63        | -44                                      | -7                       | -18 |    | -45   | -21                      | -16 |    |                        |                          | -1  | -14 | 2  |  |
| 62        | -38                                      | -5                       | -18 |    | -40   | -18                      | -19 |    |                        |                          | -2  | -13 | -1 |  |
| 61        | -34                                      | -2                       | -24 |    | -35   | -13                      | -23 |    |                        |                          | -1  | -11 | 1  |  |
| 60        | -30                                      | -1                       | -33 |    | -30   | -9                       | -26 |    |                        |                          | 0   | -8  | 7  |  |
| 59        | -25                                      | -2                       | -39 |    | -23   | -3                       | -30 |    |                        |                          | 2   | -1  | 9  |  |
| 58        | -22                                      | -2                       | -40 |    | -15   | 3                        | -35 |    |                        |                          | 7   | 5   | 5  |  |
| 57        | -18                                      | 1                        | -38 |    | -8  | 9                        | -40 |    |                        |                          | 10  | 8   | -2 |  |
| 56        | -14                                      | 5                        | -36 |    | -4  | 12                       | -43 |    |                        |                          | 10  | 7   | -7 |  |
| 55        | -9                                       | 9                        | -36 |    | -4  | 12                       | -42 |    |                        |                          | 5   | 3   | -6 |  |
| 54        | -6                                       | 9                        | -36 |    | -6  | 7                        | -36 |    |                        |                          | 0   | -2  | 0  |  |
| 53        | -3                                       | 4                        | -36 |    | -6  | 0                        | -33 |    |                        |                          | -3  | -4  | 3  |  |
| 52        | -1                                       | -5                       | -36 |    | -3  | -2                       | -35 |    |                        |                          | -2  | 3   | 1  |  |
| 51        | -3                                       | -10                      | -34 |    | 1   | -1                       | -40 |    |                        |                          | 4   | 9   | -6 |  |
| 50        | -4                                       | -12                      | -33 |    | 3   | 0                        | -41 |    |                        |                          | 7   | 12  | -8 |  |
| 49        | -5                                       | -10                      | -31 |    | 0   | -1                       | -39 |    |                        |                          | 5   | 9   | -8 |  |
| 48        | -7                                       | -7                       | -29 |    | -3  | -2                       | -35 |    |                        |                          | 4   | 5   | -6 |  |
| 47        | -9                                       | -4                       | -26 |    | -5  | -5                       | -30 |    |                        |                          | 4   | -1  | -4 |  |
| 46        | -9                                       | 0                        | -21 |    | -7  | -9                       | -25 |    |                        |                          | 2   | -9  | -4 |  |
| 45        | -9                                       | 2                        | -20 |    | -9  | -8                       | -23 |    |                        |                          | 0   | -10 | -3 |  |
| 44        | -6                                       | 2                        | -24 |    | -8  | 0                        | -24 |    |                        |                          | -2  | -2  | 0  |  |
| 43        | -12                                      | 0                        | -29 |    | -9  | 4                        | -29 |    |                        |                          | 3   | 4   | 0  |  |
| 42        | -17                                      | -2                       | -31 |    | -16   | -2                       | -31 |    |                        |                          | 1   | 0   | 0  |  |
| 41        | -18                                      | -4                       | -28 |    | -19   | -5                       | -28 |    |                        |                          | -1  | -1  | 0  |  |
| 40        | -20                                      | -3                       | -23 |    | -17   | -7                       | -25 |    |                        |                          | 3   | -4  | -2 |  |
| 39        | -23                                      | -2                       | -19 |    | -20   | -6                       | -22 |    |                        |                          | 3   | -4  | -3 |  |

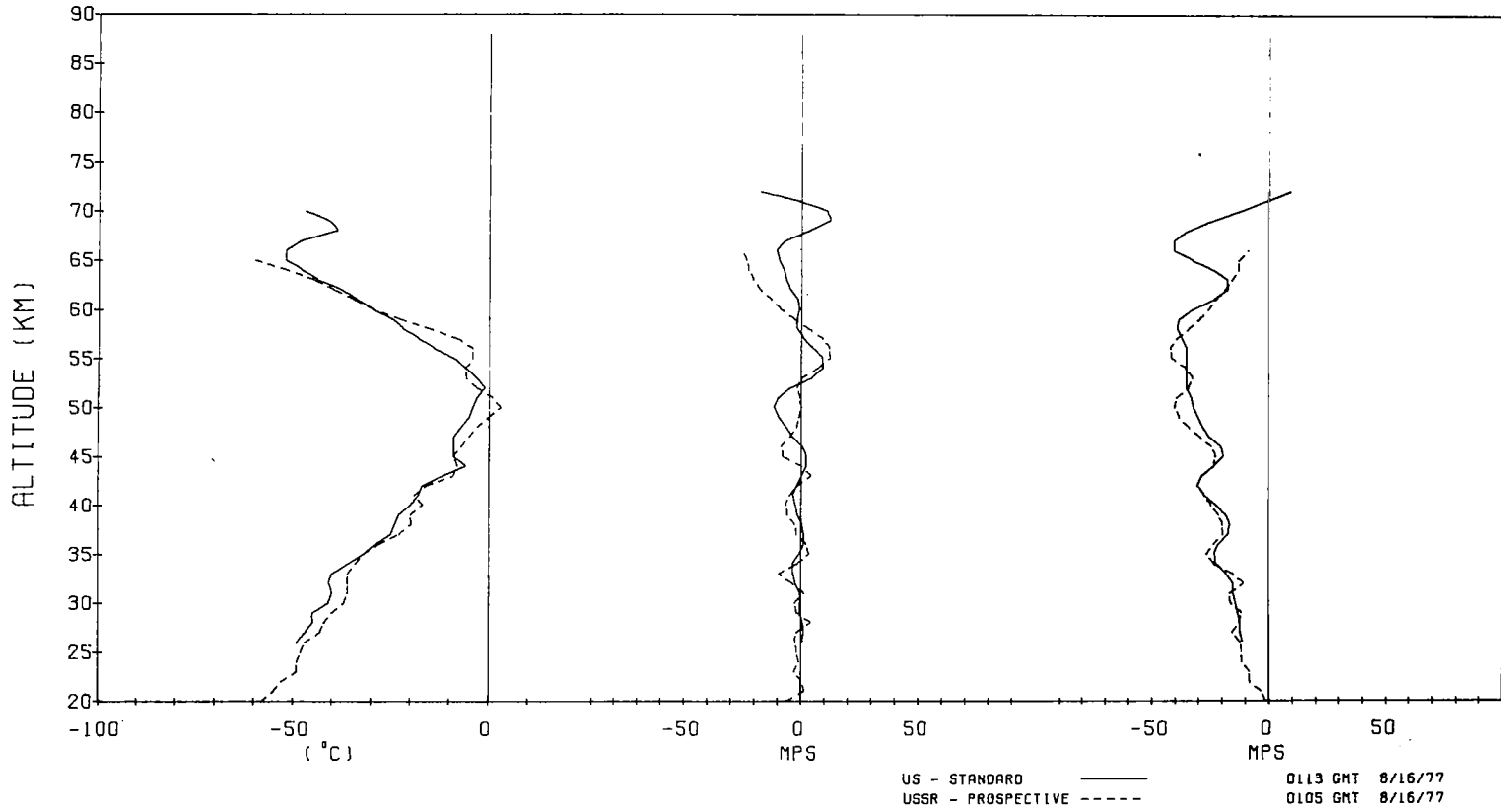
| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|---|----|----|
|           |               | M                        | S   | EW |               | M                        | S   | EW |               | M                        | S | EW |    |
|           |               | NS                       |     |    |               | NS                       |     |    |               | NS                       |   |    |    |
| 38        | -24           | 0                        | -17 |    | -20           | -3                       | -20 |    |               |                          | 4 | -3 | -3 |
| 37        | -25           | 1                        | -18 |    | -23           | -2                       | -20 |    |               |                          | 2 | -3 | -2 |
| 36        | -29           | 1                        | -22 |    | -28           | 2                        | -24 |    |               |                          | 1 | 1  | -2 |
| 35        | -32           | -1                       | -24 |    | -32           | 3                        | -27 |    |               |                          | 0 | 4  | -3 |
| 34        | -36           | -4                       | -23 |    | -34           | -2                       | -24 |    |               |                          | 2 | 2  | -1 |
| 33        | -40           | -4                       | -19 |    | -36           | -10                      | -16 |    |               |                          | 4 | -6 | 3  |
| 32        | -41           | -3                       | -16 |    | -36           | -4                       | -11 |    |               |                          | 5 | -1 | 5  |
| 31        | -40           | -1                       | -16 |    | -36           | 1                        | -17 |    |               |                          | 4 | 2  | -1 |
| 30        | -41           | -1                       | -15 |    | -37           | -3                       | -17 |    |               |                          | 4 | -2 | -2 |
| 29        | -45           | -1                       | -14 |    | -40           | -2                       | -12 |    |               |                          | 5 | -1 | 2  |
| 28        | -45           | 0                        | -13 |    | -42           | 4                        | -13 |    |               |                          | 3 | 4  | 0  |
| 27        | -47           | 1                        | -13 |    | -43           | -2                       | -16 |    |               |                          | 4 | -3 | -3 |
| 26        | -49           | 0                        | -12 |    | -47           | -3                       | -13 |    |               |                          | 2 | -3 | -1 |
| 25        | 999           | 999                      | 999 |    | -48           | -2                       | -12 |    |               |                          |   |    |    |
| 24        | 999           | 999                      | 999 |    | -49           | -1                       | -12 |    |               |                          |   |    |    |
| 23        | 999           | 999                      | 999 |    | -49           | -3                       | -9  |    |               |                          |   |    |    |
| 22        | 999           | 999                      | 999 |    | -53           | 0                        | -9  |    |               |                          |   |    |    |
| 21        | 999           | 999                      | 999 |    | -55           | 1                        | -4  |    |               |                          |   |    |    |
| 20        | 999           | 999                      | 999 |    | -58           | -6                       | -2  |    |               |                          |   |    |    |

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TEMPERATURE

MERIDIONAL

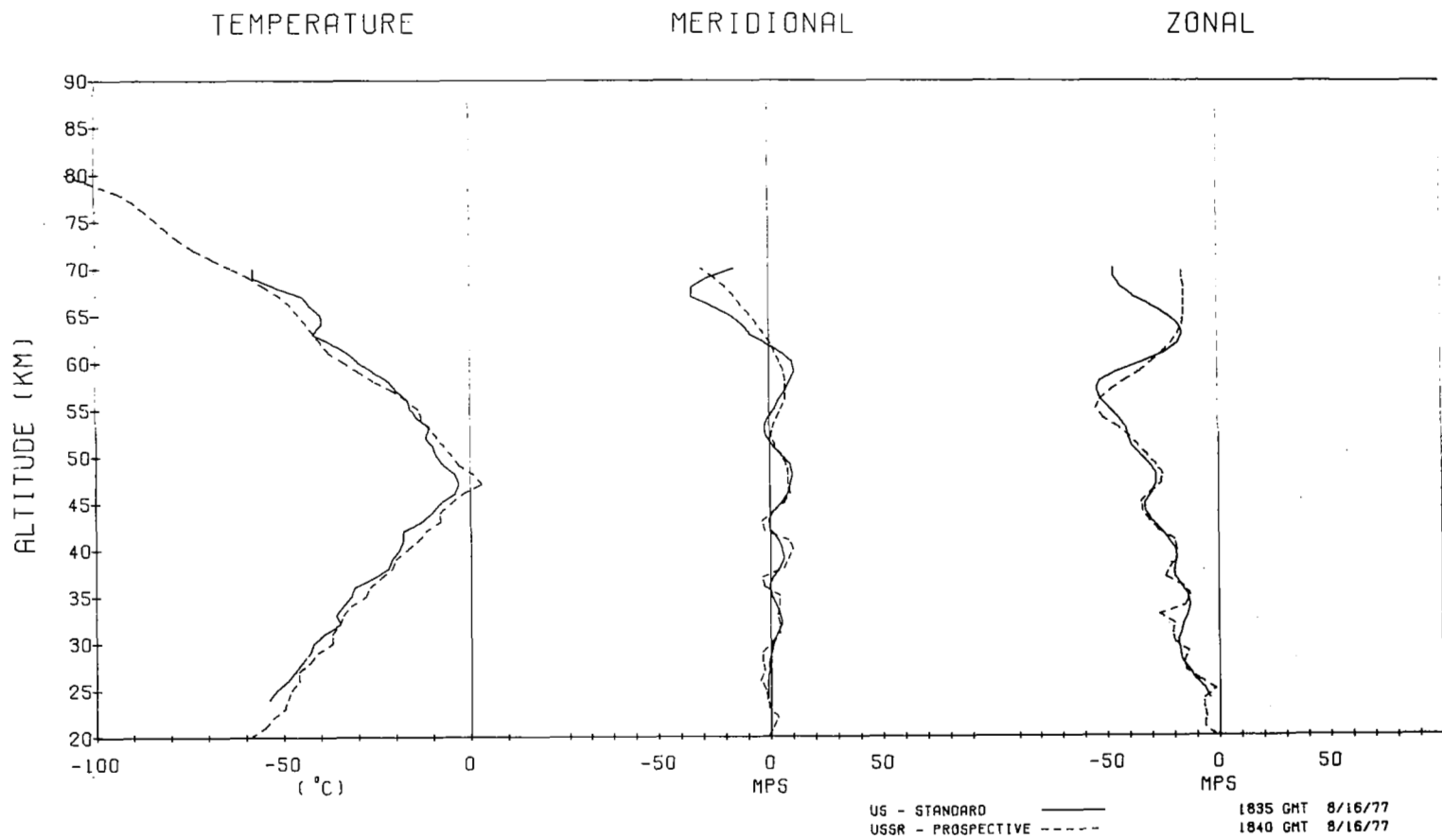
ZONAL



| ALT | US - STANDARD<br>AUG 16 1977<br>1835 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 16 1977<br>1840 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |
|-----|--|--------------------------|-----|---|--------------------------|-----|------------------------|--------------------------|-----|
|     | TEMP                                     | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     | TEMP                   | COMPONENT<br>WINDS<br>-1 |     |
|     |  | DEG C                    | M S |   | DEG C                    | M S |                        | DEG C                    | M S |
|     |  | NS                       | EW  |   | NS                       | EW  |                        | NS                       | EW  |
| 80  | 999                                      | 999                      | 999 | -108  | 999                      | 999 |                        |                          |     |
| 79  | 999                                      | 999                      | 999 | -101  | 999                      | 999 |                        |                          |     |
| 78  | 999                                      | 999                      | 999 | -94   | 999                      | 999 |                        |                          |     |
| 77  | 999                                      | 999                      | 999 | -90   | 999                      | 999 |                        |                          |     |
| 76  | 999                                      | 999                      | 999 | -87   | 999                      | 999 |                        |                          |     |
| 75  | 999                                      | 999                      | 999 | -84   | 999                      | 999 |                        |                          |     |
| 74  | 999                                      | 999                      | 999 | -81   | 999                      | 999 |                        |                          |     |
| 73  | 999                                      | 999                      | 999 | -78   | 999                      | 999 |                        |                          |     |
| 72  | 999                                      | 999                      | 999 | -74   | 999                      | 999 |                        |                          |     |
| 71  | 999                                      | 999                      | 999 | -69   | 999                      | 999 |                        |                          |     |
| 70  | -58                                      | -16                      | -47 | -64   | -31                      | -16 | -6                     | -15                      | 31  |
| 69  | -58                                      | -28                      | -47 | -59   | -25                      | -16 | -1                     | 3                        | 31  |
| 68  | -52                                      | -35                      | -44 | -55   | -20                      | -15 | -3                     | 15                       | 29  |
| 67  | -45                                      | -35                      | -38 | -51   | -16                      | -15 | -6                     | 19                       | 23  |
| 66  | -43                                      | -26                      | -30 | -48   | -13                      | -15 | -5                     | 13                       | 15  |
| 65  | -40                                      | -18                      | -23 | -46   | -9                       | -15 | -6                     | 9                        | 8   |
| 64  | -40                                      | -13                      | -18 | -44   | -6                       | -16 | -4                     | 7                        | 2   |
| 63  | -42                                      | -9                       | -16 | -42   | -3                       | -18 | 0                      | 6                        | -2  |
| 62  | -37                                      | -2                       | -18 | -40   | 0                        | -21 | -3                     | 2                        | -3  |
| 61  | -33                                      | 5                        | -24 | -38   | 2                        | -25 | -5                     | -3                       | -1  |
| 60  | -30                                      | 10                       | -34 | -34   | 4                        | -30 | -4                     | -6                       | 4   |
| 59  | -26                                      | 11                       | -45 | -30   | 6                        | -35 | -4                     | -5                       | 10  |
| 58  | -22                                      | 9                        | -53 | -26   | 7                        | -42 | -4                     | -2                       | 11  |
| 57  | -20                                      | 7                        | -55 | -21   | 7                        | -48 | -1                     | 0                        | 7   |
| 56  | -17                                      | 4                        | -53 | -17   | 7                        | -53 | 0                      | 3                        | 0   |
| 55  | -16                                      | 2                        | -49 | -14   | 5                        | -55 | 2                      | 3                        | -6  |
| 54  | -14                                      | -1                       | -45 | -13   | 3                        | -52 | 1                      | 4                        | -7  |
| 53  | -11                                      | -3                       | -42 | -11   | 1                        | -45 | 0                      | 4                        | -3  |
| 52  | -12                                      | -2                       | -41 | -9  | 0                        | -40 | 3                      | 2                        | 1   |
| 51  | -10                                      | 1                        | -39 | -7  | 2                        | -36 | 3                      | 1                        | 3   |
| 50  | -9                                       | 5                        | -35 | -5  | 5                        | -32 | 4                      | 0                        | 3   |
| 49  | -7                                       | 9                        | -31 | -3  | 7                        | -28 | 4                      | -2                       | 3   |
| 48  | -4                                       | 10                       | -28 | 1   | 8                        | -25 | 5                      | -2                       | 3   |
| 47  | -3                                       | 9                        | -28 | 3   | 8                        | -26 | 6                      | -1                       | 2   |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     | TEMP | COMPONENT<br>WINDS<br>-1 |     | TEMP | COMPONENT<br>WINDS<br>-1 |     |
|-----|------|--------------------------|-----|------|--------------------------|-----|------|--------------------------|-----|
|     |      | DEG C                    | M S |      | DEG C                    | M S |      | DEG C                    | M S |
|     |      |                          | NS  |      | EW                       |     |      | NS                       | EW  |
| 46  | -4   | 8                        | -30 | -2   | 9                        | -31 | 2    | 1                        | -1  |
| 45  | -8   | 5                        | -33 | -5   | 6                        | -35 | 3    | 1                        | -2  |
| 44  | -10  | 1                        | -33 | -8   | 1                        | -34 | 2    | 0                        | -1  |
| 43  | -13  | -1                       | -30 | -8   | -4                       | -31 | 5    | -3                       | -1  |
| 42  | -18  | 0                        | -26 | -12  | -3                       | -27 | 6    | -3                       | -1  |
| 41  | -18  | 3                        | -23 | -14  | 8                        | -20 | 4    | 5                        | 3   |
| 40  | -19  | 5                        | -20 | -17  | 10                       | -19 | 2    | 5                        | 1   |
| 39  | -21  | 6                        | -19 | -20  | 8                        | -19 | 1    | 2                        | 0   |
| 38  | -22  | 4                        | -20 | -21  | 6                        | -22 | 1    | 2                        | -2  |
| 37  | -26  | 1                        | -20 | -24  | -4                       | -24 | 2    | -5                       | -4  |
| 36  | -31  | -1                       | -17 | -27  | -3                       | -16 | 4    | -2                       | 1   |
| 35  | -32  | 0                        | -14 | -28  | 4                        | -13 | 4    | 4                        | 1   |
| 34  | -34  | 2                        | -13 | -32  | 4                        | -15 | 2    | 2                        | -2  |
| 33  | -36  | 4                        | -14 | -34  | 3                        | -27 | 2    | -1                       | -13 |
| 32  | -35  | 5                        | -16 | -35  | 4                        | -20 | 0    | -1                       | -4  |
| 31  | -39  | 3                        | -17 | -37  | 4                        | -21 | 2    | 1                        | -4  |
| 30  | -42  | 1                        | -19 | -37  | 0                        | -20 | 5    | -1                       | -1  |
| 29  | -43  | 0                        | -18 | -41  | -4                       | -14 | 2    | -4                       | 4   |
| 28  | -45  | -1                       | -17 | -43  | -4                       | -16 | 2    | -3                       | 1   |
| 27  | -47  | -1                       | -14 | -46  | -3                       | -15 | 1    | -2                       | -1  |
| 26  | -49  | -2                       | -11 | -46  | -5                       | -9  | 3    | -3                       | 2   |
| 25  | -52  | -2                       | -7  | -48  | -3                       | -2  | 4    | -1                       | 5   |
| 24  | -54  | -2                       | -5  | -49  | -2                       | -7  | 5    | 0                        | -2  |
| 23  | 999  | 999                      | 999 | -50  | -1                       | -7  |      |                          |     |
| 22  | 999  | 999                      | 999 | -53  | 3                        | -6  |      |                          |     |
| 21  | 999  | 999                      | 999 | -55  | 1                        | -7  |      |                          |     |
| 20  | 999  | 999                      | 999 | -59  | -1                       | -2  |      |                          |     |

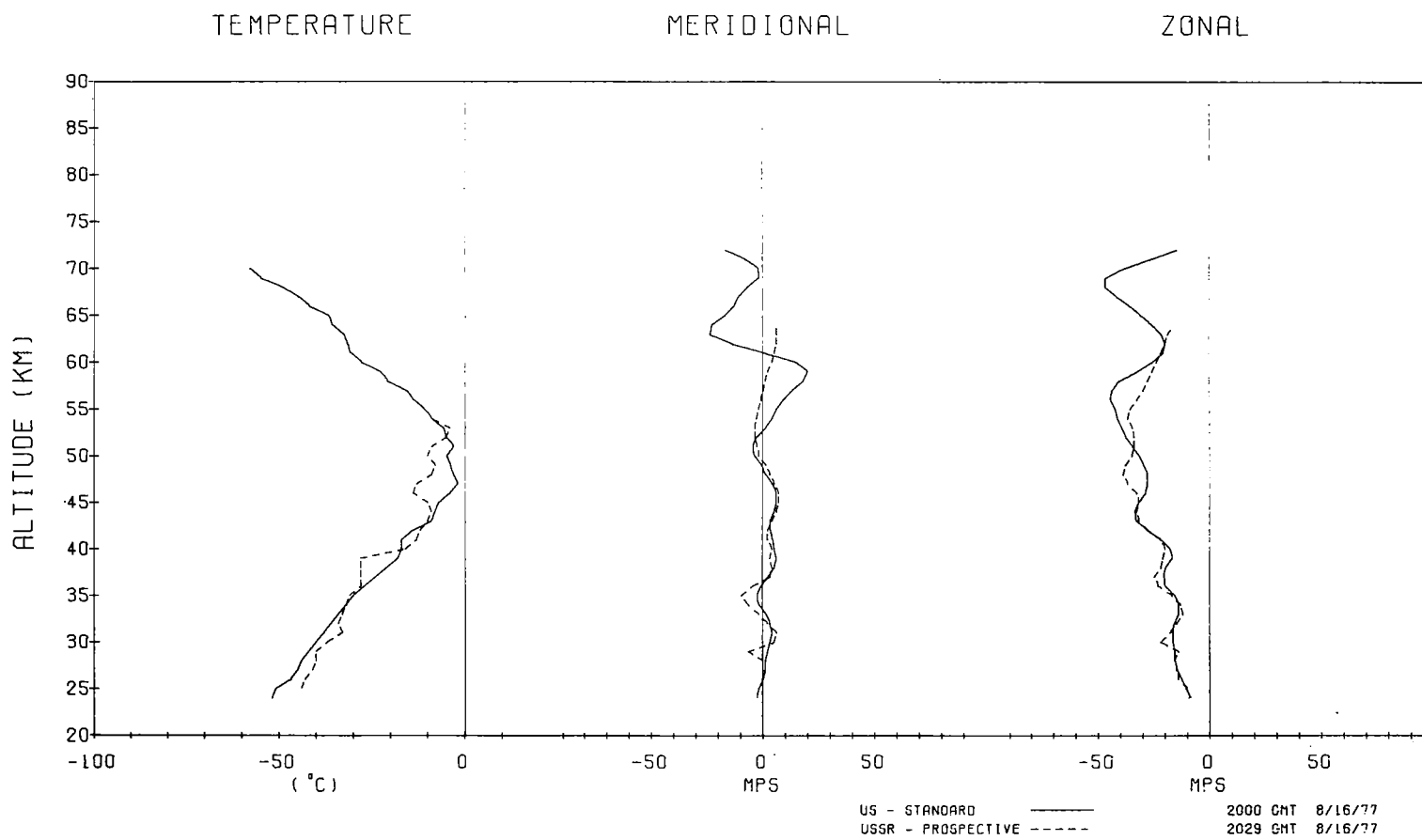
601



| US - STANDARD<br>AUG 16 1977<br>2000 GMT |       |                          |     | USSR - PROSPECTIVE<br>AUG 16 1977<br>2029 GMT |                          |     |                          | DIFFERENCLS<br>USSR-US |     |   |
|--|-------|--------------------------|-----|---|--------------------------|-----|--------------------------|------------------------|-----|---|
| ALT                                      | TEMP  | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |                        |     |   |
|  |       | NS                       | EW  |   | DEG C                    | M   | S                        | DEG C                  | M   | S |
| KM                                       | DEG C | M                        | S   | DEG C   | M                        | S   | DEG C                    | M                      | S   |   |
| 72                                       | 999   | -17                      | -15 | 999   | 999                      | 999 |                          |                        |     |   |
| 71                                       | 999   | -8                       | -27 | 999   | 999                      | 999 |                          |                        |     |   |
| 70                                       | -58   | -2                       | -39 | 999   | 999                      | 999 |                          |                        |     |   |
| 69                                       | -55   | -2                       | -47 | 999   | 999                      | 999 |                          |                        |     |   |
| 68                                       | -49   | -7                       | -47 | 999   | 999                      | 999 |                          |                        |     |   |
| 67                                       | -45   | -11                      | -42 | 999   | 999                      | 999 |                          |                        |     |   |
| 66                                       | -42   | -13                      | -36 | 999   | 999                      | 999 |                          |                        |     |   |
| 65                                       | -37   | -17                      | -31 | 999   | 999                      | 999 |                          |                        |     |   |
| 64                                       | -36   | -23                      | -26 | 999   | 6                        | -16 | 29                       | 10                     |     |   |
| 63                                       | -33   | -24                      | -22 | 999   | 6                        | -19 | 30                       | 3                      |     |   |
| 62                                       | -32   | -14                      | -20 | 999   | 6                        | -20 | 20                       | 0                      |     |   |
| 61                                       | -31   | 1                        | -21 | 999   | 5                        | -22 | 4                        | -1                     |     |   |
| 60                                       | -28   | 15                       | -26 | 999   | 4                        | -24 | -11                      | 2                      |     |   |
| 59                                       | -23   | 20                       | -33 | 999   | 2                        | -26 | -18                      | 7                      |     |   |
| 58                                       | -21   | 18                       | -41 | 999   | 1                        | -28 | -17                      | 13                     |     |   |
| 57                                       | -16   | 13                       | -44 | 999   | 0                        | -30 | -13                      | 14                     |     |   |
| 56                                       | -14   | 9                        | -45 | 999   | -1                       | -33 | -10                      | 12                     |     |   |
| 55                                       | -11   | 6                        | -43 | 999   | -2                       | -36 | -8                       | 7                      |     |   |
| 54                                       | -9    | 4                        | -42 | -9  | -3                       | -37 | 0                        | -7                     | 5   |   |
| 53                                       | -6    | 1                        | -40 | -4  | -4                       | -35 | 2                        | -5                     | 5   |   |
| 52                                       | -5    | -3                       | -38 | -5  | -4                       | -34 | 0                        | -1                     | 4   |   |
| 51                                       | -3    | -5                       | -35 | -9  | -3                       | -34 | -6                       | 2                      | 1   |   |
| 50                                       | -5    | -4                       | -32 | -10   | -2                       | -35 | -5                       | 2                      | -3  |   |
| 49                                       | -4    | -1                       | -30 | -8  | 1                        | -38 | -4                       | 2                      | -8  |   |
| 48                                       | -3    | 1                        | -28 | -9  | 3                        | -39 | -6                       | 2                      | -11 |   |
| 47                                       | -2    | 4                        | -28 | -13   | 5                        | -37 | -11                      | 1                      | -9  |   |
| 46                                       | -4    | 6                        | -29 | -14   | 7                        | -33 | -10                      | 1                      | -4  |   |
| 45                                       | -7    | 6                        | -32 | -10   | 7                        | -32 | -3                       | 1                      | 0   |   |
| 44                                       | -8    | 5                        | -34 | -9  | 6                        | -33 | -1                       | 1                      | 1   |   |
| 43                                       | -9    | 3                        | -33 | -10   | 4                        | -32 | -1                       | 1                      | 1   |   |
| 42                                       | -14   | 3                        | -28 | -12   | 2                        | -28 | 2                        | -1                     | 0   |   |
| 41                                       | -17   | 4                        | -22 | -13   | 2                        | -22 | 4                        | -2                     | 0   |   |
| 40                                       | -17   | 5                        | -18 | -16   | 4                        | -20 | 1                        | -1                     | -2  |   |
| 39                                       | -18   | 6                        | -17 | -28   | 3                        | -21 | -10                      | -3                     | -4  |   |

| ALT | TEMP  | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |       |    |
|-----|-------|--------------------------|-----|-------|--------------------------|-----|--------------------------|-------|----|
|     |       | NS                       | EW  |       | DEG C                    | M   | S                        | DEG C | M  |
| KM  | DEG C | M                        | S   | DEG C | M                        | S   | DEG C                    | M     | S  |
| 38  | -21   | 5                        | -20 | -28   | 4                        | -22 | -7                       | -1    | -2 |
| 37  | -24   | 2                        | -21 | -28   | 3                        | -25 | -4                       | 1     | -4 |
| 36  | -27   | -1                       | -20 | -28   | -5                       | -23 | -1                       | -4    | -3 |
| 35  | -30   | -3                       | -16 | -31   | -10                      | -17 | -1                       | -7    | -1 |
| 34  | -32   | -2                       | -14 | -32   | -7                       | -13 | 0                        | -5    | 1  |
| 33  | -34   | 1                        | -14 | -33   | -2                       | -12 | 1                        | -3    | 2  |
| 32  | -36   | 3                        | -16 | -34   | 2                        | -15 | 2                        | -1    | 1  |
| 31  | -38   | 4                        | -17 | -33   | 6                        | -18 | 5                        | 2     | -1 |
| 30  | -40   | 3                        | -17 | -37   | 5                        | -22 | 3                        | 2     | -5 |
| 29  | -42   | 2                        | -16 | -40   | -7                       | -14 | 2                        | -9    | 2  |
| 28  | -44   | 1                        | -16 | -40   | 0                        | -16 | 4                        | -1    | 0  |
| 27  | -45   | 1                        | -15 | -41   | 0                        | -15 | 4                        | -1    | 0  |
| 26  | -47   | 0                        | -13 | -43   | 0                        | -14 | 4                        | 0     | -1 |
| 25  | -51   | -2                       | -11 | -44   | 0                        | -10 | 7                        | 2     | 1  |
| 24  | -52   | -3                       | -9  | 999   | 999                      | 999 |                          |       |    |

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| ALT | US - STANDARD<br>AUG 17 1977<br>2025 GMT |                    |     | USSR - PROSPECTIVE<br>AUG 17 1977<br>2015 GMT |                    |     | DIFFERENCES<br>USSR-US |       |    |
|-----|--|--------------------|-----|---|--------------------|-----|------------------------|-------|----|
|     | TEMP                                     | COMPONENT<br>WINDS |     | TEMP  | COMPONENT<br>WINDS |     | COMPONENT<br>WINDS     |       |    |
|     |  | DEG C              | -1  |   | DEG C              | -1  |                        | DEG C | M  |
| KM  |  | NS                 | EW  |   | NS                 | EW  | NS                     | EW    |    |
| 80  | 999                                      | 999                | 999 | -121  | 999                | 999 |                        |       |    |
| 79  | 999                                      | 999                | 999 | -116  | 999                | 999 |                        |       |    |
| 78  | 999                                      | 999                | 999 | -111  | 999                | 999 |                        |       |    |
| 77  | 999                                      | 999                | 999 | -105  | 999                | 999 |                        |       |    |
| 76  | 999                                      | 999                | 999 | -99   | 999                | 999 |                        |       |    |
| 75  | 999                                      | 999                | 999 | -94   | 999                | 999 |                        |       |    |
| 74  | 999                                      | 999                | 999 | -89   | 999                | 999 |                        |       |    |
| 73  | 999                                      | 999                | 999 | -83   | 999                | 999 |                        |       |    |
| 72  | 999                                      | 999                | 999 | -78   | 999                | 999 |                        |       |    |
| 71  | 999                                      | 12                 | -8  | -72   | 999                | 999 |                        |       |    |
| 70  | -53                                      | 21                 | -5  | -66   | 999                | 999 | -13                    |       |    |
| 69  | -43                                      | 27                 | -10 | -60   | 999                | 999 | -17                    |       |    |
| 68  | -39                                      | 26                 | -24 | -53   | 999                | 999 | -14                    |       |    |
| 67  | -43                                      | 21                 | -39 | -47   | 999                | 999 | -4                     |       |    |
| 66  | -40                                      | 15                 | -46 | -42   | 999                | 999 | -2                     |       |    |
| 65  | -36                                      | 12                 | -44 | -37   | 3                  | -17 | -1                     | -9    | 27 |
| 64  | -30                                      | 11                 | -41 | -35   | 3                  | -17 | -5                     | -8    | 24 |
| 63  | -27                                      | 8                  | -40 | -33   | 2                  | -17 | -6                     | -6    | 23 |
| 62  | -25                                      | 2                  | -40 | -34   | 999                | 999 | -9                     |       |    |
| 61  | -24                                      | -1                 | -36 | -35   | 999                | 999 | -11                    |       |    |
| 60  | -21                                      | 6                  | -28 | -36   | 999                | 999 | -15                    |       |    |
| 59  | -18                                      | 15                 | -21 | -37   | 999                | 999 | -19                    |       |    |
| 58  | -18                                      | 20                 | -19 | -36   | 999                | 999 | -18                    |       |    |
| 57  | -10                                      | 22                 | -22 | -33   | 999                | 999 | -23                    |       |    |
| 56  | -8                                       | 27                 | -28 | -28   | 999                | 999 | -20                    |       |    |
| 55  | -6                                       | 30                 | -34 | -19   | 999                | 999 | -13                    |       |    |
| 54  | -1                                       | 25                 | -39 | -9  | 25                 | -39 | -8                     | 0     | 0  |
| 53  | 3  | 17                 | -42 | -4  | 25                 | -43 | -7                     | 8     | -1 |
| 52  | 2  | 9                  | -45 | -5  | 21                 | -44 | -7                     | 12    | 1  |
| 51  | -1                                       | 5                  | -46 | -9  | 14                 | -43 | -8                     | 9     | 3  |
| 50  | -1                                       | 1                  | -45 | -10   | -6                 | -41 | -9                     | -7    | 4  |
| 49  | -1                                       | -3                 | -43 | -8  | -2                 | -40 | -7                     | 1     | 3  |
| 48  | -2                                       | -7                 | -40 | -9  | -7                 | -42 | -7                     | 0     | -2 |
| 47  | -5                                       | -6                 | -35 | -13   | -7                 | -43 | -8                     | -1    | -8 |

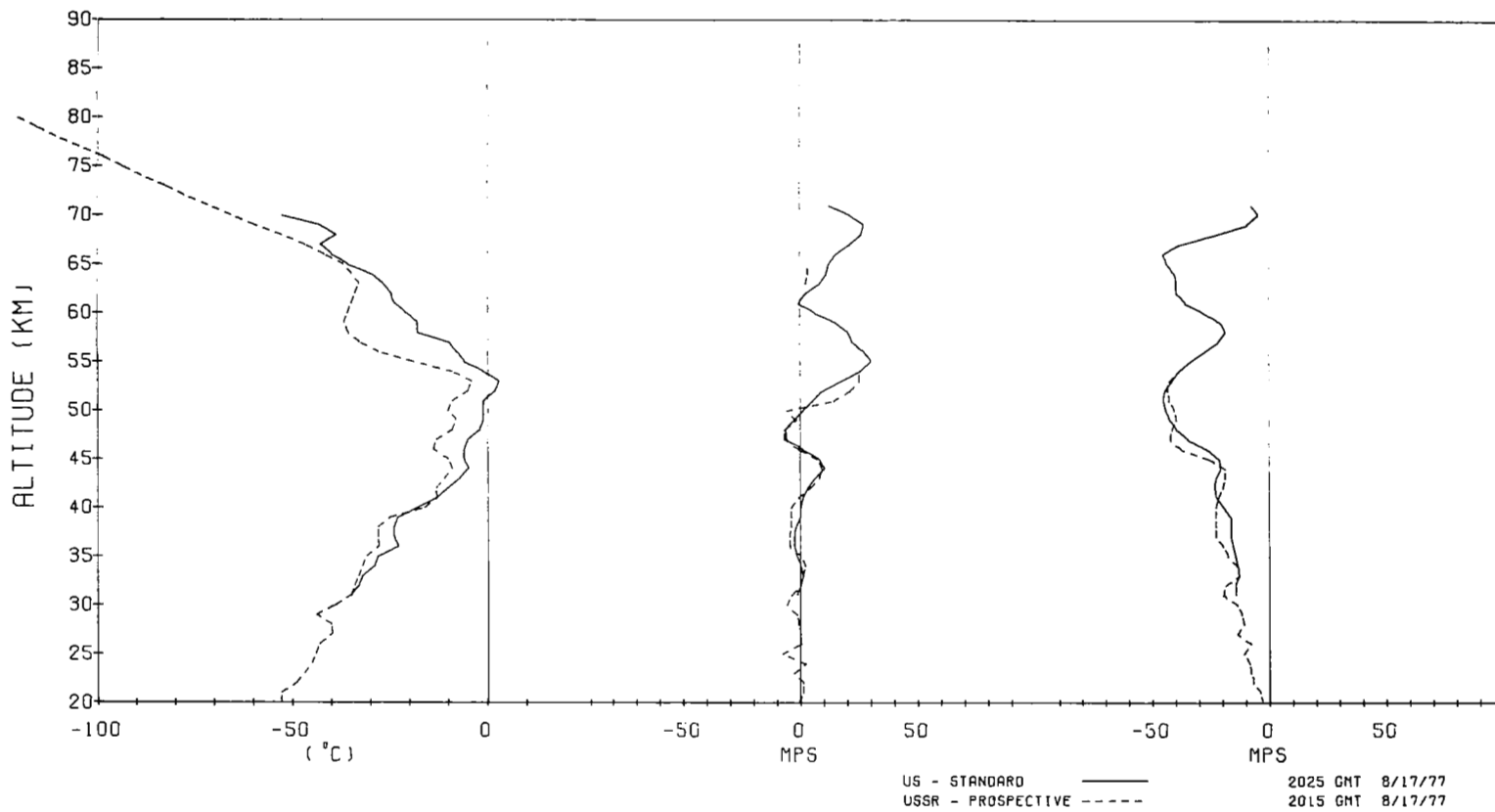
| ALT | COMPONENT<br>WINDS |       |     | COMPONENT<br>WINDS |    |       | COMPONENT<br>WINDS |    |     |
|-----|--------------------|-------|-----|--------------------|----|-------|--------------------|----|-----|
|     | TEMP               | -1    |     | TEMP               | -1 |       | TEMP               | -1 |     |
|     |                    | DEG C | M   |                    | S  | DEG C |                    | M  | S   |
| KM  |                    | NS    | EW  |                    | NS | EW    |                    | NS | EW  |
| 46  | -6                 | 1     | -27 | -14                | -1 | -38   | -8                 | -2 | -11 |
| 45  | -6                 | 8     | -22 | -10                | 7  | -26   | -4                 | -1 | -4  |
| 44  | -5                 | 10    | -21 | -9                 | 9  | -19   | -4                 | -1 | 2   |
| 43  | -7                 | 6     | -23 | -11                | 8  | -19   | -4                 | 2  | 4   |
| 42  | -10                | 3     | -24 | -13                | 4  | -20   | -3                 | 1  | 4   |
| 41  | -13                | 1     | -23 | -13                | -1 | -22   | 0                  | -2 | 1   |
| 40  | -18                | 0     | -20 | -16                | -4 | -23   | 2                  | -4 | -3  |
| 39  | -23                | 0     | -17 | -25                | -4 | -23   | -2                 | -4 | -6  |
| 38  | -24                | -2    | -17 | -28                | -4 | -23   | -4                 | -2 | -6  |
| 37  | -24                | -3    | -17 | -28                | -5 | -23   | -4                 | -2 | -6  |
| 36  | -23                | -3    | -16 | -28                | -5 | -20   | -5                 | -2 | -4  |
| 35  | -28                | -2    | -15 | -31                | 0  | -18   | -3                 | 2  | -3  |
| 34  | -29                | 0     | -14 | -32                | 2  | -14   | -3                 | 2  | 0   |
| 33  | -32                | 1     | -13 | -33                | 1  | -13   | -1                 | 0  | 0   |
| 32  | -33                | 0     | -15 | -34                | 0  | -19   | -1                 | 0  | -4  |
| 31  | -35                | -2    | -15 | -35                | -4 | -20   | 0                  | -2 | -5  |
| 30  | 999                | 999   | 999 | -39                | -6 | -14   |                    |    |     |
| 29  | 999                | 999   | 999 | -44                | -2 | -12   |                    |    |     |
| 28  | 999                | 999   | 999 | -40                | -1 | -11   |                    |    |     |
| 27  | 999                | 999   | 999 | -40                | 0  | -14   |                    |    |     |
| 26  | 999                | 999   | 999 | -43                | 0  | -8    |                    |    |     |
| 25  | 999                | 999   | 999 | -44                | -8 | -11   |                    |    |     |
| 24  | 999                | 999   | 999 | -45                | 2  | -9    |                    |    |     |
| 23  | 999                | 999   | 999 | -47                | -3 | -8    |                    |    |     |
| 22  | 999                | 999   | 999 | -49                | 1  | -7    |                    |    |     |
| 21  | 999                | 999   | 999 | -53                | 1  | -4    |                    |    |     |
| 20  | 999                | 999   | 999 | -53                | -1 | -3    |                    |    |     |

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TEMPERATURE

MERIDIONAL

ZONAL

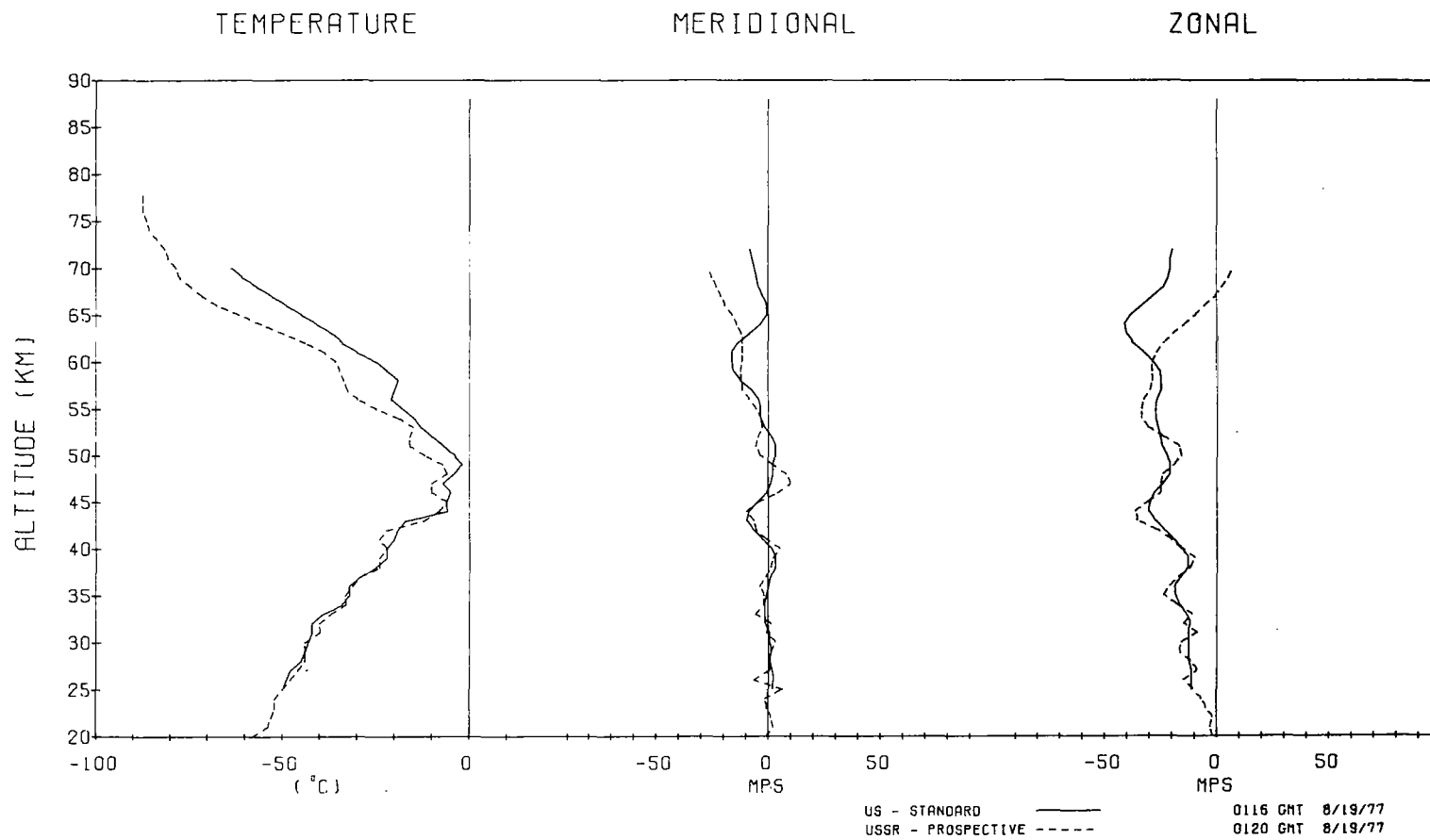




| ALT | US - STANDARD<br>AUG 19 1977<br>0116 GMT |                          |     |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>0120 GMT |                          |     |     | DIFFERENCES<br>USSR-US |             |    |    |
|-----|--|--------------------------|-----|-----|---|--------------------------|-----|-----|------------------------|-------------|----|----|
|     | TEMP                                     | COMPONENT<br>WINDS<br>-1 |     |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     |     | TEMP                   | WINDS<br>-1 |    |    |
|     |  | DEG C                    | M   | S   |   | DEG C                    | M   | S   |                        | DEG C       | M  | S  |
| KM  |  | NS                       | M   | EW  | DEG C   | NS                       | M   | EW  | DEG C                  | M           | S  | EW |
| 78  | 999                                      | 999                      | 999 | 999 | -88   | 999                      | 999 | 999 |                        |             |    |    |
| 77  | 999                                      | 999                      | 999 | 999 | -88   | 999                      | 999 | 999 |                        |             |    |    |
| 76  | 999                                      | 999                      | 999 | 999 | -88   | 999                      | 999 | 999 |                        |             |    |    |
| 75  | 999                                      | 999                      | 999 | 999 | -87   | 999                      | 999 | 999 |                        |             |    |    |
| 74  | 999                                      | 999                      | 999 | 999 | -86   | 999                      | 999 | 999 |                        |             |    |    |
| 73  | 999                                      | 999                      | 999 | 999 | -84   | 999                      | 999 | 999 |                        |             |    |    |
| 72  | 999                                      | -9                       | -20 |     | -82   | 999                      | 999 | 999 |                        |             |    |    |
| 71  | 999                                      | -8                       | -21 |     | -81   | 999                      | 999 | 999 |                        |             |    |    |
| 70  | -64                                      | -7                       | -21 |     | -79   | -28                      | 7   |     | -15                    | -21         | 28 |    |
| 69  | -61                                      | -6                       | -22 |     | -78   | -26                      | 5   |     | -17                    | -20         | 27 |    |
| 68  | -57                                      | -5                       | -24 |     | -75   | -24                      | 2   |     | -18                    | -19         | 26 |    |
| 67  | -53                                      | -3                       | -29 |     | -72   | -22                      | -1  |     | -19                    | -19         | 28 |    |
| 66  | -49                                      | -1                       | -34 |     | -68   | -20                      | -6  |     | -19                    | -19         | 28 |    |
| 65  | -45                                      | -1                       | -39 |     | -62   | -17                      | -10 |     | -17                    | -16         | 29 |    |
| 64  | -41                                      | -4                       | -42 |     | -56   | -15                      | -15 |     | -15                    | -11         | 27 |    |
| 63  | -37                                      | -9                       | -41 |     | -50   | -13                      | -20 |     | -13                    | -4          | 21 |    |
| 62  | -34                                      | -14                      | -38 |     | -44   | -12                      | -24 |     | -10                    | 2           | 14 |    |
| 61  | -30                                      | -17                      | -33 |     | -39   | -12                      | -27 |     | -9                     | 5           | 6  |    |
| 60  | -25                                      | -17                      | -29 |     | -36   | -12                      | -29 |     | -11                    | 5           | 0  |    |
| 59  | -22                                      | -16                      | -26 |     | -35   | -13                      | -29 |     | -13                    | 3           | -3 |    |
| 58  | -19                                      | -13                      | -25 |     | -34   | -13                      | -29 |     | -15                    | 0           | -4 |    |
| 57  | -20                                      | -8                       | -25 |     | -33   | -12                      | -30 |     | -13                    | -4          | -5 |    |
| 56  | -21                                      | -5                       | -27 |     | -30   | -9                       | -33 |     | -9                     | -4          | -6 |    |
| 55  | -18                                      | -4                       | -28 |     | -25   | -6                       | -34 |     | -7                     | -2          | -6 |    |
| 54  | -15                                      | -4                       | -28 |     | -19   | -4                       | -34 |     | -4                     | 0           | -6 |    |
| 53  | -13                                      | -2                       | -27 |     | -15   | -3                       | -31 |     | -2                     | -1          | -4 |    |
| 52  | -10                                      | 1                        | -26 |     | -16   | -5                       | -24 |     | -6                     | -6          | 2  |    |
| 51  | -7                                       | 3                        | -25 |     | -16   | -6                       | -17 |     | -9                     | -9          | 8  |    |
| 50  | -4                                       | 3                        | -23 |     | -12   | -4                       | -16 |     | -8                     | -7          | 7  |    |
| 49  | -2                                       | 2                        | -21 |     | -7  | 2                        | -19 |     | -5                     | 0           | 2  |    |
| 48  | -4                                       | 2                        | -21 |     | -6  | 8                        | -24 |     | -2                     | 6           | -3 |    |
| 47  | -7                                       | 1                        | -24 |     | -10   | 10                       | -25 |     | -3                     | 9           | -1 |    |
| 46  | -5                                       | -1                       | -28 |     | -10   | 4                        | -25 |     | -5                     | 5           | 3  |    |
| 45  | -6                                       | -5                       | -30 |     | -6  | -5                       | -31 |     | 0                      | 0           | -1 |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |   | TEMP  | COMPONENT<br>WINDS<br>-1 |     |   | TEMP  | COMPONENT<br>WINDS<br>-1 |    |   |       |   |    |    |
|-----|------|--------------------------|-----|---|-------|--------------------------|-----|---|-------|--------------------------|----|---|-------|---|----|----|
|     |      | DEG C                    | M   | S |       | DEG C                    | M   | S |       | DEG C                    | M  | S |       |   |    |    |
|     |      |                          |     |   |       |                          |     |   |       |                          |    |   | NS    | M | EW | NS |
| KM  |      |                          |     |   | DEG C |                          |     |   | DEG C |                          |    |   | DEG C |   |    |    |
| 44  | -6   | -9                       | -31 |   | -8    | -10                      | -37 |   | -2    | -1                       | -6 |   |       |   |    |    |
| 43  | -17  | -10                      | -28 |   | -12   | -7                       | -36 |   | 5     | 3                        | -8 |   |       |   |    |    |
| 42  | -19  | -7                       | -24 |   | -22   | -6                       | -27 |   | -3    | 1                        | -3 |   |       |   |    |    |
| 41  | -20  | -3                       | -20 |   | -24   | -1                       | -21 |   | -4    | 2                        | -1 |   |       |   |    |    |
| 40  | -22  | 1                        | -16 |   | -22   | 5                        | -16 |   | 0     | 4                        | 0  |   |       |   |    |    |
| 39  | -22  | 3                        | -13 |   | -24   | 2                        | -10 |   | -2    | -1                       | 3  |   |       |   |    |    |
| 38  | -25  | 3                        | -13 |   | -24   | 1                        | -12 |   | 1     | -2                       | 1  |   |       |   |    |    |
| 37  | -29  | 1                        | -16 |   | -29   | -1                       | -17 |   | 0     | -2                       | -1 |   |       |   |    |    |
| 36  | -32  | 0                        | -19 |   | -31   | -4                       | -21 |   | 1     | -4                       | -2 |   |       |   |    |    |
| 35  | -32  | -1                       | -19 |   | -33   | -2                       | -24 |   | -1    | -1                       | -5 |   |       |   |    |    |
| 34  | -34  | -2                       | -17 |   | -33   | -2                       | -18 |   | 1     | 0                        | -1 |   |       |   |    |    |
| 33  | -39  | -2                       | -14 |   | -37   | -6                       | -11 |   | 2     | -4                       | 3  |   |       |   |    |    |
| 32  | -42  | -2                       | -12 |   | -40   | 1                        | -15 |   | 2     | 3                        | -3 |   |       |   |    |    |
| 31  | -42  | 0                        | -13 |   | -40   | -1                       | -9  |   | 2     | -1                       | 4  |   |       |   |    |    |
| 30  | -43  | 0                        | -13 |   | -44   | 3                        | -16 |   | -1    | 3                        | -3 |   |       |   |    |    |
| 29  | -44  | 1                        | -13 |   | -44   | 1                        | -17 |   | 0     | 0                        | -4 |   |       |   |    |    |
| 28  | -45  | 0                        | -13 |   | -44   | 0                        | -12 |   | 1     | 0                        | 1  |   |       |   |    |    |
| 27  | -48  | 1                        | -12 |   | -46   | 0                        | -9  |   | 2     | -1                       | 3  |   |       |   |    |    |
| 26  | -49  | 2                        | -12 |   | -48   | -7                       | -15 |   | 1     | -9                       | -3 |   |       |   |    |    |
| 25  | -50  | 1                        | -12 |   | -50   | 6                        | -11 |   | 0     | 5                        | 1  |   |       |   |    |    |
| 24  | 999  | 999                      | 999 |   | -52   | -2                       | -7  |   |       |                          |    |   |       |   |    |    |
| 23  | 999  | 999                      | 999 |   | -52   | -1                       | -5  |   |       |                          |    |   |       |   |    |    |
| 22  | 999  | 999                      | 999 |   | -53   | 1                        | -2  |   |       |                          |    |   |       |   |    |    |
| 21  | 999  | 999                      | 999 |   | -54   | 2                        | -3  |   |       |                          |    |   |       |   |    |    |
| 20  | 999  | 999                      | 999 |   | -58   | -1                       | -2  |   |       |                          |    |   |       |   |    |    |

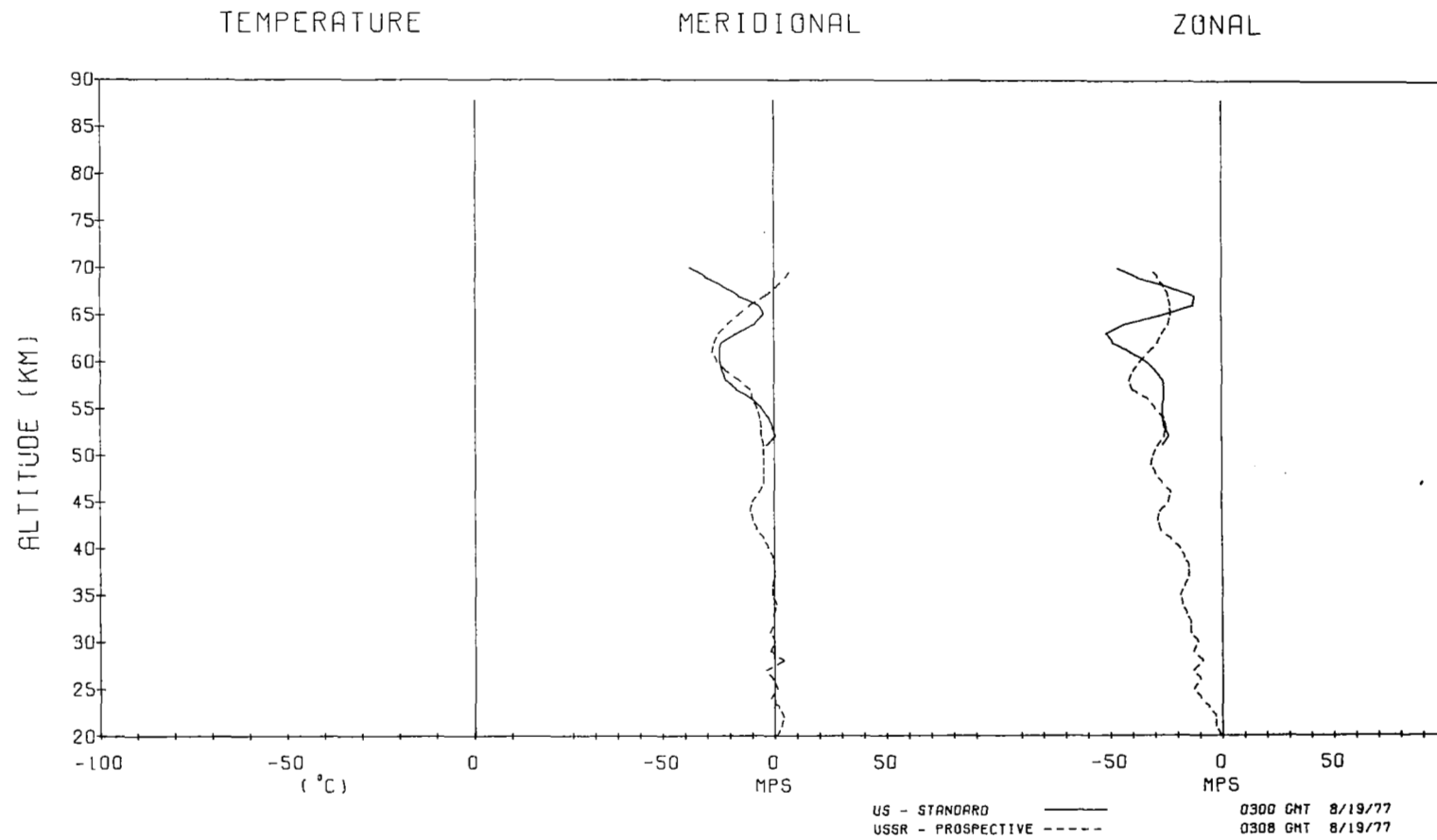
115



| US - STANDARD<br>AUG 19 1977<br>0300 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>0308 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |    |  |  |
|--|---------------|--------------------------|-----|---|--------------------------|-----|---------------|--------------------------|----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |  |  |
|  |               | NS                       | EW  |   | NS                       | EW  |               | NS                       | EW |  |  |
|  |               | M                        | S   |   | M                        | S   |               | M                        | S  |  |  |
| 70                                       | 999           | -38                      | -47 | 999   | 8                        | -32 | 46            | 15                       |    |  |  |
| 69                                       | 999           | -31                      | -38 | 999   | 5                        | -29 | 36            | 9                        |    |  |  |
| 68                                       | 999           | -23                      | -24 | 999   | 1                        | -26 | 24            | -2                       |    |  |  |
| 67                                       | 999           | -16                      | -12 | 999   | -4                       | -24 | 12            | -12                      |    |  |  |
| 66                                       | 999           | -7                       | -13 | 999   | -11                      | -23 | -4            | -10                      |    |  |  |
| 65                                       | 999           | -5                       | -27 | 999   | -16                      | -23 | -11           | 4                        |    |  |  |
| 64                                       | 999           | -9                       | -44 | 999   | -21                      | -24 | -12           | 20                       |    |  |  |
| 63                                       | 999           | -17                      | -52 | 999   | -25                      | -27 | -8            | 25                       |    |  |  |
| 62                                       | 999           | -24                      | -49 | 999   | -27                      | -29 | -3            | 20                       |    |  |  |
| 61                                       | 999           | -25                      | -41 | 999   | -28                      | -33 | -3            | 8                        |    |  |  |
| 60                                       | 999           | -25                      | -34 | 999   | -26                      | -37 | -1            | -3                       |    |  |  |
| 59                                       | 999           | -24                      | -30 | 999   | -22                      | -40 | 2             | 10                       |    |  |  |
| 58                                       | 999           | -22                      | -27 | 999   | -16                      | -42 | 6             | -15                      |    |  |  |
| 57                                       | 999           | -17                      | -26 | 999   | -11                      | -40 | 6             | -14                      |    |  |  |
| 56                                       | 999           | -10                      | -26 | 999   | -10                      | -33 | 0             | -7                       |    |  |  |
| 55                                       | 999           | -6                       | -27 | 999   | -8                       | -30 | -2            | -3                       |    |  |  |
| 54                                       | 999           | -3                       | -27 | 999   | -7                       | -26 | -4            | 1                        |    |  |  |
| 53                                       | 999           | -1                       | -26 | 999   | -6                       | -25 | -5            | 1                        |    |  |  |
| 52                                       | 999           | 0                        | -24 | 999   | -6                       | -26 | -6            | -2                       |    |  |  |
| 51                                       | 999           | -4                       | -27 | 999   | -5                       | -29 | -1            | -2                       |    |  |  |
| 50                                       | 999           | 999                      | 999 | 999   | -5                       | -31 |               |                          |    |  |  |
| 49                                       | 999           | 999                      | 999 | 999   | -5                       | -32 |               |                          |    |  |  |
| 48                                       | 999           | 999                      | 999 | 999   | -5                       | -30 |               |                          |    |  |  |
| 47                                       | 999           | 999                      | 999 | 999   | -5                       | -27 |               |                          |    |  |  |
| 46                                       | 999           | 999                      | 999 | 999   | -7                       | -23 |               |                          |    |  |  |
| 45                                       | 999           | 999                      | 999 | 999   | -10                      | -24 |               |                          |    |  |  |
| 44                                       | 999           | 999                      | 999 | 999   | -11                      | -28 |               |                          |    |  |  |
| 43                                       | 999           | 999                      | 999 | 999   | -10                      | -29 |               |                          |    |  |  |
| 42                                       | 999           | 999                      | 999 | 999   | -8                       | -28 |               |                          |    |  |  |
| 41                                       | 999           | 999                      | 999 | 999   | -5                       | -23 |               |                          |    |  |  |
| 40                                       | 999           | 999                      | 999 | 999   | -3                       | -19 |               |                          |    |  |  |
| 39                                       | 999           | 999                      | 999 | 999   | -1                       | -17 |               |                          |    |  |  |
| 38                                       | 999           | 999                      | 999 | 999   | 0                        | -15 |               |                          |    |  |  |
| 37                                       | 999           | 999                      | 999 | 999   | 0                        | -15 |               |                          |    |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|---|----|---------------|--------------------------|---|----|
|           |               | NS                       | M   | EW  |               | NS                       | M | EW |               | NS                       | M | EW |
|           |               | S                        | S   | S   |               | S                        | S | S  |               | S                        | S | S  |
| 36        | 999           | 999                      | 999 | 999 | -1            | -17                      |   |    |               |                          |   |    |
| 35        | 999           | 999                      | 999 | 999 | -1            | -19                      |   |    |               |                          |   |    |
| 34        | 999           | 999                      | 999 | 999 | 1             | -18                      |   |    |               |                          |   |    |
| 33        | 999           | 999                      | 999 | 999 | 0             | -16                      |   |    |               |                          |   |    |
| 32        | 999           | 999                      | 999 | 999 | 0             | -14                      |   |    |               |                          |   |    |
| 31        | 999           | 999                      | 999 | 999 | -2            | -14                      |   |    |               |                          |   |    |
| 30        | 999           | 999                      | 999 | 999 | 0             | -11                      |   |    |               |                          |   |    |
| 29        | 999           | 999                      | 999 | 999 | -2            | -13                      |   |    |               |                          |   |    |
| 28        | 999           | 999                      | 999 | 999 | 4             | -4                       |   |    |               |                          |   |    |
| 27        | 999           | 999                      | 999 | 999 | -4            | -13                      |   |    |               |                          |   |    |
| 26        | 999           | 999                      | 999 | 999 | -1            | -10                      |   |    |               |                          |   |    |
| 25        | 999           | 999                      | 999 | 999 | 1             | -13                      |   |    |               |                          |   |    |
| 24        | 999           | 999                      | 999 | 999 | -2            | -10                      |   |    |               |                          |   |    |
| 23        | 999           | 999                      | 999 | 999 | 2             | -6                       |   |    |               |                          |   |    |
| 22        | 999           | 999                      | 999 | 999 | 4             | -3                       |   |    |               |                          |   |    |
| 21        | 999           | 999                      | 999 | 999 | 3             | -3                       |   |    |               |                          |   |    |
| 20        | 999           | 999                      | 999 | 999 | 1             | -1                       |   |    |               |                          |   |    |

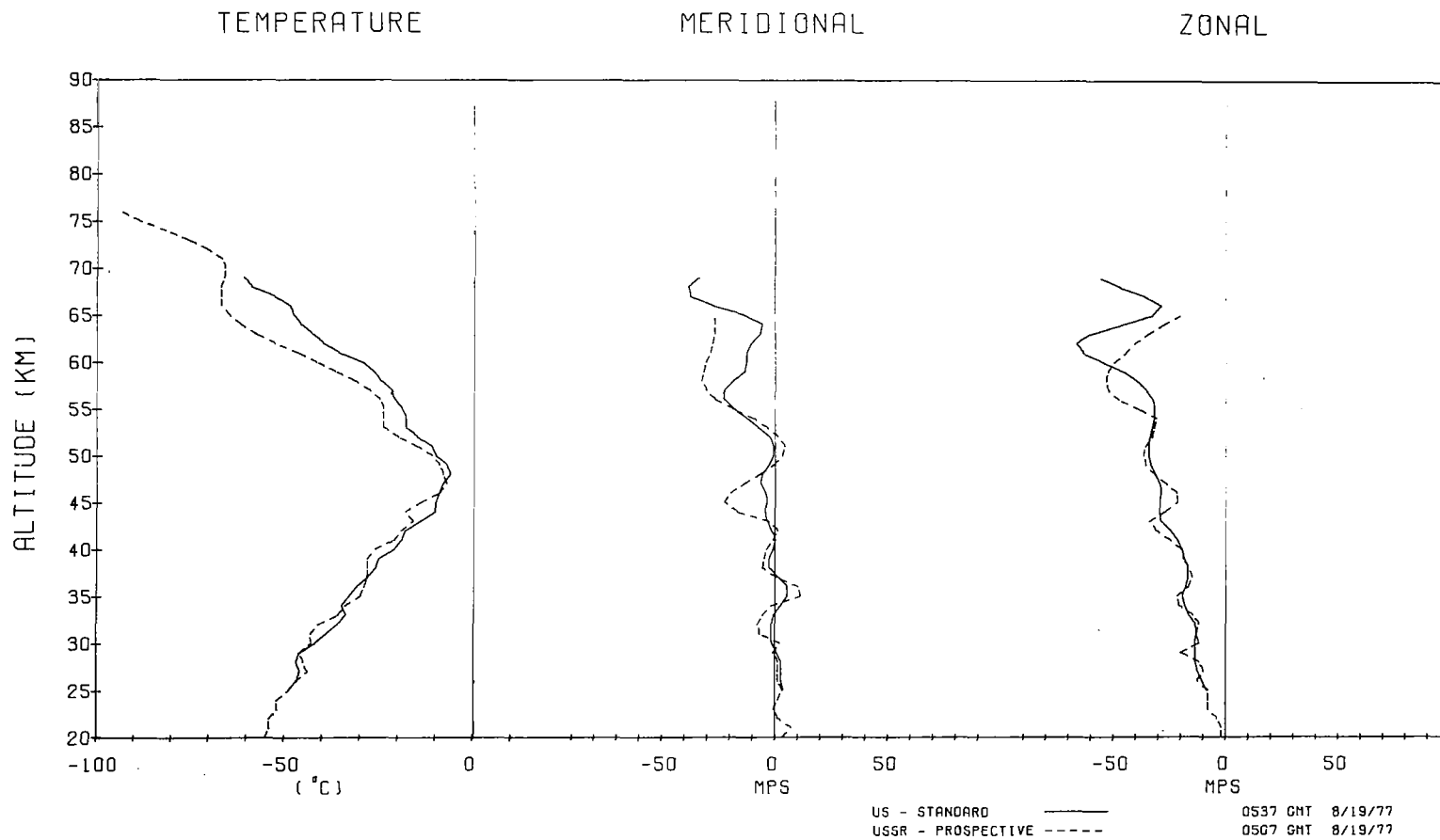
117



| ALT<br>K.M | US - STANDARD<br>AUG 19 1977<br>0537 GMT |                          |     |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>0507 GMT |                          |     |     | DIFFERENCES<br>USSR-US   |             |   |    |  |  |
|------------|--|--------------------------|-----|-----|---|--------------------------|-----|-----|--------------------------|-------------|---|----|--|--|
|            | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     |     | COMPONENT<br>WINDS<br>-1 |             |   |    |  |  |
|            |  | M                        | S   | EW  |   | M                        | S   | EW  | TLMP<br>DEG C            | WINDS<br>-1 |   |    |  |  |
|            |  |                          |     |     |   |                          |     |     |                          | NS          | S | EW |  |  |
| 76         | 999                                      | 999                      | 999 | 999 | -94   | 999                      | 999 |     |                          |             |   |    |  |  |
| 75         | 999                                      | 999                      | 999 | 999 | -89   | 999                      | 999 |     |                          |             |   |    |  |  |
| 74         | 999                                      | 999                      | 999 | 999 | -82   | 999                      | 999 |     |                          |             |   |    |  |  |
| 73         | 999                                      | 999                      | 999 | 999 | -76   | 999                      | 999 |     |                          |             |   |    |  |  |
| 72         | 999                                      | 999                      | 999 | 999 | -71   | 999                      | 999 |     |                          |             |   |    |  |  |
| 71         | 999                                      | 999                      | 999 | 999 | -67   | 999                      | 999 |     |                          |             |   |    |  |  |
| 70         | 999                                      | 999                      | 999 | 999 | -66   | 999                      | 999 |     |                          |             |   |    |  |  |
| 69         | -61                                      | -34                      | -56 | -56 | -66   | 999                      | 999 | -5  |                          |             |   |    |  |  |
| 68         | -59                                      | -39                      | -47 | -47 | -67   | 999                      | 999 | -8  |                          |             |   |    |  |  |
| 67         | -53                                      | -38                      | -36 | -36 | -67   | 999                      | 999 | -14 |                          |             |   |    |  |  |
| 66         | -49                                      | -28                      | -29 | -29 | -67   | 999                      | 999 | -18 |                          |             |   |    |  |  |
| 65         | -48                                      | -14                      | -33 | -33 | -65   | -27                      | -20 | -17 | -13                      | 13          |   |    |  |  |
| 64         | -46                                      | -6                       | -47 | -47 | -62   | -27                      | -28 | -16 | -21                      | 19          |   |    |  |  |
| 63         | -43                                      | -7                       | -61 | -61 | -58   | -27                      | -35 | -15 | -20                      | 26          |   |    |  |  |
| 62         | -40                                      | -11                      | -67 | -67 | -53   | -28                      | -41 | -13 | -17                      | 26          |   |    |  |  |
| 61         | -36                                      | -13                      | -64 | -64 | -47   | -29                      | -45 | -11 | -16                      | 19          |   |    |  |  |
| 60         | -30                                      | -13                      | -55 | -55 | -42   | -31                      | -50 | -12 | -18                      | 5           |   |    |  |  |
| 59         | -27                                      | -14                      | -46 | -46 | -37   | -32                      | -53 | -10 | -18                      | -7          |   |    |  |  |
| 58         | -25                                      | -19                      | -40 | -40 | -32   | -33                      | -54 | -7  | -14                      | -14         |   |    |  |  |
| 57         | -22                                      | -23                      | -36 | -36 | -28   | -31                      | -53 | -6  | -8                       | -17         |   |    |  |  |
| 56         | -21                                      | -23                      | -33 | -33 | -25   | -27                      | -48 | -4  | -4                       | -15         |   |    |  |  |
| 55         | -19                                      | -19                      | -32 | -32 | -24   | -19                      | -39 | -5  | 0                        | -7          |   |    |  |  |
| 54         | -18                                      | -13                      | -32 | -32 | -24   | -10                      | -31 | -6  | 3                        | 1           |   |    |  |  |
| 53         | -18                                      | -8                       | -33 | -33 | -24   | -4                       | -32 | -6  | 4                        | 1           |   |    |  |  |
| 52         | -15                                      | -3                       | -34 | -34 | -20   | 1                        | -33 | -5  | 4                        | 1           |   |    |  |  |
| 51         | -11                                      | -1                       | -35 | -35 | -15   | 4                        | -36 | -4  | 5                        | -1          |   |    |  |  |
| 50         | -10                                      | -1                       | -35 | -35 | -11   | 3                        | -37 | -1  | 4                        | -2          |   |    |  |  |
| 49         | -7                                       | -3                       | -34 | -34 | -9  | -1                       | -36 | -2  | 2                        | -2          |   |    |  |  |
| 48         | -6                                       | -6                       | -32 | -32 | -6  | -7                       | -32 | -2  | -1                       | 0           |   |    |  |  |
| 47         | -8                                       | -7                       | -30 | -30 | -7  | -14                      | -27 | 1   | -7                       | 3           |   |    |  |  |
| 46         | -9                                       | -5                       | -29 | -29 | -9  | -20                      | -22 | 0   | -15                      | 7           |   |    |  |  |
| 45         | -10                                      | -4                       | -30 | -30 | -14   | -23                      | -22 | -4  | -19                      | 8           |   |    |  |  |
| 44         | -10                                      | -5                       | -30 | -30 | -18   | -17                      | -27 | -8  | -12                      | 3           |   |    |  |  |
| 43         | -14                                      | -4                       | -29 | -29 | -16   | -3                       | -34 | -2  | 1                        | -5          |   |    |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    |    |   |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|-----|-----|---------------|--------------------------|----|----|----|---|----|
|           |               | M                        | S   | EW  |               | M                        | S   | EW  |               | M                        | S  | EW |    |   |    |
|           |               |                          |     |     |               |                          |     |     |               |                          |    |    | NS | S | EW |
|           |               |                          |     |     |               |                          |     |     |               |                          |    |    |    |   |    |
| 42        | -18           | -2                       | -25 | -25 | -19           | 1                        | -31 | -31 | -1            | 3                        | -6 |    |    |   |    |
| 41        | -19           | 0                        | -22 | -22 | -21           | -1                       | -25 | -25 | -2            | -1                       | -3 |    |    |   |    |
| 40        | -21           | -1                       | -20 | -20 | -26           | -4                       | -20 | -20 | -5            | -3                       | 0  |    |    |   |    |
| 39        | -25           | -3                       | -19 | -19 | -28           | -5                       | -19 | -19 | -3            | -2                       | 0  |    |    |   |    |
| 38        | -26           | -3                       | -17 | -17 | -28           | -6                       | -17 | -17 | -2            | -3                       | 0  |    |    |   |    |
| 37        | -28           | 1                        | -17 | -17 | -28           | 0                        | -15 | -15 | 0             | -1                       | 2  |    |    |   |    |
| 36        | -31           | 5                        | -18 | -18 | -29           | 10                       | -17 | -17 | 2             | 5                        | 1  |    |    |   |    |
| 35        | -33           | 5                        | -20 | -20 | -30           | 11                       | -22 | -22 | 3             | 6                        | -2 |    |    |   |    |
| 34        | -35           | 2                        | -19 | -19 | -34           | -2                       | -21 | -21 | 1             | -4                       | -2 |    |    |   |    |
| 33        | -34           | -1                       | -17 | -17 | -36           | -6                       | -15 | -15 | -2            | -5                       | 2  |    |    |   |    |
| 32        | -36           | -2                       | -14 | -14 | -41           | -8                       | -12 | -12 | -5            | -6                       | 2  |    |    |   |    |
| 31        | -39           | -2                       | -13 | -13 | -43           | -7                       | -13 | -13 | -4            | -5                       | 0  |    |    |   |    |
| 30        | -42           | -2                       | -14 | -14 | -43           | 2                        | -12 | -12 | -1            | 4                        | 2  |    |    |   |    |
| 29        | -46           | 0                        | -14 | -14 | -46           | -1                       | -20 | -20 | 0             | -1                       | -6 |    |    |   |    |
| 28        | -47           | 2                        | -14 | -14 | -45           | 1                        | -12 | -12 | 2             | -1                       | 2  |    |    |   |    |
| 27        | -46           | 2                        | -13 | -13 | -44           | 1                        | -10 | -10 | 2             | -1                       | 3  |    |    |   |    |
| 26        | -47           | 2                        | -11 | -11 | -47           | 1                        | -13 | -13 | 0             | -1                       | -2 |    |    |   |    |
| 25        | -49           | 3                        | -9  | -9  | -49           | 3                        | -8  | -8  | 0             | 0                        | 1  |    |    |   |    |
| 24        | 999           | 999                      | 999 | 999 | -52           | 1                        | -8  | -8  |               |                          |    |    |    |   |    |
| 23        | 999           | 999                      | 999 | 999 | -52           | -1                       | -8  | -8  |               |                          |    |    |    |   |    |
| 22        | 999           | 999                      | 999 | 999 | -54           | 1                        | -4  | -4  |               |                          |    |    |    |   |    |
| 21        | 999           | 999                      | 999 | 999 | -54           | 7                        | -2  | -2  |               |                          |    |    |    |   |    |
| 20        | 999           | 999                      | 999 | 999 | -55           | 3                        | -2  | -2  |               |                          |    |    |    |   |    |

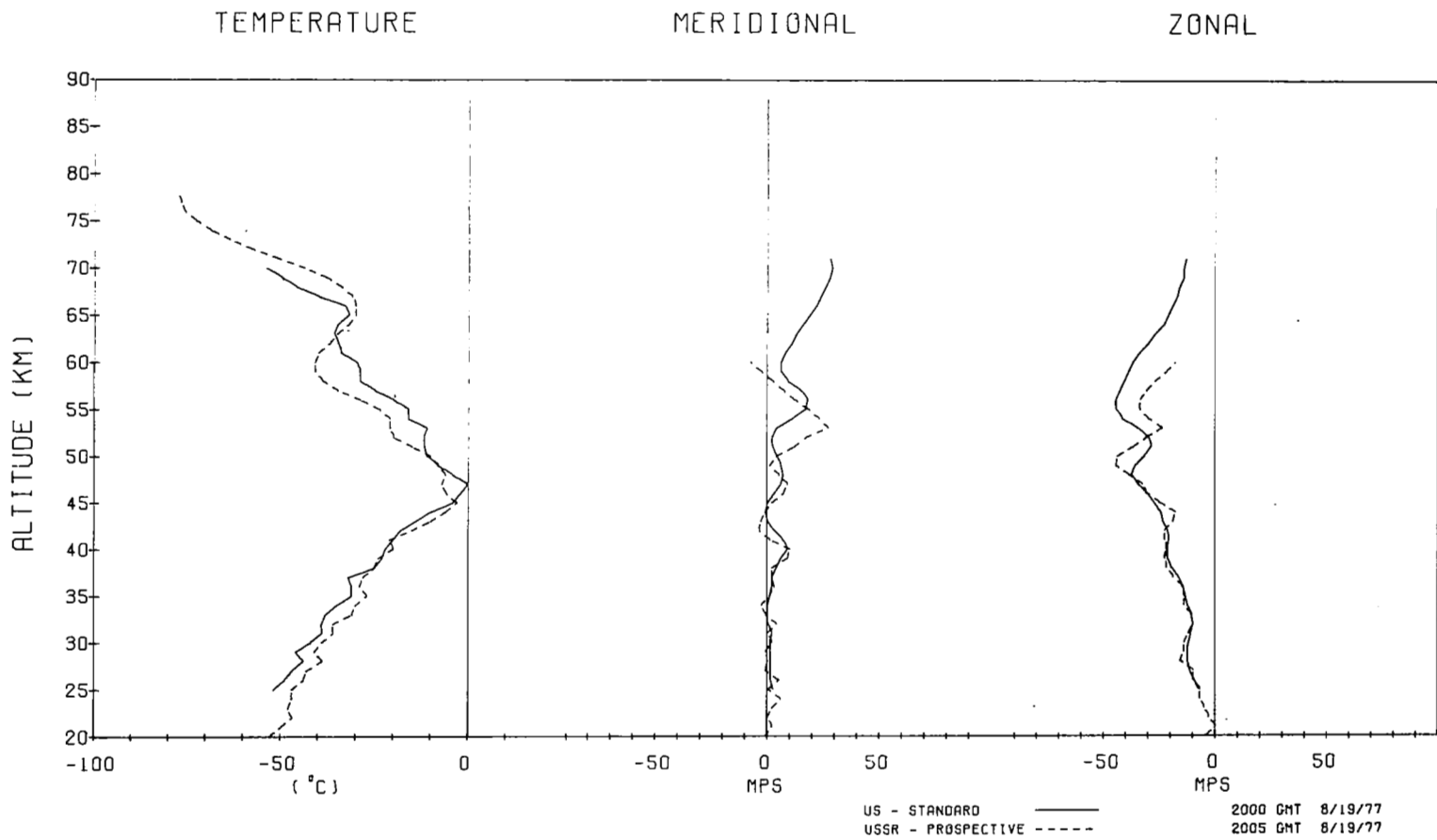
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| US - STANDARD<br>AUG 19 1977<br>2000 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>2005 GMT |                          |     |                          | DIFFERENCES<br>USSR-US |     |  |  |
|--|---------------|--------------------------|-----|---|--------------------------|-----|--------------------------|------------------------|-----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |                        |     |  |  |
|  |               | NS                       | EW  |   | NS                       | EW  | DLG C                    | M S                    | LW  |  |  |
| 78                                       | 999           | 999                      | 999 | -78   | 999                      | 999 |                          |                        |     |  |  |
| 77                                       | 999           | 999                      | 999 | -77   | 999                      | 999 |                          |                        |     |  |  |
| 76                                       | 999           | 999                      | 999 | -76   | 999                      | 999 |                          |                        |     |  |  |
| 75                                       | 999           | 999                      | 999 | -73   | 999                      | 999 |                          |                        |     |  |  |
| 74                                       | 999           | 999                      | 999 | -69   | 999                      | 999 |                          |                        |     |  |  |
| 73                                       | 999           | 999                      | 999 | -64   | 999                      | 999 |                          |                        |     |  |  |
| 72                                       | 999           | 999                      | 999 | -58   | 999                      | 999 |                          |                        |     |  |  |
| 71                                       | 999           | 28                       | -13 | -51   | 999                      | 999 |                          |                        |     |  |  |
| 70                                       | -54           | 29                       | -14 | -44   | 999                      | 999 | 10                       |                        |     |  |  |
| 69                                       | -50           | 28                       | -14 | -38   | 999                      | 999 | 12                       |                        |     |  |  |
| 68                                       | -46           | 26                       | -16 | -34   | 999                      | 999 | 12                       |                        |     |  |  |
| 67                                       | -40           | 24                       | -17 | -31   | 999                      | 999 | 9                        |                        |     |  |  |
| 66                                       | -33           | 22                       | -19 | -30   | 999                      | 999 | 3                        |                        |     |  |  |
| 65                                       | -32           | 19                       | -21 | -30   | 999                      | 999 | 2                        |                        |     |  |  |
| 64                                       | -35           | 16                       | -23 | -32   | 999                      | 999 | 3                        |                        |     |  |  |
| 63                                       | -36           | 13                       | -27 | -35   | 999                      | 999 | 1                        |                        |     |  |  |
| 62                                       | -35           | 11                       | -30 | -37   | 999                      | 999 | -2                       |                        |     |  |  |
| 61                                       | -34           | 8                        | -34 | -40   | 999                      | 999 | -6                       |                        |     |  |  |
| 60                                       | -30           | 6                        | -37 | -41   | -8                       | -18 | -11                      | -14                    | 19  |  |  |
| 59                                       | -29           | 6                        | -39 | -41   | -3                       | -22 | -12                      | -9                     | 17  |  |  |
| 58                                       | -29           | 9                        | -41 | -39   | 2                        | -27 | -10                      | -7                     | 14  |  |  |
| 57                                       | -25           | 15                       | -43 | -35   | 7                        | -31 | -10                      | -8                     | 12  |  |  |
| 56                                       | -20           | 18                       | -45 | -29   | 12                       | -34 | -9                       | -6                     | 11  |  |  |
| 55                                       | -16           | 17                       | -45 | -24   | 18                       | -34 | -8                       | 1                      | 11  |  |  |
| 54                                       | -16           | 11                       | -42 | -21   | 23                       | -30 | -5                       | 12                     | 12  |  |  |
| 53                                       | -11           | 4                        | -35 | -21   | 27                       | -24 | -10                      | 23                     | 11  |  |  |
| 52                                       | -12           | 2                        | -30 | -20   | 17                       | -31 | -8                       | 15                     | -1  |  |  |
| 51                                       | -12           | 2                        | -29 | -15   | 12                       | -37 | -3                       | 10                     | -8  |  |  |
| 50                                       | -11           | 4                        | -32 | -10   | 4                        | -44 | 1                        | 0                      | -12 |  |  |
| 49                                       | -8            | 6                        | -36 | -8  | 1                        | -45 | 0                        | -5                     | -9  |  |  |
| 48                                       | -4            | 7                        | -38 | -6  | 5                        | -39 | -2                       | -2                     | -1  |  |  |
| 47                                       | 0             | 6                        | -35 | -7  | 9                        | -33 | -7                       | 3                      | 2   |  |  |
| 46                                       | -2            | 3                        | -31 | -6  | 7                        | -31 | -4                       | 4                      | 0   |  |  |
| 45                                       | -4            | 0                        | -28 | -3  | 2                        | -25 | 1                        | 2                      | 3   |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |     |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|--------------------------|-----|----|
|           |               | NS                       | EW  |               | NS                       | EW  | DEG C                    | M S | EW |
| 44        | -10           | -1                       | -25 | -6            | -1                       | -18 | 4                        | 0   | 7  |
| 43        | -14           | 0                        | -24 | -10           | -3                       | -19 | 4                        | -3  | 5  |
| 42        | -18           | 3                        | -22 | -15           | -4                       | -23 | 3                        | -7  | -1 |
| 41        | -20           | 7                        | -21 | -21           | 1                        | -23 | -1                       | -6  | -2 |
| 40        | -22           | 9                        | -22 | -20           | 10                       | -22 | 2                        | 1   | 0  |
| 39        | -23           | 6                        | -22 | -24           | 9                        | -23 | -1                       | 3   | -1 |
| 38        | -25           | 4                        | -20 | -25           | 2                        | -22 | 0                        | -2  | -2 |
| 37        | -32           | 2                        | -17 | -28           | 2                        | -19 | 4                        | 0   | -2 |
| 36        | -31           | 2                        | -15 | -29           | 3                        | -15 | 2                        | 1   | 0  |
| 35        | -31           | 1                        | -14 | -27           | 1                        | -14 | 4                        | 0   | 0  |
| 34        | -35           | 0                        | -13 | -30           | -3                       | -14 | 5                        | -3  | -1 |
| 33        | -38           | 0                        | -11 | -31           | -1                       | -11 | 7                        | -1  | 0  |
| 32        | -39           | 0                        | -10 | -36           | 4                        | -10 | 3                        | 4   | 0  |
| 31        | -39           | 2                        | -11 | -36           | 0                        | -12 | 3                        | -2  | -1 |
| 30        | -42           | 1                        | -12 | -39           | 2                        | -14 | 3                        | 1   | -2 |
| 29        | -46           | 1                        | -13 | -41           | -1                       | -14 | 5                        | -2  | -1 |
| 28        | -44           | 1                        | -13 | -39           | 0                        | -16 | 5                        | -1  | -3 |
| 27        | -47           | 1                        | -12 | -43           | -1                       | -10 | 4                        | -2  | 2  |
| 26        | -49           | 1                        | -10 | -44           | 5                        | -10 | 5                        | 4   | 0  |
| 25        | -52           | 2                        | -8  | -47           | 0                        | -7  | 5                        | -2  | 1  |
| 24        | 999           | 999                      | 999 | -47           | 6                        | -7  |                          |     |    |
| 23        | 999           | 999                      | 999 | -48           | 2                        | -5  |                          |     |    |
| 22        | 999           | 999                      | 999 | -47           | 0                        | -3  |                          |     |    |
| 21        | 999           | 999                      | 999 | -50           | 2                        | 0   |                          |     |    |
| 20        | 999           | 999                      | 999 | -53           | -1                       | -4  |                          |     |    |

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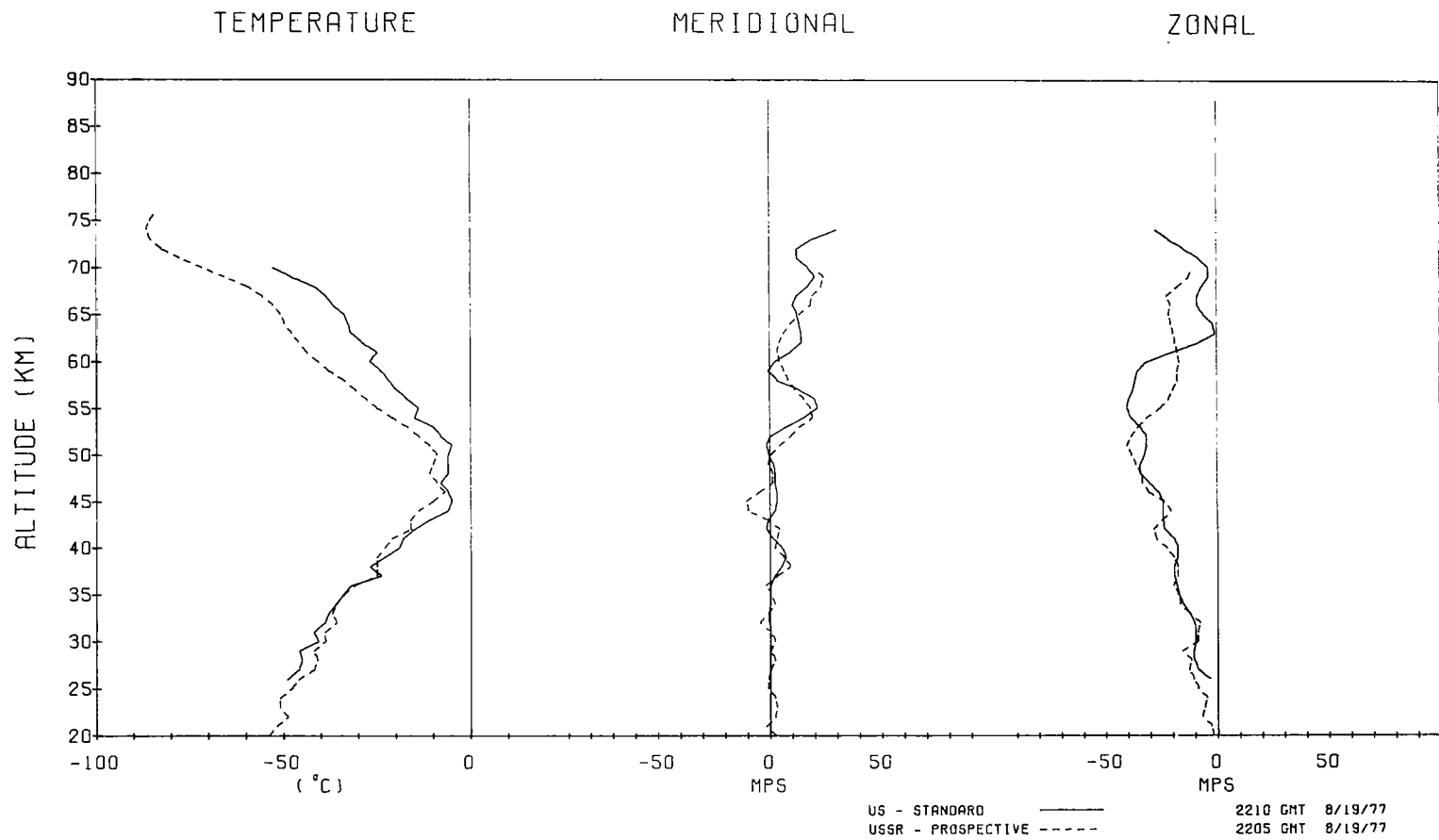




| ALT<br>KM | US - STANDARD<br>AUG 19 1977<br>2210 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>2205 GMT |                          |     | DIFFERENCES<br>USSR-US |                          |     |
|-----------|--|--------------------------|-----|---|--------------------------|-----|------------------------|--------------------------|-----|
|           | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |
|           |  | M S                      |     |   | M S                      |     |                        | M S                      |     |
|           |  | NS                       | EW  |   | NS                       | EW  |                        | NS                       | EW  |
| 76        | 999                                      | 999                      | 999 | -84   | 999                      | 999 |                        |                          |     |
| 75        | 999                                      | 999                      | 999 | -86   | 999                      | 999 |                        |                          |     |
| 74        | 999                                      | 30                       | -28 | -87   | 999                      | 999 |                        |                          |     |
| 73        | 999                                      | 19                       | -22 | -86   | 999                      | 999 |                        |                          |     |
| 72        | 999                                      | 12                       | -15 | -83   | 999                      | 999 |                        |                          |     |
| 71        | 999                                      | 12                       | -8  | -78   | 999                      | 999 |                        |                          |     |
| 70        | -53                                      | 17                       | -4  | -72   | 20                       | -11 | -19                    | 3                        | -7  |
| 69        | -48                                      | 20                       | -4  | -66   | 24                       | -13 | -18                    | 4                        | -9  |
| 68        | -42                                      | 17                       | -7  | -60   | 23                       | -18 | -18                    | 6                        | -11 |
| 67        | -39                                      | 12                       | -9  | -56   | 19                       | -23 | -17                    | 7                        | -14 |
| 66        | -37                                      | 10                       | -9  | -53   | 18                       | -21 | -16                    | 8                        | -12 |
| 65        | -34                                      | 12                       | -6  | -51   | 13                       | -22 | -17                    | 1                        | -16 |
| 64        | -33                                      | 13                       | -2  | -50   | 4                        | -21 | -17                    | -4                       | -19 |
| 63        | -32                                      | 14                       | -1  | -48   | 6                        | -20 | -16                    | -8                       | -19 |
| 62        | -29                                      | 14                       | -9  | -46   | 4                        | -19 | -17                    | -10                      | -10 |
| 61        | -25                                      | 9                        | -21 | -44   | 3                        | -18 | -19                    | -6                       | 3   |
| 60        | -27                                      | 2                        | -32 | -41   | 4                        | -17 | -14                    | 2                        | 15  |
| 59        | -24                                      | -1                       | -36 | -38   | 6                        | -18 | -14                    | 7                        | 18  |
| 58        | -22                                      | 3                        | -37 | -34   | 8                        | -18 | -12                    | 5                        | 19  |
| 57        | -20                                      | 13                       | -38 | -31   | 11                       | -20 | -11                    | -2                       | 18  |
| 56        | -17                                      | 20                       | -40 | -28   | 15                       | -22 | -11                    | -5                       | 18  |
| 55        | -14                                      | 21                       | -41 | -25   | 18                       | -26 | -11                    | -3                       | 15  |
| 54        | -15                                      | 15                       | -39 | -21   | 19                       | -32 | -6                     | 4                        | 7   |
| 53        | -10                                      | 7                        | -35 | -17   | 13                       | -36 | -7                     | 6                        | -1  |
| 52        | -8                                       | 0                        | -32 | -14   | 9                        | -39 | -6                     | 9                        | -7  |
| 51        | -5                                       | -2                       | -32 | -11   | 4                        | -41 | -6                     | 6                        | -9  |
| 50        | -6                                       | -1                       | -33 | -9  | 0                        | -39 | -3                     | 1                        | -6  |
| 49        | -6                                       | 1                        | -35 | -10   | -1                       | -37 | -4                     | -2                       | -2  |
| 48        | -6                                       | 2                        | -35 | -11   | 1                        | -35 | -5                     | -1                       | 0   |
| 47        | -8                                       | 2                        | -31 | -9  | 1                        | -34 | -1                     | -1                       | -3  |
| 46        | -6                                       | 3                        | -27 | -7  | -5                       | -31 | -1                     | -8                       | -4  |
| 45        | -5                                       | 3                        | -25 | -10   | -11                      | -24 | -5                     | -14                      | 1   |
| 44        | -6                                       | 2                        | -25 | -14   | -10                      | -21 | -8                     | -12                      | 4   |
| 43        | -11                                      | -1                       | -25 | -16   | -1                       | -25 | -5                     | 0                        | 0   |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | M S                      |     |               | M S                      |     |               | M S                      |    |
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
|           |               | 42                       | -15 |               | -2                       | -24 |               | -16                      | 4  |
| 41        | -18           | 1                        | -20 | -21           | 3                        | -28 | -3            | 2                        | -8 |
| 40        | -19           | 5                        | -18 | -23           | 2                        | -23 | -4            | -3                       | -5 |
| 39        | -23           | 7                        | -18 | -25           | 6                        | -20 | -2            | -1                       | -2 |
| 38        | -27           | 5                        | -20 | -25           | 9                        | -18 | 2             | 4                        | 2  |
| 37        | -24           | 2                        | -20 | -25           | 3                        | -18 | -1            | 1                        | 2  |
| 36        | -32           | 0                        | -19 | -31           | -2                       | -20 | 1             | -2                       | -1 |
| 35        | -34           | 0                        | -18 | -34           | 0                        | -18 | 0             | 0                        | 0  |
| 34        | -36           | 0                        | -16 | -36           | 2                        | -17 | 0             | 2                        | -1 |
| 33        | -38           | -1                       | -13 | -37           | -1                       | -13 | 1             | 0                        | 0  |
| 32        | -39           | -1                       | -11 | -36           | -5                       | -8  | 3             | -4                       | 3  |
| 31        | -42           | 0                        | -10 | -39           | 0                        | -9  | 3             | 0                        | 1  |
| 30        | -41           | 0                        | -10 | -39           | 2                        | -9  | 2             | 2                        | 1  |
| 29        | -46           | 0                        | -11 | -42           | 0                        | -16 | 4             | 0                        | -5 |
| 28        | -45           | 0                        | -11 | -41           | 2                        | -12 | 4             | 2                        | -1 |
| 27        | -46           | 0                        | -9  | -42           | 0                        | -13 | 4             | 0                        | -4 |
| 26        | -49           | -1                       | -4  | -46           | -1                       | -11 | 3             | 0                        | -7 |
| 25        | 999           | 999                      | 999 | -48           | -1                       | -9  |               |                          |    |
| 24        | 999           | 999                      | 999 | -51           | 2                        | -5  |               |                          |    |
| 23        | 999           | 999                      | 999 | -51           | 3                        | -6  |               |                          |    |
| 22        | 999           | 999                      | 999 | -49           | 2                        | -7  |               |                          |    |
| 21        | 999           | 999                      | 999 | -52           | -2                       | -3  |               |                          |    |
| 20        | 999           | 999                      | 999 | -54           | 2                        | -2  |               |                          |    |

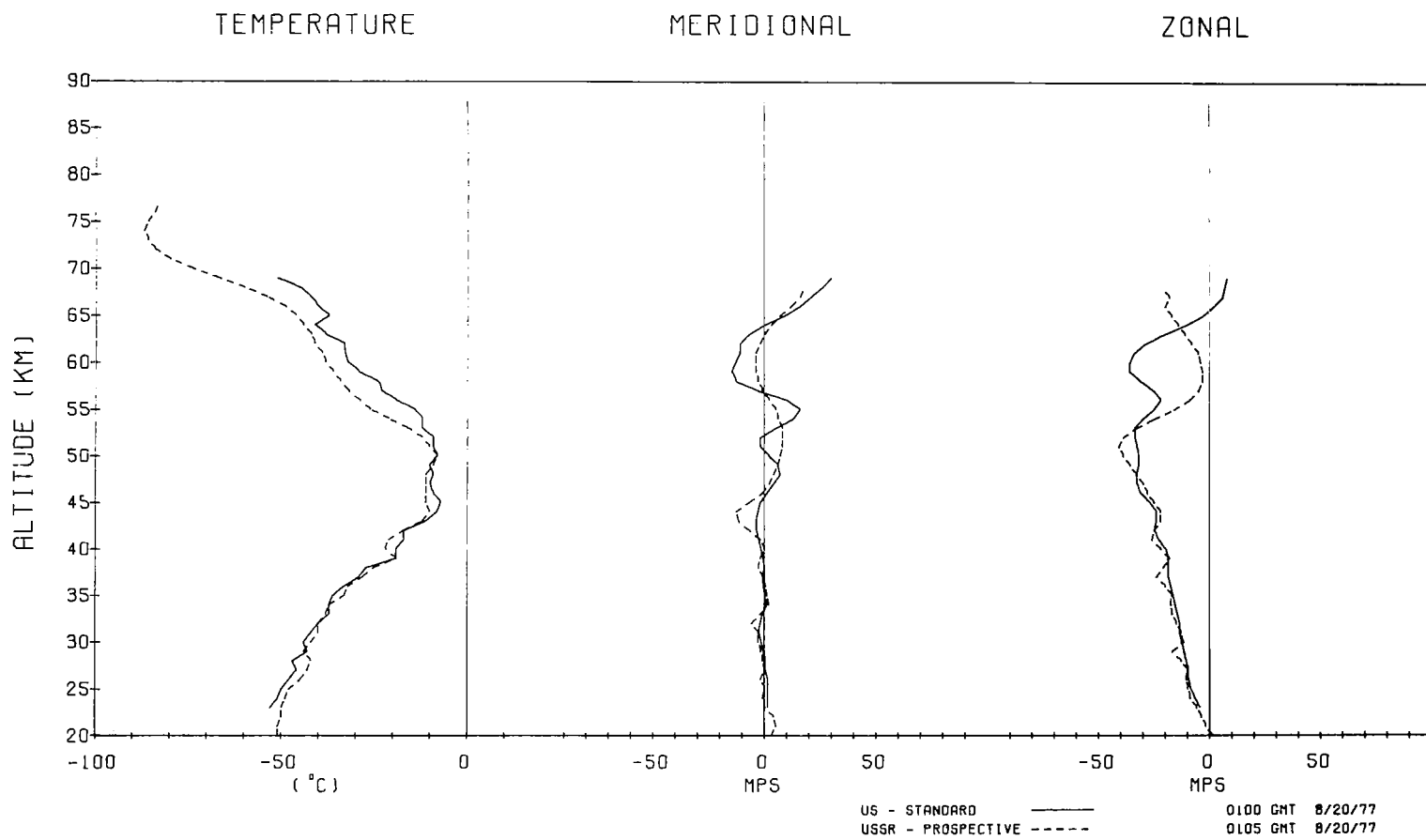
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| US - STANDARD<br>AUG 20 1977<br>0100 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 20 1977<br>0105 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |     |  |  |
|--|---------------|--------------------------|-----|---|--------------------------|-----|---------------|--------------------------|-----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  |  |
|  |               | NS                       | EW  |   | NS                       | EW  |               | NS                       | EW  |  |  |
| 77                                       | 999           | 999                      | 999 | -83   | 999                      | 999 |               |                          |     |  |  |
| 76                                       | 999           | 999                      | 999 | -84   | 999                      | 999 |               |                          |     |  |  |
| 75                                       | 999           | 999                      | 999 | -86   | 999                      | 999 |               |                          |     |  |  |
| 74                                       | 999           | 999                      | 999 | -87   | 999                      | 999 |               |                          |     |  |  |
| 73                                       | 999           | 999                      | 999 | -86   | 999                      | 999 |               |                          |     |  |  |
| 72                                       | 999           | 999                      | 999 | -84   | 999                      | 999 |               |                          |     |  |  |
| 71                                       | 999           | 999                      | 999 | -80   | 999                      | 999 |               |                          |     |  |  |
| 70                                       | 999           | 999                      | 999 | -74   | 999                      | 999 |               |                          |     |  |  |
| 69                                       | -51           | 30                       | 8   | -67   | 999                      | 999 | -16           |                          |     |  |  |
| 68                                       | -45           | 26                       | 7   | -60   | 18                       | -21 | -15           | -8                       | -28 |  |  |
| 67                                       | -42           | 21                       | 6   | -54   | 16                       | -18 | -12           | -5                       | -24 |  |  |
| 66                                       | -40           | 16                       | 2   | -49   | 12                       | -20 | -9            | -4                       | -22 |  |  |
| 65                                       | -37           | 9                        | -3  | -46   | 7                        | -17 | -9            | -2                       | -14 |  |  |
| 64                                       | -41           | 0                        | -11 | -44   | 3                        | -14 | -3            | 3                        | -3  |  |  |
| 63                                       | -38           | -7                       | -21 | -42   | 0                        | -11 | -4            | 7                        | 10  |  |  |
| 62                                       | -33           | -11                      | -29 | -41   | -2                       | -8  | -8            | 9                        | 21  |  |  |
| 61                                       | -33           | -11                      | -34 | -39   | -4                       | -5  | -6            | 7                        | 29  |  |  |
| 60                                       | -32           | -13                      | -36 | -38   | -4                       | -4  | -6            | 9                        | 32  |  |  |
| 59                                       | -29           | -15                      | -36 | -36   | -4                       | -3  | -7            | 11                       | 33  |  |  |
| 58                                       | -24           | -13                      | -31 | -34   | -3                       | -3  | -10           | 10                       | 28  |  |  |
| 57                                       | -23           | -3                       | -25 | -32   | -1                       | -5  | -9            | 2                        | 20  |  |  |
| 56                                       | -19           | 10                       | -22 | -29   | 2                        | -9  | -10           | -8                       | 13  |  |  |
| 55                                       | -14           | 16                       | -25 | -26   | 5                        | -16 | -12           | -11                      | 9   |  |  |
| 54                                       | -12           | 13                       | -30 | -21   | 6                        | -25 | -9            | -7                       | 5   |  |  |
| 53                                       | -12           | 5                        | -34 | -16   | 8                        | -33 | -4            | 3                        | 1   |  |  |
| 52                                       | -9            | -2                       | -34 | -12   | 8                        | -39 | -3            | 10                       | -5  |  |  |
| 51                                       | -9            | -2                       | -33 | -10   | 8                        | -41 | -1            | 10                       | -8  |  |  |
| 50                                       | -8            | 2                        | -32 | -8  | 7                        | -39 | 0             | 5                        | -7  |  |  |
| 49                                       | -10           | 6                        | -32 | -9  | 6                        | -36 | 1             | 0                        | -4  |  |  |
| 48                                       | -9            | 7                        | -33 | -11   | 4                        | -33 | -2            | -3                       | 0   |  |  |
| 47                                       | -10           | 4                        | -33 | -11   | 2                        | -30 | -1            | -2                       | 3   |  |  |
| 46                                       | -9            | 1                        | -31 | -11   | -1                       | -28 | -2            | -2                       | 3   |  |  |
| 45                                       | -7            | -2                       | -27 | -11   | -7                       | -25 | -4            | -5                       | 2   |  |  |
| 44                                       | -8            | -3                       | -24 | -10   | -13                      | -22 | -2            | -10                      | 2   |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 43        | -11           | -4                       | -24 | -12           | -12                      | -22 | -1            | -8                       | 2  |
| 42        | -17           | -4                       | -25 | -17           | -7                       | -25 | 0             | -3                       | 0  |
| 41        | -17           | -3                       | -23 | -21           | -2                       | -26 | -4            | 1                        | -3 |
| 40        | -19           | -2                       | -20 | -22           | 0                        | -22 | -3            | 2                        | -2 |
| 39        | -19           | -1                       | -19 | -19           | -2                       | -18 | 0             | -1                       | 1  |
| 38        | -27           | 0                        | -19 | -25           | -3                       | -21 | 2             | -3                       | -2 |
| 37        | -29           | -1                       | -19 | -28           | -1                       | -24 | 1             | 0                        | -5 |
| 36        | -33           | -1                       | -18 | -32           | 0                        | -20 | 1             | 1                        | -2 |
| 35        | -36           | 0                        | -17 | -33           | 1                        | -17 | 3             | 1                        | 0  |
| 34        | -37           | 1                        | -16 | -37           | 2                        | -18 | 0             | 1                        | -2 |
| 33        | -37           | -1                       | -15 | -38           | -2                       | -17 | -1            | -1                       | -2 |
| 32        | -40           | -2                       | -14 | -40           | -6                       | -15 | 0             | -4                       | -1 |
| 31        | -42           | -3                       | -14 | -40           | -3                       | -13 | 2             | 0                        | 1  |
| 30        | -44           | -2                       | -13 | -42           | -3                       | -12 | 2             | -1                       | 1  |
| 29        | -43           | -1                       | -12 | -44           | -2                       | -17 | -1            | -1                       | -5 |
| 28        | -47           | 0                        | -11 | -42           | -1                       | -13 | 5             | -1                       | -2 |
| 27        | -46           | 0                        | -10 | -43           | 0                        | -10 | 3             | 0                        | 0  |
| 26        | -48           | 1                        | -10 | -45           | -2                       | -11 | 3             | -3                       | -1 |
| 25        | -50           | 1                        | -9  | -48           | 0                        | -10 | 2             | -1                       | -1 |
| 24        | -51           | 1                        | -7  | -49           | -1                       | -9  | 2             | -2                       | -2 |
| 23        | -53           | 1                        | -5  | -50           | 0                        | -6  | 3             | -1                       | -1 |
| 22        | 999           | 999                      | 999 | -50           | 4                        | -4  |               |                          |    |
| 21        | 999           | 999                      | 999 | -51           | 5                        | -2  |               |                          |    |
| 20        | 999           | 999                      | 999 | -51           | 3                        | 1   |               |                          |    |

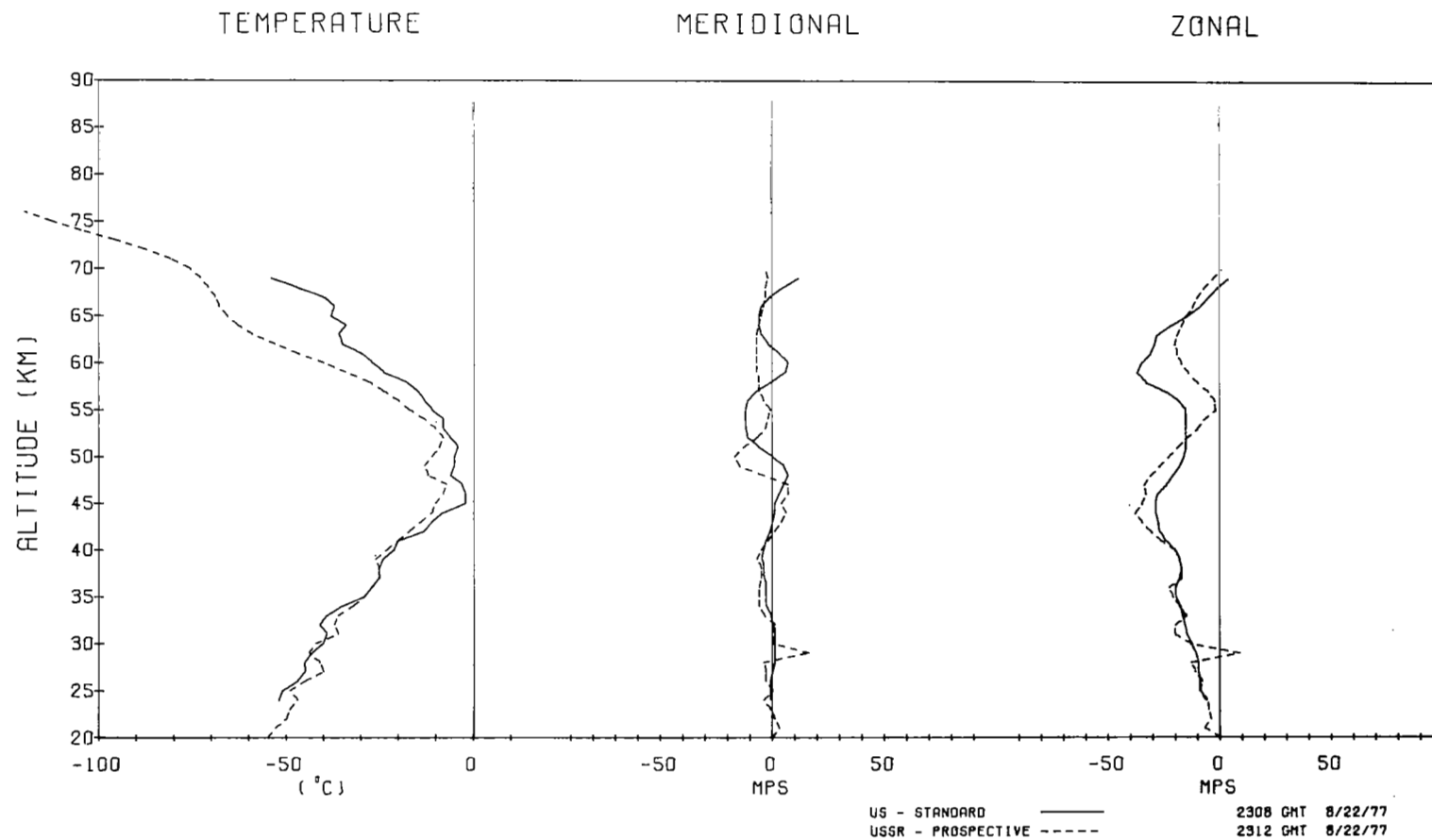
125



| US - STANDARD<br>AUG 22 1977<br>2308 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 22 1977<br>2312 GMT |               |                          |     | DIFFERENCES<br>USSR-US |                          |     |   |    |  |
|--|---------------|--------------------------|-----|---|---------------|--------------------------|-----|------------------------|--------------------------|-----|---|----|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |   | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |                        | COMPONENT<br>WINDS<br>-1 |     |   |    |  |
|  |               | NS                       | S   | EW  |               | NS                       | S   | EW                     | DEG C                    | M   | S | EW |  |
| 76                                       | 999           | 999                      | 999 | 999   | -120          | 999                      | 999 |                        |                          |     |   |    |  |
| 75                                       | 999           | 999                      | 999 | 999   | -113          | 999                      | 999 |                        |                          |     |   |    |  |
| 74                                       | 999           | 999                      | 999 | 999   | -105          | 999                      | 999 |                        |                          |     |   |    |  |
| 73                                       | 999           | 999                      | 999 | 999   | -96           | 999                      | 999 |                        |                          |     |   |    |  |
| 72                                       | 999           | 999                      | 999 | 999   | -88           | 999                      | 999 |                        |                          |     |   |    |  |
| 71                                       | 999           | 999                      | 999 | 999   | -81           | 999                      | 999 |                        |                          |     |   |    |  |
| 70                                       | 999           | 999                      | 999 | 999   | -76           | -3                       | 1   |                        |                          |     |   |    |  |
| 69                                       | -54           | 12                       | 4   |   | -73           | -2                       | -3  | -19                    | -14                      | -7  |   |    |  |
| 68                                       | -47           | 5                        | -1  |   | -71           | -3                       | -7  | -24                    | -8                       | -6  |   |    |  |
| 67                                       | -40           | -1                       | -5  |   | -69           | -3                       | -10 | -29                    | -2                       | -5  |   |    |  |
| 66                                       | -37           | -5                       | -9  |   | -68           | -4                       | -12 | -31                    | 1                        | -3  |   |    |  |
| 65                                       | -38           | -6                       | -15 |   | -66           | -5                       | -15 | -28                    | 1                        | 0   |   |    |  |
| 64                                       | -34           | -6                       | -22 |   | -63           | -6                       | -17 | -29                    | 0                        | 5   |   |    |  |
| 63                                       | -36           | -5                       | -28 |   | -59           | -7                       | -19 | -23                    | -2                       | 9   |   |    |  |
| 62                                       | -35           | -2                       | -29 |   | -53           | -7                       | -20 | -18                    | -5                       | 9   |   |    |  |
| 61                                       | -30           | 3                        | -31 |   | -47           | -7                       | -19 | -17                    | -10                      | 12  |   |    |  |
| 60                                       | -27           | 7                        | -35 |   | -40           | -7                       | -17 | -13                    | -14                      | 18  |   |    |  |
| 59                                       | -24           | 6                        | -37 |   | -34           | -7                       | -14 | -10                    | -13                      | 23  |   |    |  |
| 58                                       | -18           | 0                        | -33 |   | -28           | -6                       | -10 | -10                    | -6                       | 23  |   |    |  |
| 57                                       | -15           | -7                       | -24 |   | -24           | -6                       | -5  | -9                     | 1                        | 19  |   |    |  |
| 56                                       | -13           | -11                      | -18 |   | -20           | -4                       | -2  | -7                     | 7                        | 16  |   |    |  |
| 55                                       | -11           | -12                      | -15 |   | -17           | -1                       | -2  | -6                     | 11                       | 13  |   |    |  |
| 54                                       | -8            | -12                      | -15 |   | -13           | -2                       | -7  | -5                     | 10                       | 8   |   |    |  |
| 53                                       | -8            | -12                      | -15 |   | -10           | -3                       | -10 | -2                     | 9                        | 5   |   |    |  |
| 52                                       | -6            | -11                      | -15 |   | -8            | -7                       | -15 | -2                     | 4                        | 0   |   |    |  |
| 51                                       | -4            | -6                       | -15 |   | -9            | -13                      | -19 | -5                     | -7                       | -4  |   |    |  |
| 50                                       | -5            | 0                        | -16 |   | -11           | -17                      | -23 | -6                     | -17                      | -7  |   |    |  |
| 49                                       | -5            | 5                        | -18 |   | -13           | -15                      | -27 | -8                     | -20                      | -9  |   |    |  |
| 48                                       | -6            | 7                        | -21 |   | -12           | -4                       | -31 | -6                     | -11                      | -10 |   |    |  |
| 47                                       | -3            | 5                        | -24 |   | -7            | 7                        | -34 | -4                     | 2                        | -10 |   |    |  |
| 46                                       | -2            | 3                        | -28 |   | -8            | 7                        | -33 | -6                     | 4                        | -5  |   |    |  |
| 45                                       | -2            | 1                        | -29 |   | -10           | 4                        | -35 | -8                     | 3                        | -6  |   |    |  |
| 44                                       | -8            | 1                        | -29 |   | -11           | 6                        | -38 | -3                     | 5                        | -9  |   |    |  |
| 43                                       | -11           | 0                        | -28 |   | -14           | 4                        | -35 | -3                     | 4                        | -7  |   |    |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |   |    |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|---------------|--------------------------|---|---|----|
|           |               | NS                       | S   | EW |               | NS                       | S   | EW |               | DEG C                    | M | S | EW |
| 42        | -13           | -1                       | -27 |    | -17           | 1                        | -31 | -4 | 2             | -4                       |   |   |    |
| 41        | -20           | -3                       | -24 |    | -20           | -2                       | -26 | 0  | 1             | -2                       |   |   |    |
| 40        | -21           | -4                       | -20 |    | -23           | -5                       | -20 | -2 | -1            | 0                        |   |   |    |
| 39        | -24           | -5                       | -18 |    | -26           | -7                       | -18 | -2 | -2            | 0                        |   |   |    |
| 38        | -25           | -4                       | -17 |    | -25           | -5                       | -17 | 0  | -1            | 0                        |   |   |    |
| 37        | -25           | -4                       | -18 |    | -25           | -5                       | -17 | 0  | -1            | 1                        |   |   |    |
| 36        | -27           | -3                       | -20 |    | -27           | -6                       | -23 | 0  | -3            | -3                       |   |   |    |
| 35        | -29           | -3                       | -20 |    | -29           | -6                       | -21 | 0  | -3            | -1                       |   |   |    |
| 34        | -35           | -3                       | -18 |    | -32           | -6                       | -18 | 3  | -3            | 0                        |   |   |    |
| 33        | -39           | -1                       | -17 |    | -36           | -4                       | -15 | 3  | -3            | 2                        |   |   |    |
| 32        | -41           | 0                        | -16 |    | -37           | 1                        | -20 | 4  | 1             | -4                       |   |   |    |
| 31        | -39           | 1                        | -15 |    | -36           | 1                        | -20 | 3  | 0             | -5                       |   |   |    |
| 30        | -40           | 1                        | -13 |    | -42           | 0                        | -13 | -2 | -1            | 0                        |   |   |    |
| 29        | -43           | 1                        | -11 |    | -44           | 16                       | 9   | -1 | 15            | 20                       |   |   |    |
| 28        | -45           | 1                        | -10 |    | -41           | -4                       | -13 | 4  | -5            | -3                       |   |   |    |
| 27        | -45           | 0                        | -10 |    | -40           | -3                       | -11 | 5  | -3            | -1                       |   |   |    |
| 26        | -47           | -1                       | -9  |    | -45           | -3                       | -8  | 2  | -2            | 1                        |   |   |    |
| 25        | -51           | -1                       | -9  |    | -49           | 0                        | -9  | 2  | 1             | 0                        |   |   |    |
| 24        | -52           | -1                       | -7  |    | -47           | -4                       | -6  | 5  | -3            | 1                        |   |   |    |
| 23        | 999           | 999                      | 999 |    | -49           | -1                       | -5  |    |               |                          |   |   |    |
| 22        | 999           | 999                      | 999 |    | -50           | 1                        | -4  |    |               |                          |   |   |    |
| 21        | 999           | 999                      | 999 |    | -53           | 3                        | -7  |    |               |                          |   |   |    |
| 20        | 999           | 999                      | 999 |    | -55           | 0                        | 0   |    |               |                          |   |   |    |

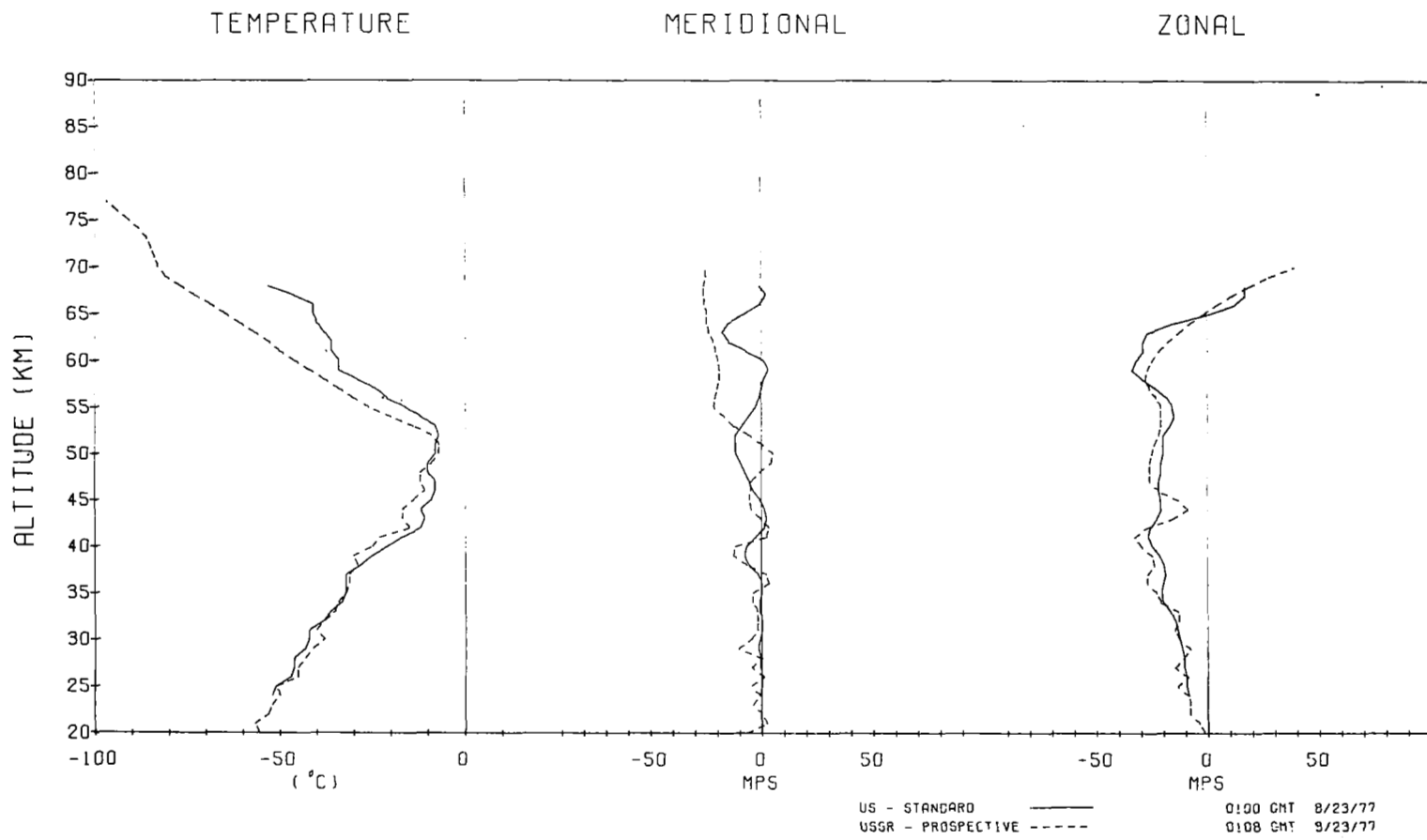
127



|     |      | US - STANDARD<br>AUG 23 1977<br>0100 GMT |     |     | USSR - PROSPECTIVE<br>AUG 23 1977<br>0108 GMT |                          |     | DIFFERENCES<br>USSR-US |      |                          |   |   |
|-----|------|--|-----|-----|---|--------------------------|-----|------------------------|------|--------------------------|---|---|
| ALT | TEMP | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP | COMPONENT<br>WINDS<br>-1 |   |   |
|     |      | DEG C                                    | M   | S   |   | DEG C                    | M   | S                      |      | DLG C                    | M | S |
| KM  |      | NS                                       | E   | W   | NS  | E                        | W   | NS                     | E    | W                        |   |   |
| 77  | 999  | 999                                      | 999 | 999 | -97   | 999                      | 999 |                        |      |                          |   |   |
| 76  | 999  | 999                                      | 999 | 999 | -94   | 999                      | 999 |                        |      |                          |   |   |
| 75  | 999  | 999                                      | 999 | 999 | -91   | 999                      | 999 |                        |      |                          |   |   |
| 74  | 999  | 999                                      | 999 | 999 | -88   | 999                      | 999 |                        |      |                          |   |   |
| 73  | 999  | 999                                      | 999 | 999 | -86   | 999                      | 999 |                        |      |                          |   |   |
| 72  | 999  | 999                                      | 999 | 999 | -85   | 999                      | 999 |                        |      |                          |   |   |
| 71  | 999  | 999                                      | 999 | 999 | -84   | 999                      | 999 |                        |      |                          |   |   |
| 70  | 999  | 999                                      | 999 | 999 | -83   | -26                      | 39  |                        |      |                          |   |   |
| 69  | 999  | 999                                      | 999 | 999 | -81   | -25                      | 28  |                        |      |                          |   |   |
| 68  | -53  | -1                                       | 17  |     | -77   | -26                      | 19  | -24                    | -25  | 2                        |   |   |
| 67  | -46  | 2  | 17  |     | -73   | -26                      | 11  | -27                    | -28  | -6                       |   |   |
| 66  | -41  | -1                                       | 12  |     | -69   | -26                      | 4   | -28                    | -25  | -8                       |   |   |
| 65  | -41  | -8                                       | 0   |     | -65   | -25                      | -2  | -24                    | -17  | -2                       |   |   |
| 64  | -40  | -15                                      | -16 |     | -61   | -25                      | -8  | -21                    | -10  | 8                        |   |   |
| 63  | -38  | -18                                      | -27 |     | -57   | -24                      | -13 | -19                    | -6   | 14                       |   |   |
| 62  | -36  | -15                                      | -29 |     | -53   | -22                      | -18 | -17                    | -7   | 11                       |   |   |
| 61  | -36  | -7                                       | -29 |     | -50   | -21                      | -22 | -14                    | -14  | 7                        |   |   |
| 60  | -34  | 1  | -32 |     | -46   | -20                      | -25 | -12                    | -21  | 7                        |   |   |
| 59  | -34  | 3  | -34 |     | -42   | -19                      | -27 | -8                     | -22  | 7                        |   |   |
| 58  | -29  | 1  | -29 |     | -38   | -19                      | -28 | -9                     | -20  | 1                        |   |   |
| 57  | -24  | 0  | -23 |     | -34   | -20                      | -26 | -10                    | -20  | -3                       |   |   |
| 56  | -21  | -1                                       | -18 |     | -30   | -21                      | -23 | -9                     | -20  | -5                       |   |   |
| 55  | -16  | -3                                       | -16 |     | -26   | -22                      | -21 | -10                    | -19  | -5                       |   |   |
| 54  | -12  | -6                                       | -15 |     | -20   | -17                      | -21 | -8                     | -11  | -6                       |   |   |
| 53  | -8   | -9                                       | -17 |     | -14   | -13                      | -21 | -6                     | -4   | -4                       |   |   |
| 52  | -7   | -12                                      | -20 |     | -9  | -6                       | -22 | -2                     | 6    | -2                       |   |   |
| 51  | -8   | -12                                      | -20 |     | -7  | 0                        | -24 | 1                      | 12   | -4                       |   |   |
| 50  | -8   | -12                                      | -20 |     | -7  | 5                        | -25 | 1                      | 17   | -5                       |   |   |
| 49  | -10  | -10                                      | -21 |     | -9  | 4                        | -26 | 1                      | 14   | -5                       |   |   |
| 48  | -10  | -8                                       | -21 |     | -12   | -1                       | -26 | -2                     | 7    | -5                       |   |   |
| 47  | -8   | -6                                       | -22 |     | -12   | -5                       | -26 | -4                     | 1    | -4                       |   |   |
| 46  | -8   | -4                                       | -22 |     | -11   | -5                       | -22 | -3                     | -1   | 0                        |   |   |
| 45  | -9   | -1                                       | -21 |     | -14   | -6                       | -13 | -5                     | -5   | 8                        |   |   |
| 44  | -12  | 1  | -21 |     | -17   | -5                       | -9  | -5                     | -6   | 12                       |   |   |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |   | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | TEMP | COMPONENT<br>WINDS<br>-1 |   |   |
|-----|------|--------------------------|-----|---|------|--------------------------|-----|----|------|--------------------------|---|---|
|     |      | DEG C                    | M   | S |      | DEG C                    | M   | S  |      | DEG C                    | M | S |
| KM  |      | NS                       | E   | W | NS   | E                        | W   | NS | E    | W                        |   |   |
| 43  | -11  | 2                        | -23 |   | -17  | -1                       | -16 | -6 | -3   | 7                        |   |   |
| 42  | -12  | 1                        | -26 |   | -15  | 3                        | -28 | -3 | 2    | -2                       |   |   |
| 41  | -17  | -3                       | -27 |   | -23  | 2                        | -33 | -6 | 5    | -6                       |   |   |
| 40  | -21  | -7                       | -25 |   | -25  | -12                      | -30 | -4 | -5   | -5                       |   |   |
| 39  | -25  | -8                       | -22 |   | -30  | -13                      | -25 | -5 | -5   | -3                       |   |   |
| 38  | -28  | -6                       | -20 |   | -29  | -7                       | -24 | -1 | -1   | -4                       |   |   |
| 37  | -32  | -2                       | -19 |   | -31  | 2                        | -27 | 1  | 4    | -8                       |   |   |
| 36  | -32  | 0                        | -20 |   | -31  | 3                        | -27 | 1  | 3    | -7                       |   |   |
| 35  | -42  | 0                        | -21 |   | -32  | -4                       | -23 | 0  | -4   | -2                       |   |   |
| 34  | -33  | -1                       | -20 |   | -34  | -4                       | -21 | -1 | -3   | -1                       |   |   |
| 33  | -36  | -1                       | -17 |   | -35  | -2                       | -13 | 1  | -1   | 4                        |   |   |
| 32  | -38  | 0                        | -15 |   | -38  | -2                       | -13 | 0  | -2   | 2                        |   |   |
| 31  | -42  | 0                        | -14 |   | -40  | -2                       | -15 | 2  | -2   | -1                       |   |   |
| 30  | -42  | -1                       | -13 |   | -38  | -5                       | -13 | 4  | -4   | 0                        |   |   |
| 29  | -43  | -2                       | -12 |   | -41  | -11                      | -8  | 2  | -9   | 4                        |   |   |
| 28  | -46  | -1                       | -11 |   | -43  | 0                        | -11 | 3  | 1    | 0                        |   |   |
| 27  | -46  | -1                       | -11 |   | -45  | -5                       | -15 | 1  | -4   | -4                       |   |   |
| 26  | -47  | 0                        | -10 |   | -45  | 1                        | -9  | 2  | 1    | 1                        |   |   |
| 25  | -51  | 0                        | -10 |   | -51  | -5                       | -14 | 0  | -5   | -4                       |   |   |
| 24  | -52  | -1                       | -9  |   | -50  | -1                       | -9  | 2  | 0    | 0                        |   |   |
| 23  | 999  | 999                      | 999 |   | -52  | -4                       | -8  |    |      |                          |   |   |
| 22  | 999  | 999                      | 999 |   | -53  | 0                        | -8  |    |      |                          |   |   |
| 21  | 999  | 999                      | 999 |   | -57  | 2                        | -4  |    |      |                          |   |   |
| 20  | 999  | 999                      | 999 |   | -56  | -7                       | -2  |    |      |                          |   |   |

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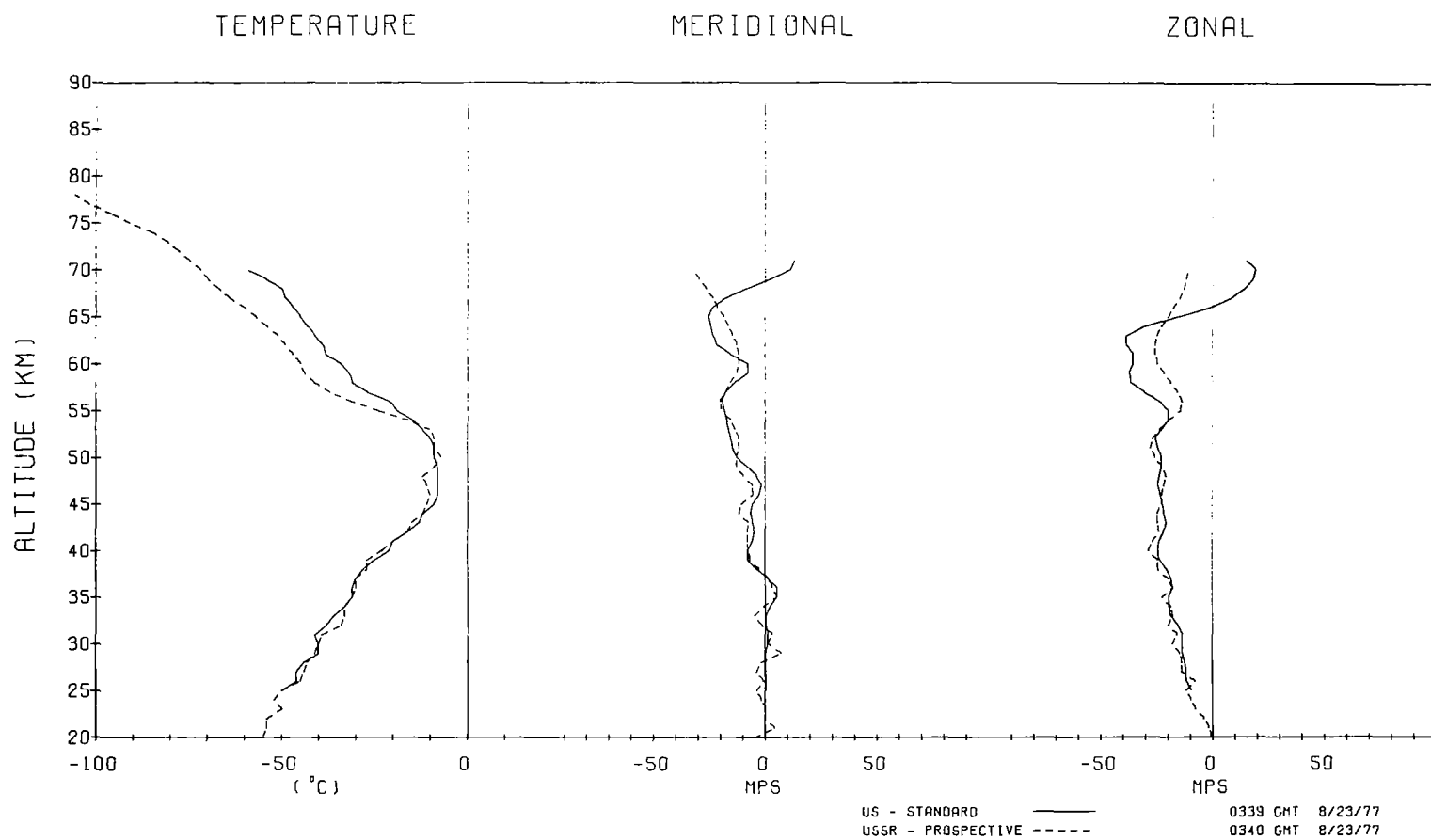




| US - STANDARD<br>AUG 23 1977<br>0339 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 23 1977<br>0340 GMT |                          |     |                          | DIFFERENCES<br>USSR-US |     |  |  |
|--|---------------|--------------------------|-----|---|--------------------------|-----|--------------------------|------------------------|-----|--|--|
| ALT<br>KM                                | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |                        |     |  |  |
|  |               | NS                       | EW  |   | NS                       | EW  | DEG C                    | M S                    | EW  |  |  |
| 78                                       | 999           | 999                      | 999 | -106  | 999                      | 999 |                          |                        |     |  |  |
| 77                                       | 999           | 999                      | 999 | -102  | 999                      | 999 |                          |                        |     |  |  |
| 76                                       | 999           | 999                      | 999 | -96   | 999                      | 999 |                          |                        |     |  |  |
| 75                                       | 999           | 999                      | 999 | -91   | 999                      | 999 |                          |                        |     |  |  |
| 74                                       | 999           | 999                      | 999 | -85   | 999                      | 999 |                          |                        |     |  |  |
| 73                                       | 999           | 999                      | 999 | -81   | 999                      | 999 |                          |                        |     |  |  |
| 72                                       | 999           | 999                      | 999 | -78   | 999                      | 999 |                          |                        |     |  |  |
| 71                                       | 999           | 13                       | 15  | -75   | 999                      | 999 |                          |                        |     |  |  |
| 70                                       | -59           | 11                       | 19  | -72   | -33                      | -11 | -13                      | -44                    | -30 |  |  |
| 69                                       | -54           | 2                        | 18  | -70   | -30                      | -12 | -16                      | -32                    | -30 |  |  |
| 68                                       | -50           | -9                       | 14  | -67   | -27                      | -13 | -17                      | -18                    | -27 |  |  |
| 67                                       | -49           | -18                      | 8   | -64   | -24                      | -15 | -15                      | -6                     | -23 |  |  |
| 66                                       | -47           | -24                      | -2  | -60   | -22                      | -18 | -13                      | 2                      | -16 |  |  |
| 65                                       | -45           | -26                      | -17 | -57   | -19                      | -20 | -12                      | 7                      | -3  |  |  |
| 64                                       | -43           | -25                      | -31 | -54   | -17                      | -23 | -11                      | 8                      | 8   |  |  |
| 63                                       | -41           | -24                      | -39 | -51   | -15                      | -25 | -10                      | 9                      | 14  |  |  |
| 62                                       | -39           | -22                      | -39 | -49   | -13                      | -26 | -10                      | 9                      | 13  |  |  |
| 61                                       | -38           | -16                      | -36 | -47   | -12                      | -26 | -9                       | 4                      | 10  |  |  |
| 60                                       | -34           | -8                       | -36 | -45   | -12                      | -25 | -11                      | -4                     | 11  |  |  |
| 59                                       | -32           | -8                       | -38 | -44   | -13                      | -22 | -12                      | -5                     | 16  |  |  |
| 58                                       | -31           | -14                      | -37 | -41   | -16                      | -19 | -10                      | -2                     | 18  |  |  |
| 57                                       | -27           | -18                      | -31 | -37   | -18                      | -16 | -10                      | 0                      | 15  |  |  |
| 56                                       | -21           | -20                      | -24 | -31   | -21                      | -14 | -10                      | -1                     | 10  |  |  |
| 55                                       | -19           | -19                      | -20 | -24   | -20                      | -15 | -5                       | -1                     | 5   |  |  |
| 54                                       | -15           | -18                      | -20 | -16   | -16                      | -20 | -1                       | 2                      | 0   |  |  |
| 53                                       | -12           | -17                      | -23 | -10   | -14                      | -24 | 2                        | 3                      | -1  |  |  |
| 52                                       | -10           | -16                      | -26 | -9  | -12                      | -27 | 1                        | 4                      | -1  |  |  |
| 51                                       | -9            | -15                      | -25 | -9  | -12                      | -28 | 0                        | 3                      | -3  |  |  |
| 50                                       | -9            | -13                      | -23 | -7  | -13                      | -26 | 2                        | 0                      | -3  |  |  |
| 49                                       | -8            | -8                       | -23 | -9  | -13                      | -23 | -1                       | -5                     | 0   |  |  |
| 48                                       | -8            | -4                       | -24 | -12   | -10                      | -21 | -4                       | -6                     | 3   |  |  |
| 47                                       | -8            | -2                       | -25 | -11   | -6                       | -22 | -3                       | -4                     | 3   |  |  |
| 46                                       | -8            | -3                       | -24 | -10   | -6                       | -23 | -2                       | -3                     | 1   |  |  |
| 45                                       | -9            | -6                       | -23 | -11   | -11                      | -23 | -2                       | -5                     | 0   |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |     |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|--------------------------|-----|----|
|           |               | NS                       | EW  |               | NS                       | EW  | DEG C                    | M S | EW |
| 44        | -12           | -7                       | -22 | -12           | -12                      | -25 | 0                        | -5  | -3 |
| 43        | -13           | -6                       | -21 | -15           | -8                       | -25 | -2                       | -2  | -4 |
| 42        | -16           | -5                       | -22 | -16           | -8                       | -24 | 0                        | -3  | -2 |
| 41        | -20           | -6                       | -24 | -20           | -8                       | -27 | 0                        | -2  | -3 |
| 40        | -21           | -8                       | -25 | -23           | -8                       | -29 | -2                       | 0   | -4 |
| 39        | -25           | -8                       | -24 | -27           | -7                       | -25 | -2                       | 1   | -1 |
| 38        | -28           | -4                       | -21 | -27           | -3                       | -25 | 1                        | 1   | -4 |
| 37        | -30           | 1                        | -19 | -30           | 1                        | -20 | 0                        | 0   | -1 |
| 36        | -31           | 5                        | -18 | -30           | 3                        | -18 | 1                        | -2  | 0  |
| 35        | -31           | 5                        | -20 | -31           | 5                        | -23 | 0                        | 0   | -3 |
| 34        | -33           | 2                        | -20 | -33           | -1                       | -19 | 0                        | -3  | 1  |
| 33        | -36           | 0                        | -19 | -33           | -5                       | -18 | 3                        | -5  | 1  |
| 32        | -38           | 0                        | -16 | -34           | -2                       | -20 | 4                        | -2  | -4 |
| 31        | -41           | 1                        | -14 | -39           | 3                        | -16 | 2                        | 2   | -2 |
| 30        | -40           | 1                        | -14 | -40           | 1                        | -18 | 0                        | 0   | -4 |
| 29        | -40           | 0                        | -14 | -41           | 7                        | -15 | -1                       | 7   | -1 |
| 28        | -44           | 0                        | -13 | -43           | -2                       | -14 | 1                        | -2  | -1 |
| 27        | -46           | 0                        | -12 | -44           | -4                       | -14 | 2                        | -4  | -2 |
| 26        | -46           | 0                        | -12 | -45           | -1                       | -8  | 1                        | -1  | 4  |
| 25        | -50           | 0                        | -10 | -50           | -4                       | -12 | 0                        | -4  | -2 |
| 24        | 999           | 999                      | 999 | -52           | -2                       | -10 |                          |     |    |
| 23        | 999           | 999                      | 999 | -50           | 0                        | -8  |                          |     |    |
| 22        | 999           | 999                      | 999 | -54           | 0                        | -4  |                          |     |    |
| 21        | 999           | 999                      | 999 | -54           | 4                        | -2  |                          |     |    |
| 20        | 999           | 999                      | 999 | -55           | -5                       | -1  |                          |     |    |

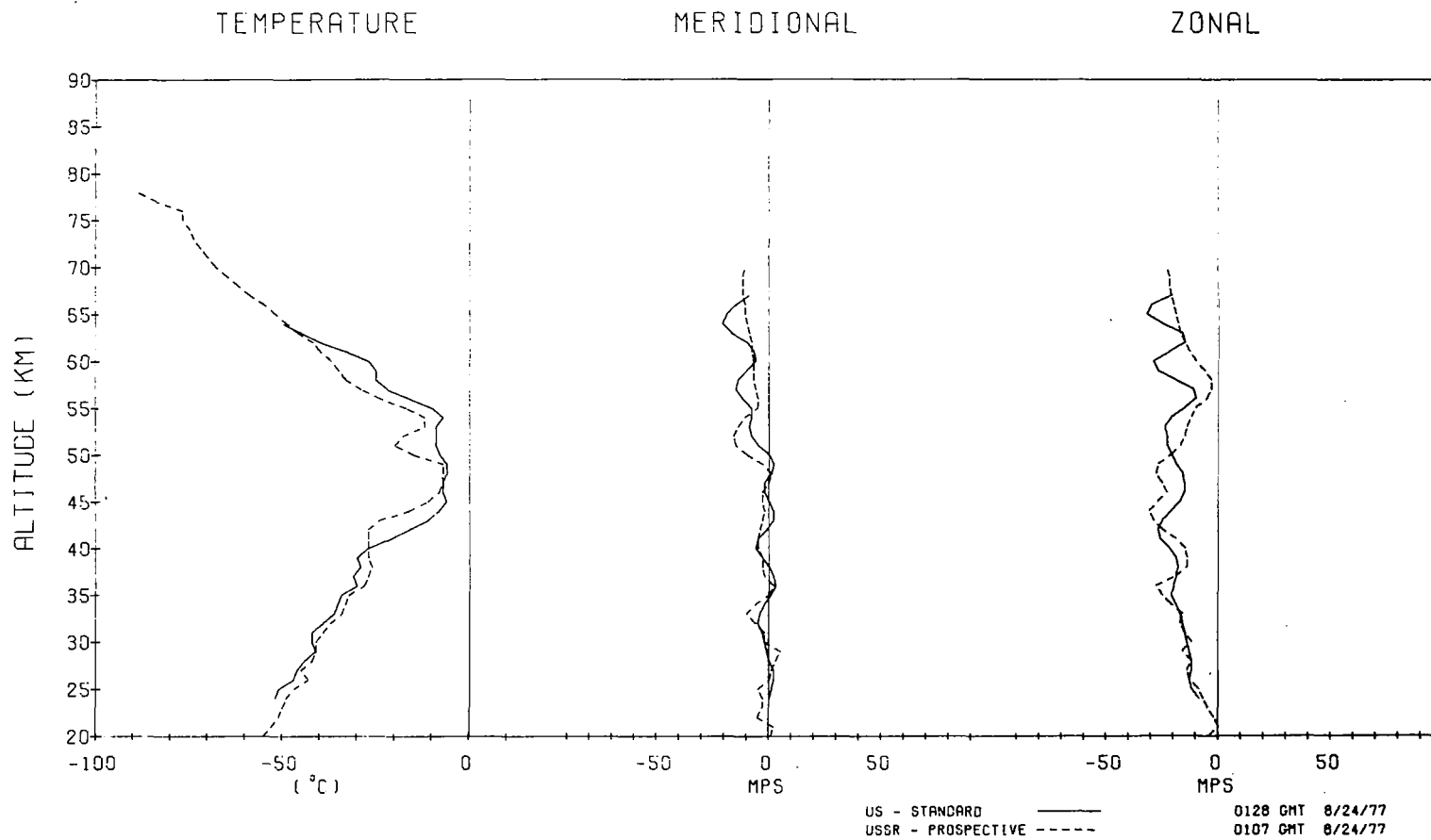
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| ALT | US - STANDARD<br>AUG 24 1977<br>0128 GMT |                          |     |     | USSR - PROSPECTIVE<br>AUG 24 1977<br>0107 GMT |                          |     |    | DIFFERENCES<br>USSR-US |                          |     |     |  |
|-----|--|--------------------------|-----|-----|---|--------------------------|-----|----|------------------------|--------------------------|-----|-----|--|
|     | TEMP<br>KM                               | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |     |  |
|     |  | M S                      |     | FW  |   | M S                      |     | FW |                        | M S                      |     | FW  |  |
|     |  | NS                       | EW  |     |   | NS                       | EW  |    |                        | NS                       | EW  |     |  |
| 78  | 999                                      | 999                      | 999 | 999 | -89   | 999                      | 999 |    |                        |                          |     |     |  |
| 77  | 999                                      | 999                      | 999 | 999 | -84   | 999                      | 999 |    |                        |                          |     |     |  |
| 76  | 999                                      | 999                      | 999 | 999 | -77   | 999                      | 999 |    |                        |                          |     |     |  |
| 75  | 999                                      | 999                      | 999 | 999 | -77   | 999                      | 999 |    |                        |                          |     |     |  |
| 74  | 999                                      | 999                      | 999 | 999 | -75   | 999                      | 999 |    |                        |                          |     |     |  |
| 73  | 999                                      | 999                      | 999 | 999 | -74   | 999                      | 999 |    |                        |                          |     |     |  |
| 72  | 999                                      | 999                      | 999 | 999 | -72   | 999                      | 999 |    |                        |                          |     |     |  |
| 71  | 999                                      | 999                      | 999 | 999 | -70   | 999                      | 999 |    |                        |                          |     |     |  |
| 70  | 999                                      | 999                      | 999 | 999 | -68   | -11                      | -23 |    |                        |                          |     |     |  |
| 69  | 999                                      | 999                      | 999 | 999 | -65   | -12                      | -22 |    |                        |                          |     |     |  |
| 68  | 999                                      | 999                      | 999 | 999 | -62   | -12                      | -22 |    |                        |                          |     |     |  |
| 67  | 999                                      | -9                       | -21 |     | -59   | -12                      | -21 |    |                        | -3                       | 0   |     |  |
| 66  | 999                                      | -15                      | -30 |     | -55   | -11                      | -20 |    |                        | 4                        | 10  |     |  |
| 65  | 999                                      | -19                      | -32 |     | -52   | -11                      | -19 |    |                        | 8                        | 13  |     |  |
| 64  | -50                                      | -21                      | -25 |     | -49   | -10                      | -18 |    |                        | 1                        | 11  | 7   |  |
| 63  | -45                                      | -17                      | -16 |     | -46   | -9                       | -17 |    |                        | -1                       | 8   | -1  |  |
| 62  | -40                                      | -10                      | -15 |     | -42   | -8                       | -15 |    |                        | -2                       | 2   | 0   |  |
| 61  | -33                                      | -7                       | -22 |     | -40   | -8                       | -13 |    |                        | -7                       | -1  | 9   |  |
| 60  | -27                                      | -6                       | -29 |     | -37   | -7                       | -10 |    |                        | -10                      | -1  | 19  |  |
| 59  | -25                                      | -10                      | -27 |     | -35   | -7                       | -6  |    |                        | -10                      | 3   | 21  |  |
| 58  | -25                                      | -14                      | -19 |     | -33   | -7                       | -3  |    |                        | -8                       | 7   | 16  |  |
| 57  | -22                                      | -15                      | -11 |     | -29   | -6                       | -3  |    |                        | -7                       | 9   | 8   |  |
| 56  | -16                                      | -12                      | -10 |     | -24   | -5                       | -5  |    |                        | -8                       | 7   | 5   |  |
| 55  | -10                                      | -8                       | -15 |     | -17   | -5                       | -10 |    |                        | -7                       | 3   | 5   |  |
| 54  | -7                                       | -8                       | -21 |     | -12   | -11                      | -12 |    |                        | -5                       | -3  | 9   |  |
| 53  | -9                                       | -9                       | -24 |     | -12   | -14                      | -14 |    |                        | -3                       | -5  | 10  |  |
| 52  | -9                                       | -8                       | -23 |     | -18   | -16                      | -15 |    |                        | -9                       | -8  | 8   |  |
| 51  | -9                                       | -5                       | -23 |     | -20   | -15                      | -17 |    |                        | -11                      | -10 | 6   |  |
| 50  | -8                                       | 0                        | -21 |     | -15   | -10                      | -21 |    |                        | -7                       | -10 | 0   |  |
| 49  | -6                                       | 2                        | -19 |     | -7  | -3                       | -27 |    |                        | -1                       | -5  | -8  |  |
| 48  | -6                                       | 1                        | -16 |     | -7  | 1                        | -28 |    |                        | -1                       | 0   | -12 |  |
| 47  | -7                                       | -2                       | -15 |     | -7  | 0                        | -25 |    |                        | 0                        | 2   | -10 |  |
| 46  | -7                                       | -2                       | -15 |     | -8  | -3                       | -23 |    |                        | -1                       | -1  | -8  |  |
| 45  | -6                                       | 0                        | -17 |     | -11   | -3                       | -27 |    |                        | -5                       | -3  | -10 |  |

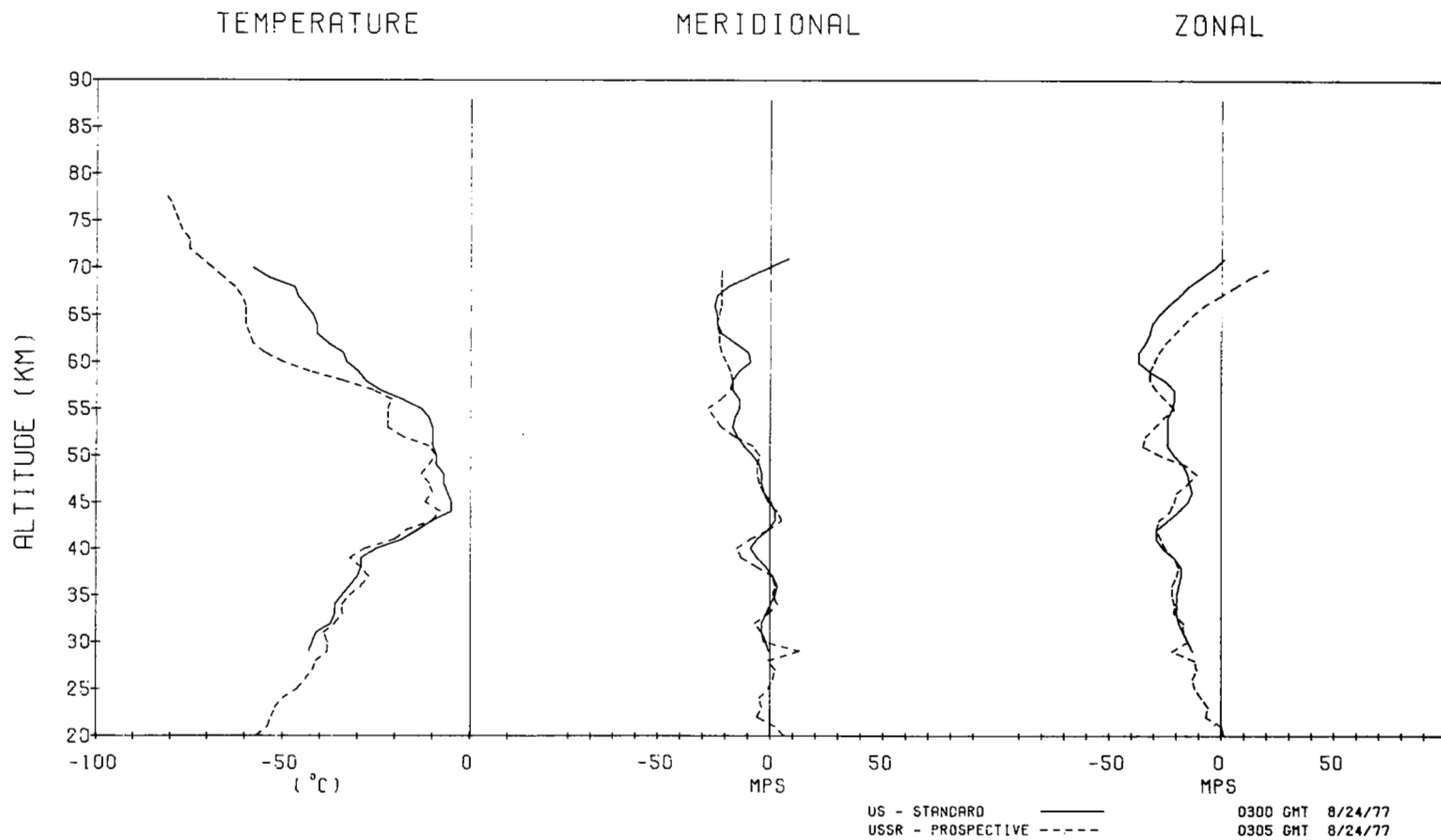
| ALT | COMPONENT<br>WINDS<br>-1 |               |     |    | COMPONENT<br>WINDS<br>-1 |     |     |               | COMPONENT<br>WINDS<br>-1 |    |               |     |  |
|-----|--------------------------|---------------|-----|----|--------------------------|-----|-----|---------------|--------------------------|----|---------------|-----|--|
|     | TEMP<br>KM               | TEMP<br>DEG C | M S |    | TEMP<br>DEG C            | M S |     | TEMP<br>DEG C | M S                      |    | TEMP<br>DEG C | M S |  |
|     |                          |               | NS  | EW |                          | NS  | EW  |               | NS                       | EW |               |     |  |
|     |                          |               | NS  | EW |                          | NS  | EW  |               | NS                       | EW |               |     |  |
| 44  | -8                       | 2             | -21 |    | -16                      | -2  | -31 |               | -8                       | -4 | -10           |     |  |
| 43  | -11                      | 2             | -25 |    | -24                      | -3  | -29 |               | -13                      | -5 | -4            |     |  |
| 42  | -16                      | -1            | -27 |    | -27                      | -4  | -25 |               | -11                      | -3 | 2             |     |  |
| 41  | -21                      | -5            | -26 |    | -27                      | -5  | -19 |               | -6                       | 0  | 7             |     |  |
| 40  | -27                      | -6            | -22 |    | -27                      | -5  | -15 |               | 0                        | 1  | 7             |     |  |
| 39  | -30                      | -3            | -19 |    | -27                      | -3  | -14 |               | 3                        | 0  | 5             |     |  |
| 38  | -29                      | 0             | -18 |    | -26                      | -3  | -14 |               | 3                        | -3 | 4             |     |  |
| 37  | -31                      | 2             | -19 |    | -27                      | -2  | -19 |               | 4                        | -4 | 0             |     |  |
| 36  | -30                      | 3             | -20 |    | -28                      | 2   | -28 |               | 2                        | -1 | -8            |     |  |
| 35  | -34                      | 1             | -21 |    | -32                      | 0   | -25 |               | 2                        | -1 | -4            |     |  |
| 34  | -35                      | -2            | -19 |    | -33                      | -6  | -21 |               | 2                        | -4 | -2            |     |  |
| 33  | -36                      | -4            | -17 |    | -34                      | -10 | -16 |               | 2                        | -6 | 1             |     |  |
| 32  | -39                      | -5            | -16 |    | -37                      | -6  | -17 |               | 2                        | -1 | -1            |     |  |
| 31  | -42                      | -3            | -15 |    | -39                      | -2  | -15 |               | 3                        | 1  | 0             |     |  |
| 30  | -42                      | -2            | -14 |    | -41                      | -2  | -12 |               | 1                        | 0  | 2             |     |  |
| 29  | -41                      | -1            | -13 |    | -41                      | 5   | -16 |               | 0                        | 6  | -3            |     |  |
| 28  | -44                      | 0             | -12 |    | -42                      | 3   | -12 |               | 2                        | 3  | 0             |     |  |
| 27  | -46                      | 2             | -12 |    | -45                      | 1   | -14 |               | 1                        | -1 | -2            |     |  |
| 26  | -47                      | 2             | -13 |    | -43                      | 0   | -13 |               | 4                        | -2 | 0             |     |  |
| 25  | -51                      | 1             | -12 |    | -47                      | -5  | -9  |               | 4                        | -6 | 3             |     |  |
| 24  | -52                      | 0             | -9  |    | -49                      | -3  | -7  |               | 3                        | -3 | 2             |     |  |
| 23  | 999                      | 999           | 999 |    | -50                      | -3  | -5  |               |                          |    |               |     |  |
| 22  | 999                      | 999           | 999 |    | -51                      | -5  | -2  |               |                          |    |               |     |  |
| 21  | 999                      | 999           | 999 |    | -53                      | 2   | 0   |               |                          |    |               |     |  |
| 20  | 999                      | 999           | 999 |    | -55                      | 1   | -4  |               |                          |    |               |     |  |

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|     |      | US - STANDARD<br>AUG 24 1977<br>0300 GMT |     |     | USSR - PROSPECTIVE<br>AUG 24 1977<br>0305 GMT |                          |     | DIFFERENCES<br>USSR-US |      |                          |    |    |
|-----|------|--|-----|-----|---|--------------------------|-----|------------------------|------|--------------------------|----|----|
| ALT | TEMP | COMPONENT<br>WINDS<br>-1                 |     |     | TEMP  | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP | COMPONENT<br>WINDS<br>-1 |    |    |
|     |      | DEG C                                    | M   | S   |   | DEG C                    | M   | S                      |      | DEG C                    | M  | S  |
| KM  |      | NS                                       | EW  |     | NS  | EW                       |     | NS                     | EW   |                          | NS | EW |
| 78  | 999  | 999                                      | 999 | 999 | -82   | 999                      | 999 |                        |      |                          |    |    |
| 77  | 999  | 999                                      | 999 | 999 | -80   | 999                      | 999 |                        |      |                          |    |    |
| 76  | 999  | 999                                      | 999 | 999 | -79   | 999                      | 999 |                        |      |                          |    |    |
| 75  | 999  | 999                                      | 999 | 999 | -78   | 999                      | 999 |                        |      |                          |    |    |
| 74  | 999  | 999                                      | 999 | 999 | -77   | 999                      | 999 |                        |      |                          |    |    |
| 73  | 999  | 999                                      | 999 | 999 | -75   | 999                      | 999 |                        |      |                          |    |    |
| 72  | 999  | 999                                      | 999 | 999 | -75   | 999                      | 999 |                        |      |                          |    |    |
| 71  | 999  | 8  | 1   |     | -72   | 999                      | 999 |                        |      |                          |    |    |
| 70  | -58  | -1                                       | -3  |     | -69   | -22                      | 22  | -11                    | -21  | 25                       |    |    |
| 69  | -54  | -10                                      | -9  |     | -66   | -22                      | 13  | -12                    | -12  | 22                       |    |    |
| 68  | -47  | -19                                      | -15 |     | -63   | -22                      | 6   | -16                    | -3   | 21                       |    |    |
| 67  | -46  | -24                                      | -19 |     | -61   | -22                      | -1  | -15                    | 2    | 18                       |    |    |
| 66  | -44  | -25                                      | -24 |     | -60   | -22                      | -8  | -16                    | 3    | 16                       |    |    |
| 65  | -42  | -24                                      | -28 |     | -60   | -23                      | -13 | -18                    | 1    | 15                       |    |    |
| 64  | -41  | -24                                      | -31 |     | -60   | -24                      | -17 | -19                    | 0    | 14                       |    |    |
| 63  | -41  | -22                                      | -32 |     | -59   | -23                      | -21 | -18                    | -1   | 11                       |    |    |
| 62  | -38  | -16                                      | -34 |     | -58   | -23                      | -25 | -20                    | -7   | 9                        |    |    |
| 61  | -34  | -10                                      | -37 |     | -55   | -22                      | -28 | -21                    | -12  | 9                        |    |    |
| 60  | -33  | -9                                       | -37 |     | -50   | -20                      | -30 | -17                    | -11  | 7                        |    |    |
| 59  | -30  | -14                                      | -32 |     | -43   | -18                      | -32 | -13                    | -4   | 0                        |    |    |
| 58  | -28  | -17                                      | -25 |     | -34   | -17                      | -32 | -6                     | 0    | -7                       |    |    |
| 57  | -24  | -17                                      | -21 |     | -26   | -18                      | -29 | -2                     | -1   | -8                       |    |    |
| 56  | -18  | -14                                      | -21 |     | -21   | -22                      | -25 | -3                     | -8   | -4                       |    |    |
| 55  | -13  | -14                                      | -22 |     | -22   | -28                      | -21 | -9                     | -14  | 1                        |    |    |
| 54  | -11  | -16                                      | -24 |     | -22   | -25                      | -26 | -11                    | -9   | -2                       |    |    |
| 53  | -10  | -17                                      | -24 |     | -22   | -22                      | -30 | -12                    | -5   | -6                       |    |    |
| 52  | -10  | -15                                      | -24 |     | -18   | -16                      | -34 | -8                     | -1   | -10                      |    |    |
| 51  | -10  | -12                                      | -24 |     | -11   | -8                       | -35 | -1                     | 4    | -11                      |    |    |
| 50  | -9   | -8                                       | -21 |     | -9  | -5                       | -27 | 0                      | 3    | -6                       |    |    |
| 49  | -9   | -5                                       | -17 |     | -11   | -6                       | -16 | -2                     | -1   | 1                        |    |    |
| 48  | -7   | -4                                       | -15 |     | -13   | -6                       | -11 | -6                     | -2   | 4                        |    |    |
| 47  | -7   | -4                                       | -14 |     | -11   | -5                       | -15 | -4                     | -1   | -1                       |    |    |
| 46  | -6   | -3                                       | -13 |     | -10   | -3                       | -20 | -4                     | 0    | -7                       |    |    |
| 45  | -5   | 0  | -15 |     | -12   | -1                       | -21 | -7                     | -1   | -6                       |    |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |   | TEMP | COMPONENT<br>WINDS<br>-1 |     |    | TEMP | COMPONENT<br>WINDS<br>-1 |    |    |
|-----|------|--------------------------|-----|---|------|--------------------------|-----|----|------|--------------------------|----|----|
|     |      | DEG C                    | M   | S |      | DEG C                    | M   | S  |      | DEG C                    | M  | S  |
| KM  |      | NS                       | EW  |   | NS   | EW                       |     | NS | EW   |                          | NS | EW |
| 44  | -5   | 2                        | -19 |   | -8   | 3                        | -23 | -3 | 1    | -4                       |    |    |
| 43  | -10  | 2                        | -24 |   | -10  | 5                        | -28 | 0  | 3    | -4                       |    |    |
| 42  | -14  | -1                       | -29 |   | -17  | -1                       | -29 | -3 | 0    | 0                        |    |    |
| 41  | -18  | -6                       | -29 |   | -20  | -9                       | -27 | -2 | -3   | 2                        |    |    |
| 40  | -25  | -9                       | -26 |   | -28  | -15                      | -25 | -3 | -6   | 1                        |    |    |
| 39  | -29  | -6                       | -21 |   | -32  | -13                      | -21 | -3 | -7   | 0                        |    |    |
| 38  | -29  | -2                       | -18 |   | -29  | -6                       | -19 | 0  | -4   | -1                       |    |    |
| 37  | -30  | 1                        | -18 |   | -27  | 1                        | -20 | 3  | 0    | -2                       |    |    |
| 36  | -32  | 3                        | -19 |   | -29  | 2                        | -22 | 3  | -1   | -3                       |    |    |
| 35  | -34  | 2                        | -20 |   | -32  | 1                        | -22 | 2  | -1   | -2                       |    |    |
| 34  | -36  | 0                        | -20 |   | -34  | 3                        | -21 | 2  | 3    | -1                       |    |    |
| 33  | -36  | -2                       | -20 |   | -34  | -1                       | -21 | 2  | 1    | -1                       |    |    |
| 32  | -37  | -4                       | -19 |   | -36  | -7                       | -17 | 1  | -3   | 2                        |    |    |
| 31  | -41  | -4                       | -17 |   | -39  | -4                       | -17 | 2  | 0    | 0                        |    |    |
| 30  | -42  | -2                       | -15 |   | -38  | -3                       | -15 | 4  | -1   | 0                        |    |    |
| 29  | -43  | -1                       | -13 |   | -38  | 13                       | -22 | 5  | 14   | -9                       |    |    |
| 28  | 999  | 999                      | 999 |   | -41  | -1                       | -12 |    |      |                          |    |    |
| 27  | 999  | 999                      | 999 |   | -42  | 2                        | -11 |    |      |                          |    |    |
| 26  | 999  | 999                      | 999 |   | -44  | 1                        | -13 |    |      |                          |    |    |
| 25  | 999  | 999                      | 999 |   | -46  | -1                       | -12 |    |      |                          |    |    |
| 24  | 999  | 999                      | 999 |   | -50  | -5                       | -9  |    |      |                          |    |    |
| 23  | 999  | 999                      | 999 |   | -52  | -4                       | -6  |    |      |                          |    |    |
| 22  | 999  | 999                      | 999 |   | -53  | -6                       | -7  |    |      |                          |    |    |
| 21  | 999  | 999                      | 999 |   | -54  | 2                        | 0   |    |      |                          |    |    |
| 20  | 999  | 999                      | 999 |   | -57  | 6                        | 1   |    |      |                          |    |    |
| 19  | 999  | 999                      | 999 |   | -57  | -1                       | 2   |    |      |                          |    |    |
| 18  | 999  | 999                      | 999 |   | -60  | -2                       | 8   |    |      |                          |    |    |





## APPENDIX C

### LISTINGS AND PLOTS OF US(STANDARD) AND US(SPHERE) DATA

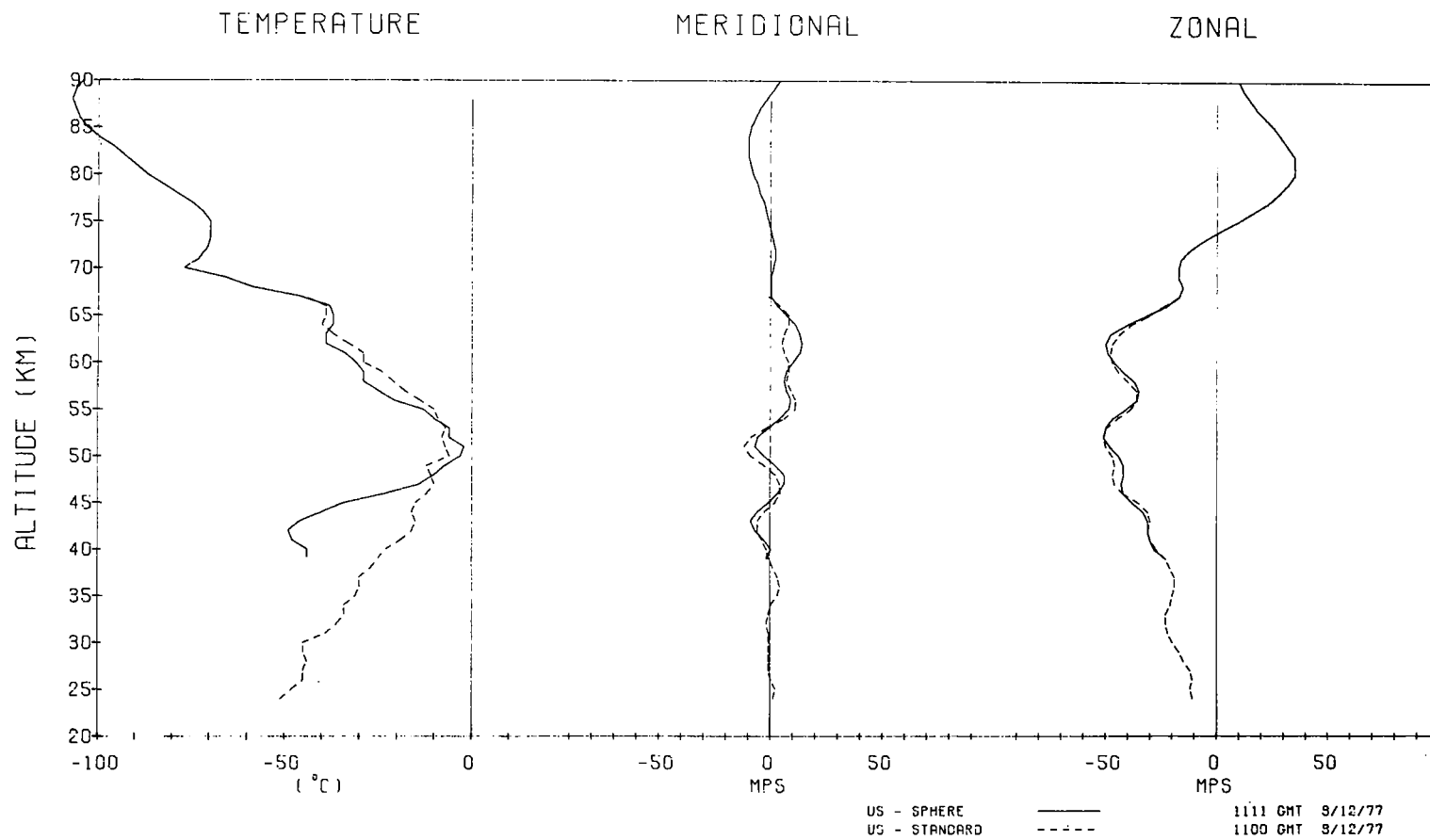
A comparison of data obtained from the US Super-Loki Datasonde and Super-Loki Sphere rocketsonde systems using standard data reduction techniques are presented with corresponding differences listed.



| ALT<br>KM | US - SPHERE<br>AUG 12 1977<br>1111 GMT |                          |     | US - STANDARD<br>AUG 12 1977<br>1100 GMT |                          |     | DIFFERENCES<br>STD-SPHERE |                          |    |
|-----------|--|--------------------------|-----|--|--------------------------|-----|---------------------------|--------------------------|----|
|           | TEMP<br>DEG C                          | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C             | COMPONENT<br>WINDS<br>-1 |    |
|           |  | M                        | S   |  | M                        | S   |                           | M                        | S  |
|           |  |                          |     |  |                          |     |                           |                          |    |
| 93        | -90                                    | 13                       | 2   | 999                                      | 999                      | 999 |                           |                          |    |
| 92        | -95                                    | 10                       | 5   | 999                                      | 999                      | 999 |                           |                          |    |
| 91        | -100                                   | 8                        | 8   | 999                                      | 999                      | 999 |                           |                          |    |
| 90        | -104                                   | 4                        | 10  | 999                                      | 999                      | 999 |                           |                          |    |
| 89        | -106                                   | 1                        | 12  | 999                                      | 999                      | 999 |                           |                          |    |
| 88        | -107                                   | -2                       | 15  | 999                                      | 999                      | 999 |                           |                          |    |
| 87        | -106                                   | -5                       | 18  | 999                                      | 999                      | 999 |                           |                          |    |
| 86        | -105                                   | -7                       | 22  | 999                                      | 999                      | 999 |                           |                          |    |
| 85        | -103                                   | -9                       | 26  | 999                                      | 999                      | 999 |                           |                          |    |
| 84        | -100                                   | -10                      | 29  | 999                                      | 999                      | 999 |                           |                          |    |
| 83        | -96                                    | -10                      | 32  | 999                                      | 999                      | 999 |                           |                          |    |
| 82        | -93                                    | -10                      | 35  | 999                                      | 999                      | 999 |                           |                          |    |
| 81        | -90                                    | -9                       | 35  | 999                                      | 999                      | 999 |                           |                          |    |
| 80        | -87                                    | -8                       | 35  | 999                                      | 999                      | 999 |                           |                          |    |
| 79        | -83                                    | -6                       | 32  | 999                                      | 999                      | 999 |                           |                          |    |
| 78        | -79                                    | -5                       | 28  | 999                                      | 999                      | 999 |                           |                          |    |
| 77        | -75                                    | -3                       | 23  | 999                                      | 999                      | 999 |                           |                          |    |
| 76        | -72                                    | -2                       | 16  | 999                                      | 999                      | 999 |                           |                          |    |
| 75        | -70                                    | -1                       | 9   | 999                                      | 999                      | 999 |                           |                          |    |
| 74        | -70                                    | 0                        | 1   | 999                                      | 999                      | 999 |                           |                          |    |
| 73        | -70                                    | 1                        | -6  | 999                                      | 999                      | 999 |                           |                          |    |
| 72        | -71                                    | 2                        | -12 | 999                                      | 999                      | 999 |                           |                          |    |
| 71        | -73                                    | 2                        | -16 | 999                                      | 999                      | 999 |                           |                          |    |
| 70        | -77                                    | 1                        | -17 | 999                                      | 999                      | 999 |                           |                          |    |
| 69        | -66                                    | 0                        | -17 | 999                                      | 999                      | 999 |                           |                          |    |
| 68        | -59                                    | 0                        | -15 | 999                                      | 999                      | 999 |                           |                          |    |
| 67        | -46                                    | 0                        | -17 | -45                                      | -1                       | -17 | 1                         | -1                       | 0  |
| 66        | -38                                    | 3                        | -23 | -39                                      | 4                        | -24 | -1                        | 1                        | -1 |
| 65        | -37                                    | 7                        | -32 | -39                                      | 8                        | -31 | -2                        | 1                        | 1  |
| 64        | -37                                    | 11                       | -41 | -40                                      | 8                        | -39 | -3                        | -3                       | 2  |
| 63        | -39                                    | 13                       | -48 | -37                                      | 6                        | -44 | 2                         | -7                       | 4  |
| 62        | -39                                    | 14                       | -50 | -33                                      | 5                        | -47 | 6                         | -9                       | 3  |
| 61        | -34                                    | 13                       | -49 | -29                                      | 6                        | -48 | 5                         | -7                       | 1  |
| 60        | -31                                    | 10                       | -46 | -29                                      | 8                        | -47 | 2                         | -2                       | -1 |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    |    |    |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|----|----|----|----|
|           |               | M                        | S   |               | M                        | S   |               | M                        | S  |    |    |    |    |
|           |               |                          |     |               |                          |     |               |                          |    | NS | EW | NS | EW |
|           |               |                          |     |               |                          |     |               |                          |    |    |    |    |    |
| 59        | -29           | 7                        | -42 | -24           | 8                        | -44 | 5             | 1                        | -2 |    |    |    |    |
| 58        | -29           | 6                        | -37 | -21           | 7                        | -40 | 8             | 1                        | -3 |    |    |    |    |
| 57        | -25           | 7                        | -35 | -18           | 9                        | -36 | 7             | 2                        | -1 |    |    |    |    |
| 56        | -21           | 9                        | -36 | -14           | 11                       | -36 | 7             | 2                        | 0  |    |    |    |    |
| 55        | -13           | 8                        | -41 | -10           | 11                       | -39 | 3             | 3                        | 2  |    |    |    |    |
| 54        | -10           | 4                        | -47 | -9            | 6                        | -45 | 1             | 2                        | 2  |    |    |    |    |
| 53        | -6            | -1                       | -50 | -7            | -2                       | -50 | -1            | -1                       | 0  |    |    |    |    |
| 52        | -6            | -6                       | -51 | -8            | -9                       | -51 | -2            | -3                       | 0  |    |    |    |    |
| 51        | -2            | -7                       | -48 | -7            | -12                      | -50 | -5            | -5                       | -2 |    |    |    |    |
| 50        | -3            | -3                       | -44 | -6            | -9                       | -47 | -3            | -6                       | -3 |    |    |    |    |
| 49        | -7            | 2                        | -42 | -12           | -3                       | -46 | -5            | -5                       | -4 |    |    |    |    |
| 48        | -10           | 6                        | -42 | -11           | 2                        | -47 | -1            | -4                       | -5 |    |    |    |    |
| 47        | -14           | 6                        | -43 | -10           | 4                        | -46 | 4             | -2                       | -3 |    |    |    |    |
| 46        | -23           | 3                        | -42 | -12           | 4                        | -42 | 11            | 1                        | 0  |    |    |    |    |
| 45        | -34           | -1                       | -38 | -15           | 2                        | -35 | 19            | 3                        | 3  |    |    |    |    |
| 44        | -40           | -6                       | -33 | -16           | -3                       | -31 | 24            | 3                        | 2  |    |    |    |    |
| 43        | -46           | -9                       | -31 | -15           | -6                       | -30 | 31            | 3                        | 1  |    |    |    |    |
| 42        | -49           | -7                       | -31 | -16           | -6                       | -31 | 33            | 1                        | 0  |    |    |    |    |
| 41        | -48           | -3                       | -30 | -19           | -4                       | -30 | 29            | -1                       | 0  |    |    |    |    |
| 40        | -44           | 0                        | -28 | -23           | -2                       | -27 | 21            | -2                       | 1  |    |    |    |    |
| 39        | -44           | -2                       | -23 | -25           | -1                       | -23 | 19            | 1                        | 0  |    |    |    |    |
| 38        | 999           | 999                      | 999 | -27           | 1                        | -21 |               |                          |    |    |    |    |    |
| 37        | 999           | 999                      | 999 | -30           | 3                        | -19 |               |                          |    |    |    |    |    |
| 36        | 999           | 999                      | 999 | -30           | 4                        | -19 |               |                          |    |    |    |    |    |
| 35        | 999           | 999                      | 999 | -31           | 3                        | -20 |               |                          |    |    |    |    |    |
| 34        | 999           | 999                      | 999 | -34           | 0                        | -21 |               |                          |    |    |    |    |    |
| 33        | 999           | 999                      | 999 | -34           | -1                       | -23 |               |                          |    |    |    |    |    |
| 32        | 999           | 999                      | 999 | -36           | -2                       | -23 |               |                          |    |    |    |    |    |
| 31        | 999           | 999                      | 999 | -39           | -1                       | -22 |               |                          |    |    |    |    |    |
| 30        | 999           | 999                      | 999 | -45           | -1                       | -20 |               |                          |    |    |    |    |    |
| 29        | 999           | 999                      | 999 | -45           | -1                       | -17 |               |                          |    |    |    |    |    |
| 28        | 999           | 999                      | 999 | -44           | -1                       | -15 |               |                          |    |    |    |    |    |
| 27        | 999           | 999                      | 999 | -45           | -1                       | -12 |               |                          |    |    |    |    |    |
| 26        | 999           | 999                      | 999 | -45           | 0                        | -11 |               |                          |    |    |    |    |    |

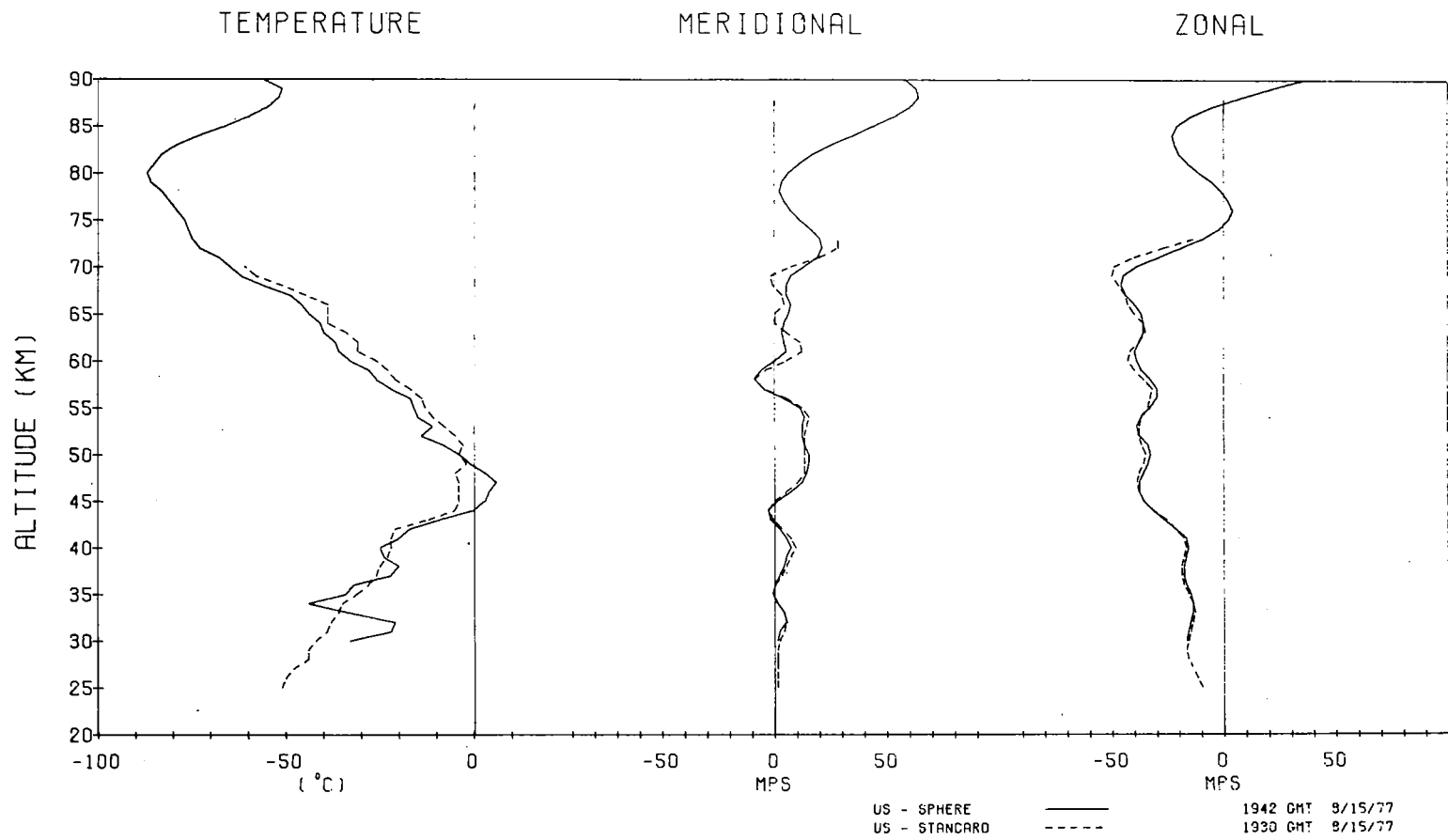
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| US - SPHERE<br>AUG 15 1977<br>1942 GMT |               |                          |     | US - STANDARD<br>AUG 15 1977<br>1930 GMT |               |                          |   | DIFFERENCES<br>STD-SPHERE |               |                          |     |    |
|--|---------------|--------------------------|-----|--|---------------|--------------------------|---|---------------------------|---------------|--------------------------|-----|----|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |                           | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    |
|  |               | NS S EW                  |     |  |               | NS S EW                  |   |                           |               | NS S EW                  |     |    |
|  |               | NS                       | S   | EW                                       |               | NS                       | S | EW                        |               | NS                       | S   | EW |
| 94                                     | -81           | -5                       | 65  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 93                                     | -76           | 13                       | 64  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 92                                     | -68           | 31                       | 59  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 91                                     | -62           | 46                       | 49  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 90                                     | -56           | 58                       | 36  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 89                                     | -51           | 63                       | 21  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 88                                     | -52           | 64                       | 7   | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 87                                     | -55           | 60                       | -6  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 86                                     | -60           | 53                       | -15 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 85                                     | -66           | 44                       | -21 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 84                                     | -73           | 35                       | -23 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 83                                     | -79           | 25                       | -22 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 82                                     | -83           | 17                       | -20 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 81                                     | -85           | 11                       | -16 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 80                                     | -87           | 6                        | -11 | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 79                                     | -86           | 3                        | -5  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 78                                     | -83           | 2                        | -1  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 77                                     | -81           | 4                        | 2   | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 76                                     | -79           | 7                        | 4   | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 75                                     | -77           | 11                       | 2   | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 74                                     | -76           | 16                       | -2  | 999                                      | 999           | 999                      |   |                           |               |                          |     |    |
| 73                                     | -75           | 20                       | -9  | 999                                      | 28            | -13                      |   |                           |               | 8                        | -4  |    |
| 72                                     | -73           | 21                       | -19 | 999                                      | 28            | -27                      |   |                           |               | 7                        | -8  |    |
| 71                                     | -68           | 19                       | -29 | 999                                      | 20            | -40                      |   |                           |               | 1                        | -11 |    |
| 70                                     | -65           | 13                       | -39 | -61                                      | 7             | -49                      |   |                           | 4             | -6                       | -10 |    |
| 69                                     | -62           | 7                        | -45 | -58                                      | -2            | -50                      |   |                           | 4             | -9                       | -5  |    |
| 68                                     | -56           | 5                        | -46 | -51                                      | -1            | -47                      |   |                           | 5             | -6                       | -1  |    |
| 67                                     | -49           | 5                        | -44 | -45                                      | 3             | -44                      |   |                           | 4             | -2                       | 0   |    |
| 66                                     | -46           | 7                        | -40 | -39                                      | 4             | -43                      |   |                           | 7             | -3                       | -3  |    |
| 65                                     | -44           | 6                        | -37 | -39                                      | 0             | -40                      |   |                           | 5             | -6                       | -3  |    |
| 64                                     | -41           | 4                        | -36 | -39                                      | 0             | -36                      |   |                           | 2             | -4                       | 0   |    |
| 63                                     | -40           | 3                        | -36 | -34                                      | 5             | -35                      |   |                           | 6             | 2                        | 1   |    |
| 62                                     | -37           | 4                        | -38 | -31                                      | 11            | -38                      |   |                           | 6             | 7                        | 0   |    |
| 61                                     | -36           | 5                        | -40 | -31                                      | 12            | -42                      |   |                           | 5             | 7                        | -2  |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|---|----|---------------|--------------------------|----|----|
|           |               | NS S EW                  |     |     |               | NS S EW                  |   |    |               | NS S EW                  |    |    |
|           |               | NS                       | S   | EW  |               | NS                       | S | EW |               | NS                       | S  | EW |
| 60        | -33           | 0                        | -39 | -26 | 5             | -43                      |   |    |               | 7                        | 5  | -4 |
| 59        | -28           | -6                       | -37 | -23 | -4            | -40                      |   |    |               | 5                        | 2  | -3 |
| 58        | -26           | -9                       | -33 | -21 | -9            | -36                      |   |    |               | 5                        | 0  | -3 |
| 57        | -22           | -5                       | -30 | -17 | -5            | -32                      |   |    |               | 5                        | 0  | -2 |
| 56        | -17           | 4                        | -30 | -14 | 5             | -33                      |   |    |               | 3                        | 1  | -3 |
| 55        | -16           | 11                       | -33 | -13 | 12            | -34                      |   |    |               | 3                        | 1  | -1 |
| 54        | -15           | 13                       | -37 | -11 | 15            | -37                      |   |    |               | 4                        | 2  | 0  |
| 53        | -11           | 12                       | -39 | -8  | 14            | -38                      |   |    |               | 3                        | 2  | 1  |
| 52        | -14           | 12                       | -38 | -5  | 13            | -38                      |   |    |               | 9                        | 1  | 0  |
| 51        | -8            | 13                       | -34 | -3  | 13            | -37                      |   |    |               | 5                        | 0  | -3 |
| 50        | -4            | 15                       | -33 | -4  | 13            | -35                      |   |    |               | 0                        | -2 | -2 |
| 49        | -1            | 15                       | -34 | -2  | 13            | -36                      |   |    |               | -1                       | -2 | -2 |
| 48        | 3             | 14                       | -36 | -5  | 13            | -38                      |   |    |               | -8                       | -1 | -2 |
| 47        | 6             | 12                       | -38 | -4  | 10            | -39                      |   |    |               | -10                      | -2 | -1 |
| 46        | 4             | 7                        | -38 | -4  | 5             | -38                      |   |    |               | -8                       | -2 | 0  |
| 45        | 3             | 1                        | -36 | -4  | 0             | -36                      |   |    |               | -7                       | -1 | 0  |
| 44        | 0             | -3                       | -32 | -5  | -3            | -32                      |   |    |               | -5                       | 0  | 0  |
| 43        | -9            | -2                       | -27 | -12 | -1            | -26                      |   |    |               | -3                       | 1  | 1  |
| 42        | -17           | 2                        | -22 | -21 | 3             | -22                      |   |    |               | -4                       | 1  | 0  |
| 41        | -20           | 5                        | -17 | -22 | 7             | -18                      |   |    |               | -2                       | 2  | -1 |
| 40        | -25           | 7                        | -16 | -22 | 9             | -17                      |   |    |               | 3                        | 2  | -1 |
| 39        | -24           | 5                        | -17 | -23 | 7             | -18                      |   |    |               | 1                        | 2  | -1 |
| 38        | -20           | 4                        | -18 | -25 | 5             | -19                      |   |    |               | -5                       | 1  | -1 |
| 37        | -22           | 2                        | -18 | -26 | 3             | -19                      |   |    |               | -4                       | 1  | -1 |
| 36        | -32           | 0                        | -17 | -28 | 0             | -18                      |   |    |               | 4                        | 0  | -1 |
| 35        | -34           | -1                       | -15 | -31 | -1            | -16                      |   |    |               | 3                        | 0  | -1 |
| 34        | -44           | 1                        | -14 | -35 | 1             | -14                      |   |    |               | 9                        | 0  | 0  |
| 33        | -33           | 4                        | -14 | -36 | 4             | -13                      |   |    |               | -3                       | 0  | 1  |
| 32        | -21           | 5                        | -15 | -38 | 5             | -14                      |   |    |               | -17                      | 0  | 1  |
| 31        | -22           | 2                        | -16 | -39 | 4             | -15                      |   |    |               | -17                      | 2  | 1  |
| 30        | -33           | 1                        | -17 | -42 | 2             | -16                      |   |    |               | -9                       | 1  | 1  |
| 29        | 999           | 999                      | 999 | -44 | 1             | -17                      |   |    |               |                          |    |    |
| 28        | 999           | 999                      | 999 | -44 | 1             | -16                      |   |    |               |                          |    |    |
| 27        | 999           | 999                      | 999 | -48 | 1             | -14                      |   |    |               |                          |    |    |

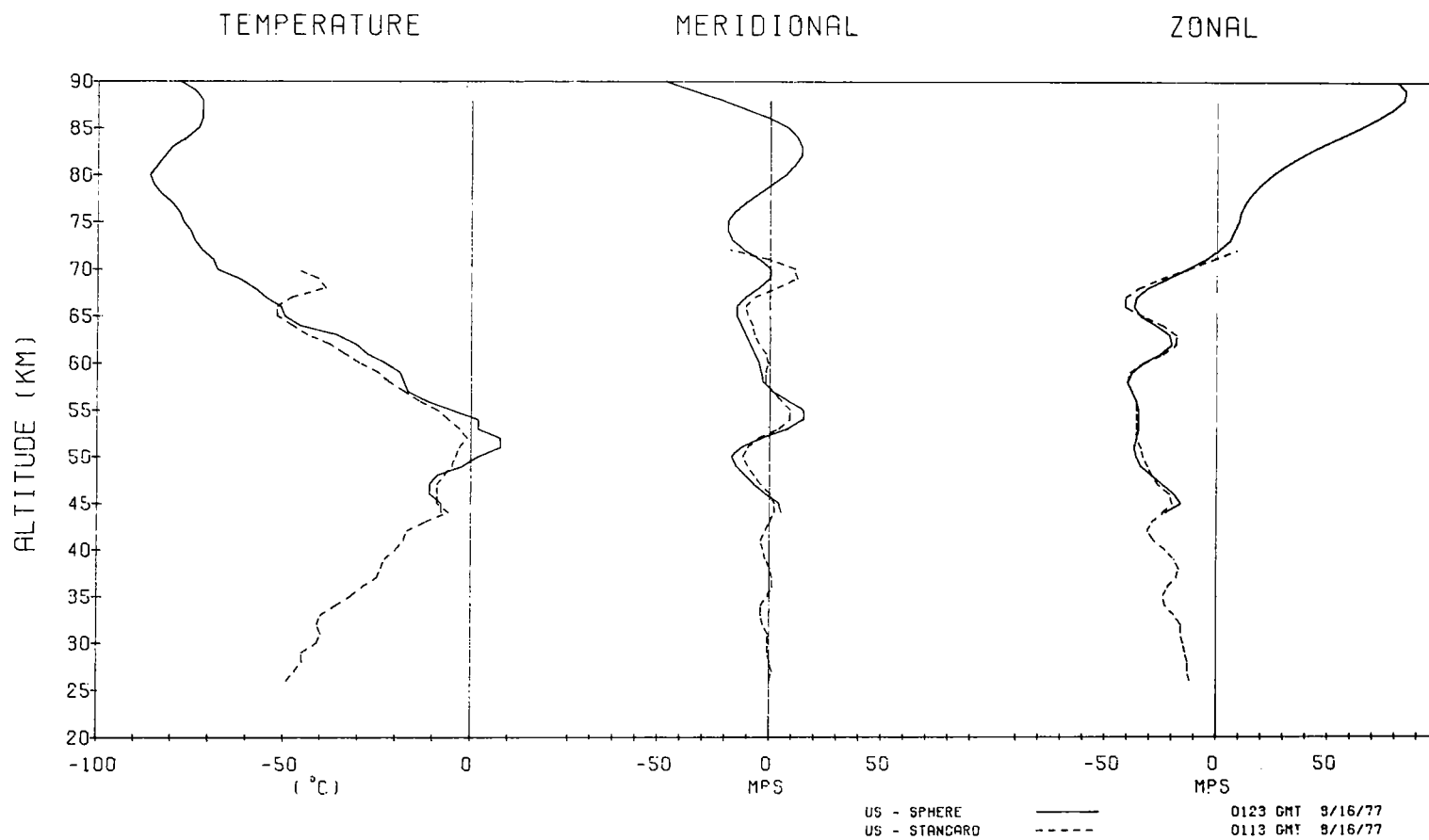
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|     |       | US - SPHERE<br>AUG 16 1977<br>0123 GMT |     |    | US - STANDARD<br>AUG 16 1977<br>0113 GMT |                 |     | DIFFERENCES<br>STD-SPHERL |       |                 |     |    |    |
|-----|-------|--|-----|----|--|-----------------|-----|---------------------------|-------|-----------------|-----|----|----|
| ALT | TEMP  | COMPONENT WINDS                        |     |    | TEMP                                     | COMPONENT WINDS |     |                           | TEMP  | COMPONENT WINDS |     |    |    |
|     |       | -1                                     |     |    |  | -1              |     |                           |       | -1              |     |    |    |
| KM  | DEG C | NS                                     | M S | EW | DEG C                                    | NS              | M S | EW                        | DEG C | NS              | M S | EW |    |
|     |       |  |     |    |  |                 |     |                           |       |                 |     |    | 93 |
| 92  | -85   | -65                                    | 63  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 91  | -82   | -57                                    | 74  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 90  | -78   | -47                                    | 81  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 89  | -74   | -35                                    | 85  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 88  | -72   | -22                                    | 84  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 87  | -72   | -11                                    | 79  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 86  | -72   | 0                                      | 72  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 85  | -73   | 8                                      | 64  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 84  | -76   | 12                                     | 55  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 83  | -80   | 14                                     | 46  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 82  | -82   | 14                                     | 38  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 81  | -84   | 11                                     | 31  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 80  | -86   | 7                                      | 25  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 79  | -85   | 1                                      | 20  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 78  | -83   | -5                                     | 16  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 77  | -80   | -11                                    | 13  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 76  | -78   | -16                                    | 11  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 75  | -77   | -19                                    | 10  |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 74  | -75   | -19                                    | 8   |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 73  | -74   | -17                                    | 6   |    | 999                                      | 999             | 999 |                           |       |                 |     |    |    |
| 72  | -72   | -12                                    | 1   |    | 999                                      | -18             | 9   |                           |       |                 | -6  | 8  |    |
| 71  | -69   | -5                                     | -5  |    | 999                                      | -1              | -2  |                           |       |                 | 4   | 3  |    |
| 70  | -68   | 0                                      | -13 |    | -47                                      | 11              | -13 |                           |       |                 | 21  | 11 | 0  |
| 69  | -62   | 0                                      | -22 |    | -41                                      | 12              | -25 |                           |       |                 | 21  | 12 | -3 |
| 68  | -58   | -5                                     | -31 |    | -39                                      | 3               | -35 |                           |       |                 | 19  | 8  | -4 |
| 67  | -55   | -11                                    | -36 |    | -48                                      | -7              | -41 |                           |       |                 | 7   | 4  | -5 |
| 66  | -51   | -15                                    | -37 |    | -52                                      | -11             | -41 |                           |       |                 | -1  | 4  | -4 |
| 65  | -50   | -15                                    | -34 |    | -52                                      | -10             | -33 |                           |       |                 | -2  | 5  | 1  |
| 64  | -46   | -13                                    | -27 |    | -48                                      | -8              | -24 |                           |       |                 | -2  | 5  | 3  |
| 63  | -36   | -11                                    | -21 |    | -44                                      | -7              | -18 |                           |       |                 | -8  | 4  | 3  |
| 62  | -31   | -9                                     | -20 |    | -38                                      | -5              | -18 |                           |       |                 | -7  | 4  | 2  |
| 61  | -28   | -7                                     | -25 |    | -34                                      | -2              | -24 |                           |       |                 | -6  | 5  | 1  |
| 60  | -23   | -5                                     | -33 |    | -30                                      | -1              | -33 |                           |       |                 | -7  | 4  | 0  |

| ALT | TEMP  | COMPONENT WINDS |     |    | TEMP  | COMPONENT WINDS |     |    | TEMP  | COMPONENT WINDS |     |    |    |
|-----|-------|-----------------|-----|----|-------|-----------------|-----|----|-------|-----------------|-----|----|----|
|     |       | -1              |     |    |       | -1              |     |    |       | -1              |     |    |    |
| KM  | DEG C | NS              | M S | EW | DEG C | NS              | M S | EW | DEG C | NS              | M S | EW |    |
|     |       |                 |     |    |       |                 |     |    |       |                 |     |    | 59 |
| 58  | -18   | -3              | -40 |    | -22   | -2              | -40 |    |       |                 | -4  | 1  | 0  |
| 57  | -17   | 1               | -38 |    | -18   | 1               | -38 |    |       |                 | -1  | 0  | 0  |
| 56  | -12   | 8               | -36 |    | -14   | 5               | -36 |    |       |                 | -2  | -3 | 0  |
| 55  | -5    | 15              | -35 |    | -9    | 9               | -36 |    |       |                 | -4  | -6 | -1 |
| 54  | 2     | 15              | -35 |    | -6    | 9               | -36 |    |       |                 | -8  | -6 | -1 |
| 53  | 2     | 8               | -35 |    | -3    | 4               | -36 |    |       |                 | -5  | -4 | -1 |
| 52  | 8     | -4              | -36 |    | -1    | -5              | -36 |    |       |                 | -9  | -1 | 0  |
| 51  | 8     | -13             | -37 |    | -3    | -10             | -34 |    |       |                 | -11 | 3  | 3  |
| 50  | 2     | -17             | -36 |    | -4    | -12             | -33 |    |       |                 | -6  | 5  | 3  |
| 49  | -2    | -15             | -34 |    | -5    | -10             | -31 |    |       |                 | -3  | 5  | 3  |
| 48  | -9    | -11             | -29 |    | -7    | -7              | -29 |    |       |                 | 2   | 4  | 0  |
| 47  | -11   | -7              | -24 |    | -9    | -4              | -26 |    |       |                 | 2   | 3  | -2 |
| 46  | -11   | -2              | -19 |    | -9    | 0               | -21 |    |       |                 | 2   | 2  | -2 |
| 45  | -8    | 4               | -16 |    | -9    | 2               | -20 |    |       |                 | -1  | -2 | -4 |
| 44  | -8    | 5               | -23 |    | -6    | 2               | -24 |    |       |                 | 2   | -3 | -1 |
| 43  | 999   | 999             | 999 |    | -12   | 0               | -29 |    |       |                 |     |    |    |
| 42  | 999   | 999             | 999 |    | -17   | -2              | -31 |    |       |                 |     |    |    |
| 41  | 999   | 999             | 999 |    | -18   | -4              | -28 |    |       |                 |     |    |    |
| 40  | 999   | 999             | 999 |    | -20   | -3              | -23 |    |       |                 |     |    |    |
| 39  | 999   | 999             | 999 |    | -23   | -2              | -19 |    |       |                 |     |    |    |
| 38  | 999   | 999             | 999 |    | -24   | 0               | -17 |    |       |                 |     |    |    |
| 37  | 999   | 999             | 999 |    | -25   | 1               | -18 |    |       |                 |     |    |    |
| 36  | 999   | 999             | 999 |    | -29   | 1               | -22 |    |       |                 |     |    |    |
| 35  | 999   | 999             | 999 |    | -32   | -1              | -24 |    |       |                 |     |    |    |
| 34  | 999   | 999             | 999 |    | -36   | -4              | -23 |    |       |                 |     |    |    |
| 33  | 999   | 999             | 999 |    | -40   | -4              | -19 |    |       |                 |     |    |    |
| 32  | 999   | 999             | 999 |    | -41   | -3              | -16 |    |       |                 |     |    |    |
| 31  | 999   | 999             | 999 |    | -40   | -1              | -16 |    |       |                 |     |    |    |
| 30  | 999   | 999             | 999 |    | -41   | -1              | -15 |    |       |                 |     |    |    |
| 29  | 999   | 999             | 999 |    | -45   | -1              | -14 |    |       |                 |     |    |    |
| 28  | 999   | 999             | 999 |    | -45   | 0               | -13 |    |       |                 |     |    |    |
| 27  | 999   | 999             | 999 |    | -47   | 1               | -13 |    |       |                 |     |    |    |
| 26  | 999   | 999             | 999 |    | -49   | 0               | -12 |    |       |                 |     |    |    |

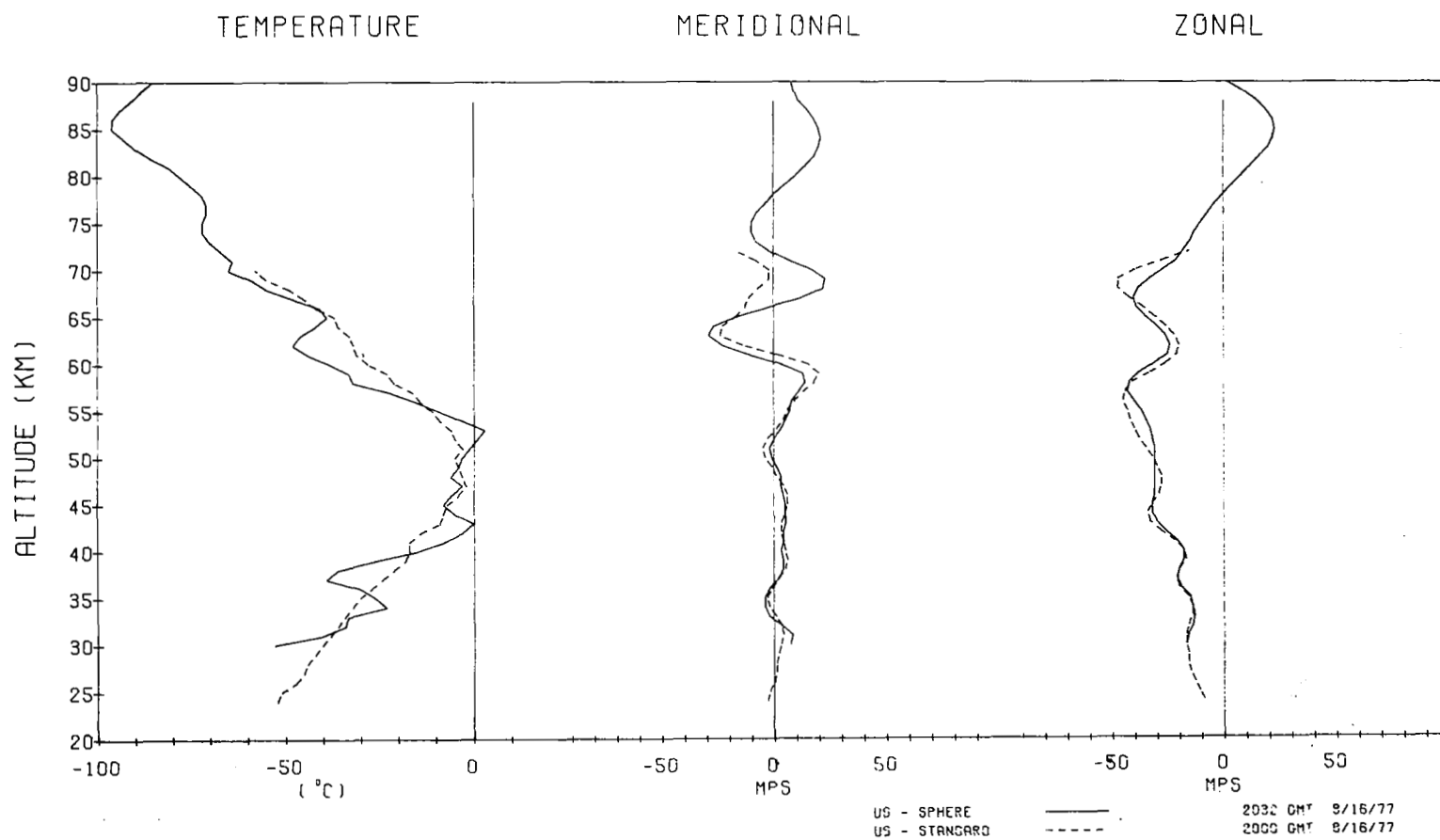
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| ALT | US - SPHERE<br>AUG 16 1977<br>2032 GMT |                          |     |     | US - STANDARD<br>AUG 16 1977<br>2000 GMT |                          |   |    | DIFFERENCES<br>STD-SPHERE |         |   |     |  |
|-----|--|--------------------------|-----|-----|--|--------------------------|---|----|---------------------------|---------|---|-----|--|
|     | TEMP<br>DEG C                          | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |   |    | COMPONENT<br>WINDS<br>-1  |         |   |     |  |
|     |  | NS S EW                  |     |     |  | NS S EW                  |   |    | DEG C                     | NS S EW |   |     |  |
|     |  | NS                       | S   | EW  |  | NS                       | S | EW |                           | NS      | S | EW  |  |
| 94  | -86                                    | 9                        | -22 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 93  | -83                                    | 8                        | -18 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 92  | -81                                    | 7                        | -13 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 91  | -81                                    | 7                        | -6  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 90  | -85                                    | 8                        | 2   | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 89  | -88                                    | 9                        | 9   | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 88  | -91                                    | 11                       | 15  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 87  | -94                                    | 15                       | 19  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 86  | -96                                    | 18                       | 22  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 85  | -96                                    | 20                       | 23  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 84  | -93                                    | 21                       | 22  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 83  | -90                                    | 20                       | 20  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 82  | -86                                    | 18                       | 16  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 81  | -81                                    | 14                       | 12  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 80  | -78                                    | 10                       | 8   | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 79  | -75                                    | 5                        | 4   | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 78  | -72                                    | 0                        | 0   | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 77  | -71                                    | -4                       | -4  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 76  | -71                                    | -8                       | -7  | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 75  | -72                                    | -10                      | -10 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 74  | -72                                    | -10                      | -13 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 73  | -70                                    | -8                       | -15 | 999 | 999                                      | 999                      |   |    |                           |         |   |     |  |
| 72  | -67                                    | -2                       | -18 | 999 | -17                                      | -15                      |   |    |                           | -15     |   | 3   |  |
| 71  | -64                                    | 7                        | -21 | 999 | -8                                       | -27                      |   |    |                           | -15     |   | -6  |  |
| 70  | -65                                    | 17                       | -27 | -58 | -2                                       | -39                      |   |    | 7                         | -19     |   | -12 |  |
| 69  | -59                                    | 23                       | -33 | -55 | -2                                       | -47                      |   |    | 4                         | -25     |   | -14 |  |
| 68  | -55                                    | 22                       | -38 | -49 | -7                                       | -47                      |   |    | 6                         | -29     |   | -9  |  |
| 67  | -48                                    | 12                       | -40 | -45 | -11                                      | -42                      |   |    | 3                         | -23     |   | -2  |  |
| 66  | -41                                    | -3                       | -39 | -42 | -13                                      | -36                      |   |    | -1                        | -10     |   | 3   |  |
| 65  | -39                                    | -17                      | -35 | -37 | -17                                      | -31                      |   |    | 2                         | 0       |   | 4   |  |
| 64  | -42                                    | -27                      | -30 | -36 | -23                                      | -26                      |   |    | 6                         | 4       |   | 4   |  |
| 63  | -46                                    | -29                      | -26 | -33 | -24                                      | -22                      |   |    | 13                        | 5       |   | 4   |  |
| 62  | -48                                    | -23                      | -24 | -32 | -14                                      | -20                      |   |    | 16                        | 9       |   | 4   |  |
| 61  | -44                                    | -11                      | -25 | -31 | 1  | -21                      |   |    | 13                        | 12      |   | 4   |  |

| ALT | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |
|-----|---------------|--------------------------|-----|-----|---------------|--------------------------|-----|----|---------------|--------------------------|---|----|
|     |               | NS S EW                  |     |     |               | NS S EW                  |     |    |               | NS S EW                  |   |    |
|     |               | NS                       | S   | EW  |               | NS                       | S   | EW |               | NS                       | S | EW |
|     |               | NS                       | S   | EW  |               | NS                       | S   | EW |               | NS                       | S | EW |
| 60  | -38           | 3                        | -31 | -28 | 15            | -26                      | 10  | 12 | 5             |                          |   |    |
| 59  | -33           | 13                       | -38 | -23 | 20            | -33                      | 10  | 7  | 5             |                          |   |    |
| 58  | -32           | 14                       | -42 | -21 | 18            | -41                      | 11  | 4  | 1             |                          |   |    |
| 57  | -22           | 11                       | -43 | -16 | 13            | -44                      | 6   | 2  | -1            |                          |   |    |
| 56  | -15           | 8                        | -40 | -14 | 9             | -45                      | 1   | 1  | -5            |                          |   |    |
| 55  | -9            | 7                        | -37 | -11 | 6             | -43                      | -2  | -1 | -6            |                          |   |    |
| 54  | -3            | 5                        | -35 | -9  | 4             | -42                      | -6  | -1 | -7            |                          |   |    |
| 53  | 3             | 3                        | -33 | -6  | 1             | -40                      | -9  | -2 | -7            |                          |   |    |
| 52  | 1             | 0                        | -32 | -5  | -3            | -38                      | -6  | -3 | -6            |                          |   |    |
| 51  | -1            | -2                       | -31 | -3  | -5            | -35                      | -2  | -3 | -4            |                          |   |    |
| 50  | -3            | -1                       | -31 | -5  | -4            | -32                      | -2  | -3 | -1            |                          |   |    |
| 49  | -4            | 1                        | -31 | -4  | -1            | -30                      | 0   | -2 | 1             |                          |   |    |
| 48  | -6            | 3                        | -31 | -3  | 1             | -28                      | 3   | -2 | 3             |                          |   |    |
| 47  | -3            | 3                        | -31 | -2  | 4             | -28                      | 1   | 1  | 3             |                          |   |    |
| 46  | -6            | 4                        | -31 | -4  | 6             | -29                      | 2   | 2  | 2             |                          |   |    |
| 45  | -8            | 5                        | -32 | -7  | 6             | -32                      | 1   | 1  | 0             |                          |   |    |
| 44  | -5            | 5                        | -32 | -8  | 5             | -34                      | -3  | 0  | -2            |                          |   |    |
| 43  | 0             | 5                        | -30 | -9  | 3             | -33                      | -9  | -2 | -3            |                          |   |    |
| 42  | -3            | 4                        | -26 | -14 | 3             | -28                      | -11 | -1 | -2            |                          |   |    |
| 41  | -8            | 4                        | -21 | -17 | 4             | -22                      | -9  | 0  | -1            |                          |   |    |
| 40  | -15           | 3                        | -18 | -17 | 5             | -18                      | -2  | 2  | 0             |                          |   |    |
| 39  | -26           | 4                        | -18 | -18 | 6             | -17                      | 8   | 2  | 1             |                          |   |    |
| 38  | -36           | 4                        | -20 | -21 | 5             | -20                      | 15  | 1  | 0             |                          |   |    |
| 37  | -39           | 2                        | -21 | -24 | 2             | -21                      | 15  | 0  | 0             |                          |   |    |
| 36  | -30           | -2                       | -19 | -27 | -1            | -20                      | 3   | 1  | -1            |                          |   |    |
| 35  | -26           | -4                       | -15 | -30 | -3            | -16                      | -4  | 1  | -1            |                          |   |    |
| 34  | -23           | -4                       | -14 | -32 | -2            | -14                      | -9  | 2  | 0             |                          |   |    |
| 33  | -33           | -2                       | -13 | -34 | 1             | -14                      | -1  | 3  | -1            |                          |   |    |
| 32  | -34           | 3                        | -14 | -36 | 3             | -16                      | -2  | 0  | -2            |                          |   |    |
| 31  | -40           | 8                        | -16 | -38 | 4             | -17                      | 2   | -4 | -1            |                          |   |    |
| 30  | -53           | 7                        | -17 | -40 | 3             | -17                      | 13  | -4 | 0             |                          |   |    |
| 29  | 999           | 999                      | 999 | -42 | 2             | -16                      |     |    |               |                          |   |    |
| 28  | 999           | 999                      | 999 | -44 | 1             | -16                      |     |    |               |                          |   |    |
| 27  | 999           | 999                      | 999 | -45 | 1             | -15                      |     |    |               |                          |   |    |

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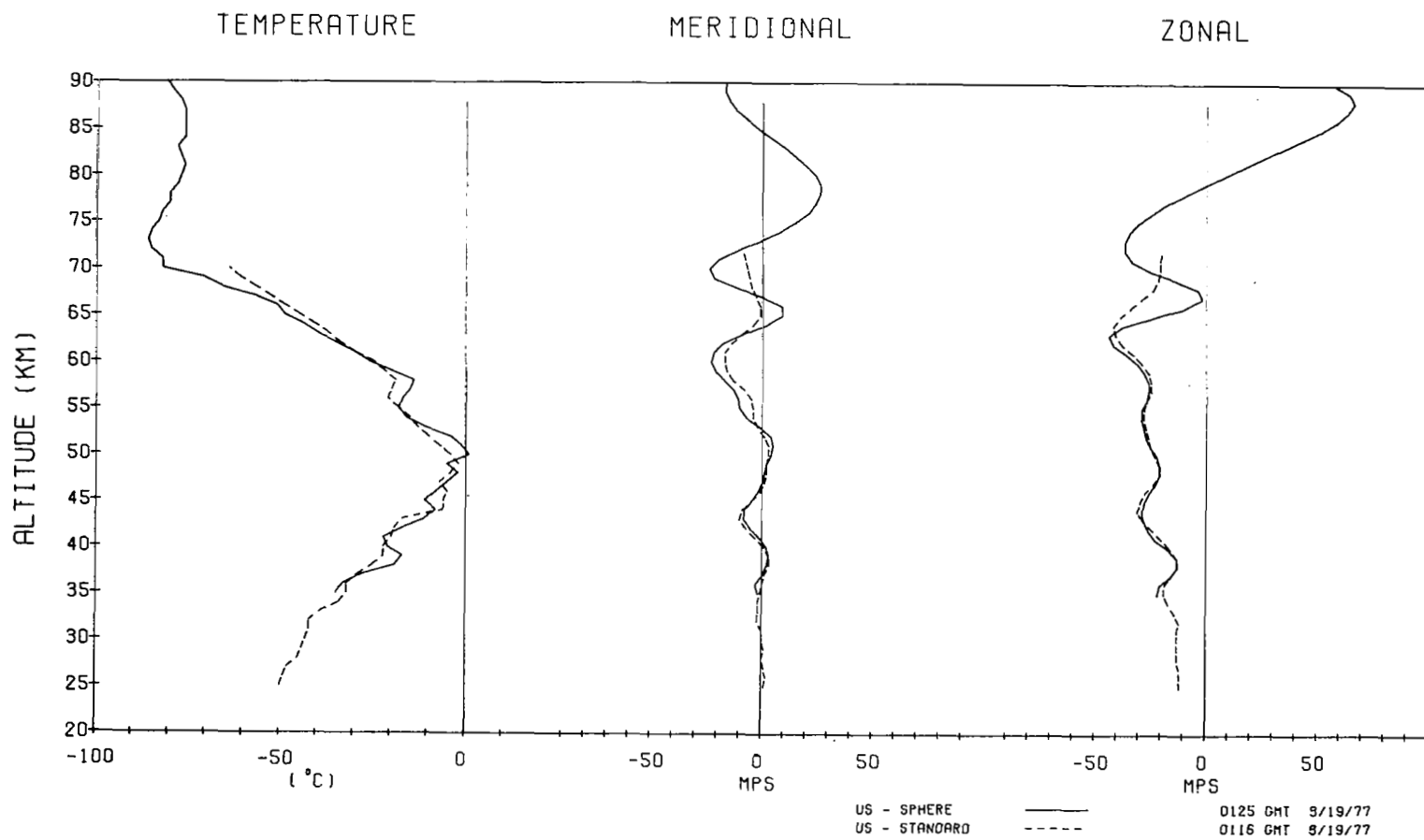




| US - SPHERE<br>AUG 19 1977<br>0125 GMT |               |                          |     | US - STANDARD<br>AUG 19 1977<br>0116 GMT |                          |     |               | DIFFERENCLS<br>STD-SPHERE |     |  |  |
|--|---------------|--------------------------|-----|--|--------------------------|-----|---------------|---------------------------|-----|--|--|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1  |     |  |  |
|  |               | NS                       | EW  |  | NS                       | EW  |               | NS                        | EW  |  |  |
| 93                                     | -83           | -1                       | 17  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 92                                     | -82           | -9                       | 33  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 91                                     | -81           | -15                      | 47  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 90                                     | -81           | -17                      | 57  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 89                                     | -79           | -17                      | 64  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 88                                     | -77           | -15                      | 66  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 87                                     | -76           | -12                      | 63  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 86                                     | -76           | -7                       | 58  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 85                                     | -76           | -2                       | 51  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 84                                     | -76           | 4                        | 42  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 83                                     | -78           | 10                       | 33  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 82                                     | -77           | 15                       | 24  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 81                                     | -76           | 20                       | 15  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 80                                     | -77           | 24                       | 6   | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 79                                     | -78           | 26                       | -3  | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 78                                     | -80           | 26                       | -11 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 77                                     | -80           | 24                       | -19 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 76                                     | -82           | 21                       | -25 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 75                                     | -83           | 15                       | -31 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 74                                     | -85           | 8                        | -35 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 73                                     | -86           | -1                       | -37 | 999                                      | 999                      | 999 |               |                           |     |  |  |
| 72                                     | -85           | -11                      | -37 | 999                                      | -9                       | -20 |               | 2                         | 17  |  |  |
| 71                                     | -82           | -20                      | -34 | 999                                      | -8                       | -21 |               | 12                        | 13  |  |  |
| 70                                     | -82           | -24                      | -26 | -64                                      | -7                       | -21 | 18            | 17                        | 5   |  |  |
| 69                                     | -71           | -22                      | -14 | -61                                      | -6                       | -22 | 10            | 16                        | -8  |  |  |
| 68                                     | -66           | -12                      | -4  | -57                                      | -5                       | -24 | 9             | 7                         | -20 |  |  |
| 67                                     | -57           | 0                        | -2  | -53                                      | -3                       | -29 | 4             | -3                        | -27 |  |  |
| 66                                     | -51           | 9                        | -10 | -49                                      | -1                       | -34 | 2             | -10                       | -24 |  |  |
| 65                                     | -49           | 9                        | -24 | -45                                      | -1                       | -39 | 4             | -10                       | -15 |  |  |
| 64                                     | -44           | 2                        | -38 | -41                                      | -4                       | -42 | 3             | -6                        | -4  |  |  |
| 63                                     | -40           | -9                       | -44 | -37                                      | -9                       | -41 | 3             | 0                         | 3   |  |  |
| 62                                     | -35           | -18                      | -42 | -34                                      | -14                      | -38 | 1             | 4                         | 4   |  |  |
| 61                                     | -30           | -22                      | -36 | -30                                      | -17                      | -33 | 0             | 5                         | 3   |  |  |
| 60                                     | -26           | -23                      | -31 | -25                                      | -17                      | -29 | 1             | 6                         | 2   |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 59        | -20           | -21                      | -28 | -22           | -16                      | -26 | -2            | 5                        | 2  |
| 58        | -14           | -17                      | -26 | -19           | -13                      | -25 | -5            | 4                        | 1  |
| 57        | -15           | -13                      | -26 | -20           | -8                       | -25 | -5            | 5                        | 1  |
| 56        | -17           | -11                      | -27 | -21           | -5                       | -27 | -4            | 6                        | 0  |
| 55        | -18           | -10                      | -29 | -18           | -4                       | -28 | 0             | 6                        | 1  |
| 54        | -16           | -7                       | -29 | -15           | -4                       | -28 | 1             | 3                        | 1  |
| 53        | -11           | -1                       | -28 | -13           | -2                       | -27 | -2            | -1                       | 1  |
| 52        | -4            | 4                        | -27 | -10           | 1                        | -26 | -6            | -3                       | 1  |
| 51        | -1            | 5                        | -25 | -7            | 3                        | -25 | -6            | -2                       | 0  |
| 50        | 1             | 4                        | -22 | -4            | 3                        | -23 | -5            | -1                       | -1 |
| 49        | -5            | 2                        | -21 | -2            | 2                        | -21 | 3             | 0                        | 0  |
| 48        | -2            | 1                        | -21 | -4            | 2                        | -21 | -2            | 1                        | 0  |
| 47        | -5            | 0                        | -23 | -7            | 1                        | -24 | -2            | 1                        | -1 |
| 46        | -8            | -2                       | -26 | -5            | -1                       | -28 | 3             | 1                        | -2 |
| 45        | -11           | -5                       | -28 | -6            | -5                       | -30 | 5             | 0                        | -2 |
| 44        | -8            | -8                       | -29 | -6            | -9                       | -31 | 2             | -1                       | -2 |
| 43        | -11           | -8                       | -28 | -17           | -10                      | -28 | -6            | -2                       | 0  |
| 42        | -17           | -5                       | -26 | -19           | -7                       | -24 | -2            | -2                       | 2  |
| 41        | -22           | -1                       | -23 | -20           | -3                       | -20 | 2             | -2                       | 3  |
| 40        | -21           | 2                        | -17 | -22           | 1                        | -16 | -1            | -1                       | 1  |
| 39        | -17           | 3                        | -13 | -22           | 3                        | -13 | -5            | 0                        | 0  |
| 38        | -19           | 2                        | -13 | -25           | 3                        | -13 | -6            | 1                        | 0  |
| 37        | -28           | 0                        | -16 | -29           | 1                        | -16 | -1            | 1                        | 0  |
| 36        | -33           | -3                       | -21 | -32           | 0                        | -19 | 1             | 3                        | 2  |
| 35        | -35           | -2                       | -22 | -32           | -1                       | -19 | 3             | 1                        | 3  |
| 34        | 999           | 999                      | 999 | -34           | -2                       | -17 |               |                          |    |
| 33        | 999           | 999                      | 999 | -39           | -2                       | -14 |               |                          |    |
| 32        | 999           | 999                      | 999 | -42           | -2                       | -12 |               |                          |    |
| 31        | 999           | 999                      | 999 | -42           | 0                        | -13 |               |                          |    |
| 30        | 999           | 999                      | 999 | -43           | 0                        | -13 |               |                          |    |
| 29        | 999           | 999                      | 999 | -44           | 1                        | -13 |               |                          |    |
| 28        | 999           | 999                      | 999 | -45           | 0                        | -13 |               |                          |    |
| 27        | 999           | 999                      | 999 | -48           | 1                        | -12 |               |                          |    |
| 26        | 999           | 999                      | 999 | -49           | 2                        | -12 |               |                          |    |

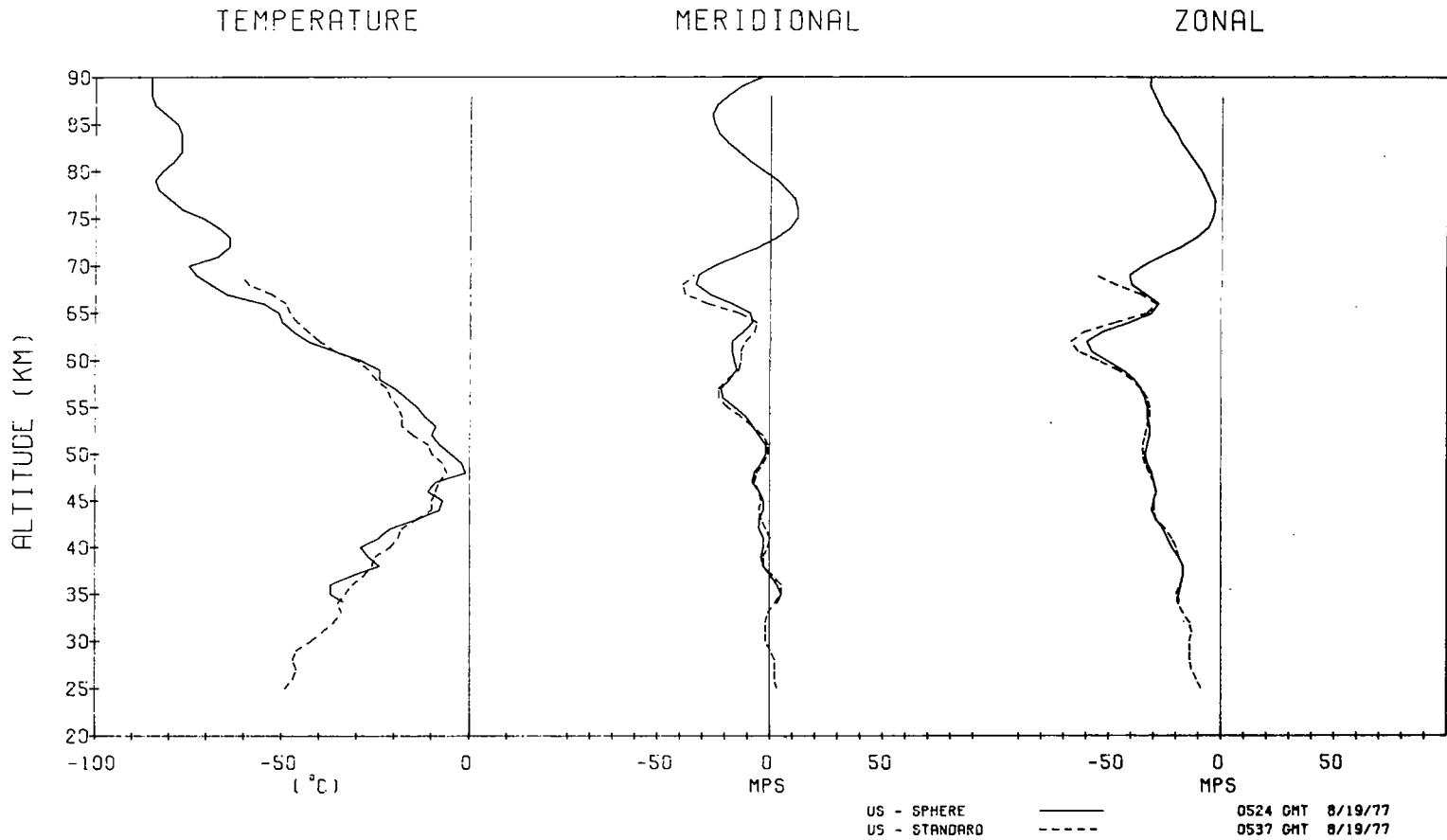
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| ALT<br>KM | US - SPHERE<br>AUG 19 1977<br>0524 GMT |                          |     | US - STANDARD<br>AUG 19 1977<br>0537 GMT |                          |     | DIFFERENCES<br>STD-SPHERE |                          |     |
|-----------|--|--------------------------|-----|--|--------------------------|-----|---------------------------|--------------------------|-----|
|           | TEMP<br>DEG C                          | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                            | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C             | COMPONENT<br>WINDS<br>-1 |     |
|           |  | NS                       | S   |  | NS                       | S   |                           | NS                       | S   |
| 94        | -80                                    | 23                       | -16 | 999                                      | 999                      | 999 |                           |                          |     |
| 93        | -81                                    | 20                       | -22 | 999                                      | 999                      | 999 |                           |                          |     |
| 92        | -81                                    | 13                       | -27 | 999                                      | 999                      | 999 |                           |                          |     |
| 91        | -82                                    | 5                        | -30 | 999                                      | 999                      | 999 |                           |                          |     |
| 90        | -85                                    | -4                       | -32 | 999                                      | 999                      | 999 |                           |                          |     |
| 89        | -85                                    | -13                      | -32 | 999                                      | 999                      | 999 |                           |                          |     |
| 88        | -85                                    | -19                      | -30 | 999                                      | 999                      | 999 |                           |                          |     |
| 87        | -84                                    | -24                      | -28 | 999                                      | 999                      | 999 |                           |                          |     |
| 86        | -81                                    | -26                      | -26 | 999                                      | 999                      | 999 |                           |                          |     |
| 85        | -78                                    | -25                      | -23 | 999                                      | 999                      | 999 |                           |                          |     |
| 84        | -77                                    | -23                      | -20 | 999                                      | 999                      | 999 |                           |                          |     |
| 83        | -77                                    | -19                      | -18 | 999                                      | 999                      | 999 |                           |                          |     |
| 82        | -77                                    | -14                      | -15 | 999                                      | 999                      | 999 |                           |                          |     |
| 81        | -79                                    | -9                       | -12 | 999                                      | 999                      | 999 |                           |                          |     |
| 80        | -82                                    | -3                       | -9  | 999                                      | 999                      | 999 |                           |                          |     |
| 79        | -84                                    | 3                        | -7  | 999                                      | 999                      | 999 |                           |                          |     |
| 78        | -83                                    | 7                        | -5  | 999                                      | 999                      | 999 |                           |                          |     |
| 77        | -80                                    | 11                       | -3  | 999                                      | 999                      | 999 |                           |                          |     |
| 76        | -77                                    | 12                       | -3  | 999                                      | 999                      | 999 |                           |                          |     |
| 75        | -71                                    | 12                       | -4  | 999                                      | 999                      | 999 |                           |                          |     |
| 74        | -67                                    | 9                        | -6  | 999                                      | 999                      | 999 |                           |                          |     |
| 73        | -64                                    | 3                        | -11 | 999                                      | 999                      | 999 |                           |                          |     |
| 72        | -64                                    | -5                       | -18 | 999                                      | 999                      | 999 |                           |                          |     |
| 71        | -67                                    | -15                      | -27 | 999                                      | 999                      | 999 |                           |                          |     |
| 70        | -75                                    | -25                      | -35 | 999                                      | 999                      | 999 |                           |                          |     |
| 69        | -73                                    | -32                      | -41 | -61                                      | -34                      | -56 | 12                        | -2                       | -15 |
| 68        | -69                                    | -33                      | -40 | -59                                      | -39                      | -47 | 10                        | -6                       | -7  |
| 67        | -65                                    | -27                      | -34 | -53                                      | -38                      | -36 | 12                        | -11                      | -2  |
| 66        | -55                                    | -17                      | -28 | -49                                      | -28                      | -29 | 6                         | -11                      | -1  |
| 65        | -51                                    | -9                       | -31 | -48                                      | -14                      | -33 | 3                         | -5                       | -2  |
| 64        | -50                                    | -8                       | -41 | -46                                      | -6                       | -47 | 4                         | 2                        | -6  |
| 63        | -47                                    | -12                      | -53 | -43                                      | -7                       | -61 | 4                         | 5                        | -8  |
| 62        | -43                                    | -17                      | -60 | -40                                      | -11                      | -67 | 3                         | 6                        | -7  |
| 61        | -36                                    | -17                      | -58 | -36                                      | -13                      | -64 | 0                         | 4                        | -6  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|-----|-----|
|           |               | NS                       | S   |               | NS                       | S   |               | NS                       | S   | EW  |
|           |               | 60                       | -29 |               | -16                      | -51 |               | -30                      | -13 | -55 |
| 59        | -24           | -15                      | -44 | -27           | -14                      | -46 | -3            | 1                        | -2  |     |
| 58        | -24           | -18                      | -39 | -25           | -19                      | -40 | -1            | -1                       | -1  |     |
| 57        | -20           | -22                      | -36 | -22           | -23                      | -36 | -2            | -1                       | 0   |     |
| 56        | -17           | -21                      | -34 | -21           | -23                      | -33 | -4            | -2                       | 1   |     |
| 55        | -14           | -16                      | -33 | -19           | -19                      | -32 | -5            | -3                       | 1   |     |
| 54        | -12           | -11                      | -33 | -18           | -13                      | -32 | -6            | -2                       | 1   |     |
| 53        | -9            | -8                       | -32 | -18           | -8                       | -33 | -9            | 0                        | -1  |     |
| 52        | -10           | -5                       | -32 | -15           | -3                       | -34 | -5            | 2                        | -2  |     |
| 51        | -8            | -2                       | -33 | -11           | -1                       | -35 | -3            | 1                        | -2  |     |
| 50        | -5            | -2                       | -34 | -10           | -1                       | -35 | -5            | 1                        | -1  |     |
| 49        | -2            | -4                       | -33 | -7            | -3                       | -34 | -5            | 1                        | -1  |     |
| 48        | -1            | -7                       | -31 | -6            | -6                       | -32 | -5            | 1                        | -1  |     |
| 47        | -9            | -8                       | -30 | -6            | -7                       | -30 | 1             | 1                        | 0   |     |
| 46        | -11           | -5                       | -29 | -9            | -5                       | -29 | 2             | 0                        | 0   |     |
| 45        | -7            | -3                       | -30 | -10           | -4                       | -30 | -3            | -1                       | 0   |     |
| 44        | -8            | -3                       | -31 | -10           | -5                       | -30 | -2            | -2                       | 1   |     |
| 43        | -14           | -5                       | -29 | -14           | -4                       | -29 | 0             | 1                        | 0   |     |
| 42        | -21           | -5                       | -26 | -18           | -2                       | -25 | 3             | 3                        | 1   |     |
| 41        | -24           | -3                       | -24 | -19           | 0                        | -22 | 5             | 3                        | 2   |     |
| 40        | -29           | -3                       | -22 | -21           | -1                       | -20 | 8             | 2                        | 2   |     |
| 39        | -27           | -4                       | -19 | -25           | -3                       | -19 | 2             | 1                        | 0   |     |
| 38        | -24           | -3                       | -17 | -26           | -3                       | -17 | -2            | 0                        | 0   |     |
| 37        | -31           | 0                        | -17 | -28           | 1                        | -17 | 3             | 1                        | 0   |     |
| 36        | -37           | 3                        | -18 | -31           | 5                        | -18 | 6             | 2                        | 0   |     |
| 35        | -37           | 5                        | -19 | -33           | 5                        | -20 | 4             | 0                        | -1  |     |
| 34        | -33           | 3                        | -19 | -35           | 2                        | -19 | -2            | -1                       | 0   |     |
| 33        | 999           | 999                      | 999 | -34           | -1                       | -17 |               |                          |     |     |
| 32        | 999           | 999                      | 999 | -36           | -2                       | -14 |               |                          |     |     |
| 31        | 999           | 999                      | 999 | -39           | -2                       | -13 |               |                          |     |     |
| 30        | 999           | 999                      | 999 | -42           | -2                       | -14 |               |                          |     |     |
| 29        | 999           | 999                      | 999 | -46           | 0                        | -14 |               |                          |     |     |
| 28        | 999           | 999                      | 999 | -47           | 2                        | -14 |               |                          |     |     |
| 27        | 999           | 999                      | 999 | -46           | 2                        | -13 |               |                          |     |     |

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## APPENDIX D

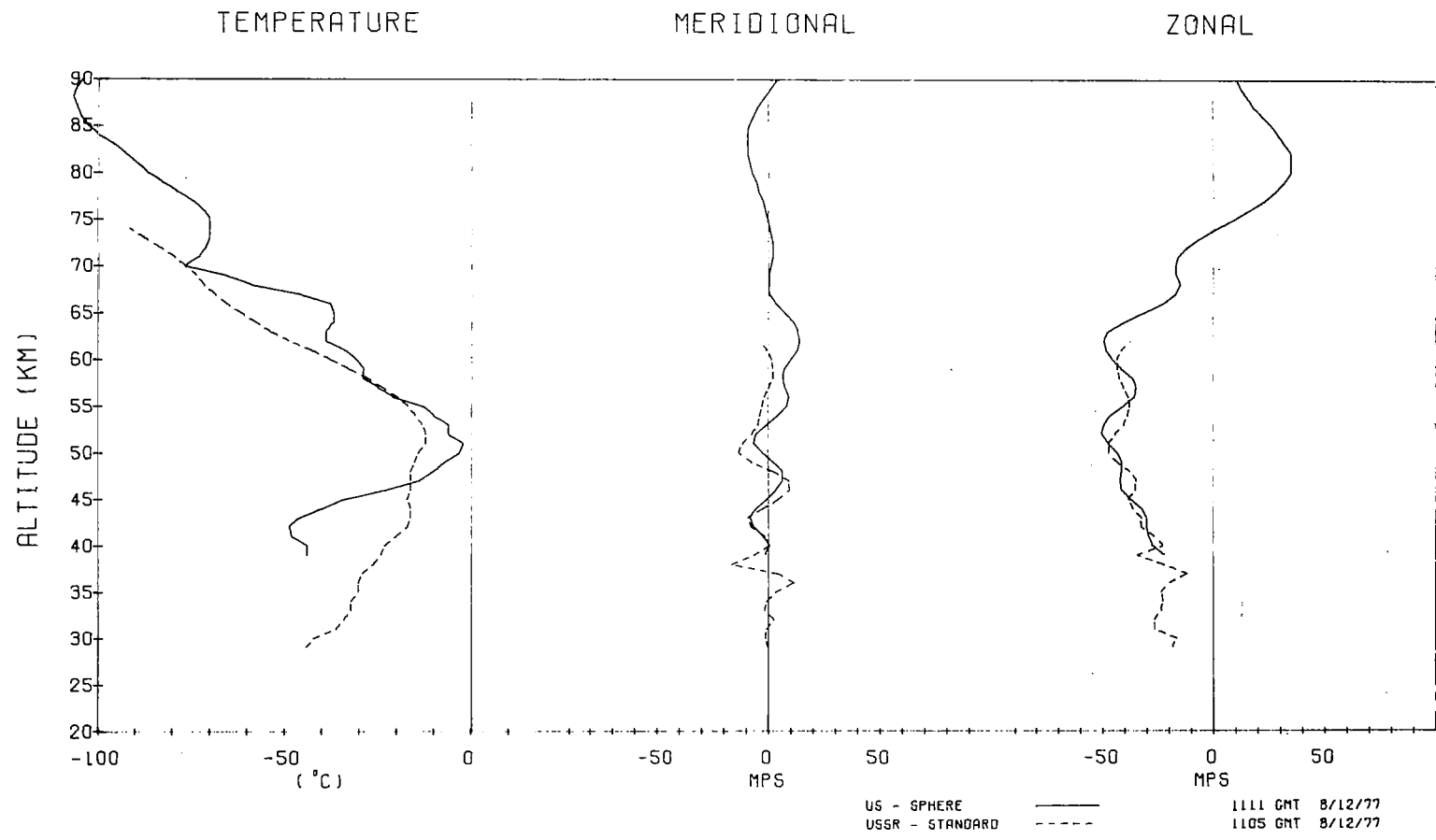
### LISTINGS AND PLOTS OF USSR(STANDARD) AND US(SPHERE) DATA

The data of Appendix D is similar to Appendix C except that data from the USSR(standard) technique is compared with the Sphere data.

|     |      | US - SPHERE<br>AUG 12 1977<br>1111 GMT |     |   | USSR - STANDARD<br>AUG 12 1977<br>1105 GMT |                          |     | DIFFERENCES<br>USSR-US |      |                          |    |    |
|-----|------|--|-----|---|--|--------------------------|-----|------------------------|------|--------------------------|----|----|
| ALT | TEMP | COMPONENT<br>WINDS<br>-1               |     |   | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP | COMPONENT<br>WINDS<br>-1 |    |    |
|     |      | DEG C                                  | M   | S |  | DEG C                    | M   | S                      |      | DEG C                    | M  | S  |
| KM  |      | NS                                     | EW  |   | NS   | EW                       |     | NS                     | EW   |                          | NS | EW |
| 93  | -90  | 13                                     | 2   |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 92  | -95  | 10                                     | 5   |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 91  | -100 | 8                                      | 8   |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 90  | -104 | 4                                      | 10  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 89  | -106 | 1                                      | 12  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 88  | -107 | -2                                     | 15  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 87  | -106 | -5                                     | 18  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 86  | -105 | -7                                     | 22  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 85  | -103 | -9                                     | 26  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 84  | -100 | -10                                    | 29  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 83  | -96  | -10                                    | 32  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 82  | -93  | -10                                    | 35  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 81  | -90  | -9                                     | 35  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 80  | -87  | -8                                     | 35  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 79  | -83  | -6                                     | 32  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 78  | -79  | -5                                     | 28  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 77  | -75  | -3                                     | 23  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 76  | -72  | -2                                     | 16  |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 75  | -70  | -1                                     | 9   |   | 999  | 999                      | 999 |                        |      |                          |    |    |
| 74  | -70  | 0                                      | 1   |   | -92  | 999                      | 999 | -22                    |      |                          |    |    |
| 73  | -70  | 1                                      | -6  |   | -86  | 999                      | 999 | -18                    |      |                          |    |    |
| 72  | -71  | 2                                      | -12 |   | -84  | 999                      | 999 | -13                    |      |                          |    |    |
| 71  | -73  | 2                                      | -16 |   | -80  | 999                      | 999 | -7                     |      |                          |    |    |
| 70  | -77  | 1                                      | -17 |   | -77  | 999                      | 999 | 0                      |      |                          |    |    |
| 69  | -66  | 0                                      | -17 |   | -74  | 999                      | 999 | -8                     |      |                          |    |    |
| 68  | -59  | 0                                      | -15 |   | -72  | 999                      | 999 | -13                    |      |                          |    |    |
| 67  | -46  | 0                                      | -17 |   | -69  | 999                      | 999 | -23                    |      |                          |    |    |
| 66  | -38  | 3                                      | -23 |   | -66  | 999                      | 999 | -28                    |      |                          |    |    |
| 65  | -37  | 7                                      | -32 |   | -62  | 999                      | 999 | -25                    |      |                          |    |    |
| 64  | -37  | 11                                     | -41 |   | -58  | 999                      | 999 | -21                    |      |                          |    |    |
| 63  | -39  | 13                                     | -48 |   | -54  | 999                      | 999 | -15                    |      |                          |    |    |
| 62  | -39  | 14                                     | -50 |   | -49  | -4                       | -38 | -10                    | -18  | 12                       |    |    |
| 61  | -34  | 13                                     | -49 |   | -43  | -1                       | -42 | -9                     | -14  | 7                        |    |    |
| 60  | -31  | 10                                     | -46 |   | -38  | 1                        | -44 | -7                     | -9   | 2                        |    |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |   | TEMP | COMPONENT<br>WINDS<br>-1 |     |     | TEMP | COMPONENT<br>WINDS<br>-1 |    |    |
|-----|------|--------------------------|-----|---|------|--------------------------|-----|-----|------|--------------------------|----|----|
|     |      | DEG C                    | M   | S |      | DEG C                    | M   | S   |      | DEG C                    | M  | S  |
| KM  |      | NS                       | EW  |   | NS   | EW                       |     | NS  | EW   |                          | NS | EW |
| 59  | -29  | 7                        | -42 |   | -33  | 2                        | -44 | -4  | -5   | -2                       |    |    |
| 58  | -29  | 6                        | -37 |   | -28  | 2                        | -43 | 1   | -4   | -6                       |    |    |
| 57  | -25  | 7                        | -35 |   | -24  | 0                        | -41 | 1   | -7   | -6                       |    |    |
| 56  | -21  | 9                        | -36 |   | -20  | -2                       | -39 | 1   | -11  | -3                       |    |    |
| 55  | -13  | 8                        | -41 |   | -17  | -3                       | -38 | -4  | -11  | 3                        |    |    |
| 54  | -10  | 4                        | -47 |   | -15  | -4                       | -39 | -5  | -8   | 8                        |    |    |
| 53  | -6   | -1                       | -50 |   | -13  | -5                       | -41 | -7  | -4   | 9                        |    |    |
| 52  | -6   | -6                       | -51 |   | -12  | -8                       | -45 | -6  | -2   | 6                        |    |    |
| 51  | -2   | -7                       | -48 |   | -12  | -12                      | -48 | -10 | -5   | 0                        |    |    |
| 50  | -3   | -3                       | -44 |   | -14  | -14                      | -48 | -11 | -11  | -4                       |    |    |
| 49  | -7   | 2                        | -42 |   | -15  | -8                       | -44 | -8  | -10  | -2                       |    |    |
| 48  | -10  | 6                        | -42 |   | -16  | 2                        | -38 | -6  | -4   | 4                        |    |    |
| 47  | -14  | 6                        | -43 |   | -16  | 9                        | -35 | -2  | 3    | 8                        |    |    |
| 46  | -23  | 3                        | -42 |   | -16  | 9                        | -36 | 7   | 6    | 6                        |    |    |
| 45  | -34  | -1                       | -38 |   | -17  | 4                        | -39 | 17  | 5    | -1                       |    |    |
| 44  | -40  | -6                       | -33 |   | -16  | -3                       | -37 | 24  | 3    | -4                       |    |    |
| 43  | -46  | -9                       | -31 |   | -16  | -10                      | -33 | 30  | -1   | -2                       |    |    |
| 42  | -49  | -7                       | -31 |   | -17  | -8                       | -33 | 32  | -1   | -2                       |    |    |
| 41  | -48  | -3                       | -30 |   | -20  | -2                       | -27 | 28  | 1    | 3                        |    |    |
| 40  | -44  | 0                        | -28 |   | -23  | 0                        | -23 | 21  | 0    | 5                        |    |    |
| 39  | -44  | -2                       | -23 |   | -24  | -7                       | -35 | 20  | -5   | -12                      |    |    |
| 38  | 999  | 999                      | 999 |   | -26  | -17                      | -23 |     |      |                          |    |    |
| 37  | 999  | 999                      | 999 |   | -29  | 4                        | -12 |     |      |                          |    |    |
| 36  | 999  | 999                      | 999 |   | -30  | 11                       | -20 |     |      |                          |    |    |
| 35  | 999  | 999                      | 999 |   | -30  | 3                        | -24 |     |      |                          |    |    |
| 34  | 999  | 999                      | 999 |   | -32  | -1                       | -23 |     |      |                          |    |    |
| 33  | 999  | 999                      | 999 |   | -32  | -2                       | -24 |     |      |                          |    |    |
| 32  | 999  | 999                      | 999 |   | -34  | 2                        | -27 |     |      |                          |    |    |
| 31  | 999  | 999                      | 999 |   | -36  | -1                       | -27 |     |      |                          |    |    |
| 30  | 999  | 999                      | 999 |   | -42  | -2                       | -17 |     |      |                          |    |    |
| 29  | 999  | 999                      | 999 |   | -44  | -1                       | -19 |     |      |                          |    |    |

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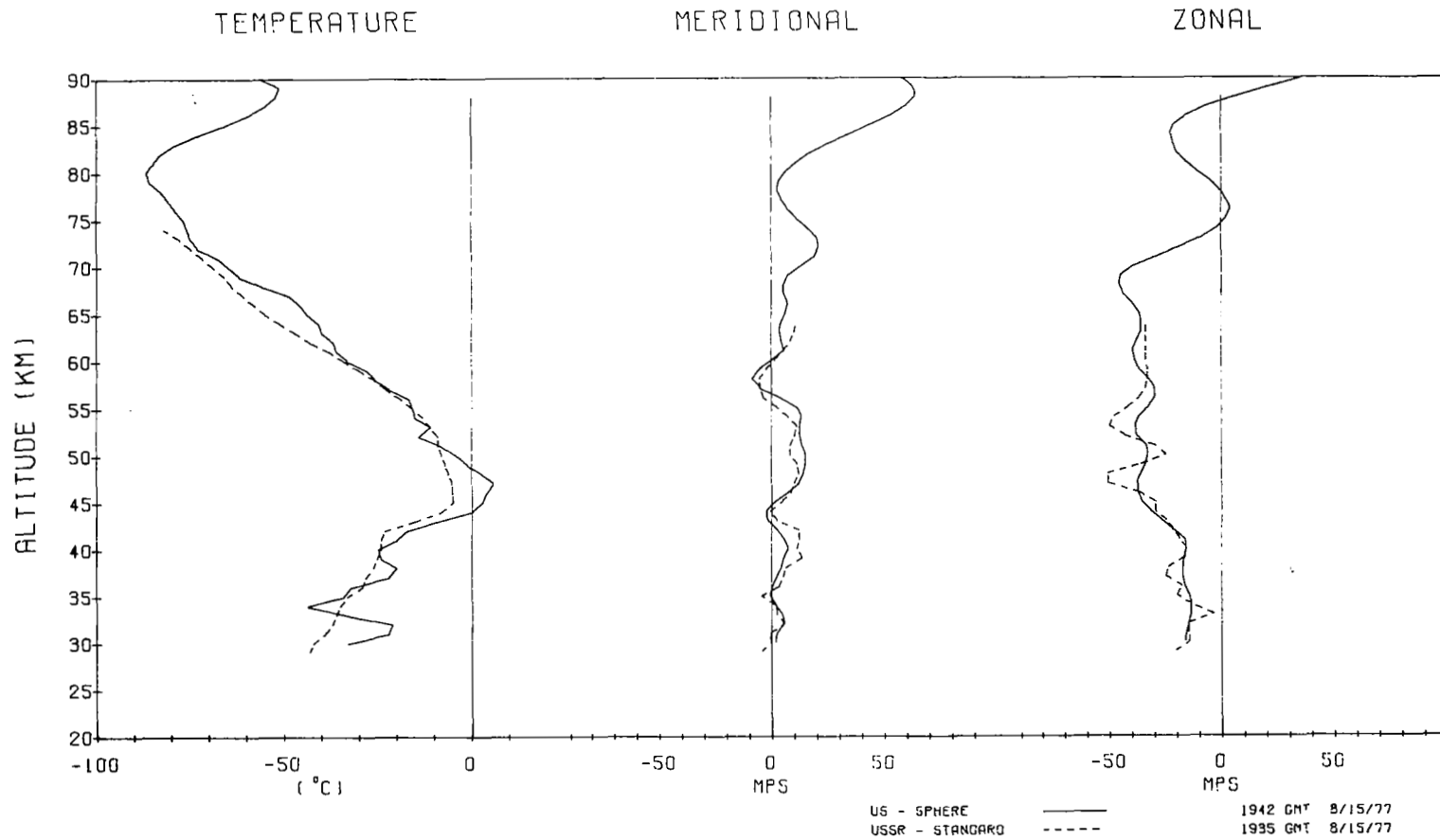




| ALT   | US - SPHERE |                 |       | USSR - STANDARD |                 |       | DIFFERENCES |                 |    |
|-------|-------------|-----------------|-------|-----------------|-----------------|-------|-------------|-----------------|----|
|       | AUG 15 1977 |                 |       | AUG 15 1977     |                 |       | USSR-US     |                 |    |
|       | 1942 GMT    |                 |       | 1935 GMT        |                 |       |             |                 |    |
|       | TEMP        | COMPONENT WINDS |       | TEMP            | COMPONENT WINDS |       | TEMP        | COMPONENT WINDS |    |
| DEG C | -1          |                 | DEG C | -1              |                 | DEG C | -1          |                 |    |
| KM    | NS          | S               | EW    | NS              | S               | EW    | NS          | S               | EW |
| 94    | -81         | -5              | 65    | 999             | 999             | 999   |             |                 |    |
| 93    | -76         | 13              | 64    | 999             | 999             | 999   |             |                 |    |
| 92    | -68         | 31              | 59    | 999             | 999             | 999   |             |                 |    |
| 91    | -62         | 46              | 49    | 999             | 999             | 999   |             |                 |    |
| 90    | -56         | 58              | 36    | 999             | 999             | 999   |             |                 |    |
| 89    | -51         | 63              | 21    | 999             | 999             | 999   |             |                 |    |
| 88    | -52         | 64              | 7     | 999             | 999             | 999   |             |                 |    |
| 87    | -55         | 60              | -6    | 999             | 999             | 999   |             |                 |    |
| 86    | -60         | 53              | -15   | 999             | 999             | 999   |             |                 |    |
| 85    | -66         | 44              | -21   | 999             | 999             | 999   |             |                 |    |
| 84    | -73         | 35              | -23   | 999             | 999             | 999   |             |                 |    |
| 83    | -79         | 25              | -22   | 999             | 999             | 999   |             |                 |    |
| 82    | -83         | 17              | -20   | 999             | 999             | 999   |             |                 |    |
| 81    | -85         | 11              | -16   | 999             | 999             | 999   |             |                 |    |
| 80    | -87         | 6               | -11   | 999             | 999             | 999   |             |                 |    |
| 79    | -86         | 3               | -5    | 999             | 999             | 999   |             |                 |    |
| 78    | -83         | 2               | -1    | 999             | 999             | 999   |             |                 |    |
| 77    | -81         | 4               | 2     | 999             | 999             | 999   |             |                 |    |
| 76    | -79         | 7               | 4     | 999             | 999             | 999   |             |                 |    |
| 75    | -77         | 11              | 2     | 999             | 999             | 999   |             |                 |    |
| 74    | -76         | 16              | -2    | -82             | 999             | 999   | -6          |                 |    |
| 73    | -75         | 20              | -9    | -78             | 999             | 999   | -3          |                 |    |
| 72    | -73         | 21              | -19   | -75             | 999             | 999   | -2          |                 |    |
| 71    | -68         | 19              | -29   | -72             | 999             | 999   | -4          |                 |    |
| 70    | -65         | 13              | -39   | -69             | 999             | 999   | -4          |                 |    |
| 69    | -62         | 7               | -45   | -66             | 999             | 999   | -4          |                 |    |
| 68    | -56         | 5               | -46   | -64             | 999             | 999   | -8          |                 |    |
| 67    | -49         | 5               | -44   | -61             | 999             | 999   | -12         |                 |    |
| 66    | -46         | 7               | -40   | -58             | 999             | 999   | -12         |                 |    |
| 65    | -44         | 6               | -37   | -55             | 999             | 999   | -11         |                 |    |
| 64    | -41         | 4               | -36   | -51             | 11              | -34   | -10         | 7               | 2  |
| 63    | -40         | 3               | -36   | -47             | 10              | -34   | -7          | 7               | 2  |
| 62    | -37         | 4               | -38   | -43             | 8               | -34   | -6          | 4               | 4  |
| 61    | -36         | 5               | -40   | -38             | 5               | -34   | -2          | 0               | 6  |

| ALT | COMPONENT WINDS |     |     | COMPONENT WINDS |    |     | COMPONENT WINDS |    |     |
|-----|-----------------|-----|-----|-----------------|----|-----|-----------------|----|-----|
|     | -1              |     |     | -1              |    |     | -1              |    |     |
|     | TEMP            | NS  | S   | TEMP            | NS | S   | TEMP            | NS | S   |
|     | DEG C           | M   | EW  | DEG C           | M  | EW  | DEG C           | M  | EW  |
| 60  | -33             | 0   | -39 | -34             | 1  | -34 | -1              | 1  | 5   |
| 59  | -28             | -6  | -37 | -30             | -3 | -33 | -2              | 3  | 4   |
| 58  | -26             | -9  | -33 | -26             | -6 | -33 | 0               | 3  | 0   |
| 57  | -22             | -5  | -30 | -23             | -6 | -34 | -1              | -1 | -4  |
| 56  | -17             | 4   | -30 | -19             | -4 | -37 | -2              | -8 | -7  |
| 55  | -16             | 11  | -33 | -16             | 2  | -42 | 0               | -9 | -9  |
| 54  | -15             | 13  | -37 | -13             | 7  | -48 | 2               | -6 | -11 |
| 53  | -11             | 12  | -39 | -11             | 11 | -50 | 0               | -1 | -11 |
| 52  | -14             | 12  | -38 | -9              | 10 | -43 | 5               | -2 | -5  |
| 51  | -8              | 13  | -34 | -9              | 8  | -30 | -1              | -5 | 4   |
| 50  | -4              | 15  | -33 | -8              | 8  | -25 | -4              | -7 | 8   |
| 49  | -1              | 15  | -34 | -7              | 11 | -36 | -6              | -4 | -2  |
| 48  | 3               | 14  | -36 | -6              | 12 | -51 | -9              | -2 | -15 |
| 47  | 6               | 12  | -38 | -5              | 10 | -51 | -11             | -2 | -13 |
| 46  | 4               | 7   | -38 | -5              | 8  | -37 | -9              | 1  | 1   |
| 45  | 3               | 1   | -36 | -5              | 4  | -30 | -8              | 3  | 6   |
| 44  | 0               | -3  | -32 | -8              | -1 | -30 | -8              | 2  | 2   |
| 43  | -9              | -2  | -27 | -15             | 2  | -25 | -6              | 4  | 2   |
| 42  | -17             | 2   | -22 | -23             | 12 | -22 | -6              | 10 | 0   |
| 41  | -20             | 5   | -17 | -24             | 12 | -19 | -4              | 7  | -2  |
| 40  | -25             | 7   | -16 | -24             | 11 | -16 | 1               | 4  | 0   |
| 39  | -24             | 5   | -17 | -25             | 13 | -17 | -1              | 8  | 0   |
| 38  | -20             | 4   | -18 | -26             | 6  | -24 | -6              | 2  | -6  |
| 37  | -22             | 2   | -18 | -28             | 5  | -25 | -6              | 3  | -7  |
| 36  | -32             | 0   | -17 | -29             | 3  | -18 | 3               | 3  | -1  |
| 35  | -34             | -1  | -15 | -33             | -5 | -20 | 1               | -4 | -5  |
| 34  | -44             | 1   | -14 | -35             | 1  | -14 | 9               | 0  | 0   |
| 33  | -33             | 4   | -14 | -36             | 2  | -4  | -3              | -2 | 10  |
| 32  | -21             | 5   | -15 | -37             | 5  | -15 | -16             | 0  | 0   |
| 31  | -22             | 2   | -16 | -39             | -1 | -15 | -17             | -3 | 1   |
| 30  | -33             | 1   | -17 | -42             | -1 | -15 | -9              | -2 | 2   |
| 29  | 999             | 999 | 999 | -43             | -5 | -21 |                 |    |     |

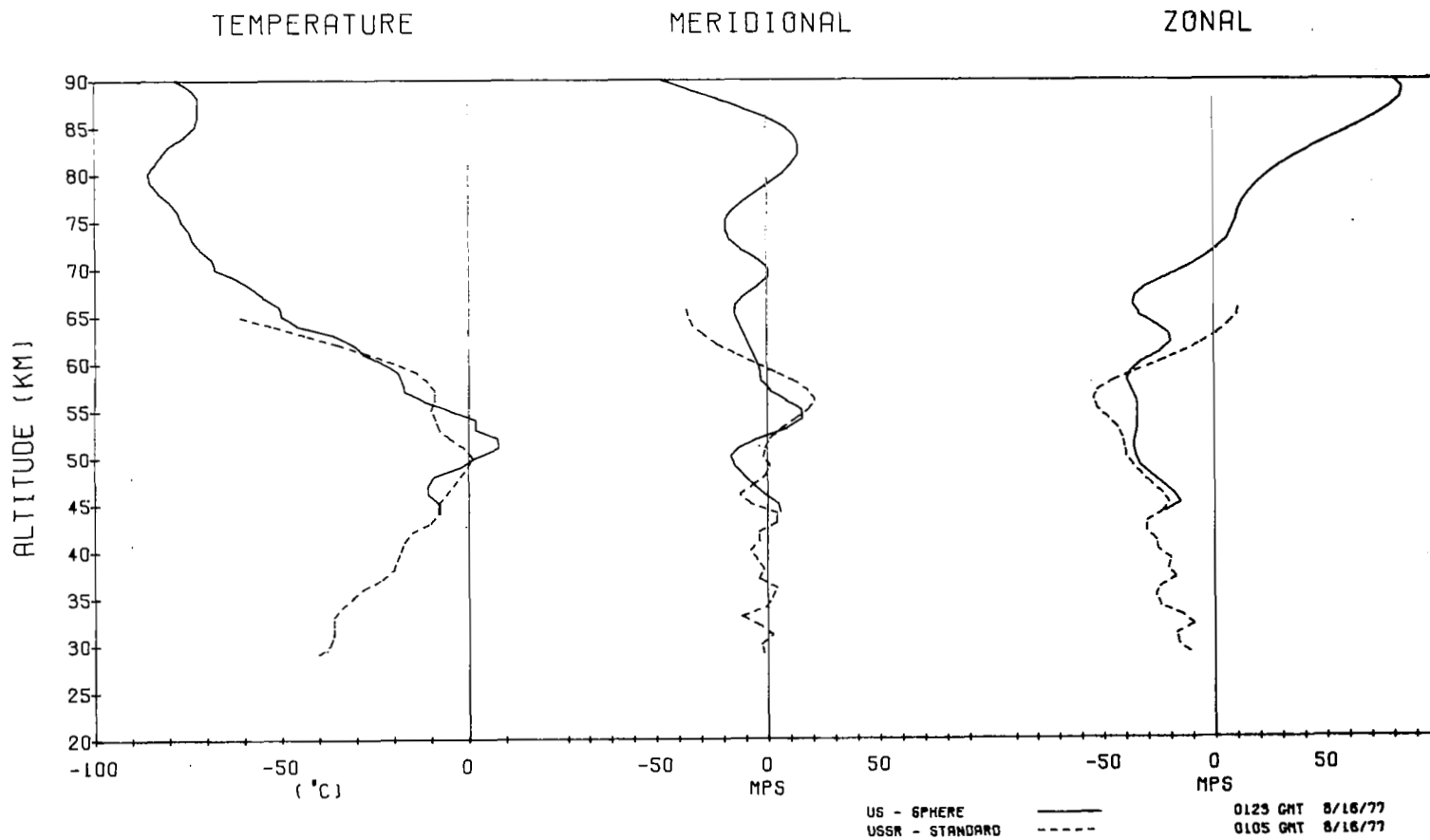
155



| US - SPHERE<br>AUG 16 1977<br>0123 GMT |               |                          |     | USSR - STANDARD<br>AUG 16 1977<br>0105 GMT |               |                          |     | DIFFERENCES<br>USSR-US |               |                          |   |    |
|--|---------------|--------------------------|-----|--|---------------|--------------------------|-----|------------------------|---------------|--------------------------|---|----|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |  | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |                        | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |   |    |
|  |               | NS                       | M   | EW   |               | NS                       | M   | EW                     |               | NS                       | M | EW |
| 93                                     | -87           | -71                      | 51  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 92                                     | -85           | -65                      | 63  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 91                                     | -82           | -57                      | 74  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 90                                     | -78           | -47                      | 81  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 89                                     | -74           | -35                      | 85  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 88                                     | -72           | -22                      | 84  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 87                                     | -72           | -11                      | 79  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 86                                     | -72           | 0                        | 72  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 85                                     | -73           | 8                        | 64  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 84                                     | -76           | 12                       | 55  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 83                                     | -80           | 14                       | 46  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 82                                     | -82           | 14                       | 38  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 81                                     | -84           | 11                       | 31  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 80                                     | -86           | 7                        | 25  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 79                                     | -85           | 1                        | 20  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 78                                     | -83           | -5                       | 16  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 77                                     | -80           | -11                      | 13  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 76                                     | -78           | -16                      | 11  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 75                                     | -77           | -19                      | 10  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 74                                     | -75           | -19                      | 8   | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 73                                     | -74           | -17                      | 6   | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 72                                     | -72           | -12                      | 1   | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 71                                     | -69           | -5                       | -5  | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 70                                     | -68           | 0                        | -13 | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 69                                     | -62           | 0                        | -22 | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 68                                     | -58           | -5                       | -31 | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 67                                     | -55           | -11                      | -36 | 999  | 999           | 999                      |     |                        |               |                          |   |    |
| 66                                     | -51           | -15                      | -37 | 999  | -37           | 11                       |     |                        |               |                          |   |    |
| 65                                     | -50           | -15                      | -34 | -62  | -36           | 10                       | -12 | -21                    | 44            |                          |   |    |
| 64                                     | -46           | -13                      | -27 | -53  | -34           | 6                        | -7  | -21                    | 33            |                          |   |    |
| 63                                     | -36           | -11                      | -21 | -44  | -29           | 1                        | -8  | -18                    | 22            |                          |   |    |
| 62                                     | -31           | -9                       | -20 | -35  | -23           | -6                       | -4  | -14                    | 14            |                          |   |    |
| 61                                     | -28           | -7                       | -25 | -27  | -15           | -15                      | 1   | -8                     | 10            |                          |   |    |
| 60                                     | -23           | -5                       | -33 | -20  | -6            | -25                      | 3   | -1                     | 8             |                          |   |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DLG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DLG C | COMPONENT<br>WINDS<br>-1 |   |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|-----|-----|---------------|--------------------------|---|----|
|           |               | NS                       | M   | EW  |               | NS                       | M   | EW  |               | NS                       | M | EW |
| 59        | -19           | -4                       | -38 | -14 | 3             | -36                      | 5   | 7   | 2             |                          |   |    |
| 58        | -18           | -3                       | -40 | -11 | 12            | -46                      | 7   | 15  | -6            |                          |   |    |
| 57        | -17           | 1                        | -38 | -9  | 18            | -53                      | 8   | 17  | -15           |                          |   |    |
| 56        | -12           | 8                        | -36 | -9  | 21            | -55                      | 3   | 13  | -19           |                          |   |    |
| 55        | -5            | 15                       | -35 | -10 | 18            | -53                      | -5  | 3   | -18           |                          |   |    |
| 54        | 2             | 15                       | -35 | -9  | 12            | -48                      | -11 | -3  | -13           |                          |   |    |
| 53        | 2             | 8                        | -35 | -8  | 6             | -44                      | -10 | -2  | -9            |                          |   |    |
| 52        | 8             | -4                       | -36 | -5  | 1             | -42                      | -13 | 5   | -6            |                          |   |    |
| 51        | 8             | -13                      | -37 | -1  | -1            | -41                      | -9  | 12  | -4            |                          |   |    |
| 50        | 2             | -17                      | -36 | 1   | -2            | -40                      | -1  | 15  | -4            |                          |   |    |
| 49        | -2            | -15                      | -34 | 0   | 1             | -37                      | 2   | 16  | -3            |                          |   |    |
| 48        | -9            | -11                      | -29 | -2  | -1            | -33                      | 7   | 10  | -4            |                          |   |    |
| 47        | -11           | -7                       | -24 | -4  | -7            | -29                      | 7   | 0   | -5            |                          |   |    |
| 46        | -11           | -2                       | -19 | -6  | -13           | -24                      | 5   | -11 | -5            |                          |   |    |
| 45        | -8            | 4                        | -16 | -8  | -8            | -21                      | 0   | -12 | -5            |                          |   |    |
| 44        | -8            | 5                        | -23 | -8  | 4             | -24                      | 0   | -1  | -1            |                          |   |    |
| 43        | 999           | 999                      | 999 | -10 | 4             | -31                      |     |     |               |                          |   |    |
| 42        | 999           | 999                      | 999 | -15 | -4            | -31                      |     |     |               |                          |   |    |
| 41        | 999           | 999                      | 999 | -17 | -4            | -27                      |     |     |               |                          |   |    |
| 40        | 999           | 999                      | 999 | -18 | -8            | -26                      |     |     |               |                          |   |    |
| 39        | 999           | 999                      | 999 | -19 | -5            | -20                      |     |     |               |                          |   |    |
| 38        | 999           | 999                      | 999 | -20 | -2            | -21                      |     |     |               |                          |   |    |
| 37        | 999           | 999                      | 999 | -23 | -4            | -18                      |     |     |               |                          |   |    |
| 36        | 999           | 999                      | 999 | -28 | 4             | -25                      |     |     |               |                          |   |    |
| 35        | 999           | 999                      | 999 | -31 | 2             | -27                      |     |     |               |                          |   |    |
| 34        | 999           | 999                      | 999 | -34 | -1            | -25                      |     |     |               |                          |   |    |
| 33        | 999           | 999                      | 999 | -36 | -12           | -15                      |     |     |               |                          |   |    |
| 32        | 999           | 999                      | 999 | -36 | -4            | -10                      |     |     |               |                          |   |    |
| 31        | 999           | 999                      | 999 | -36 | 2             | -18                      |     |     |               |                          |   |    |
| 30        | 999           | 999                      | 999 | -37 | -3            | -17                      |     |     |               |                          |   |    |
| 29        | 999           | 999                      | 999 | -40 | -2            | -12                      |     |     |               |                          |   |    |

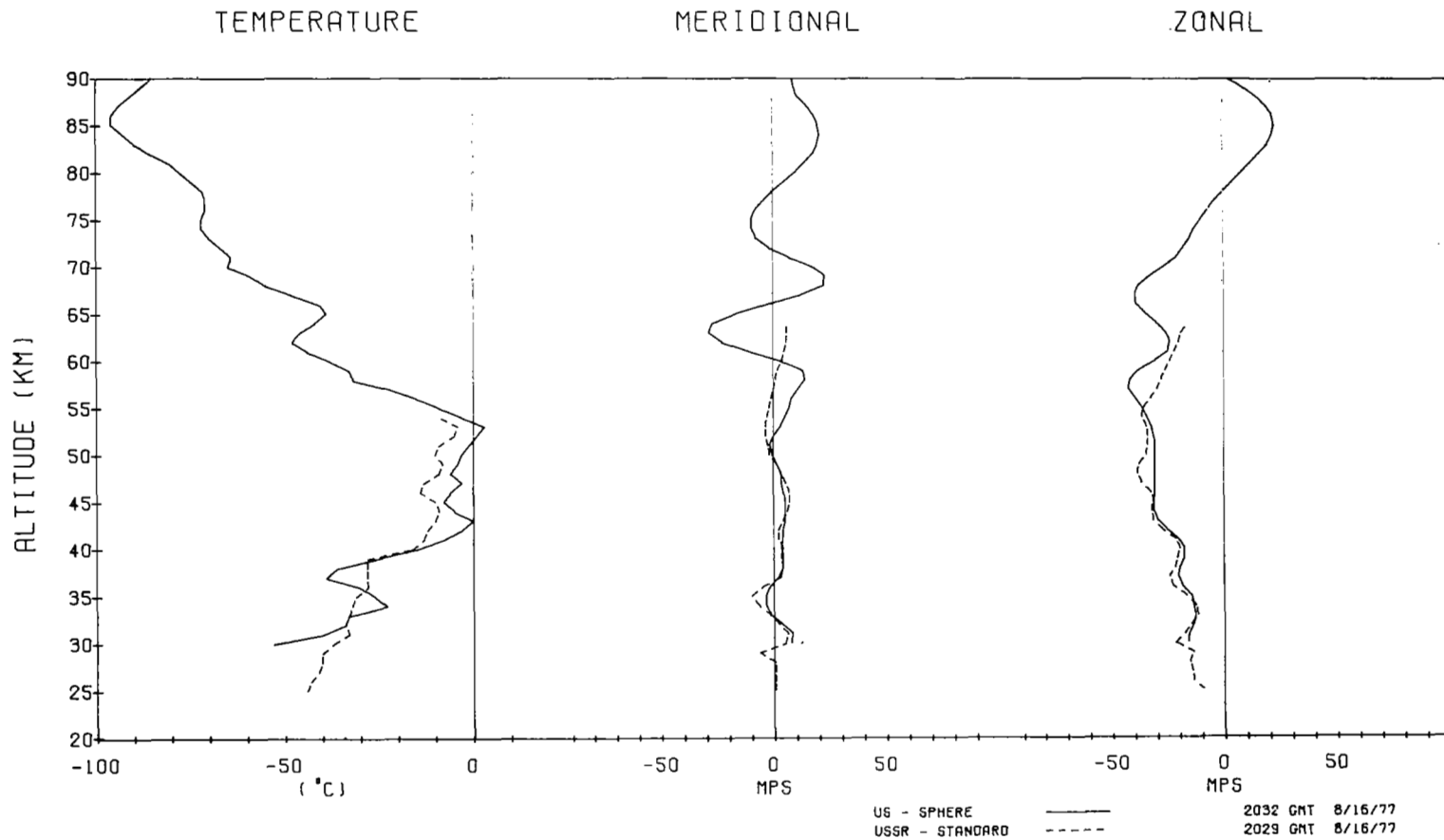
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| ALT | US - SPHERE<br>AUG 16 1977<br>2032 GMT |                          |     | USSR - STANDARD<br>AUG 16 1977<br>2029 GMT |                          |     | DIFFERENCES<br>USSR-US |             |     |    |    |    |
|-----|--|--------------------------|-----|--|--------------------------|-----|------------------------|-------------|-----|----|----|----|
|     | TEMP                                   | COMPONENT<br>WINDS<br>-1 |     | TEMP                                       | COMPONENT<br>WINDS<br>-1 |     | TEMP                   | WINDS<br>-1 |     |    |    |    |
|     |  | DEG C                    | M S |  | DEG C                    | M S |                        | DEG C       | M S |    |    |    |
|     |  |                          | NS  |  |                          | EW  |                        |             | NS  | EW | NS | EW |
| 94  | -86                                    | 9                        | -22 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 93  | -83                                    | 8                        | -18 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 92  | -81                                    | 7                        | -13 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 91  | -81                                    | 7                        | -6  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 90  | -85                                    | 8                        | 2   | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 89  | -88                                    | 9                        | 9   | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 88  | -91                                    | 11                       | 15  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 87  | -94                                    | 15                       | 19  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 86  | -96                                    | 18                       | 22  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 85  | -96                                    | 20                       | 23  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 84  | -93                                    | 21                       | 22  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 83  | -90                                    | 20                       | 20  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 82  | -86                                    | 18                       | 16  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 81  | -81                                    | 14                       | 12  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 80  | -78                                    | 10                       | 8   | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 79  | -75                                    | 5                        | 4   | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 78  | -72                                    | 0                        | 0   | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 77  | -71                                    | -4                       | -4  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 76  | -71                                    | -8                       | -7  | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 75  | -72                                    | -10                      | -10 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 74  | -72                                    | -10                      | -13 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 73  | -70                                    | -8                       | -15 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 72  | -67                                    | -2                       | -18 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 71  | -64                                    | 7                        | -21 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 70  | -65                                    | 17                       | -27 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 69  | -59                                    | 23                       | -33 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 68  | -55                                    | 22                       | -38 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 67  | -48                                    | 12                       | -40 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 66  | -41                                    | -3                       | -39 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 65  | -39                                    | -17                      | -35 | 999  | 999                      | 999 |                        |             |     |    |    |    |
| 64  | -42                                    | -27                      | -30 | 999  | 6                        | -16 | 33                     | 14          |     |    |    |    |
| 63  | -46                                    | -29                      | -26 | 999  | 6                        | -19 | 35                     | 7           |     |    |    |    |
| 62  | -48                                    | -23                      | -24 | 999  | 6                        | -20 | 29                     | 4           |     |    |    |    |
| 61  | -44                                    | -11                      | -25 | 999  | 5                        | -22 | 16                     | 3           |     |    |    |    |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     | TEMP | COMPONENT<br>WINDS<br>-1 |     | TEMP | COMPONENT<br>WINDS<br>-1 |     |    |    |    |
|-----|------|--------------------------|-----|------|--------------------------|-----|------|--------------------------|-----|----|----|----|
|     |      | DEG C                    | M S |      | DEG C                    | M S |      | DEG C                    | M S |    |    |    |
|     |      |                          | NS  |      |                          | EW  |      |                          | NS  | EW | NS | EW |
|     |      |                          |     |      |                          |     |      |                          |     |    |    |    |
| 60  | -38  | 3                        | -31 | 999  | 4                        | -24 |      |                          | 1   | 7  |    |    |
| 59  | -33  | 13                       | -38 | 999  | 2                        | -26 |      |                          | -11 | 12 |    |    |
| 58  | -32  | 14                       | -42 | 999  | 1                        | -28 |      |                          | -13 | 14 |    |    |
| 57  | -22  | 11                       | -43 | 999  | 0                        | -30 |      |                          | -11 | 13 |    |    |
| 56  | -15  | 8                        | -40 | 999  | -1                       | -33 |      |                          | -9  | 7  |    |    |
| 55  | -9   | 7                        | -37 | 999  | -2                       | -36 |      |                          | -9  | 1  |    |    |
| 54  | -3   | 5                        | -35 | -9   | -3                       | -37 |      |                          | -6  | -8 | -2 |    |
| 53  | 3    | 3                        | -33 | -4   | -4                       | -35 |      |                          | -7  | -7 | -2 |    |
| 52  | 1    | 0                        | -32 | -5   | -4                       | -34 |      |                          | -6  | -4 | -2 |    |
| 51  | -1   | -2                       | -31 | -9   | -3                       | -34 |      |                          | -8  | -1 | -3 |    |
| 50  | -3   | -1                       | -31 | -10  | -2                       | -35 |      |                          | -7  | -1 | -4 |    |
| 49  | -4   | 1                        | -31 | -8   | 1                        | -38 |      |                          | -4  | 0  | -7 |    |
| 48  | -6   | 3                        | -31 | -9   | 3                        | -39 |      |                          | -3  | 0  | -8 |    |
| 47  | -3   | 3                        | -31 | -13  | 5                        | -37 |      |                          | -10 | 2  | -6 |    |
| 46  | -6   | 4                        | -31 | -14  | 7                        | -33 |      |                          | -8  | 3  | -2 |    |
| 45  | -8   | 5                        | -32 | -10  | 7                        | -32 |      |                          | -2  | 2  | 0  |    |
| 44  | -5   | 5                        | -32 | -9   | 6                        | -33 |      |                          | -4  | 1  | -1 |    |
| 43  | 0    | 5                        | -30 | -10  | 4                        | -32 |      |                          | -10 | -1 | -2 |    |
| 42  | -3   | 4                        | -26 | -12  | 2                        | -28 |      |                          | -9  | -2 | -2 |    |
| 41  | -8   | 4                        | -21 | -13  | 2                        | -22 |      |                          | -5  | -2 | -1 |    |
| 40  | -15  | 3                        | -18 | -16  | 4                        | -20 |      |                          | -1  | 1  | -2 |    |
| 39  | -26  | 4                        | -18 | -28  | 3                        | -21 |      |                          | -2  | -1 | -3 |    |
| 38  | -36  | 4                        | -20 | -28  | 4                        | -22 |      |                          | 8   | 0  | -2 |    |
| 37  | -39  | 2                        | -21 | -28  | 3                        | -25 |      |                          | 11  | 1  | -4 |    |
| 36  | -30  | -2                       | -19 | -28  | -5                       | -23 |      |                          | 2   | -3 | -4 |    |
| 35  | -26  | -4                       | -15 | -31  | -10                      | -17 |      |                          | -5  | -6 | -2 |    |
| 34  | -23  | -4                       | -14 | -32  | -7                       | -13 |      |                          | -9  | -3 | 1  |    |
| 33  | -33  | -2                       | -13 | -33  | -2                       | -12 |      |                          | 0   | 0  | 1  |    |
| 32  | -34  | 3                        | -14 | -34  | 2                        | -15 |      |                          | 0   | -1 | -1 |    |
| 31  | -40  | 8                        | -16 | -33  | 6                        | -18 |      |                          | 7   | -2 | -2 |    |
| 30  | -53  | 7                        | -17 | -37  | 5                        | -22 |      |                          | 16  | -2 | -5 |    |
| 29  | 999  | 999                      | 999 | -40  | -7                       | -14 |      |                          |     |    |    |    |
| 28  | 999  | 999                      | 999 | -40  | 0                        | -16 |      |                          |     |    |    |    |
| 27  | 999  | 999                      | 999 | -41  | 0                        | -15 |      |                          |     |    |    |    |

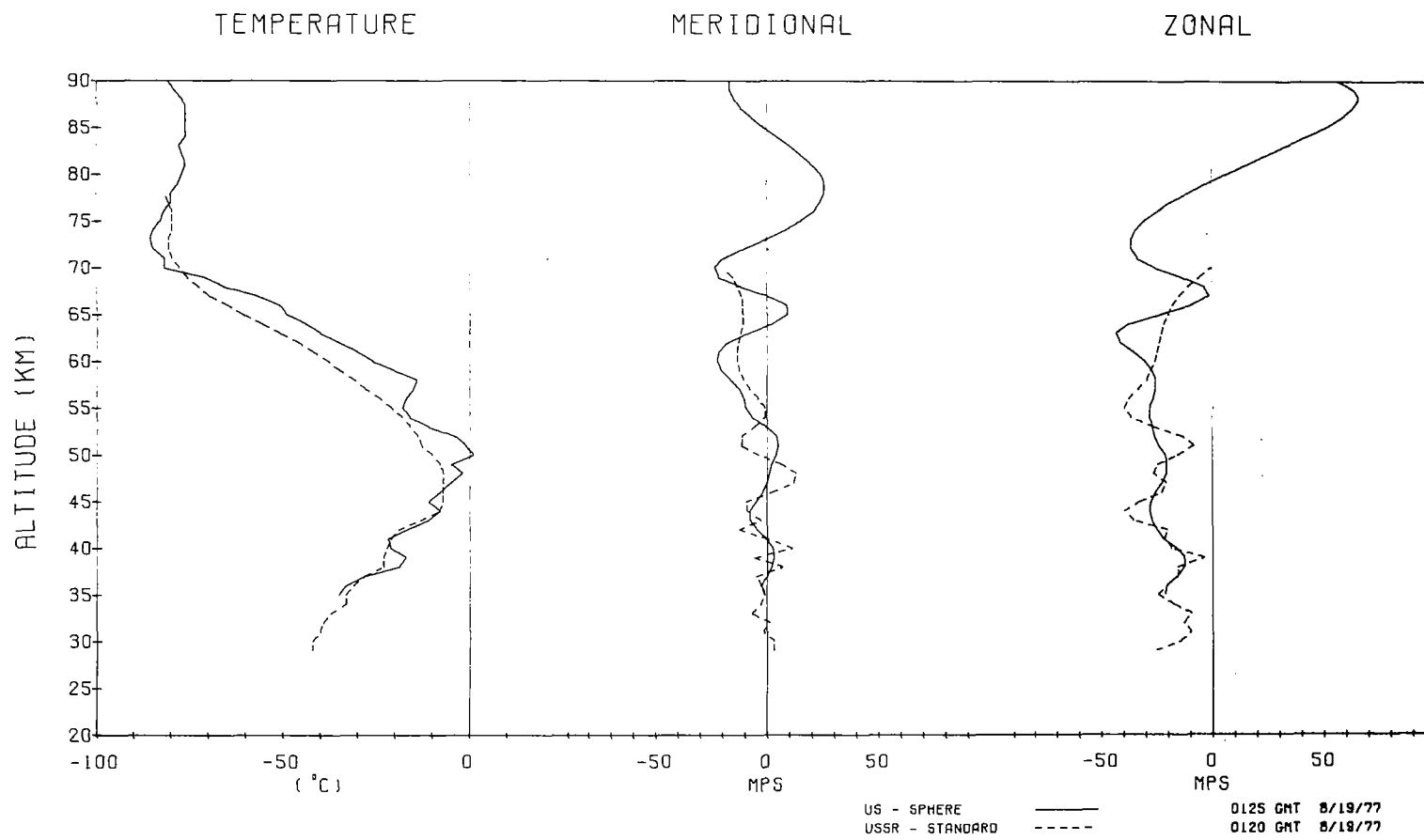
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| US - SPHERE<br>AUG 19 1977<br>0125 GMT |               |                          |     | USSR - STANDARD<br>AUG 19 1977<br>0120 GMT |                          |     |                          | DIFFERENCES<br>USSR-US |       |     |  |
|--|---------------|--------------------------|-----|--|--------------------------|-----|--------------------------|------------------------|-------|-----|--|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |                        | DLG C | M S |  |
|  |               | NS                       | EW  |  | NS                       | EW  | NS                       | EW                     |       |     |  |
| 93                                     | -83           | -1                       | 17  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 92                                     | -82           | -9                       | 33  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 91                                     | -81           | -15                      | 47  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 90                                     | -81           | -17                      | 57  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 89                                     | -79           | -17                      | 64  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 88                                     | -77           | -15                      | 66  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 87                                     | -76           | -12                      | 63  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 86                                     | -76           | -7                       | 58  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 85                                     | -76           | -2                       | 51  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 84                                     | -76           | 4                        | 42  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 83                                     | -78           | 10                       | 33  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 82                                     | -77           | 15                       | 24  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 81                                     | -76           | 20                       | 15  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 80                                     | -77           | 24                       | 6   | 999  | 999                      | 999 |                          |                        |       |     |  |
| 79                                     | -78           | 26                       | -3  | 999  | 999                      | 999 |                          |                        |       |     |  |
| 78                                     | -80           | 26                       | -11 | -82  | 999                      | 999 | -2                       |                        |       |     |  |
| 77                                     | -80           | 24                       | -19 | -81  | 999                      | 999 | -1                       |                        |       |     |  |
| 76                                     | -82           | 21                       | -25 | -80  | 999                      | 999 | 2                        |                        |       |     |  |
| 75                                     | -83           | 15                       | -31 | -80  | 999                      | 999 | 3                        |                        |       |     |  |
| 74                                     | -85           | 8                        | -35 | -80  | 999                      | 999 | 5                        |                        |       |     |  |
| 73                                     | -86           | -1                       | -37 | -81  | 999                      | 999 | 5                        |                        |       |     |  |
| 72                                     | -85           | -11                      | -37 | -81  | 999                      | 999 | 4                        |                        |       |     |  |
| 71                                     | -82           | -20                      | -34 | -80  | 999                      | 999 | 2                        |                        |       |     |  |
| 70                                     | -82           | -24                      | -26 | -78  | -20                      | -1  | 4                        | 4                      | 25    |     |  |
| 69                                     | -71           | -22                      | -14 | -76  | -16                      | -6  | -5                       | 6                      | 8     |     |  |
| 68                                     | -66           | -12                      | -4  | -73  | -14                      | -11 | -7                       | -2                     | -7    |     |  |
| 67                                     | -57           | 0                        | -2  | -70  | -12                      | -15 | -13                      | -12                    | -13   |     |  |
| 66                                     | -51           | 9                        | -10 | -65  | -11                      | -18 | -14                      | -20                    | -8    |     |  |
| 65                                     | -49           | 9                        | -24 | -61  | -11                      | -20 | -12                      | -20                    | 4     |     |  |
| 64                                     | -44           | 2                        | -38 | -56  | -11                      | -22 | -12                      | -13                    | 16    |     |  |
| 63                                     | -40           | -9                       | -44 | -51  | -12                      | -23 | -11                      | -3                     | 21    |     |  |
| 62                                     | -35           | -18                      | -42 | -46  | -13                      | -24 | -11                      | 5                      | 18    |     |  |
| 61                                     | -30           | -22                      | -36 | -42  | -14                      | -25 | -12                      | 8                      | 11    |     |  |
| 60                                     | -26           | -23                      | -31 | -36  | -14                      | -26 | -12                      | 9                      | 5     |     |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | COMPONENT<br>WINDS<br>-1 |     | DEG C | M S |  |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|--------------------------|-----|-------|-----|--|
|           |               | NS                       | EW  |               | NS                       | EW  | NS                       | EW  |       |     |  |
| 59        | -20           | -21                      | -28 | -35           | -13                      | -28 | -15                      | 8   | 0     |     |  |
| 58        | -14           | -17                      | -26 | -31           | -11                      | -30 | -17                      | 6   | -4    |     |  |
| 57        | -15           | -13                      | -26 | -28           | -8                       | -34 | -13                      | 5   | -8    |     |  |
| 56        | -17           | -11                      | -27 | -24           | -4                       | -38 | -7                       | 7   | -11   |     |  |
| 55        | -18           | -10                      | -29 | -21           | -1                       | -40 | -3                       | 9   | -11   |     |  |
| 54        | -16           | -7                       | -29 | -18           | -1                       | -37 | -2                       | 6   | -8    |     |  |
| 53        | -11           | -1                       | -28 | -16           | -6                       | -27 | -5                       | -5  | 1     |     |  |
| 52        | -4            | 4                        | -27 | -14           | -12                      | -14 | -10                      | -16 | 13    |     |  |
| 51        | -1            | 5                        | -25 | -13           | -12                      | -9  | -12                      | -17 | 16    |     |  |
| 50        | 1             | 4                        | -22 | -10           | -4                       | -16 | -11                      | -8  | 6     |     |  |
| 49        | -5            | 2                        | -21 | -8            | 6                        | -25 | -3                       | 4   | -4    |     |  |
| 48        | -2            | 1                        | -21 | -7            | 13                       | -27 | -5                       | 12  | -6    |     |  |
| 47        | -5            | 0                        | -23 | -7            | 12                       | -21 | -2                       | 12  | 2     |     |  |
| 46        | -8            | -2                       | -26 | -7            | 2                        | -23 | 1                        | 4   | 3     |     |  |
| 45        | -11           | -5                       | -28 | -7            | -10                      | -33 | 4                        | -5  | -5    |     |  |
| 44        | -8            | -8                       | -29 | -8            | -9                       | -40 | 0                        | -1  | -11   |     |  |
| 43        | -11           | -8                       | -28 | -13           | -3                       | -36 | -2                       | 5   | -8    |     |  |
| 42        | -17           | -5                       | -26 | -19           | -13                      | -21 | -2                       | -8  | 5     |     |  |
| 41        | -22           | -1                       | -23 | -21           | 0                        | -22 | 1                        | 1   | 1     |     |  |
| 40        | -21           | 2                        | -17 | -22           | 11                       | -19 | -1                       | 9   | -2    |     |  |
| 39        | -17           | 3                        | -13 | -23           | -6                       | -4  | -6                       | -9  | 9     |     |  |
| 38        | -19           | 2                        | -13 | -23           | 7                        | -16 | -4                       | 5   | -3    |     |  |
| 37        | -28           | 0                        | -16 | -28           | -5                       | -16 | 0                        | -5  | 0     |     |  |
| 36        | -33           | -3                       | -21 | -31           | -3                       | -21 | 2                        | 0   | 0     |     |  |
| 35        | -35           | -2                       | -22 | -33           | -1                       | -25 | 2                        | 1   | -3    |     |  |
| 34        | 999           | 999                      | 999 | -33           | -3                       | -18 |                          |     |       |     |  |
| 33        | 999           | 999                      | 999 | -37           | -7                       | -10 |                          |     |       |     |  |
| 32        | 999           | 999                      | 999 | -39           | 1                        | -13 |                          |     |       |     |  |
| 31        | 999           | 999                      | 999 | -40           | -2                       | -10 |                          |     |       |     |  |
| 30        | 999           | 999                      | 999 | -42           | 3                        | -15 |                          |     |       |     |  |
| 29        | 999           | 999                      | 999 | -42           | 3                        | -26 |                          |     |       |     |  |

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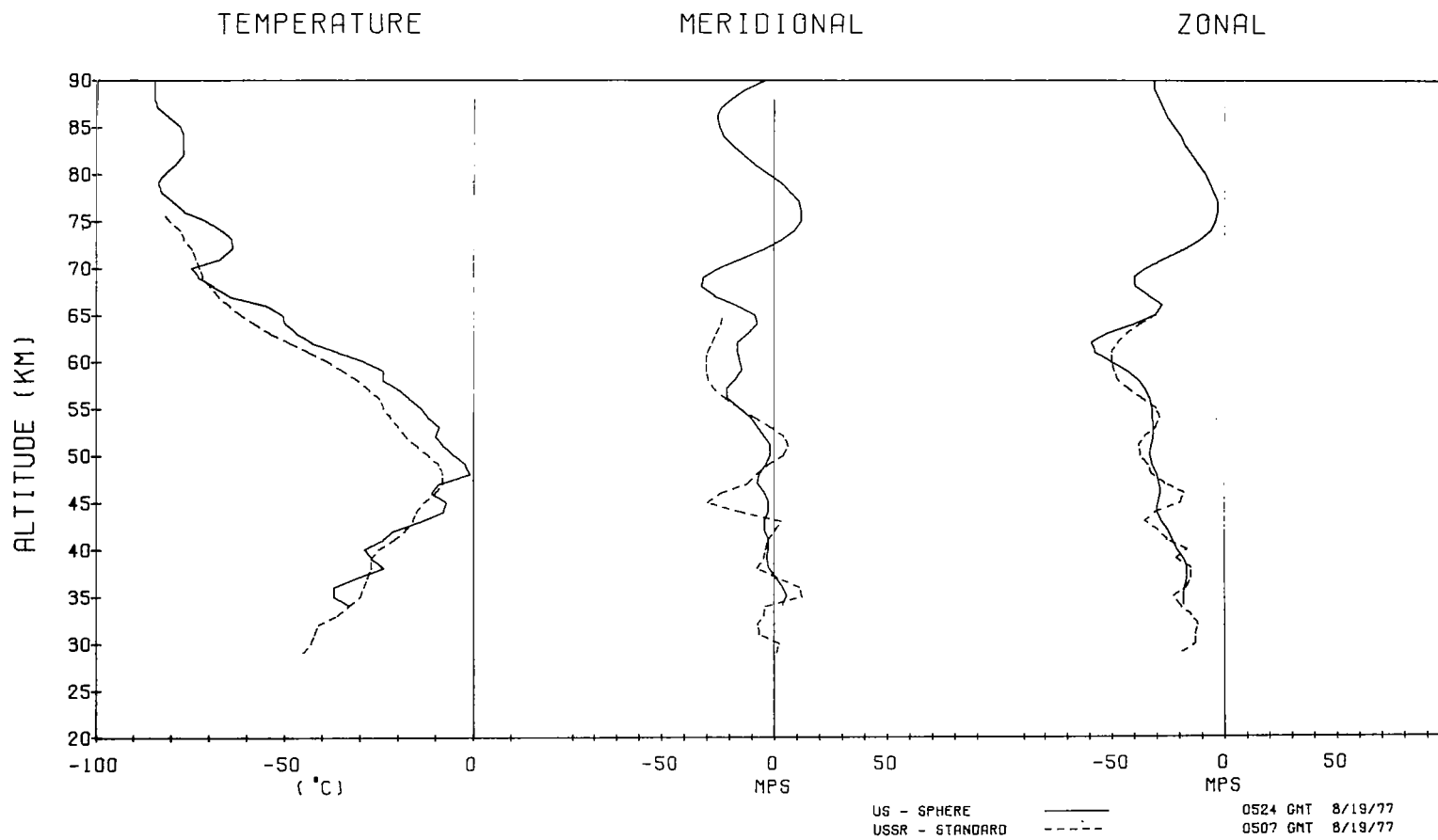




| US - SPHERE<br>AUG 19 1977<br>0524 GMT |               |                          |     | USSR - STANDARD<br>AUG 19 1977<br>0507 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |    |  |  |    |
|--|---------------|--------------------------|-----|--|--------------------------|-----|---------------|--------------------------|----|--|--|----|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                              | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DLG C | COMPONENT<br>WINDS<br>-1 |    |  |  |    |
|  |               | M                        | S   |  | M                        | S   |               | M                        | S  |  |  | NS |
| 94                                     | -80           | 23                       | -16 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 93                                     | -81           | 20                       | -22 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 92                                     | -81           | 13                       | -27 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 91                                     | -82           | 5                        | -30 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 90                                     | -85           | -4                       | -32 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 89                                     | -85           | -13                      | -32 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 88                                     | -85           | -19                      | -30 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 87                                     | -84           | -24                      | -28 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 86                                     | -81           | -26                      | -26 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 85                                     | -78           | -25                      | -23 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 84                                     | -77           | -23                      | -20 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 83                                     | -77           | -19                      | -18 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 82                                     | -77           | -14                      | -15 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 81                                     | -79           | -9                       | -12 | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 80                                     | -82           | -3                       | -9  | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 79                                     | -84           | 3                        | -7  | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 78                                     | -83           | 7                        | -5  | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 77                                     | -80           | 11                       | -3  | 999  | 999                      | 999 |               |                          |    |  |  |    |
| 76                                     | -77           | 12                       | -3  | -83  | 999                      | 999 | -6            |                          |    |  |  |    |
| 75                                     | -71           | 12                       | -4  | -81  | 999                      | 999 | -10           |                          |    |  |  |    |
| 74                                     | -67           | 9                        | -6  | -78  | 999                      | 999 | -11           |                          |    |  |  |    |
| 73                                     | -64           | 3                        | -11 | -77  | 999                      | 999 | -13           |                          |    |  |  |    |
| 72                                     | -64           | -5                       | -18 | -75  | 999                      | 999 | -11           |                          |    |  |  |    |
| 71                                     | -67           | -15                      | -27 | -74  | 999                      | 999 | -7            |                          |    |  |  |    |
| 70                                     | -75           | -25                      | -35 | -73  | 999                      | 999 | 2             |                          |    |  |  |    |
| 69                                     | -73           | -32                      | -41 | -72  | 999                      | 999 | 1             |                          |    |  |  |    |
| 68                                     | -69           | -33                      | -40 | -70  | 999                      | 999 | -1            |                          |    |  |  |    |
| 67                                     | -65           | -27                      | -34 | -68  | 999                      | 999 | -3            |                          |    |  |  |    |
| 66                                     | -55           | -17                      | -28 | -65  | 999                      | 999 | -10           |                          |    |  |  |    |
| 65                                     | -51           | -9                       | -31 | -62  | -23                      | -31 | -11           | -14                      | 0  |  |  |    |
| 64                                     | -50           | -8                       | -41 | -58  | -24                      | -38 | -8            | -16                      | 3  |  |  |    |
| 63                                     | -47           | -12                      | -53 | -54  | -26                      | -44 | -7            | -14                      | 9  |  |  |    |
| 62                                     | -43           | -17                      | -60 | -49  | -28                      | -48 | -6            | -11                      | 12 |  |  |    |
| 61                                     | -36           | -17                      | -58 | -44  | -30                      | -51 | -8            | -13                      | 7  |  |  |    |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |  |  |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|--|--|
|           |               | M                        | S   |               | M                        | S   |               | M                        | S  |  |  |
| 60        | -29           | -16                      | -51 | -39           | -31                      | -51 | -10           | -15                      | 0  |  |  |
| 59        | -24           | -15                      | -44 | -35           | -31                      | -50 | -11           | -16                      | -6 |  |  |
| 58        | -24           | -18                      | -39 | -31           | -30                      | -48 | -7            | -12                      | -9 |  |  |
| 57        | -20           | -22                      | -36 | -28           | -27                      | -43 | -8            | -5                       | -7 |  |  |
| 56        | -17           | -21                      | -34 | -25           | -22                      | -37 | -8            | -1                       | -3 |  |  |
| 55        | -14           | -16                      | -33 | -24           | -16                      | -31 | -10           | 0                        | 2  |  |  |
| 54        | -12           | -11                      | -33 | -22           | -9                       | -29 | -10           | 2                        | 4  |  |  |
| 53        | -9            | -8                       | -32 | -20           | -2                       | -31 | -11           | 6                        | 1  |  |  |
| 52        | -10           | -5                       | -32 | -18           | 4                        | -36 | -8            | 9                        | -4 |  |  |
| 51        | -8            | -2                       | -33 | -15           | 6                        | -39 | -7            | 8                        | -6 |  |  |
| 50        | -5            | -2                       | -34 | -12           | 4                        | -38 | -7            | 6                        | -4 |  |  |
| 49        | -2            | -4                       | -33 | -9            | -3                       | -35 | -7            | 1                        | -2 |  |  |
| 48        | -1            | -7                       | -31 | -8            | -8                       | -33 | -7            | -1                       | -2 |  |  |
| 47        | -9            | -8                       | -30 | -8            | -12                      | -27 | 1             | -4                       | 3  |  |  |
| 46        | -11           | -5                       | -29 | -10           | -24                      | -18 | 1             | -19                      | 11 |  |  |
| 45        | -7            | -3                       | -30 | -13           | -30                      | -20 | -6            | -27                      | 10 |  |  |
| 44        | -8            | -3                       | -31 | -15           | -15                      | -31 | -7            | -12                      | 0  |  |  |
| 43        | -14           | -5                       | -29 | -16           | 3                        | -36 | -2            | 8                        | -7 |  |  |
| 42        | -21           | -5                       | -26 | -18           | 0                        | -30 | 3             | 5                        | -4 |  |  |
| 41        | -24           | -3                       | -24 | -21           | -3                       | -26 | 3             | 0                        | -2 |  |  |
| 40        | -29           | -3                       | -22 | -25           | -4                       | -17 | 4             | -1                       | 5  |  |  |
| 39        | -27           | -4                       | -19 | -27           | -5                       | -22 | 0             | -1                       | -3 |  |  |
| 38        | -24           | -3                       | -17 | -27           | -8                       | -15 | -3            | -5                       | 2  |  |  |
| 37        | -31           | 0                        | -17 | -28           | 1                        | -15 | 3             | 1                        | 2  |  |  |
| 36        | -37           | 3                        | -18 | -29           | 11                       | -17 | 8             | 8                        | 1  |  |  |
| 35        | -37           | 5                        | -19 | -30           | 12                       | -23 | 7             | 7                        | -4 |  |  |
| 34        | -33           | 3                        | -19 | -33           | -4                       | -20 | 0             | -7                       | -1 |  |  |
| 33        | 999           | 999                      | 999 | -36           | -5                       | -15 |               |                          |    |  |  |
| 32        | 999           | 999                      | 999 | -41           | -8                       | -12 |               |                          |    |  |  |
| 31        | 999           | 999                      | 999 | -42           | -7                       | -13 |               |                          |    |  |  |
| 30        | 999           | 999                      | 999 | -43           | 2                        | -13 |               |                          |    |  |  |
| 29        | 999           | 999                      | 999 | -45           | 1                        | -19 |               |                          |    |  |  |

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## APPENDIX E

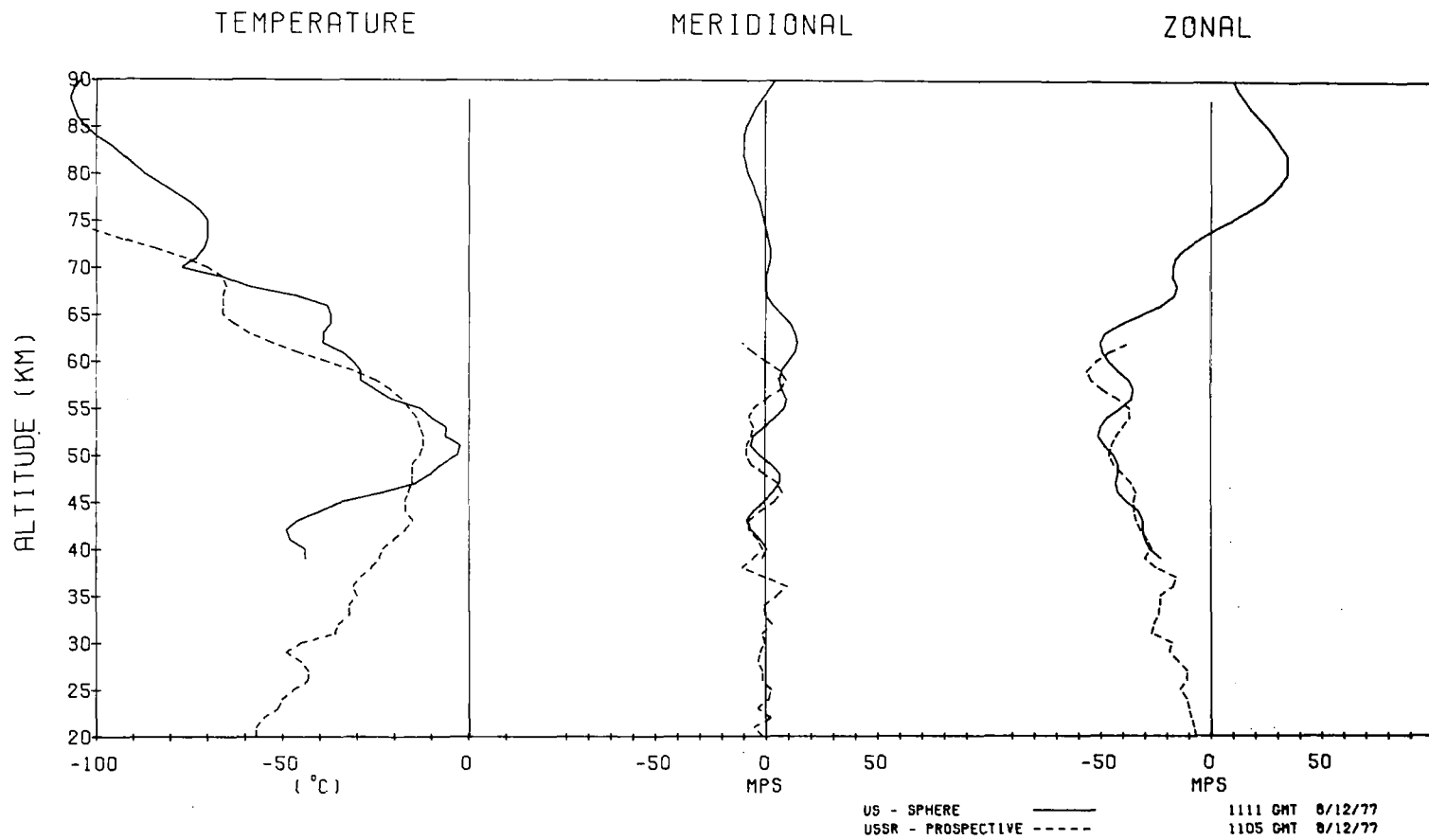
### LISTINGS AND PLOTS OF USSR(PROSPECTIVE) AND US(SPHERE) DATA

Appendix E is similar to Appendixes C and D except the comparison is US Sphere technique with the USSR(prospective) technique.

| US - SPHERE<br>AUG 12 1977<br>1111 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 12 1977<br>1105 GMT |               |                          |     | DIFFERENCES<br>USSR-US |                          |    |   |    |  |  |
|--|---------------|--------------------------|-----|---|---------------|--------------------------|-----|------------------------|--------------------------|----|---|----|--|--|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |   | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |                        | COMPONENT<br>WINDS<br>-1 |    |   |    |  |  |
|  |               | NS                       | M   | EW  |               | NS                       | M   | EW                     | DEG C                    | M  | S | EW |  |  |
| 93                                     | -90           | 13                       | 2   |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 92                                     | -95           | 10                       | 5   |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 91                                     | -100          | 8                        | 8   |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 90                                     | -104          | 4                        | 10  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 89                                     | -106          | 1                        | 12  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 88                                     | -107          | -2                       | 15  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 87                                     | -106          | -5                       | 18  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 86                                     | -105          | -7                       | 22  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 85                                     | -103          | -9                       | 26  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 84                                     | -100          | -10                      | 29  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 83                                     | -96           | -10                      | 32  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 82                                     | -93           | -10                      | 35  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 81                                     | -90           | -9                       | 35  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 80                                     | -87           | -8                       | 35  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 79                                     | -83           | -6                       | 32  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 78                                     | -79           | -5                       | 28  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 77                                     | -75           | -3                       | 23  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 76                                     | -72           | -2                       | 16  |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 75                                     | -70           | -1                       | 9   |   | 999           | 999                      | 999 |                        |                          |    |   |    |  |  |
| 74                                     | -70           | 0                        | 1   |   | -101          | 999                      | 999 | -31                    |                          |    |   |    |  |  |
| 73                                     | -70           | 1                        | -6  |   | -93           | 999                      | 999 | -23                    |                          |    |   |    |  |  |
| 72                                     | -71           | 2                        | -12 |   | -84           | 999                      | 999 | -13                    |                          |    |   |    |  |  |
| 71                                     | -73           | 2                        | -16 |   | -76           | 999                      | 999 | -3                     |                          |    |   |    |  |  |
| 70                                     | -77           | 1                        | -17 |   | -70           | 999                      | 999 | 7                      |                          |    |   |    |  |  |
| 69                                     | -66           | 0                        | -17 |   | -66           | 999                      | 999 | 0                      |                          |    |   |    |  |  |
| 68                                     | -59           | 0                        | -15 |   | -65           | 999                      | 999 | -6                     |                          |    |   |    |  |  |
| 67                                     | -46           | 0                        | -17 |   | -66           | 999                      | 999 | -20                    |                          |    |   |    |  |  |
| 66                                     | -38           | 3                        | -23 |   | -66           | 999                      | 999 | -28                    |                          |    |   |    |  |  |
| 65                                     | -37           | 7                        | -32 |   | -66           | 999                      | 999 | -29                    |                          |    |   |    |  |  |
| 64                                     | -37           | 11                       | -41 |   | -63           | 999                      | 999 | -26                    |                          |    |   |    |  |  |
| 63                                     | -39           | 13                       | -48 |   | -59           | 999                      | 999 | -20                    |                          |    |   |    |  |  |
| 62                                     | -39           | 14                       | -50 |   | -53           | -11                      | -37 | -14                    | -25                      | 13 |   |    |  |  |
| 61                                     | -34           | 13                       | -49 |   | -46           | -6                       | -46 | -12                    | -19                      | 3  |   |    |  |  |
| 60                                     | -31           | 10                       | -46 |   | -38           | 0                        | -52 | -7                     | -10                      | -6 |   |    |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | COMPONENT<br>WINDS<br>-1 |     |   |    |  |  |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|-----|--------------------------|-----|---|----|--|--|
|           |               | NS                       | M   | EW |               | NS                       | M   | EW  | DEG C                    | M   | S | EW |  |  |
| 59        | -29           | 7                        | -42 |    | -31           | 6                        | -56 | -2  | -1                       | -14 |   |    |  |  |
| 58        | -29           | 6                        | -37 |    | -25           | 9                        | -54 | 4   | 3                        | -17 |   |    |  |  |
| 57        | -25           | 7                        | -35 |    | -21           | 7                        | -49 | 4   | 0                        | -14 |   |    |  |  |
| 56        | -21           | 9                        | -36 |    | -18           | 0                        | -42 | 3   | -9                       | -6  |   |    |  |  |
| 55        | -13           | 8                        | -41 |    | -16           | -6                       | -37 | -3  | -14                      | 4   |   |    |  |  |
| 54        | -10           | 4                        | -47 |    | -14           | -8                       | -37 | -4  | -12                      | 10  |   |    |  |  |
| 53        | -6            | -1                       | -50 |    | -13           | -6                       | -40 | -7  | -5                       | 10  |   |    |  |  |
| 52        | -6            | -6                       | -51 |    | -12           | -7                       | -43 | -6  | -1                       | 8   |   |    |  |  |
| 51        | -2            | -7                       | -48 |    | -12           | -9                       | -45 | -10 | -2                       | 3   |   |    |  |  |
| 50        | -3            | -3                       | -44 |    | -13           | -9                       | -46 | -10 | -6                       | -2  |   |    |  |  |
| 49        | -7            | 2                        | -42 |    | -15           | -7                       | -44 | -8  | -9                       | -2  |   |    |  |  |
| 48        | -10           | 6                        | -42 |    | -15           | -1                       | -40 | -5  | -7                       | 2   |   |    |  |  |
| 47        | -14           | 6                        | -43 |    | -15           | 5                        | -36 | -1  | -1                       | 7   |   |    |  |  |
| 46        | -23           | 3                        | -42 |    | -16           | 7                        | -34 | 7   | 4                        | 8   |   |    |  |  |
| 45        | -34           | -1                       | -38 |    | -17           | 4                        | -35 | 17  | 5                        | 3   |   |    |  |  |
| 44        | -40           | -6                       | -33 |    | -17           | -3                       | -35 | 23  | 3                        | -2  |   |    |  |  |
| 43        | -46           | -9                       | -31 |    | -15           | -8                       | -34 | 31  | 1                        | -3  |   |    |  |  |
| 42        | -49           | -7                       | -31 |    | -17           | -8                       | -32 | 32  | -1                       | -1  |   |    |  |  |
| 41        | -48           | -3                       | -30 |    | -20           | -4                       | -29 | 28  | -1                       | 1   |   |    |  |  |
| 40        | -44           | 0                        | -28 |    | -23           | -2                       | -27 | 21  | -2                       | 1   |   |    |  |  |
| 39        | -44           | -2                       | -23 |    | -24           | -6                       | -30 | 20  | -4                       | -7  |   |    |  |  |
| 38        | 999           | 999                      | 999 |    | -26           | -11                      | -25 |     |                          |     |   |    |  |  |
| 37        | 999           | 999                      | 999 |    | -29           | -1                       | -16 |     |                          |     |   |    |  |  |
| 36        | 999           | 999                      | 999 |    | -31           | 9                        | -17 |     |                          |     |   |    |  |  |
| 35        | 999           | 999                      | 999 |    | -30           | 5                        | -23 |     |                          |     |   |    |  |  |
| 34        | 999           | 999                      | 999 |    | -32           | -1                       | -23 |     |                          |     |   |    |  |  |
| 33        | 999           | 999                      | 999 |    | -32           | -1                       | -24 |     |                          |     |   |    |  |  |
| 32        | 999           | 999                      | 999 |    | -35           | 2                        | -26 |     |                          |     |   |    |  |  |
| 31        | 999           | 999                      | 999 |    | -36           | -2                       | -27 |     |                          |     |   |    |  |  |
| 30        | 999           | 999                      | 999 |    | -45           | -1                       | -18 |     |                          |     |   |    |  |  |
| 29        | 999           | 999                      | 999 |    | -49           | -3                       | -19 |     |                          |     |   |    |  |  |
| 28        | 999           | 999                      | 999 |    | -45           | -4                       | -15 |     |                          |     |   |    |  |  |
| 27        | 999           | 999                      | 999 |    | -43           | -2                       | -11 |     |                          |     |   |    |  |  |
| 26        | 999           | 999                      | 999 |    | -43           | -2                       | -11 |     |                          |     |   |    |  |  |

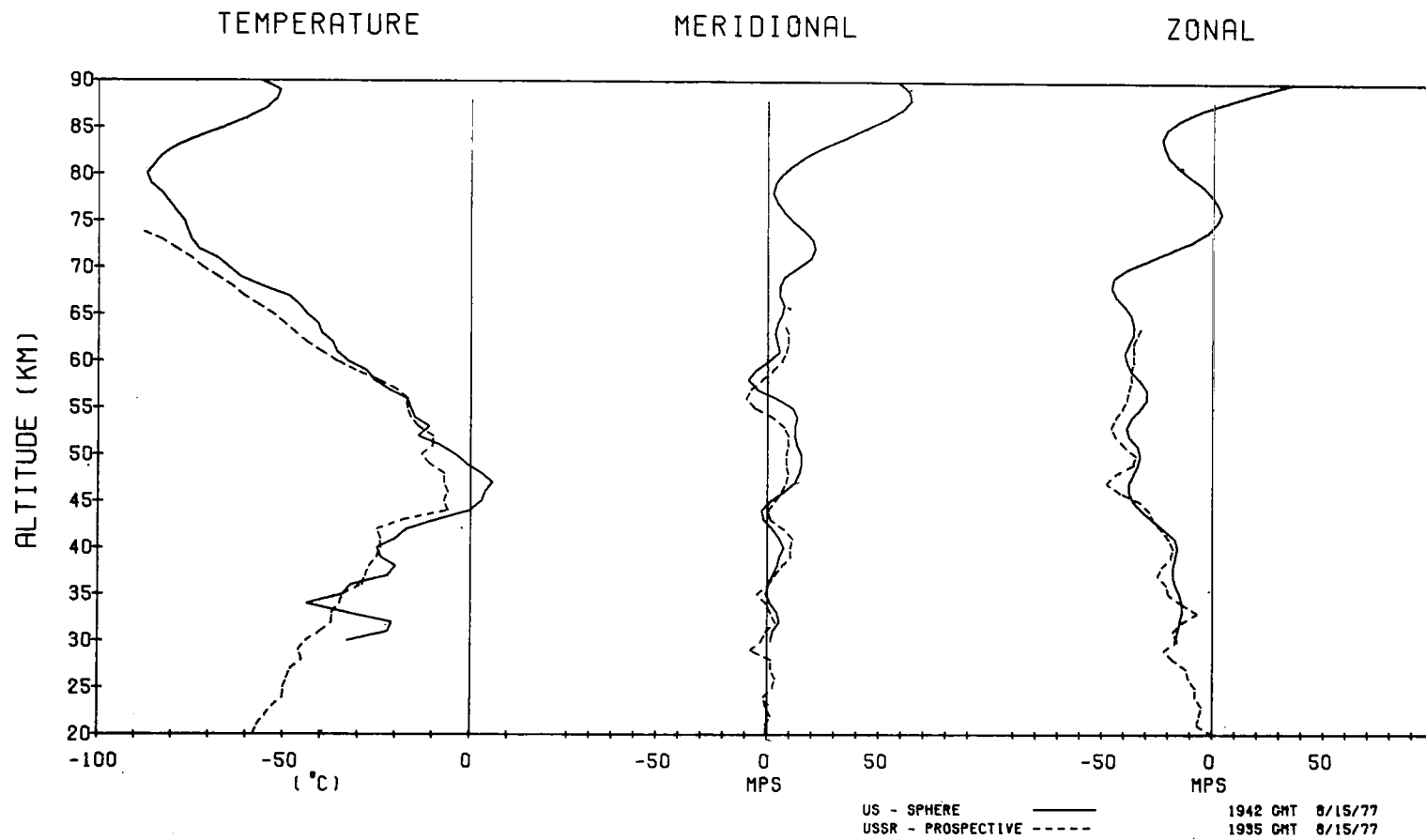
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| ALT | US - SPHERE<br>AUG 15 1977<br>1942 GMT |                    |     | USSR - PROSPECTIVE<br>AUG 15 1977<br>1935 GMT |                    |     | DIFFERENCES<br>USSR-US |                    |    |
|-----|--|--------------------|-----|---|--------------------|-----|------------------------|--------------------|----|
|     | TEMP                                   | COMPONENT<br>WINDS |     | TEMP  | COMPONENT<br>WINDS |     | TLMP                   | COMPONENT<br>WINDS |    |
|     |  | DEG C              | -1  |   | DEG C              | -1  |                        | DEG C              | -1 |
| KM  |  | NS                 | EW  |   | NS                 | EW  |                        | NS                 | EW |
| 94  | -81                                    | -5                 | 65  | 999   | 999                | 999 |                        |                    |    |
| 93  | -76                                    | 13                 | 64  | 999   | 999                | 999 |                        |                    |    |
| 92  | -68                                    | 31                 | 59  | 999   | 999                | 999 |                        |                    |    |
| 91  | -62                                    | 46                 | 49  | 999   | 999                | 999 |                        |                    |    |
| 90  | -56                                    | 58                 | 36  | 999   | 999                | 999 |                        |                    |    |
| 89  | -51                                    | 63                 | 21  | 999   | 999                | 999 |                        |                    |    |
| 88  | -52                                    | 64                 | 7   | 999   | 999                | 999 |                        |                    |    |
| 87  | -55                                    | 60                 | -6  | 999   | 999                | 999 |                        |                    |    |
| 86  | -60                                    | 53                 | -15 | 999   | 999                | 999 |                        |                    |    |
| 85  | -66                                    | 44                 | -21 | 999   | 999                | 999 |                        |                    |    |
| 84  | -73                                    | 35                 | -23 | 999   | 999                | 999 |                        |                    |    |
| 83  | -79                                    | 25                 | -22 | 999   | 999                | 999 |                        |                    |    |
| 82  | -83                                    | 17                 | -20 | 999   | 999                | 999 |                        |                    |    |
| 81  | -85                                    | 11                 | -16 | 999   | 999                | 999 |                        |                    |    |
| 80  | -87                                    | 6                  | -11 | 999   | 999                | 999 |                        |                    |    |
| 79  | -86                                    | 3                  | -5  | 999   | 999                | 999 |                        |                    |    |
| 78  | -83                                    | 2                  | -1  | 999   | 999                | 999 |                        |                    |    |
| 77  | -81                                    | 4                  | 2   | 999   | 999                | 999 |                        |                    |    |
| 76  | -79                                    | 7                  | 4   | 999   | 999                | 999 |                        |                    |    |
| 75  | -77                                    | 11                 | 2   | 999   | 999                | 999 |                        |                    |    |
| 74  | -76                                    | 16                 | -2  | -89   | 999                | 999 | -13                    |                    |    |
| 73  | -75                                    | 20                 | -9  | -83   | 999                | 999 | -8                     |                    |    |
| 72  | -73                                    | 21                 | -19 | -79   | 999                | 999 | -6                     |                    |    |
| 71  | -68                                    | 19                 | -29 | -75   | 999                | 999 | -7                     |                    |    |
| 70  | -65                                    | 13                 | -39 | -72   | 999                | 999 | -7                     |                    |    |
| 69  | -62                                    | 7                  | -45 | -68   | 999                | 999 | -6                     |                    |    |
| 68  | -56                                    | 5                  | -46 | -64   | 999                | 999 | -8                     |                    |    |
| 67  | -49                                    | 5                  | -44 | -61   | 999                | 999 | -12                    |                    |    |
| 66  | -46                                    | 7                  | -40 | -57   | 999                | 999 | -11                    |                    |    |
| 65  | -44                                    | 6                  | -37 | -53   | 999                | 999 | -9                     |                    |    |
| 64  | -41                                    | 4                  | -36 | -50   | 7                  | -32 | -9                     | 3                  | 4  |
| 63  | -40                                    | 3                  | -36 | -47   | 9                  | -34 | -7                     | 6                  | 2  |
| 62  | -37                                    | 4                  | -38 | -44   | 9                  | -36 | -7                     | 5                  | 2  |
| 61  | -36                                    | 5                  | -40 | -40   | 8                  | -36 | -4                     | 3                  | 4  |

| ALT | TEMP | COMPONENT<br>WINDS |     | TEMP | COMPONENT<br>WINDS |     | TEMP | COMPONENT<br>WINDS |     |
|-----|------|--------------------|-----|------|--------------------|-----|------|--------------------|-----|
|     |      | -1                 |     |      | -1                 |     |      | -1                 |     |
|     |      | DEG C              | M S |      | DEG C              | M S |      | DEG C              | M S |
| KM  |      | NS                 | EW  |      | NS                 | EW  |      | NS                 | EW  |
| 60  | -33  | 0                  | -39 | -36  | 6                  | -36 | -3   | 6                  | 3   |
| 59  | -28  | -6                 | -37 | -31  | 2                  | -37 | -3   | 8                  | 0   |
| 58  | -26  | -9                 | -33 | -25  | -3                 | -37 | 1    | 6                  | -4  |
| 57  | -22  | -5                 | -30 | -20  | -8                 | -38 | 2    | -3                 | -8  |
| 56  | -17  | 4                  | -30 | -17  | -10                | -39 | 0    | -14                | -9  |
| 55  | -16  | 11                 | -33 | -17  | -6                 | -41 | -1   | -17                | -8  |
| 54  | -15  | 13                 | -37 | -16  | 2                  | -44 | -1   | -11                | -7  |
| 53  | -11  | 12                 | -39 | -14  | 7                  | -46 | -3   | -5                 | -7  |
| 52  | -14  | 12                 | -38 | -10  | 9                  | -44 | 4    | -3                 | -6  |
| 51  | -8   | 13                 | -34 | -10  | 9                  | -40 | -2   | -4                 | -6  |
| 50  | -4   | 15                 | -33 | -13  | 8                  | -35 | -9   | -7                 | -2  |
| 49  | -1   | 15                 | -34 | -11  | 8                  | -36 | -10  | -7                 | -2  |
| 48  | 3    | 14                 | -36 | -7   | 9                  | -44 | -10  | -5                 | -8  |
| 47  | 6    | 12                 | -38 | -7   | 8                  | -48 | -13  | -4                 | -10 |
| 46  | 4    | 7                  | -38 | -6   | 6                  | -42 | -10  | -1                 | -4  |
| 45  | 3    | 1                  | -36 | -7   | 3                  | -33 | -10  | 2                  | 3   |
| 44  | 0    | -3                 | -32 | -6   | 0                  | -29 | -6   | 3                  | 3   |
| 43  | -9   | -2                 | -27 | -18  | 1                  | -27 | -9   | 3                  | 0   |
| 42  | -17  | 2                  | -22 | -25  | 7                  | -23 | -8   | 5                  | -1  |
| 41  | -20  | 5                  | -17 | -24  | 11                 | -20 | -4   | 6                  | -3  |
| 40  | -25  | 7                  | -16 | -24  | 10                 | -18 | 1    | 3                  | -2  |
| 39  | -24  | 5                  | -17 | -25  | 10                 | -19 | -1   | 5                  | -2  |
| 38  | -20  | 4                  | -18 | -27  | 6                  | -23 | -7   | 2                  | -5  |
| 37  | -22  | 2                  | -18 | -28  | 3                  | -25 | -6   | 1                  | -7  |
| 36  | -32  | 0                  | -17 | -29  | 0                  | -21 | 3    | 0                  | -4  |
| 35  | -34  | -1                 | -15 | -34  | -5                 | -20 | 0    | -4                 | -5  |
| 34  | -44  | 1                  | -14 | -35  | -1                 | -14 | 9    | -2                 | 0   |
| 33  | -33  | 4                  | -14 | -37  | 1                  | -7  | -4   | -3                 | 7   |
| 32  | -21  | 5                  | -15 | -37  | 3                  | -14 | -16  | -2                 | 1   |
| 31  | -22  | 2                  | -16 | -40  | -1                 | -18 | -18  | -3                 | -2  |
| 30  | -33  | 1                  | -17 | -44  | -3                 | -16 | -11  | -4                 | 1   |
| 29  | 999  | 999                | 999 | -46  | -8                 | -22 |      |                    |     |
| 28  | 999  | 999                | 999 | -45  | 1                  | -18 |      |                    |     |
| 27  | 999  | 999                | 999 | -48  | 1                  | -12 |      |                    |     |

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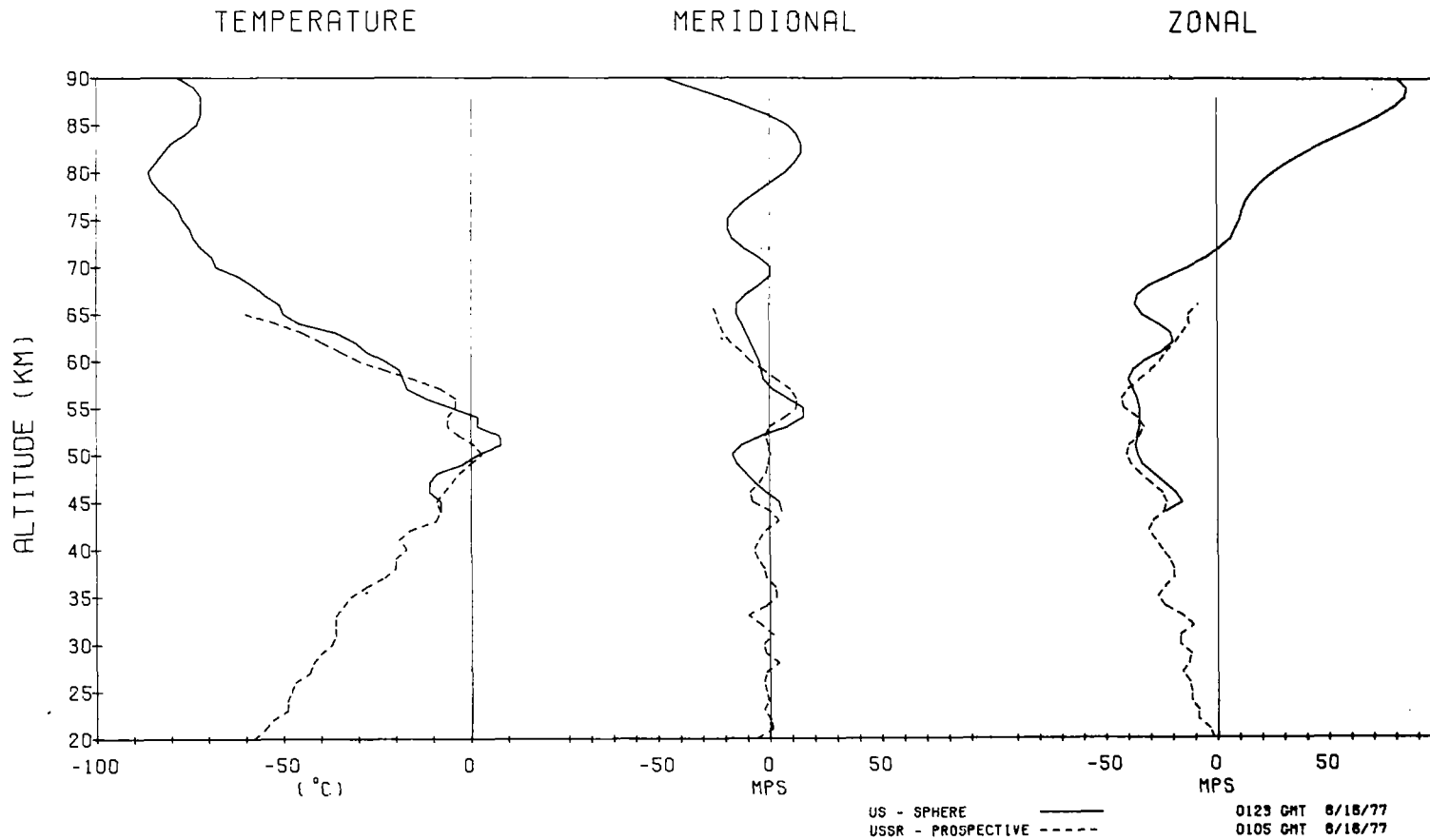




| ALT<br>KM | US - SPHERE<br>AUG 16 1977<br>0123 GMT |                          |     |     | USSR - PROSPECTIVE<br>AUG 16 1977<br>0105 GMT |                          |    |    | DIFFERENCES<br>USSR-US |                          |     |     |    |
|-----------|--|--------------------------|-----|-----|---|--------------------------|----|----|------------------------|--------------------------|-----|-----|----|
|           | TEMP<br>DEG C                          | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |    |    | TEMP<br>DEG C          | COMPONENT<br>WINDS<br>-1 |     |     |    |
|           |  | M S                      |     | EW  |   | M S                      |    | EW |                        | M S                      |     | EW  |    |
|           |  | NS                       | EW  |     |   | NS                       | EW |    |                        | NS                       | EW  |     |    |
| 93        | -87                                    | -71                      | 51  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 92        | -85                                    | -65                      | 63  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 91        | -82                                    | -57                      | 74  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 90        | -78                                    | -47                      | 81  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 89        | -74                                    | -35                      | 85  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 88        | -72                                    | -22                      | 84  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 87        | -72                                    | -11                      | 79  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 86        | -72                                    | 0                        | 72  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 85        | -73                                    | 8                        | 64  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 84        | -76                                    | 12                       | 55  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 83        | -80                                    | 14                       | 46  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 82        | -82                                    | 14                       | 38  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 81        | -84                                    | 11                       | 31  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 80        | -86                                    | 7                        | 25  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 79        | -85                                    | 1                        | 20  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 78        | -83                                    | -5                       | 16  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 77        | -80                                    | -11                      | 13  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 76        | -78                                    | -16                      | 11  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 75        | -77                                    | -19                      | 10  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 74        | -75                                    | -19                      | 8   | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 73        | -74                                    | -17                      | 6   | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 72        | -72                                    | -12                      | 1   | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 71        | -69                                    | -5                       | -5  | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 70        | -68                                    | 0                        | -13 | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 69        | -62                                    | 0                        | -22 | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 68        | -58                                    | -5                       | -31 | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 67        | -55                                    | -11                      | -36 | 999 | 999   | 999                      |    |    |                        |                          |     |     |    |
| 66        | -51                                    | -15                      | -37 | 999 | -26   | -9                       |    |    |                        |                          | -11 | 28  |    |
| 65        | -50                                    | -15                      | -34 | -60 | -24   | -13                      |    |    |                        |                          | -10 | -9  | 21 |
| 64        | -46                                    | -13                      | -27 | -52 | -23   | -13                      |    |    |                        |                          | -6  | -10 | 14 |
| 63        | -36                                    | -11                      | -21 | -45 | -21   | -16                      |    |    |                        |                          | -9  | -10 | 5  |
| 62        | -31                                    | -9                       | -20 | -40 | -18   | -19                      |    |    |                        |                          | -9  | -9  | 1  |
| 61        | -28                                    | -7                       | -25 | -35 | -13   | -23                      |    |    |                        |                          | -7  | -6  | 2  |
| 60        | -23                                    | -5                       | -33 | -30 | -9  | -26                      |    |    |                        |                          | -7  | -4  | 7  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |     |    |
|-----------|---------------|--------------------------|-----|-----|---------------|--------------------------|----|----|---------------|--------------------------|-----|-----|----|
|           |               | M S                      |     | EW  |               | M S                      |    | EW |               | M S                      |     | EW  |    |
|           |               | NS                       | EW  |     |               | NS                       | EW |    |               | NS                       | EW  |     |    |
|           |               | NS                       | EW  | NS  |               | EW                       | NS | EW |               | NS                       | EW  |     |    |
| 59        | -19           | -4                       | -38 | -23 | -3            | -30                      |    |    |               |                          | -4  | 1   | 8  |
| 58        | -18           | -3                       | -40 | -15 | 3             | -35                      |    |    |               |                          | 3   | 6   | 5  |
| 57        | -17           | 1                        | -38 | -8  | 9             | -40                      |    |    |               |                          | 9   | 8   | -2 |
| 56        | -12           | 8                        | -36 | -4  | 12            | -43                      |    |    |               |                          | 8   | 4   | -7 |
| 55        | -5            | 15                       | -35 | -4  | 12            | -42                      |    |    |               |                          | 1   | -3  | -7 |
| 54        | 2             | 15                       | -35 | -6  | 7             | -36                      |    |    |               |                          | -8  | -8  | -1 |
| 53        | 2             | 8                        | -35 | -6  | 0             | -33                      |    |    |               |                          | -8  | -8  | 2  |
| 52        | 8             | -4                       | -36 | -3  | -2            | -35                      |    |    |               |                          | -11 | 2   | 1  |
| 51        | 8             | -13                      | -37 | 1   | -1            | -40                      |    |    |               |                          | -7  | 12  | -3 |
| 50        | 2             | -17                      | -36 | 3   | 0             | -41                      |    |    |               |                          | 1   | 17  | -5 |
| 49        | -2            | -15                      | -34 | 0   | -1            | -39                      |    |    |               |                          | 2   | 14  | -5 |
| 48        | -9            | -11                      | -29 | -3  | -2            | -35                      |    |    |               |                          | 6   | 9   | -6 |
| 47        | -11           | -7                       | -24 | -5  | -5            | -30                      |    |    |               |                          | 6   | 2   | -6 |
| 46        | -11           | -2                       | -19 | -7  | -9            | -25                      |    |    |               |                          | 4   | -7  | -6 |
| 45        | -8            | 4                        | -16 | -9  | -8            | -23                      |    |    |               |                          | -1  | -12 | -7 |
| 44        | -8            | 5                        | -23 | -8  | 0             | -24                      |    |    |               |                          | 0   | -5  | -1 |
| 43        | 999           | 999                      | 999 | -9  | 4             | -29                      |    |    |               |                          |     |     |    |
| 42        | 999           | 999                      | 999 | -16 | -2            | -31                      |    |    |               |                          |     |     |    |
| 41        | 999           | 999                      | 999 | -19 | -5            | -28                      |    |    |               |                          |     |     |    |
| 40        | 999           | 999                      | 999 | -17 | -7            | -25                      |    |    |               |                          |     |     |    |
| 39        | 999           | 999                      | 999 | -20 | -6            | -22                      |    |    |               |                          |     |     |    |
| 38        | 999           | 999                      | 999 | -20 | -3            | -20                      |    |    |               |                          |     |     |    |
| 37        | 999           | 999                      | 999 | -23 | -2            | -20                      |    |    |               |                          |     |     |    |
| 36        | 999           | 999                      | 999 | -28 | 2             | -24                      |    |    |               |                          |     |     |    |
| 35        | 999           | 999                      | 999 | -32 | 3             | -27                      |    |    |               |                          |     |     |    |
| 34        | 999           | 999                      | 999 | -34 | -2            | -24                      |    |    |               |                          |     |     |    |
| 33        | 999           | 999                      | 999 | -36 | -10           | -16                      |    |    |               |                          |     |     |    |
| 32        | 999           | 999                      | 999 | -36 | -4            | -11                      |    |    |               |                          |     |     |    |
| 31        | 999           | 999                      | 999 | -36 | 1             | -17                      |    |    |               |                          |     |     |    |
| 30        | 999           | 999                      | 999 | -37 | -3            | -17                      |    |    |               |                          |     |     |    |
| 29        | 999           | 999                      | 999 | -40 | -2            | -12                      |    |    |               |                          |     |     |    |
| 28        | 999           | 999                      | 999 | -42 | 4             | -13                      |    |    |               |                          |     |     |    |
| 27        | 999           | 999                      | 999 | -43 | -2            | -16                      |    |    |               |                          |     |     |    |
| 26        | 999           | 999                      | 999 | -47 | -3            | -13                      |    |    |               |                          |     |     |    |

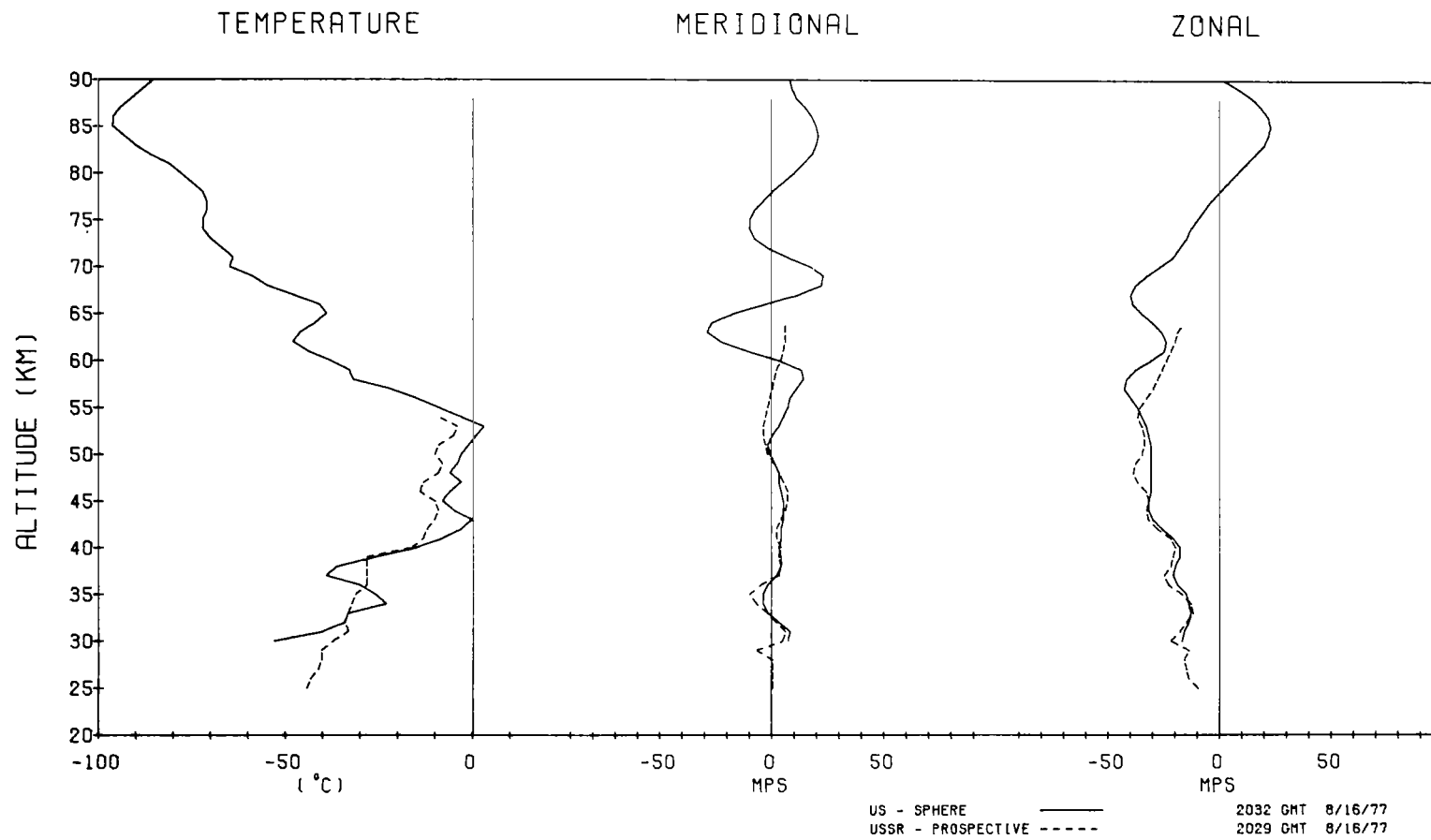
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| US - SPHERE<br>AUG 16 1977<br>2032 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 16 1977<br>2029 GMT |               |                          |     | DIFFERENCES<br>USSR-US |                          |    |    |  |  |
|--|---------------|--------------------------|-----|---|---------------|--------------------------|-----|------------------------|--------------------------|----|----|--|--|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |   | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |                        | COMPONENT<br>WINDS<br>-1 |    |    |  |  |
|  |               | NS                       | S   | EW  |               | NS                       | S   | EW                     | NS                       | S  | EW |  |  |
| 94                                     | -86           | 9                        | -22 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 93                                     | -83           | 8                        | -18 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 92                                     | -81           | 7                        | -13 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 91                                     | -81           | 7                        | -6  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 90                                     | -85           | 8                        | 2   |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 89                                     | -88           | 9                        | 9   |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 88                                     | -91           | 11                       | 15  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 87                                     | -94           | 15                       | 19  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 86                                     | -96           | 18                       | 22  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 85                                     | -96           | 20                       | 23  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 84                                     | -93           | 21                       | 22  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 83                                     | -90           | 20                       | 20  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 82                                     | -86           | 18                       | 16  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 81                                     | -81           | 14                       | 12  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 80                                     | -78           | 10                       | 8   |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 79                                     | -75           | 5                        | 4   |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 78                                     | -72           | 0                        | 0   |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 77                                     | -71           | -4                       | -4  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 76                                     | -71           | -8                       | -7  |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 75                                     | -72           | -10                      | -10 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 74                                     | -72           | -10                      | -13 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 73                                     | -70           | -8                       | -15 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 72                                     | -67           | -2                       | -18 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 71                                     | -64           | 7                        | -21 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 70                                     | -65           | 17                       | -27 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 69                                     | -59           | 23                       | -33 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 68                                     | -55           | 22                       | -38 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 67                                     | -48           | 12                       | -40 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 66                                     | -41           | -3                       | -39 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 65                                     | -39           | -17                      | -35 |   | 999           | 999                      | 999 |                        |                          |    |    |  |  |
| 64                                     | -42           | -27                      | -30 |   | 999           | 6                        | -16 |                        |                          | 33 | 14 |  |  |
| 63                                     | -46           | -29                      | -26 |   | 999           | 6                        | -19 |                        |                          | 35 | 7  |  |  |
| 62                                     | -48           | -23                      | -24 |   | 999           | 6                        | -20 |                        |                          | 29 | 4  |  |  |
| 61                                     | -44           | -11                      | -25 |   | 999           | 5                        | -22 |                        |                          | 16 | 3  |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     |    | COMPONENT<br>WINDS<br>-1 |     |     |    |  |
|-----------|---------------|--------------------------|-----|----|---------------|--------------------------|-----|----|--------------------------|-----|-----|----|--|
|           |               | NS                       | S   | EW |               | NS                       | S   | EW | NS                       | S   | EW  |    |  |
| 60        | -38           | 3                        | -31 |    | 999           | 4                        | -24 |    |                          |     | 1   | 7  |  |
| 59        | -33           | 13                       | -38 |    | 999           | 2                        | -26 |    |                          |     | -11 | 12 |  |
| 58        | -32           | 14                       | -42 |    | 999           | 1                        | -28 |    |                          |     | -13 | 14 |  |
| 57        | -22           | 11                       | -43 |    | 999           | 0                        | -30 |    |                          |     | -11 | 13 |  |
| 56        | -15           | 8                        | -40 |    | 999           | -1                       | -33 |    |                          |     | -9  | 7  |  |
| 55        | -9            | 7                        | -37 |    | 999           | -2                       | -36 |    |                          |     | -9  | 1  |  |
| 54        | -3            | 5                        | -35 |    | -9            | -3                       | -37 |    |                          | -6  | -8  | -2 |  |
| 53        | 3             | 3                        | -33 |    | -4            | -4                       | -35 |    |                          | -7  | -7  | -2 |  |
| 52        | 1             | 0                        | -32 |    | -5            | -4                       | -34 |    |                          | -6  | -4  | -2 |  |
| 51        | -1            | -2                       | -31 |    | -9            | -3                       | -34 |    |                          | -8  | -1  | -3 |  |
| 50        | -3            | -1                       | -31 |    | -10           | -2                       | -35 |    |                          | -7  | -1  | -4 |  |
| 49        | -4            | 1                        | -31 |    | -8            | 1                        | -38 |    |                          | -4  | 0   | -7 |  |
| 48        | -6            | 3                        | -31 |    | -9            | 3                        | -39 |    |                          | -3  | 0   | -8 |  |
| 47        | -3            | 3                        | -31 |    | -13           | 5                        | -37 |    |                          | -10 | 2   | -6 |  |
| 46        | -6            | 4                        | -31 |    | -14           | 7                        | -33 |    |                          | -8  | 3   | -2 |  |
| 45        | -8            | 5                        | -32 |    | -10           | 7                        | -32 |    |                          | -2  | 2   | 0  |  |
| 44        | -5            | 5                        | -32 |    | -9            | 6                        | -33 |    |                          | -4  | 1   | -1 |  |
| 43        | 0             | 5                        | -30 |    | -10           | 4                        | -32 |    |                          | -10 | -1  | -2 |  |
| 42        | -3            | 4                        | -26 |    | -12           | 2                        | -28 |    |                          | -9  | -2  | -2 |  |
| 41        | -8            | 4                        | -21 |    | -13           | 2                        | -22 |    |                          | -5  | -2  | -1 |  |
| 40        | -15           | 3                        | -18 |    | -16           | 4                        | -20 |    |                          | -1  | 1   | -2 |  |
| 39        | -26           | 4                        | -18 |    | -28           | 3                        | -21 |    |                          | -2  | -1  | -3 |  |
| 38        | -36           | 4                        | -20 |    | -28           | 4                        | -22 |    |                          | 8   | 0   | -2 |  |
| 37        | -39           | 2                        | -21 |    | -28           | 3                        | -25 |    |                          | 11  | 1   | -4 |  |
| 36        | -30           | -2                       | -19 |    | -28           | -5                       | -23 |    |                          | 2   | -3  | -4 |  |
| 35        | -26           | -4                       | -15 |    | -31           | -10                      | -17 |    |                          | -5  | -6  | -2 |  |
| 34        | -23           | -4                       | -14 |    | -32           | -7                       | -13 |    |                          | -9  | -3  | 1  |  |
| 33        | -33           | -2                       | -13 |    | -33           | -2                       | -12 |    |                          | 0   | 0   | 1  |  |
| 32        | -34           | 3                        | -14 |    | -34           | 2                        | -15 |    |                          | 0   | -1  | -1 |  |
| 31        | -40           | 8                        | -16 |    | -33           | 6                        | -18 |    |                          | 7   | -2  | -2 |  |
| 30        | -53           | 7                        | -17 |    | -37           | 5                        | -22 |    |                          | 16  | -2  | -5 |  |
| 29        | 999           | 999                      | 999 |    | -40           | -7                       | -14 |    |                          |     |     |    |  |
| 28        | 999           | 999                      | 999 |    | -40           | 0                        | -16 |    |                          |     |     |    |  |
| 27        | 999           | 999                      | 999 |    | -41           | 0                        | -15 |    |                          |     |     |    |  |

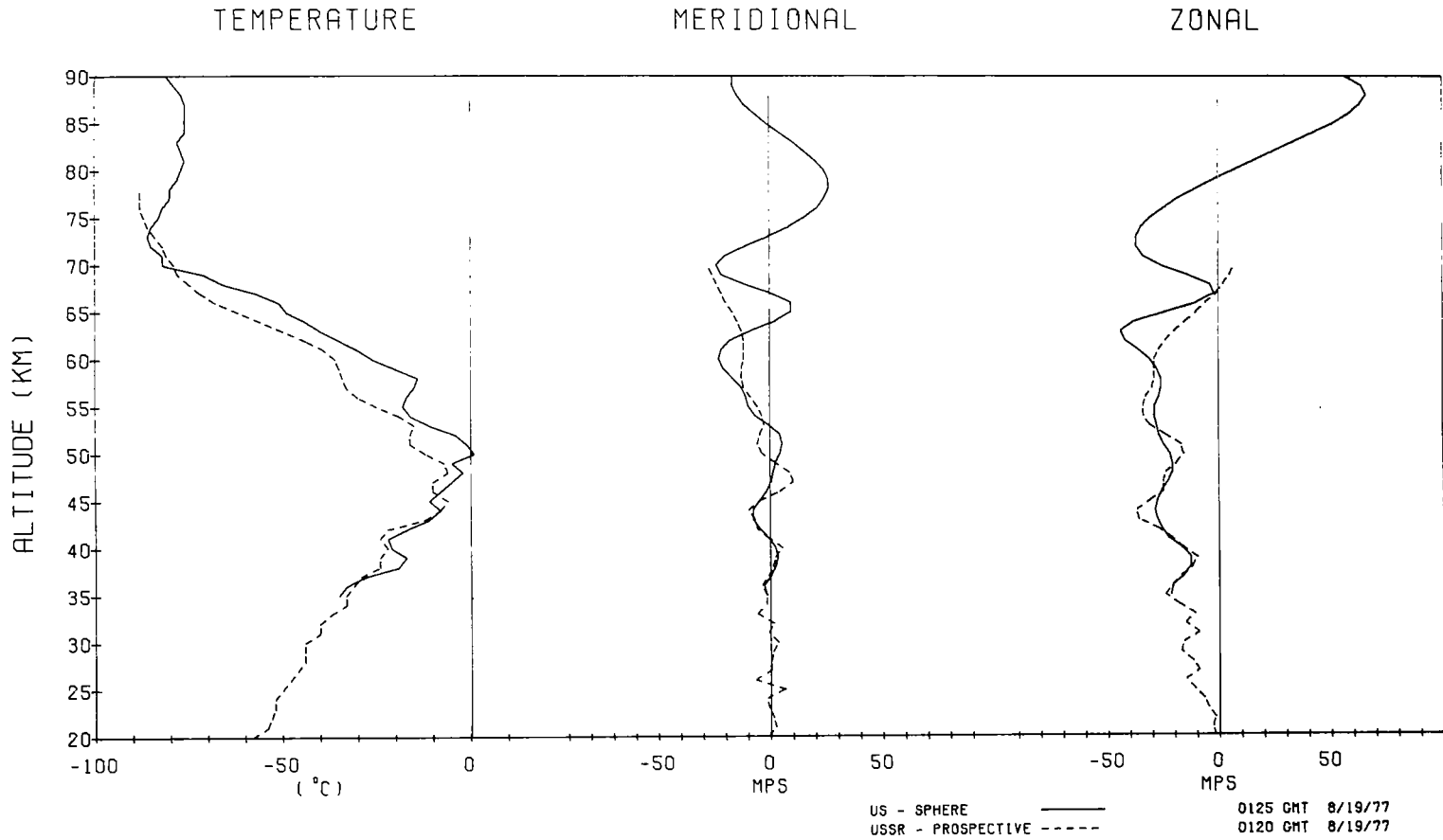
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| US - SPHERE<br>AUG 19 1977<br>0125 GMT |               |                          |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>0120 GMT |                          |     |               | DIFFERENCES<br>USSR-US   |    |  |  |
|--|---------------|--------------------------|-----|---|--------------------------|-----|---------------|--------------------------|----|--|--|
| ALT<br>KM                              | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C                                 | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |  |  |
|  |               | NS                       | EW  |   | NS                       | EW  |               | NS                       | EW |  |  |
| 93                                     | -83           | -1                       | 17  | 999   | 999                      | 999 |               |                          |    |  |  |
| 92                                     | -82           | -9                       | 33  | 999   | 999                      | 999 |               |                          |    |  |  |
| 91                                     | -81           | -15                      | 47  | 999   | 999                      | 999 |               |                          |    |  |  |
| 90                                     | -81           | -17                      | 57  | 999   | 999                      | 999 |               |                          |    |  |  |
| 89                                     | -79           | -17                      | 64  | 999   | 999                      | 999 |               |                          |    |  |  |
| 88                                     | -77           | -15                      | 66  | 999   | 999                      | 999 |               |                          |    |  |  |
| 87                                     | -76           | -12                      | 63  | 999   | 999                      | 999 |               |                          |    |  |  |
| 86                                     | -76           | -7                       | 58  | 999   | 999                      | 999 |               |                          |    |  |  |
| 85                                     | -76           | -2                       | 51  | 999   | 999                      | 999 |               |                          |    |  |  |
| 84                                     | -76           | 4                        | 42  | 999   | 999                      | 999 |               |                          |    |  |  |
| 83                                     | -78           | 10                       | 33  | 999   | 999                      | 999 |               |                          |    |  |  |
| 82                                     | -77           | 15                       | 24  | 999   | 999                      | 999 |               |                          |    |  |  |
| 81                                     | -76           | 20                       | 15  | 999   | 999                      | 999 |               |                          |    |  |  |
| 80                                     | -77           | 24                       | 6   | 999   | 999                      | 999 |               |                          |    |  |  |
| 79                                     | -78           | 26                       | -3  | 999   | 999                      | 999 |               |                          |    |  |  |
| 78                                     | -80           | 26                       | -11 | -88   | 999                      | 999 | -8            |                          |    |  |  |
| 77                                     | -80           | 24                       | -19 | -88   | 999                      | 999 | -8            |                          |    |  |  |
| 76                                     | -82           | 21                       | -25 | -88   | 999                      | 999 | -6            |                          |    |  |  |
| 75                                     | -83           | 15                       | -31 | -87   | 999                      | 999 | -4            |                          |    |  |  |
| 74                                     | -85           | 8                        | -35 | -86   | 999                      | 999 | -1            |                          |    |  |  |
| 73                                     | -86           | -1                       | -37 | -84   | 999                      | 999 | 2             |                          |    |  |  |
| 72                                     | -85           | -11                      | -37 | -82   | 999                      | 999 | 3             |                          |    |  |  |
| 71                                     | -82           | -20                      | -34 | -81   | 999                      | 999 | 1             |                          |    |  |  |
| 70                                     | -82           | -24                      | -26 | -79   | -28                      | 7   | 3             | -4                       | 33 |  |  |
| 69                                     | -71           | -22                      | -14 | -78   | -26                      | 5   | -7            | -4                       | 19 |  |  |
| 68                                     | -66           | -12                      | -4  | -75   | -24                      | 2   | -9            | -12                      | 6  |  |  |
| 67                                     | -57           | 0                        | -2  | -72   | -22                      | -1  | -15           | -22                      | 1  |  |  |
| 66                                     | -51           | 9                        | -10 | -68   | -20                      | -6  | -17           | -29                      | 4  |  |  |
| 65                                     | -49           | 9                        | -24 | -62   | -17                      | -10 | -13           | -26                      | 14 |  |  |
| 64                                     | -44           | 2                        | -38 | -56   | -15                      | -15 | -12           | -17                      | 23 |  |  |
| 63                                     | -40           | -9                       | -44 | -50   | -13                      | -20 | -10           | -4                       | 24 |  |  |
| 62                                     | -35           | -18                      | -42 | -44   | -12                      | -24 | -9            | 6                        | 18 |  |  |
| 61                                     | -30           | -22                      | -36 | -39   | -12                      | -27 | -9            | 10                       | 9  |  |  |
| 60                                     | -26           | -23                      | -31 | -36   | -12                      | -29 | -10           | 11                       | 2  |  |  |

| ALT<br>KM | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |     | TEMP<br>DEG C | COMPONENT<br>WINDS<br>-1 |    |
|-----------|---------------|--------------------------|-----|---------------|--------------------------|-----|---------------|--------------------------|----|
|           |               | NS                       | EW  |               | NS                       | EW  |               | NS                       | EW |
| 59        | -20           | -21                      | -28 | -35           | -13                      | -29 | -15           | 8                        | -1 |
| 58        | -14           | -17                      | -26 | -34           | -13                      | -29 | -20           | 4                        | -3 |
| 57        | -15           | -13                      | -26 | -33           | -12                      | -30 | -18           | 1                        | -4 |
| 56        | -17           | -11                      | -27 | -30           | -9                       | -33 | -13           | 2                        | -6 |
| 55        | -18           | -10                      | -29 | -25           | -6                       | -34 | -7            | 4                        | -5 |
| 54        | -16           | -7                       | -29 | -19           | -4                       | -34 | -3            | 3                        | -5 |
| 53        | -11           | -1                       | -28 | -15           | -3                       | -31 | -4            | -2                       | -3 |
| 52        | -4            | 4                        | -27 | -16           | -5                       | -24 | -12           | -9                       | 3  |
| 51        | -1            | 5                        | -25 | -16           | -6                       | -17 | -15           | -11                      | 8  |
| 50        | 1             | 4                        | -22 | -12           | -4                       | -16 | -13           | -8                       | 6  |
| 49        | -5            | 2                        | -21 | -7            | 2                        | -19 | -2            | 0                        | 2  |
| 48        | -2            | 1                        | -21 | -6            | 8                        | -24 | -4            | 7                        | -3 |
| 47        | -5            | 0                        | -23 | -10           | 10                       | -25 | -5            | 10                       | -2 |
| 46        | -8            | -2                       | -26 | -10           | 4                        | -25 | -2            | 6                        | 1  |
| 45        | -11           | -5                       | -28 | -6            | -5                       | -31 | 5             | 0                        | -3 |
| 44        | -8            | -8                       | -29 | -8            | -10                      | -37 | 0             | -2                       | -8 |
| 43        | -11           | -8                       | -28 | -12           | -7                       | -36 | -1            | 1                        | -8 |
| 42        | -17           | -5                       | -26 | -22           | -6                       | -27 | -5            | -1                       | -1 |
| 41        | -22           | -1                       | -23 | -24           | -1                       | -21 | -2            | 0                        | 2  |
| 40        | -21           | 2                        | -17 | -22           | 5                        | -16 | -1            | 3                        | 1  |
| 39        | -17           | 3                        | -13 | -24           | 2                        | -10 | -7            | -1                       | 3  |
| 38        | -19           | 2                        | -13 | -24           | 1                        | -12 | -5            | -1                       | 1  |
| 37        | -28           | 0                        | -16 | -29           | -1                       | -17 | -1            | -1                       | -1 |
| 36        | -33           | -3                       | -21 | -31           | -4                       | -21 | 2             | -1                       | 0  |
| 35        | -35           | -2                       | -22 | -33           | -2                       | -24 | 2             | 0                        | -2 |
| 34        | 999           | 999                      | 999 | -33           | -2                       | -18 |               |                          |    |
| 33        | 999           | 999                      | 999 | -37           | -6                       | -11 |               |                          |    |
| 32        | 999           | 999                      | 999 | -40           | 1                        | -15 |               |                          |    |
| 31        | 999           | 999                      | 999 | -40           | -1                       | -9  |               |                          |    |
| 30        | 999           | 999                      | 999 | -44           | 3                        | -16 |               |                          |    |
| 29        | 999           | 999                      | 999 | -44           | 1                        | -17 |               |                          |    |
| 28        | 999           | 999                      | 999 | -44           | 0                        | -12 |               |                          |    |
| 27        | 999           | 999                      | 999 | -46           | 0                        | -9  |               |                          |    |
| 26        | 999           | 999                      | 999 | -48           | -7                       | -15 |               |                          |    |

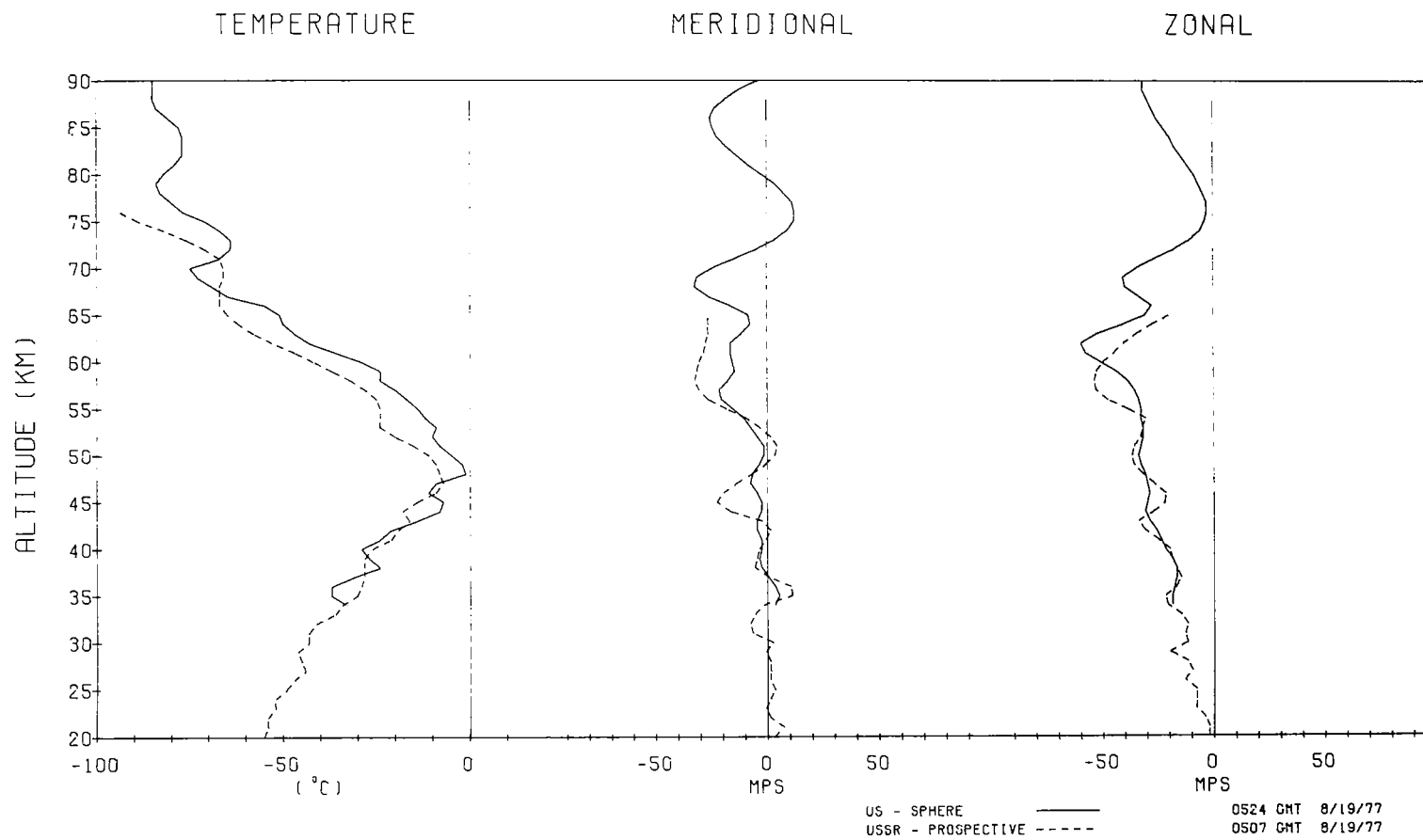
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| ALT | US - SPHERE<br>AUG 19 1977<br>0524 GMT |                          |     | USSR - PROSPECTIVE<br>AUG 19 1977<br>0507 GMT |                          |       | DIFFERENCES<br>USSR-US |             |    |       |   |   |
|-----|--|--------------------------|-----|---|--------------------------|-------|------------------------|-------------|----|-------|---|---|
|     | TEMP                                   | COMPONENT<br>WINDS<br>-1 |     | TEMP  | COMPONENT<br>WINDS<br>-1 |       | TEMP                   | WINDS<br>-1 |    |       |   |   |
|     |  | DEG C                    | M   |   | S                        | DEG C |                        | M           | S  | DEG C | M | S |
| 94  | -80                                    | 23                       | -16 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 93  | -81                                    | 20                       | -22 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 92  | -81                                    | 13                       | -27 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 91  | -82                                    | 5                        | -30 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 90  | -85                                    | -4                       | -32 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 89  | -85                                    | -13                      | -32 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 88  | -85                                    | -19                      | -30 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 87  | -84                                    | -24                      | -28 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 86  | -81                                    | -26                      | -26 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 85  | -78                                    | -25                      | -23 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 84  | -77                                    | -23                      | -20 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 83  | -77                                    | -19                      | -18 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 82  | -77                                    | -14                      | -15 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 81  | -79                                    | -9                       | -12 | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 80  | -82                                    | -3                       | -9  | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 79  | -84                                    | 3                        | -7  | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 78  | -83                                    | 7                        | -5  | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 77  | -80                                    | 11                       | -3  | 999   | 999                      | 999   |                        |             |    |       |   |   |
| 76  | -77                                    | 12                       | -3  | -94   | 999                      | 999   | -17                    |             |    |       |   |   |
| 75  | -71                                    | 12                       | -4  | -89   | 999                      | 999   | -18                    |             |    |       |   |   |
| 74  | -67                                    | 9                        | -6  | -82   | 999                      | 999   | -15                    |             |    |       |   |   |
| 73  | -64                                    | 3                        | -11 | -76   | 999                      | 999   | -12                    |             |    |       |   |   |
| 72  | -64                                    | -5                       | -18 | -71   | 999                      | 999   | -7                     |             |    |       |   |   |
| 71  | -67                                    | -15                      | -27 | -67   | 999                      | 999   | 0                      |             |    |       |   |   |
| 70  | -75                                    | -25                      | -35 | -66   | 999                      | 999   | 9                      |             |    |       |   |   |
| 69  | -73                                    | -32                      | -41 | -66   | 999                      | 999   | 7                      |             |    |       |   |   |
| 68  | -69                                    | -33                      | -40 | -67   | 999                      | 999   | 2                      |             |    |       |   |   |
| 67  | -65                                    | -27                      | -34 | -67   | 999                      | 999   | -2                     |             |    |       |   |   |
| 66  | -55                                    | -17                      | -28 | -67   | 999                      | 999   | -12                    |             |    |       |   |   |
| 65  | -51                                    | -9                       | -31 | -65   | -27                      | -20   | -14                    | -18         | 11 |       |   |   |
| 64  | -50                                    | -8                       | -41 | -62   | -27                      | -28   | -12                    | -19         | 13 |       |   |   |
| 63  | -47                                    | -12                      | -53 | -58   | -27                      | -35   | -11                    | -15         | 18 |       |   |   |
| 62  | -43                                    | -17                      | -60 | -53   | -26                      | -41   | -10                    | -11         | 19 |       |   |   |
| 61  | -36                                    | -17                      | -58 | -47   | -29                      | -45   | -11                    | -12         | 13 |       |   |   |

| ALT | TEMP | COMPONENT<br>WINDS<br>-1 |     |     | TEMP | COMPONENT<br>WINDS<br>-1 |     |     | TEMP | COMPONENT<br>WINDS<br>-1 |   |   |
|-----|------|--------------------------|-----|-----|------|--------------------------|-----|-----|------|--------------------------|---|---|
|     |      | DEG C                    | M   | S   |      | DEG C                    | M   | S   |      | DEG C                    | M | S |
|     |      |                          |     |     |      |                          |     |     |      |                          |   |   |
| 60  | -29  | -16                      | -51 | -42 | -31  | -50                      | -13 | -15 | 1    |                          |   |   |
| 59  | -24  | -15                      | -44 | -37 | -32  | -53                      | -13 | -17 | -9   |                          |   |   |
| 58  | -24  | -18                      | -39 | -32 | -33  | -54                      | -8  | -15 | -15  |                          |   |   |
| 57  | -20  | -22                      | -36 | -28 | -31  | -53                      | -8  | -9  | -17  |                          |   |   |
| 56  | -17  | -21                      | -34 | -25 | -27  | -48                      | -8  | -6  | -14  |                          |   |   |
| 55  | -14  | -16                      | -33 | -24 | -19  | -39                      | -10 | -3  | -6   |                          |   |   |
| 54  | -12  | -11                      | -33 | -24 | -10  | -31                      | -12 | 1   | 2    |                          |   |   |
| 53  | -9   | -8                       | -32 | -24 | -4   | -32                      | -15 | 4   | 0    |                          |   |   |
| 52  | -10  | -5                       | -32 | -20 | 1    | -33                      | -10 | 6   | -1   |                          |   |   |
| 51  | -8   | -2                       | -33 | -15 | 4    | -36                      | -7  | 6   | -3   |                          |   |   |
| 50  | -5   | -2                       | -34 | -11 | 3    | -37                      | -6  | 5   | -3   |                          |   |   |
| 49  | -2   | -4                       | -33 | -9  | -1   | -36                      | -7  | 3   | -3   |                          |   |   |
| 48  | -1   | -7                       | -31 | -8  | -7   | -32                      | -7  | 0   | -1   |                          |   |   |
| 47  | -9   | -8                       | -30 | -7  | -14  | -27                      | 2   | -6  | 3    |                          |   |   |
| 46  | -11  | -5                       | -29 | -9  | -20  | -22                      | 2   | -15 | 7    |                          |   |   |
| 45  | -7   | -3                       | -30 | -14 | -23  | -22                      | -7  | -20 | 8    |                          |   |   |
| 44  | -8   | -3                       | -31 | -18 | -17  | -27                      | -10 | -14 | 4    |                          |   |   |
| 43  | -14  | -5                       | -29 | -16 | -3   | -34                      | -2  | 2   | -5   |                          |   |   |
| 42  | -21  | -5                       | -26 | -19 | 1    | -31                      | 2   | 6   | -5   |                          |   |   |
| 41  | -24  | -3                       | -24 | -21 | -1   | -25                      | 3   | 2   | -1   |                          |   |   |
| 40  | -29  | -3                       | -22 | -26 | -4   | -20                      | 3   | -1  | 2    |                          |   |   |
| 39  | -27  | -4                       | -19 | -28 | -5   | -19                      | -1  | -1  | 0    |                          |   |   |
| 38  | -24  | -3                       | -17 | -28 | -6   | -17                      | -4  | -3  | 0    |                          |   |   |
| 37  | -31  | 0                        | -17 | -28 | 0    | -15                      | 3   | 0   | 2    |                          |   |   |
| 36  | -37  | 3                        | -18 | -29 | 10   | -17                      | 8   | 7   | 1    |                          |   |   |
| 35  | -37  | 5                        | -19 | -30 | 11   | -22                      | 7   | 6   | -3   |                          |   |   |
| 34  | -33  | 3                        | -19 | -34 | -2   | -21                      | -1  | -5  | -2   |                          |   |   |
| 33  | 999  | 999                      | 999 | -36 | -6   | -15                      |     |     |      |                          |   |   |
| 32  | 999  | 999                      | 999 | -41 | -8   | -12                      |     |     |      |                          |   |   |
| 31  | 999  | 999                      | 999 | -43 | -7   | -13                      |     |     |      |                          |   |   |
| 30  | 999  | 999                      | 999 | -43 | 2    | -12                      |     |     |      |                          |   |   |
| 29  | 999  | 999                      | 999 | -46 | -1   | -20                      |     |     |      |                          |   |   |
| 28  | 999  | 999                      | 999 | -45 | 1    | -12                      |     |     |      |                          |   |   |
| 27  | 999  | 999                      | 999 | -44 | 1    | -10                      |     |     |      |                          |   |   |

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## APPENDIX F

### LISTINGS OF US RADIOSONDE (NWS TYPE J005) AND USSR RADIOSONDE (TYPE RKZ) DATA

During the intercomparison exercise at Wallops Island, Va., it was recognized that much of the rocketsonde data makes use of a radiosonde profile, either, for tie-on at some initial level for computation of pressure at rocketsonde altitudes, or to provide a continuous profile from the surface to the top of the rocket data. Differences in rocketsonde temperature and geopotential heights at fixed pressure surfaces when compared to other rocketsonde measurements can be attributed to lack of suitable tie-on information. In order to provide data suitable for such an analysis, radiosondes of the US and USSR were launched on a single balloon and tracked by the ground equipment of both participants. Although analysis of the measurements still remain to be accomplished, this was, to our knowledge, the first time US and USSR instruments were used to measure the exact same volume of the atmosphere. The radiosonde instrument used during this test was the typical US National Weather Service device (J005) and the radiosonde used aboard the USSR Research Vessel Akademik Korolev was the RKZ instrument.

733-1

37 45 С 75 27 Э

## ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ НИС ДКІД, КОРОЛЕВ ТИП Р/З РКЗ-2 И ВЫПУСКА 73

ДАТА 24/08-77 ВРЕМЯ НАБЛ. 12,0 GMT. 06,9 МЕСТН.

ИЗМ.: ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯВЛЕНИЯ: ВЬСОТА НІД ПЗ.

16/04 СІ АС : 0,1 км : 0,2 км : 0,5 км

КОДІНЧ. ФОРМА : ВЬСОТА

ОБЛ.: НЖ : 1 : 2 : 3 : 4 : 5 : Г : Ф : ЧМ : ПЗ

06:04:1:1:0:0:0:0: : : 216 10 234 10

| И   | ШИФР | Н     | Р    | Т     | С     | У  | Д   | В   | П    | И    |
|-----|------|-------|------|-------|-------|----|-----|-----|------|------|
|     |      | 0,01  | 1013 | 22,3  |       | 91 | 200 | 0,9 | 1,5  |      |
|     |      | 0,13  | 1000 | 21,9  |       | 91 |     |     | 1,6  |      |
|     |      | 0,20  | 992  | 21,6  |       | 90 | 215 | 1,0 |      |      |
| 3 1 | НГ   | 0,24  | 986  | 21,5  | п.33  | 90 | 219 | 1,0 | 1,7  |      |
|     |      | 0,31  | 979  | 21,5  |       | 90 | 224 | 1,0 |      |      |
| 3 1 | ВГ   | 0,49  | 959  | 21,7  | -0,08 | 79 | 236 | 1,0 | 3,8  |      |
|     |      | 0,50  | 958  | 21,6  |       | 79 | 235 | 1,0 |      |      |
|     |      | 0,61  | 946  | 21,3  |       | 77 | 237 | 1,1 |      |      |
|     |      | 0,91  | 913  | 20,5  |       | 74 | 232 | 1,4 |      |      |
|     |      | 1,00  | 904  | 20,3  |       | 73 | 233 | 1,4 |      |      |
|     |      | 1,04  | 900  | 20,2  |       | 72 | 234 | 1,5 | 5,1  |      |
| 3 4 | НГ   | 1,20  | 884  | 19,9  | 0,26  | 70 | 231 | 1,5 | 5,5  |      |
|     |      | 1,50  | 853  | 17,0  | 0,93  | 67 | 229 | 1,6 |      |      |
|     |      | 1,53  | 850  | 16,8  |       | 66 | 229 | 1,6 | 6,3  |      |
|     |      | 1,59  | 844  | 16,3  |       | 66 | 229 | 1,6 | 6,4  |      |
|     |      | 2,00  | 804  | 13,0  | 0,91  | 73 | 228 | 1,5 |      |      |
|     |      | 2,04  | 800  | 12,6  |       | 74 | 227 | 1,5 | 4,5  |      |
|     |      | 3,00  | 713  | 5,8   | 0,72  | 89 | 232 | 1,9 | 25,2 |      |
|     |      | 3,15  | 700  | 4,8   |       | 91 | 234 | 1,9 | 1,4  |      |
| 3 3 | НГ   | 3,42  | 677  | 2,6   | 0,75  | 94 | 237 | 2,0 | 0,9  |      |
| 3 0 | ЧГ   | 3,91  | 637  | 0,0   |       | 97 | 238 | 2,1 | 0,4  |      |
| 3 2 | ЧГ   | 4,00  | 630  | -0,5  |       | 98 | 239 | 2,1 |      |      |
|     |      | 4,15  | 618  | -1,4  | п.54  | 98 | 239 | 2,1 | 0,2  |      |
|     |      | 4,33  | 604  | -1,3  |       | 99 | 240 | 2,0 | 0,1  |      |
| 3 2 | ВГ   | 4,39  | 600  | -1,3  | -0,00 | 98 | 240 | 2,0 | 0,2  |      |
|     |      | 5,00  | 556  | -5,5  | 0,68  | 89 | 230 | 1,9 |      |      |
|     |      | 5,82  | 500  | -10,0 |       | 92 | 230 | 1,9 | 1,1  |      |
|     |      | 6,00  | 488  | -11,0 | п.55  | 91 | 227 | 1,8 | 29,1 |      |
|     |      | 7,00  | 428  | -16,6 | 0,56  | 79 | 238 | 1,5 |      |      |
|     |      | 7,51  | 400  | -19,3 |       | 71 | 234 | 1,4 | 3,8  |      |
| 3 4 | НГ   | 7,55  | 398  | -19,5 | 0,52  | 72 | 234 | 1,5 | 3,8  |      |
|     |      | 8,00  | 374  | -22,6 | 0,69  | 76 | 236 | 1,7 |      |      |
|     |      | 8,49  | 350  | -26,7 |       | 79 | 240 | 1,9 | 2,4  |      |
|     |      | 8,94  | 329  | -30,0 |       | 65 | 244 | 1,9 | 4,4  | 3,6  |
|     |      | 9,00  | 326  | -30,5 | 0,79  | 65 | 244 | 1,9 |      |      |
|     |      | 9,58  | 300  | -36,0 |       | 68 | 245 | 2,0 | 3,8  |      |
| 3 3 | НГ   | 9,62  | 298  | -36,4 | 0,94  | 68 | 245 | 2,0 | 3,7  |      |
|     |      | 10,00 | 282  | -38,2 |       | 72 | 247 | 2,3 |      |      |
| 3 4 | НГ   | 10,00 | 277  | -39,2 | 0,49  | 72 | 246 | 2,4 | 3,1  |      |
|     |      | 10,14 | 250  | -44,2 |       | 71 | 249 | 2,4 | 3,0  |      |
|     |      | 10,81 | 244  | -45,9 | 0,81  | 71 | 250 | 2,4 |      |      |
|     |      | 11,00 | 209  | -53,7 | 0,78  | 70 | 253 | 2,7 |      |      |
|     |      | 12,28 | 200  | -55,8 |       | 70 | 252 | 2,7 | 2,8  |      |
| 3 3 | НГ   | 12,56 | 192  | -57,0 | 0,76  | 70 | 252 | 2,6 | 2,8  | 3,52 |
| 3 2 | НГ   | 13,00 | 178  | -60,1 | 0,50  | 68 | 251 | 2,5 | 2,9  |      |

| И   | ШИФР | Н     | Р    | Т     | С     | У  | Д   | В   | П    | И    |
|-----|------|-------|------|-------|-------|----|-----|-----|------|------|
| 3 2 | АГ   | 13,26 | 171  | -60,1 | -0,01 | 67 | 252 | 2,4 | 3,0  |      |
|     |      | 14,00 | 157  | -64,3 |       | 64 | 253 | 2,1 |      |      |
|     |      | 14,07 | 150  | -64,8 |       | 64 | 253 | 2,1 | 3,2  |      |
| 5 0 | НГ   | 14,17 | 148  | -65,5 | 0,59  | 64 | 253 | 2,0 | 3,2  |      |
|     |      | 15,00 | 128  | -66,2 | 0,09  | 61 | 248 | 1,9 |      |      |
|     |      | 16,00 | 109  | -66,7 | 0,05  | 57 | 236 | 1,9 |      |      |
|     |      | 16,53 | 105  | -66,5 |       | 56 | 240 | 1,5 | 4,0  |      |
| 5 0 | ПМТ  | 16,89 | 94,2 | -66,9 | 0,02  | 55 | 237 | 1,2 | 4,1  | 30,2 |
|     |      | 17,00 | 92,5 | -66,2 |       | 54 | 260 | 1,1 |      |      |
|     |      | 17,69 | 92,4 | -61,3 | -0,70 | 53 | 272 | 0,8 | 4,7  |      |
|     |      | 18,00 | 78,6 | -61,8 | 0,17  | 52 | 259 | 0,5 |      |      |
|     |      | 18,72 | 70,4 | -60,1 |       | 52 | 272 | 0,4 | 5,1  |      |
|     |      | 19,00 | 67,7 | -59,3 | -0,26 | 49 | 214 | 0,3 |      |      |
| 5 0 | ВГ   | 19,74 | 59,4 | -56,7 | -0,33 | 46 | 173 | 0,3 | 6,0  |      |
|     |      | 20,00 | 57,7 | -57,6 | 0,37  | 45 | 158 | 0,4 |      |      |
|     |      | 20,84 | 50,0 | -56,1 |       | 41 | 110 | 0,5 | 6,8  |      |
|     |      | 21,00 | 48,8 | -55,5 | -0,21 | 41 | 100 | 0,5 | 40,0 |      |
|     |      | 22,00 | 41,7 | -54,6 | -0,08 | 38 | 885 | 0,9 |      |      |
|     |      | 23,00 | 35,7 | -53,8 | -0,16 | 38 | 106 | 0,7 |      |      |
|     |      | 23,21 | 34,4 | -52,5 | -0,25 | 37 | 113 | 0,7 | 7,8  |      |
|     |      | 24,00 | 30,8 | -52,6 | 0,01  | 37 | 118 | 0,7 | 8,8  | 37,0 |
|     |      | 24,12 | 30,0 | -52,7 |       | 36 | 111 | 0,7 |      |      |
|     |      | 25,00 | 26,2 | -52,3 | -0,03 | 36 | 867 | 0,6 |      |      |
|     |      | 26,00 | 22,4 | -50,7 | -0,16 | 36 | 868 | 0,6 |      |      |
|     |      | 26,75 | 20,8 | -50,2 |       | 36 | 888 | 1,1 |      |      |
|     |      | 27,00 | 19,2 | -50,1 | -0,06 | 36 | 895 | 1,2 |      |      |
|     |      | 28,00 | 18,5 | -48,1 | -0,20 | 36 | 891 | 1,2 | 41,5 |      |
|     |      | 28,64 | 15,8 | -47,8 |       | 36 | 889 | 1,2 |      |      |
|     |      | 29,00 | 14,2 | -47,7 | -0,05 | 36 | 884 | 1,2 |      |      |
|     |      | 30,00 | 12,2 | -45,8 | -0,19 | 36 | 894 | 1,4 |      |      |
|     |      | 31,00 | 10,5 | -45,2 | -0,06 | 36 | 896 | 1,6 |      |      |
|     |      | 31,33 | 10,0 | -44,6 |       | 36 | 896 | 1,6 |      |      |
|     |      | 32,00 | 9,8  | -45,1 |       | 36 | 897 | 1,6 |      |      |
|     |      | 32,11 | 8,9  | -45,4 | 0,02  | 36 | 897 | 1,6 |      |      |
|     |      | 33,00 | 7,9  | -42,9 | -0,28 | 36 | 887 | 1,6 | 44,0 |      |
|     |      | 34,00 | 6,7  | -42,2 | -0,07 |    |     |     |      |      |
|     |      | 34,68 | 6,1  | -40,7 | -0,23 |    |     |     | 64,8 |      |

ТДЗ-3

37 45 С 75 27 З

ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ ИМС АКАД. КОРОЛЕВ ТИП Р/З РКЗ-2 Н ВЫПУСКА 74

ДАТА 24/08-77 ВРЕМЯ НАБЛ. 14,9 СМТ. 00,9 МЕСТН.

М : К : ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯВЛЕНИЯ : ВИСОТА НІД ПЗ.

10/10 NS,FRNB : 0.1 KM : 0.2 KM : 0.5 KM

КОЛИЧ : ФОРМА : ВИСОТА : Д : V : Д : Ч : Д : V

05:ЧМ : 1:2:3:4:5:Г:Ф: УМ : ПЗ

1:1:0:0:0:0:0:6:0:0: : 212: 14: 221: 15: 236: 16:

| М | ШФР | Н     | Р    | Т    | С    | U  | Д   | V  | D   | W   |
|---|-----|-------|------|------|------|----|-----|----|-----|-----|
|   |     | 0.01  | 1013 | 21.8 |      | 92 | 200 | 11 | 1.4 |     |
|   |     | 0.12  | 1000 | 21.5 |      | 94 | 213 | 14 | 1.6 |     |
|   |     | 0.22  | 991  | 21.4 |      | 95 | 220 | 15 |     |     |
|   |     | 0.33  | 979  | 21.1 |      | 94 | 230 | 15 |     |     |
|   |     | 0.45  | 958  | 20.8 | 0.23 | 88 | 230 | 15 |     |     |
|   |     | 0.56  | 945  | 20.5 |      | 88 | 234 | 15 |     |     |
|   |     | 0.69  | 913  | 19.9 |      | 89 | 234 | 15 |     |     |
|   |     | 0.80  | 904  | 19.5 |      | 80 | 234 | 15 |     |     |
|   |     | 1.02  | 901  | 19.1 | 0.30 | 79 | 235 | 15 |     |     |
|   |     | 1.04  | 900  | 19.1 |      | 79 | 235 | 15 | 3.7 |     |
|   |     | 1.22  | 881  | 18.2 | 0.44 | 82 | 238 | 15 | 3.7 |     |
|   |     | 1.55  | 853  | 16.9 | 0.82 | 85 | 231 | 15 | 3.2 |     |
|   |     | 1.55  | 850  | 15.8 |      | 84 | 231 | 15 | 2.4 |     |
|   |     | 2.00  | 804  | 12.1 | 0.77 | 82 | 228 | 14 |     |     |
|   |     | 2.04  | 800  | 11.9 |      | 82 | 230 | 14 | 1.2 |     |
|   |     | 2.66  | 742  | 7.3  | 0.69 | 90 | 233 | 15 | 1.6 | 216 |
|   |     | 3.00  | 700  | 4.9  | 0.55 | 92 | 233 | 15 |     |     |
|   |     | 3.97  | 632  | 0.0  |      | 94 | 233 | 15 | 0.9 |     |
|   |     | 4.00  | 630  | 0.0  |      | 94 | 232 | 15 |     |     |
|   |     | 4.08  | 623  | 0.6  | 0.58 | 95 | 250 | 15 | 0.7 |     |
|   |     | 4.26  | 610  | 0.4  |      | 97 | 247 | 15 | 0.4 |     |
|   |     | 4.35  | 604  | 0.4  | 0.09 | 97 | 249 | 15 | 0.5 |     |
|   |     | 4.39  | 600  | 0.8  |      | 96 | 246 | 15 | 0.5 |     |
|   |     | 5.00  | 556  | 4.9  |      | 95 | 242 | 14 |     | 233 |
|   |     | 5.13  | 546  | 3.7  | 0.66 | 94 | 242 | 14 | 0.8 |     |
|   |     | 5.82  | 500  | 8.3  |      | 92 | 247 | 14 | 1.1 |     |
|   |     | 6.00  | 489  | 8.8  | 0.36 | 92 | 247 | 15 |     |     |
|   |     | 6.32  | 482  | 11.1 | 0.62 | 92 | 247 | 15 | 1.0 |     |
|   |     | 6.40  | 480  | 11.7 |      | 90 | 248 | 15 | 1.2 | 248 |
|   |     | 6.51  | 478  | 11.1 | 0.65 | 88 | 243 | 15 | 1.6 |     |
|   |     | 6.51  | 350  | 12.4 |      | 86 | 240 | 21 | 1.6 |     |
|   |     | 9.00  | 327  | 27.5 | 0.64 | 84 | 239 | 23 |     |     |
|   |     | 9.43  | 308  | 30.2 | 0.63 | 82 | 235 | 23 | 2.0 |     |
|   |     | 9.62  | 300  | 31.8 |      | 81 | 236 | 23 | 2.1 |     |
|   |     | 10.00 | 284  | 34.6 | 0.78 | 79 | 237 | 22 |     | 264 |
|   |     | 10.73 | 256  | 39.3 | 0.64 | 75 | 240 | 24 | 2.6 |     |
|   |     | 11.88 | 250  | 40.9 |      | 75 | 240 | 24 | 2.5 |     |
|   |     | 11.00 | 246  | 42.2 | 1.07 | 75 | 240 | 25 |     |     |
|   |     | 11.00 | 211  | 55.4 | 1.02 | 73 | 240 | 25 |     |     |
|   |     | 11.35 | 200  | 55.6 |      | 72 | 240 | 25 | 2.5 |     |
|   |     | 11.55 | 192  | 55.8 |      | 72 | 240 | 25 | 2.5 | 269 |
|   |     | 11.55 | 187  | 55.1 |      | 71 | 240 | 25 | 2.6 |     |
|   |     | 11.55 | 187  | 55.2 | 0.01 | 71 | 240 | 25 |     |     |

| М     | ШФР | Н     | Р     | Т     | С     | U   | Д   | V  | D   | W   |
|-------|-----|-------|-------|-------|-------|-----|-----|----|-----|-----|
| 3.4   | НГ  | 13.49 | 167   | -59.5 | 0.26  | 78  | 242 | 27 | 2.7 |     |
| 14.00 |     | 154   | -63.5 |       |       | 78  | 239 | 22 |     |     |
| 5.0   | НГ  | 14.06 | 152   | -63.9 | 0.79  | 78  | 238 | 22 | 2.6 |     |
| 14.15 |     | 158   | -63.5 |       |       | 69  | 238 | 21 | 2.6 |     |
| 15.00 |     | 151   | -51.7 |       |       | 69  | 240 | 19 |     |     |
| 5.0   | ПМТ | 15.07 | 120   | -61.6 | -0.23 | 69  | 240 | 19 | 2.8 |     |
| 15.61 |     | 118   | -44.3 | 0.50  |       | 68  | 243 | 19 | 2.7 | 276 |
| 16.00 |     | 111   | -53.2 | -0.28 |       | 68  | 253 | 17 |     |     |
| 16.64 |     | 100   | -51.5 |       |       | 68  | 269 | 12 | 2.9 |     |
| 16.86 |     | 96.6  | -61.1 | -0.20 |       | 67  | 262 | 11 | 2.9 |     |
| 17.00 |     | 94.4  | -60.0 |       |       | 67  | 270 | 11 |     |     |
| 17.27 |     | 90.4  | -58.0 | -0.87 |       | 67  | 246 | 11 | 3.1 | 288 |
| 18.00 |     | 80.8  | -57.6 | -0.06 |       | 65  | 208 | 11 |     |     |
| 18.89 |     | 70.8  | -56.0 |       |       | 66  | 201 | 05 | 5.3 |     |
| 19.00 |     | 68.8  | -55.0 | -0.20 |       | 66  | 200 | 05 |     |     |
| 19.32 |     | 65.8  | -53.3 | -0.70 |       | 65  | 194 | 04 | 3.4 |     |
| 20.00 |     | 58.8  | -54.3 | 0.15  |       | 64  | 184 | 05 |     |     |
| 20.89 |     | 51.8  | -53.2 | -0.06 |       | 63  | 133 | 06 | 3.7 |     |
| 21.00 |     | 50.7  | -53.3 |       |       | 63  | 133 | 06 |     |     |
| 21.05 |     | 50.8  | -53.2 |       |       | 63  | 129 | 06 | 3.8 |     |
| 22.00 |     | 43.8  | -51.8 | -0.17 |       | 61  | 108 | 04 |     | 336 |
| 22.45 |     | 37.8  | -49.7 | -0.26 |       | 60  | 99  | 04 | 4.3 |     |
| 23.00 |     | 37.8  | -49.6 |       |       | 60  | 98  | 04 |     |     |
| 24.00 |     | 31.7  | -51.1 |       | 0.11  | 60  | 92  | 04 |     |     |
| 24.37 |     | 30.8  | -50.1 |       |       | 60  | 91  | 04 |     |     |
| 25.00 |     | 27.8  | -48.0 |       |       | 60  | 91  | 05 |     |     |
| 25.11 |     | 26.8  | -47.6 | -0.33 |       | 60  | 94  | 07 |     |     |
| 26.00 |     | 23.8  | -47.9 | 0.03  |       | 60  | 96  | 04 |     |     |
| 27.00 |     | 20.8  | -47.8 | -0.31 |       | 60  | 98  | 10 |     | 490 |
| 27.04 |     | 20.0  | -47.7 |       |       | 60  | 98  | 11 |     |     |
| 28.00 |     | 17.8  | -46.3 | -0.14 |       | 100 | 11  |    |     |     |
| 28.32 |     | 16.8  | -46.3 | -0.00 |       |     |     |    |     |     |
| 29.93 |     | 15.8  | -43.3 | -0.50 |       |     |     |    |     | 480 |

7.33-1

37 45 с 75 27 3

ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ НИС АКАД. КОРДЕЛЕР ТИП Р/З РКЗ-2 Н ВЫУСКА 75

ДАТА 24/08-77 ВРЕМЯ НАБЛ. 23,2 GMT. 17,2 МЕСТН.

М : К : ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯВЛЕНИЯ: ВИСОТА НАД ПЗ.

10/00 АС : 0,1 км : 0,2 км : 0,5 км

КОД ИХ : ФОРМА : ВИСОТА

00 : ИХ : 1 : 2 : 3 : 4 : 5 : Г : Ф : УМ : ПЗ

10 : 00 : 0 : 1 : 0 : 0 : 0 : 0 : 0 : 332 : 07 : 324 : 17 : 238 : 05

М : ШИФР : Н : Р : Т : Г : У : Д : V : П : W

| М     | ШИФР | Н   | Р | Т   | Г   | У  | Д     | V | П    | W    |
|-------|------|-----|---|-----|-----|----|-------|---|------|------|
| 0.01  | 1010 | 23  | 1 | 08  | 320 | 05 | 2.1   |   |      |      |
| 0.10  | 1000 | 22  | 9 | 89  | 333 | 07 | 1.8   |   |      |      |
| 0.20  | 989  | 22  | 6 | 91  | 325 | 07 |       |   |      |      |
| 0.31  | 976  | 22  | 3 | 93  | 310 | 05 |       |   |      |      |
| 0.50  | 955  | 21  | 0 | 98  | 244 | 05 | 0.43  |   |      |      |
| 0.61  | 943  | 20  | 0 | 99  | 234 | 07 |       |   |      |      |
| 0.91  | 911  | 18  | 6 | 98  | 214 | 11 |       |   |      |      |
| 1.00  | 900  | 18  | 4 | 98  | 214 | 11 | 0.52  |   |      |      |
| 1.36  | 864  | 17  | 1 | 97  | 216 | 11 | 0.34  |   | 0.3  |      |
| 1.50  | 850  | 16  | 2 | 96  | 213 | 11 | 0.34  |   | 0.5  |      |
| 2.00  | 802  | 13  | 4 | 90  | 212 | 12 | 0.58  |   |      |      |
| 2.02  | 800  | 13  | 3 | 90  | 212 | 12 |       |   |      |      |
| 2.62  | 745  | 9   | 4 | 94  | 211 | 14 | 0.64  |   | 1.6  |      |
| 2.77  | 732  | 9   | 8 | 95  | 210 | 15 | -0.28 |   | 0.8  |      |
| 3.00  | 711  | 8   | 2 | 97  | 208 | 16 | 0.70  |   | 0.7  |      |
| 3.13  | 700  | 7   | 2 | 98  | 207 | 17 |       |   | 2.81 |      |
| 3.45  | 673  | 4   | 4 | 98  | 203 | 17 | 0.3   |   | 0.3  |      |
| 3.90  | 637  | 1   | 6 | 100 | 206 | 19 | 0.0   |   | 0.0  |      |
| 4.00  | 629  | 0   | 0 | 97  | 206 | 19 | 0.79  |   | 0.0  |      |
| 4.03  | 627  | 0   | 0 | 96  | 207 | 19 |       |   | 0.6  |      |
| 4.30  | 606  | 2   | 2 | 98  | 214 | 19 | 0.81  |   | 0.0  |      |
| 4.38  | 600  | 2   | 2 | 98  | 215 | 20 |       |   | 0.0  |      |
| 4.39  | 599  | 1   | 1 | 98  | 216 | 20 |       |   | 0.0  |      |
| 4.66  | 579  | -2  | 1 | 92  | 221 | 20 | 0.00  |   | 1.2  |      |
| 4.92  | 561  | -3  | 4 | 90  | 227 | 20 |       |   | 0.0  |      |
| 5.00  | 555  | -5  | 6 | 90  | 228 | 20 |       |   | 0.0  |      |
| 5.17  | 543  | -4  | 4 | 90  | 229 | 20 | 0.37  |   | 0.0  |      |
| 5.82  | 500  | -7  | 0 | 90  | 231 | 20 |       |   | 0.0  |      |
| 6.00  | 488  | -9  | 0 | 90  | 231 | 20 | 0.50  |   | 0.0  | 3.11 |
| 6.53  | 456  | -11 | 8 | 90  | 230 | 20 |       |   | 0.0  |      |
| 7.00  | 429  | -14 | 7 | 97  | 227 | 20 | 0.58  |   | 0.0  |      |
| 7.52  | 400  | -18 | 3 | 93  | 228 | 20 |       |   | 0.0  |      |
| 7.70  | 390  | -18 | 9 | 94  | 229 | 21 | 0.60  |   | 0.7  |      |
| 8.00  | 375  | -21 | 7 | 94  | 233 | 21 | 0.93  |   | 0.0  |      |
| 8.30  | 359  | -25 | 0 | 90  | 234 | 21 |       |   | 0.5  |      |
| 8.90  | 318  | -33 | 0 | 92  | 235 | 21 | 0.69  |   | 0.0  |      |
| 9.00  | 300  | -35 | 0 | 96  | 240 | 21 |       |   | 0.0  |      |
| 10.00 | 284  | -37 | 0 | 82  | 241 | 21 | 0.99  |   | 0.0  | 3.26 |
| 10.85 | 250  | -45 | 8 | 82  | 241 | 21 |       |   | 1.7  |      |
| 11.00 | 244  | -46 | 9 | 82  | 240 | 21 | 0.90  |   |      |      |
| 12.00 | 210  | -55 | 4 | 76  | 232 | 31 |       |   | 3.1  |      |
| 12.08 | 207  | -56 | 1 | 76  | 231 | 31 | 0.85  |   | 2.2  |      |
| 12.30 | 200  | -57 | 1 | 75  | 229 | 31 |       |   | 2.5  |      |

| М   | ШИФР | Н     | Р   | Т     | Г     | У  | Д   | V  | П   | W    |
|-----|------|-------|-----|-------|-------|----|-----|----|-----|------|
| 3.3 | НГ   | 13.80 | 176 | -61.2 | 0.55  | 71 | 334 | 32 |     | 349  |
| 3.4 | НГ   | 13.22 | 172 | -62.3 | 0.48  | 70 | 335 | 33 | 2.6 |      |
|     |      | 13.59 | 162 | -62.5 | 0.06  | 68 | 240 | 32 | 2.9 |      |
|     |      | 14.80 | 152 | -65.5 |       | 66 | 246 | 29 |     |      |
| 5.0 | НГ   | 14.02 | 150 | -65.7 | 0.74  | 66 | 247 | 29 | 2.0 |      |
|     |      | 14.08 | 158 | -65.6 |       | 66 | 248 | 29 | 3.0 |      |
|     |      | 14.56 | 139 | -64.6 | -0.20 | 65 | 255 | 28 | 3.1 |      |
|     |      | 14.74 | 134 | -62.1 | -1.36 | 64 | 256 | 24 | 3.2 |      |
|     |      | 15.00 | 129 | -63.5 | 0.54  | 63 | 257 | 22 |     |      |
|     |      | 16.00 | 113 | -64.3 | 0.08  | 64 | 259 | 13 |     | 3.05 |
|     |      | 16.30 | 104 | -66.2 | 0.62  | 64 | 258 | 11 | 3.1 |      |
|     |      | 16.56 | 100 | -64.6 |       | 65 | 256 | 09 | 3.1 |      |
|     |      | 17.00 | 93  | -61.1 |       | 65 | 253 | 09 |     |      |
|     |      | 17.01 | 92  | -61.1 | -0.72 | 65 | 253 | 09 | 3.2 |      |
| 5.0 | ПМТ  | 17.87 | 90  | -66.4 | 0.61  | 63 | 249 | 12 | 3.2 |      |
|     |      | 18.00 | 79  | -64.7 |       | 53 | 253 | 11 |     |      |
| 5.0 | ВГ   | 18.37 | 74  | -59.4 | -1.42 | 62 | 273 | 07 | 3.6 | 252  |
|     |      | 18.76 | 70  | -59.9 |       | 56 | 273 | 04 | 3.8 |      |
|     |      | 19.00 | 67  | -58.9 | -0.20 | 59 | 262 | 03 |     |      |
|     |      | 19.58 | 61  | -58.3 | 0.93  |    | 268 | 02 |     |      |
|     |      | 20.00 |     |       |       |    | 265 | 02 |     |      |
|     |      | 21.00 |     |       |       |    | 000 | 02 |     | 2.09 |
|     |      | 22.00 |     |       |       |    | 049 | 02 |     |      |
|     |      | 23.00 |     |       |       |    | 065 | 05 |     | 2.65 |
|     |      | 24.00 |     |       |       |    | 088 | 10 |     |      |
|     |      | 25.00 |     |       |       |    | 112 | 09 |     |      |
|     |      | 26.00 |     |       |       |    | 083 | 08 |     | 2.43 |

ТЛЗ-2

37 45 С 75 27 Э

ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ НИС АКАД. КОРОЛЕВ ТИП Р/З РКЗ-2 И ВЫПУСКА 76

ДАТА 25/08-77 ВРЕМЯ НАБЛ. 11,5 СМТ. 06,5 МЕСТН.

М:К: ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯВЛЕНИЯ: ВЬСОТА НАД ПЗ.

00/00 : 0.1 км : 0.2 км : 0.6 км

КОЛИЧ. ФОРМА ВЬСОТА

05:НЖ 1:2:3:4:5:Г:Ф: ЧМ: ПЗ Д V Д V Д V

05:00 9:9:9:9:9:0:0: : 351: 11:355: 09: 163: 78

М ШИОР Н Р Т С U Д V Д W

| М | ШИОР  | Н    | Р     | Т     | С | U  | Д   | V   | Д    | W    |
|---|-------|------|-------|-------|---|----|-----|-----|------|------|
|   | 0.01  | 1018 | 16.2  |       |   | 91 | 350 | 0.7 | 1.5  |      |
|   | 0.17  | 1000 | 14.8  |       |   | 86 | 353 | 1.2 | 2.2  |      |
|   | 0.20  | 996  | 14.4  |       |   | 85 | 355 | 0.9 |      |      |
|   | 0.31  | 993  | 13.4  |       |   | 82 | 307 | 1.2 |      |      |
|   | 0.50  | 961  | 12.6  |       |   | 77 | 350 | 1.5 |      |      |
|   | 0.56  | 955  | 12.6  | 0.67  |   | 75 | 303 | 8.5 | 4.3  |      |
|   | 0.61  | 948  | 12.6  |       |   | 73 | 329 | 9.5 |      |      |
|   | 0.91  | 915  | 13.0  |       |   | 71 | 343 | 0.8 |      |      |
|   | 0.95  | 911  | 13.5  | -0.24 |   | 71 | 338 | 0.9 | 5.1  |      |
|   | 1.00  | 906  | 13.8  |       |   | 71 | 338 | 0.9 |      |      |
|   | 1.05  | 900  | 12.7  |       |   | 71 | 339 | 1.1 | 5.0  |      |
|   | 1.19  | 886  | 11.8  | 0.73  |   | 71 | 339 | 1.2 | 5.0  |      |
|   | 1.31  | 869  | 12.0  |       |   | 56 | 332 | 1.4 | 8.3  |      |
|   | 1.42  | 851  | 13.3  | -0.65 |   | 57 | 328 | 1.2 | 8.3  |      |
|   | 1.50  | 854  | 12.8  |       |   | 58 | 324 | 1.1 |      |      |
|   | 1.53  | 850  | 12.5  |       |   | 58 | 324 | 1.1 | 9.1  |      |
|   | 2.00  | 804  | 9.8   |       |   | 61 | 330 | 1.2 |      |      |
|   | 2.04  | 800  | 9.6   |       |   | 62 | 337 | 1.2 | 7.0  |      |
|   | 2.10  | 794  | 9.3   | -0.58 |   | 62 | 305 | 1.2 | 6.8  |      |
|   | 2.41  | 763  | 9.4   | -0.02 |   | 65 | 294 | 1.2 | 6.3  |      |
|   | 2.55  | 753  | 8.8   |       |   | 66 | 299 | 1.2 | 6.1  |      |
|   | 2.85  | 725  | 7.4   | 0.48  |   | 46 | 296 | 1.2 | 10.9 | 27.0 |
|   | 3.00  | 713  | 7.2   |       |   | 36 | 300 | 1.3 | 14.3 |      |
|   | 3.11  | 703  | 8.2   | -0.34 |   | 35 | 299 | 1.3 | 14.2 |      |
|   | 3.14  | 700  | 8.1   |       |   | 36 | 299 | 1.3 | 14.3 |      |
|   | 4.00  | 630  | 4.2   | 0.45  |   | 31 | 292 | 1.5 |      |      |
|   | 4.05  | 627  | 4.1   |       |   | 31 | 292 | 1.5 | 15.6 |      |
|   | 4.22  | 614  | 3.7   | 0.26  |   | 31 | 289 | 1.5 | 15.5 |      |
|   | 4.39  | 601  | 3.7   | -0.04 |   | 31 | 284 | 1.4 | 15.5 |      |
|   | 4.40  | 600  | 3.6   |       |   | 31 | 283 | 1.4 | 15.5 |      |
|   | 4.83  | 569  | 0.0   |       |   | 34 | 278 | 1.3 | 14.1 |      |
|   | 5.00  | 557  | -1.6  | 0.88  |   | 35 | 284 | 1.3 |      |      |
|   | 5.48  | 524  | -4.7  | -0.66 |   | 34 | 296 | 1.3 | 13.5 |      |
|   | 5.63  | 514  | -4.2  | -0.34 |   | 33 | 295 | 1.4 | 13.0 |      |
|   | 5.85  | 500  | -5.9  |       |   | 31 | 284 | 1.4 | 14.2 |      |
|   | 6.00  | 491  | -7.1  | 0.79  |   | 31 | 292 | 1.4 |      | 29.1 |
|   | 7.00  | 431  | -15.1 | 0.60  |   | 30 | 285 | 1.4 |      |      |
|   | 7.55  | 400  | -19.2 |       |   | 30 | 285 | 1.4 | 13.0 |      |
|   | 8.00  | 376  | -23.6 | 0.85  |   | 30 | 283 | 1.4 |      |      |
|   | 8.53  | 350  | -28.1 |       |   | 30 | 276 | 1.6 | 12.2 |      |
|   | 9.00  | 327  | -32.6 | 0.83  |   | 30 | 265 | 1.6 |      | 30.0 |
|   | 9.61  | 300  | -36.4 |       |   | 29 | 267 | 1.6 | 11.3 |      |
|   | 9.88  | 292  | -37.8 | 0.72  |   | 30 | 263 | 1.6 | 11.1 |      |
|   | 10.00 | 284  | -39.9 |       |   | 30 | 258 | 1.7 |      |      |
|   | 10.66 | 257  | -46.9 | 1.07  |   | 30 | 267 | 1.5 | 10.0 |      |

| М | ШИОР | Н     | Р    | Т     | С     | U  | Д   | V   | Д    | W    |
|---|------|-------|------|-------|-------|----|-----|-----|------|------|
|   |      | 10.84 | 25.8 | -48.3 |       | 30 | 271 | 1.5 | 9.8  |      |
|   |      | 11.00 | 24.4 | -49.4 | 0.72  | 30 | 269 | 1.5 |      |      |
|   |      | 11.46 | 22.9 | -53.3 | 0.84  | 31 | 264 | 1.6 | 9.2  |      |
|   |      | 12.00 | 20.8 | -55.1 |       | 31 | 257 | 2.0 |      | 31.6 |
|   |      | 2.12  | 20.5 | -55.3 | 0.31  | 31 | 259 | 2.1 | 8.9  |      |
|   |      | 2.28  | 20.8 | -57.4 |       | 32 | 253 | 2.2 | 8.6  |      |
|   |      | 2.72  | 18.4 | -59.6 | 0.71  | 32 | 254 | 2.2 | 8.3  |      |
|   |      | 2.96  | 18.8 | -58.7 | -0.40 | 32 | 256 | 2.2 | 8.4  |      |
|   |      | 3.00  | 17.8 | -58.8 |       | 32 | 257 | 2.2 |      |      |
|   |      | 4.00  | 15.2 | -62.8 |       | 32 | 260 | 2.1 |      |      |
|   |      | 4.00  | 15.0 | -62.4 |       | 32 | 260 | 2.1 | 8.0  |      |
|   |      | 4.15  | 14.0 | -62.9 | 0.35  | 32 | 260 | 2.1 | 7.9  |      |
|   |      | 4.39  | 14.3 | -68.4 | -1.06 | 32 | 260 | 2.1 | 8.2  |      |
|   |      | 5.00  | 12.8 | -62.7 | 0.39  | 32 | 269 | 2.0 |      |      |
|   |      | 16.00 | 11.8 | -63.2 | 0.04  | 32 | 275 | 1.8 |      | 34.1 |
|   |      | 16.57 | 9.8  | -64.5 |       | 32 | 277 | 1.6 | 7.8  |      |
|   |      | 16.67 | 9.5  | -64.5 |       | 32 | 277 | 1.6 | 7.8  |      |
|   |      | 17.00 | 9.3  | -61.3 | -0.97 | 33 | 269 | 1.5 |      |      |
|   |      | 17.57 | 8.3  | -57.2 | -0.61 | 33 | 254 | 1.2 | 8.4  |      |
|   |      | 18.00 | 7.6  | -58.9 | 0.51  | 33 | 249 | 0.9 |      |      |
|   |      | 18.00 | 7.0  | -60.1 |       | 33 | 260 | 0.8 | 8.1  | 34.4 |
|   |      | 18.99 | 6.7  | -60.6 | 0.17  | 33 | 260 | 0.8 | 8.0  |      |
|   |      | 19.00 | 6.7  | -60.4 |       | 33 | 260 | 0.8 | 8.3  |      |
|   |      | 19.38 | 6.3  | -57.4 | -0.79 | 33 | 279 | 0.8 | 8.3  |      |
|   |      | 20.00 | 5.7  | -55.0 | 0.00  | 33 | 342 | 0.6 | 8.5  |      |
|   |      | 20.00 | 5.0  | -55.0 |       | 33 | 363 | 0.6 |      |      |
|   |      | 21.00 | 4.9  | -55.0 | -0.17 | 33 | 367 | 0.6 |      |      |
|   |      | 21.75 | 4.3  | -52.9 | -0.38 | 33 | 389 | 0.5 | 8.7  |      |
|   |      | 22.00 | 4.2  | -52.9 | -0.03 | 33 | 389 | 0.5 |      |      |
|   |      | 23.00 | 3.6  | -42.3 | -0.05 | 33 | 385 | 0.5 | 36.6 |      |
|   |      | 24.00 | 3.1  | -51.4 | -0.09 | 33 | 363 | 0.5 |      |      |
|   |      | 24.22 | 3.0  | -51.3 |       | 33 | 366 | 0.5 |      |      |
|   |      | 25.00 | 2.6  | -51.8 | -0.04 | 33 | 371 | 0.7 |      |      |
|   |      | 26.00 | 2.2  | -48.9 | -0.21 | 33 | 386 | 0.9 |      |      |
|   |      | 26.39 | 2.1  | -50.1 | 0.30  | 33 | 388 | 1.0 | 40.1 |      |
|   |      | 26.86 | 2.0  | -49.0 |       | 33 | 390 | 1.1 |      |      |
|   |      | 27.00 | 1.9  | -48.7 | -0.23 | 33 | 390 | 1.2 |      |      |
|   |      | 27.44 | 1.8  | -46.9 | -0.40 | 33 | 391 | 1.3 |      |      |
|   |      | 28.00 | 1.6  | -46.8 | -0.03 | 33 | 391 | 1.3 |      |      |
|   |      | 28.77 | 1.5  | -45.9 |       | 33 | 390 | 1.4 |      |      |
|   |      | 29.00 | 1.4  | -46.0 | -0.08 | 33 | 390 | 1.5 |      |      |
|   |      | 30.00 | 1.2  | -45.8 | -0.01 | 33 | 389 | 1.6 |      |      |
|   |      | 31.00 | 1.0  | -45.2 | -0.07 | 33 | 388 | 1.7 |      |      |
|   |      | 31.47 | 1.0  | -44.5 |       | 33 | 386 | 1.8 |      |      |
|   |      | 32.00 | 9.2  | -45.2 | 0.00  | 33 | 384 | 1.9 | 47.3 |      |
|   |      | 33.00 | 8.8  | -43.5 | -0.17 |    |     |     |      |      |
|   |      | 33.53 | 7.4  | -43.2 | -0.06 |    |     |     | 50.0 |      |

ТАБ-3

37 45 С 75 27 З

ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ НИС ДКЛД, КОРОЛЕВ ТИП Р/З РКЗ-2 И ВЫШКА 77

ДАТА 25/03-77

ВРЕМЯ НАБЛ. 14,8 СМТ. 09,7 МЕСТН.

1 : К : ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯВЛЕНИЯ: ВИСОТА НАД ПЗ.

| 00/00 | СТ  | ДС  | 0.1 км | 0.2 км | 0.5 км |
|-------|-----|-----|--------|--------|--------|
| 00/00 | 112 | 314 | 51     | Ф      | ЧП     |
| 00/00 | 111 | 0   | 0      | 0      | 0      |
| 00/00 | 111 | 0   | 0      | 0      | 0      |

| Шифр  | Н    | Р  | Т  | С  | U   | Д  | V    | W    |
|-------|------|----|----|----|-----|----|------|------|
| 0.01  | 1021 | 17 | 0  | 72 | 360 | 06 | 5.1  |      |
| 0.19  | 1000 | 15 | 0  | 74 | 360 | 09 | 4.5  |      |
| 0.20  | 998  | 15 | 0  | 75 | 000 | 09 |      |      |
| 0.31  | 985  | 12 | 0  | 76 | 000 | 09 |      |      |
| 0.50  | 964  | 12 | 0  | 79 | 019 | 06 |      |      |
| 0.62  | 954  | 11 | 0  | 80 | 023 | 06 | 3.1  |      |
| 0.74  | 938  | 11 | 0  | 82 | 008 | 04 | 3.7  |      |
| 0.91  | 917  | 12 | 0  | 73 | 355 | 05 |      |      |
| 0.94  | 914  | 12 | 0  | 71 | 354 | 05 | 5.1  |      |
| 1.00  | 908  | 12 | 0  | 68 | 353 | 05 |      |      |
| 1.07  | 900  | 10 | 0  | 64 | 353 | 06 | 6.6  |      |
| 1.50  | 855  | 10 | 0  | 41 | 002 | 09 |      |      |
| 1.55  | 850  | 10 | 0  | 38 | 002 | 09 | 13.6 |      |
| 1.57  | 848  | 10 | 0  | 37 | 001 | 09 | 14.7 |      |
| 1.65  | 836  | 11 | 0  | 32 | 358 | 09 | 15.9 |      |
| 1.84  | 820  | 11 | 0  | 22 | 347 | 09 | 20.7 |      |
| 2.00  | 805  | 10 | 0  | 21 | 336 | 10 |      |      |
| 2.05  | 800  | 10 | 0  | 21 | 332 | 10 | 21.3 |      |
| 2.50  | 758  | 8  | 0  | 18 | 318 | 14 | 22.6 |      |
| 2.64  | 745  | 8  | 0  | 19 | 313 | 13 | 22.2 |      |
| 2.84  | 728  | 9  | 1  | 19 | 305 | 12 | 22.1 | 26.5 |
| 3.00  | 714  | 8  | 0  | 20 | 301 | 11 |      |      |
| 3.09  | 706  | 8  | 0  | 20 | 301 | 11 | 21.9 |      |
| 3.16  | 700  | 8  | 0  | 20 | 301 | 11 | 21.6 |      |
| 4.00  | 632  | 3  | 2  | 23 | 300 | 13 |      |      |
| 4.41  | 600  | 1  | 6  | 25 | 292 | 13 | 17.9 |      |
| 4.72  | 577  | 0  | 0  | 26 | 284 | 13 | 17.3 |      |
| 5.00  | 558  | -  | 1  | 25 | 286 | 13 |      |      |
| 5.48  | 525  | -  | 4  | 25 | 287 | 12 | 17.1 |      |
| 5.70  | 511  | -  | 4  | 24 | 286 | 13 | 17.3 | 296  |
| 5.86  | 500  | -  | 5  | 24 | 283 | 13 | 17.2 |      |
| 6.00  | 491  | -  | 6  | 24 | 283 | 13 |      |      |
| 7.00  | 431  | -  | 15 | 22 | 279 | 12 |      |      |
| 7.56  | 400  | -  | 19 | 22 | 274 | 14 | 16.3 |      |
| 8.10  | 377  | -  | 23 | 22 | 272 | 15 |      |      |
| 8.53  | 350  | -  | 28 | 22 | 271 | 16 | 15.0 |      |
| 9.00  | 328  | -  | 32 | 22 | 268 | 16 |      | 317  |
| 9.62  | 300  | -  | 36 | 22 | 267 | 17 | 13.6 |      |
| 10.00 | 284  | -  | 40 | 23 | 269 | 17 |      |      |
| 10.85 | 250  | -  | 47 | 23 | 275 | 17 | 11.9 |      |
| 11.00 | 244  | -  | 48 | 24 | 270 | 18 |      |      |
| 11.42 | 229  | -  | 52 | 24 | 272 | 20 | 11.2 |      |
| 12.00 | 209  | -  | 55 | 24 | 267 | 21 |      |      |
| 12.29 | 200  | -  | 55 | 24 | 266 | 21 | 10.6 |      |
| 12.82 | 184  | -  | 59 | 25 | 264 | 22 | 10.2 | 327  |

| Шифр    | Н     | Р   | Т     | С     | U  | Д   | V  | W    |
|---------|-------|-----|-------|-------|----|-----|----|------|
| 3.2 ВГ  | 13.80 | 178 | -59.6 |       | 25 | 264 | 21 |      |
| 3.3 НГ  | 13.82 | 178 | -58.6 | 0.91  | 25 | 264 | 21 | 10.2 |
|         | 13.54 | 167 | -51.9 | 0.61  | 25 | 264 | 20 | 9.8  |
|         | 14.00 | 157 | -52.9 | 0.24  | 25 | 265 | 19 |      |
|         | 14.89 | 156 | -53.2 |       | 25 | 265 | 19 | 9.6  |
|         | 14.28 | 145 | -53.8 | 0.34  | 25 | 265 | 18 | 9.5  |
|         | 15.00 | 129 | -53.6 | 0.03  | 25 | 269 | 17 |      |
| 5.0 НГ  | 15.82 | 117 | -54.7 | 0.14  | 24 | 273 | 15 | 9.6  |
| 5.0 МЧТ | 16.00 | 117 | -54.2 |       | 24 | 274 | 14 | 352  |
|         | 16.57 | 112 | -54.3 |       | 24 | 278 | 12 | 9.8  |
|         | 17.08 | 105 | -54.2 | -0.80 | 24 | 279 | 10 | 9.8  |
|         | 17.08 | 95  | -54.2 | -0.83 | 24 | 281 | 09 |      |
|         | 17.54 | 85  | -54.2 | -0.43 | 24 | 282 | 07 | 10.4 |
|         | 18.00 | 77  | -54.1 | 0.00  | 24 | 282 | 06 | 10.1 |
|         | 18.00 | 70  | -53.8 | 0.44  | 24 | 280 | 06 | 10.3 |
|         | 18.00 | 67  | -53.6 |       | 24 | 280 | 05 |      |
|         | 19.00 | 57  | -53.6 |       | 24 | 258 | 05 |      |
|         | 19.11 | 56  | -53.2 | -0.79 | 24 | 257 | 05 | 10.7 |
|         | 20.00 | 57  | -53.7 | 0.15  | 24 | 257 | 05 | 396  |
|         | 20.00 | 51  | -53.8 |       | 24 | 281 | 02 |      |
|         | 20.00 | 49  | -53.8 |       | 24 | 282 | 02 | 10.8 |
|         | 21.00 | 49  | -53.6 | 0.08  | 24 | 282 | 02 |      |
|         | 21.29 | 47  | -53.4 |       | 24 | 282 | 02 |      |
|         | 22.00 | 42  | -53.0 | 0.12  | 24 | 282 | 02 |      |
|         | 22.32 | 40  | -53.0 | 0.02  | 24 | 284 | 02 |      |
|         | 23.00 | 36  | -52.9 | -0.33 | 24 | 281 | 06 |      |
|         | 23.46 | 33  | -51.2 | -0.35 | 24 | 282 | 07 |      |
|         | 24.00 |     |       |       |    | 283 | 07 | 411  |
|         | 25.00 |     |       |       |    | 284 | 08 |      |
|         | 26.00 |     |       |       |    | 284 | 08 |      |
|         | 27.00 |     |       |       |    | 289 | 12 |      |
|         | 28.00 |     |       |       |    | 289 | 13 |      |
|         | 29.00 |     |       |       |    | 288 | 14 | 443  |
|         | 30.00 |     |       |       |    | 291 | 14 | 422  |

ТАБ-2

17 45 С 75 27 З

ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАЦИЯ НИС ДКАД, КОРОЛЕВ ТИП Р/З РКЗ-2 И ВЫПУСКА 7А

ДАТА 25/08-77 ВРЕМЯ НАБЛ. 23,7 ГЧТ. 19,6 МЕСТЧ.

К : ОБЛАЧНОСТЬ И АТМОСФЕРН. ЯДЛЕНИЯ: ЯНСОТА НАД ПЗ.

01/00 АС 10.1 КМ 10.2 КМ 10.5 КМ

КОЛИЧ: ФОРМА : ВИСОТА Д У Д Ч Д Ч

05:НЖ 1:2:3:4:5:Г:Ф: УН : ПЗ

01:00:01:01:01:0:0:0: 082 07:080 26:007 03:

| Шифр | Н     | Р    | Т    | Г    | У  | Д  | Ч  | Д    | Ч   |
|------|-------|------|------|------|----|----|----|------|-----|
| 2 НГ | 0.01  | 1021 | 19.3 |      | 68 | 70 | 04 | 6.0  |     |
| 2 НГ | 0.19  | 1000 | 18.4 |      | 47 | 53 | 01 | 12.1 |     |
| 2 НГ | 0.26  | 999  | 18.1 | 0.62 | 44 | 50 | 02 | 15.4 |     |
| 2 НГ | 0.31  | 992  | 17.7 |      | 33 | 36 | 03 | 21.9 |     |
| 2 НГ | 0.37  | 979  | 17.7 | 0.90 | 27 | 33 | 03 | 19.2 |     |
| 2 НГ | 0.59  | 964  | 16.9 |      | 46 | 50 | 03 | 7.9  |     |
| 2 НГ | 0.59  | 956  | 16.4 |      | 60 | 59 | 03 | 3.2  |     |
| 2 НГ | 0.51  | 952  | 16.1 |      | 49 | 34 | 04 | 3.4  |     |
| 2 НГ | 0.91  | 919  | 13.2 |      | 46 | 35 | 04 | 12.1 |     |
| 2 НГ | 1.00  | 909  | 13.2 |      | 43 | 01 | 04 | 12.6 |     |
| 2 НГ | 1.08  | 900  | 12.6 |      | 42 | 01 | 04 | 14.7 |     |
| 1 НГ | 1.13  | 895  | 12.3 | 0.75 | 36 | 08 | 03 | 14.7 |     |
| 1 НГ | 1.31  | 877  | 13.5 | 0.72 | 30 | 10 | 03 | 18.1 |     |
| 1 НГ | 1.51  | 856  | 12.2 |      | 13 | 29 | 02 | 27.9 |     |
| 1 НГ | 1.56  | 850  | 11.7 |      | 11 | 30 | 02 | 28.7 |     |
| 1 НГ | 2.00  | 807  | 10.3 |      | 8  | 27 | 03 | 33.3 |     |
| 1 НГ | 2.02  | 805  | 10.2 | 0.47 | 12 | 29 | 03 | 28.6 |     |
| 1 НГ | 2.07  | 800  | 10.3 |      | 10 | 29 | 04 | 28.6 |     |
| 1 НГ | 2.24  | 780  | 10.8 |      | 8  | 27 | 05 | 30.1 |     |
| 1 НГ | 2.54  | 756  | 11.5 | 0.26 | 10 | 29 | 04 | 28.6 |     |
| 2 НГ | 2.67  | 744  | 11.1 | 0.36 | 2  | 31 | 05 | 28.6 | 252 |
| 2 НГ | 2.80  | 732  | 11.0 | 0.00 | 3  | 33 | 05 | 27.3 |     |
| 2 НГ | 3.00  | 715  | 10.9 |      | 7  | 32 | 05 | 24.0 |     |
| 2 НГ | 3.18  | 700  | 10.6 |      | 8  | 27 | 04 | 22.7 |     |
| 4 НГ | 3.34  | 687  | 8.2  | 0.42 | 2  | 31 | 05 | 19.7 |     |
| 3 НГ | 3.81  | 649  | 9.0  | 0.82 | 22 | 31 | 05 | 16.6 |     |
| 3 НГ | 4.00  | 633  | 4.4  |      | 24 | 30 | 06 | 15.6 |     |
| 3 НГ | 4.44  | 600  | 2.0  |      | 28 | 31 | 05 | 15.0 |     |
| 4 НГ | 4.64  | 582  | 1.9  | 0.36 | 30 | 30 | 05 | 12.7 |     |
| 4 НГ | 4.91  | 567  | 0.0  |      | 31 | 30 | 05 | 10.2 |     |
| 4 НГ | 5.00  | 561  | 0.0  | 0.87 | 32 | 30 | 05 | 12.6 |     |
| 4 НГ | 5.89  | 500  | 7.7  |      | 35 | 33 | 05 | 10.2 |     |
| 4 НГ | 6.00  | 493  | 8.5  | 0.76 | 36 | 34 | 12 | 12.6 | 276 |
| 4 НГ | 6.62  | 455  | 12.8 |      | 42 | 31 | 11 | 12.1 |     |
| 4 НГ | 7.00  | 432  | 15.3 | 0.69 | 42 | 31 | 11 | 12.3 |     |
| 4 НГ | 7.58  | 400  | 19.0 | 0.69 | 33 | 31 | 11 | 12.6 |     |
| 4 НГ | 7.92  | 382  | 21.6 |      | 32 | 32 | 11 | 12.6 |     |
| 4 НГ | 8.00  | 378  | 22.3 |      | 31 | 32 | 11 | 11.8 |     |
| 4 НГ | 8.56  | 350  | 26.6 | 0.85 | 33 | 31 | 12 | 12.6 | 297 |
| 4 НГ | 8.60  | 329  | 30.0 |      | 33 | 32 | 12 | 10.8 |     |
| 4 НГ | 9.00  | 285  | 39.7 | 0.87 | 28 | 31 | 12 | 10.8 |     |
| 3 НГ | 10.61 | 260  | 44.0 | 0.87 | 28 | 31 | 12 | 10.8 |     |

| Шифр      | Н     | Р   | Т     | Г     | У   | Д   | Ч  | Д    | Ч   |
|-----------|-------|-----|-------|-------|-----|-----|----|------|-----|
| 1 НГ      | 10.88 | 258 | -46.5 |       | 28  | 303 | 20 | 10.6 |     |
| 1 НГ      | 11.00 | 248 | -47.2 | 0.57  | 28  | 298 | 20 |      |     |
| 1 НГ      | 12.00 | 211 | -54.6 | 0.74  | 29  | 300 | 15 |      | 307 |
| 1 НГ      | 12.38 | 208 | -56.3 | 0.56  | 30  | 308 | 14 | 9.0  |     |
| 1 НГ      | 12.33 | 208 | -56.2 |       | 30  | 306 | 14 | 9.0  |     |
| 1 НГ      | 2.45  | 194 | -55.7 | -0.41 | 31  | 309 | 14 | 9.0  |     |
| 1 НГ      | 2.99  | 188 | -59.1 | 0.63  | 32  | 318 | 12 | 8.4  |     |
| 1 НГ      | 3.00  | 188 | -59.2 |       | 32  | 319 | 12 |      |     |
| 1 НГ      | 3.78  | 158 | -67.2 | 1.02  | 33  | 306 | 15 | 7.5  |     |
| 1 НГ      | 4.00  | 154 | -65.7 |       | 32  | 300 | 17 |      |     |
| 1 НГ      | 4.02  | 154 | -65.5 | -0.70 | 32  | 300 | 17 | 7.8  |     |
| 1 НГ      | 4.11  | 158 | -66.2 |       | 31  | 298 | 17 | 7.9  |     |
| 1 НГ, ПЧТ | 4.48  | 141 | -69.0 | 0.75  | 30  | 294 | 19 | 8.0  | 299 |
| 1 НГ, ПЧТ | 4.84  | 138 | -68.7 | -0.08 | 28  | 300 | 19 | 8.4  |     |
| 1 НГ, ПЧТ | 15.00 | 120 | -65.9 |       | 27  | 302 | 19 |      |     |
| 1 НГ, ПЧТ | 15.23 | 128 | -62.8 | -1.56 | 26  | 305 | 20 | 9.4  |     |
| 1 НГ, ПЧТ | 16.00 | 110 | -63.6 | 0.11  | 24  | 312 | 17 |      |     |
| 1 НГ, ПЧТ | 16.58 | 100 | -65.4 |       | 31  | 316 | 15 | 9.0  |     |
| 1 НГ, ПЧТ | 16.59 | 99  | -65.4 | 0.31  | 31  | 316 | 15 | 9.0  |     |
| 1 НГ, ПЧТ | 17.00 | 93  | -63.8 | -0.40 | 31  | 311 | 12 |      |     |
| 1 НГ, ПЧТ | 17.44 | 86  | -61.1 | -0.60 | 30  | 304 | 16 | 8.5  | 291 |
| 1 НГ, ПЧТ | 18.00 | 79  | -64.5 | -0.61 | 30  | 300 | 06 |      |     |
| 1 НГ, ПЧТ | 18.29 | 75  | -64.4 | -0.65 | 30  | 305 | 05 | 8.3  |     |
| 1 НГ, ПЧТ | 18.57 | 72  | -63.5 | -0.32 | 30  | 310 | 03 | 8.4  |     |
| 1 НГ, ПЧТ | 19.77 | 70  | -69.2 |       | 30  | 313 | 02 | 8.8  |     |
| 1 НГ, ПЧТ | 19.00 | 67  | -67.1 |       | 30  | 317 | 03 |      |     |
| 1 НГ, ПЧТ | 19.03 | 67  | -66.9 | -1.42 | 30  | 318 | 02 | 9.1  |     |
| 1 НГ, ПЧТ | 19.75 | 59  | -69.5 | 0.36  | 28  | 318 | 02 | 9.1  |     |
| 1 НГ, ПЧТ | 19.00 | 57  | -67.0 | -1.00 | 28  | 318 | 04 |      |     |
| 1 НГ, ПЧТ | 19.89 | 50  | -65.6 |       | 26  | 804 | 84 | 10.6 |     |
| 1 НГ, ПЧТ | 21.00 | 49  | -65.3 |       | 26  | 812 | 84 |      | 301 |
| 1 НГ, ПЧТ | 21.10 | 48  | -65.1 | -0.18 | 019 | 04  |    |      |     |
| 1 НГ, ПЧТ | 22.00 | 42  | -66.1 | 0.11  | 052 | 05  |    |      |     |
| 1 НГ, ПЧТ | 23.00 | 35  | -66.7 |       | 062 | 06  |    |      |     |
| 1 НГ, ПЧТ | 23.04 | 35  | -66.8 | 0.07  | 062 | 06  |    |      |     |
| 1 НГ, ПЧТ | 23.30 | 34  | -63.4 | -1.31 | 062 | 07  |    |      | 301 |
| 1 НГ, ПЧТ | 23.89 | 31  | -64.2 | 0.13  |     |     |    |      |     |
| 1 НГ, ПЧТ | 24.00 | 30  | -63.8 |       |     |     |    |      |     |
| 1 НГ, ПЧТ | 24.15 | 30  | -63.2 |       |     |     |    |      |     |
| 1 НГ, ПЧТ | 24.59 | 28  | -60.1 | -0.59 |     |     |    |      | 293 |



ТАБЛИЦА РЕЗУЛЬТАТОВ ЗОНДИРОВАНИЯ

СТАНЦИЯ НИС ЖКАД, КОРОЛЕВ ТИД Р/З РКЗ-2 Ч ВЫПУСКА 79

ДАТА 25/09-77 ВРЕМЯ НАБА. ПОС 5 СМТ. 21,5 МЕТУ.

Ч : К : ОБЛАЧНОСТЬ И АТМОСФЕРНОЕ РАДЕНИЕ: ВИСОТА НАД ПО.

|        |               |        |        |
|--------|---------------|--------|--------|
| СР/Д   | 0.1 КМ        | 0.2 КМ | 0.5 КМ |
| КОД ИЧ | ФОРМА         | ВИСОТА |        |
| СРЕДН  | 1 2 3 4 5 Г 0 | У И    | П      |

| М     | ШИР  | Н    | Р     | Т      | С  | U    | Δ   | V | D | W |
|-------|------|------|-------|--------|----|------|-----|---|---|---|
| 0.01  | 1023 | 18.7 |       | 65.110 | 01 | 6.7  |     |   |   |   |
| 0.20  | 1001 | 17.7 |       | 61.089 | 03 |      |     |   |   |   |
| 0.22  | 1000 | 17.5 |       | 61.089 | 03 | 7.6  |     |   |   |   |
| 0.31  | 998  | 17.1 |       | 60.088 | 03 |      |     |   |   |   |
| 0.50  | 966  | 15.0 | 0.54  | 50.052 | 03 |      |     |   |   |   |
| 0.61  | 954  | 14.4 |       | 50.011 | 03 |      |     |   |   |   |
| 0.91  | 920  | 13.4 |       | 50.011 | 03 |      |     |   |   |   |
| 1.00  | 911  | 13.2 | 0.47  | 50.011 | 03 |      |     |   |   |   |
| 1.04  | 900  | 12.4 |       | 50.011 | 03 | 7.0  |     |   |   |   |
| 1.22  | 882  | 10.6 | 0.64  | 40.000 | 03 | 10.9 |     |   |   |   |
| 1.42  | 861  | 10.4 | 0.72  | 34.000 | 03 | 14.5 |     |   |   |   |
| 1.53  | 858  | 10.3 |       | 34.000 | 03 | 14.7 |     |   |   |   |
| 1.58  | 850  | 10.0 |       | 30.255 | 03 | 17.4 |     |   |   |   |
| 1.64  | 837  | 10.0 | 0.42  | 30.221 | 03 | 31.7 |     |   |   |   |
| 1.97  | 811  | 10.6 |       | 5.322  | 07 | 37.6 |     |   |   |   |
| 2.00  | 808  | 10.6 |       | 5.316  | 07 |      |     |   |   |   |
| 2.08  | 800  | 10.5 |       | 6.300  | 07 | 36.0 |     |   |   |   |
| 2.65  | 748  | 11.6 | -0.14 | 10.297 | 05 | 39.4 |     |   |   |   |
| 2.94  | 722  | 11.1 | 0.16  | 13.284 | 06 | 27.2 |     |   |   |   |
| 3.00  | 717  | 10.9 |       | 14.292 | 06 |      | 293 |   |   |   |
| 3.20  | 700  | 9.5  |       | 16.277 | 06 | 24.7 |     |   |   |   |
| 3.36  | 646  | 5.1  | 0.65  | 22.259 | 07 | 29.2 |     |   |   |   |
| 4.00  | 635  | 4.7  |       | 25.267 | 04 |      |     |   |   |   |
| 4.46  | 600  | 3.1  |       | 25.292 | 06 | 18.2 |     |   |   |   |
| 4.52  | 596  | 2.7  | 0.34  | 25.294 | 06 | 18.1 |     |   |   |   |
| 4.92  | 566  |      |       | 28.295 | 07 | 16.3 |     |   |   |   |
| 5.00  | 561  |      | 0.74  | 28.295 | 07 |      |     |   |   |   |
| 5.27  | 542  |      | 0.99  | 31.302 | 07 | 14.6 |     |   |   |   |
| 5.50  | 500  |      | 0.60  | 36.320 | 07 | 12.5 |     |   |   |   |
| 6.00  | 494  |      |       | 37.320 | 07 | 12.0 |     |   |   |   |
| 6.07  | 489  |      |       | 26.333 | 11 |      | 313 |   |   |   |
| 7.00  | 434  |      | 0.64  | 24.333 | 11 |      |     |   |   |   |
| 7.41  | 410  |      | 0.57  | 24.333 | 11 | 15.9 |     |   |   |   |
| 7.60  | 400  |      |       | 23.332 | 11 | 15.9 |     |   |   |   |
| 8.20  | 370  |      | 0.82  | 22.332 | 11 |      |     |   |   |   |
| 8.59  | 350  |      |       | 20.333 | 11 | 16.2 |     |   |   |   |
| 9.00  | 330  |      | 0.82  | 19.332 | 16 |      |     |   |   |   |
| 9.05  | 328  |      |       | 18.332 | 16 | 16.2 |     |   |   |   |
| 9.68  | 300  |      |       | 19.320 | 11 | 15.3 |     |   |   |   |
| 10.00 | 288  |      | 0.89  | 19.321 | 16 |      | 331 |   |   |   |
| 10.92 | 250  |      |       | 19.331 | 19 | 13.5 |     |   |   |   |
| 11.00 | 247  |      | 0.90  | 19.334 | 19 |      |     |   |   |   |
| 11.72 | 221  |      | 0.89  | 20.338 | 21 | 12.3 |     |   |   |   |
| 12.00 | 212  |      | 0.36  | 20.333 | 29 |      |     |   |   |   |

| М     | ШИР | Н | Р | Т     | С     | U      | Δ | V | D       | W    |
|-------|-----|---|---|-------|-------|--------|---|---|---------|------|
| 12.36 | 200 |   |   | -56.7 |       | 28.325 |   |   | 19.11.0 |      |
| 12.99 | 181 |   |   | -59.2 | 0.44  | 21.314 |   |   | 18.11.2 | 352  |
| 13.00 | 181 |   |   | -59.3 |       | 21.314 |   |   |         |      |
| 13.77 | 150 |   |   | -66.7 | 0.96  | 23.310 |   |   | 18      | 9.7  |
| 14.00 | 150 |   |   | -67.5 |       | 24.312 |   |   | 14      |      |
| 14.13 | 150 |   |   | -67.9 | 0.33  | 24.313 |   |   | 20      | 0.4  |
| 14.14 | 150 |   |   | -67.9 |       | 24.313 |   |   | 20      | 0.4  |
| 14.37 | 140 |   |   | -66.5 | -0.61 | 24.315 |   |   | 20      | 0.5  |
| 4.88  | 135 |   |   | -69.4 | 0.56  | 24.319 |   |   | 21      | 0.3  |
| 5.00  | 135 |   |   | -68.0 |       | 24.319 |   |   | 20      |      |
| 5.52  | 110 |   |   | -63.0 | -0.93 | 24.319 |   |   | 17      | 0.9  |
| 6.00  | 110 |   |   | -62.6 |       | 24.319 |   |   | 14      |      |
| 6.08  | 100 |   |   | -62.5 | -0.10 | 24.320 |   |   | 13      | 10.0 |
| 6.60  | 100 |   |   | -63.5 |       | 23.319 |   |   | 12      | 10.0 |
| 7.00  | 93  |   |   | -63.4 | 0.10  | 23.319 |   |   | 10      |      |
| 7.35  | 88  |   |   | -62.2 | -0.34 | 23.319 |   |   | 10      | 10.3 |
| 8.08  | 79  |   |   | -64.8 |       | 23.315 |   |   | 11      |      |
| 8.02  | 79  |   |   | -65.0 | 0.40  | 23.314 |   |   | 07      | 10.0 |
| 8.80  | 70  |   |   | -67.4 |       | 22.305 |   |   | 04      | 11.0 |
| 8.84  | 69  |   |   | -66.7 | -1.00 | 22.305 |   |   | 04      | 11.1 |
| 9.08  | 67  |   |   | -68.3 |       | 22.303 |   |   | 02      |      |
| 9.63  | 61  |   |   | -68.9 | 0.53  | 22.329 |   |   | 04      | 10.7 |
| 10.00 | 57  |   |   | -68.1 | -0.75 | 22.348 |   |   | 05      | 357  |
| 10.53 | 53  |   |   | -68.4 | -0.51 | 21.016 |   |   | 07      | 11.6 |
| 10.92 | 50  |   |   | -68.4 |       | 21.032 |   |   | 09      | 11.7 |
| 11.00 | 49  |   |   | -68.9 |       | 21.035 |   |   | 09      |      |
| 11.44 | 45  |   |   | -67.0 | 0.11  | 21.052 |   |   | 04      | 11.6 |
| 11.55 | 43  |   |   | -65.0 | 0.72  | 21.052 |   |   | 04      |      |
| 12.00 | 42  |   |   | -65.0 |       | 21.057 |   |   | 06      | 12.1 |
| 13.00 | 35  |   |   | -65.5 | -0.04 | 20.087 |   |   | 06      |      |
| 13.00 | 35  |   |   | -65.1 | -0.24 | 20.087 |   |   | 06      |      |
| 13.19 | 30  |   |   | -65.2 |       | 19.081 |   |   | 07      | 354  |
| 13.30 | 26  |   |   | -65.4 | 0.04  | 19.081 |   |   | 07      | 12.9 |
| 13.40 | 22  |   |   | -65.0 |       | 18.084 |   |   | 10      |      |
| 13.44 | 21  |   |   | -64.9 | -0.10 | 18.085 |   |   | 11      |      |
| 16.03 | 20  |   |   | -48.7 |       | 18.085 |   |   | 12      |      |
| 27.00 | 19  |   |   | -48.2 | -0.32 | 18.085 |   |   | 12      |      |
| 28.00 | 16  |   |   | -46.3 | -0.18 | 18.084 |   |   | 14      | 394  |
| 28.74 | 15  |   |   | -44.8 |       | 18.082 |   |   | 14      |      |
| 29.00 | 14  |   |   | -44.3 |       | 18.080 |   |   | 15      |      |
| 29.03 | 14  |   |   | -44.2 | -0.21 | 18.080 |   |   | 15      |      |
| 30.00 | 12  |   |   | -44.4 | -0.03 | 18.076 |   |   | 16      |      |
| 31.00 | 10  |   |   | -43.4 | -0.11 | 18.077 |   |   | 15      |      |
| 31.29 | 10  |   |   | -43.4 | 0.01  | 18.077 |   |   | 15      |      |
| 31.46 | 10  |   |   | -43.0 |       | 18.077 |   |   | 15      |      |
| 32.00 | 9   |   |   | -41.5 | -0.27 | 18.077 |   |   | 15      | 446  |
| 32.90 | 8   |   |   | -39.2 | -0.26 | 18.077 |   |   | 16      |      |
| 33.00 | 8   |   |   | -39.2 |       | 18.077 |   |   | 16      |      |
| 34.00 | 6   |   |   | -40.5 | 0.12  | 18.078 |   |   | 18      |      |
| 34.46 | 6   |   |   | -41.2 | 0.15  | 18.080 |   |   | 18      |      |
| 35.00 | 5   |   |   | -39.3 | -0.36 | 18.082 |   |   | 20      |      |
| 36.00 | 5   |   |   | -36.6 | -0.24 |        |   |   |         | 376  |

| US RAWINSONDE        |                | ASCENSION # A.K.1 |                  |                 |            |            |           |           |
|----------------------|----------------|-------------------|------------------|-----------------|------------|------------|-----------|-----------|
| AKADEMIK KOROLEV     |                | 37.450 N 75.270 W |                  |                 |            |            |           |           |
| AUGUST 24, 1977      |                | 1152 GMT          |                  |                 |            |            |           |           |
| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C     | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | EW<br>MPS |
| 4                    | 1013.7         | 22.0              | 88               | 19.9            | 200        | 9.0        | 8.5       | 3.1       |
| 122                  | 1000.0         | 22.0              | 83               | 19.0            | 999        | 999.9      | 999.9     | 999.9     |
| 210                  | 990.0          | 22.0              | 80               | 18.3            | 999        | 999.9      | 999.9     | 999.9     |
| 662                  | 940.0          | 23.1              | 62               | 15.3            | 999        | 999.9      | 999.9     | 999.9     |
| 1039                 | 900.0          | 21.3              | 61               | 13.3            | 999        | 999.9      | 999.9     | 999.9     |
| 1532                 | 850.0          | 17.7              | 62               | 10.3            | 999        | 999.9      | 999.9     | 999.9     |
| 1952                 | 809.0          | 13.8              | 63               | 6.9             | 232        | 15.2       | 9.3       | 12.0      |
| 2046                 | 800.0          | 13.1              | 63               | 6.2             | 233        | 16.0       | 9.7       | 12.7      |
| 2319                 | 756.0          | 9.8               | 63               | 3.0             | 231        | 17.6       | 11.1      | 13.7      |
| 3152                 | 700.0          | 5.1               | 93               | 4.0             | 239        | 20.1       | 10.3      | 17.3      |
| 4395                 | 600.0          | -0.6              | 100              | -0.6            | 242        | 19.5       | 9.2       | 17.2      |
| 5073                 | 551.0          | -4.0              | 53               | -12.2           | 232        | 19.0       | 11.7      | 15.0      |
| 5378                 | 530.0          | -6.5              | 94               | -7.2            | 235        | 16.9       | 9.8       | 13.8      |
| 5831                 | 500.0          | -9.0              | 94               | -9.8            | 234        | 20.5       | 12.2      | 16.5      |
| 6019                 | 488.0          | -10.2             | 100              | -10.2           | 231        | 21.6       | 13.7      | 16.7      |
| 6357                 | 467.0          | -11.7             | 59               | -18.2           | 228        | 18.0       | 12.1      | 13.4      |
| 6657                 | 449.0          | -13.5             | 68               | -18.1           | 219        | 18.5       | 6.7       | 5.4       |
| 7526                 | 400.0          | -18.8             | 56               | -25.4           | 237        | 17.0       | 9.4       | 14.2      |
| 8505                 | 350.0          | -26.2             | 63               | -31.1           | 243        | 19.6       | 9.0       | 17.4      |
| 8994                 | 327.0          | -29.8             | 26               | -43.1           | 253        | 18.2       | 5.3       | 17.4      |
| 9600                 | 300.0          | -35.0             | 49               | -42.0           | 247        | 23.3       | 9.2       | 21.4      |
| 10029                | 282.0          | -38.0             | 49               | -44.8           | 248        | 24.7       | 9.3       | 22.8      |
| 10845                | 250.0          | -44.9             |                  |                 | 250        | 24.7       | 8.1       | 22.2      |
| 12297                | 200.0          | -56.2             |                  |                 | 285        | 13.0       | -3.4      | 12.5      |
| 14088                | 150.0          | -64.5             |                  |                 | 256        | 23.1       | 5.8       | 22.4      |
| 14509                | 140.0          | -64.9             |                  |                 | 257        | 28.6       | 6.4       | 27.9      |
| 14913                | 131.0          | -65.5             |                  |                 | 259        | 25.9       | 4.9       | 25.4      |
| 15197                | 125.0          | -65.2             |                  |                 | 242        | 20.0       | 9.5       | 17.6      |
| 16552                | 100.0          | -65.7             |                  |                 | 244        | 25.5       | 11.2      | 22.9      |
| 16928                | 94.0           | -66.2             |                  |                 | 251        | 24.9       | 8.0       | 23.6      |
| 17691                | 83.0           | -60.5             |                  |                 | 27         | 4.2        | -3.8      | -1.9      |
| 17919                | 80.0           | -60.5             |                  |                 | 105        | 2.7        | 0.7       | -2.6      |
| 18754                | 70.0           | -58.7             |                  |                 | 223        | 3.8        | 2.8       | -2.6      |
| 19730                | 60.0           | -55.4             |                  |                 | 154        | 2.4        | 2.2       | -1.0      |
| 20891                | 50.0           | -54.6             |                  |                 | 75         | 5.9        | -1.5      | -5.7      |
| 22324                | 40.0           | -52.2             |                  |                 | 73         | 11.1       | -3.2      | -10.6     |
| 24196                | 30.0           | -50.6             |                  |                 | 180        | 6.1        | 6.1       | 0.        |
| 25388                | 25.0           | -48.6             |                  |                 | 65         | 6.8        | -2.9      | -6.1      |
| 26860                | 20.0           | -46.8             |                  |                 | 82         | 11.7       | -1.7      | -11.6     |
| 27749                | 17.5           | -44.6             |                  |                 | 92         | 15.0       | 0.4       | -15.0     |
| 28781                | 15.0           | -44.1             |                  |                 | 102        | 14.3       | 2.9       | -14.1     |
| 30010                | 12.5           | -42.4             |                  |                 | 80         | 20.8       | -3.5      | -20.5     |
| 31519                | 10.0           | -41.2             |                  |                 | 101        | 18.3       | 3.5       | -17.9     |
| 33041                | 8.0            | -39.1             |                  |                 | 83         | 17.7       | -2.1      | -17.6     |
| 33959                | 7.0            | -37.2             |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION # A.K.2

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 24, 1977

1446 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | EW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1014.5         | 21.8          | 89               | 19.8            | 200        | 11.0       | 10.3      | 3.8       |
| 128                  | 1000.0         | 20.3          | 87               | 18.1            | 999        | 999.9      | 999.9     | 999.9     |
| 250                  | 986.0          | 18.9          | 85               | 16.3            | 999        | 999.9      | 999.9     | 999.9     |
| 453                  | 963.0          | 18.5          | 76               | 14.2            | 999        | 999.9      | 999.9     | 999.9     |
| 735                  | 932.0          | 20.7          | 80               | 17.1            | 999        | 999.9      | 999.9     | 999.9     |
| 1036                 | 900.0          | 19.7          | 66               | 13.1            | 999        | 999.9      | 999.9     | 999.9     |
| 1526                 | 850.0          | 16.6          | 76               | 12.4            | 999        | 999.9      | 999.9     | 999.9     |
| 2039                 | 800.0          | 12.9          | 82               | 9.8             | 999        | 999.9      | 999.9     | 999.9     |
| 2425                 | 764.0          | 10.2          | 76               | 6.2             | 999        | 999.9      | 999.9     | 999.9     |
| 3146                 | 700.0          | 5.5           | 94               | 4.6             | 999        | 999.9      | 999.9     | 999.9     |
| 3372                 | 681.0          | 4.3           | 90               | 2.8             | 237        | 15.9       | 8.7       | 13.3      |
| 4300                 | 607.0          | -0.6          | 98               | -0.9            | 253        | 12.9       | 3.8       | 12.3      |
| 4392                 | 600.0          | -1.1          | 96               | -1.7            | 250        | 13.0       | 4.5       | 12.2      |
| 5615                 | 514.0          | -6.8          | 78               | -9.9            | 245        | 15.2       | 6.3       | 13.8      |
| 5830                 | 500.0          | -8.4          | 78               | -11.5           | 246        | 14.8       | 6.1       | 13.5      |
| 7531                 | 400.0          | -18.0         | 72               | -21.9           | 246        | 16.9       | 6.9       | 15.5      |
| 8515                 | 350.0          | -24.3         | 65               | -29.0           | 238        | 21.3       | 11.2      | 18.1      |
| 9621                 | 300.0          | -32.0         | 57               | -37.6           | 237        | 27.5       | 15.0      | 23.1      |
| 10537                | 263.0          | -39.0         | 50               | -45.4           | 241        | 27.7       | 13.4      | 24.2      |
| 10881                | 250.0          | -42.0         |                  |                 | 243        | 30.1       | 13.5      | 26.9      |
| 11702                | 221.0          | -48.8         |                  |                 | 239        | 30.6       | 15.7      | 26.3      |
| 11973                | 212.0          | -51.8         |                  |                 | 237        | 31.3       | 17.0      | 26.3      |
| 12346                | 200.0          | -54.9         |                  |                 | 236        | 33.1       | 18.6      | 27.4      |
| 13046                | 179.0          | -59.2         |                  |                 | 242        | 38.0       | 17.9      | 33.5      |
| 13592                | 164.0          | -60.6         |                  |                 | 239        | 36.6       | 18.7      | 31.5      |
| 14144                | 150.0          | -62.6         |                  |                 | 248        | 28.4       | 10.5      | 26.3      |
| 14746                | 136.0          | -64.1         |                  |                 | 242        | 14.8       | 6.9       | 13.1      |
| 15264                | 125.0          | -62.9         |                  |                 | 226        | 23.9       | 16.7      | 17.1      |
| 16637                | 100.0          | -61.1         |                  |                 | 263        | 18.0       | 2.2       | 17.9      |
| 18031                | 80.0           | -58.2         |                  |                 | 187        | 10.4       | 10.3      | 1.3       |
| 18875                | 70.0           | -55.6         |                  |                 | 228        | 11.9       | 8.0       | 8.9       |
| 19860                | 60.0           | -53.9         |                  |                 | 22         | 1.0        | -0.9      | -0.4      |
| 21032                | 50.0           | -53.1         |                  |                 | 107        | 7.6        | 2.2       | -7.3      |
| 22476                | 40.0           | -51.1         |                  |                 | 88         | 17.5       | -0.5      | -17.5     |
| 24352                | 30.0           | -50.1         |                  |                 | 199        | 4.9        | 4.6       | 1.6       |
| 25547                | 25.0           | -47.6         |                  |                 | 64         | 14.8       | -6.5      | -13.3     |
| 27025                | 20.0           | -46.2         |                  |                 | 106        | 15.3       | 4.3       | -14.7     |
| 27917                | 17.5           | -41.4         |                  |                 | 88         | 17.9       | -0.6      | -17.8     |
| 28967                | 15.0           | -39.6         |                  |                 | 94         | 14.0       | 1.0       | -13.9     |
| 30067                | 12.8           | -32.6         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION # A.K.3

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 24, 1977

2315 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | FW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1010.0         | 23.0          | 84               | 20.2            | 320        | 5.0        | -3.8      | 3.2       |
| 90                   | 1000.0         | 21.5          | 86               | 19.0            | 999        | 999.9      | 999.9     | 999.9     |
| 265                  | 980.0          | 18.4          | 90               | 16.7            | 999        | 999.9      | 999.9     | 999.9     |
| 552                  | 948.0          | 20.8          | 95               | 19.9            | 999        | 999.9      | 999.9     | 999.9     |
| 1000                 | 900.0          | 18.3          | 95               | 17.4            | 999        | 999.9      | 999.9     | 999.9     |
| 1489                 | 850.0          | 16.0          | 88               | 13.9            | 999        | 999.9      | 999.9     | 999.9     |
| 1641                 | 835.0          | 14.8          | 91               | 13.3            | 216        | 11.1       | 9.0       | 6.6       |
| 1888                 | 811.0          | 13.8          | 73               | 9.0             | 214        | 12.5       | 10.4      | 7.0       |
| 2002                 | 800.0          | 12.9          | 81               | 9.6             | 212        | 12.5       | 10.6      | 6.7       |
| 2432                 | 760.0          | 10.2          | 94               | 9.3             | 214        | 14.2       | 11.9      | 7.8       |
| 2698                 | 736.0          | 8.7           | 55               | 0.2             | 215        | 17.0       | 13.8      | 9.8       |
| 3065                 | 704.0          | 7.0           | 89               | 5.2             | 203        | 16.3       | 14.9      | 6.5       |
| 3111                 | 700.0          | 6.6           | 90               | 5.1             | 203        | 16.2       | 15.0      | 6.3       |
| 4095                 | 620.0          | -1.3          | 97               | -1.8            | 203        | 18.9       | 17.4      | 7.4       |
| 4356                 | 600.0          | -2.5          | 65               | -8.5            | 208        | 17.6       | 15.5      | 8.3       |
| 4396                 | 597.0          | -2.7          | 60               | -9.5            | 209        | 17.4       | 15.2      | 8.4       |
| 4652                 | 578.0          | -3.2          | 100              | -3.2            | 219        | 17.4       | 13.5      | 11.0      |
| 5247                 | 536.0          | -5.0          | 100              | -5.0            | 233        | 18.1       | 10.9      | 14.4      |
| 5530                 | 517.0          | -6.7          | 87               | -8.4            | 233        | 18.2       | 11.0      | 14.5      |
| 5789                 | 500.0          | -8.4          | 96               | -8.9            | 234        | 18.0       | 10.6      | 14.6      |
| 7489                 | 400.0          | -18.4         | 93               | -19.3           | 228        | 22.3       | 14.8      | 16.6      |
| 7583                 | 395.0          | -19.0         | 100              | -19.0           | 229        | 22.8       | 14.9      | 17.2      |
| 7909                 | 378.0          | -21.5         | 68               | -25.8           | 232        | 23.2       | 14.2      | 18.4      |
| 8472                 | 350.0          | -24.9         | 84               | -26.9           | 237        | 22.3       | 12.2      | 18.6      |
| 8598                 | 344.0          | -25.6         | 89               | -26.9           | 237        | 21.4       | 11.6      | 18.0      |
| 9571                 | 300.0          | -33.5         | 65               | -37.7           | 239        | 26.2       | 13.6      | 22.4      |
| 9954                 | 284.0          | -37.2         | 50               | -43.9           | 240        | 25.0       | 12.5      | 21.6      |
| 10819                | 250.0          | -44.9         |                  |                 | 243        | 29.7       | 13.6      | 26.4      |
| 12271                | 200.0          | -56.5         |                  |                 | 236        | 28.9       | 16.3      | 23.8      |
| 13971                | 152.0          | -65.7         |                  |                 | 238        | 35.9       | 19.0      | 30.5      |
| 14051                | 150.0          | -65.6         |                  |                 | 240        | 36.2       | 18.1      | 31.4      |
| 14603                | 137.0          | -63.7         |                  |                 | 257        | 33.2       | 7.7       | 32.3      |
| 15164                | 125.0          | -64.0         |                  |                 | 261        | 23.4       | 3.8       | 23.1      |
| 15569                | 117.0          | -64.1         |                  |                 | 263        | 17.0       | 2.1       | 16.9      |
| 16228                | 105.0          | -66.1         |                  |                 | 268        | 17.3       | 0.6       | 17.3      |
| 16524                | 100.0          | -64.1         |                  |                 | 263        | 15.6       | 1.8       | 15.5      |
| 17889                | 80.0           | -65.2         |                  |                 | 244        | 13.8       | 6.1       | 12.4      |
| 18716                | 70.0           | -59.5         |                  |                 | 302        | 3.3        | -1.8      | 2.8       |
| 19683                | 60.0           | -57.7         |                  |                 | 275        | 1.6        | -0.1      | 1.6       |
| 20832                | 50.0           | -57.3         |                  |                 | 322        | 0.7        | -0.6      | 0.4       |
| 22247                | 40.0           | -55.5         |                  |                 | 242        | 3.8        | 1.8       | 3.4       |
| 24089                | 30.0           | -54.2         |                  |                 | 88         | 18.1       | -0.5      | -18.1     |
| 25258                | 25.0           | -52.1         |                  |                 | 104        | 8.8        | 2.1       | -8.6      |
| 26706                | 20.0           | -50.1         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |
| 26838                | 19.6           | -49.4         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION # A.K.4

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 25, 1977

1134 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | FW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1018.4         | 16.2          | 90               | 14.5            | 360        | 9.0        | -9.0      | 0.        |
| 158                  | 1000.0         | 15.0          | 82               | 11.9            | 999        | 999.9      | 999.9     | 999.9     |
| 556                  | 954.0          | 13.6          | 63               | 6.6             | 999        | 999.9      | 999.9     | 999.9     |
| 816                  | 925.0          | 14.6          | 62               | 7.4             | 999        | 999.9      | 999.9     | 999.9     |
| 1046                 | 900.0          | 13.1          | 54               | 4.1             | 999        | 999.9      | 999.9     | 999.9     |
| 1065                 | 898.0          | 13.0          | 54               | 3.8             | 999        | 999.9      | 999.9     | 999.9     |
| 1341                 | 869.0          | 14.2          | 42               | 1.4             | 999        | 999.9      | 999.9     | 999.9     |
| 1526                 | 850.0          | 13.2          | 41               | 0.2             | 999        | 999.9      | 999.9     | 999.9     |
| 1596                 | 843.0          | 12.8          | 41               | -0.2            | 999        | 999.9      | 999.9     | 999.9     |
| 1858                 | 817.0          | 11.3          | 54               | 2.2             | 314        | 11.6       | -8.0      | 8.3       |
| 2033                 | 800.0          | 10.5          | 58               | 2.5             | 306        | 11.9       | -7.0      | 9.7       |
| 2691                 | 739.0          | 8.5           | 42               | -3.7            | 297        | 13.1       | -5.9      | 11.7      |
| 2998                 | 712.0          | 8.9           |                  |                 | 300        | 12.0       | -6.0      | 10.3      |
| 3137                 | 700.0          | 8.4           |                  |                 | 299        | 12.4       | -5.9      | 10.8      |
| 4396                 | 600.0          | 3.6           |                  |                 | 285        | 17.4       | -4.5      | 16.8      |
| 4725                 | 576.0          | 1.0           |                  |                 | 274        | 13.8       | -0.8      | 13.7      |
| 5007                 | 556.0          | -2.2          |                  |                 | 278        | 11.4       | -1.6      | 11.3      |
| 5842                 | 500.0          | -5.7          |                  |                 | 300        | 15.2       | -7.6      | 13.2      |
| 5985                 | 491.0          | -6.5          |                  |                 | 297        | 15.1       | -6.9      | 13.4      |
| 6242                 | 475.0          | -9.5          |                  |                 | 284        | 12.3       | -2.9      | 11.9      |
| 7305                 | 413.0          | -17.1         |                  |                 | 288        | 14.4       | -4.3      | 13.7      |
| 7451                 | 405.0          | -19.6         |                  |                 | 280        | 10.0       | -1.8      | 9.8       |
| 7542                 | 400.0          | -20.3         |                  |                 | 283        | 11.0       | -2.5      | 10.7      |
| 8515                 | 350.0          | -28.3         |                  |                 | 277        | 15.7       | -1.9      | 15.6      |
| 9599                 | 300.0          | -37.6         |                  |                 | 266        | 16.9       | 1.1       | 16.9      |
| 10826                | 250.0          | -48.4         |                  |                 | 261        | 16.4       | 2.5       | 16.2      |
| 12258                | 200.0          | -57.2         |                  |                 | 251        | 20.9       | 6.9       | 19.7      |
| 12816                | 183.0          | -59.5         |                  |                 | 247        | 23.6       | 9.2       | 21.7      |
| 14050                | 150.0          | -62.9         |                  |                 | 275        | 18.5       | -1.7      | 18.4      |
| 14133                | 148.0          | -63.3         |                  |                 | 278        | 18.6       | -2.6      | 18.4      |
| 15173                | 125.0          | -63.2         |                  |                 | 272        | 18.2       | -0.7      | 18.2      |
| 16539                | 100.0          | -64.7         |                  |                 | 272        | 16.5       | -0.5      | 16.5      |
| 16601                | 99.0           | -64.8         |                  |                 | 273        | 16.0       | -0.7      | 16.0      |
| 17927                | 80.0           | -58.4         |                  |                 | 283        | 11.0       | -2.5      | 10.7      |
| 18762                | 70.0           | -59.9         |                  |                 | 244        | 3.3        | 1.5       | 2.9       |
| 19728                | 60.0           | -57.4         |                  |                 | 296        | 12.3       | -5.4      | 11.1      |
| 20882                | 50.0           | -56.4         |                  |                 | 95         | 9.6        | 0.9       | -9.6      |
| 22313                | 40.0           | -52.5         |                  |                 | 112        | 8.7        | 3.3       | -8.0      |
| 24179                | 30.0           | -50.5         |                  |                 | 29         | 5.2        | -4.6      | -2.5      |
| 25368                | 25.0           | -49.1         |                  |                 | 92         | 11.5       | 0.4       | -11.5     |
| 26833                | 20.0           | -48.2         |                  |                 | 67         | 9.6        | -3.8      | -8.8      |
| 27715                | 17.5           | -46.6         |                  |                 | 99         | 15.4       | 2.4       | -15.2     |
| 28744                | 15.0           | -44.8         |                  |                 | 90         | 14.2       | 0.        | -14.2     |
| 29964                | 12.5           | -44.1         |                  |                 | 84         | 15.1       | -1.5      | -15.1     |
| 31464                | 10.0           | -43.2         |                  |                 | 92         | 17.7       | 0.6       | -17.7     |
| 32971                | 8.0            | -41.2         |                  |                 | 84         | 22.0       | -2.3      | -21.9     |
| 33880                | 7.0            | -40.4         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION # A.K.5

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 25, 1977

1446 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | EW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1020.7         | 17.2          | 72               | 12.0            | 360        | 6.0        | -6.0      | 0.        |
| 178                  | 1000.0         | 15.7          | 61               | 8.2             | 999        | 999.9      | 999.9     | 999.9     |
| 238                  | 993.0          | 15.2          | 58               | 6.9             | 999        | 999.9      | 999.9     | 999.9     |
| 488                  | 964.0          | 12.9          | 74               | 8.3             | 999        | 999.9      | 999.9     | 999.9     |
| 763                  | 933.0          | 13.2          | 44               | 1.2             | 999        | 999.9      | 999.9     | 999.9     |
| 1000                 | 907.0          | 13.1          |                  |                 | 999        | 999.9      | 999.9     | 999.9     |
| 1064                 | 900.0          | 12.8          |                  |                 | 999        | 999.9      | 999.9     | 999.9     |
| 1542                 | 850.0          | 12.8          |                  |                 | 999        | 999.9      | 999.9     | 999.9     |
| 1751                 | 829.0          | 12.5          |                  |                 | 354        | 7.9        | -7.8      | 0.8       |
| 2048                 | 800.0          | 11.5          |                  |                 | 329        | 10.8       | -9.3      | 5.5       |
| 3156                 | 700.0          | 9.2           |                  |                 | 301        | 10.0       | -5.1      | 8.6       |
| 4410                 | 600.0          | 2.5           |                  |                 | 292        | 13.3       | -5.0      | 12.3      |
| 5858                 | 500.0          | -5.7          |                  |                 | 270        | 9.4        | 0.        | 9.4       |
| 7556                 | 400.0          | -20.0         |                  |                 | 273        | 12.9       | -0.7      | 12.9      |
| 8529                 | 350.0          | -28.6         |                  |                 | 275        | 17.3       | -1.4      | 17.2      |
| 9612                 | 300.0          | -37.2         |                  |                 | 256        | 14.6       | 3.5       | 14.2      |
| 10841                | 250.0          | -47.6         |                  |                 | 278        | 16.0       | -2.3      | 15.8      |
| 12031                | 208.0          | -54.9         |                  |                 | 264        | 23.6       | 2.6       | 23.4      |
| 12281                | 200.0          | -55.2         |                  |                 | 264        | 21.3       | 2.1       | 21.2      |
| 13801                | 157.0          | -61.9         |                  |                 | 257        | 18.5       | 4.2       | 18.0      |
| 14082                | 150.0          | -62.4         |                  |                 | 265        | 17.9       | 1.6       | 17.8      |
| 14965                | 130.0          | -63.8         |                  |                 | 267        | 18.6       | 0.9       | 18.6      |
| 15205                | 125.0          | -62.6         |                  |                 | 266        | 16.6       | 1.2       | 16.6      |
| 16579                | 100.0          | -63.2         |                  |                 | 278        | 15.8       | -2.2      | 15.7      |
| 17959                | 80.0           | -60.7         |                  |                 | 277        | 17.0       | -2.1      | 16.9      |
| 18797                | 70.0           | -56.3         |                  |                 | 282        | 11.9       | -2.5      | 11.6      |
| 19778                | 60.0           | -55.4         |                  |                 | 63         | 1.3        | -0.6      | -1.2      |
| 20940                | 50.0           | -54.8         |                  |                 | 105        | 6.2        | 1.6       | -6.0      |
| 22375                | 40.0           | -51.9         |                  |                 | 128        | 1.4        | 0.9       | -1.1      |
| 24255                | 30.0           | -48.3         |                  |                 | 85         | 10.7       | -0.9      | -10.7     |
| 25454                | 25.0           | -48.9         |                  |                 | 104        | 10.9       | 2.6       | -10.6     |
| 26932                | 20.0           | -44.5         |                  |                 | 95         | 14.2       | 1.2       | -14.2     |
| 27827                | 17.5           | -43.8         |                  |                 | 83         | 12.8       | -1.7      | -12.7     |
| 28863                | 15.0           | -42.7         |                  |                 | 95         | 17.3       | 1.6       | -17.2     |
| 30095                | 12.5           | -42.4         |                  |                 | 81         | 12.4       | -2.0      | -12.3     |
| 31604                | 10.0           | -40.7         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION # A.K.6

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 25, 1977

2333 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | EW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1022.3         | 19.4          | 62               | 12.0            | 70         | 3.0        | -1.0      | -2.8      |
| 193                  | 1000.0         | 19.4          | 42               | 5.2             | 999        | 999.9      | 999.9     | 999.9     |
| 297                  | 988.0          | 19.4          | 30               | 1.5             | 999        | 999.9      | 999.9     | 999.9     |
| 1005                 | 909.0          | 13.5          | 61               | 6.2             | 999        | 999.9      | 999.9     | 999.9     |
| 1088                 | 900.0          | 14.0          | 42               | -3.7            | 999        | 999.9      | 999.9     | 999.9     |
| 1240                 | 884.0          | 14.9          |                  |                 | 999        | 999.9      | 999.9     | 999.9     |
| 1568                 | 850.0          | 12.7          |                  |                 | 116        | 4.8        | 2.2       | -4.3      |
| 1950                 | 812.0          | 11.2          |                  |                 | 54         | 0.1        | -0.1      | -0.1      |
| 2073                 | 800.0          | 11.5          |                  |                 | 307        | 1.8        | -1.1      | 1.5       |
| 2457                 | 764.0          | 12.4          |                  |                 | 300        | 5.6        | -2.8      | 4.8       |
| 3184                 | 700.0          | 10.3          |                  |                 | 277        | 3.7        | -0.5      | 3.7       |
| 4444                 | 600.0          | 3.4           |                  |                 | 314        | 8.2        | -5.7      | 5.9       |
| 5510                 | 525.0          | -4.7          | 21               | -23.4           | 305        | 10.8       | -6.2      | 8.8       |
| 5891                 | 500.0          | -7.2          | 22               | -25.1           | 312        | 10.6       | -7.0      | 7.9       |
| 6994                 | 433.0          | -15.2         | 22               | -32.1           | 317        | 14.1       | -10.3     | 9.6       |
| 7587                 | 400.0          | -19.2         |                  |                 | 320        | 17.5       | -13.4     | 11.3      |
| 8201                 | 368.0          | -23.9         |                  |                 | 321        | 16.8       | -13.1     | 10.6      |
| 8502                 | 353.0          | -27.6         |                  |                 | 320        | 15.3       | -11.7     | 9.8       |
| 8563                 | 350.0          | -27.9         |                  |                 | 320        | 15.8       | -12.1     | 10.1      |
| 9651                 | 300.0          | -36.8         |                  |                 | 330        | 13.7       | -11.9     | 6.8       |
| 10885                | 250.0          | -45.9         |                  |                 | 309        | 16.3       | -10.2     | 12.7      |
| 12335                | 200.0          | -55.3         |                  |                 | 310        | 13.7       | -8.7      | 10.5      |
| 13651                | 162.0          | -65.3         |                  |                 | 312        | 14.0       | -9.4      | 10.4      |
| 14118                | 150.0          | -65.7         |                  |                 | 288        | 14.2       | -4.3      | 13.5      |
| 14535                | 140.0          | -67.2         |                  |                 | 292        | 14.2       | -5.3      | 13.1      |
| 15128                | 127.0          | -61.7         |                  |                 | 310        | 21.9       | -14.0     | 16.9      |
| 15226                | 125.0          | -61.8         |                  |                 | 310        | 20.1       | -13.0     | 15.3      |
| 16599                | 100.0          | -63.3         |                  |                 | 310        | 15.6       | -9.9      | 12.0      |
| 17976                | 80.0           | -63.0         |                  |                 | 311        | 12.5       | -8.2      | 9.4       |
| 18808                | 70.0           | -56.3         |                  |                 | 324        | 5.5        | -4.4      | 3.2       |
| 19782                | 60.0           | -55.5         |                  |                 | 283        | 3.4        | -0.8      | 3.4       |
| 20946                | 50.0           | -54.3         |                  |                 | 52         | 5.0        | -3.1      | -3.9      |
| 22373                | 40.0           | -53.9         |                  |                 | 76         | 8.7        | -2.1      | -8.4      |
| 24230                | 30.0           | -50.3         |                  |                 | 55         | 6.6        | -3.8      | -5.4      |
| 24589                | 28.4           | -49.3         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |

US RAWINSONDE

ASCENSION • A.K.7

AKADEMIK KOROLEV

37.450 N 75.270 W

AUGUST 26, 1977

226 GMT

| ALTITUDE<br>GEOP MTR | PRESSURE<br>MB | TEMP<br>DEG C | REL HUM<br>PRCNT | DEW PT<br>DEG C | DIR<br>DEG | SPD<br>MPS | NS<br>MPS | FW<br>MPS |
|----------------------|----------------|---------------|------------------|-----------------|------------|------------|-----------|-----------|
| 4                    | 1023.3         | 18.5          | 62               | 11.1            | 110        | 1.0        | 0.3       | -0.9      |
| 201                  | 1000.0         | 18.0          | 61               | 10.3            | 999        | 999.9      | 999.9     | 999.9     |
| 1094                 | 900.0          | 12.4          | 61               | 5.0             | 999        | 999.9      | 999.9     | 999.9     |
| 1141                 | 895.0          | 12.1          | 60               | 4.6             | 999        | 999.9      | 999.9     | 999.9     |
| 1426                 | 865.0          | 13.2          |                  |                 | 106        | 4.3        | 1.2       | -4.1      |
| 1572                 | 850.0          | 12.5          |                  |                 | 108        | 2.7        | 0.8       | -2.6      |
| 1984                 | 809.0          | 11.1          |                  |                 | 327        | 1.2        | -1.0      | 0.6       |
| 2077                 | 800.0          | 11.3          |                  |                 | 318        | 1.9        | -1.4      | 1.3       |
| 2581                 | 753.0          | 12.3          |                  |                 | 290        | 4.7        | -1.6      | 4.4       |
| 3188                 | 700.0          | 10.4          |                  |                 | 274        | 5.7        | -0.4      | 5.7       |
| 4449                 | 600.0          | 3.7           |                  |                 | 293        | 5.3        | -2.0      | 4.9       |
| 5894                 | 500.0          | -7.2          |                  |                 | 318        | 8.4        | -6.2      | 5.6       |
| 7593                 | 400.0          | -18.8         |                  |                 | 337        | 11.3       | -10.4     | 4.5       |
| 8572                 | 350.0          | -26.3         |                  |                 | 337        | 13.7       | -12.6     | 5.4       |
| 9664                 | 300.0          | -36.0         |                  |                 | 326        | 17.3       | -14.3     | 9.8       |
| 10899                | 250.0          | -46.9         |                  |                 | 329        | 15.9       | -13.7     | 8.2       |
| 12343                | 200.0          | -56.2         |                  |                 | 328        | 20.2       | -17.1     | 10.8      |
| 13615                | 163.0          | -66.2         |                  |                 | 300        | 15.4       | -7.7      | 13.3      |
| 14117                | 150.0          | -66.6         |                  |                 | 297        | 16.7       | -7.7      | 14.8      |
| 14709                | 136.0          | -67.0         |                  |                 | 313        | 22.6       | -15.5     | 16.4      |
| 15219                | 125.0          | -65.1         |                  |                 | 322        | 24.8       | -19.5     | 15.2      |
| 15520                | 119.0          | -62.4         |                  |                 | 324        | 24.4       | -19.8     | 14.3      |
| 16592                | 100.0          | -62.7         |                  |                 | 319        | 15.9       | -12.0     | 10.4      |
| 17380                | 88.0           | -61.8         |                  |                 | 321        | 14.4       | -11.2     | 9.1       |
| 17961                | 80.0           | -65.7         |                  |                 | 320        | 11.5       | -8.8      | 7.4       |
| 18790                | 70.0           | -57.3         |                  |                 | 33         | 3.2        | -2.7      | -1.8      |
| 19756                | 60.0           | -58.6         |                  |                 | 277        | 3.1        | -0.4      | 3.1       |
| 20915                | 50.0           | -55.0         |                  |                 | 59         | 6.8        | -3.5      | -5.9      |
| 22342                | 40.0           | -53.3         |                  |                 | 96         | 8.6        | 1.2       | -8.5      |
| 24202                | 30.0           | -51.0         |                  |                 | 84         | 5.7        | -0.7      | -5.7      |
| 25388                | 25.0           | -50.7         |                  |                 | 84         | 10.5       | -1.2      | -10.4     |
| 26849                | 20.0           | -47.6         |                  |                 | 86         | 13.4       | -0.9      | -13.4     |
| 27733                | 17.5           | -46.4         |                  |                 | 84         | 13.5       | -1.5      | -13.4     |
| 28760                | 15.0           | -44.7         |                  |                 | 72         | 15.5       | -4.9      | -14.7     |
| 29980                | 12.5           | -44.2         |                  |                 | 74         | 15.1       | -4.2      | -14.5     |
| 31478                | 10.0           | -42.8         |                  |                 | 78         | 14.7       | -3.0      | -14.4     |
| 32991                | 8.0            | -41.0         |                  |                 | 71         | 16.4       | -5.4      | -15.4     |
| 33899                | 7.0            | -41.1         |                  |                 | 74         | 18.3       | -5.1      | -17.5     |
| 34946                | 6.0            | -40.8         |                  |                 | 72         | 18.4       | -5.6      | -17.5     |
| 36192                | 5.0            | -39.0         |                  |                 | 73         | 20.6       | -5.9      | -19.7     |
| 37390                | 4.2            | -37.9         |                  |                 | 999        | 999.9      | 999.9     | 999.9     |



|   |  |   |                                 |
|---|--|---|---------------------------------|
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|   |  | 15. Supplementary Notes   |                                 |
| 16. Abstract<br><p>In 1971, the National Aeronautics and Space Administration in the United States and the Academy of Sciences in the Union of Soviet Socialist Republics, agreed to a coordinated program of rocketsonde investigations along about 60°E and 70°W Longitudes. The Americans agreed to coordinate launchings along 70°W with the Cooperative Meteorological Rocket Network (CMRN) in the US and the Experimental Inter-American Meteorological Rocketsonde Network (EXAMETNET) in the Southern Hemisphere and the NASA launch site at Wallops Flight Center, Virginia. The Hydrometeorological Service of the USSR, on behalf of the USSR Academy of Sciences, agreed to provide data from sites along 60°E. It was recognized early in these investigations that the rocketsonde instruments used by the US and USSR needed to be compared if useful results were to be obtained. As a result of an internationally coordinated rocket intercomparison held in 1973 it was learned that large differences existed between the measurements obtained with the US and USSR instruments. After examination of the instruments and adjustments to techniques were completed, it was agreed that an intercomparison of the US Super Loki Datasonde and the USSR M100B rocketsonde should be conducted. It was agreed that 22 pairs of rocket instruments, half scheduled for daytime and half for nighttime, would be launched. The actual launchings commenced on August 10, 1977, with the Soviets launching from their ship, the Research Vessel Akademik Korolev, and the Americans from the launch complex at NASA's Wallops Flight Center, Virginia. Except for minor variations in the launch schedule, all rocketsondes were launched as planned.</p> <p>Results indicate that the US/USSR rocketsonde measurement agreement improved since the 1973 intercomparisons. It was learned that the mean of the differences of the temperatures compare to within 6°C at about 60 km and to within 2°C near 50 km. However, the root-mean-square differences are much larger. Wind measurements were found to agree, in the mean, to within 3 ms<sup>-1</sup> up to 57 km.</p> |  |   |                                 |
| 17. Key Words (Suggested by Author(s))<br>Meteorological Rockets      Sondes<br>Meteorological Instruments      Rawinsondes<br>Wind Measurement      Temperature<br>Instrument Errors      Thermistors<br>Atmospheric Temperature      USSR<br>Rocket Sondes      Stratosphere  |  | 18. Distribution Statement<br><br>Unlimited<br><br>STAR Category 47 |                                 |
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