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ARGON-OXYGEN-NITROGEN THREE COMPONENT SYSTEM

EXPERIMENTAL VAPOR-LIQUID EQUILIBRIUM DATA

TECHNICAL DOCUMENTARY REPORT NO. APL TDR 64–64
APRIL 1964

AF Aero Propulsion Laboratory
Research and Technology Division
Air Force Systems Command
Wright–Patterson Air Force Base, Ohio

PROJECT NO. 3048, TASK NO. 30193

(Prepared under Contract No. AF 33(657)–8742
by Air Products and Chemicals, Inc., Research and
Development Department, Allentown, Pa.; G. M. Wilson,
P. M. Silverberg, and M. G. Zellner, authors)

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FOREWORD

This report summarizes all work done under contract to the Air Force for the experimental determination of vapor-liquid equilibrium in argon, oxygen, and nitrogen mixtures from July 15, 1962 to April 8, 1964.

The following persons were contributing authors on this subject:

L. Israel - literature search and many useful computer programs.

A. Jambhekar - mixture virial coefficients.

C. J. Sterner - former director of the vapor-liquid laboratory.

P. Fennema - improved chromatographic analysis.

This report is dedicated to that hardy band of technicians who ran the equipment two shifts for a seemingly endless ten months. Our thanks go to E. Frederick, R. Gotthardt, J. Wallace, C. Worman, and especially to H. Donat whose perserverance, unfailing precision, and mechanical ability helped pull us over many rough spots.

ABSTRACT

This Final Technical Documentary Report presents the results from July 15, 1962 to April 15, 1964 as covered by the contract for the experimental determination of vapor-liquid equilibrium data in argon, oxygen, and nitrogen mixtures. The experimental apparatus and procedures are described. The experimental data at 26, 23, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2 and 1 atmosphere levels are presented. A correlation of our experimental data is made. Plots and tables of equilibrium constants, relative volatilities and activity coefficients are presented. Experimental and calculated results are compared and a comparison of the data to the literature is made. Analytical enthalpy data is presented.

The correlation reproduces the experimental data with an error less than 2.5%; being worst at 20 atmospheres and best at 6 atmospheres.

This Technical Documentary Report has been reviewed and is approved.

for Marc P. Dunnam
Chief, Technical Support Division
AF Aero-Propulsion Laboratory

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I. INTRODUCTION

This project, under contract with the U. S. Air Force, was undertaken to measure and correlate vapor-liquid equilibrium data in binary and ternary mixtures of oxygen, nitrogen, and argon. This project was undertaken because much of the existing data are reported only for low pressures and few data have been obtained in the ternary system. The measurements of this project establish the vapor-liquid equilibrium properties of the oxygen-nitrogen-argon system over a wide range of pressures and over the entire range of binary and ternary compositions. One thousand nine hundred and sixty two data points were measured and this system may well be one of the most thoroughly studied ternary systems to date.

The project effort was divided into three parts as follows:

1. A literature search for existing data.

2. The measurement of vapor-liquid equilibrium data at the following combinations of pressures and compositions. The actual compositions measured are in only approximate agreement with the listed compositions and, therefore, more than one run was sometimes made in a given concentration region.

Pressure, Atm	Mole Ratio $N_2/(N_2+O_2)$	Mole Fraction Argon
1	0	0
2	0.10	0.01
4	0.20	0.02
6	0.40	0.03
8	0.60	0.04
10	0.80	0.05
12	0.90	0.07
14	0.97	0.10
16	1.00	0.20
18	----	0.40
20	----	0.60
23	----	0.80
26	----	0.90

3. The thermodynamic correlation of the equilibrium data and the analytical determination of enthalpy data.

Manuscript released by authors April 1964 for publication as an RTD Technical Documentary Report.

This report summarizes:

1. The results of the literature search.

2. A bibliography of existing vapor-liquid equilibrium, enthalpy, and related data of the oxygen-nitrogen-argon system.

3. A description of the experimental apparatus.

4. Tables of the experimental data.

5. A thermodynamic correlation of the data.

6. Tables and figures of derived vapor-liquid equilibrium and enthalpy data.

The experimental data are accurate to within ± 0.5% in the pressure and ± 1% in the relative volatility. By smoothing the data it is possible to obtain equilibria accurate to ± 0.5% in the relative volatility. The thermodynamic correlation of the data is not quite as accurate as the experimental data due to a weakness in the correlation method at temperatures above the critical temperature of nitrogen and at pressures near the critical point of a mixture. The largest difference between the correlation and the experimental data appears to be at 20 atmospheres where the calculated pressure and relative volatilities deviate 2.5% from the experimental data. This accuracy is satisfactory for most process design calculations, but it may be desirable on occasion to interpolate directly from the experimental data.

II. LITERATURE SEARCH

A literature search was made to obtain all existing data relating to vapor-liquid equilibrium and enthalpy of the oxygen-nitrogen-argon system. The search included the following sources of information.

1. Chemical Abstracts (January 1957 - December 1962).

2. Chemical Titles (January 1961 - May 1963).

3. Armed Services Technical Information Agency (ASTIA) - A complete search of the ASTIA collection was obtained (to September 1963).

4. Cryogenic Data Center - NBS Cryogenic Engineering Laboratory, Boulder, Colorado - Two searches to January 1963 and to October 1963.

5. Existing bibliographies on the subject:

   a. "The Compendium", Johnson, V. J. (ed.), WADD Tech. Rept. 60-56, (1961).

   b. E. F. Yendall and Olzewski, W. J., "Saturation Properties of Oxygen-Nitrogen Mixtures", ASD Technical Rept. 61-536, Sept. 1961.

   c. Ju Chin Chu, et al, Vapor Liquid Equilibrium Data, J. W. Edwards Co., Ann Arbor, Michigan, 1956.

   d. E. Hala, et al, Vapor-Liquid Equilibrium, Pergamon, New York, 1958.

   e. G. A. Cook, ed., Argon, Helium, and the Rare Gases, Vol. II, Interscience, New York, 1961.

   f. J. Timmermans, Physico-Chemical Constants of Binary Systems, Interscience, New York, 1960.

A bibliography of the data is given in the Appendix according to the following categories:

A. Vapor-Liquid Equilibrium Data Nitrogen-Oxygen System

B. Vapor-Liquid Equilibrium Data Nitrogen-Argon System

C. Vapor-Liquid Equilibrium Data Argon-Oxygen System

D. Vapor-Liquid Equilibrium Data Nitrogen-Oxygen-Argon Ternary System

E. Enthalpy Data

F. Pressure-Volume-Temperature Data for Gaseous Mixtures of N_2-O_2-Ar (including air) used in checking the virial coefficients

G. Vapor Pressure Data

H. Miscellaneous References

From this search it is concluded that few vapor-liquid equilibrium data exist in three principal areas, namely:

1. Few data exist for the nitrogen-argon binary system.

2. Few data exist above pressures of 5 to 10 atmospheres.

3. Few data exist for the argon-oxygen-nitrogen ternary system.

From the search for enthalpy data it is concluded that:

1. Heat of mixing data for the binaries of the oxygen-nitrogen-argon system are reported only at low temperatures.

2. Latent heat data are reported in terms of correlations based principally on vapor pressure data. Except for argon the data appear to be satisfactory, but in the case of argon there appears to be little experimental data to back up the correlated data.

III. EXPERIMENTAL APPARATUS AND PROCEDURE

A. Recirculation System

A schematic flow diagram of the equilibrium apparatus[1] is presented in Figure 1. The elements which make up the complete apparatus consist of: equilibrium cell, recirculation pump, closed recirculation loop, constant-temperature bath, system pressure gauge, cell thermocouple, liquid sampling line, gas sampling coil, system volume regulator, charging manifold, vacuum pump and numerous subsidiary equipment such as valves, gauges, etc. A photograph of the apparatus is presented in Figure 2 showing the cell barricade, pressure gauges, volume regulator and temperature controller.

The recirculation method is one of the standard laboratory techniques for obtaining accurate vapor-liquid equilibrium data at temperatures below ambient. With this method, a cell partly full of liquid and of appreciable volume is maintained at a constant operating temperature. The vapor inside the cell is drawn out of the top of the cell, warmed to ambient temperature, passed through a pump which increases the pressure of the vapor slightly, cooled back to the cell temperature and introduced to the bottom of the cell. The recirculated vapor bubbles through the liquid to the vapor space and continues the cycle through the system. As the vapor bubbles through the liquid, the liquid is agitated and the liquid and vapor approach equilibrium. When equilibrium is achieved, portions of the vapor and of the liquid are withdrawn from the system and analyzed for chemical compositions.

In this apparatus, the vapors warm to ambient temperature in exposed tubing, recirculate by use of an electromagnetic pump[2] and cool to cell temperature in a coil of tubing which is immersed in the constant-temperature bath.

B. Equilibrium Cell

A schematic diagram of the equilibrium cell is shown on Figure 3. The equilibrium cell is a vertical cylindrical tube made of laminated glass which is sealed at both ends by Teflon gaskets supported by end flanges. The end flanges are connected to each other by tie-rods outside of the cell. The glass tube, which is usable at pressures up to 800 psia and temperatures to -340°F, is 3/8 in. ID, 11/16 in. OD and 3-1/2 in. long with squared-off ends ground flat and fire-polished. The liquid sampling line and the three-element thermocouple both enter the equilibrium cell at the top through the 1/4 in. OD vapor outlet line. The recirculated vapor enters the cell through small holes in a distributor plate which caps the inlet line. Inside the cell the flow of bubbles from the vapor inlet is broken up by a series of horizontal screens. Near the top of the cell, a plug of fiberglas prevents carryover of entrained liquid.

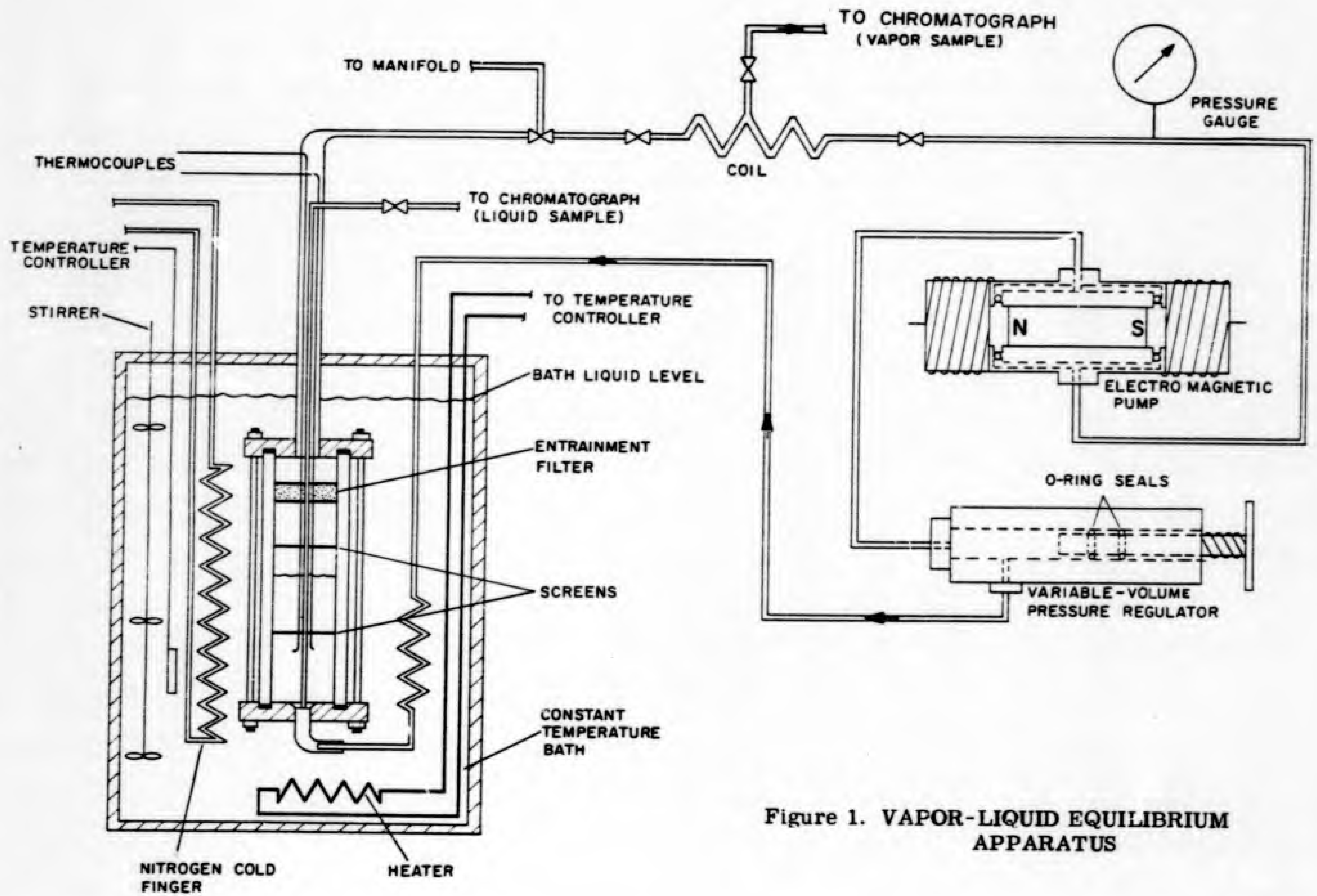

Figure 1. VAPOR-LIQUID EQUILIBRIUM APPARATUS

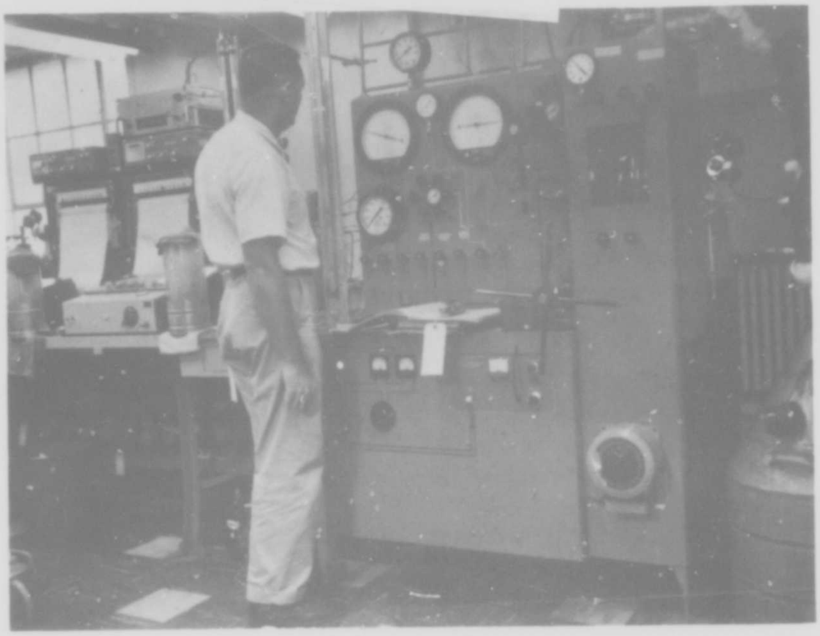

FIGURE 2. FRONT VIEW OF EQUILIBRIUM APPARATUS

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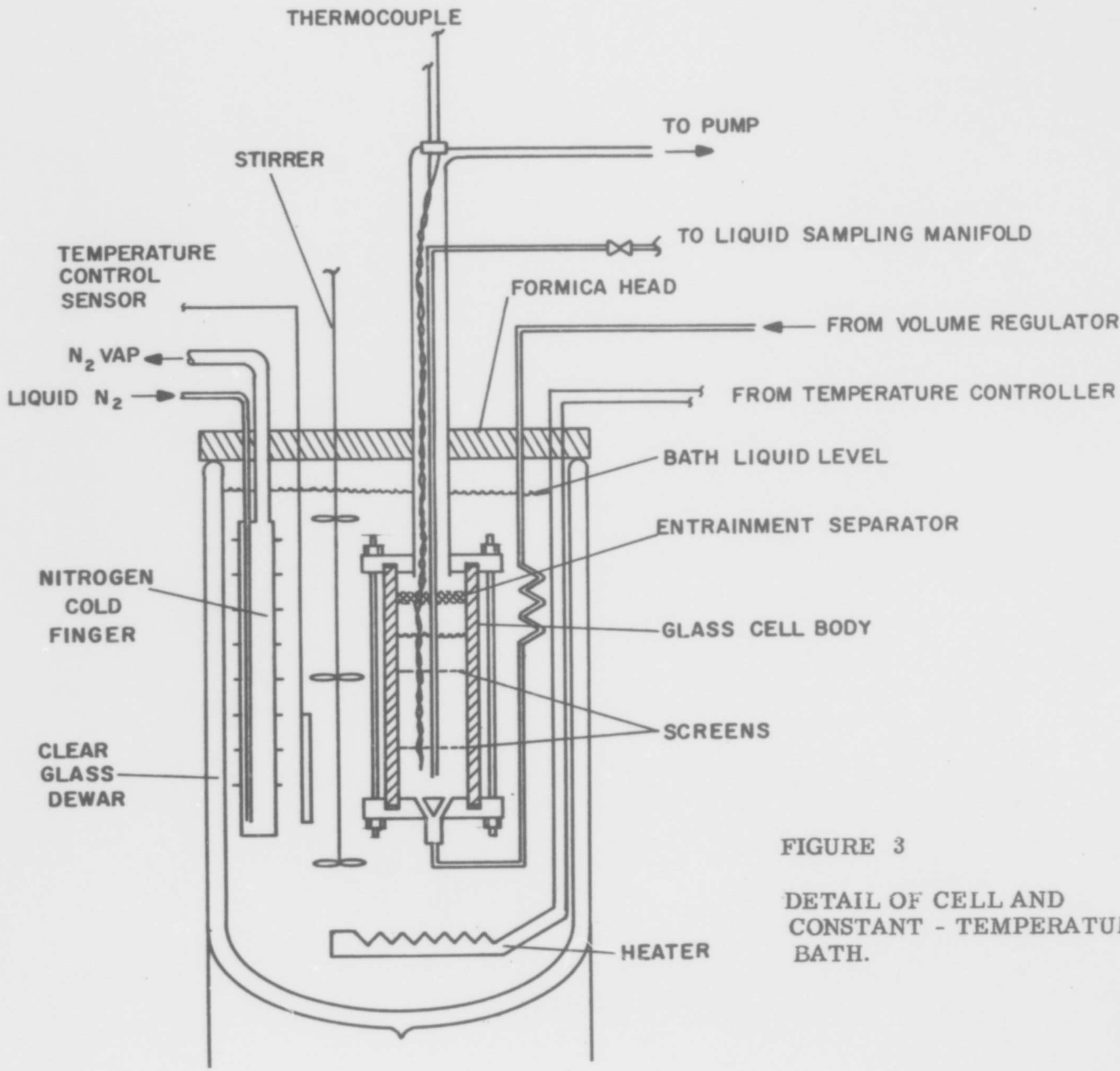

FIGURE 3

DETAIL OF CELL AND CONSTANT - TEMPERATURE BATH.

The equilibrium cell is immersed in a constant-temperature liquid bath which is contained in a clear glass dewar vessel. The dewar is supported on a pedestal within a steel barricade which is open top and bottom. The equilibrium cell is illuminated and may be viewed while operating through the clear dewar and a safety glass window in the barricade. A photograph of the cell and bath are shown in Figure 4.

C. Constant-Temperature Bath

The constant-temperature bath in which the equilibrium cell is immersed may be any of one of several fluids, depending on the operating temperature. From the highest temperature covered down to -301°F, Freon-13*was used. Liquid argon was used down to -308°F. Liquid nitrogen was used down to -320°F.

The temperature of the bath liquid is controlled to within ± 0.01°F by use of a proportional electronic controller. The bath is cooled by liquid nitrogen which flows into a "cold finger" at a constant rate and evaporates. The temperature of the bath is adjusted to operating conditions by passing an electrical current through a resistance heating element immersed in the bath. The heating current is regulated by the controller which receives temperature information from a platinum resistance thermometer which is immersed in the bath. The bath liquid is kept agitated by a motor-driven stirrer. Two additional thermocouples in the bath are used to determine the bath temperature and to check on the controller action.

D. Operating Procedure

Routine operation of the equilibrium apparatus begins with the cell at room temperature and the entire system under vacuum. Precooled bath liquid is added to the dewar vessel and the cell is cooled down to the operating temperature. Measured quantities of the component gases are introduced to the system, one component at a time, generally starting with nitrogen. The quantities of gas added are calculated beforehand and measured by pressure changes in a volume-calibrated manifold.. Before any component is allowed to enter the manifold, the manifold is evacuated and purged with the appropriate gas. The recirculation pump is turned on while the components are being introduced and continues to operate until it is time to sample. When all components have been added to the system, slight adjustments of the pressure and liquid volume are made by adding small additional quantities of the appropriate component. After the desired liquid volume has formed and the pressure is established at the proper level, the apparatus is permitted to operate at constant temperature and pressure for approximately one half hour before taking samples. The sampling procedures are described under "E. Sampling Systems".

*E.I. Dupont de Nemours Inc. registered trademark.

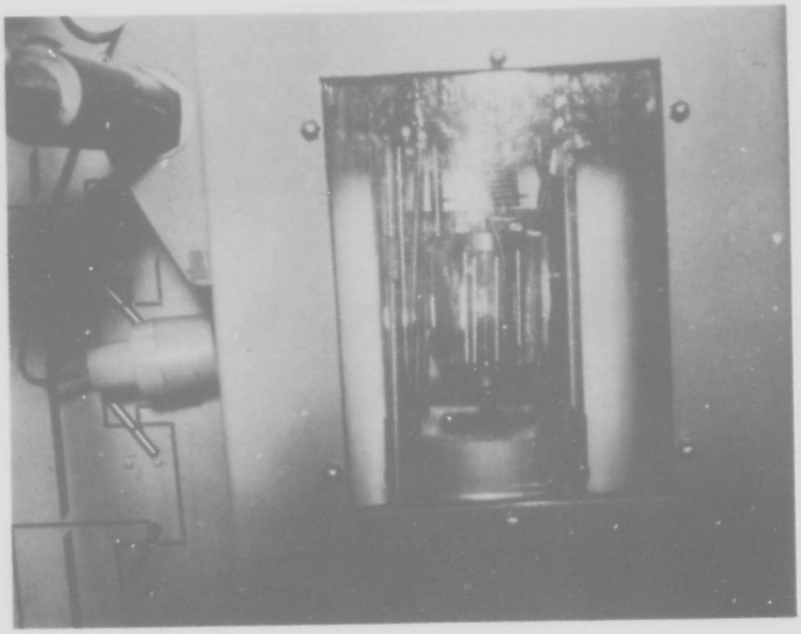

FIGURE 4. CLOSE-UP OF THE EQUILIBRIUM CELL AND CONSTANT TEMPERATURE BATH.

The cell is the long cylinder upright in the center of the dewar.

Normally, after the samples have been taken, the pressure is released from the system, the bath liquid is recovered from dewar and the cell is allowed to warm to room temperature. The system is then evacuated and allowed to remain under vacuum overnight to be ready for operation the next day. Since more than one run is made per day, it was not necessary to allow the cell to warm up between runs on a particular day, but only at the last run.

E. Sampling Systems

After one-half hour of operation, the recirculating pump is stopped and the system pressure is recorded. At this time, a large proportion of the vapor in the system remains in the vapor sampling coil which is part of the recirculation loop. Valves at the end of this sampling coil are closed to isolate the coil from the rest of the system. When these valves are closed, gas samples can be removed at anytime from the coil through the gas sampling valve without being affected by the liquid sampling procedure.

After the vapor sample has been trapped in the vapor coil, the liquid in the cell is sampled by withdrawing a portion of it through the liquid sampling line. The liquid sampling line extends into the equilibrium cell through the vapor outlet to a point just above the vapor distributor plate. The holes in the distributor plate are so arranged that the bubbles of vapor rise clear of the end of the sampling line as they pass up through the liquid. The liquid sampling line, which is a 1/16 in. OD tube with the dead volume reduced to capillary dimensions by insertion of a 20 ga. wire, leads to the liquid sampling valve, which in turn leads to the liquid sampling manifold.

The procedure for taking liquid samples is quite critical and has a considerable effect on the accuracy of the final data. As the liquid sample passes up through the sampling line to the sampling valve, it is warmed from its saturation temperature to a temperature well in the superheat region. The liquid totally vaporizes in a short section of the sampling line, resulting in a fractionation effect in that section of the line. As liquid continues to flow, the fractionation region of the sampling line tends to accumulate the less volatile components, finally reaching approximate equilibrium with the flowing sample stream. It is necessary to throw away the first portion of sample which passes through the sampling valve and to make sure that the flow rate of sample is maintained constant during the sample period. The flow rate is maintained constant by making only one setting of the sampling valve and allowing the vapor to expand through the valve to a pressure which is less than half of the system pressure. Also, while the liquid sample is being withdrawn from the cell, the pressure in the system is maintained by screwing in on the system volume regulator.

Both liquid and vapor samples are finally collected in 75 cc. sample cylinders which are equipped with a pressure gauge at one end and a shut-off valve at the other end. Sample cylinders and manifold are normally purged with sample gas and then evacuated before being filled with the sample.

F. Pressure Measurement

The pressure in the equilibrium system is measured by a temperature-compensated Bourdon-tube gauge which has been calibrated by the manufacturer (Heise) and checked with a dead-weight gauge. The low-pressure gauge which was used for measuring pressures at 20 atmospheres and below can be read directly to the nearest 0.1 psi with a hysteresis error of $\pm$ 0.005 psi. The high-pressure gauge which was used for pressures above 20 atmospheres can be read directly to the nearest 0.3 psi with a hysteresis error of $\pm$ 0.1 psi.

The pressure gauges used in this experimental program have been tested with an Ashcroft Portable Dead-Weight Tester. The results of this calibration are shown in Figures 5 and 6 . As can be seen on the graphs, the 500 psia gauge, Heise H16100, shows no deviation up to 220 psia and deviates only 0.1 psi above 220 psia. The 300 psia gauge, Heise H31596, shows a slight drift with increasing pressure, but the error is never larger than 0.1%. This gauge is considered satisfactory without a correction to the readings.

G. Temperature Measurement

The temperature of the equilibrium liquid is measured by a three-element copper-constantan thermocouple which is immersed in the liquid inside the cell. Melting ice is used as the warm end reference junction. Seven separate calibrations have been made of the thermocouple by measurement of the vapor pressure of oxygen. We initially calibrated against the vapor pressures of argon, oxygen and nitrogen but systematic deviations became evident. Oxygen was used as the standard because its normal boiling point is an International Standard Temperature and in this way our calibration was guaranteed to pass through this point.

All seven calibrations covered the temperature range -220°F to -300°F. One calibration extended warmer and one calibration extended colder. The data for all seven calibrations was fitted by least squares to a polynomial of millivolts vs. temperature. Figure 7 shows the deviation of the measured versus calculated millivolts with a dashed line drawn to indicate the millivolt deviation equivalent to 0.1°F. As can be seen, almost all points are within 0.1°F of the calibration equation.

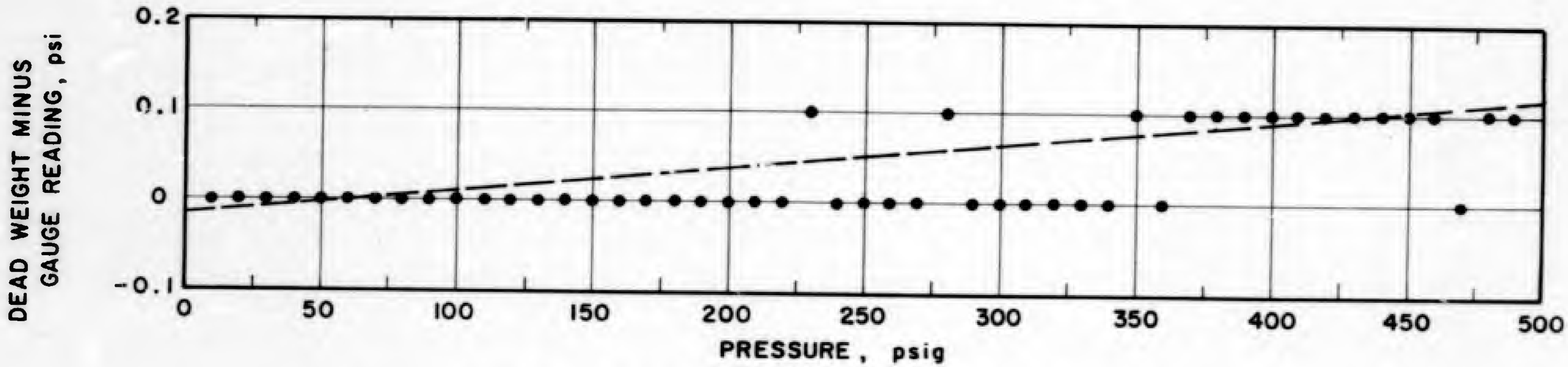

Figure 5. Dead Weight Test of 500 psi Heise Gauge.

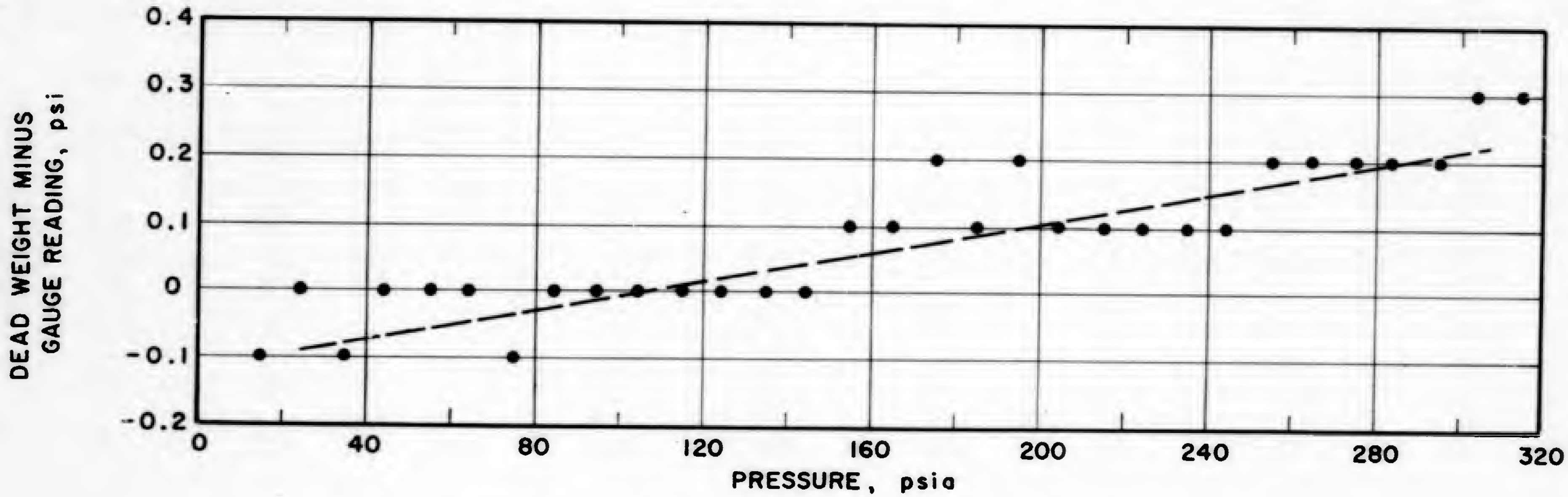

Figure 6. Dead Weight Test of 300 psi Heise Gauge.

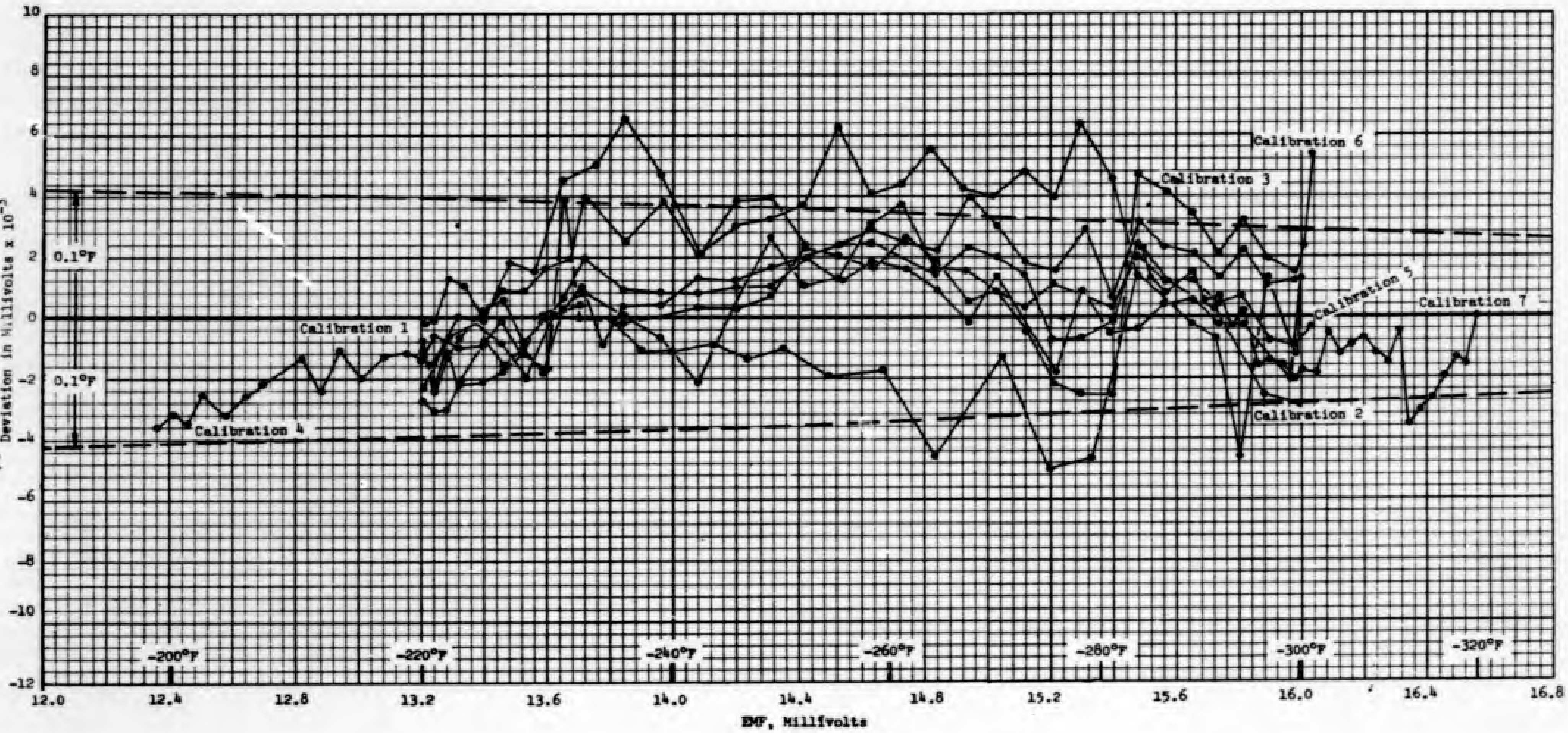

Figure 7. Thermocouple Calibration.

H. Time of Equilibration

Five runs were made to determine equilibration time of the experimental apparatus with mixtures of nitrogen and argon in the cell. Measurements were made of the following variables after adding an incremental sample of either argon or nitrogen:

1. Temperature - every five seconds

2. Pressure - every five seconds

3. Liquid level - every second on movie film

4. Composition - continuously by means of a Gow-Mac Thermal Conductivity Cell installed in parallel to the vapor recirculation line.

The conditions of the runs are given in Table 1 and the results of Run A, which can be considered typical, are shown in Figure 8 . This figure indicates that all the properties change at the same time and the same way. In this case, there was a sharp rise right after the argon was added, a rapid fall-off, a slow recovery with overshoot and a settling to steady-state values. By the time six minutes had elapsed, the transient had settled out. In the measurement of vapor-liquid equilibria, thirty minutes were allowed for equilibration, so equilibrium errors are negligible and contribute a smaller error than reading the pressure and temperature.

TABLE 1

EQUILIBRATION TEST RESULTS

Run	Temperature °F	Initial Pressure Psia	Final Pressure Psia	Time to Equilibrate	% N_2 in Vapor	% Ar in Vapor	Material Added
A	-255	175.6	174.0	4-1/2 min.	51.04	48.96	Argon
B	-247	293.8	290.3	4-1/2 min.	83.73	16.27	Argon
C	-228	294.1	293.7	4-1/2 min.	10.40	89.60	Argon
D	-279	58.8	60.8	5 min.	34.02	65.98	Nitrogen
E	-294	58.8	57.5	4 min.	94.21	5.79	Argon

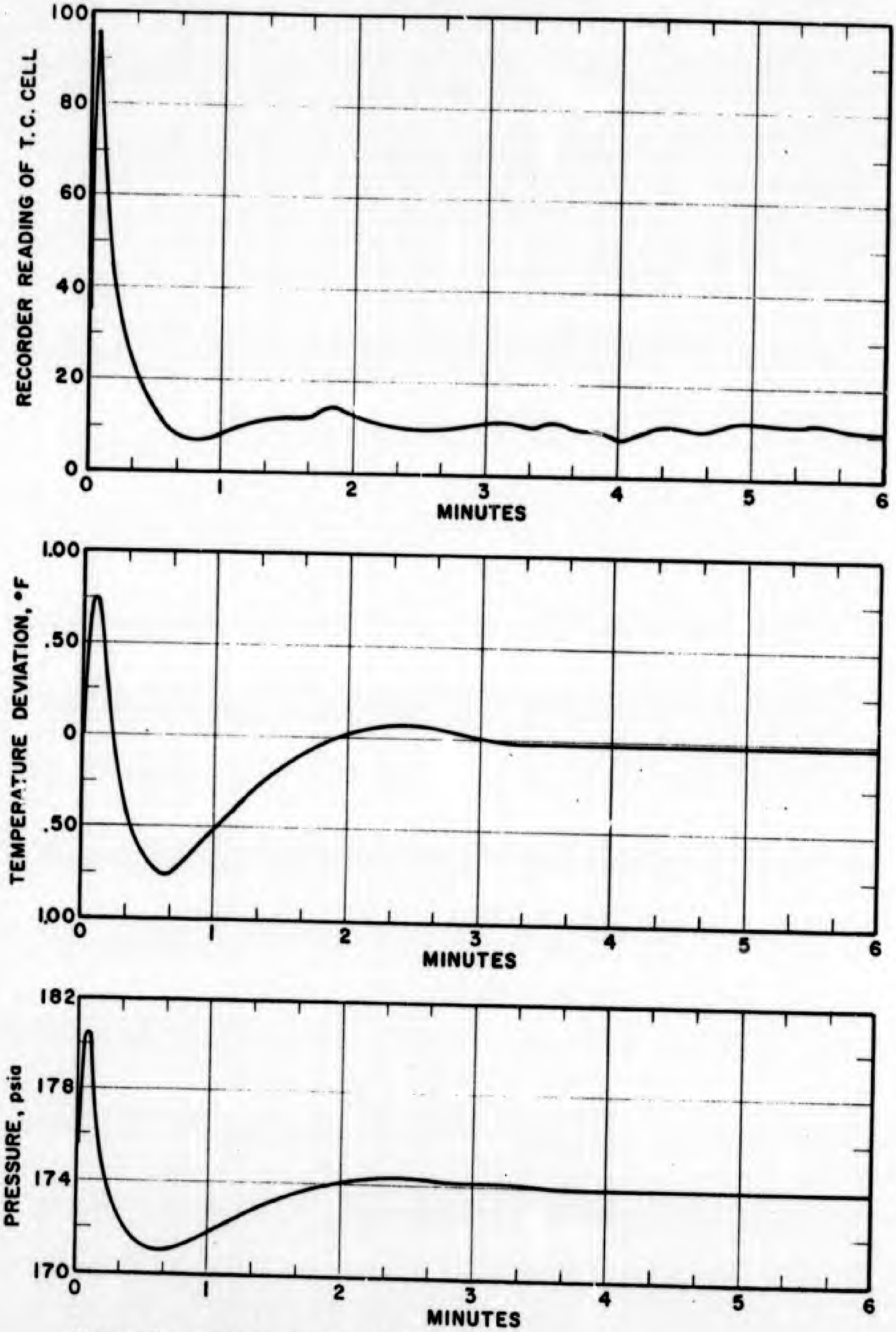

Figure 8. Equilibration Test Run on Vapor-Liquid Apparatus.

IV. ANALYTICAL METHODS

The best analytical method for analyzing the argon-oxygen-nitrogen mixtures was judged to be gas chromatography. Other techniques which were considered included: paramagnetic and electrolytic methods for oxygen, titanium sponge technique for argon, and mass spectrometry for argon, oxygen and nitrogen. These techniques were found to have limitations of accuracy and speed which make them inferior to gas chromatography.

A. Analyses to Run 264

For the first 150 experimental points a technique was used described in the first quarterly report(3). With this technique, the flow of carrier gas and sample was split, passed through two separate columns and recombined to pass through the same detector. One column was a five-foot length of 28-32 mesh molecular sieve 5A at 105°F and the other column was a six-foot length of 30-70 mesh molecular sieve 5A at -110°F. The first column was used to separate the nitrogen from the argon plus oxygen and the second column was used to separate the oxygen from the argon. In order to get proper separation of the argon it was necessary to provide a retention time of about 12.5 minutes for the oxygen. The maximum deviation with any particular sample was about 1.5% of the resulting analysis.

Between runs 150 and 264 a dual-chromatograph system was used for analysis. One chromatograph determined oxygen and nitrogen and the other chromatograph determined argon. The columns in each chromatograph were identical (6 ft 5A molecular sieves at 30°C), but one chromatograph used argon as the carrier gas and the other used oxygen as the carrier. In this way, the only separation required in either column was between the nitrogen and the other two gases. The chromatograph using argon carrier gas would only register the oxygen part of the argon + oxygen peak and in the chromatograph using oxygen carrier gas, only the argon part of the argon + oxygen peak would register. Frequent calibration standards were required to assure internal consistency of the data. There was an improvement in accuracy over the preceding method.

B. Analyses After Run 264

Beginning with run 264 a new method was adopted whereby all three components of an oxygen-nitrogen-argon mixture can be separated on a single chromatographic column. By this method it is possible to calculate the relative proportions of each component from the relative peak size. This has several advantages over the previous methods where a knowledge of the absolute peak size was required. This new method is less sensitive to drift in operating detector current and column variations since it is only the variation during the period of elution of the peaks which affect the analysis. With the absolute method, any variation in current or column conditions from the time a standard calibration is run until the unknown sample is run will affect the analysis.

By this new method, the components are separated at liquid oxygen temperature on a chromatographic column containing tetrafluoromethane (Freon 14)*as a solvent on firebrick. The separation is made in the order of the boiling points of the gases with nitrogen emerging first from the column. A sample chromatogram of a mixture containing 77.40% nitrogen, 10.13% argon and 12.47% oxygen is shown in Figure 9 . Each of the component peaks is clearly separated from the other peaks. It is possible to obtain duplicate analyses of a mixture which agree within 0.3%. Tests with a standard blend, however, show variations of as much as 1% between analyses on separate days. This presumably is due to some interference between the peaks.

The separation is performed on a 15' x 1/4" column with a flow rate of approximately 230 cc/minute of helium. The ratio of Freon 14 to firebrick is about 1 to 3 by weight. The column is made up by first packing the column with the firebrick, then charging the column with a mixture of Freon 14 and helium at room temperature to a pressure high enough to put the required amount of Freon 14 in the column. This usually requires charging to a pressure between 900 and 1100 psig. Subsequent to pressurization with the Freon 14-helium mixture the column is submerged in boiling liquid oxygen whereupon the Freon 14 condenses as the immobile chromatographic solvent on the firebrick. This column is then used in the conventional manner to separate the components of the oxygen-nitrogen-argon mixtures. The sample size is 5 cc fed in at either 760 or 900 mm Hg (10 cc flooded the column). A sample normally fully separates in fourteen minutes.

Starting with run 1530, the method was modified. It was discovered that a mixture of 30% ethane, 60% tetrafluoromethane, and 10% helium solved the problem of the tailing of nitrogen into the argon peak. The argon retention time increased slightly bringing it closer to the oxygen peak. The charging pressure of the column was reduced to between 500 and 700 psig and the flow rate increased to 300 cc/minute. Analysis time was reduced by this improvement to nine minutes.

A specially built electronic integrator records the response of the thermal conductivity cell. The basic chromatograph is a Beckman GC-2 with two 5 cc sample loops. The column described above is external to the chromatograph box in a dewar of liquid oxygen. The integrator has

*E. I. Dupont de Nemours Inc. registered trademark.

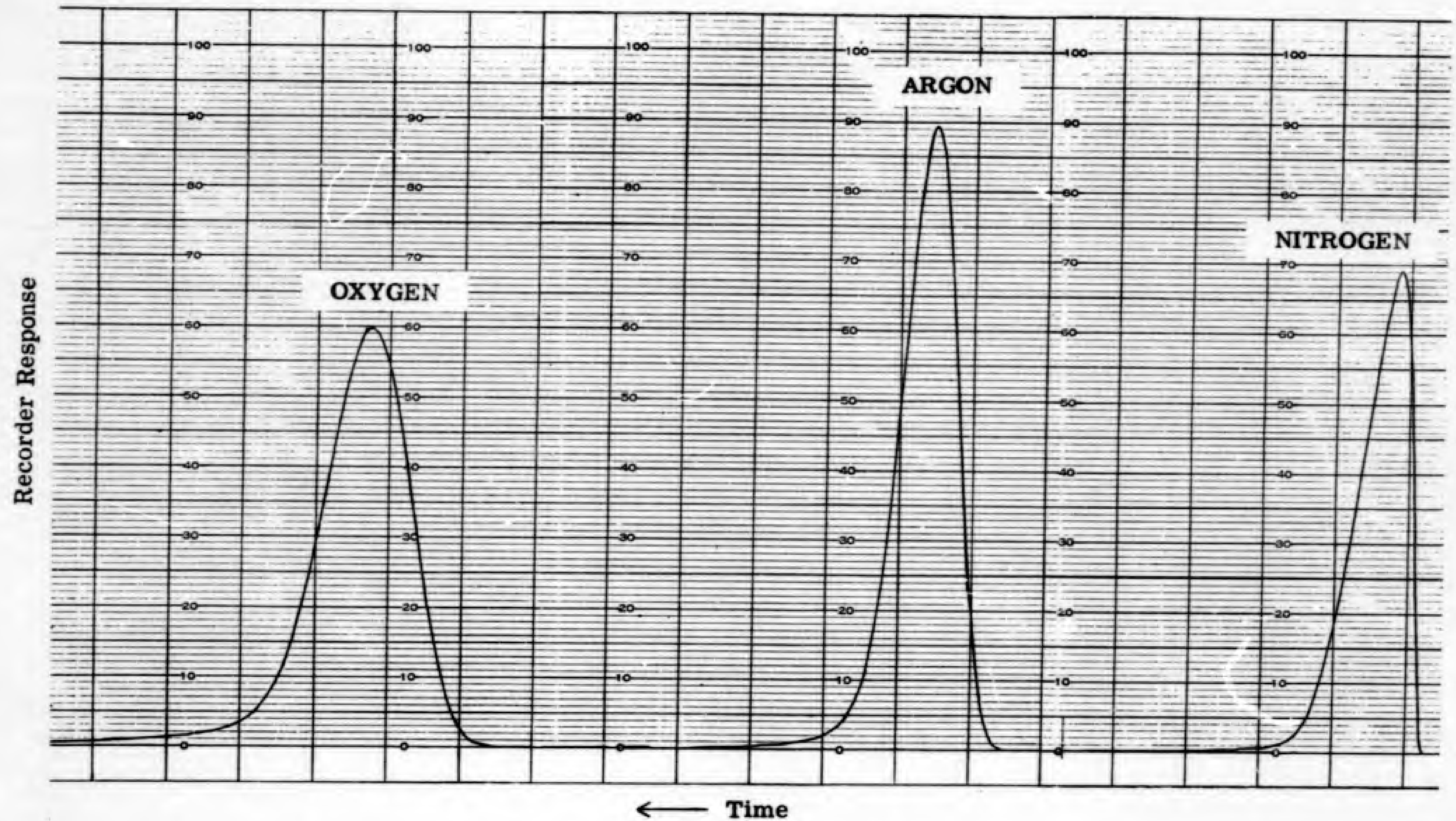

Figure 9. Sample Chromatogram.

four components:

(1) Hewlett-Packard 5532A Electronic Counter for display

(2) Dymec Model 2210 Voltage to Frequency Converter

(3) Sola Type CVH-1 Harmonic-Neutralized Constant Voltage Transformer

(4) Sanborn 860-1500-PA Amplifier

Also the output of the thermal conductivity cell is recorded as peaks by a Brown Electronik Recorder with variable sensitivity and span. This recorder is electrically isolated from the integrator. Photographs of the chromatograph are shown in Figures 10 and 11.

The thermal conductivity detector was calibrated in December 1962 and November 1963 over a wide range of sample size and operating conditions to insure accurate analysis of the mixtures. It was found that a two-fold variation in flow rate affects the analysis only 0.3%. A change in the filament current to 2/3 the operating value only affected the analysis by 1%. During actual operation these variables would be expected to vary over only a fraction of these changes. In order to determine the effect of sample size, standard blends of oxygen, nitrogen, and argon were used to determine the response of the detector relative to a 2 cc sample of oxygen. The results of this calibration are shown in Figure 12, in which the relative response, q, is the inverse of the thermal conductivity cell response. The triangles represent points taken in 1963 and the circles represent the points taken in 1962. The lines drawn on the graph are the calibrations used in all calculations. It can be seen that for the two calibrations the response of oxygen and the response of nitrogen agree. The response of argon differs by 2% for small samples. This difference in the case of argon probably represents a variation in the standards rather than a variation in the cell response. This is indicated by the results in Table 2 which lists analyses of two mixtures which were routinely analyzed daily to determine whether the column was good or needed rebuilding. The special mix ran out at the end of August and synthetic air was first used on April 18, 1963. It is evident from examination of Table 2 that while there was scatter in the daily analyses, there was no systematic trend in the analyses with time.

Compositions were calculated using the relative responses lines shown in Figure 12. The mole fraction of a component is given in terms of peak area and relative response as

$$x_i = \frac{A_i\, q_i}{A_1 q_1 + A_2\, q_2 + A_3\, q_3} \tag{1}$$

Figure 10. Photograph of Gas Chromatograph.

The column is submerged in the steel dewar in the background. The Beckman GC2-A is shown in the near background. The sample bomb and sample feed system are above the operator's hand. The manometer is behind the recorder. On top of the recorder are the Electronic Counter and the Voltage to Frequency Converter. Not shown are the transformer and amplifier.

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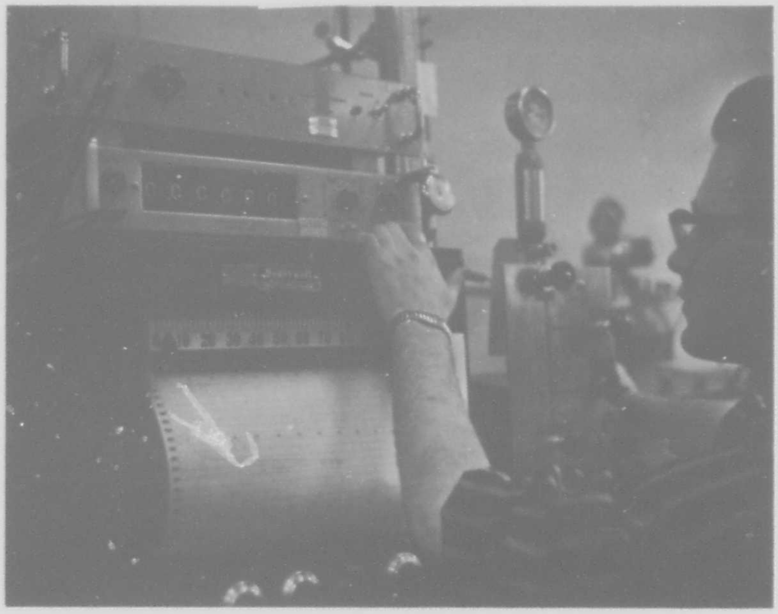

Figure 11. Close-up of Electronic Components of the Chromatograph.

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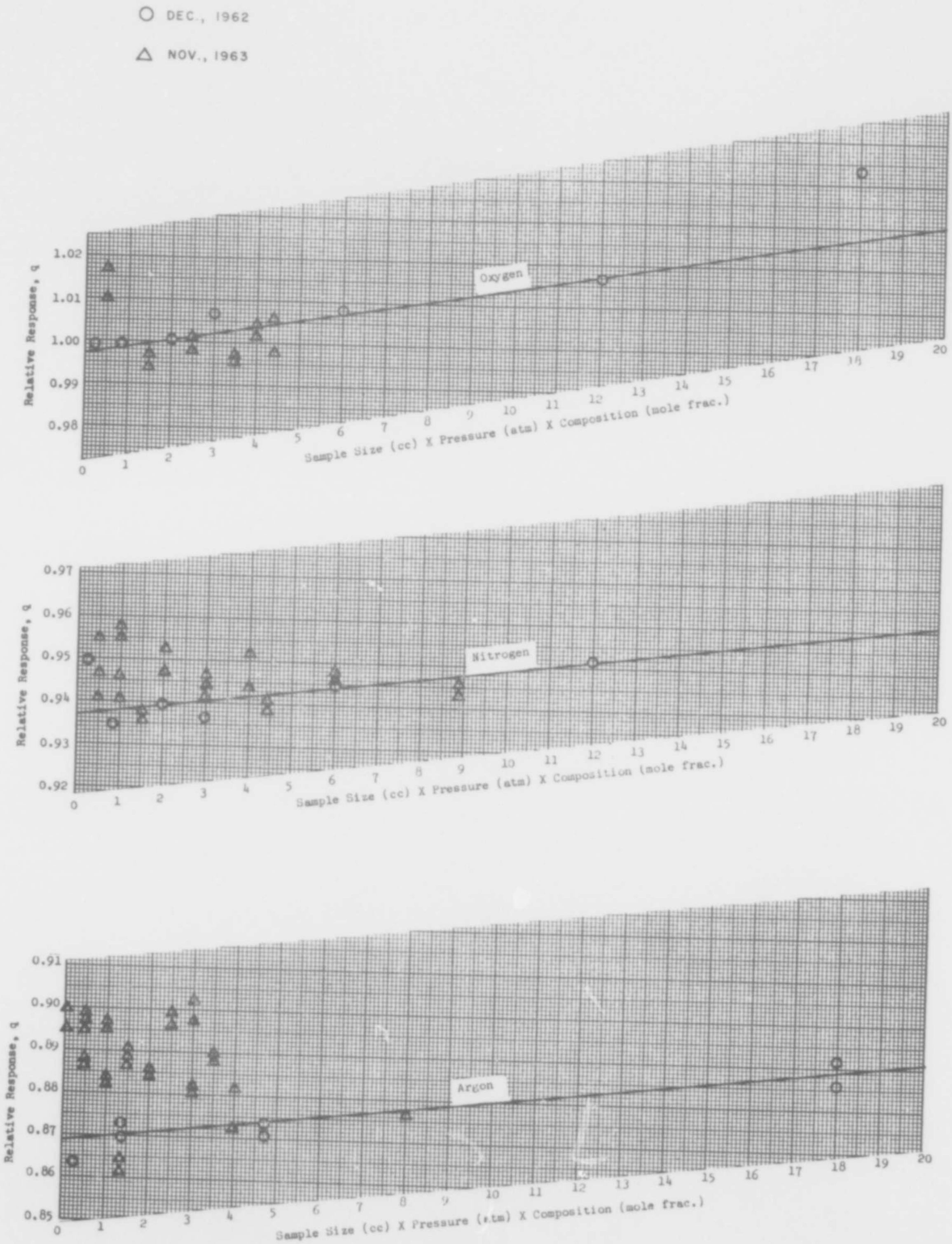

Figure 12. Chromatograph Calibration Curves.

TABLE 2

SAMPLE LONG-TERM ANALYSES

Synthetic Air				Special Mix			
Date	N_2	Ar	O_2	Date	N_2	Ar	O_2
4-18-63	77.594	0.891	21.513	1-8-63	47.035	3.771	49.195
4-29-63	77.556	0.836	21.607	1-23-63	46.602	3.835	49.563
5-13-63	78.028	0.920	21.051	3-19-63	46.844	3.805	49.350
6-3-63	77.772	0.912	21.315	4-4-63	46.692	3.754	49.555
6-13-63	77.571	0.874	21.553	4-16-63	47.028	3.678	49.295
7-4-63	77.663	0.838	21.497	4-29-63	46.683	3.764	49.552
7-18-63	77.674	0.775	21.569	5-13-63	46.648	3.800	49.550
8-1-63	77.936	0.531	21.531	6-3-63	46.925	3.783	49.291
8-16-63	77.107	0.874	22.018	6-24-63	46.861	3.755	49.383
8-29-63	77.467	0.793	21.739	7-11-63	48.841	3.630	49.527
9-17-63	77.600	0.853	21.546	7-29-63	49.074	3.533	47.394
9-30-63	77.859	0.837	21.302	8-16-63	48.377	3.533	48.089
10-4-63	78.544	0.837	20.617	8-29-63	46.974	3.726	49.299
10-21-63	77.508	0.897	21.593				

V. EXPERIMENTAL DATA

The tables to follow list the entire experimental data taken during this project. There are listed a total of 1962 points, although there are 1965 listed run numbers; the missing numbers are runs where a mishap such as a lost sample occurred. The data range from one to twenty-six atmospheres and from 139°R to 250°R. Tables 3 through 16 are arranged according to pressure level and the run numbers represent only the chronology of measurement. All runs have been included whether they were used in the correlation or discarded for badness of fit.

The component gases used for these measurements are APCI produced with typical analyses as follows:

Oxygen: 99.70% O_2, 0.30% Ar

Nitrogen: 99.997% N_2, 0.003% Ar

Argon: 99.996% Ar, 0.002% N_2, 0.002% O_2

A typical run had the following history. One hour elapsed from the time of introduction of the first gas into the equilibrium apparatus until the samples were taken. The samples were stored approximately six hours as analytical inventory and then one hour elapsed during analysis. The raw area data was sent to the computer the next morning and the calculated compositions returned in the afternoon one day later.

Modifications in procedure took place throughout the duration of the program. The first run was made Aug. 13, 1962 and the last run was made October 17 , 1963. The following progressive modifications took place during the program.

Run 151: Changed to dual chromatograph system for analysis

Run 264: Changed to relative response, Freon column chromatograph for analysis

Run 609: Finished initial contract

Run 610: Started extension to contract. The 500 psia pressure gauge was installed on the equilibrium apparatus in place of the 300 psia gauge.

Run 936: The 500 psia pressure gauge was removed from the equilibrium apparatus and the 300 psia gauge re-installed.

Runs 1361-1683, 1689-1965: Detachable sample loops used on equilibrium apparatus. All other runs used sample bombs

Run 1530: Mixed solvent Freon-Ethane replaced Freon in the column of the chromatograph

Run 1965: Last run.

TABLE 3

EXPERIMENTAL DATA AT 1 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1576	158.9	.0755	.....	.9245	.2524	.....	.7476
1577	155.9	.1554	.....	.8446	.4239	.....	.5761
1578	150.9	.3115	.....	.6885	.6571	.....	.3429
1579	155.9	.0462	.9538	.....	.1290	.8710	.....
1580	152.9	.1411	.8589	.....	.3381	.6619	.....
1581	162.4	.....	.0299	.9701	.....	.0460	.9540
1582	162.2	.....	.0506	.9494	.....	.0765	.9235
1583	162.1	.....	.0647	.9353	.....	.0978	.9022
1584	161.8	.....	.0726	.9274	.....	.1088	.8912
1585	161.5	.....	.0985	.9015	.....	.1428	.8572
1586	161.2	.....	.1249	.8751	.....	.1770	.8230
1587	160.4	.....	.2343	.7657	.....	.3197	.6803
1588	158.9	.....	.5054	.4946	.....	.5768	.4232
1589	158.4	.....	.6682	.3318	.....	.7173	.2827
1590	157.9	.....	.8403	.1597	.....	.8597	.1403
1591	157.4	.....	.9541	.0459	.....	.9572	.0428
1592	158.9	.0743	.0102	.9156	.2341	.0141	.7518
1593	158.9	.0629	.0231	.9140	.2175	.0310	.7516
1594	158.9	.0629	.0335	.9036	.2116	.0434	.7450
1595	158.9	.0604	.0448	.8948	.2045	.0592	.7363
1596	158.9	.0591	.0559	.8850	.1977	.0724	.7299
1597	158.9	.0549	.0812	.8639	.1821	.1036	.7143
1598	158.9	.0574	.1087	.8339	.1621	.1414	.6965
1599	158.9	.0411	.1632	.7957	.1310	.2062	.6628
1600	158.9	.0239	.2824	.6937	.0792	.3374	.5834
1601	155.9	.1496	.0165	.8339	.4169	.0189	.5642
1602	155.9	.1451	.0266	.8282	.4091	.0284	.5624
1603	155.9	.1475	.0347	.8178	.4075	.0374	.5552
1604	155.9	.1432	.0478	.8090	.4024	.0501	.5475
1605	155.9	.1442	.0607	.7951	.4092	.0628	.5280
1606	155.9	.1381	.0846	.7773	.3871	.0887	.5242
1607	155.9	.1354	.1155	.7491	.3603	.1487	.4910
1608	155.9	.1249	.1894	.6857	.3331	.1909	.4760
1609	155.9	.1030	.3263	.5707	.2785	.3213	.4003
1610	155.9	.0883	.4522	.4595	.2397	.4355	.3247

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1611	155.9	.0758	.5913	.3329	.2055	.5522	.2423
1612	155.9	.0653	.7274	.2074	.1825	.6592	.1583
1613	155.9	.0585	.8213	.1202	.1625	.7463	.0912
1614	152.9	.2371	.0361	.7268	.5597	.0316	.4087
1615	152.9	.2378	.0639	.6983	.5465	.0564	.3971
1616	152.9	.2274	.0872	.6854	.5346	.0759	.3894
1617	152.9	.2187	.1264	.6549	.5142	.1102	.3757
1618	152.9	.2117	.2134	.5749	.4922	.1792	.3286
1619	152.9	.1899	.3600	.4501	.4403	.2955	.2642
1620	152.9	.1769	.4923	.3308	.4075	.3950	.1974
1621	152.9	.1614	.6344	.2042	.3736	.4996	.1268
1622	152.9	.1491	.7455	.1054	.3573	.5752	.0675
1623	150.9	.3151	.0141	.6708	.6573	.0112	.3315
1624	150.9	.3156	.0286	.6558	.6527	.0220	.3253
1625	150.9	.3055	.0423	.6522	.6404	.0330	.3267
1626	150.9	.3035	.0499	.6466	.6369	.0377	.3255
1627	150.9	.3012	.0613	.6375	.6357	.0477	.3165
1628	150.9	.3033	.0880	.6087	.6252	.0669	.3080
1629	150.9	.3006	.1274	.5720	.6143	.0968	.2889
1630	150.9	.2969	.2138	.4893	.6017	.1579	.2404
1631	150.9	.2852	.3181	.3967	.5707	.2263	.2031
1632	150.9	.2545	.4878	.2578	.5151	.3453	.1395
1633	150.9	.2407	.6712	.0881	.4934	.4572	.0494
1634	148.9	.3881	.0692	.5427	.7093	.0468	.2439
1635	148.9	.3826	.1667	.4507	.6820	.1131	.2049
1636	148.9	.3661	.2559	.3780	.6638	.1668	.1693
1637	148.9	.3611	.3675	.2715	.6455	.2301	.1244
1638	148.9	.3363	.5470	.1167	.6094	.3350	.0556
1639	148.9	.3131	.6869	.....	.5790	.4210	.....
1640	145.0	.5523	.4477	.....	.7838	.2162	.....
1641	143.0	.8514	.1486	.....	.8907	.1093	.....
1642	143.0	.7307	.....	.2693	.9147	.....	.0853
1643	146.9	.4961	.....	.5039	.8050	.....	.1950
1644	141.5	.8710	.....	.1290	.9627	.....	.0373
1645	140.0	.9860	.....	.0140	.9962	.....	.0038

TABLE 3

EXPERIMENTAL DATA AT 1 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
1646	141.5	.8457	.1543	.....	.9363	.0637	.....	1682	140.0	.9766	.0102	.0132	.9917	.0025	.0057
1647	141.0	.8790	.1210	.....	.9506	.0494	.....	1683	140.0	.9779	.0162	.0059	.9892	.0096	.0012
1648	140.4	.9373	.0627	.....	.9749	.0251	.....	1923	162.5	.....	.0088	.9912	.....	.0142	.9858
1649	140.2	.9623	.0377	.....	.9843	.0157	.....	1924	160.4	.....	.2559	.7441	.....	.3327	.6673
1650	140.0	.9822	.0178	.....	.9938	.0062	.....	1925	158.9	.0789	.0154	.9057	.2559	.0191	.7250
1651	139.7	.9928	.0072	.....	.9973	.0027	.....	1926	158.9	.0543	.1139	.8317	.1778	.1431	.6790
1652	146.9	.4775	.0150	.5075	.7892	.0093	.2016	1927	157.4	.....	.9754	.0236	.....	.9783	.0217
1653	146.9	.4825	.0217	.4958	.7883	.0145	.1972	1928	155.9	.1397	.0612	.7991	.3901	.0641	.5458
1654	146.9	.4840	.0358	.4802	.7866	.0218	.1916	1929	155.9	.1297	.1193	.7509	.3595	.1244	.5160
1655	146.9	.4800	.0485	.4715	.7864	.0295	.1841	1930	155.9	.0578	.7335	.2087	.1596	.6820	.1584
1656	146.9	.4879	.0673	.4449	.7862	.0402	.1736	1931	155.9	.0432	.9005	.0563	.1187	.8395	.0418
1657	146.9	.4894	.0924	.4182	.7794	.0544	.1661	1942	150.9	.2924	.2203	.4874	.5925	.1610	.2465
1658	146.9	.4789	.1308	.3903	.7655	.0772	.1572	1943	146.9	.4958	.0207	.4835	.7978	.0124	.1898
1659	146.9	.4743	.2292	.2965	.7512	.1298	.1190	1944	146.9	.4529	.3779	.1693	.7196	.2104	.0699
1660	146.9	.4489	.3808	.1702	.7063	.2084	.0853	1945	145.0	.5769	.3597	.0634	.8015	.1750	.0235
1661	146.9	.4344	.5184	.0471	.6981	.2818	.0201	1946	145.0	.5936	.0404	.3660	.8481	.0215	.1304
1662	145.0	.6166	.0392	.3442	.8578	.0189	.1234	1947	145.0	.6075	.0895	.3030	.8474	.0461	.1065
1663	145.0	.6106	.0873	.3021	.8481	.0407	.1112	1948	145.0	.5867	.1956	.2177	.8223	.0992	.0785
1664	145.0	.5916	.1818	.2266	.8292	.0935	.0773	1949	143.0	.7464	.0102	.2435	.9182	.0048	.0770
1665	145.0	.5823	.2789	.1388	.8111	.1354	.0535	1950	143.0	.7571	.0275	.2153	.9193	.0124	.0683
1666	143.0	.7478	.0112	.2410	.9178	.0057	.0765	1951	143.0	.7150	.2431	.0419	.8786	.1073	.0141
1667	143.0	.7522	.0250	.2228	.9174	.0107	.0719	1952	143.0	.7077	.2923	.....	.8707	.1293	.....
1668	143.0	.7584	.0337	.2080	.9197	.0150	.0653	1953	141.5	.9612	.0388	.....	.9851	.0149	.....
1669	143.0	.7524	.0502	.1975	.9150	.0228	.0621	1954	141.5	.8647	.....	.1353	.9606	.....	.0394
1670	143.0	.7528	.0744	.1728	.9123	.0333	.0544	1955	141.5	.8504	.1496	.....	.9387	.0613	.....
1671	143.0	.7464	.0921	.1615	.9078	.0414	.0508	1956	141.5	.8664	.0098	.1239	.9581	.0041	.0377
1672	143.0	.7313	.1314	.1373	.8979	.0590	.0431	1957	141.5	.8562	.1093	.0345	.9454	.0449	.0097
1673	143.0	.7203	.2422	.0375	.8822	.1064	.0114	1958	140.8	.9001	.0999	.....	.9598	.0402	.....
1674	141.5	.8569	.0080	.1351	.9545	.0048	.0407	1959	140.1	.9622	.0378	.....	.9852	.0148	.....
1675	141.5	.8573	.0186	.1241	.9549	.0078	.0373	1960	140.2	.9549	.0451	.....	.9818	.0182	.....
1676	141.5	.8578	.0395	.1027	.9544	.0170	.0286	1961	140.3	.9523	.0477	.....	.9808	.0192	.....
1677	141.5	.8515	.0499	.0986	.9500	.0205	.0295	1962	129.9	.9845	.0155	.....	.9940	.0060	.....
1678	141.5	.8544	.0615	.0841	.9492	.0251	.0257	1963	140.0	.9838	.0043	.0119	.9953	.0016	.0030
1679	141.5	.8502	.0875	.0623	.9458	.0360	.0181	1964	140.0	.9844	.0098	.0058	.9948	.0038	.0014
1680	141.5	.8616	.1097	.0287	.9490	.0425	.0085	1965	140.0	.9778	.0151	.0071	.9924	.0057	.0019
1681	140.0	.9788	.0080	.0132	.9934	.0022	.0044								

TABLE 4

EXPERIMENTAL DATA AT 2 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1466	171.9	.0721	.....	.9279	.2160	.....	.7840
1467	168.9	.1470	.....	.8530	.3769	.....	.6231
1468	162.9	.3437	.....	.6563	.6407	.....	.3593
1469	158.9	.5139	.....	.4861	.7823	.....	.2177
1470	160.9	.3406	.6594	.....	.5779	.4221	.....
1471	165.9	.1371	.8629	.....	.3001	.6999	.....
1472	167.9	.0708	.9292	.....	.1762	.8238	.....
1473	175.1	.....	.0464	.9536	.....	.0644	.9356
1474	175.3	.....	.0195	.9805	.....	.0288	.9712
1475	175.0	.....	.0524	.9476	.....	.0753	.9247
1476	174.8	.....	.0690	.9310	.....	.0975	.9025
1477	174.7	.....	.0808	.9192	.....	.1138	.8862
1478	174.5	.....	.0962	.9038	.....	.1335	.8665
1479	174.3	.....	.1180	.8820	.....	.1594	.8406
1480	173.4	.....	.2357	.7643	.....	.2972	.7028
1481	171.9	.....	.5059	.4941	.....	.5674	.4326
1482	171.4	.....	.5902	.4098	.....	.6432	.3568
1483	170.6	.....	.7881	.2119	.....	.8151	.1849
1484	170.3	.....	.9722	.0278	.....	.9762	.0238
1485	171.9	.0719	.0094	.9187	.2081	.0122	.7797
1486	171.9	.0717	.0187	.9096	.2118	.0233	.7648
1487	171.9	.0699	.0332	.8969	.2009	.0414	.7577
1488	171.9	.0658	.0507	.8835	.1892	.0627	.7481
1489	171.9	.0652	.0619	.8729	.1856	.0767	.7378
1490	171.9	.0565	.0880	.8555	.1619	.1083	.7298
1491	171.9	.0505	.1286	.8209	.1439	.1568	.6993
1492	171.9	.0282	.2552	.7167	.0804	.3037	.6159
1493	168.9	.1393	.0098	.8509	.3684	.0108	.6208
1494	168.9	.1370	.0266	.8364	.3545	.0283	.6172
1495	168.9	.1353	.0374	.8273	.3490	.0388	.6122
1496	168.9	.1388	.0482	.8130	.3401	.0512	.6087
1497	168.9	.1363	.0581	.8056	.3482	.0620	.5899
1498	168.9	.1318	.0880	.7802	.3397	.0893	.5710
1499	168.9	.1323	.1132	.7545	.3284	.1183	.5533

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1500	168.9	.1258	.1657	.7085	.3082	.1703	.5215
1501	168.9	.1058	.2999	.5944	.2589	.2997	.4414
1502	168.9	.0845	.4310	.4845	.2239	.4141	.3620
1503	168.9	.0725	.5494	.3781	.1775	.5296	.2928
1504	168.9	.0623	.6623	.2754	.1506	.6330	.2164
1505	168.9	.0484	.7692	.1824	.1205	.7307	.1487
1506	165.9	.2297	.0280	.7423	.5029	.0258	.4713
1507	165.9	.2228	.0672	.7100	.4845	.0616	.4538
1508	165.9	.2160	.1350	.6490	.4619	.1202	.4179
1509	165.9	.2012	.2539	.5450	.4280	.2190	.3531
1510	165.9	.1812	.4112	.4076	.3848	.3475	.2677
1511	165.9	.1646	.5671	.2683	.3518	.4692	.1790
1512	165.9	.1461	.7326	.1213	.3194	.5955	.0851
1513	165.9	.1390	.8357	.0253	.3044	.6784	.0173
1514	162.9	.3364	.0131	.6506	.6306	.0129	.3565
1515	162.9	.3317	.0286	.6397	.6273	.0225	.3502
1516	162.9	.3331	.0402	.6267	.6282	.0315	.3403
1517	162.9	.3288	.0531	.6181	.6228	.0411	.3361
1518	162.9	.3324	.0666	.6010	.6225	.0515	.3260
1519	162.9	.3240	.0965	.5795	.6245	.0701	.3054
1520	162.9	.3220	.1370	.5410	.5970	.1048	.2982
1521	162.9	.3146	.2092	.4761	.5787	.1577	.2636
1522	162.9	.2930	.3768	.3302	.5382	.2757	.1861
1523	162.9	.2740	.5469	.1792	.5058	.3903	.1039
1524	162.9	.2601	.6540	.0859	.4860	.4610	.0530
1525	160.9	.4083	.0573	.5343	.6986	.0388	.2626
1526	160.9	.4062	.0949	.4988	.6882	.0653	.2465
1527	160.9	.3932	.1777	.4290	.6643	.1206	.2150
1528	160.9	.3766	.3155	.3078	.6311	.2144	.1545
1529	160.9	.3595	.4856	.1549	.6029	.3140	.0831
1530	158.9	.5052	.0127	.4822	.7761	.0078	.2161
1531	158.9	.5088	.0255	.4658	.7757	.0162	.2081
1532	158.9	.5039	.0404	.4556	.7711	.0256	.2033
1533	158.9	.5052	.0595	.4353	.7653	.0382	.1966

TABLE 4

EXPERIMENTAL DATA AT 2 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1534	158.9	.5070	.0721	.4209	.7633	.0450	.1917
1535	158.9	.5024	.0979	.3997	.7578	.0618	.1804
1536	158.9	.4960	.1387	.3653	.7494	.0869	.1637
1537	158.9	.4978	.2360	.2662	.7285	.1419	.1296
1538	158.9	.4725	.3439	.1836	.7088	.2066	.0846
1539	158.9	.4560	.4730	.0710	.6880	.2780	.0340
1540	156.9	.6172	.0377	.3451	.8374	.0212	.1415
1541	156.9	.6072	.1204	.2724	.8204	.0675	.1122
1542	156.9	.6061	.1386	.2553	.8173	.0779	.1048
1543	156.9	.6027	.1926	.2047	.8116	.1055	.0829
1544	156.9	.5723	.3893	.0384	.7753	.2084	.0163
1545	154.9	.7392	.0133	.2474	.9013	.0072	.0915
1546	154.9	.7376	.0279	.2346	.8976	.0144	.0880
1547	154.9	.7343	.0418	.2239	.8952	.0211	.0837
1548	154.9	.7318	.0541	.2142	.8922	.0270	.0808
1549	154.9	.7273	.0693	.2035	.8888	.0359	.0753
1550	154.9	.7220	.0992	.1788	.8805	.0507	.0688
1551	154.9	.7246	.1281	.1473	.8768	.0659	.0573
1552	154.9	.7038	.2521	.0441	.8560	.1266	.0174
1553	152.9	.8681	.0164	.1155	.9519	.0082	.0399
1554	152.9	.8756	.0249	.0995	.9525	.0123	.0352
1555	152.9	.8732	.0380	.0889	.9532	.0167	.0302
1556	152.9	.8722	.0465	.0813	.9531	.0199	.0270
1557	152.9	.8633	.0539	.0828	.9483	.0245	.0273
1558	152.9	.8654	.0724	.0622	.9447	.0339	.0215
1559	152.9	.8595	.0952	.0453	.9409	.0432	.0159
1560	151.9	.9460	.0071	.0469	.9810	.0032	.0158
1561	151.9	.9409	.0207	.0385	.9790	.0087	.0122
1562	151.9	.9349	.0339	.0313	.9767	.0144	.0089
1563	151.9	.9343	.0424	.0233	.9740	.0192	.0069
1564	154.9	.7401	.....	.2599	.9044	.....	.0956
1565	152.9	.8744	.....	.1256	.9565	.....	.0435
1566	151.9	.9449	.....	.0551	.9815	.....	.0185
1567	151.2	.9949	.0051	.....	.9974	.0026	.....
1568	151.4	.9810	.0190	.....	.9919	.0081	.....

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1569	151.5	.9719	.0281	.....	.9880	.0120	.....
1570	151.7	.9529	.0471	.....	.9798	.0202	.....
1571	151.8	.9410	.0590	.....	.9738	.0262	.....
1572	152.2	.9001	.0999	.....	.9547	.0453	.....
1573	152.9	.8450	.1550	.....	.9283	.0717	.....
1574	154.9	.6956	.3044	.....	.8500	.1500	.....
1575	157.9	.4978	.5022	.....	.7189	.2811	.....
1896	175.2	.....	.0274	.9726	.....	.0395	.9605
1897	171.9	.....	.4999	.5001	.....	.5608	.4392
1898	171.9	.0750	.0105	.9145	.2172	.0133	.7694
1899	170.2	.....	.9785	.0215	.....	.9799	.0201
1900	168.9	.0417	.8890	.0693	.1059	.8364	.0577
1901	168.9	.1417	.0402	.8181	.3576	.0434	.5990
1902	168.9	.1349	.0919	.7731	.3357	.0976	.5668
1903	168.9	.0834	.4342	.4823	.2050	.4284	.3666
1904	168.9	.0586	.6829	.2585	.1456	.6495	.2049
1905	167.9	.0670	.9330	.....	.1654	.8346	.....
1906	165.9	.2359	.....	.7641	.5189	.....	.4811
1907	165.9	.1335	.8386	.0280	.2960	.6838	.0202
1908	162.9	.3365	.0150	.6485	.6354	.0119	.3527
1909	162.9	.3271	.0952	.5778	.6103	.0745	.3152
1910	160.9	.4144	.0331	.5524	.7069	.0238	.2693
1911	160.9	.4192	.0539	.5269	.7036	.0373	.2591
1912	158.9	.4848	.2341	.2811	.7284	.1428	.1289
1913	158.9	.5032	.0524	.4444	.7685	.0341	.1974
1932	156.9	.6123	.0688	.3189	.8304	.0385	.1311
1933	156.9	.5909	.1957	.2134	.8013	.1091	.0896
1934	152.9	.8464	.1261	.0275	.9320	.0580	.0101
1935	152.9	.8576	.0244	.1180	.9511	.0117	.0372
1936	152.9	.8636	.0449	.0916	.9476	.0208	.0316
1937	152.9	.8583	.0582	.0835	.9436	.0273	.0291
1938	151.9	.9330	.0343	.0327	.9737	.0153	.0110
1939	151.9	.9277	.0634	.0090	.9691	.0281	.0028
1940	151.9	.9336	.0434	.0230	.9731	.0191	.0078
1941	151.2	.9930	.0070	.....	.9972	.0028	.....

TABLE 5

EXPERIMENTAL DATA AT 4 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
1361	182.8	.0702	.9298	.....	.1547	.8453	.....
1362	180.8	.1320	.8680	.....	.2703	.7297	.....
1363	174.8	.3687	.6313	.....	.5732	.4268	.....
1364	171.9	.5277	.4723	.....	.7130	.2870	.....
1365	168.4	.7372	.2628	.....	.8583	.1417	.....
1366	166.9	.8444	.1556	.....	.9214	.0786	.....
1367	165.9	.9181	.0819	.....	.9614	.0386	.....
1368	165.6	.9373	.0627	.....	.9706	.0292	.....
1369	165.4	.9529	.0471	.....	.9778	.0222	.....
1370	165.3	.9632	.0368	.....	.9828	.0172	.....
1371	165.1	.9775	.0225	.....	.9902	.0098	.....
1372	165.0	.9872	.0128	.....	.9941	.0059	.....
1373	186.8	.0860	.....	.9140	.2081	.....	.7919
1374	183.8	.1591	.....	.8409	.3527	.....	.6473
1375	177.8	.3454	.....	.6546	.6008	.....	.3992
1376	171.9	.5987	.....	.4013	.8070	.....	.1930
1377	168.4	.7788	.....	.2212	.9065	.....	.0935
1378	166.9	.8697	.....	.1303	.9485	.....	.0515
1379	165.4	.9620	.....	.0380	.9861	.....	.0139
1380	190.6	.....	.0252	.9748	.....	.0346	.9654
1381	190.4	.....	.0514	.9486	.....	.0677	.9323
1382	190.3	.....	.0446	.9554	.....	.0605	.9395
1383	190.2	.....	.0471	.9529	.....	.0640	.9360
1384	190.1	.....	.0519	.9481	.....	.0656	.9344
1385	189.8	.....	.0804	.9196	.....	.1077	.8923
1386	188.8	.....	.1947	.8053	.....	.2444	.7556
1387	187.3	.....	.4232	.5768	.....	.4807	.5193
1388	186.3	.....	.6296	.3704	.....	.6616	.3384
1389	185.8	.....	.7869	.2131	.....	.8077	.1923
1390	185.4	.....	.9313	.0687	.....	.9399	.0601
1391	186.8	.0812	.0154	.9033	.1988	.0182	.7830
1392	186.8	.0765	.0316	.8920	.1878	.0378	.7745
1393	186.8	.0748	.0478	.8774	.1869	.0563	.7568

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
1394	186.8	.0717	.0609	.8674	.1783	.0721	.7496
1395	186.8	.0679	.0781	.8540	.1672	.0906	.7422
1396	186.8	.0639	.1128	.8233	.1543	.1302	.7155
1397	186.8	.0547	.1363	.8090	.1360	.1598	.7042
1398	186.8	.0474	.1859	.7668	.1162	.2150	.6688
1399	186.8	.0252	.3400	.6348	.0615	.3913	.5572
1400	183.8	.1581	.0139	.8281	.3473	.0148	.6380
1401	183.8	.1524	.0274	.8202	.3422	.0296	.6282
1402	183.8	.1490	.0435	.8076	.3320	.0454	.6226
1403	183.8	.1492	.0589	.7919	.3286	.0610	.6103
1404	183.8	.1444	.0767	.7789	.3186	.0903	.6011
1405	183.8	.1403	.1073	.7524	.3108	.1133	.5759
1406	183.8	.1315	.1320	.7366	.2935	.1379	.5686
1407	183.8	.1243	.1982	.6775	.2683	.2019	.5298
1408	183.8	.0937	.4245	.4818	.2014	.4176	.3810
1409	183.8	.0738	.5904	.3358	.1592	.5689	.2720
1410	183.8	.0552	.7561	.1887	.1207	.7216	.1577
1411	183.8	.0454	.9092	.0454	.1007	.8608	.0385
1412	180.8	.2469	.0276	.7255	.4821	.0255	.4924
1413	180.8	.2334	.0689	.6977	.4625	.0633	.4742
1414	180.8	.2262	.1275	.6463	.4410	.1183	.4407
1415	180.8	.2021	.2884	.5095	.3889	.2475	.3636
1416	180.8	.1738	.5136	.3127	.3345	.4451	.2204
1417	180.8	.1579	.6464	.1957	.3087	.5457	.1456
1418	180.8	.1447	.7674	.0879	.2880	.6488	.0632
1419	180.8	.1415	.8257	.0328	.2784	.6971	.0245
1420	177.8	.3435	.0091	.6473	.6006	.0074	.3920
1421	177.8	.3423	.0211	.6366	.5966	.0167	.3867
1422	177.8	.3407	.0387	.6206	.5906	.0315	.3779
1423	177.8	.3380	.0472	.6148	.5889	.0384	.3727
1424	177.8	.3305	.0867	.5827	.5729	.0709	.3562
1425	177.8	.3200	.1328	.5472	.5560	.1071	.3369
1426	177.8	.3152	.1763	.5085	.5436	.1412	.3152

TABLE 5

EXPERIMENTAL DATA AT 4 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1427	177.8	.3092	.2168	.4740	.5384	.1731	.2885
1428	177.8	.2841	.4007	.3153	.4925	.3097	.1978
1429	177.8	.3054	.5906	.1040	.4502	.4755	.0743
1430	174.8	.4548	.0319	.5132	.5996	.0234	.2771
1431	174.8	.4474	.0906	.4621	.6842	.0649	.2509
1432	174.8	.4374	.1559	.4068	.6664	.1108	.2229
1433	174.8	.4171	.2735	.3094	.6416	.1913	.1670
1434	174.8	.3981	.4444	.1574	.6091	.3026	.0883
1435	174.8	.3890	.5421	.0689	.5966	.3629	.0405
1436	171.9	.5999	.0114	.3887	.8025	.0114	.1861
1437	171.9	.5913	.0251	.3837	.8001	.0149	.1850
1438	171.9	.5940	.0341	.3718	.8029	.0214	.1757
1439	171.9	.5931	.0512	.3557	.7973	.0321	.1706
1440	171.9	.5932	.0618	.3451	.7938	.0388	.1674
1441	171.9	.5898	.0880	.3222	.7893	.0552	.1555
1442	171.9	.5868	.1162	.2970	.7828	.0735	.1438
1443	171.9	.5664	.2279	.2057	.7585	.1404	.1011
1444	171.9	.5505	.3544	.0951	.7406	.2140	.0454
1445	169.9	.6897	.0641	.2461	.8494	.0433	.1074
1446	169.9	.6811	.1252	.1936	.8420	.0721	.0859
1447	169.9	.6678	.2317	.1005	.8234	.1315	.0451
1448	168.4	.7814	.0118	.2068	.9048	.0062	.0890
1449	168.4	.7764	.0259	.1977	.9046	.0128	.0826
1450	168.4	.7744	.0406	.1850	.8999	.0209	.0792
1451	168.4	.7694	.0565	.1741	.8945	.0316	.0738
1452	168.4	.7686	.0645	.1669	.8952	.0352	.0696
1453	168.4	.7668	.0929	.1403	.8898	.0503	.0599
1454	168.4	.7614	.1346	.1040	.8826	.0725	.0449
1455	168.4	.7486	.2051	.0463	.8705	.1095	.0200
1456	166.9	.8655	.0126	.1219	.9453	.0066	.0481
1457	166.9	.8678	.0255	.1067	.9454	.0126	.0421
1458	166.9	.8681	.0344	.0975	.9447	.0169	.0384
1459	166.9	.8667	.0487	.0846	.9411	.0244	.0344
1460	166.9	.8683	.0650	.0667	.9408	.0324	.0267
1461	166.9	.8583	.1006	.0412	.9340	.0505	.0155
1462	166.9	.8557	.1279	.0164	.9290	.0650	.0060
1463	165.4	.9614	.0120	.0266	.9847	.0053	.0099
1464	165.4	.9625	.0228	.0148	.9836	.0107	.0057
1465	165.4	.9634	.0187	.0179	.9843	.0086	.0070
1869	190.6	.....	.0110	.9890	.....	.0148	.9852
1870	190.4	.....	.0291	.9709	.....	.0401	.9599
1871	190.1	.....	.0558	.9442	.....	.0759	.9241
1872	189.3	.....	.1417	.8583	.....	.1828	.8172
1873	185.4	.....	.9506	.0494	.....	.9552	.0448
1874	183.8	.1527	.0399	.8075	.3369	.0422	.6208
1875	180.8	.1991	.2954	.5055	.3831	.2630	.3538
1876	180.8	.1445	.7618	.0937	.2849	.6459	.0692
1877	177.8	.2448	.7552	.....	.4251	.5749	.....
1878	177.8	.3354	.0739	.5907	.5785	.0602	.3613
1879	177.8	.2571	.6278	.1151	.4479	.4771	.0751
1880	176.8	.3830	.....	.6170	.6380	.....	.3620
1881	174.8	.3849	.5483	.0668	.5908	.3705	.0388
1882	171.9	.5931	.0120	.3949	.8019	.0076	.1904
1883	171.9	.5895	.0243	.3862	.7980	.0153	.1868
1884	171.9	.5410	.3648	.0943	.7306	.2215	.0479
1885	169.9	.6860	.0675	.2465	.8502	.0392	.1105
1886	168.4	.7741	.0273	.1986	.9005	.0148	.0846
1887	168.4	.7714	.0427	.1859	.8981	.0233	.0786
1888	166.9	.8638	.0168	.1194	.9443	.0084	.0473
1889	166.9	.8492	.1004	.0504	.9279	.0519	.0202
1890	166.9	.8456	.1359	.0185	.9226	.0698	.0076
1891	165.4	.9552	.0175	.0273	.9813	.0081	.0105
1892	165.4	.9547	.0270	.0183	.9790	.0132	.0079
1893	165.4	.9535	.0215	.0251	.9799	.0104	.0097
1894	165.4	.9528	.0347	.0125	.9780	.0174	.0047
1895	165.1	.9737	.0263	.....	.9872	.0128	.....

TABLE 6

EXPERIMENTAL DATA AT 6 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
453	197.8	.0721	.....	.9279	.1646	.....	.8354
454	195.8	.1213	.....	.8787	.2595	.....	.7405
455	191.8	.2285	.....	.7715	.4310	.....	.5690
456	187.8	.3548	.....	.6452	.5840	.....	.4160
457	183.8	.5069	.....	.4931	.7208	.....	.2792
458	179.8	.6890	.....	.3110	.8468	.....	.1532
459	176.8	.8413	.....	.1587	.9284	.....	.0716
460	174.8	.9513	.....	.0487	.9794	.....	.0206
461	200.8	.....	.0274	.9726	.....	.0376	.9624
462	200.5	.....	.0550	.9450	.....	.0717	.9283
463	200.2	.....	.0868	.9132	.....	.1110	.8890
464	199.9	.....	.1198	.8802	.....	.1508	.8492
465	174.8	.9373	.0627	.....	.9666	.0334	.....
466	175.3	.9035	.0965	.....	.9474	.0526	.....
467	175.8	.8728	.1272	.....	.9314	.0686	.....
468	176.3	.8395	.1605	.....	.9107	.0893	.....
469	198.8	.0441	.0307	.9252	.1037	.0379	.8584
470	198.8	.0408	.0474	.9118	.0966	.0583	.8452
471	198.8	.0261	.0623	.9116	.0879	.0750	.8371
472	198.8	.0354	.0794	.8852	.0819	.0953	.8228
473	198.8	.0287	.1000	.8714	.0666	.1243	.8092
474	198.8	.0190	.1561	.8249	.0441	.1941	.7618
475	194.8	.1400	.0319	.8281	.2913	.0338	.6749
476	194.8	.1371	.0486	.8142	.2845	.0520	.6635
477	194.8	.1334	.0676	.7990	.2769	.0714	.6517
478	194.8	.1317	.0814	.7869	.2707	.0871	.6422
479	194.8	.1242	.1130	.7628	.2552	.1210	.6239
480	194.8	.1154	.1685	.7161	.2392	.1765	.5843
481	190.8	.2531	.0327	.7142	.4605	.0306	.5089
482	190.8	.2483	.0529	.6988	.4519	.0491	.4990
483	190.8	.2477	.0683	.6841	.4485	.0634	.4881
484	190.8	.2441	.0834	.6724	.4436	.0762	.4802
485	190.8	.2388	.1232	.6379	.4303	.1132	.4565
486	190.8	.2294	.1742	.5963	.4126	.1589	.4285
487	186.8	.3858	.0344	.5796	.6105	.0278	.3617
488	186.8	.3641	.0522	.5636	.6893	.0333	.2774
489	186.8	.3826	.0684	.5489	.6016	.0549	.3434
490	186.8	.3773	.0899	.5328	.5953	.0726	.3319
491	186.8	.3725	.1243	.5032	.5856	.0986	.3158

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
492	186.8	.3645	.1810	.4545	.5705	.1430	.2865
493	182.8	.5443	.0363	.4194	.7464	.0253	.2282
494	182.8	.5410	.0555	.4035	.7405	.0377	.2217
495	182.8	.5387	.0725	.3888	.7410	.0484	.2106
496	182.8	.5354	.0936	.3709	.7308	.0650	.2042
497	182.8	.5276	.1321	.3403	.7362	.0930	.1708
498	182.8	.5153	.1887	.2960	.7076	.1292	.1632
499	179.8	.6770	.0355	.2875	.8351	.0222	.1427
500	179.8	.6730	.0574	.2696	.8296	.0358	.1346
501	179.8	.6710	.0755	.2536	.8398	.0433	.1169
502	179.8	.6679	.0953	.2368	.8236	.0591	.1173
503	179.8	.6630	.1332	.2038	.8149	.0831	.1020
504	179.8	.6536	.1906	.1558	.8404	.0957	.0639
505	177.8	.7714	.0625	.1661	.8849	.0367	.0785
506	177.8	.7714	.0995	.1291	.8814	.0580	.0606
507	177.8	.7655	.1372	.0973	.8750	.0797	.0454
508	177.8	.7566	.1975	.0459	.8651	.1139	.0210
509	175.8	.8903	.0240	.0857	.9500	.0125	.0376
510	175.8	.8851	.0511	.0637	.9466	.0274	.0259
511	175.8	.8796	.0670	.0534	.9407	.0358	.0235
512	175.8	.8823	.0800	.0376	.9377	.0455	.0168
513	175.8	.8782	.0972	.0245	.9364	.0527	.0109
514	175.8	.8742	.1140	.0118	.9326	.0620	.0054
515	174.8	.9461	.0383	.0156	.9760	.0175	.0065
516	174.8	.9428	.0074	.0498	.9748	.0038	.0214
596	198.8	.0440	.0191	.9369	.1039	.0234	.8727
597	198.8	.0366	.0636	.8996	.0875	.0769	.8357
598	194.8	.1436	.0191	.8372	.2946	.0201	.6853
599	190.8	.2565	.0193	.7242	.4623	.0182	.5195
600	186.8	.3669	.0200	.5931	.6130	.0161	.3709
601	186.8	.3786	.0509	.5706	.6046	.0410	.3544
602	182.8	.5444	.0182	.4373	.7475	.0128	.2396
603	182.8	.5335	.0760	.3905	.7331	.0513	.2156
604	182.8	.5268	.1323	.3410	.7214	.0909	.1876
605	179.8	.6769	.0136	.3095	.8396	.0082	.1522
606	179.8	.5685	.0731	.2584	.8257	.0450	.1294
607	179.8	.5516	.1921	.1561	.8038	.1181	.0781
608	177.8	.7764	.0178	.2058	.8944	.0097	.0959
609	177.8	.7785	.0314	.1901	.8934	.0176	.0890

TABLE 6

EXPERIMENTAL DATA AT 6 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1304	190.8	.1452	.8548	.....	.2666	.7334	.....
1305	184.8	.3758	.6242	.....	.5580	.4420	.....
1306	179.8	.6219	.3781	.....	.7683	.2317	.....
1307	177.8	.7409	.2591	.....	.8515	.1485	.....
1308	174.6	.9522	.0478	.....	.9759	.0241	.....
1309	174.4	.9610	.0390	.....	.9807	.0193	.....
1310	174.3	.9701	.0299	.....	.9351	.0149	.....
1311	174.2	.9802	.0198	.....	.9907	.0093	.....
1312	174.1	.9918	.0082	.....	.9968	.0032	.....
1313	201.0	.....	.0036	.9964	.....	.0058	.9942
1314	200.9	.....	.0035	.9965	.....	.0052	.9948
1315	200.7	.....	.0232	.9768	.....	.0353	.9647
1316	198.8	.....	.2430	.7570	.....	.2850	.7150
1317	197.8	.....	.3928	.6072	.....	.4407	.5593
1318	196.8	.....	.5850	.4150	.....	.6192	.3805
1319	196.4	.....	.6895	.3104	.....	.7147	.2853
1320	196.1	.....	.7832	.2168	.....	.7986	.2014
1321	198.8	.0464	.0120	.9416	.1097	.0151	.8752
1322	194.8	.1446	.0118	.8436	.2994	.0129	.6877
1323	194.8	.1371	.0524	.8106	.2818	.0564	.6618
1324	194.8	.1188	.1409	.7403	.2442	.1482	.6077
1325	194.8	.0854	.3512	.5635	.1747	.3583	.4670
1326	194.8	.0618	.5288	.4094	.1263	.5268	.3469
1327	194.8	.0469	.6631	.2900	.0953	.6543	.2504
1328	194.8	.0377	.7657	.1966	.0501	.7481	.1718
1329	190.8	.2539	.0170	.7291	.4645	.0151	.5204
1330	190.8	.2444	.0603	.6953	.4439	.0563	.4998
1331	190.8	.1907	.4286	.3807	.3430	.3771	.2799
1332	190.8	.1711	.6049	.2240	.3080	.5238	.1681
1333	190.8	.1592	.7272	.1136	.2896	.6239	.0865
1334	190.8	.2109	.7528	.0363	.2772	.6896	.0332
1335	190.8	.1435	.8454	.0111	.2791	.7093	.0116
1336	186.8	.3855	.0331	.5814	.6140	.0226	.3634
1337	186.8	.3277	.4581	.2142	.5188	.3458	.1355
1338	186.8	.3115	.5889	.0996	.4912	.4444	.0643
1339	186.8	.2999	.6581	.0419	.4787	.4928	.0285
1340	184.8	.4486	.0794	.4720	.6718	.0504	.2778
1341	184.8	.4397	.1528	.4075	.6490	.1110	.2400
1342	184.8	.4238	.2668	.3094	.6226	.1935	.1839

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1343	184.8	.3940	.4997	.1063	.5819	.3544	.0638
1344	182.8	.5392	.0093	.4515	.7502	.0067	.2431
1345	182.8	.5397	.0301	.4302	.7436	.0210	.2354
1346	182.8	.4958	.3724	.1318	.6788	.2482	.0730
1347	182.8	.4823	.4513	.0664	.6649	.2986	.0365
1348	179.8	.6843	.0171	.2987	.8404	.0101	.1495
1349	179.8	.6809	.0317	.2874	.8365	.0198	.1437
1350	179.8	.6735	.0423	.2842	.8315	.0255	.1430
1351	179.8	.6454	.2702	.0844	.7922	.1547	.0431
1352	177.8	.7869	.0096	.2035	.8998	.0057	.0945
1353	177.8	.7800	.0233	.1967	.8953	.0135	.0912
1354	177.8	.7785	.0440	.1775	.8928	.0253	.0819
1355	177.8	.7675	.0545	.1780	.8892	.0302	.0607
1356	175.8	.8920	.0132	.0948	.9517	.0076	.0407
1357	175.8	.8864	.0442	.0694	.9459	.0237	.0305
1358	174.8	.9488	.0118	.0393	.9767	.0057	.0177
1359	174.8	.9488	.0241	.0271	.9773	.0119	.0108
1360	174.8	.9469	.0358	.0175	.9741	.0187	.0072
1838	201.0	.....	.0073	.9927	.....	.0095	.9905
1839	200.9	.....	.0153	.9847	.....	.0196	.9804
1840	200.7	.....	.0344	.9656	.....	.0461	.9539
1841	195.8	.....	.9390	.0610	.....	.9458	.0542
1842	194.8	.0275	.9265	.0460	.0580	.8998	.0422
1843	193.8	.0523	.9477	.....	.1079	.8921	.....
1844	190.8	.2100	.3220	.4680	.3751	.2863	.3387
1845	190.8	.2571	.0136	.7293	.4675	.0126	.5199
1846	190.8	.1535	.8028	.0437	.2801	.6868	.0331
1847	190.8	.1497	.8332	.0171	.2757	.7114	.0129
1848	186.8	.3922	.0123	.5956	.6193	.0101	.3706
1849	186.8	.3872	.0404	.5724	.6134	.0326	.3540
1850	184.8	.4579	.0795	.4626	.6707	.0587	.2706
1851	179.8	.6835	.0236	.2929	.8409	.0147	.1444
1852	177.8	.7831	.0180	.1989	.8964	.0103	.0933
1853	177.8	.7787	.0539	.1674	.8891	.0314	.0795
1854	175.8	.8935	.0175	.0890	.9518	.0092	.0389
1855	174.8	.9493	.0145	.0362	.9773	.0075	.0152
1856	174.8	.9483	.0284	.0233	.9753	.0146	.0102
1857	174.2	.9821	.0179	.....	.9908	.0092	.....
1856	174.1	.9884	.0116	.....	.9942	.0058	.....

TABLE 7

EXPERIMENTAL DATA AT 8 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
389	206.8	.0512	.....	.9488	.1127	.....	.8873
390	202.8	.1495	.....	.8505	.2931	.....	.7069
391	197.8	.2940	.....	.7060	.4939	.....	.5061
392	193.8	.4290	.....	.5710	.6371	.....	.3629
393	189.8	.5830	.....	.4170	.7638	.....	.2362
394	186.8	.7138	.....	.2862	.8507	.....	.1493
395	184.8	.8085	.....	.1915	.9051	.....	.0949
396	182.8	.9125	.....	.0875	.9586	.....	.0414
397	209.0	.....	.0116	.9884	.....	.0151	.9849
398	208.7	.....	.0381	.9619	.....	.0493	.9507
399	208.4	.....	.0673	.9327	.....	.0854	.9146
400	208.1	.....	.0985	.9015	.....	.1231	.8769
401	181.8	.9620	.0380	.....	.9790	.0210	.....
402	182.3	.9306	.0694	.....	.9606	.0394	.....
403	182.8	.8985	.1015	.....	.9425	.0575	.....
404	183.3	.8647	.1353	.....	.9218	.0782	.....
405	205.8	.0690	.0316	.8994	.1456	.0384	.8160
406	205.8	.0657	.0467	.8877	.1385	.0543	.8071
407	205.8	.0625	.0636	.8739	.1318	.0743	.7938
408	205.8	.0592	.0764	.8644	.1236	.0896	.7869
409	205.8	.0525	.1071	.8404	.1105	.1240	.7655
410	205.8	.0444	.1535	.8021	.0933	.1759	.7308
411	201.8	.1699	.0329	.7972	.3202	.0344	.6454
412	201.8	.1678	.0485	.7838	.3166	.0505	.6330
413	201.8	.1636	.0677	.7687	.3068	.0690	.6242
414	201.8	.1606	.0833	.7560	.3015	.0855	.6130
415	201.8	.1545	.1160	.7295	.2898	.1132	.5920
416	201.8	.1461	.1673	.6866	.2734	.1710	.5555
417	197.8	.2870	.0336	.6795	.4816	.0304	.4880
418	197.8	.2853	.0531	.6616	.4779	.0488	.4733
419	197.8	.2829	.0703	.6468	.4728	.0620	.4651
420	197.8	.2797	.0859	.6345	.4672	.0785	.4543
421	197.8	.2749	.1214	.6037	.4572	.1091	.4337
422	197.8	.2656	.1761	.5583	.4402	.1577	.4020
423	195.8	.3509	.0343	.6148	.5541	.0296	.4163
424	195.8	.3487	.0514	.5999	.5504	.0429	.4067

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
425	195.8	.3450	.0669	.5881	.5455	.0581	.3963
426	195.8	.3412	.0872	.5717	.5377	.0744	.3879
427	195.8	.3368	.1212	.5420	.5295	.1015	.3690
428	195.8	.3265	.1740	.4995	.5150	.1442	.3408
429	191.8	.4940	.0352	.4708	.6893	.0259	.2848
430	191.8	.4900	.0590	.4510	.6833	.0442	.2725
431	191.8	.4926	.0714	.4360	.6829	.0538	.2633
432	191.8	.4878	.0915	.4208	.6770	.0688	.2542
433	191.8	.4815	.1308	.3877	.6681	.0978	.2341
434	191.8	.4714	.1979	.3307	.6533	.1452	.2015
435	187.8	.6665	.0382	.2953	.8156	.0254	.1590
436	187.8	.6616	.0552	.2832	.8102	.0368	.1530
437	187.8	.6600	.0770	.2630	.8075	.0510	.1416
438	187.8	.6551	.0967	.2482	.8014	.0640	.1347
439	187.8	.6507	.1344	.2149	.7955	.0880	.1165
440	187.8	.6408	.1928	.1664	.7824	.1267	.0909
441	185.8	.7532	.0597	.1871	.8674	.0367	.0959
442	185.8	.7446	.1011	.1542	.8568	.0640	.0792
443	185.8	.7415	.1363	.1222	.8519	.0853	.0628
444	185.8	.7317	.1950	.0733	.8429	.1196	.0375
445	183.8	.8567	.0327	.1106	.9262	.0194	.0544
446	183.8	.8552	.0484	.0964	.9244	.0282	.0475
447	183.8	.8513	.0749	.0737	.9205	.0438	.0357
448	183.8	.8487	.0992	.0521	.9161	.0583	.0256
449	183.8	.8451	.1211	.0338	.9131	.0712	.0157
450	183.8	.8425	.1410	.0166	.9095	.0824	.0081
451	182.8	.9107	.0323	.0570	.9538	.0185	.0278
452	182.8	.9027	.0711	.0263	.9460	.0414	.0126
584	205.8	.0700	.0189	.9110	.1486	.0219	.8294
585	201.8	.1714	.0192	.8095	.3259	.0195	.6545
586	197.8	.2901	.0201	.6898	.4850	.0189	.4961
587	195.8	.3550	.0180	.6270	.5609	.0155	.4237
588	191.8	.4968	.0181	.4851	.6942	.0138	.2920
589	191.8	.4889	.0710	.4401	.6817	.0528	.2656
590	187.8	.6647	.0212	.3142	.8169	.0137	.1694
591	185.8	.7562	.0203	.2235	.8728	.0124	.1148

TABLE 7

EXPERIMENTAL DATA AT 8 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
592	185.8	.7534	.0354	.2113	.8713	.0212	.1075
593	183.8	.8564	.0207	.1229	.9273	.0123	.0604
594	182.8	.9033	.0201	.0766	.9542	.0112	.0346
595	182.8	.9044	.0457	.0499	.9491	.0269	.0239
1246	181.8	.9645	.....	.0355	.9834	.....	.0166
1247	199.8	.1126	.8874	.....	.2062	.7938	.....
1248	197.8	.1775	.8225	.....	.3043	.6957	.....
1249	191.8	.4142	.5858	.....	.5816	.4184	.....
1250	187.8	.6073	.3927	.....	.7481	.2519	.....
1251	184.8	.7771	.2229	.....	.8679	.1321	.....
1252	182.0	.9466	.0534	.....	.9708	.0292	.....
1253	181.6	.9691	.0309	.....	.9835	.0165	.....
1254	181.4	.9835	.0165	.....	.9915	.0085	.....
1255	181.2	.9965	.0035	.....	.9982	.0018	.....
1256	209.0	.....	.0088	.9912	.....	.0106	.9894
1257	208.8	.....	.0260	.9740	.....	.0313	.9687
1258	208.4	.....	.0709	.9291	.....	.0877	.9123
1259	207.3	.....	.2000	.8000	.....	.2391	.7609
1260	205.8	.....	.4186	.5814	.....	.4628	.5372
1261	204.8	.....	.6224	.3776	.....	.6524	.3476
1262	204.0	.....	.8511	.1489	.....	.8610	.1390
1263	205.8	.0707	.0113	.9180	.1503	.0139	.8357
1264	205.8	.0257	.2503	.7240	.0539	.2821	.6640
1265	201.8	.1728	.0128	.8145	.3274	.0132	.6594
1266	201.8	.1044	.4105	.4851	.1950	.4027	.4023
1267	201.8	.0813	.5967	.3220	.1527	.5760	.2713
1268	201.8	.0679	.7204	.2118	.1321	.6889	.1790
1269	201.8	.0587	.8326	.1087	.1122	.7915	.0962
1270	201.8	.0546	.8906	.0548	.1027	.8498	.0475
1271	199.8	.1785	.3013	.5202	.3148	.2832	.4020
1272	199.8	.1560	.4659	.3780	.2744	.4284	.2972
1273	199.8	.1362	.6018	.2619	.2447	.5460	.2093
1274	199.8	.1215	.7635	.1151	.2213	.6847	.0940
1275	197.8	.2154	.4646	.3200	.3615	.4007	.2378
1276	197.8	.1972	.6106	.1923	.3343	.5191	.1466
1277	197.8	.1641	.7776	.0382	.3102	.6603	.0295

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1279	195.8	.3411	.0417	.6173	.5485	.0347	.4168
1280	195.8	.3143	.2450	.4407	.4933	.2042	.3025
1281	195.8	.2997	.3660	.3344	.4710	.2978	.2312
1282	195.8	.2740	.5207	.2054	.4346	.4200	.1455
1283	195.8	.2585	.6835	.0580	.4130	.5460	.0410
1284	191.8	.4970	.0086	.4944	.6947	.0065	.2988
1285	191.8	.4926	.0517	.4557	.6850	.0384	.2766
1286	191.8	.4462	.3391	.2147	.6202	.2462	.1336
1287	191.8	.4224	.5123	.0653	.5912	.3688	.0400
1288	189.8	.5739	.0373	.3889	.7521	.0264	.2215
1289	189.8	.5669	.0828	.3503	.7357	.0599	.2044
1290	189.8	.5621	.1163	.3217	.7340	.0819	.1841
1291	189.8	.5426	.2457	.2117	.7074	.1695	.1230
1292	189.8	.5223	.3915	.0862	.6826	.2669	.0505
1293	187.8	.6227	.3095	.0678	.7633	.1989	.0378
1294	187.8	.6094	.3581	.0325	.7529	.2294	.0177
1295	185.8	.7578	.0059	.2363	.8790	.0033	.1177
1296	185.8	.7597	.0266	.2137	.8743	.0160	.1097
1297	185.8	.7517	.0702	.1781	.8669	.0422	.0909
1298	185.8	.7256	.2362	.0382	.8368	.1435	.0197
1299	182.8	.9085	.0139	.0776	.9588	.0062	.0350
1300	182.8	.9042	.0596	.0362	.9497	.0335	.0168
1301	181.8	.9644	.0080	.0277	.9835	.0040	.0125
1302	181.8	.9609	.0170	.0222	.9810	.0090	.0100
1303	181.8	.9582	.0317	.0102	.9785	.0172	.0043
1827	209.0	.....	.0110	.9890	.....	.0148	.9852
1828	208.8	.....	.0302	.9698	.....	.0398	.9602
1829	197.8	.2801	.0685	.6514	.4706	.0621	.4673
1830	195.8	.3500	.0454	.6046	.5525	.0383	.4092
1831	203.8	.....	.9248	.0752	.....	.9294	.0706
1832	185.8	.7611	.0118	.2271	.8782	.0072	.1146
1833	183.8	.8432	.1271	.0298	.9121	.0738	.0141
1834	182.8	.9144	.0155	.0701	.9591	.0087	.0322
1835	181.8	.9653	.0124	.0222	.9841	.0064	.0095
1836	181.8	.9582	.0418	.....	.9769	.0231	.....
1837	181.2	.9957	.0043	.....	.9977	.0023	.....

TABLE 8

EXPERIMENTAL DATA AT 10 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
325	212.8	.0706	.....	.9294	.1439	.....	.8561	365	197.8	.5153	.0624	.4224	.6903	.0464	.2633
326	209.8	.1463	.....	.8537	.2719	.....	.7281	366	197.8	.5171	.0566	.4263	.6927	.0430	.2644
327	205.8	.2587	.....	.7413	.4329	.....	.5671	367	197.8	.5155	.0722	.4124	.6888	.0547	.2565
328	201.8	.3844	.....	.6156	.5767	.....	.4233	368	197.8	.5117	.0890	.3993	.6850	.0668	.2482
329	197.8	.5284	.....	.4716	.7067	.....	.2933	369	197.8	.5055	.1278	.3668	.6753	.0949	.2298
330	193.8	.6881	.....	.3119	.8249	.....	.1751	370	197.8	.4974	.1828	.3198	.6644	.1363	.1993
331	190.8	.8243	.....	.1757	.9077	.....	.0923	371	193.8	.6860	.0358	.2783	.8183	.0248	.1569
332	188.8	.9203	.....	.0797	.9606	.....	.0394	372	193.8	.6813	.0565	.2622	.8137	.0385	.1478
333	215.8	.....	.0076	.9924	.....	.0099	.9901	373	193.8	.6807	.0741	.2453	.8121	.0503	.1375
334	215.5	.....	.0352	.9648	.....	.0445	.9555	374	193.8	.6752	.0950	.2298	.8076	.0633	.1291
335	215.2	.....	.0681	.9319	.....	.0833	.9167	375	193.8	.6680	.1326	.1994	.7968	.0901	.1131
336	214.9	.....	.1024	.8976	.....	.1240	.8759	376	193.8	.6624	.1813	.1563	.7901	.1207	.0892
337	187.7	.9666	.0334	.....	.9810	.0190	.....	377	191.8	.7714	.0556	.1730	.8707	.0356	.0937
338	188.2	.9384	.0616	.....	.9640	.0360	.....	378	191.8	.7636	.0948	.1417	.8625	.0609	.0766
339	188.8	.9090	.0910	.....	.9460	.0540	.....	379	191.8	.7556	.1378	.1066	.8543	.0884	.0573
340	189.3	.8801	.1199	.....	.9282	.0718	.....	380	191.8	.7474	.1895	.0631	.8461	.1206	.0334
341	212.8	.0652	.0278	.9070	.1306	.0318	.8377	381	189.8	.8714	.0228	.1057	.9314	.0139	.0548
342	212.8	.0611	.0453	.8936	.1218	.0527	.8254	382	189.8	.8689	.0300	.1011	.9289	.0188	.0523
343	212.8	.0567	.0596	.8836	.1154	.0696	.8150	383	189.8	.8663	.0502	.0835	.9257	.0311	.0433
344	212.8	.0536	.0779	.8686	.1079	.0909	.8012	384	189.8	.8628	.0717	.0654	.9220	.0445	.0335
345	212.8	.0470	.1085	.8446	.0947	.1240	.7813	385	189.8	.8578	.0996	.0426	.9168	.0608	.0224
346	212.8	.0396	.1524	.8081	.0791	.1736	.7474	386	189.8	.8518	.1285	.0197	.9109	.0787	.0104
347	208.8	.1662	.0330	.8009	.3027	.0344	.6629	387	188.8	.9208	.0285	.0508	.9553	.0169	.0279
348	208.8	.1621	.0496	.7883	.2971	.0505	.6524	388	188.8	.9126	.0616	.0258	.9507	.0364	.0128
349	208.8	.1592	.0653	.7755	.2992	.0682	.6326	571	188.8	.9184	.0283	.0534	.9574	.0163	.0263
350	208.8	.1566	.0814	.7620	.2847	.0856	.6297	572	188.8	.9203	.0097	.0700	.9600	.0054	.0346
351	208.8	.1524	.1131	.7346	.2741	.1160	.6099	573	191.8	.7752	.0174	.2074	.8715	.0092	.1193
352	208.8	.1430	.1481	.7090	.2580	.1519	.5901	574	191.8	.7683	.0396	.1921	.8726	.0261	.1013
353	204.8	.2805	.0320	.6876	.4575	.0299	.5126	575	193.8	.6833	.0188	.2979	.8203	.0126	.1671
354	204.8	.2797	.0493	.6711	.4575	.0455	.4969	576	197.8	.5209	.0117	.4674	.7018	.0092	.2891
355	204.8	.2768	.0635	.6597	.4496	.0592	.4912	577	197.8	.5195	.0317	.4488	.6955	.0243	.2802
356	204.8	.2714	.0816	.6471	.4419	.0756	.4825	578	200.8	.4110	.0170	.5720	.6008	.0142	.3850
357	204.8	.2698	.1141	.6161	.4355	.1020	.4625	579	204.8	.2810	.0176	.7014	.4571	.0162	.5266
358	204.8	.2585	.1655	.5760	.4173	.1505	.4322	580	204.8	.2705	.0483	.6812	.4458	.0433	.5109
359	200.8	.4122	.0375	.5503	.6006	.0307	.3688	581	208.8	.1676	.0171	.8154	.3039	.0186	.6775
360	200.8	.4086	.0535	.5379	.5960	.0437	.3603	582	208.8	.1569	.0667	.7764	.2841	.0697	.6461
361	200.8	.4056	.0703	.5241	.5864	.0644	.3492	583	190.8	.7971	.1572	.0457	.8774	.0992	.0234
362	200.8	.4002	.0881	.5117	.5328	.0750	.3422	1189	187.6	.9887	.....	.0113	.9944	.....	.0056
363	200.8	.3935	.1234	.4831	.5741	.1000	.3259	1190	205.8	.1452	.8548	.....	.2469	.7531	.....
364	200.8	.3857	.1770	.4373	.5611	.1441	.2948	1191	202.8	.2515	.7485	.....	.3883	.6117	.....

TABLE 8

EXPERIMENTAL DATA AT 10 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1192	197.8	.4502	.5498	.....	.6035	.3965	.....
1193	193.8	.6400	.3600	.....	.7632	.2368	.....
1194	190.8	.8015	.1985	.....	.8780	.1220	.....
1195	188.2	.9529	.0471	.....	.9728	.0272	.....
1196	188.0	.9657	.0343	.....	.9800	.0200	.....
1197	187.5	.9948	.0052	.....	.9983	.0017	.....
1198	215.6	.....	.0488	.9512	.....	.0654	.9346
1199	215.4	.....	.0683	.9317	.....	.0855	.9145
1200	215.3	.....	.0723	.9277	.....	.0894	.9106
1201	213.8	.....	.2500	.7500	.....	.2866	.7134
1202	212.3	.....	.4866	.5134	.....	.5226	.4774
1203	211.3	.....	.7066	.2934	.....	.7254	.2746
1204	210.6	.....	.9671	.0329	.....	.9681	.0319
1205	212.8	.0297	.0130	.9573	.1394	.0133	.8473
1206	212.8	.0623	.0232	.9146	.1305	.0288	.8407
1207	212.8	.0178	.2537	.7285	.0363	.2861	.6777
1208	208.8	.1617	.0251	.8132	.3009	.0268	.6723
1209	208.8	.1574	.0409	.8017	.2884	.0431	.6685
1210	208.8	.1281	.1969	.6751	.2357	.1981	.5663
1211	208.8	.1058	.3808	.5134	.1885	.3776	.4339
1212	208.8	.0793	.5783	.3425	.1416	.5635	.2949
1213	208.8	.0625	.7524	.1852	.1128	.7235	.1638
1214	208.8	.0508	.9123	.0370	.0935	.8744	.0322
1215	204.8	.2811	.0274	.6915	.4585	.0253	.5161
1216	204.8	.2745	.0671	.6584	.4475	.0615	.4910
1217	204.8	.2430	.2485	.5085	.3938	.2236	.3825
1218	204.8	.2100	.4539	.3362	.3420	.4003	.2577
1219	204.8	.1939	.6274	.1787	.3089	.5503	.1408
1220	204.8	.1813	.7375	.0811	.2979	.6362	.0659
1221	202.8	.2963	.3051	.3986	.4520	.2627	.2853
1222	202.8	.2644	.5489	.1867	.4063	.4562	.1375
1223	202.8	.2468	.7069	.0463	.3825	.5829	.0346
1224	200.8	.4077	.0109	.5814	.5980	.0089	.3931
1225	200.8	.4020	.0353	.5627	.5899	.0290	.3811
1226	200.8	.3433	.4331	.2236	.5013	.3432	.1555
1227	200.8	.3267	.5761	.0971	.4790	.4526	.0683
1228	197.8	.5163	.0263	.4574	.6931	.0198	.2872
1229	197.8	.5092	.0500	.4408	.6860	.0375	.2766
1230	197.8	.4729	.3088	.2182	.6337	.2275	.1388
1231	197.8	.4624	.3994	.1382	.6188	.2918	.0893

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1233	195.8	.5945	.0607	.3448	.7537	.0434	.2029
1234	195.8	.5862	.1151	.2988	.7403	.0816	.1781
1235	195.8	.5754	.1983	.2263	.7288	.1377	.1335
1236	195.8	.5438	.3528	.1033	.6963	.2416	.0622
1237	193.8	.6847	.0094	.3059	.8209	.0075	.1716
1238	193.8	.6349	.3232	.0418	.7592	.2172	.0236
1239	191.8	.7736	.0123	.2141	.8738	.0078	.1185
1240	191.8	.7717	.0223	.2061	.8774	.0130	.1096
1241	191.8	.7705	.0372	.1922	.8737	.0228	.1036
1242	188.8	.9273	.0074	.0654	.9621	.0044	.0336
1243	188.8	.9286	.0202	.0512	.9626	.0116	.0258
1244	188.8	.9272	.0399	.0329	.9611	.0228	.0161
1245	188.8	.9242	.0463	.0295	.9589	.0264	.0147
1800	215.7	.....	.0153	.9847	.....	.0195	.9805
1801	215.6	.....	.0279	.9721	.....	.0350	.9650
1802	211.0	.....	.7560	.2440	.....	.7721	.2279
1803	210.6	.....	.9094	.0906	.....	.9143	.0857
1804	212.8	.0676	.0144	.9180	.1357	.0167	.8476
1805	212.8	.0643	.0286	.9071	.1292	.0327	.8381
1806	208.8	.1683	.0115	.8202	.3073	.0118	.6809
1807	208.8	.1659	.0253	.8089	.3013	.0255	.6732
1808	204.8	.2634	.1119	.6246	.4303	.1023	.4674
1809	212.8	.0672	.0100	.9228	.1355	.0113	.8532
1810	204.8	.1893	.6308	.1800	.3082	.5510	.1407
1811	200.8	.3992	.0743	.5265	.5841	.0619	.3540
1812	200.8	.3964	.0999	.5037	.5782	.0824	.3394
1813	197.8	.5210	.0104	.4687	.7001	.0078	.2921
1814	195.8	.5936	.0229	.3834	.7588	.0166	.2246
1815	195.8	.5691	.1958	.2351	.7189	.1384	.1427
1816	193.8	.6843	.0137	.3020	.8199	.0094	.1707
1817	193.8	.6382	.3279	.0339	.7645	.2166	.0189
1818	191.8	.7775	.0138	.2087	.8794	.0091	.1115
1819	191.8	.7757	.0264	.1979	.8770	.0167	.1063
1820	191.8	.7776	.0160	.2064	.8807	.0101	.1092
1821	191.8	.7735	.0374	.1891	.8758	.0238	.1004
1822	191.8	.7500	.1960	.0540	.8481	.1230	.0290
1823	190.8	.8212	.....	.1788	.9078	.....	.0922
1824	187.6	.9826	.....	.0174	.9923	.....	.0077
1825	187.5	.9839	.0161	.....	.9917	.0083	.....
1826	188.8	.9213	.0165	.0622	.9591	.0090	.0319

TABLE 9

EXPERIMENTAL DATA AT 12 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
258	216.7	.1193	.....	.8817	.2185	.....	.7815
259	212.8	.2247	.....	.7753	.3643	.....	.6357
260	208.8	.3421	.....	.6579	.5214	.....	.4786
261	204.8	.4802	.....	.5198	.6496	.....	.3504
262	200.8	.6261	.....	.3739	.7712	.....	.2288
263	197.8	.7524	.....	.2476	.8592	.....	.1408
264	195.8	.8412	.....	.1556	.9107	.....	.0893
265	194.8	.8848	.....	.1152	.9385	.....	.0615
266	221.4	.....	.0158	.9842	.....	.0197	.9803
267	221.1	.....	.0444	.9556	.....	.0547	.9453
268	220.8	.....	.0787	.9213	.....	.0963	.9037
269	220.5	.....	.1102	.8898	.....	.1322	.8677
270	194.8	.8688	.1312	.....	.9180	.0820	.....
271	195.3	.8418	.1582	.....	.8998	.1002	.....
272	195.8	.8135	.1865	.....	.8808	.1192	.....
273	196.3	.7858	.2142	.....	.8620	.1380	.....
274	218.7	.0591	.0313	.9097	.1153	.0371	.8476
275	218.7	.0540	.0499	.8961	.1057	.0573	.8369
276	218.7	.0493	.0675	.8833	.0974	.0772	.8255
277	218.7	.0436	.0927	.8637	.0858	.1061	.8080
278	193.3	.9528	.0472	.....	.9711	.0289	.....
279	193.8	.9228	.0772	.....	.9524	.0476	.....
280	218.7	.0411	.1223	.8365	.0783	.1393	.7825
281	218.7	.0307	.1684	.8009	.0584	.1913	.7504
282	194.3	.8981	.1019	.....	.9370	.0630	.....
283	214.8	.1602	.0366	.8032	.2823	.0379	.6798
284	214.8	.1564	.0531	.7905	.2752	.0548	.6700
285	214.8	.1524	.0698	.7779	.2697	.0718	.6585
286	214.8	.1474	.0879	.7648	.2614	.0911	.6476
287	214.8	.1402	.1303	.7295	.2480	.1331	.6189
288	214.8	.1287	.1835	.6878	.2266	.1868	.5867
289	210.8	.2700	.0337	.6962	.4338	.0315	.5348
290	210.8	.2670	.0545	.6785	.4260	.0512	.5228
291	210.8	.2627	.0690	.6683	.4197	.0651	.5152
292	210.8	.2592	.0842	.6567	.4155	.0788	.5057
293	210.8	.2514	.1205	.6282	.4030	.1140	.4830
294	210.8	.2471	.1810	.5720	.3906	.1672	.4422

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
295	206.8	.4015	.0376	.5610	.5758	.0319	.3923
296	206.8	.3987	.0571	.5442	.5739	.0479	.3783
297	206.8	.3965	.0748	.5287	.5670	.0637	.3693
298	206.8	.3926	.0923	.5151	.5615	.0776	.3609
299	206.8	.3843	.1320	.4837	.5514	.1104	.3382
300	206.8	.3749	.1886	.4365	.5374	.1558	.3068
301	202.8	.5453	.0390	.4156	.7048	.0300	.2652
302	202.8	.5406	.0583	.4011	.7017	.0447	.2536
303	202.8	.5377	.0803	.3821	.6962	.0610	.2428
304	202.8	.5363	.0987	.3650	.6894	.0756	.2350
305	202.8	.5307	.1392	.3302	.6840	.1044	.2116
306	202.8	.5204	.2120	.2677	.6701	.1584	.1715
307	199.8	.6663	.0379	.2958	.7960	.0270	.1770
308	199.8	.6620	.0603	.2777	.7915	.0426	.1659
309	199.8	.6583	.0852	.2565	.7860	.0603	.1537
310	199.8	.6560	.1063	.2377	.7825	.0755	.1419
311	199.8	.6476	.1456	.2068	.7748	.1013	.1240
312	199.8	.6382	.2193	.1425	.7603	.1534	.0863
313	198.8	.7024	.0614	.2362	.8193	.0423	.1385
314	198.8	.6954	.1093	.1953	.8098	.0749	.1154
315	198.8	.6885	.1510	.1604	.8020	.1031	.0950
316	198.8	.6789	.2164	.1048	.7904	.1476	.0621
317	196.8	.7936	.0377	.1687	.8804	.0245	.0951
318	196.8	.7899	.0575	.1526	.8767	.0376	.0856
319	196.8	.7867	.0749	.1384	.8732	.0494	.0774
320	196.8	.7828	.0974	.1198	.8683	.0642	.0675
321	196.8	.7764	.1333	.0903	.8622	.0871	.0507
322	196.8	.7656	.1836	.0508	.8533	.1183	.0284
323	195.8	.8333	.0564	.1103	.9015	.0371	.0614
324	195.8	.8270	.0934	.0797	.8959	.0597	.0444
565	199.8	.6629	.0226	.3145	.7992	.0172	.1836
566	198.8	.7069	.0190	.2741	.8266	.0126	.1609
567	198.8	.7021	.0435	.2544	.8231	.0300	.1470
568	196.8	.7930	.0203	.1667	.8837	.0123	.1040
569	195.8	.8402	.0159	.1439	.9116	.0105	.0779
570	195.8	.8391	.0363	.1245	.9068	.0244	.0689
1135	193.3	.9661	.....	.0339	.9799	.....	.0201

TABLE 9

EXPERIMENTAL DATA AT 12 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION			VAPOR MOL FRACTION			RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION			VAPOR MOL FRACTION		
		N2	AR	O2	N2	AR	O2			N2	AR	O2	N2	AR	O2
1136	212.8	.1072	.8928	.....	.1768	.8232	.....	1174	199.8	.6227	.3280	.0493	.7438	.2269	.0293
1137	210.8	.1699	.8301	.....	.2717	.7283	.....	1175	198.8	.6730	.2711	.0559	.7845	.1825	.0330
1138	204.8	.3896	.6104	.....	.5327	.4673	.....	1176	196.8	.8044	.0061	.1895	.8876	.0052	.1072
1139	199.8	.6152	.3848	.....	.7357	.2643	.....	1177	196.8	.7998	.0188	.1815	.8863	.0121	.1016
1140	193.0	.9778	.0222	.....	.9867	.0133	.....	1178	196.8	.7973	.0340	.1687	.8832	.0224	.0943
1141	221.5	.....	.0198	.9802	.....	.0273	.9727	1179	195.8	.8308	.1209	.0483	.8961	.0774	.0266
1142	221.2	.....	.0554	.9446	.....	.0677	.9323	1180	194.3	.9237	.0075	.0688	.9592	.0047	.0361
1143	221.0	.....	.0726	.9274	.....	.0879	.9121	1181	194.3	.9223	.0184	.0594	.9575	.0116	.0309
1144	219.8	.....	.2094	.7906	.....	.2405	.7595	1182	194.3	.9233	.0224	.0543	.9575	.0153	.0272
1145	218.7	.....	.3670	.6330	.....	.4032	.5968	1183	194.3	.9182	.0370	.0448	.9538	.0227	.0235
1146	217.7	.....	.5377	.4623	.....	.5677	.4323	1184	194.3	.9158	.0484	.0359	.9512	.0293	.0195
1147	216.8	.....	.5439	.4561	.....	.5727	.4273	1185	194.3	.9138	.0667	.0196	.9474	.0424	.0103
1148	216.4	.....	.9159	.0841	.....	.9190	.0810	1186	193.3	.9684	.0069	.0246	.9835	.0045	.0120
1149	218.7	.0665	.0207	.9128	.1262	.0236	.8502	1187	193.3	.9676	.0143	.0181	.9830	.0082	.0089
1150	218.7	.0622	.0431	.8947	.1173	.0497	.8330	1188	193.3	.9662	.0233	.0106	.9798	.0139	.0063
1151	214.8	.1639	.0277	.8084	.3039	.0277	.6684	1777	221.5	.....	.0120	.9880	.....	.0151	.9849
1152	214.8	.1654	.0299	.8048	.2898	.0303	.6798	1778	221.2	.....	.0397	.9603	.....	.0488	.9512
1153	214.8	.1643	.0453	.7904	.2869	.0463	.6668	1779	221.0	.....	.0567	.9433	.....	.0694	.9306
1154	214.9	.1026	.3878	.5096	.1785	.3839	.4376	1780	216.8	.....	.7226	.2774	.....	.7403	.2597
1155	214.8	.0787	.5847	.3367	.1359	.5695	.2945	1781	216.6	.....	.7871	.2129	.....	.7999	.2001
1156	214.8	.0662	.7090	.2248	.1151	.6831	.2018	1782	216.4	.....	.8576	.1424	.....	.8639	.1361
1157	214.8	.0581	.7811	.1609	.1004	.7566	.1430	1783	218.7	.0642	.0106	.9253	.1236	.0124	.8640
1158	214.8	.0511	.8776	.0713	.0899	.8448	.0653	1784	214.8	.1618	.0253	.8129	.2838	.0266	.6896
1159	210.8	.2265	.3393	.4342	.3554	.3098	.3347	1785	214.8	.1603	.0324	.8073	.2810	.0340	.6850
1160	210.8	.2143	.4317	.3540	.3343	.3865	.2792	1786	214.8	.1643	.0120	.8237	.2881	.0127	.6993
1161	210.8	.1940	.5738	.2321	.3060	.5081	.1859	1787	212.8	.2209	.....	.7791	.3698	.....	.6302
1162	210.8	.1807	.7027	.1165	.2865	.6189	.0946	1788	206.8	.4024	.0148	.5828	.5787	.0123	.4090
1163	210.8	.1740	.7958	.0302	.2772	.6975	.0253	1789	199.8	.6618	.0243	.3139	.7957	.0169	.1874
1164	206.8	.4075	.0117	.5808	.5854	.0106	.4040	1790	199.8	.6602	.0347	.3051	.7929	.0242	.1829
1165	206.8	.4035	.0375	.5590	.5755	.0317	.3928	1791	198.8	.7052	.0229	.2719	.8259	.0158	.1583
1166	206.8	.3570	.3151	.3278	.5096	.2589	.2315	1792	196.8	.7948	.0138	.1914	.8834	.0089	.1077
1167	206.8	.3414	.4626	.1959	.4836	.3747	.1417	1793	195.8	.8356	.0433	.1211	.9052	.0274	.0674
1168	206.8	.3203	.6032	.0765	.4598	.4848	.0554	1794	194.3	.9068	.0289	.0642	.9482	.0182	.0336
1169	202.8	.4970	.3674	.1356	.6387	.2724	.0890	1795	194.3	.9102	.....	.0898	.9522	.....	.0478
1170	202.8	.4835	.4568	.0597	.6250	.3366	.0384	1796	193.3	.9582	.....	.0418	.9774	.....	.0226
1171	199.8	.6670	.0111	.3219	.8015	.0077	.1908	1797	193.3	.9564	.0082	.0353	.9770	.0048	.0182
1172	199.8	.6635	.0238	.3127	.7982	.0160	.1857	1798	193.3	.9555	.0249	.0196	.9743	.0152	.0106
1173	199.8	.6642	.0298	.3059	.8016	.0183	.1801	1799	193.0	.9679	.0321	.....	.9807	.0193	.....

TABLE 10

EXPERIMENTAL DATA AT 14 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
194	223.7	.0693	.....	.9307	.1308	.....	.8692
195	219.7	.1716	.....	.8284	.2923	.....	.7077
196	216.7	.2586	.....	.7414	.4055	.....	.5945
197	211.8	.4055	.....	.5945	.5725	.....	.4275
198	207.8	.5506	.....	.4494	.7035	.....	.2965
199	203.8	.7025	.....	.2975	.8198	.....	.1802
200	200.8	.8272	.....	.1728	.9017	.....	.0983
201	198.8	.9149	.....	.0851	.9537	.....	.0463
202	226.5	.....	.0215	.9785	.....	.0263	.9737
203	226.2	.....	.0452	.9548	.....	.0553	.9447
204	225.9	.....	.0820	.9180	.....	.0983	.9017
205	225.6	.....	.0902	.9098	.....	.1268	.8732
206	197.8	.9588	.0412	.....	.9740	.0260	.....
207	198.3	.9318	.0682	.....	.9565	.0435	.....
208	198.8	.8998	.1002	.....	.9355	.0645	.....
209	199.3	.8757	.1243	.....	.9204	.0796	.....
210	224.7	.0422	.0168	.9410	.0821	.0198	.8981
211	224.7	.0391	.0268	.9341	.0766	.0320	.8915
212	224.7	.0357	.0384	.9259	.0697	.0452	.8851
213	224.7	.0329	.0516	.9155	.0641	.0603	.8756
214	224.7	.0273	.0768	.8959	.0533	.0897	.8570
215	224.7	.0173	.1209	.8618	.0353	.1342	.8305
216	219.7	.1672	.0197	.8131	.2854	.0197	.6949
217	219.7	.1644	.0306	.8050	.2828	.0321	.6851
218	219.7	.1613	.0473	.7914	.2735	.0493	.6772
219	219.7	.1598	.0607	.7795	.2706	.0633	.6661
220	219.7	.1509	.0976	.7515	.2562	.1006	.6432
221	219.7	.1420	.1531	.7048	.2400	.1580	.6019
222	214.8	.3098	.0239	.6663	.4611	.0219	.5171
223	214.8	.3104	.0369	.6527	.4611	.0346	.5043
224	214.8	.3080	.0490	.6430	.4595	.0396	.5009
225	214.8	.3031	.0671	.6298	.4499	.0624	.4877
226	214.8	.2906	.1150	.5944	.4355	.1037	.4608
227	214.8	.2779	.1691	.5530	.4172	.1546	.4282
228	209.8	.4705	.0242	.5053	.6339	.0200	.3460
229	209.8	.4641	.0440	.4919	.6263	.0364	.3373
230	209.8	.4626	.0812	.4562	.6201	.0670	.3129
231	209.8	.4579	.1067	.4354	.6114	.0874	.3012
232	209.8	.4482	.1505	.4014	.6000	.1218	.2782
233	209.8	.4362	.2252	.3386	.5854	.1804	.2341
234	204.8	.6558	.0430	.3012	.7805	.0316	.1879
235	204.8	.6525	.0682	.2793	.7761	.0507	.1732
236	204.8	.6475	.0943	.2582	.7713	.0693	.1594
237	204.8	.6426	.1179	.2395	.7658	.0851	.1491
238	204.8	.6425	.1406	.2169	.7627	.1023	.1350
239	204.8	.6299	.2082	.1619	.7520	.1479	.1001
240	202.8	.7392	.0403	.2205	.8419	.0282	.1299
241	202.8	.7351	.0671	.1978	.8303	.0470	.1227
242	202.8	.7270	.0857	.1873	.8275	.0595	.1130
243	202.8	.7254	.1035	.1711	.8249	.0723	.1028
244	202.8	.7159	.1482	.1359	.8168	.1021	.0811
245	202.8	.7075	.1964	.0961	.8081	.1344	.0575
246	201.8	.7721	.0651	.1627	.8594	.0452	.0954
247	201.8	.7655	.1066	.1279	.8544	.0722	.0734
248	201.8	.7601	.1554	.0845	.8463	.1044	.0493
249	201.8	.7486	.2039	.0475	.8374	.1351	.0275
250	199.8	.8650	.0438	.0912	.9204	.0286	.0510
251	199.8	.8602	.0713	.0685	.9145	.0475	.0380
252	199.8	.8564	.0962	.0473	.9088	.0623	.0288
253	199.8	.8533	.1146	.0321	.9069	.0750	.0181
254	199.8	.8510	.1292	.0198	.9057	.0833	.0111
255	199.8	.8693	.0251	.1057	.9251	.0164	.0586
256	198.8	.9114	.0510	.0376	.9442	.0332	.0226
257	198.8	.9042	.0772	.0186	.9410	.0485	.0105
558	225.5	.....	.1190	.8810	.....	.1407	.8593
559	203.8	.7041	.....	.2959	.8188	.....	.1812
560	202.8	.7365	.0639	.1995	.8345	.0458	.1197
561	201.8	.7773	.0623	.1605	.8631	.0418	.0951
562	199.8	.8712	.0405	.0883	.9234	.0269	.0497
628	200.8	.8098	.....	.1902	.8897	.....	.1103
1064	197.8	.9693	.....	.0307	.9835	.....	.0165
1065	217.7	.1041	.8959	.....	.1713	.8287	.....
1066	214.8	.2014	.7986	.....	.3079	.6921	.....
1067	209.8	.3866	.6134	.....	.5224	.4776	.....
1068	204.8	.6032	.3968	.....	.7230	.2770	.....
1069	201.8	.7552	.2448	.....	.8367	.1633	.....
1070	198.0	.9577	.0423	.....	.9749	.0251	.....
1071	197.7	.9752	.0248	.....	.9846	.0154	.....
1072	197.5	.9842	.0158	.....	.9909	.0091	.....
1073	197.4	.9890	.0110	.....	.9939	.0061	.....
1074	226.6	.....	.0138	.9862	.....	.0182	.9818
1075	226.4	.....	.0382	.9618	.....	.0480	.9520

TABLE 10

EXPERIMENTAL DATA AT 14 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
1076	226.3	.....	.0499	.9501	.....	.0608	.9392	1117	207.8	.4931	.3793	.1276	.6267	.2869	.0864
1077	225.5	.....	.1330	.8670	.....	.1581	.8419	1118	207.8	.4829	.4651	.0520	.6148	.3496	.0356
1078	224.7	.....	.2356	.7644	.....	.2650	.7350	1119	204.8	.6684	.0111	.3205	.7917	.0081	.2003
1079	223.2	.....	.4624	.5376	.....	.4925	.5075	1120	204.8	.6659	.0233	.3108	.7915	.0159	.1926
1080	222.2	.....	.6800	.3200	.....	.6989	.3011	1121	204.8	.6633	.0393	.2974	.7860	.0290	.1850
1081	221.6	.....	.8804	.1196	.....	.8847	.1153	1122	204.8	.6208	.3073	.0718	.7355	.2187	.0459
1082	221.4	.....	.9653	.0347	.....	.9678	.0322	1123	201.8	.7926	.0119	.1955	.8749	.0079	.1172
1083	224.7	.0449	.0168	.9383	.0843	.0195	.8962	1124	201.8	.7934	.0227	.1839	.8774	.0151	.1076
1084	219.7	.1703	.0209	.8088	.2858	.0198	.6945	1125	201.8	.7896	.0380	.1724	.8731	.0255	.1014
1085	219.7	.1594	.0730	.7676	.2684	.0718	.6598	1126	201.8	.7875	.0526	.1599	.8711	.0352	.0937
1086	219.7	.1529	.0997	.7474	.2578	.1014	.6408	1127	201.8	.7866	.0618	.1516	.8706	.0417	.0877
1087	219.7	.1295	.2491	.6214	.2171	.2488	.5341	1128	198.8	.9592	.0076	.0332	.9609	.0041	.0350
1088	219.7	.0967	.4596	.4437	.1599	.4529	.3872	1129	198.8	.9260	.0207	.0533	.9588	.0124	.0288
1089	219.7	.0746	.6313	.2941	.1253	.6141	.2606	1130	198.8	.9232	.0262	.0506	.9591	.0156	.0253
1090	219.7	.0608	.7751	.1642	.1036	.7483	.1481	1131	198.8	.9266	.0389	.0345	.9538	.0248	.0213
1091	219.7	.0559	.8547	.0894	.0946	.8234	.0820	1132	197.8	.9766	.0062	.0172	.9860	.0032	.0108
1092	217.7	.2291	.0198	.7511	.3668	.0200	.6133	1133	197.8	.9725	.0139	.0136	.9840	.0082	.0077
1093	217.7	.2127	.0979	.6894	.3393	.0952	.5656	1134	197.8	.9664	.0255	.0081	.9793	.0161	.0047
1094	217.7	.1870	.2463	.5667	.2961	.2373	.4666	1755	226.2	.....	.0504	.9496	.....	.0609	.9391
1095	217.7	.1563	.4359	.4078	.2489	.4123	.3388	1756	221.4	.....	.9318	.0682	.....	.9322	.0678
1096	217.7	.1283	.6746	.1971	.2054	.6240	.1706	1757	224.7	.0189	.1225	.8586	.0349	.1412	.8240
1097	217.7	.1093	.8810	.0097	.1783	.8133	.0084	1758	219.7	.1664	.0085	.8252	.2818	.0090	.7093
1098	214.8	.3146	.0175	.6679	.4743	.0165	.5093	1759	219.7	.1640	.0181	.8179	.2791	.0194	.7015
1099	214.8	.3063	.0530	.6407	.4616	.0489	.4894	1760	214.8	.2980	.0492	.6528	.4512	.0442	.5046
1100	214.8	.3011	.0898	.6091	.4507	.0809	.4685	1761	211.8	.3986	.0477	.5537	.5545	.0408	.4047
1101	214.8	.2699	.2737	.4564	.4014	.2436	.3550	1762	204.8	.6563	.0237	.3200	.7830	.0173	.1997
1102	214.8	.2469	.4283	.3248	.3667	.3778	.2555	1763	201.8	.7464	.2536	.....	.8291	.1709	.....
1103	214.8	.2187	.6567	.1246	.3301	.5704	.0995	1764	199.8	.8590	.1034	.0376	.9115	.0669	.0216
1104	214.8	.2135	.7334	.0531	.3217	.6352	.0432	1765	198.8	.9192	.0089	.0719	.9535	.0057	.0408
1105	211.8	.4064	.0473	.5463	.5681	.0386	.3933	1766	198.8	.9171	.0231	.0598	.9516	.0149	.0333
1106	211.8	.3939	.1114	.4948	.5473	.0942	.3585	1767	198.8	.9162	.0303	.0535	.9501	.0193	.0305
1107	211.8	.3854	.1701	.4445	.5351	.1438	.3211	1768	198.8	.9156	.0445	.0399	.9494	.0285	.0221
1108	211.8	.3462	.4446	.2092	.4779	.3662	.1559	1769	198.8	.9117	.0549	.0333	.9469	.0346	.0185
1109	211.8	.3242	.5921	.0836	.4557	.4814	.0629	1770	197.8	.9673	.0077	.0250	.9814	.0047	.0139
1110	209.8	.4808	.0130	.5062	.6410	.0107	.3484	1771	197.8	.9659	.0158	.0183	.9804	.0097	.0099
1111	209.8	.4750	.0313	.4938	.6353	.0250	.3397	1772	197.8	.9650	.0248	.0102	.9791	.0154	.0055
1112	209.8	.4686	.0614	.4700	.6265	.0496	.3238	1773	198.0	.9507	.0493	.....	.9684	.0316	.....
1113	209.8	.4297	.3123	.2580	.5723	.2487	.1790	1774	198.7	.9662	.0338	.....	.9786	.0214	.....
1114	209.8	.4002	.5358	.0640	.5374	.4178	.0448	1775	197.5	.9791	.0209	.....	.9870	.0130	.....
1115	207.8	.5382	.0951	.3668	.6831	.0738	.2431	1776	197.4	.9851	.0149	.....	.9912	.0088	.....
1116	207.8	.5180	.2138	.2683	.6582	.1624	.1794	1868	197.7	.9632	.0368	.....	.9768	.0232	.....

TABLE 11

EXPERIMENTAL DATA AT 16 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
130	227.7	.0870	.....	.9130	.1465	.....	.8535	171	209.8	.6352	.0328	.3320	.7615	.0246	.2138
131	224.7	.1588	.....	.8412	.2569	.....	.7431	172	209.8	.6290	.0500	.3209	.7574	.0379	.2047
132	220.7	.2741	.....	.7259	.4091	.....	.5909	173	209.8	.6275	.0777	.2948	.7489	.0586	.1925
133	216.7	.3981	.....	.6019	.5356	.....	.4644	174	209.8	.6233	.1166	.2601	.7434	.0876	.1690
134	211.8	.5444	.....	.4556	.7042	.....	.2958	175	209.8	.6075	.1773	.2152	.7287	.1328	.1385
135	207.8	.7174	.....	.2826	.8245	.....	.1755	176	206.8	.7593	.0206	.2201	.8455	.0146	.1399
136	204.8	.8501	.....	.1499	.9054	.....	.0946	177	206.8	.7542	.0345	.2113	.8412	.0248	.1340
137	202.8	.9292	.....	.0708	.9618	.....	.0382	178	206.8	.7515	.0565	.1920	.8368	.0399	.1233
138	231.2	.....	.0125	.9875	.....	.0159	.9841	179	206.8	.7487	.0750	.1763	.8338	.0545	.1117
139	230.9	.....	.0412	.9588	.....	.0500	.9500	180	206.8	.7435	.1114	.1452	.8291	.0781	.0928
140	230.6	.....	.0744	.9256	.....	.0936	.9064	181	206.8	.7277	.1631	.1092	.8179	.1145	.0675
141	230.3	.....	.1043	.8957	.....	.1207	.8793	182	205.8	.7915	.0433	.1652	.8705	.0291	.1004
142	201.8	.9728	.0272	.....	.9824	.0176	.....	183	205.8	.7845	.0653	.1503	.8665	.0430	.0905
143	202.3	.9424	.0576	.....	.9633	.0367	.....	184	205.8	.7823	.0952	.1225	.8575	.0688	.0737
144	202.8	.9153	.0847	.....	.9451	.0549	.....	185	205.8	.7680	.1576	.0743	.8469	.1080	.0451
145	203.3	.8858	.1142	.....	.9252	.0748	.....	186	203.8	.8830	.0232	.0938	.9309	.0153	.0539
146	229.7	.0308	.0123	.9570	.0574	.0141	.9284	187	203.8	.8764	.0395	.0840	.9263	.0250	.0487
147	229.7	.0315	.0238	.9448	.0569	.0276	.9154	188	203.8	.8731	.0581	.0688	.9208	.0406	.0385
148	229.7	.0262	.0343	.9395	.0490	.0397	.9113	189	203.8	.8735	.0616	.0649	.9161	.0440	.0398
149	229.7	.0271	.0407	.9322	.0495	.0463	.9043	190	203.8	.8648	.1166	.0186	.9143	.0750	.0107
150	229.7	.0232	.0678	.9090	.0435	.0854	.8711	191	203.8	.8643	.1232	.0125	.9125	.0803	.0072
151	229.7	.0124	.1249	.8626	.0214	.1449	.8337	192	202.8	.9208	.0400	.0393	.9525	.0250	.0225
152	224.7	.1604	.0156	.8240	.2664	.0174	.7162	193	202.8	.9183	.0637	.0180	.9460	.0437	.0103
153	224.7	.1576	.0289	.8135	.2617	.0304	.7079	547	220.7	.2728	.....	.7272	.4132	.....	.5868
154	224.7	.1560	.0367	.8073	.2572	.0392	.7036	548	216.7	.3943	.....	.6057	.5491	.....	.4509
155	224.7	.1525	.0467	.8008	.2517	.0512	.6971	549	212.8	.5040	.....	.4960	.6542	.....	.3458
156	224.7	.1452	.0790	.7758	.2421	.0839	.6740	550	204.8	.8448	.....	.1552	.9070	.....	.0930
157	224.7	.1337	.1375	.7286	.2214	.1479	.6307	551	202.8	.9322	.....	.0678	.9604	.....	.0396
158	219.7	.3048	.0178	.6774	.4422	.0166	.5411	552	225.7	.1413	.0100	.8487	.2250	.0158	.7593
159	219.7	.3014	.0304	.6683	.4390	.0282	.5328	553	224.7	.1587	.0121	.8292	.2653	.0115	.7232
160	219.7	.2974	.0478	.6549	.4330	.0448	.5222	554	219.7	.3030	.0142	.6827	.4469	.0134	.5397
161	219.7	.2941	.0557	.6502	.4293	.0516	.5191	555	209.8	.6306	.0622	.3072	.7612	.0488	.1900
162	219.7	.2851	.1130	.6019	.4135	.1045	.4821	556	206.8	.7391	.1599	.1010	.8236	.1134	.0630
163	219.7	.2747	.1553	.5681	.3994	.1437	.4569	1000	201.8	.9808	.....	.0192	.9897	.....	.0103
164	214.8	.4557	.0215	.5228	.6083	.0180	.3737	1001	221.7	.1232	.8768	.....	.1940	.8060	.....
165	214.8	.4536	.0316	.5147	.6049	.0269	.3683	1002	218.7	.2239	.7761	.....	.3309	.6691	.....
166	214.8	.4524	.0458	.5018	.6026	.0393	.3580	1003	214.8	.3707	.6293	.....	.4960	.5040	.....
167	214.8	.4507	.0607	.4886	.5995	.0523	.3481	1004	209.8	.5809	.4191	.....	.6905	.3095	.....
168	214.8	.4419	.1003	.4578	.5880	.0834	.3286	1005	204.8	.8179	.1821	.....	.8765	.1235	.....
169	214.8	.4278	.1684	.4039	.5718	.1398	.2884	1006	202.5	.9368	.0632	.....	.9592	.0408	.....
170	209.8	.6389	.0194	.3417	.7644	.0146	.2210	1007	202.0	.9650	.0350	.....	.9774	.0226	.....

TABLE 11

EXPERIMENTAL DATA AT 16 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
1008	201.6	.9852	.0148	.....	.9910	.0090	.....
1009	226.0	.....	.9302	.0698	.....	.9323	.0677
1010	226.3	.....	.8058	.1942	.....	.8147	.1853
1011	226.7	.....	.6902	.3098	.....	.7078	.2922
1012	227.7	.....	.4736	.5264	.....	.5026	.4974
1013	229.2	.....	.2391	.7609	.....	.2686	.7314
1014	230.8	.....	.0573	.9427	.....	.0690	.9310
1015	231.0	.....	.0407	.9593	.....	.0478	.9522
1016	231.1	.....	.0343	.9657	.....	.0410	.9590
1017	224.7	.1558	.0377	.8065	.2561	.0393	.7046
1018	224.7	.1089	.2801	.6110	.1795	.2827	.5378
1019	224.7	.0819	.4502	.4680	.1437	.4413	.4151
1020	224.7	.0693	.5588	.3719	.1135	.5529	.3336
1021	224.7	.0510	.7344	.2146	.0856	.7189	.1955
1022	224.7	.0390	.8716	.0894	.0662	.8508	.0830
1023	224.7	.0346	.9564	.0090	.0599	.9320	.0081
1024	221.7	.2285	.0741	.6974	.3569	.0711	.5720
1025	221.7	.2152	.1472	.6376	.3339	.1427	.5234
1026	221.7	.2096	.1867	.6036	.3241	.1790	.4969
1027	221.7	.1475	.6510	.2015	.2274	.6013	.1713
1028	221.7	.1319	.8183	.0498	.2048	.7521	.0432
1029	219.7	.3018	.0222	.6760	.4465	.0208	.5328
1030	219.7	.2887	.0949	.6164	.4248	.0881	.4871
1031	219.7	.2589	.2502	.4909	.3819	.2277	.3903
1032	219.7	.2390	.3928	.3682	.3513	.3533	.2954
1033	219.7	.2229	.4984	.2787	.3293	.4438	.2269
1034	219.7	.2091	.6075	.1834	.3114	.5386	.1500
1035	219.7	.1863	.7645	.0492	.2854	.6740	.0406
1036	216.7	.3752	.0767	.5480	.5273	.0657	.4070
1037	216.7	.3644	.1322	.5034	.5133	.1136	.3731
1038	216.7	.3417	.3391	.3192	.4709	.2890	.2401
1039	216.7	.3140	.5548	.1311	.4341	.4651	.1009
1040	216.7	.3005	.6581	.0414	.4192	.5492	.0317
1041	214.8	.4632	.0114	.5254	.6153	.0091	.3756
1042	214.8	.4487	.0914	.4599	.5944	.0759	.3297
1043	214.8	.4259	.2335	.3407	.5624	.1927	.2448
1044	214.8	.4061	.3682	.2256	.5384	.2988	.1628
1045	214.8	.3783	.5753	.0464	.5055	.4607	.0338
1046	211.8	.5556	.0885	.3559	.6920	.0679	.2401
1047	211.8	.5306	.2475	.2218	.6596	.1895	.1509
1048	211.8	.5174	.3409	.1417	.6422	.2611	.0966
1049	211.8	.5058	.4295	.0648	.6296	.3262	.0442
1050	209.8	.6467	.0124	.3409	.7697	.0093	.2210
1051	209.8	.6392	.0502	.3106	.7615	.0375	.2009
1052	209.8	.6166	.1923	.1911	.7328	.1423	.1249
1053	209.8	.6016	.2864	.1120	.7158	.2112	.0731
1054	206.8	.7649	.0096	.2255	.8550	.0061	.1389
1055	206.8	.7601	.0411	.1988	.8470	.0299	.1231
1056	206.8	.7413	.1920	.0668	.8256	.1327	.0418
1057	205.8	.7774	.1904	.0321	.8546	.1273	.0181
1058	203.8	.8889	.0170	.0942	.9358	.0094	.0547
1059	203.8	.8900	.0298	.0802	.9318	.0200	.0481
1060	203.8	.8777	.0904	.0319	.9213	.0602	.0185
1061	202.8	.9316	.0405	.0279	.9569	.0256	.0176
1062	201.8	.9795	.0060	.0144	.9884	.0038	.0078
1063	201.8	.9808	.0112	.0080	.9897	.0063	.0040
1733	231.3	.....	.0068	.9932	.....	.0095	.9905
1734	231.2	.....	.0186	.9814	.....	.0239	.9761
1735	230.6	.....	.0773	.9227	.....	.0910	.9090
1736	229.7	.0278	.0443	.9279	.0513	.0515	.8971
1737	228.7	.....	.3101	.6899	.....	.3408	.6592
1738	225.7	.1347	.0166	.8487	.2273	.0178	.7549
1739	224.7	.1652	.....	.8348	.2694	.....	.7306
1740	224.7	.1373	.1341	.7287	.2246	.1385	.6369
1741	224.7	.1217	.2173	.6611	.2011	.2197	.5792
1742	224.7	.0832	.4512	.4656	.1312	.4478	.4210
1743	224.7	.0352	.9595	.0053	.0684	.9240	.0076
1744	214.8	.4561	.0144	.5295	.6076	.0117	.3807
1745	212.8	.5290	.....	.4710	.6740	.....	.3260
1746	209.8	.6243	.0775	.2982	.7470	.0581	.1949
1747	206.8	.7357	.1429	.1214	.8232	.1009	.0759
1748	206.8	.7589	.0066	.2345	.8468	.0056	.1477
1749	205.8	.7707	.1967	.0327	.8438	.1365	.0197
1750	203.8	.8788	.0661	.0551	.9224	.0440	.0336
1751	203.8	.8864	.0164	.0972	.9311	.0109	.0580
1752	202.8	.9247	.0434	.0319	.9525	.0286	.0189
1753	201.8	.9741	.0155	.0105	.9841	.0098	.0061
1754	226.6	.....	.0113	.9887	.....	.0141	.9859
1860	231.3	.....	.0082	.9918	.....	.0103	.9897
1861	224.7	.1455	.0833	.7712	.2387	.0860	.6753
1862	224.7	.0354	.9548	.0098	.0590	.9327	.0083
1866	206.8	.7591	.0164	.2245	.8481	.0117	.1402

TABLE 12

EXPERIMENTAL DATA AT 18 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
66	231.8	.0873	.....	.9127	.1427	.....	.8573
67	227.8	.1959	.....	.8041	.3043	.....	.6957
68	224.7	.2784	.....	.7216	.4168	.....	.5832
69	220.7	.4023	.....	.5977	.5400	.....	.4600
70	216.7	.5320	.....	.4680	.6655	.....	.3345
71	211.8	.7120	.....	.2880	.8176	.....	.1824
72	208.8	.8451	.....	.1549	.8966	.....	.1034
73	206.8	.9283	.....	.0717	.9576	.....	.0424
74	235.2	.....	.0372	.9628	.....	.0435	.9565
75	234.9	.....	.0682	.9318	.....	.0805	.9195
76	234.6	.....	.1035	.8965	.....	.1202	.8798
77	234.3	.....	.1340	.8660	.....	.1553	.8447
78	205.3	.9886	.0114	.....	.9922	.0078	.....
79	205.8	.9603	.0397	.....	.9737	.0263	.....
80	206.3	.9341	.0659	.....	.9563	.0437	.....
81	206.8	.9040	.0960	.....	.9348	.0652	.....
82	233.7	.0345	.0240	.9414	.0593	.0291	.9116
83	233.7	.0292	.0475	.9233	.0510	.0553	.8937
84	233.7	.0238	.0621	.9141	.0450	.0712	.8838
85	233.7	.0172	.1076	.8752	.0306	.1225	.8469
86	229.7	.1401	.0168	.8431	.2270	.0182	.7548
87	229.7	.1303	.0221	.8476	.2206	.0240	.7554
88	229.7	.1350	.0356	.8294	.2192	.0371	.7437
89	229.7	.1307	.0455	.8238	.2114	.0481	.7404
90	229.7	.1182	.0729	.8089	.1981	.0770	.7250
91	229.7	.1105	.1193	.7702	.1816	.1277	.6907
92	224.7	.2754	.0153	.7093	.4066	.0148	.5786
93	224.7	.2656	.0246	.7098	.3951	.0232	.5817
94	224.7	.2718	.0350	.6932	.3933	.0336	.5731
95	224.7	.2599	.0484	.6917	.3903	.0459	.5638
96	224.7	.2626	.0940	.6434	.3807	.0914	.5279
97	224.7	.2479	.1393	.6128	.3703	.1307	.4991
98	219.7	.4205	.0182	.5613	.5570	.0135	.4295
99	219.7	.4316	.0268	.5416	.5541	.0219	.4239
100	219.7	.4276	.0430	.5294	.5584	.0342	.4075
101	219.7	.4218	.0557	.5225	.5472	.0449	.4080
102	219.7	.4218	.0899	.4883	.5456	.0789	.3755
103	219.7	.4038	.1551	.4411	.5227	.1295	.3478
104	214.8	.5917	.0180	.3902	.7251	.0121	.2628
105	214.8	.5882	.0269	.3849	.7224	.0190	.2586
106	214.8	.5906	.0423	.3670	.7181	.0317	.2503
107	214.8	.5806	.0601	.3593	.7128	.0449	.2423
108	214.8	.5797	.0974	.3229	.7083	.0749	.2168

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
109	214.8	.5674	.1665	.2662	.6829	.1306	.1865
110	209.8	.7935	.0189	.1875	.8716	.0114	.1171
111	209.8	.7874	.0341	.1786	.8696	.0211	.1093
112	209.8	.7851	.0539	.1610	.8624	.0368	.1007
113	209.8	.7810	.0733	.1457	.8597	.0494	.0909
114	209.8	.7754	.1114	.1133	.8560	.0777	.0663
115	209.8	.7623	.1844	.0533	.8399	.1269	.0332
116	207.8	.8780	.0177	.1043	.9257	.0102	.0640
117	207.8	.8736	.0310	.0954	.9249	.0186	.0566
118	207.8	.8745	.0486	.0768	.9230	.0310	.0460
119	207.8	.8670	.0662	.0668	.9195	.0421	.0384
120	207.8	.8598	.0905	.0496	.9137	.0598	.0264
121	207.8	.8587	.1217	.0196	.9048	.0818	.0134
122	206.8	.9213	.0305	.0482	.9506	.0192	.0301
123	206.8	.9143	.0471	.0386	.9456	.0302	.0242
124	206.8	.9159	.0603	.0238	.9451	.0393	.0155
125	206.8	.9067	.0811	.0123	.9404	.0522	.0074
126	205.8	.9671	.0127	.0202	.9782	.0101	.0116
127	205.8	.9696	.0045	.0258	.9824	.0029	.0147
128	205.8	.9670	.0136	.0194	.9787	.0101	.0112
129	205.8	.9617	.0323	.0060	.9755	.0215	.0030
534	231.8	.0852	.....	.9148	.1512	.....	.8488
535	224.7	.2765	.....	.7235	.4096	.....	.5904
536	211.8	.7270	.....	.2730	.8222	.....	.1778
537	208.8	.8426	.....	.1574	.9089	.....	.0911
538	235.2	.....	.0384	.9616	.....	.0468	.9532
539	229.7	.1440	.0111	.8450	.2325	.0119	.7556
540	224.7	.2770	.0271	.6959	.4075	.0263	.5662
541	224.7	.2742	.0400	.6857	.4040	.0385	.5575
542	219.7	.4326	.0183	.5492	.5750	.0158	.4092
543	219.7	.4285	.0424	.5291	.5649	.0361	.3990
544	214.8	.6028	.0431	.3540	.7258	.0346	.2396
545	207.8	.8698	.0333	.0969	.9242	.0228	.0530
546	214.8	.5873	.1498	.2629	.6982	.1183	.1831
563	209.8	.7885	.0968	.1146	.8580	.0692	.0728
564	205.8	.9719	.0233	.0048	.9796	.0170	.0034
936	205.8	.9710	.....	.0290	.9822	.....	.0178
937	224.7	.1669	.8331	.....	.2503	.7497	.....
938	221.7	.2698	.7302	.....	.3778	.6222	.....
939	216.7	.4584	.5416	.....	.5761	.4239	.....
940	209.8	.7692	.2308	.....	.8388	.1612	.....
941	207.8	.8705	.1295	.....	.9116	.0884	.....
942	206.0	.9587	.0413	.....	.9725	.0275	.....

TABLE 12

EXPERIMENTAL DATA AT 18 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
943	205.6	.9748	.0252	.....	.9825	.0175	.....	986	214.8	.6009	.0127	.3864	.7312	.0094	.2594
944	205.5	.9797	.0203	.....	.9863	.0137	.....	987	214.8	.5568	.3236	.1196	.6686	.2490	.0824
945	235.4	.....	.0181	.9819	.....	.0229	.9771	988	212.8	.6834	.0119	.3047	.7895	.0094	.2011
946	235.3	.....	.0265	.9735	.....	.0316	.9684	989	212.8	.6763	.0542	.2695	.7805	.0405	.1790
947	235.0	.....	.0558	.9442	.....	.0660	.9340	990	212.8	.6678	.0966	.2356	.7716	.0720	.1564
948	233.7	.....	.2039	.7961	.....	.2291	.7709	991	212.8	.6553	.1892	.1555	.7544	.1433	.1023
949	232.4	.....	.3892	.6108	.....	.4174	.5826	992	212.8	.6420	.2815	.0765	.7408	.2083	.0510
950	231.4	.....	.5770	.4230	.....	.5999	.4001	993	209.8	.8003	.0124	.1873	.8727	.0091	.1181
951	230.5	.....	.8189	.1811	.....	.8263	.1732	994	209.8	.7974	.0425	.1601	.8677	.0305	.1019
952	230.3	.....	.9064	.0936	.....	.9097	.0903	995	209.8	.7730	.1992	.0279	.8411	.1416	.0172
953	229.7	.1372	.0387	.8241	.2208	.0406	.7385	996	207.8	.8863	.0106	.1031	.9304	.0073	.0623
954	229.7	.1066	.1943	.6991	.1702	.2019	.6279	997	207.8	.8817	.0404	.0779	.9258	.0266	.0476
955	229.7	.0839	.3260	.5901	.1333	.3349	.5318	998	206.8	.9308	.0057	.0636	.9583	.0034	.0383
956	229.7	.0618	.4800	.4583	.0962	.4866	.4172	999	206.8	.9278	.0160	.0562	.9569	.0098	.0334
957	229.7	.0421	.6319	.3260	.0662	.6325	.3013	1707	235.5	.....	.0100	.9900	.....	.0121	.9879
958	229.7	.0266	.8020	.1714	.0410	.7953	.1637	1708	235.4	.....	.0212	.9788	.....	.0247	.9753
959	226.7	.2119	.0777	.7104	.3194	.0768	.6038	1709	230.3	.....	.9206	.0794	.....	.9216	.0784
960	226.7	.1301	.6062	.2638	.1958	.5721	.2322	1710	233.7	.0421	.0160	.9419	.0719	.0186	.9096
961	226.7	.1676	.3178	.5146	.2531	.3074	.4395	1711	229.7	.0169	.9054	.0777	.0276	.8974	.0750
962	226.7	.1283	.6063	.2654	.1945	.5734	.2321	1712	226.7	.0994	.9006	.....	.1602	.8398	.....
963	226.7	.1109	.7937	.0955	.1691	.7457	.0852	1713	226.7	.1817	.2381	.5802	.2688	.2287	.5025
964	226.7	.1056	.8531	.0414	.1622	.8006	.0372	1714	224.7	.2657	.0600	.6743	.3924	.0566	.5510
965	224.7	.2730	.0442	.6828	.4009	.0416	.5575	1715	219.7	.4308	.0300	.5391	.5693	.0256	.4051
966	224.7	.2633	.0904	.6463	.3864	.0864	.5272	1716	219.7	.4217	.0763	.5020	.5597	.0653	.3750
967	224.7	.2403	.2150	.5447	.3507	.2013	.4480	1717	219.7	.3960	.2002	.4037	.5278	.1708	.3014
968	224.7	.2159	.3761	.4081	.3142	.3483	.3375	1718	214.8	.5986	.0376	.3638	.7217	.0302	.2481
969	224.7	.1959	.5214	.2827	.2839	.4783	.2378	1719	214.8	.5955	.0571	.3474	.7264	.0369	.2368
970	224.7	.1750	.7172	.1079	.2564	.6515	.0922	1720	214.8	.6020	.0124	.3856	.7279	.0101	.2620
971	224.7	.1690	.7967	.0343	.2494	.7202	.0303	1721	216.7	.5099	.1342	.3558	.6404	.1093	.2502
972	221.7	.3547	.0966	.5487	.4891	.0849	.4261	1722	212.8	.6198	.3802	.....	.7155	.2845	.....
973	221.7	.3361	.1987	.4651	.4620	.1759	.3621	1723	209.8	.7950	.0201	.1849	.8677	.0138	.1185
974	221.7	.3200	.2981	.3819	.4402	.2613	.2985	1724	209.8	.7939	.0323	.1738	.8669	.0235	.1096
975	221.7	.2848	.5677	.1475	.3927	.4896	.1177	1725	208.8	.8399	.....	.1601	.8994	.....	.1006
976	221.7	.2706	.6846	.0448	.3743	.5899	.0359	1726	207.8	.8830	.0196	.0974	.9266	.0135	.0599
977	219.7	.4342	.0117	.5541	.5772	.0100	.4128	1727	207.8	.8714	.0881	.0405	.9141	.0613	.0246
978	219.7	.3958	.2389	.3653	.5228	.2013	.2759	1728	207.8	.8781	.0346	.0873	.9234	.0239	.0527
979	219.7	.3771	.3549	.2680	.4997	.2991	.2012	1729	207.8	.8461	.1539	.....	.8930	.1070	.....
980	219.7	.3478	.5906	.0617	.4617	.4892	.0491	1730	206.8	.9254	.0075	.0671	.9551	.0049	.0400
981	216.7	.5315	.0260	.4425	.6667	.0213	.3120	1731	206.8	.9276	.0210	.0515	.9497	.0161	.0342
982	216.7	.5193	.0922	.3886	.6524	.0749	.2727	1732	205.8	.9649	.0269	.0082	.9790	.0178	.0032
983	216.7	.4931	.1402	.3667	.6418	.1082	.2499	1863	219.7	.4085	.1509	.4407	.5434	.1295	.3271
984	216.7	.4902	.2732	.2365	.6132	.2184	.1684	1864	214.8	.6031	.0216	.3753	.7265	.0172	.2563
985	216.7	.4721	.4188	.1091	.5880	.3326	.0794	1867	205.8	.9657	.0246	.0097	.9774	.0163	.0063

TABLE 13

EXPERIMENTAL DATA AT 20 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION			VAPOR MOL FRACTION			RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION			VAPOR MOL FRACTION		
		N2	AR	O2	N2	AR	O2			N2	AR	O2	N2	AR	O2
1	232.5	.1749	.....	.8251	.2724	.....	.7276	42	214.8	.7389	.0444	.2167	.8230	.0321	.1449
2	223.7	.4232	.....	.5768	.5633	.....	.4367	43	214.8	.7353	.0647	.2000	.8226	.0481	.1293
3	214.1	.7715	.....	.2285	.8504	.....	.1496	44	214.8	.7315	.0763	.1923	.8149	.0581	.1270
4	211.0	.8987	.....	.1013	.9368	.....	.0632	45	214.8	.7234	.1231	.1535	.8048	.0943	.1009
5	235.6	.0940	.....	.9060	.1553	.....	.8447	46	214.8	.7184	.1789	.1027	.7964	.1362	.0674
6	227.6	.3144	.....	.6856	.4331	.....	.5669	47	212.8	.8161	.0644	.1195	.8814	.0457	.0729
7	221.7	.4803	.....	.5197	.6164	.....	.3836	48	212.8	.8123	.0448	.1429	.8766	.0319	.0915
8	212.8	.8222	.....	.1778	.8811	.....	.1189	49	212.8	.8177	.0171	.1652	.8848	.0114	.1038
9	239.5	.....	.0080	.9920	.....	.0102	.9898	51	212.8	.8115	.0711	.1174	.8723	.0504	.0772
10	239.4	.....	.0161	.9839	.....	.0197	.9803	52	212.8	.8023	.1073	.0904	.8646	.0769	.0585
11	239.2	.....	.0449	.9551	.....	.0519	.9481	53	212.8	.7960	.1451	.0590	.8592	.1037	.0371
12	238.9	.....	.0581	.9419	.....	.0633	.9367	54	211.8	.8608	.0253	.1139	.9109	.0171	.0720
13	208.8	.9913	.0087	.....	.9943	.0057	.....	55	211.8	.8552	.0539	.0909	.[illegible]058	.0373	.0569
14	209.3	.9628	.0372	.....	.9734	.0266	.....	56	211.8	.8492	.0942	.0566	.8977	.0659	.0364
15	209.8	.9364	.0636	.....	.9557	.0443	.....	57	211.8	.8466	.1243	.0290	.8870	.0941	.0189
16	210.3	.9096	.0904	.....	.9356	.0644	.....	58	210.8	.9045	.0103	.0852	.9409	.0064	.0527
17	234.7	.1067	.0211	.8722	.1800	.0222	.7977	59	210.8	.9012	.0237	.0751	.9361	.0171	.0468
18	234.7	.1045	.0307	.8649	.1738	.0341	.7921	60	210.8	.8979	.0380	.0641	.9343	.0262	.0395
19	234.7	.1084	.0341	.8575	.1727	.0373	.7901	61	210.8	.8988	.0448	.0564	.9339	.0281	.0381
20	234.7	.1034	.0594	.8373	.1680	.0646	.7674	62	210.8	.8989	.0575	.0437	.9318	.0401	.0281
21	234.7	.1170	.0102	.8727	.1865	.0113	.8022	63	210.8	.8947	.0901	.0153	.9264	.0638	.0098
22	234.7	.1163	.0175	.8662	.1831	.0187	.7982	64	209.8	.9438	.0254	.0307	.9657	.0160	.0183
23	229.7	.2591	.0090	.7319	.3751	.0095	.6154	65	209.8	.9445	.0453	.0102	.9628	.0308	.0064
24	229.7	.2657	.0151	.7192	.3754	.0152	.6094	517	214.1	.7804	.....	.2196	.8555	.....	.1445
25	229.7	.2515	.0231	.7254	.3689	.0231	.6080	518	221.7	.4981	.....	.5019	.6319	.....	.3681
26	229.7	.2482	.0326	.7192	.3610	.0324	.6066	519	217.7	.6394	.....	.3606	.7486	.....	.2514
27	229.7	.2456	.0476	.7066	.3704	.0471	.5825	520	209.8	.9467	.0380	.0152	.9635	.0268	.0097
28	229.7	.2337	.1037	.6626	.3503	.1003	.5494	521	212.8	.8216	.0777	.1007	.8795	.0546	.0659
29	224.7	.3893	.0247	.5860	.5213	.0212	.4576	522	214.8	.7427	.0804	.1769	.8194	.0601	.1205
30	224.7	.3824	.0370	.5806	.5184	.0324	.4492	523	219.7	.5686	.0183	.4132	.6902	.0154	.2944
31	224.7	.3733	.0581	.5686	.5094	.0508	.4397	524	229.7	.2521	.0115	.7364	.3689	.0117	.6194
32	224.7	.3711	.0863	.5426	.5018	.0767	.4215	525	234.7	.1144	.0090	.8766	.1881	.0097	.8022
33	224.7	.3644	.1326	.5029	.4974	.1164	.3862	526	234.7	.1194	.0235	.8571	.1235	.0260	.8506
34	224.7	.3475	.2330	.4195	.4677	.2052	.3271	527	229.7	.2440	.0116	.7444	.3330	.0119	.6551
35	219.7	.5486	.0371	.4143	.6318	.0291	.2891	528	229.7	.2446	.0660	.6895	.3466	.0619	.5915
36	219.7	.5525	.0371	.4104	.6827	.0289	.2884	529	219.7	.5611	.0675	.3714	.6859	.0516	.2626
37	219.7	.5467	.0589	.3944	.6560	.0462	.2978	530	210.8	.9091	.0423	.0486	.9439	.0268	.0293
38	219.7	.5244	.0990	.3766	.6486	.0812	.2702	531	211.8	.8499	.1213	.0288	.9007	.0843	.0150
39	219.7	.5132	.1530	.3338	.6436	.1246	.2318	532	227.6	.3153	.....	.6847	.4583	.....	.5417
40	219.7	.5042	.2283	.2675	.6247	.1809	.1944	533	212.8	.8210	.....	.1790	.8952	.....	.1048
41	214.8	.7411	.0255	.2334	.8254	.0189	.1537	557	212.8	.8262	.0576	.1162	.8867	.0416	.0717

TABLE 13

EXPERIMENTAL DATA AT 20 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
834	208.7	.9951	.0049	.....	.9965	.0035	.....	876	221.7	.4510	.2474	.3017	.5695	.2058	.2247
835	209.0	.9792	.0208	.....	.9856	.0144	.....	877	221.7	.4420	.3213	.2366	.5593	.2652	.1755
836	209.4	.9599	.0401	.....	.9725	.0275	.....	878	221.7	.4154	.4958	.0888	.5281	.4042	.0676
837	212.8	.7936	.2064	.....	.8513	.1487	.....	879	219.7	.5591	.0132	.4277	.6831	.0107	.3062
838	217.7	.5707	.4293	.....	.6703	.3297	.....	880	219.7	.5575	.0472	.3953	.6776	.0380	.2844
839	229.7	.1290	.8710	.....	.1921	.8079	.....	881	219.7	.5508	.0786	.3706	.6689	.0636	.2675
840	231.7	.0671	.9329	.....	.1032	.8968	.....	882	219.7	.5029	.3786	.1185	.6113	.3010	.0877
841	209.3	.9697	.....	.0303	.9808	.....	.0192	883	217.7	.6227	.0770	.3003	.7294	.0605	.2101
842	219.7	.5615	.....	.4385	.6874	.....	.3126	884	217.7	.6126	.1353	.2521	.7181	.1064	.1755
843	239.2	.....	.0249	.9751	.....	.0288	.9712	885	217.7	.5891	.2892	.1217	.6894	.2247	.0859
844	238.8	.....	.0629	.9371	.....	.0727	.9273	886	214.8	.7420	.0138	.2442	.8307	.0108	.1586
845	238.5	.....	.0932	.9068	.....	.1074	.8926	887	214.8	.7443	.0301	.2257	.8274	.0223	.1503
846	237.9	.....	.1605	.8395	.....	.1807	.8193	888	214.8	.7409	.0591	.2000	.8201	.0443	.1356
847	236.6	.....	.3363	.6637	.....	.3630	.6370	889	214.8	.7059	.2679	.0262	.7848	.1965	.0187
848	235.6	.....	.5025	.4975	.....	.5267	.4733	890	209.3	.9674	.0134	.0192	.9813	.0093	.0095
849	234.7	.....	.7127	.2873	.....	.7243	.2757	891	209.3	.9673	.0211	.0116	.9785	.0141	.0075
850	234.3	.....	.8401	.1599	.....	.8450	.1550	892	209.3	.9634	.0305	.0061	.9751	.0205	.0043
851	234.7	.0908	.1164	.7928	.1443	.1243	.7314	1684	238.9	.....	.0626	.9374	.....	.0376	.9624
852	234.7	.0493	.3344	.6164	.0786	.3489	.5725	1685	234.7	.0807	.1706	.7487	.1329	.1798	.6873
853	234.7	.0309	.4557	.5134	.0501	.4704	.4795	1686	234.7	.0038	.6748	.3214	.0065	.7040	.2896
854	234.7	.0147	.5585	.4268	.0236	.5752	.4012	1687	231.7	.1680	.1451	.6869	.2531	.1455	.6014
855	234.7	.0011	.6968	.3022	.0023	.7098	.2878	1688	231.7	.0785	.8097	.1117	.1221	.7783	.0996
856	231.7	.1634	.1482	.6885	.2378	.1501	.6121	1689	229.7	.2489	.0138	.7373	.3670	.0139	.6191
857	231.7	.1227	.3945	.4828	.1839	.3858	.4304	1690	229.7	.2389	.0651	.6960	.3494	.0640	.5866
858	231.7	.0917	.6179	.2904	.1400	.5982	.2617	1691	229.7	.2357	.0790	.6853	.3447	.0767	.5786
859	231.7	.0710	.8408	.0882	.1105	.8086	.0809	1692	229.7	.2295	.1105	.6600	.3365	.1071	.5565
860	231.7	.0714	.8533	.0752	.1107	.8193	.0699	1693	227.7	.2959	.0610	.6430	.4200	.0576	.5224
861	229.7	.1960	.2720	.5320	.2869	.2610	.4521	1694	227.6	.3111	.....	.6889	.4378	.....	.5622
862	229.7	.1720	.4257	.4023	.2528	.4022	.3449	1695	224.7	.2954	.7046	.....	.4018	.5982	.....
863	229.7	.1496	.5926	.2578	.2210	.5506	.2284	1696	221.7	.4034	.5966	.....	.5080	.4920	.....
864	229.7	.1426	.6973	.1601	.2093	.6503	.1405	1697	224.7	.3940	.0121	.5940	.5268	.0109	.4622
865	227.7	.2822	.1229	.5948	.3985	.1156	.4859	1698	224.7	.3429	.3241	.3330	.4575	.2801	.2624
866	227.7	.2675	.2022	.5303	.3788	.1873	.4339	1699	219.7	.5377	.1531	.3092	.6519	.1245	.2236
867	227.7	.2454	.3442	.4104	.3451	.3172	.3377	1700	212.8	.8273	.....	.1727	.8876	.....	.1124
868	227.7	.2156	.5622	.2222	.3045	.5078	.1877	1701	212.8	.8277	.0187	.1536	.8860	.0137	.1003
869	227.7	.1971	.7460	.0569	.2807	.6703	.0490	1702	211.8	.8508	.1248	.0244	.8955	.0885	.0160
870	224.7	.3918	.0192	.5890	.5255	.0176	.4569	1703	210.8	.9039	.0455	.0507	.9353	.0320	.0327
871	224.7	.3831	.0690	.5479	.5133	.0606	.4261	1704	210.8	.9034	.0191	.0775	.9380	.0133	.0487
872	224.7	.3207	.4632	.2161	.4287	.3996	.1717	1705	209.3	.9732	.0089	.0179	.9823	.0061	.0116
873	224.7	.3015	.6175	.0811	.4046	.5299	.0655	1706	209.3	.9698	.0195	.0107	.9809	.0135	.0056
874	221.7	.4767	.0835	.4399	.6044	.0706	.3251	1859	238.9	.....	.0689	.9311	.....	.0759	.9241
875	221.7	.4650	.1525	.3825	.5885	.1272	.2843	1865	209.3	.9664	.0240	.0097	.9776	.0169	.0055

TABLE 14

EXPERIMENTAL DATA AT 23 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
724	240.2	.1125	.....	.8875	.1742	.....	.8258
725	236.7	.2048	.....	.7952	.3004	.....	.6996
726	229.7	.4082	.....	.5918	.5301	.....	.4699
727	223.7	.5871	.....	.4129	.6956	.....	.3044
728	218.2	.8068	.....	.1932	.8656	.....	.1344
729	215.3	.9233	.....	.0767	.9506	.....	.0494
730	213.8	.9607	.....	.0193	.9877	.....	.0123
731	236.7	.0767	.9233	.....	.1140	.8860	.....
732	232.7	.2043	.7957	.....	.2814	.7186	.....
733	226.7	.4147	.5853	.....	.5160	.4840	.....
734	220.7	.6574	.3426	.....	.7367	.2633	.....
735	216.7	.8409	.1591	.....	.8836	.1164	.....
736	215.3	.9108	.0892	.....	.9349	.0651	.....
737	214.5	.9488	.0512	.....	.9635	.0365	.....
738	214.1	.9662	.0338	.....	.9765	.0235	.....
739	213.9	.9728	.0272	.....	.9801	.0199	.....
740	213.7	.9821	.0179	.....	.9871	.0129	.....
741	213.5	.9942	.0058	.....	.9950	.0050	.....
742	244.7	.....	.0134	.9866	.....	.0157	.9843
743	244.6	.....	.0233	.9767	.....	.0269	.9731
744	244.5	.....	.0331	.9669	.....	.0378	.9622
745	244.4	.....	.0407	.9593	.....	.0467	.9533
746	244.2	.....	.0611	.9389	.....	.0718	.9282
747	243.9	.....	.0948	.9052	.....	.1084	.8916
748	243.4	.....	.1528	.8472	.....	.1709	.8291
749	242.3	.....	.2852	.7148	.....	.3092	.6908
750	241.3	.....	.4386	.5614	.....	.4621	.5379
751	240.2	.....	.6679	.3321	.....	.6809	.3191
752	239.8	.....	.8177	.1823	.....	.8229	.1771
753	240.2	.1134	.0078	.8789	.1753	.0103	.8144
754	240.2	.1141	.0141	.8718	.1732	.0146	.8120
755	240.2	.1071	.0223	.8706	.1680	.0241	.8080

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
756	240.2	.1054	.0281	.8665	.1640	.0301	.8058
757	240.2	.1033	.0450	.8517	.1606	.0480	.7915
758	240.2	.1005	.0583	.8413	.1555	.0618	.7827
759	240.2	.0925	.0952	.8122	.1434	.1012	.7554
760	240.2	.0841	.1432	.7727	.1302	.1526	.7172
761	240.2	.0653	.2390	.6957	.1003	.2506	.6491
762	240.2	.0303	.4482	.5215	.0451	.4636	.4913
763	240.2	.0069	.6265	.3666	.0116	.6415	.3470
764	236.7	.2063	.0070	.7867	.2963	.0077	.6959
765	236.7	.1992	.0389	.7619	.2906	.0392	.6703
766	236.7	.1959	.0579	.7462	.2850	.0574	.6577
767	236.7	.1934	.0735	.7330	.2796	.0737	.6467
768	236.7	.1875	.0929	.7195	.2734	.0932	.6334
769	236.7	.1780	.1313	.6906	.2593	.1315	.6093
770	236.7	.1703	.1704	.6594	.2486	.1701	.5813
771	236.7	.1600	.2276	.6124	.2339	.2263	.5398
772	236.7	.1253	.4463	.4285	.1839	.4343	.3818
773	236.7	.1054	.6107	.2839	.1541	.5894	.2565
774	236.7	.0935	.7365	.1700	.1372	.7064	.1564
775	236.7	.0812	.8847	.0341	.1205	.8478	.0317
776	232.7	.3161	.0153	.6685	.4323	.0154	.5524
777	232.7	.3050	.0693	.6258	.4169	.0656	.5175
778	232.7	.2961	.1243	.5796	.4037	.1167	.4796
779	232.7	.2808	.2100	.5092	.3808	.1948	.4244
780	232.7	.2661	.2933	.4406	.3604	.2709	.3687
781	232.7	.2436	.4509	.3055	.3308	.4118	.2575
782	232.7	.2235	.6114	.1651	.3053	.5545	.1403
783	232.7	.2087	.7707	.0206	.2873	.6968	.0159
784	229.7	.4072	.0149	.5779	.5290	.0135	.4575
785	229.7	.4093	.0257	.5650	.5245	.0232	.4522
786	229.7	.4025	.0395	.5581	.5214	.0356	.4430
787	229.7	.3996	.0545	.5458	.5154	.0497	.4349

TABLE 14

EXPERIMENTAL DATA AT 23 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
788	229.7	.3955	.0684	.5361	.5174	.0614	.4212
789	229.7	.3885	.0973	.5142	.5053	.0870	.4077
790	229.7	.3865	.1250	.4886	.5013	.1103	.3885
791	229.7	.3742	.1770	.4488	.4842	.1563	.3594
792	229.7	.3541	.3147	.3312	.4574	.2756	.2670
793	229.7	.3277	.4964	.1759	.4258	.4325	.1417
794	226.7	.5041	.0184	.4775	.6175	.0162	.3663
795	226.7	.4953	.0501	.4547	.6096	.0437	.3467
796	226.7	.4899	.0822	.4279	.6057	.0705	.3239
797	226.7	.4794	.1392	.3813	.5899	.1164	.2936
798	226.7	.4666	.2455	.2879	.5718	.2114	.2169
799	226.7	.4479	.3526	.1995	.5494	.2978	.1528
800	223.7	.6066	.0106	.3828	.7104	.0091	.2805
801	223.7	.6035	.0246	.3719	.7102	.0204	.2695
802	223.7	.6005	.0362	.3633	.7048	.0297	.2655
803	223.7	.6003	.0519	.3476	.7035	.0423	.2542
804	223.7	.5982	.0652	.3367	.7008	.0530	.2462
805	223.7	.5940	.0932	.3129	.6935	.0762	.2303
806	223.7	.5882	.1185	.2932	.6882	.0967	.2151
807	223.7	.5731	.2137	.2131	.6699	.1739	.1562
808	223.7	.5478	.3766	.0756	.6409	.3008	.0583
809	220.7	.7121	.0193	.2687	.7978	.0140	.1882
810	220.7	.7031	.0593	.2376	.7855	.0459	.1686
811	220.7	.7006	.0938	.2056	.7815	.0737	.1449
812	220.7	.6824	.1904	.1272	.7658	.1481	.0861
813	220.7	.6693	.2913	.0394	.7472	.2253	.0275
814	218.2	.8080	.0092	.1828	.8663	.0082	.1255
815	218.2	.8068	.0209	.1723	.8616	.0158	.1226
816	218.2	.8055	.0330	.1615	.8613	.0260	.1127
817	218.2	.8033	.0448	.1518	.8613	.0340	.1047
818	218.2	.8030	.0540	.1430	.8610	.0408	.0982
819	218.2	.7971	.0743	.1286	.8552	.0571	.0877

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
820	218.2	.7919	.1018	.1063	.8512	.0767	.0721
821	218.2	.7798	.1898	.0304	.8351	.1440	.0209
822	216.7	.8622	.0273	.1105	.9054	.0201	.0744
823	216.7	.8503	.1216	.0280	.8909	.0919	.0172
824	216.7	.8550	.0743	.0708	.8954	.0559	.0488
825	215.3	.9255	.0076	.0669	.9492	.0054	.0454
826	215.3	.9242	.0226	.0532	.9466	.0168	.0366
827	215.3	.9223	.0347	.0431	.9462	.0243	.0295
828	215.3	.9184	.0467	.0349	.9429	.0336	.0235
829	215.3	.9187	.0604	.0210	.9414	.0438	.0148
830	215.3	.9158	.0767	.0075	.9390	.0562	.0049
831	213.8	.9827	.0058	.0115	.9901	.0031	.0067
832	213.8	.9830	.0103	.0067	.9884	.0075	.0041
833	213.8	.9831	.0137	.0032	.9881	.0098	.0022
918	213.5	.9946	.0023	.0031	.9963	.0016	.0021
919	215.3	.9212	.0377	.0411	.9447	.0273	.0280
920	216.7	.8591	.0757	.0653	.8977	.0572	.0451
921	218.2	.8063	.0080	.1857	.8670	.0064	.1266
922	220.7	.7170	.0235	.2595	.7940	.0185	.1875
923	220.7	.6765	.2474	.0761	.7548	.1925	.0528
924	223.7	.6025	.0258	.3717	.7094	.0209	.2697
925	223.7	.6105	.....	.3895	.7142	.....	.2858
926	226.7	.4305	.4799	.0896	.5317	.3999	.0684
927	229.7	.3160	.6183	.0656	.4111	.5354	.0535
928	229.7	.3092	.6908	.....	.4022	.5978	.....
929	232.7	.2113	.7446	.0442	.2896	.6725	.0380
930	236.7	.2018	.0268	.7714	.2951	.0268	.6781
931	239.6	.....	.9093	.0907	.....	.9122	.0878
932	240.2	.1138	.0080	.8782	.1757	.0083	.8160
933	240.2	.1093	.0389	.8517	.1641	.0431	.7928
934	240.2	.0297	.4579	.5124	.0456	.4712	.4832
935	240.2	.0090	.6332	.3578	.0112	.6492	.3396

TABLE 15

EXPERIMENTAL DATA AT 26 ATM.

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2	RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	LIQUID MOL FRACTION AR	LIQUID MOL FRACTION O2	VAPOR MOL FRACTION N2	VAPOR MOL FRACTION AR	VAPOR MOL FRACTION O2
610	245.1	.1071	.....	.8929	.1659	.....	.8341	646	242.7	.0502	.8991	.0507	.0730	.8773	.0498
611	240.7	.2319	.....	.7681	.3236	.....	.6764	647	240.7	.2281	.0049	.7670	.3203	.0051	.6746
612	234.7	.4057	.....	.5943	.5152	.....	.4848	648	240.7	.2290	.0077	.7633	.3190	.0082	.6728
613	226.7	.5976	.....	.4024	.6942	.....	.3058	649	240.7	.2256	.0118	.7626	.3148	.0120	.6732
614	222.7	.8094	.....	.1906	.8626	.....	.1374	650	240.7	.2268	.0173	.7560	.3133	.0178	.6689
615	219.7	.9250	.....	.0750	.9464	.....	.0536	651	240.7	.2189	.0271	.7539	.3125	.0277	.6598
616	218.2	.9790	.....	.0210	.9868	.....	.0132	652	240.7	.2214	.0310	.7477	.3093	.0307	.6600
617	240.7	.1055	.8945	.....	.1481	.8519	.....	653	240.7	.2137	.0608	.7256	.2994	.0608	.6398
618	237.7	.2004	.7996	.....	.2700	.7300	.....	654	240.7	.1901	.1587	.6512	.2693	.1560	.5747
619	231.7	.4080	.5920	.....	.4973	.5027	.....	655	240.7	.1512	.3826	.4662	.2132	.3709	.4160
620	225.7	.6378	.3622	.....	.7109	.2891	.....	656	240.7	.1194	.6170	.2636	.1722	.5885	.2393
621	221.2	.8373	.1627	.....	.8753	.1247	.....	657	240.7	.1072	.7296	.1632	.1549	.6969	.1482
622	219.2	.9301	.0699	.....	.9471	.0529	.....	658	240.7	.0963	.8469	.0568	.1409	.8055	.0536
623	218.8	.9494	.0506	.....	.9612	.0388	.....	659	237.7	.3134	.0044	.6822	.4187	.0043	.5770
624	218.4	.9654	.0346	.....	.9736	.0264	.....	660	237.7	.3115	.0131	.6754	.4159	.0122	.5719
625	218.2	.9739	.0261	.....	.9806	.0194	.....	661	237.7	.3123	.0164	.6712	.4150	.0156	.5694
626	218.0	.9864	.0136	.....	.9896	.0104	.....	662	237.7	.3101	.0252	.6647	.4111	.0238	.5652
627	217.8	.9950	.0050	.....	.9966	.0034	.....	663	237.7	.3085	.0432	.6483	.4095	.0409	.5496
629	244.4	.....	.9300	.0700	.....	.9310	.0690	664	237.7	.3034	.0644	.6321	.4024	.0619	.5356
630	244.5	.....	.8530	.1470	.....	.8585	.1415	665	237.7	.2971	.0920	.6109	.3949	.0869	.5182
631	244.6	.....	.8067	.1933	.....	.8134	.1866	666	237.7	.2813	.2021	.5166	.3707	.1918	.4375
632	244.7	.....	.7719	.2281	.....	.7790	.2210	667	237.7	.2569	.3154	.4277	.3435	.2927	.3638
633	244.9	.....	.7087	.2913	.....	.7221	.2779	668	237.7	.2261	.5436	.2303	.3015	.4991	.1994
634	245.2	.....	.6519	.3481	.....	.6624	.3376	669	237.7	.2032	.7612	.0357	.2725	.6964	.0311
635	245.6	.....	.5594	.4406	.....	.5760	.4240	670	234.7	.3880	.0743	.5377	.4936	.0687	.4377
636	246.0	.....	.4805	.5195	.....	.4999	.5001	671	234.7	.3765	.1626	.4609	.4845	.1484	.3671
637	246.7	.....	.3591	.6409	.....	.3827	.6173	672	234.7	.3433	.3138	.3429	.4378	.2808	.2814
639	248.1	.....	.1702	.8298	.....	.1888	.8112	673	234.7	.3211	.5075	.1714	.4085	.4491	.1424
640	249.0	.....	.0720	.9280	.....	.0807	.9193	674	234.7	.3134	.5817	.1049	.3987	.5133	.0880
641	242.7	.1533	.0661	.7806	.2282	.0672	.7045	675	234.7	.3075	.6407	.0518	.3921	.5642	.0437
642	242.7	.1351	.2041	.6608	.1935	.2063	.6002	676	231.7	.4964	.0100	.4936	.6039	.0087	.3875
643	242.7	.0965	.4374	.4661	.1375	.4335	.4291	677	231.7	.4966	.0147	.4886	.6039	.0127	.3834
644	242.7	.0873	.5017	.4111	.1244	.4962	.3794	678	231.7	.4966	.0259	.4775	.6020	.0229	.3751
645	242.7	.0571	.7902	.1527	.0825	.7739	.1437	679	231.7	.0000	.0000	.0000	.5988	.0322	.3690

TABLE 15

EXPERIMENTAL DATA AT 26 ATM. (continued)

RUN NO.	TEMP. DEG.R	LIQUID MOL FRACTION N2	AR	O2	VAPOR MOL FRACTION N2	AR	O2
680	231.7	.4934	.0424	.4642	.5977	.0376	.3647
681	231.7	.4874	.0683	.4443	.5910	.0598	.3492
682	231.7	.4813	.0934	.4253	.5835	.0809	.3356
683	231.7	.4650	.1800	.3550	.5632	.1555	.2813
684	231.7	.4271	.4067	.1662	.5245	.3444	.1311
685	231.7	.4119	.5352	.0530	.5037	.4526	.0434
686	228.7	.5945	.0265	.3791	.6864	.0228	.2908
687	228.7	.5884	.0465	.3651	.6822	.0389	.2789
688	228.7	.5875	.0624	.3500	.6768	.0523	.2710
689	228.7	.5749	.1455	.2796	.6641	.1216	.2143
690	228.7	.5580	.2422	.1998	.6431	.2021	.1548
691	228.7	.5335	.3975	.0690	.6216	.3256	.0528
692	225.7	.7014	.0103	.2883	.7782	.0083	.2135
693	225.7	.6996	.0208	.2796	.7755	.0173	.2072
694	225.7	.6981	.0283	.2735	.7740	.0232	.2028
695	225.7	.6963	.0393	.2644	.7713	.0321	.1965
696	225.7	.6936	.0465	.2599	.7721	.0382	.1896
697	225.7	.6929	.0615	.2457	.7675	.0504	.1821
698	225.7	.6884	.0909	.2207	.7634	.0740	.1626
699	225.7	.6706	.1924	.1368	.7408	.1552	.1040
700	222.7	.8047	.0397	.1556	.8552	.0306	.1142
701	222.7	.8019	.0563	.1418	.8529	.0436	.1034
702	222.7	.7967	.0855	.1178	.8472	.0671	.0857
703	222.7	.7830	.1664	.0505	.8324	.1297	.0379
704	221.2	.8652	.0117	.1230	.9014	.0089	.0897
705	221.2	.8642	.0235	.1123	.8990	.0183	.0827
706	221.2	.8561	.0491	.0948	.8921	.0394	.0685
707	221.2	.8564	.0694	.0742	.8939	.0538	.0523
708	221.2	.8517	.0931	.0552	.8896	.0708	.0396
709	221.2	.8530	.1144	.0356	.8844	.0888	.0268
710	221.2	.8463	.1360	.0177	.8816	.1049	.0136
711	220.2	.9014	.0211	.0776	.9291	.0162	.0546
712	220.2	.8982	.0365	.0653	.9252	.0231	.0467
713	220.2	.8902	.0915	.0183	.9163	.0701	.0136
714	219.2	.9416	.0077	.0507	.9577	.0060	.0364
715	219.2	.9397	.0216	.0386	.9571	.0161	.0268
716	219.2	.9393	.0303	.0304	.9553	.0228	.0220
717	219.2	.9367	.0406	.0226	.9527	.0311	.0163
718	219.2	.9334	.0513	.0153	.9490	.0375	.0135
719	219.2	.9332	.0552	.0117	.9491	.0422	.0087
720	218.2	.9799	.0085	.0116	.9851	.0066	.0083
721	218.2	.9780	.0167	.0053	.9838	.0126	.0036
722	231.7	.4934	.0329	.4736	.5985	.0288	.3727
723	247.2	.....	.2902	.7098	.....	.3117	.6883
893	249.6	.....	.0196	.9804	.....	.0222	.9778
894	249.4	.....	.0372	.9628	.....	.0426	.9574
895	249.2	.....	.0547	.9453	.....	.0615	.9385
896	248.8	.....	.0970	.9030	.....	.1088	.8912
897	245.2	.1094	.0190	.8715	.1592	.0204	.8204
898	245.2	.1008	.0611	.8380	.1492	.0649	.7859
899	245.2	.0849	.1341	.7810	.1244	.1424	.7331
900	245.2	.0744	.1846	.7409	.1101	.1951	.6948
901	245.2	.0516	.3086	.6398	.0755	.3215	.6031
902	242.7	.1369	.2029	.6602	.1950	.2053	.5996
903	242.7	.0501	.9251	.0247	.0721	.9041	.0238
904	240.7	.2312	.0098	.7591	.3214	.0096	.6690
905	240.7	.2277	.0237	.7487	.3164	.0237	.6599
906	240.7	.2208	.0575	.7217	.3063	.0571	.6366
907	237.7	.2155	.6597	.1248	.2869	.6035	.1096
908	234.7	.3766	.1479	.4754	.4777	.1366	.3857
909	231.7	.4913	.0488	.4599	.5959	.0429	.3612
910	225.7	.6978	.0463	.2559	.7719	.0374	.1906
911	225.7	.6649	.2567	.0784	.7361	.2049	.0590
912	221.2	.8649	.0318	.1033	.9018	.0243	.0739
913	221.2	.8634	.0401	.0965	.8982	.0310	.0706
914	219.2	.9330	.0464	.0206	.9516	.0347	.0137
915	218.2	.9794	.....	.0206	.9858	.....	.0142
916	218.2	.9751	.0184	.0065	.9822	.0135	.0044
917	217.8	.9949	.0051	.....	.9960	.0040	.....

TABLE 16

EXPERIMENTAL DATA AT MIXED PRESSURE LEVELS

Run No.	Press. Atm.	Temp. Deg. R	Liquid Mol Fraction N_2	Liquid Mol Fraction Ar	Liquid Mol Fraction O_2	Vapor Mol Fraction N_2	Vapor Mol Fraction Ar	Vapor Mol Fraction O_2
50	19.5	212.8	.7875	.0869	.1256	.8562	.0623	.0815
1914	1.03	163.0	.0039	-----	.9961	.0166	-----	.9834
1915	1.05	162.5	.0130	-----	.9870	.0491	-----	.9509
1916	0.97	162.0	.0035	-----	.9965	.0144	-----	.9856
1917	0.99	162.0	.0066	-----	.9934	.0248	-----	.9752
1918	0.98	161.3	.0179	-----	.9821	.0677	-----	.9323
1919	0.99	160.3	.0364	-----	.9636	.1313	-----	.8687
1920	0.97	160.0	.0385	-----	.9615	.1404	-----	.8596
1921	1.05	159.8	.0746	-----	.9254	.2397	-----	.7603
1922	1.01	159.0	.0833	-----	.9167	.2627	-----	.7373

VI. CORRELATION OF EXPERIMENTAL DATA

A. Thermodynamic Equations

The problem of correlation of vapor-liquid equilibrium data at high pressures is more complicated than at low pressures since the effect of pressure on the free energy of the liquid and also the effect of deviations from ideality in the vapor must be taken into account. A derivation of the equilibrium equations which take these effects into account follows.

The effect of pressure upon the free energy of a component in the liquid is given by the relation

$$dG_i = \overline{V}_i dp \tag{2}$$

and the effect of nonideality in the vapor is accounted for by means of the fugacity coefficient defined as

$$\phi_i = \frac{f_i}{py_i} \tag{3}$$

The activity coefficient of component i in the liquid is now defined as

$$\ln \gamma_i = \ln \frac{f_i}{f_i^* x_i} = \left[\frac{\partial(G^E/RT)}{\partial n_i}\right]_{T,p,n_j} \tag{4}$$

The derivation of the equilibrium equations involves a seven-step process:

1. The component is taken as a vapor from a standard pressure at which the vapor behaves ideally to the vapor pressure p_i^o.

$$\frac{\Delta G^I}{RT} = \ln p_i^o + \ln \phi_i^o \tag{5}$$

2. The vapor is condensed at the pressure p_i^o to liquid.

$$\frac{\Delta G^{II}}{RT} = 0 \tag{6}$$

3. The liquid is taken from the pressure p_i^o to the pressure of mixing p_m.

$$\frac{\Delta G^{III}}{RT} = \int_{p_i^o}^{p_m} \frac{V_i^o}{RT}\, dp \tag{7}$$

4. The component is mixed at the pressure p_m.

$$\frac{\Delta G^{IV}}{RT} = \ln x_i \gamma_i \tag{8}$$

5. The mixture is taken from the pressure p_m to the total vapor pressure of the mixture.

$$\frac{\Delta G^{V}}{RT} = \int_{p_m}^{p} \frac{\bar{V}_i}{RT}\, dp \tag{9}$$

6. The component in the liquid mixture is in equilibrium with the vapor at the pressure p and composition y_i.

$$\frac{\Delta G^{VI}}{RT} = 0 \tag{10}$$

7. The vapor is taken from the pressure p and composition y to a standard pressure at which the vapor behaves ideally, and then is separated into the various components.

$$\frac{\Delta G^{VII}}{RT} = \ln py_i - \ln \phi_i \tag{11}$$

Now since the free energy is a property of state and independent of the route by which the state is obtained, the sum of all these changes should add to zero since the initial and final states are the same. Thus the following relation for equilibrium is obtained.

$$\Sigma \frac{\Delta G}{RT} = \ln p_i^o \phi_i^o + \int_{p_i^o}^{p_m} \frac{V_i^o}{RT}\, dp + \ln x_i \gamma_i + \int_{p_m}^{p} \frac{\bar{V}_i}{RT}\, dp - \ln py_i\phi_i = 0 \tag{12}$$

If this equation is solved for py_i, the following is obtained:

$$\ln py_i = \ln \frac{p_i^o \phi_i^o x_i \gamma_i}{\phi_i} + \int_{p_i^o}^{p_m} \frac{V_i^o}{RT}\, dp + \int_{p_m}^{p} \frac{\overline{V}_i}{RT}\, dp \qquad (13)$$

For the correlation of the nitrogen-argon-oxygen vapor liquid data there were insufficient partial molar volume data to use this equation as it stands, and it was necessary to simplify it. Thus it was assumed that the partial molar volume of a component in solution is equivalent to the liquid molar volume of that component and that the liquid volume is independent of pressure. With these assumptions, the equilibrium relation simplifies to the following equation which is the one used in correlating the nitrogen-argon-oxygen data.

$$py_i = \left[\frac{p_i^o x_i \gamma_i \phi_i^o}{\phi_i}\right] e^{V_i^o (p - p^o_i)/RT} \qquad (14)$$

These assumptions regarding the molar volume are partly justified by the fact that the correction is usually small amounting to less than 20% in most cases and any errors which are made in this correction can be partially compensated for with other parameters. However, in the neighborhood of the critical point this correction is undoubtedly larger and deviates significantly from the simplifying assumptions made here. Therefore it is improbable that this simplified equation will be applicable in the neighborhood of the critical point.

In the calculation of equilibria it is helpful to bear in mind that according to the phase rule, $F = c - P + 2$; c variables must be specified (since $P = 2$) before the equilibrium point can be calculated. Thus one might specify the liquid composition and the temperature (the liquid composition involves c - 1 variables since $\Sigma_i\, x_i = 1$) or perhaps the mole fraction of one component in the liquid, the temperature and the pressure. If it is necessary to calculate not only the equilibrium point but also the number of moles in each phase, one more variable must be specified since the phase rule includes only intensive variables. Thus for example, one might specify an overall composition of the two-phase system, the pressure and the temperature.

The ease of numerical calculation varies depending upon which variables are specified; however even in the simplest cases iterative type calculations are necessary. This iteration is necessary since the functions ϕ_i, γ_i and $e^{V_i(p-p_i^o)/RT}$ are not specified in terms of any one set of variables. For this reason the task of manual calculation would be prohibitive and calculations were done on a GE-225 computer.

B. Liquid Molar Volume

The liquid molar volume of the three components were determined by a least squares fit of existing data to the equation

$$V = a + b\,x + c\,x^2 + d\,x^3 + e\,x^4 + f\,x^5 \qquad (15)$$

Table 17 lists the constants obtained and the literature source for the data. Above the critical temperature of nitrogen the molar volume of nitrogen represents an extrapolation of the data from below the critical temperature. Data close to the critical point were not fitted.

TABLE 17

LIQUID MOLAR VOLUME CORRELATION CONSTANTS

Component	a	b	c	d	e	f	Lit. Ref.
Nitrogen	- 0.7	147.1	-264.1	227.08	- 92.29	14.649	(4)
Argon	-98.7	451.5	-610.2	393.62	-122.11	14.803	(4)
Oxygen	-34.0	178.6	-221.5	139.05	- 43.09	5.341	(5)

C. Vapor Pressure of Pure Components

Vapor pressure data for oxygen were taken from the literature. These data were used for the calibration of the three junction thermocouple of the equilibrium cell. Vapor pressure data for nitrogen and argon were measured in the cell based upon the temperature scale obtained from the oxygen data. Initially, it was attempted to calibrate the thermocouple from literature data on all three components, but calculated temperatures disagreed by as much as 0.2°R; therefore, only the data for oxygen were used in the calibration. If the oxygen temperature scale is in error by 0.2°R, then our temperature scale is in error by 0.2°R, but the ratio of vapor pressures will be more nearly correct than as calculated from the literature data.

Our value for the boiling point of oxygen is 162.36°R compared to the accepted value of 162.34°R[6].

The vapor pressure data were fitted to the Riedel equation[7].

$$\ln p_i^o = A - \frac{B}{T} + C \ln T + DT^6 \tag{16}$$

The constants obtained by a least squares fit to the data are summarized in Table 18 and deviation plots of the data are given in Figures 13, 14, and 15. The agreement with the data is generally within + 0.3% although there are some deviations as high as 1% from the correlated curves.

The vapor pressure of nitrogen calculated above the nitrogen critical temperature represents an extrapolation of the data from below the critical temperature.

TABLE 18

CONSTANTS FOR PURE COMPONENT VAPOR PRESSURES

Component	A	B	C	D	Data Source
Nitrogen	25.2115	1598.96	-2.24519	1.5445×10^{-15}	This Work
Argon	18.7043	1621.12	-1.12969	0.4132×10^{-15}	This Work
Oxygen	21.6017	1781.43	-1.56188	0.4032×10^{-15}	8,9,10,11,12

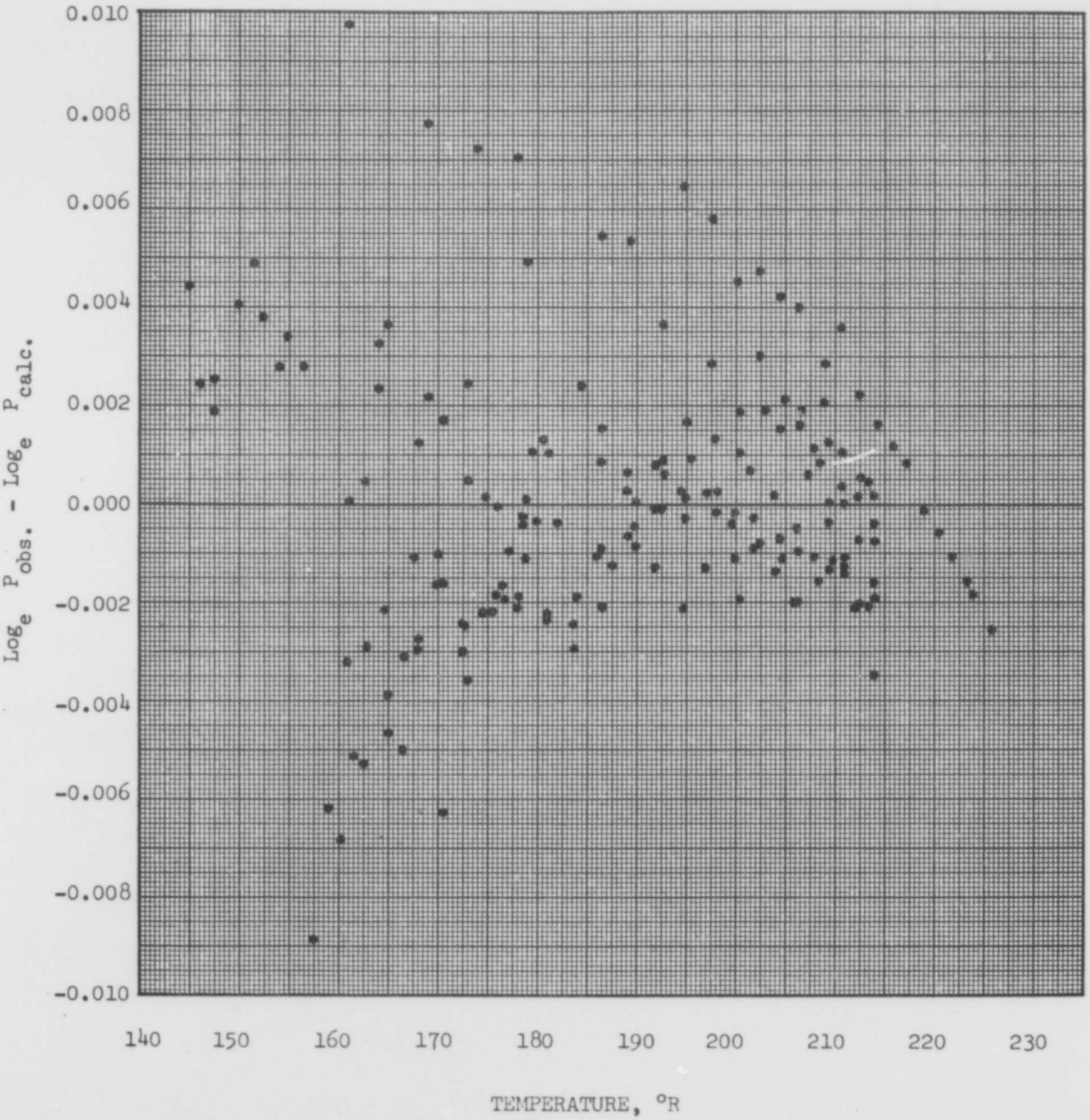

Figure 13. Deviation of APCI Nitrogen Vapor Pressure Data from Riedel Equation.

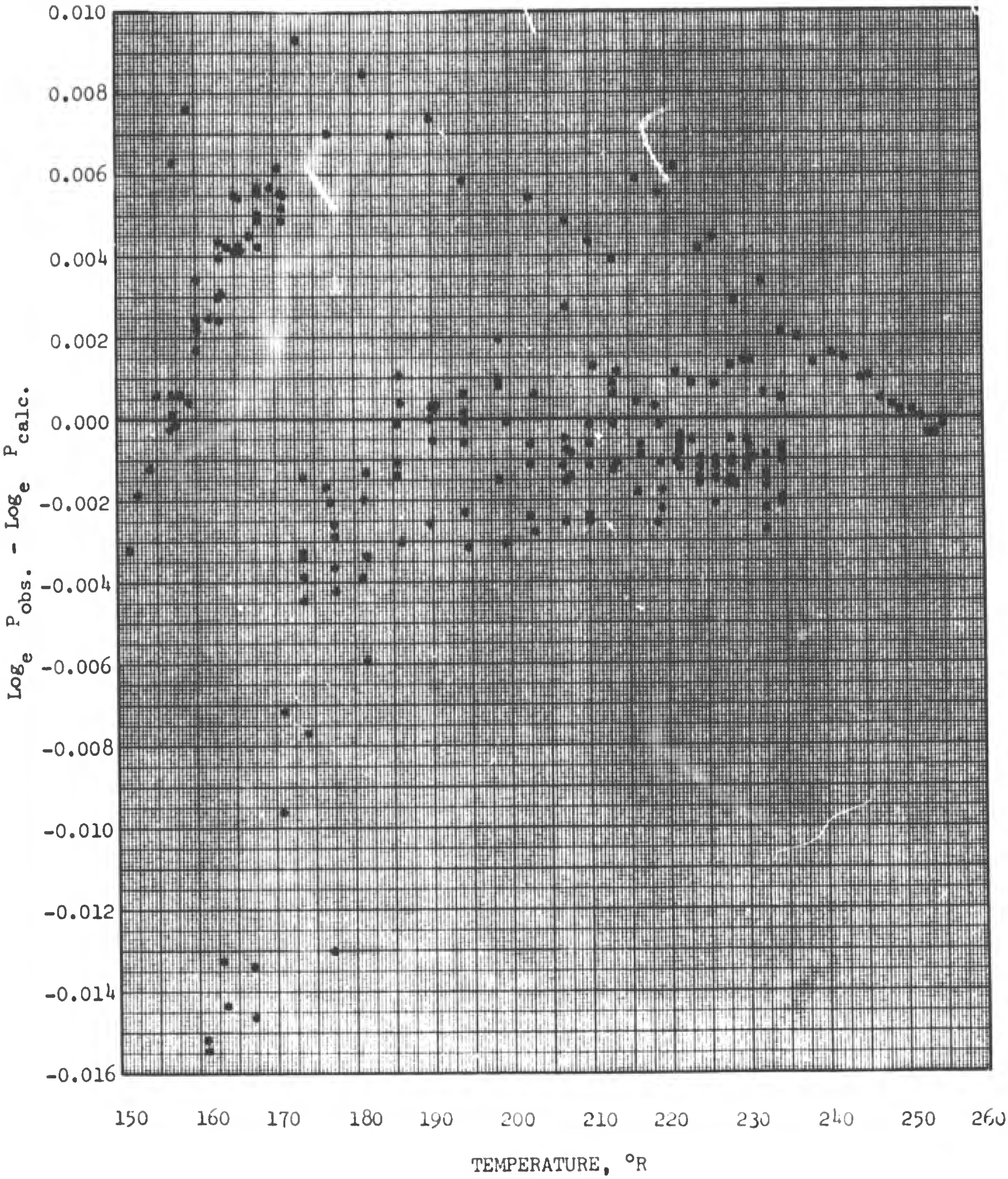

Figure 14. Deviation of APCI Argon Vapor Pressure Data from Riedel Equation.

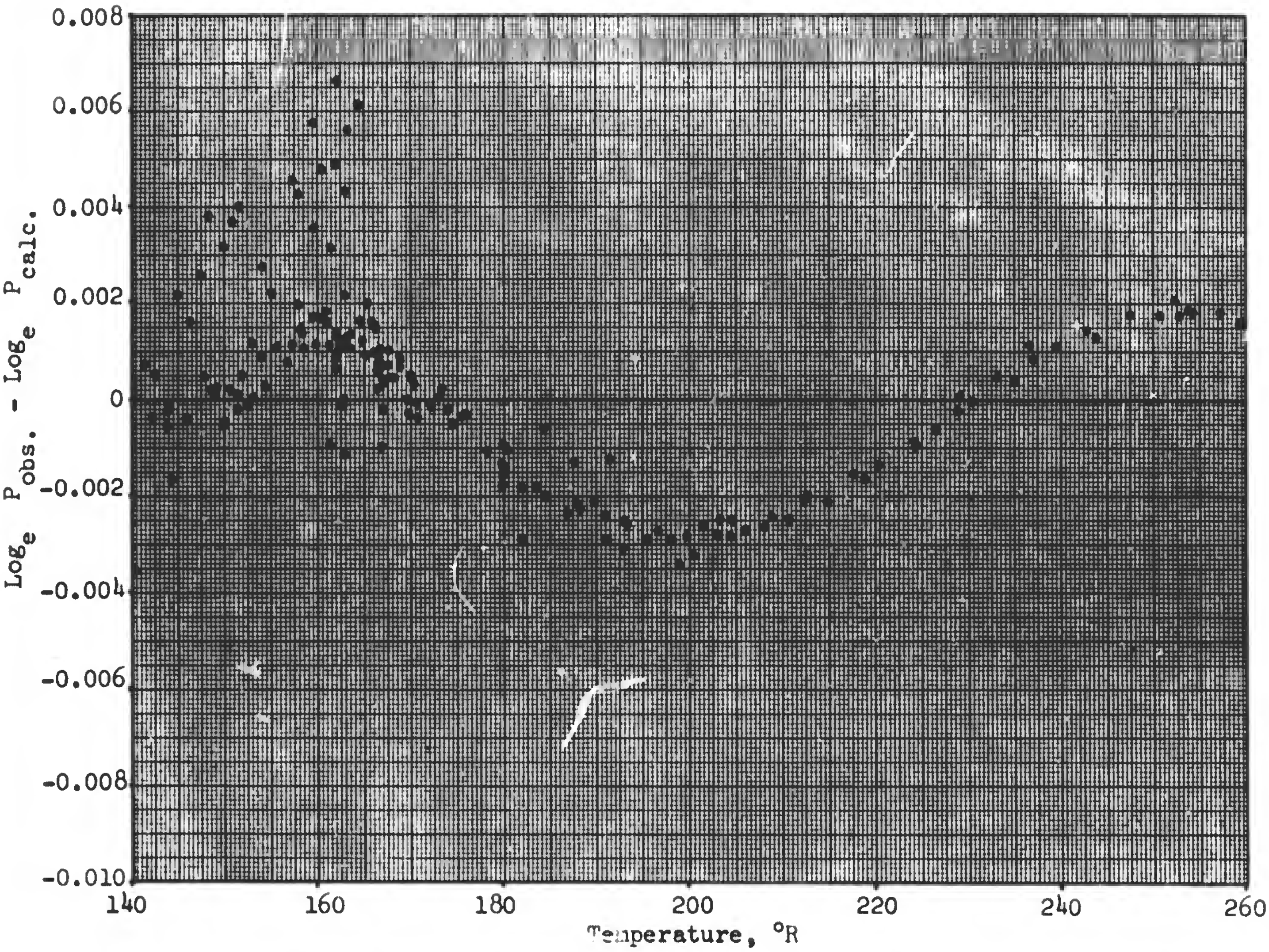

Figure 15. Deviation of Literature Oxygen Vapor Pressure Data from Riedel Equation.

A comparison of vapor pressure data from the literature for nitrogen(5,8,13,14,15) and argon(5,16,17) is given in Figures 16 and 17. The data for nitrogen deviate systematically about 0.7% from the calculated curve; the vapor pressures from the literature being too high. The data for argon are in good agreement with the correlation at high temperatures but at low temperatures the disagreement is of the order of 1%. These differences were part of the source of difficulty in correlating the data when the equilibrium cell thermocouple was calibrated from these data. This inconsistency then led to the calibration of the thermocouple from the vapor pressure of oxygen alone.

D. Fugacity Coefficient

The fugacity coefficient in the vapor phase is calculated from the virial equation of state terminating with the third virial coefficient

$$\frac{pV}{RT} = Z = 1 + \frac{B}{V} + \frac{C}{V^2} \tag{17}$$

The equation for the fugacity coefficient is as follows:

$$\ln \phi_i = \frac{2}{V} \sum_{j=1}^{n} y_i B_{ij} + \frac{3}{2V^2} \sum_{j=1}^{n} \sum_{k=1}^{n} y_j y_k C_{ijk} - \ln Z \tag{18}$$

The cross coefficients B_{ij} and C_{ijk} are calculated by methods similar to those presented by Pitzer(18) and by Prausnitz(19). The values of the second and third coefficients are given in Tables 19 and 20.

The calculated coefficients for the pure components are in good agreement with literature data(20,30) as is indicated in Figures 18, 19, and 20. The third virial coefficient deviates more than does the second; however, an error of 0.1 $(ft^3/lb\text{-}mole)^2$ in the third virial coefficient produces a maximum error of only about 0.2% in the calculated fugacity coefficient.

The virial equation terminated at the third virial coefficient deviates negligibly from experimental P-V-T data at densities up to one half the critical density as shown in Figures 21 , 22 , and 23 . At the experimental pressures of measurement the density of the vapor was always less than one half the critical density.

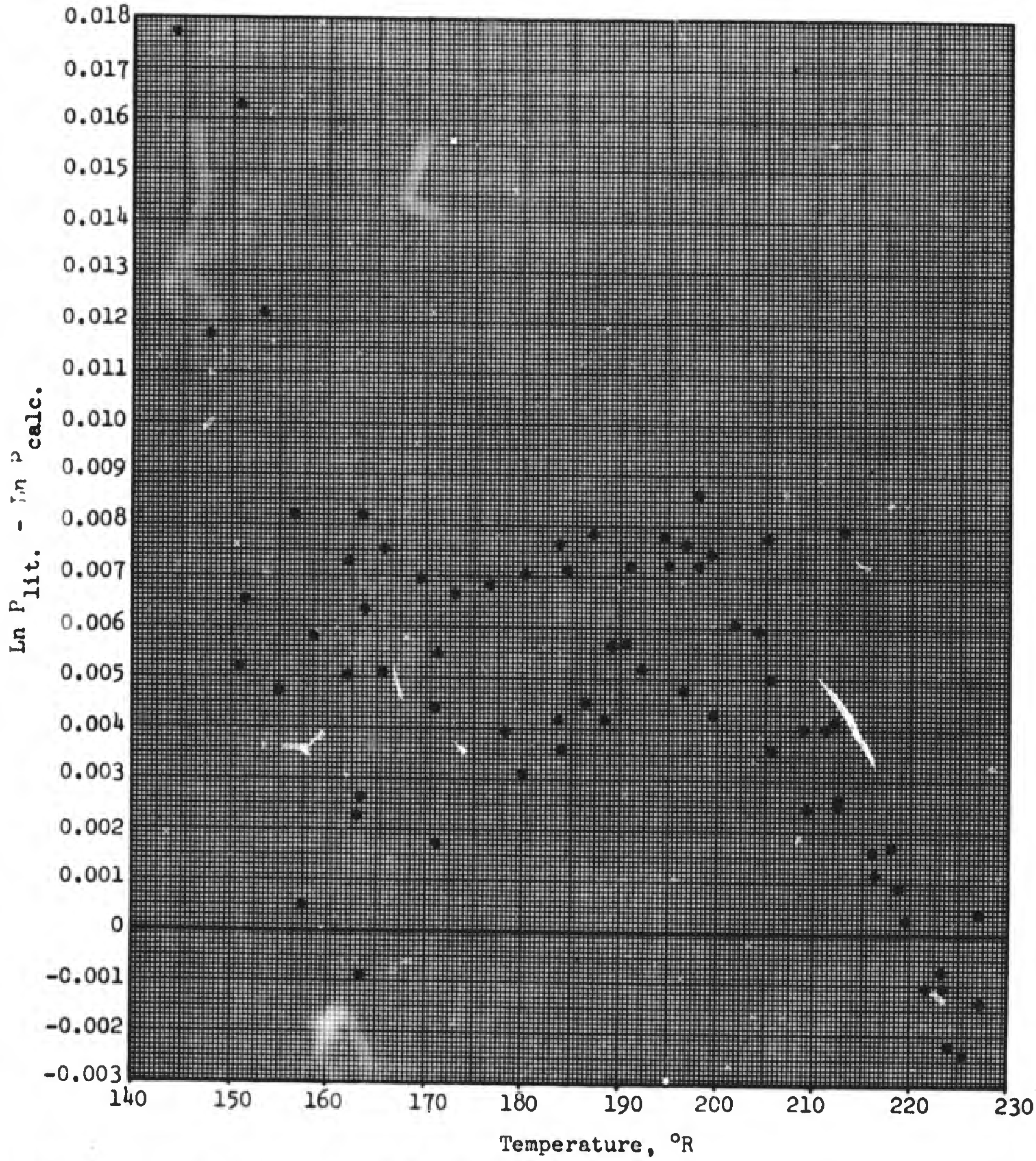

Figure 16. Deviation of Literature Vapor Pressure from APCI Correlation for Nitrogen.

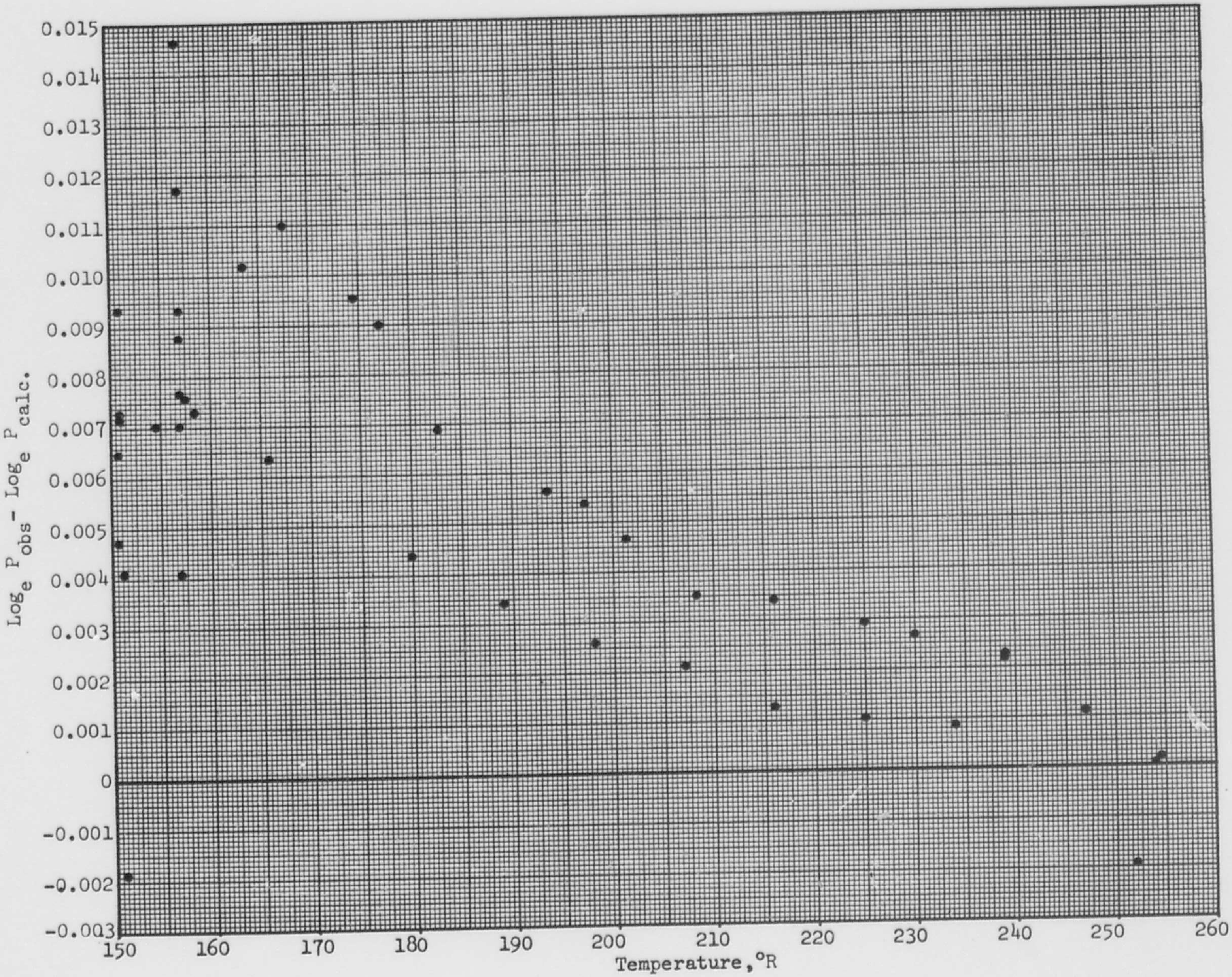

Figure 17. Deviation of Literature Vapor Pressure from APCI correlation for Argon.

TABLE 19

SECOND VIRIAL COEFFICIENTS USED IN CALCULATIONS
Cubic Feet/Pound Mole

Nitrogen = 1, Argon = 2, Oxygen = 3

T, °R	$-B_{11}$	$-B_{12}$	$-B_{13}$	$-B_{22}$	$-B_{23}$	$-B_{33}$
130	4.886	5.063	5.340	5.150	5.484	6.054
140	4.226	4.398	4.595	4.527	4.748	5.154
150	3.703	3.868	4.015	4.014	4.168	4.475
160	3.277	3.435	3.549	3.587	3.699	3.941
170	2.922	3.074	3.165	3.226	3.311	3.508
180	2.623	2.769	2.843	2.918	2.983	3.149
190	2.366	2.507	2.568	2.653	2.704	2.845
200	2.144	2.281	2.331	2.423	2.463	2.585
210	1.951	2.083	2.125	2.221	2.253	2.360
220	1.780	1.909	1.945	2.043	2.069	2.163
230	1.629	1.754	1.784	1.885	1.906	1.990
240	1.494	1.616	1.642	1.744	1.760	1.835
250	1.373	1.493	1.514	1.617	1.630	1.697
260	1.264	1.381	1.400	1.503	1.512	1.574

TABLE 20

THIRD VIRIAL COEFFICIENTS USED IN CALCULATIONS (Cubic Feet/Pound Mole)^2

Nitrogen = 1, Argon = 2, Oxygen = 3

T, °R	C_{111}	C_{112}	C_{113}	C_{122}	C_{123}	C_{133}	C_{222}	C_{223}	C_{233}	C_{333}
130	-1.024	-2.175	-2.371	-3.662	-3.927	-4.205	-5.581	-5.933	-6.303	-6.692
140	0.035	-0.685	-0.799	-1.614	-1.770	-1.935	-2.809	-3.020	-3.241	-3.474
150	0.578	0.110	0.043	-0.492	-0.586	-0.685	-1.264	-1.393	-1.529	-1.672
160	0.850	0.533	0.495	0.130	0.073	0.013	-0.386	-0.466	-0.551	-0.640
170	0.974	0.753	0.731	0.473	0.439	0.403	0.117	0.067	0.015	-0.041
180	1.018	0.858	0.847	0.657	0.638	0.617	0.405	0.374	0.342	0.307
190	1.019	0.898	0.894	0.750	0.740	0.728	0.566	0.547	0.527	0.506
200	0.995	0.902	0.902	0.789	0.785	0.779	0.651	0.640	0.629	0.616
210	0.960	0.885	0.888	0.797	0.796	0.795	0.690	0.684	0.679	0.672
220	0.919	0.857	0.862	0.786	0.788	0.789	0.701	0.699	0.697	0.695
230	0.877	0.824	0.830	0.765	0.768	0.771	0.695	0.696	0.697	0.697
240	0.835	0.789	0.795	0.738	0.743	0.747	0.680	0.683	0.685	0.687
250	0.795	0.754	0.760	0.709	0.714	0.719	0.660	0.663	0.667	0.670
260	0.757	0.719	0.726	0.679	0.685	0.691	0.636	0.641	0.645	0.649

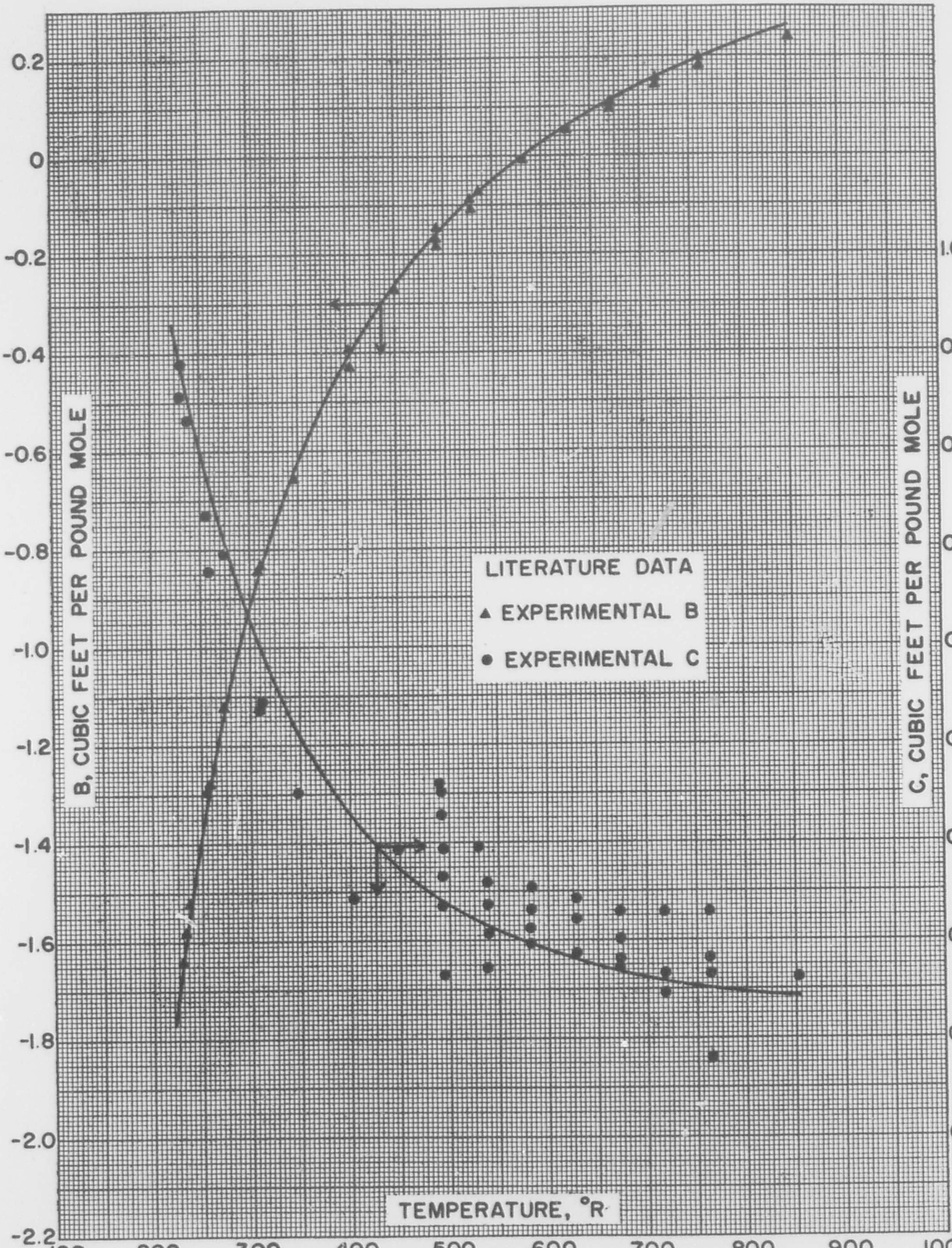

Figure 18. Calculated Second and Third Virial Coefficients, B and C, for Nitrogen.

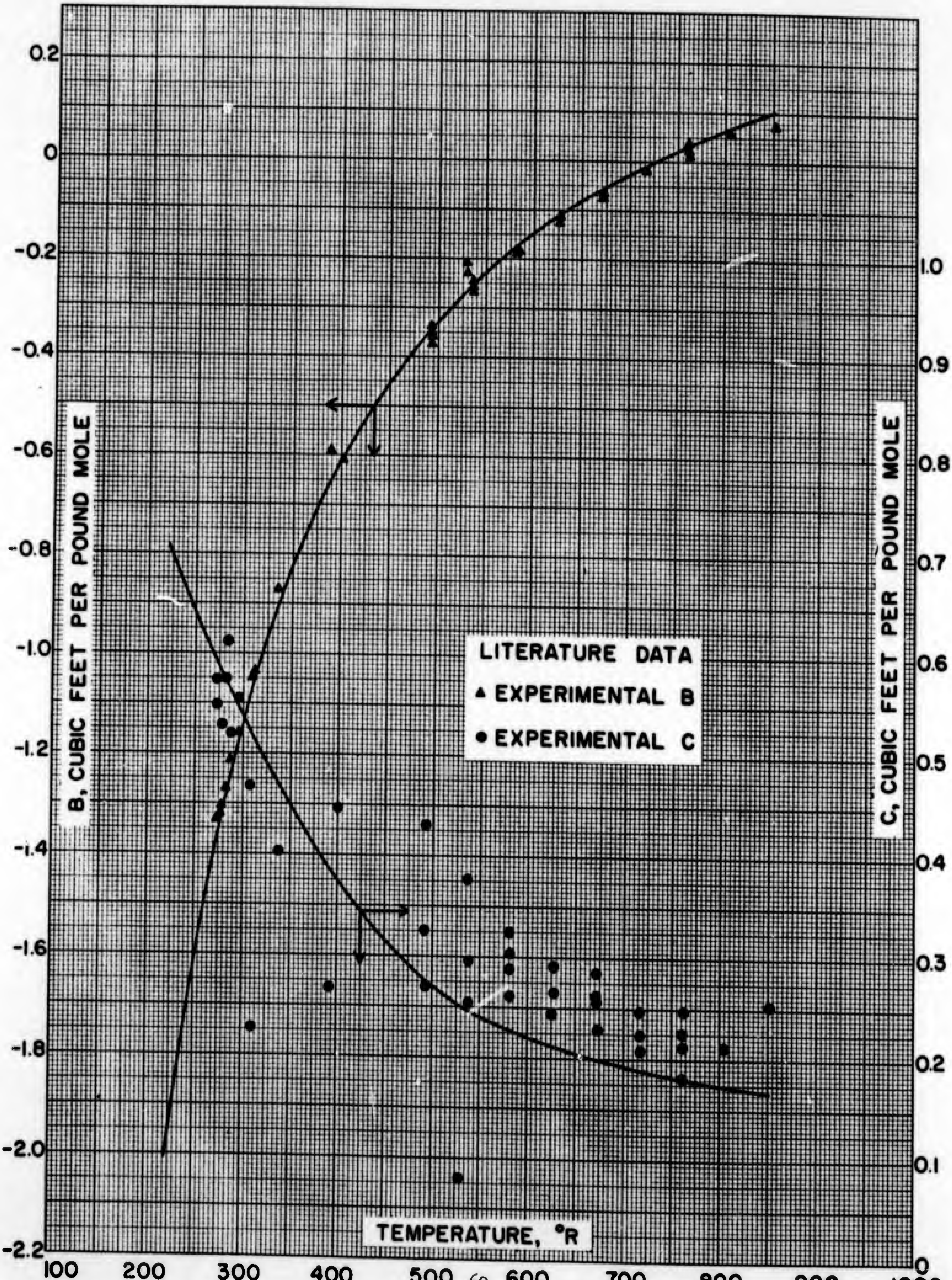

Figure 19. Calculated Second and Third Virial Coefficients, B and C, for Argon.

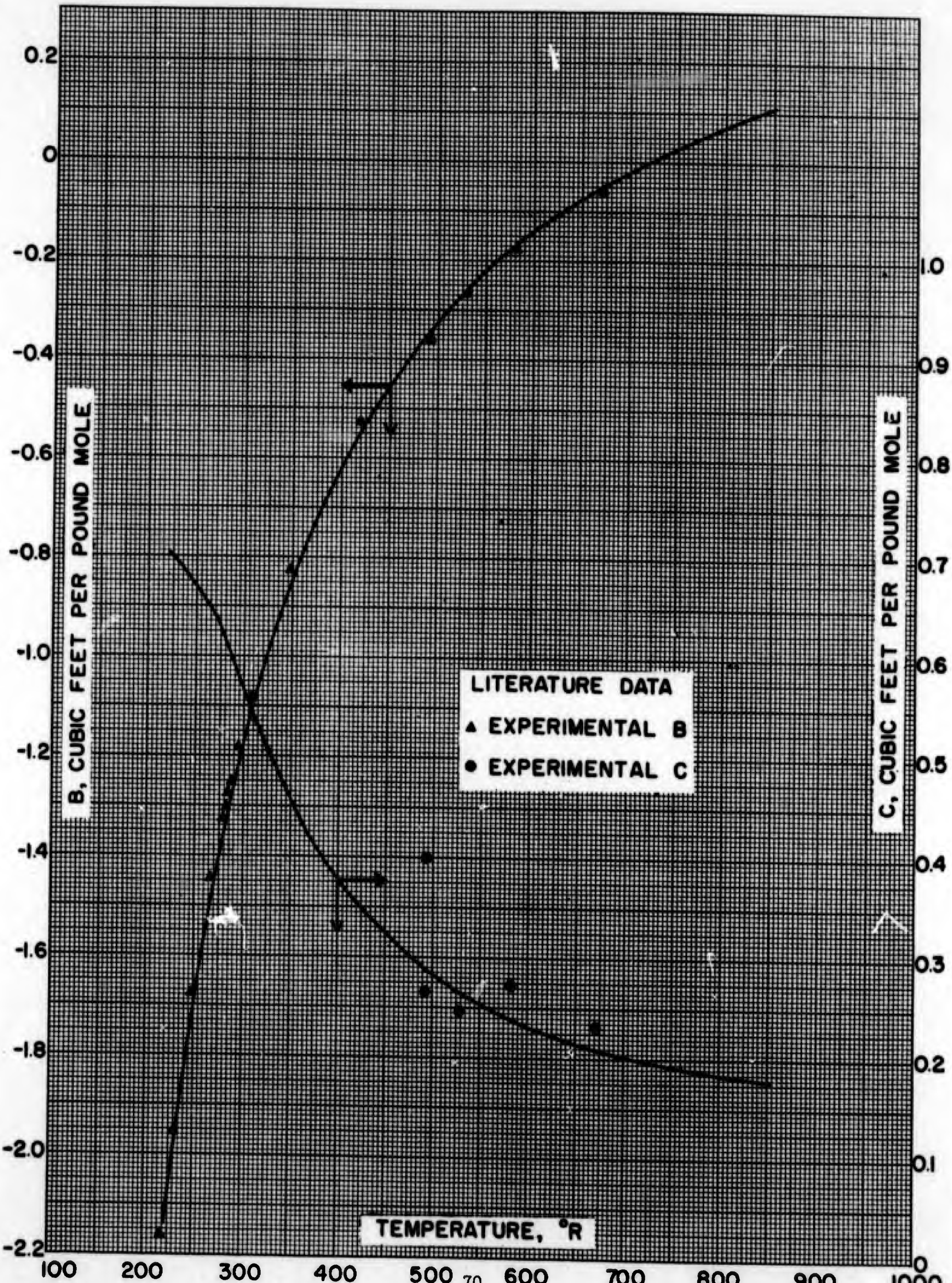

Figure 20. Calculated Second and Third Virial Coefficient, B and C, for Oxygen.

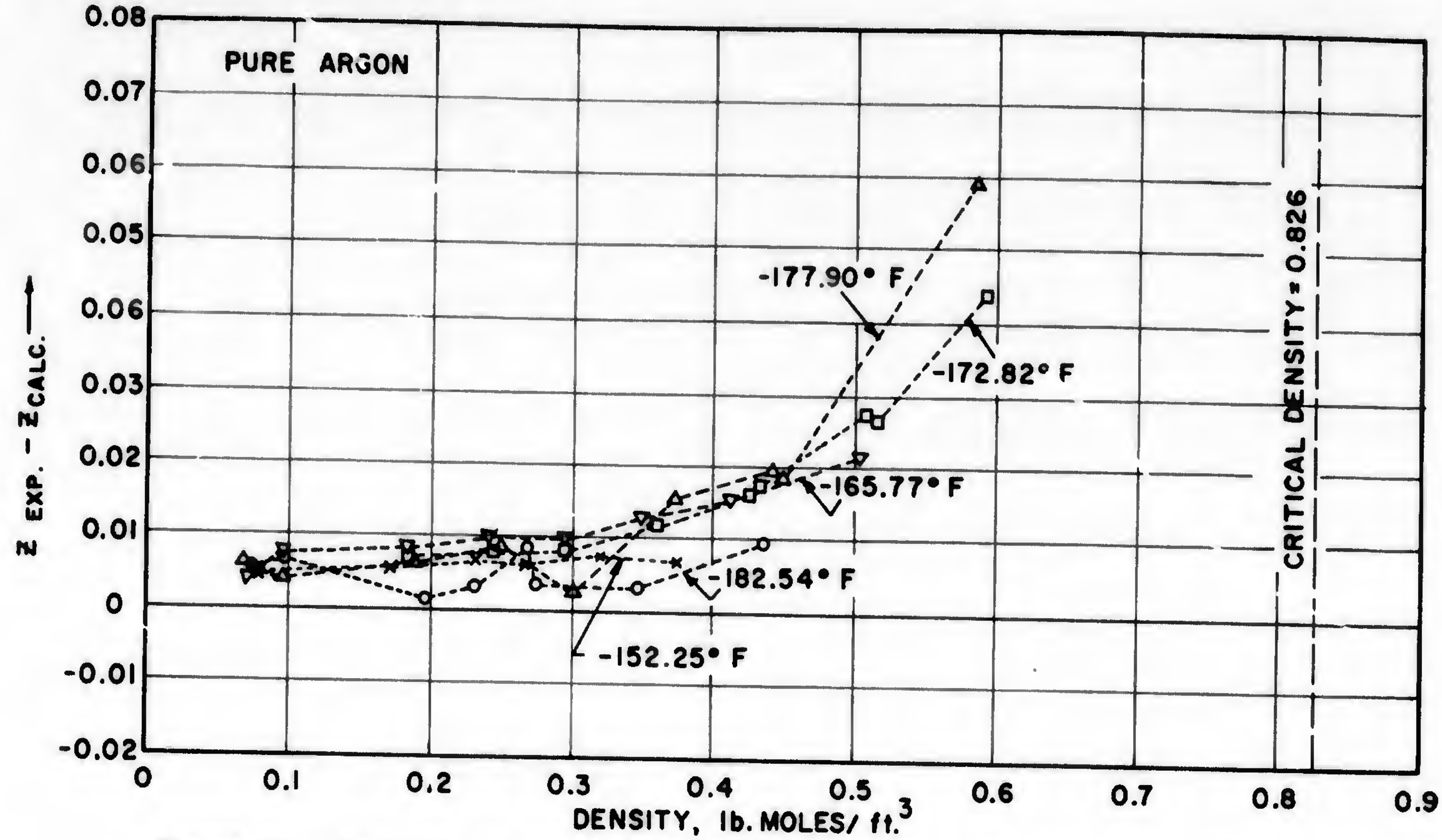

Figure 21. Comparison of Calculated and Experimental Compressibility Data, Argon.

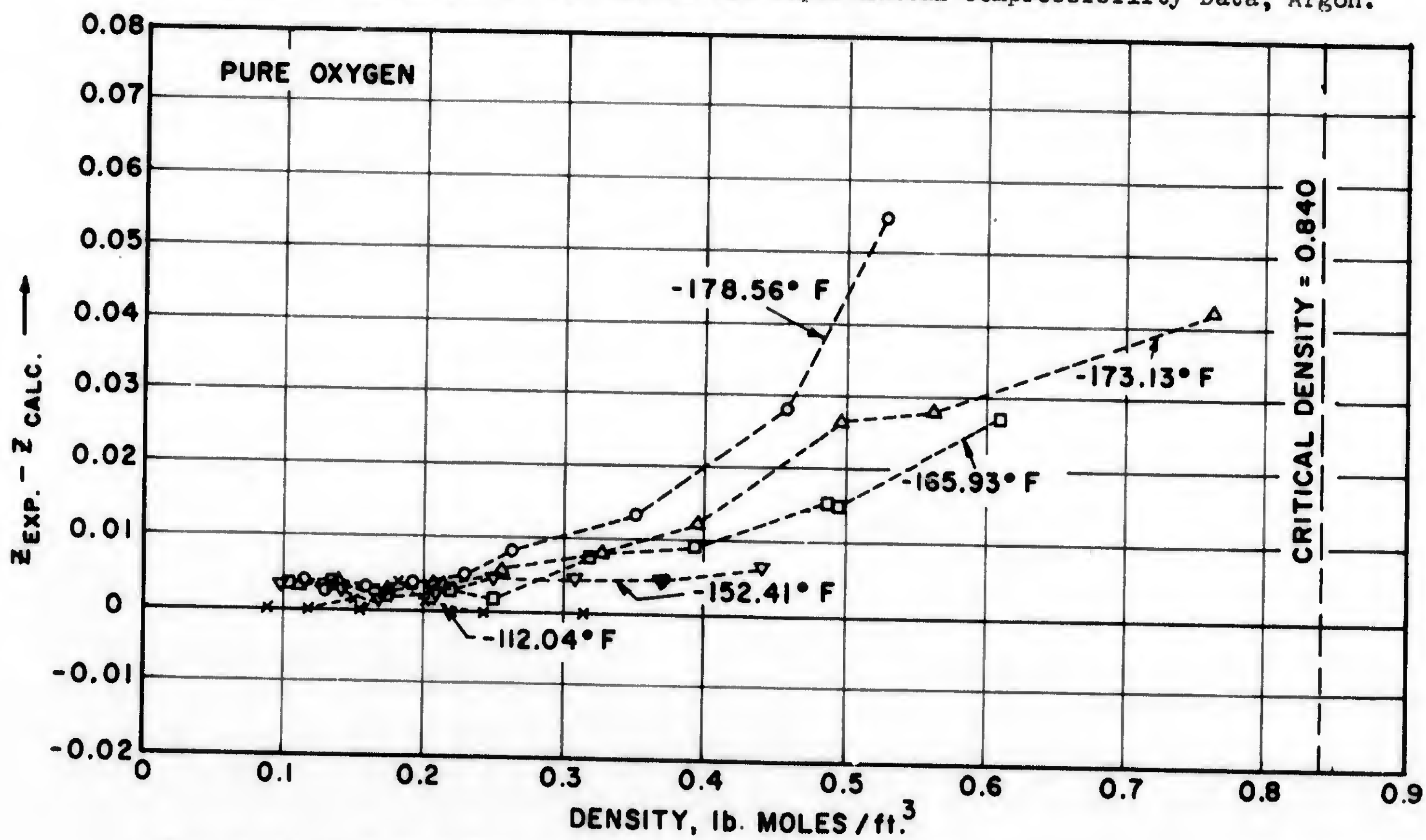

Figure 22. Comparison of Calculated and Experimental Compressibility Data, Oxygen.

Knobler and co-workers[31] have measured the cross coefficients of argon-oxygen, oxygen-nitrogen, and nitrogen-argon at 90°K. These data are shown in Figure 24 plotted along with the calculated curves. No other cross coefficient data were found.

Keunnen, Virschoyle and Van Urk[32] have measured the compressibility of two oxygen-nitrogen mixtures and Penning[33] has made measurements on air. Deviations in compressibility are shown plotted in Figures 25 and 26 where the difference is small as in the case of the pure components.

In view of these comparisons it is felt that the virial equation and the virial coefficients are within the experimental range of accuracy of existing P-V-T data and holds for mixtures as well as for pure components. The deviation in compressibility factor is of the order of 0.005 which probably corresponds to the uncertainty in the fugacity coefficient.

E. Activity Coefficient Equation

The liquid activity coefficient data calculated from the experimental data were correlated by means of the Van Laar equation. In a binary mixture it may be written as

$$\ln \gamma_1 = S_1 \left[\frac{S_2 x_2}{S_1 x_1 + S_2 x_2} \right]^2 A_{12} \tag{19}$$

or in a multicomponent mixture as

$$\ln \gamma_i = S_i \left[\sum_{j=1}^{n} \theta_j A_{ij} - \frac{1}{2} \sum_{j=1}^{n} \sum_{k=1}^{n} \theta_j \theta_k A_{jk} \right] \tag{20}$$

where $\theta_j = \dfrac{S_j x_j}{\sum_{k=1}^{n} S_k x_j}$

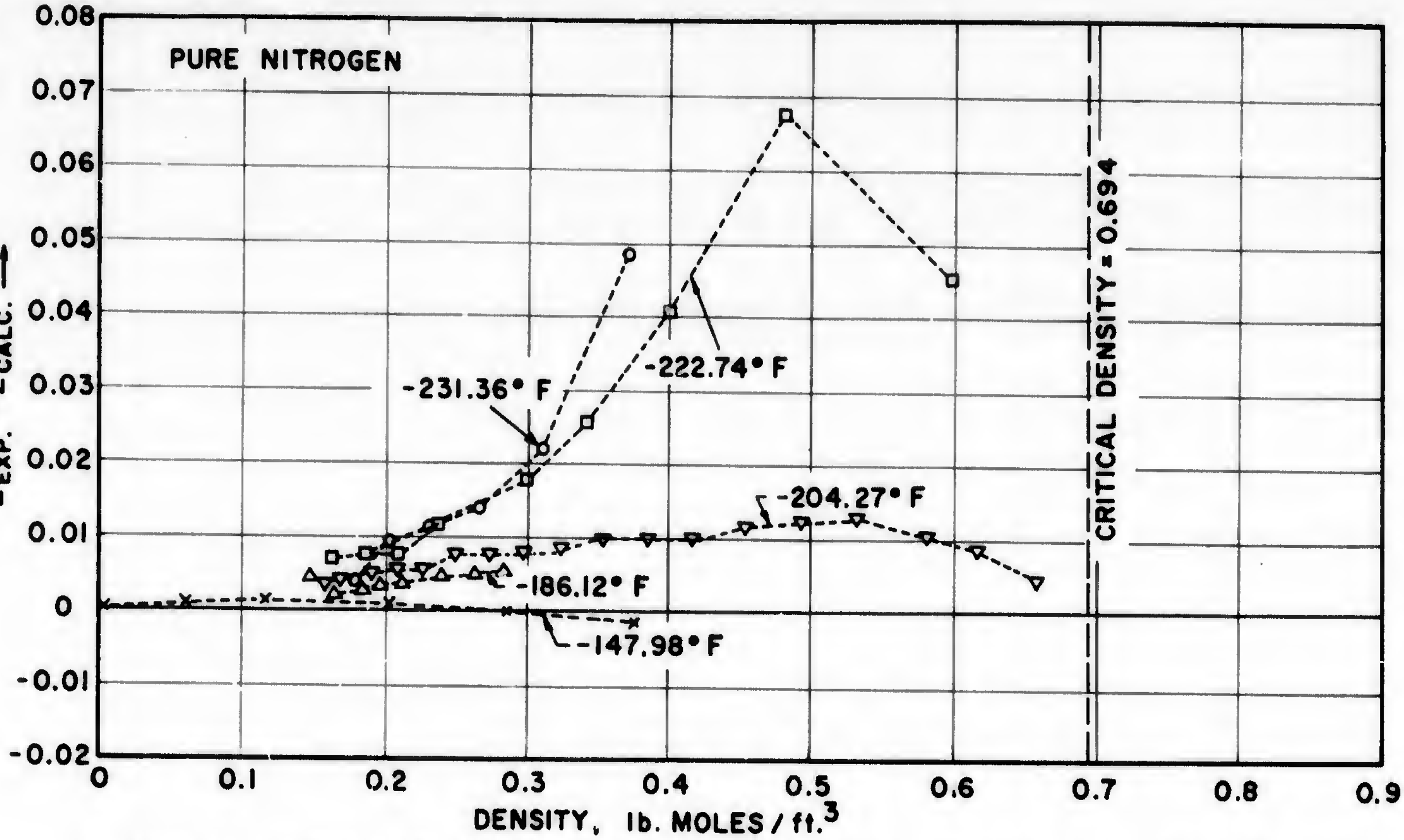

Figure 23. Comparison of Calculated and Experimental Compressibility Data, Nitrogen.

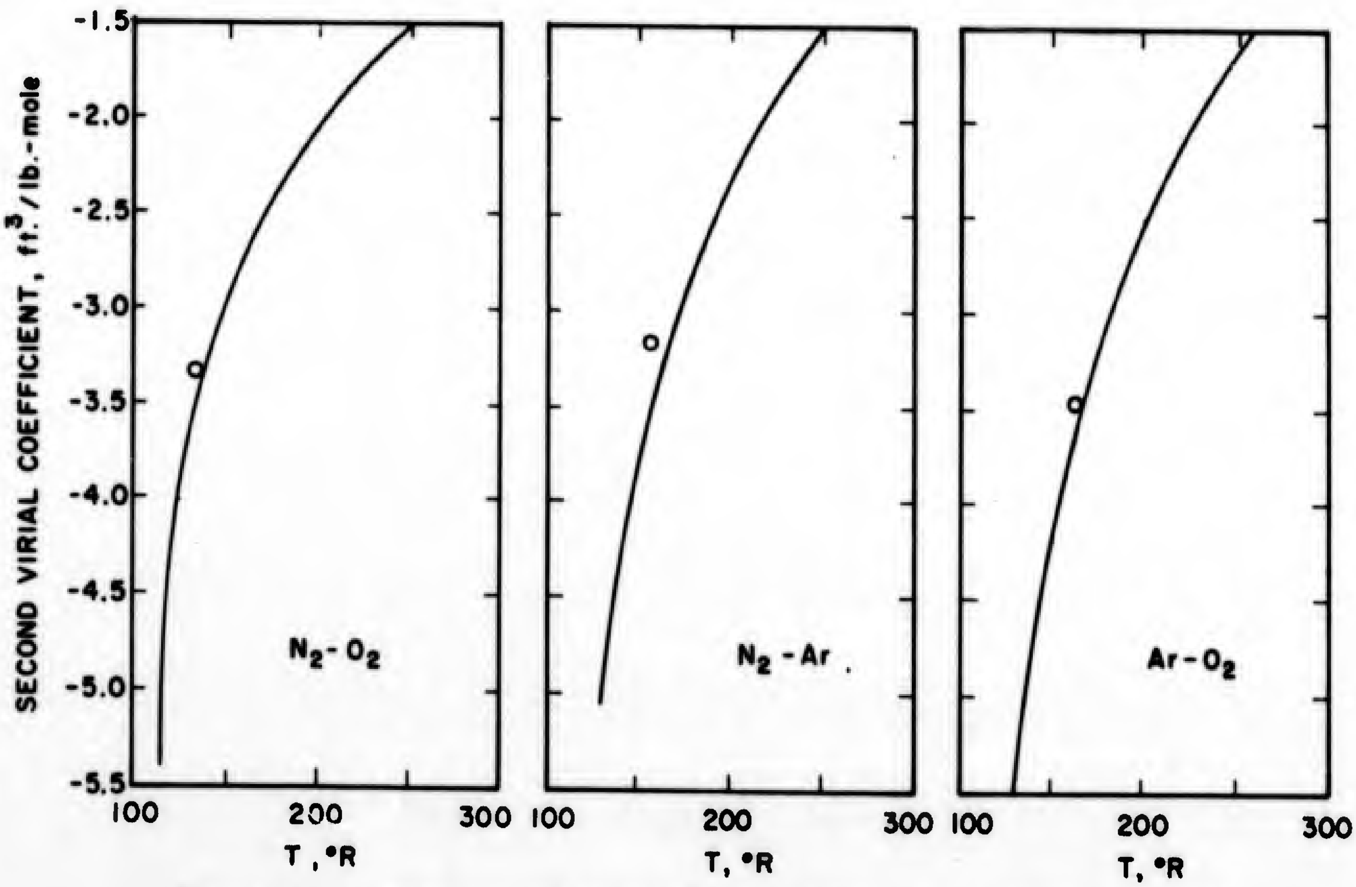

Figure 24. Comparison of Calculated and Experimental Cross Coefficients.

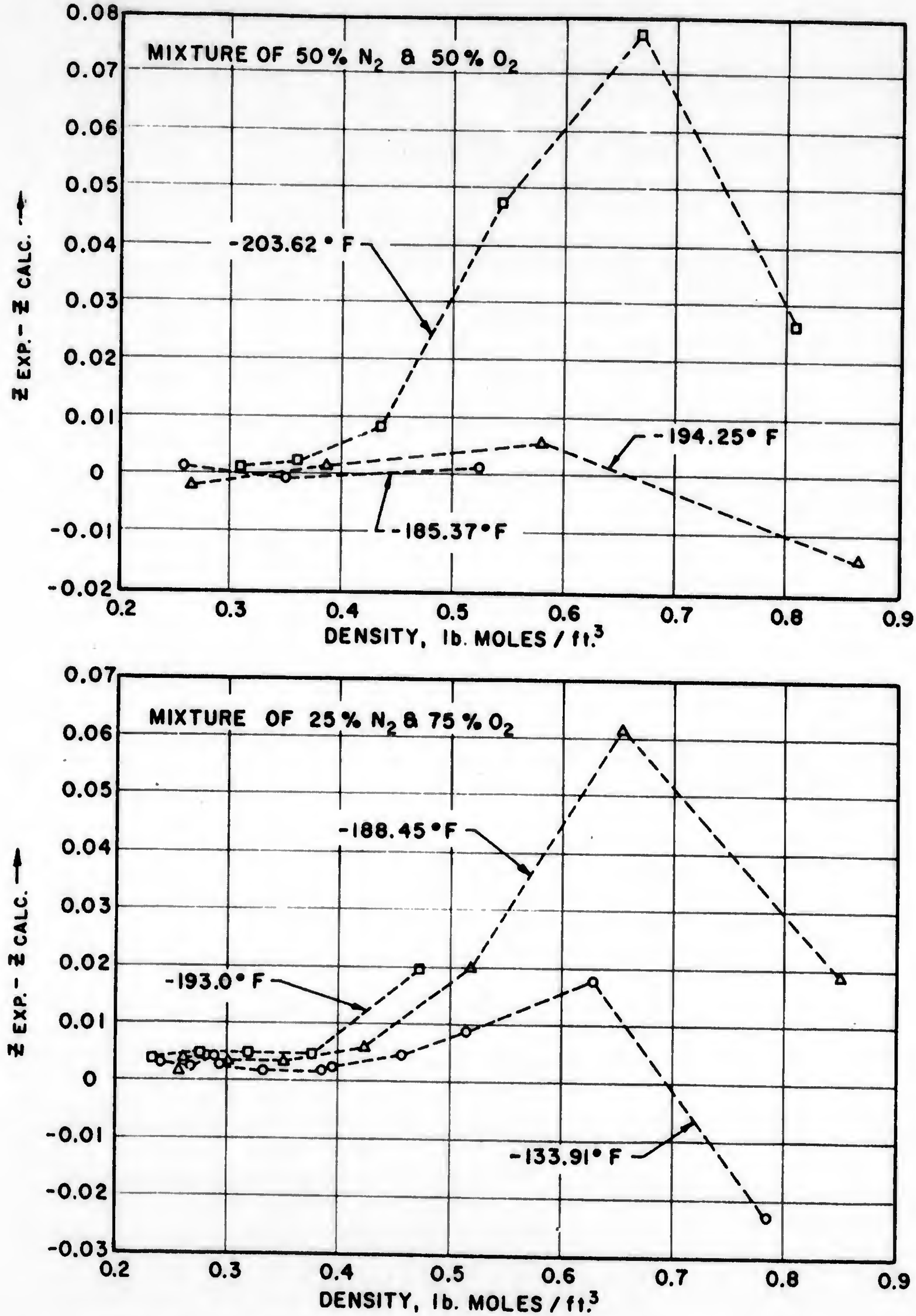

Figure 25. Comparison of Calculated and Experimental Compressibility Data, Nitrogen-Oxygen Mixture.

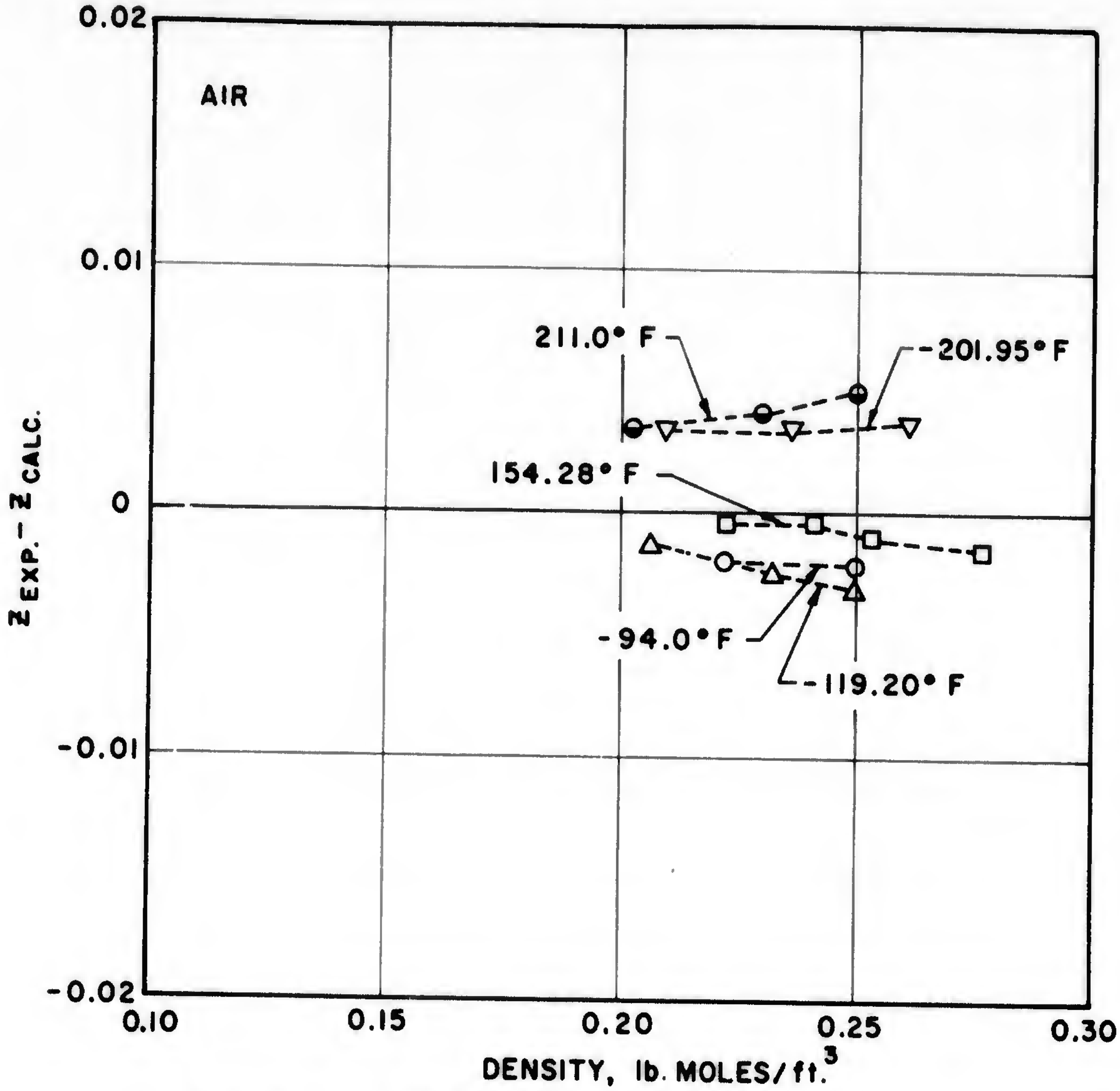

Figure 26. Comparison of Calculated and Experimental Compressibility Data, Air.

The interaction coefficients A_{ij} were assumed to be temperature dependent according to the relation

$$A_{ij} = a_{ij} + b_{ij}/T \tag{21}$$

The constants in the Van Laar equation were determined by a least squares fit to the entire set of vapor-liquid equilibrium data. The constants obtained are given in Table 21 . A discussion of the correlation and comparisons with data are given in the following section.

TABLE 21

VAN LAAR CONSTANTS FOR NITROGEN-ARGON-OXYGEN ACTIVITY COEFFICIENTS IN THE LIQUID PHASE

Component	Van Laar Volume	a_{ij}			b_{ij}		
		N_2	Ar	O_2	N_2	Ar	O_2
Nitrogen	1.00	0	-.1515	-.0669	0	51.8	43.9
Argon	1.00	-.1515	0	-.0837	51.8	0	40.7
Oxygen	1.00	-.0669	-.0837	0	43.9	40.7	0

VII. COMPARISON OF CORRELATION TO DATA

The experimental vapor-liquid equilibrium data were fitted by the method of least squares to the constants in the logarithm of the activity coefficient of each component. By this method a single vapor-liquid equilibrium point provided two activity coefficient points in a binary mixture and three points in a ternary mixture. With 1962 equilibrium points this produced 5344 activity coefficient points, requiring considerable running time on the computer each time a least squares analysis was made. Each experimental point was weighted equally because equal weight seems as logical for this set of data as other methods of weighting. If the Gibbs free energy of mixing had been fitted, it would have been more logical to weight the data differently because data at low concentrations of a component would not receive sufficient weight.

A summary of the various least square analysis runs made on the computer is given in Table 22, where the curve-fit number is in the chronological order of the analysis made. Runs 1, 2, 3, and 4 show that it makes little difference in the RMS error whether the three binaries are assumed to be symmetrical or unsymmetrical in the activity coefficient. Runs 5 and 6 are equivalent to Runs 4 and 1 respectively, except that points deviating more than three times the RMS error were deleted. The percentage of points deleted was five times the theoretical number of 0.3% based on a random error distribution, and the RMS error was reduced approximately 50%--38 times the theoretical value of 1.3%--justifying the deletion of the points. Runs 5 and 6 show that it makes little difference in the RMS error whether the constants a_{ii} are set to zero or not; the error only increasing from .0235 to .0261. Because of this insensitivity, the constants b_{ij} have been fixed consistent with heat of mixing data from the literature and the coefficients a_{ij} have been adjusted to fit the activity coefficient data. Runs 7 and 8 correspond to this restriction, however, it was found that there was a systematic bias in the correlation due to errors in the vapor pressures of the pure components.

This bias is shown in Table 23 where there were 1517 nitrogen points in Run 8 with positive deviation compared with only 229 points with negative deviation. An examination of the data showed that the correlation could be improved if the vapor pressures of the pure components were adjusted slightly. An adjustment of the data was made by the use of vapor pressure data measured under the present project in place of data reported in the literature as described in Section III-G. The results of the adjustment are shown as the difference between Runs 8 and 10 in Tables 22 and 23. The RMS error dropped slightly and the number of positive and negative deviations became more nearly the same.

TABLE 22

CONSTANTS AND ROOT MEAN SQUARE ERROR OF VARIOUS CURVE-FITS

Constant	Curve-Fit Number									
	1	2	3	4	5	6	7	8	9	10
S_{N_2}	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
S_{Ar}	1.0	.9743*	.9743	1.0	1.0	1.0	1.0	1.0	1.0	1.0
S_{O_2}	1.0	.9469*	.9469	1.0	1.0	1.0	1.0	1.0	1.0	1.0
a_{N_2-Ar}	0.0	0.0	.0696*	.0698*	.1237*	0.0	-.1415*	-.1397*	-.1555*	-.1515*
b_{N_2-Ar}	24.54*	24.54	11.61*	11.16*	1.01*	24.60*	51.8	51.8	51.8	51.8
$a_{N_2-O_2}$	0.0	0.0	.1849*	.1818*	.2191*	0.0	-.0432*	-.0439*	-.0653*	-.0669*
$b_{N_2-O_2}$	34.81*	34.81	-.60*	0.0*	-7.74*	34.51*	43.9	43.9	43.9	43.9
a_{Ar-O_2}	0 0	0.0	-.1096*	-.1046*	-.0984*	0.0	-.0864*	-.0893*	-.0808*	-.0837*
b_{Ar-O_2}	23.31*	23.31	46.45*	44.47*	42.64*	22.78*	40.7	40.7	40.7	40.7
RMS Error	.0456	.0455	.0444	.0445	.0235	.0261	.0466	.0284	.0431	.0250
Points Deleted	0	0	0	0	87	86	0	81	0	92

*Coefficient Varied in That Run

TABLE 23

SUMMARY OF POSITIVE AND NEGATIVE
DEVIATIONS OF EXPERIMENTAL POINTS FROM CORRELATION

	Nitrogen		Argon		Oxygen	
Run No.	Plus	Minus	Plus	Minus	Plus	Minus
8	1517	229	829	935	533	1201
10	1135	614	1024	733	570	1176

Run 10 has been adopted as the final correlation although there still remain systematic deviations in the data as shown in Figures 27 to 31 . The various regions designated in these figures correspond to the following:

Region I, nitrogen mole fraction greater than 0.5

Region II, argon mole fraction greater than 0.5

Region III, oxygen mole fraction greater than 0.5

Region IV, mole fraction of all three components less than 0.5.

These figures indicate systematic deviations at low temperatures; a relatively even distribution at between 170 and 180°R; systematic deviations between 190 and 210°R; a relatively even distribution between 220 and 230°R ; and systematic deviations above 230°R. This pattern exists somewhat independent of the region examined, but is most predominant in Regions II, III, and IV.

A comparison of calculated vs. measured activity coefficients in each of the binaries are presented in Figures 32 to 45. The data were divided into approximately 20°R intervals and plotted on separate graphs. The solid lines represent the calculated activity coefficient at the two extremes of temperature. In this comparison the same systematic deviation is observed as in Figures 27 to 31 for the nitrogen-oxygen and nitrogen-argon system, the largest systematic error being approximately 2.5% in the nitrogen-argon system. The oxygen-argon system seems to show no systematic deviations.

A comparison of calculated and measured equilibria in the binary and ternary systems is given in Figures 46 to 82 which show tie lines in a ternary phase diagram at constant temperature and pressure. The figures are ordered

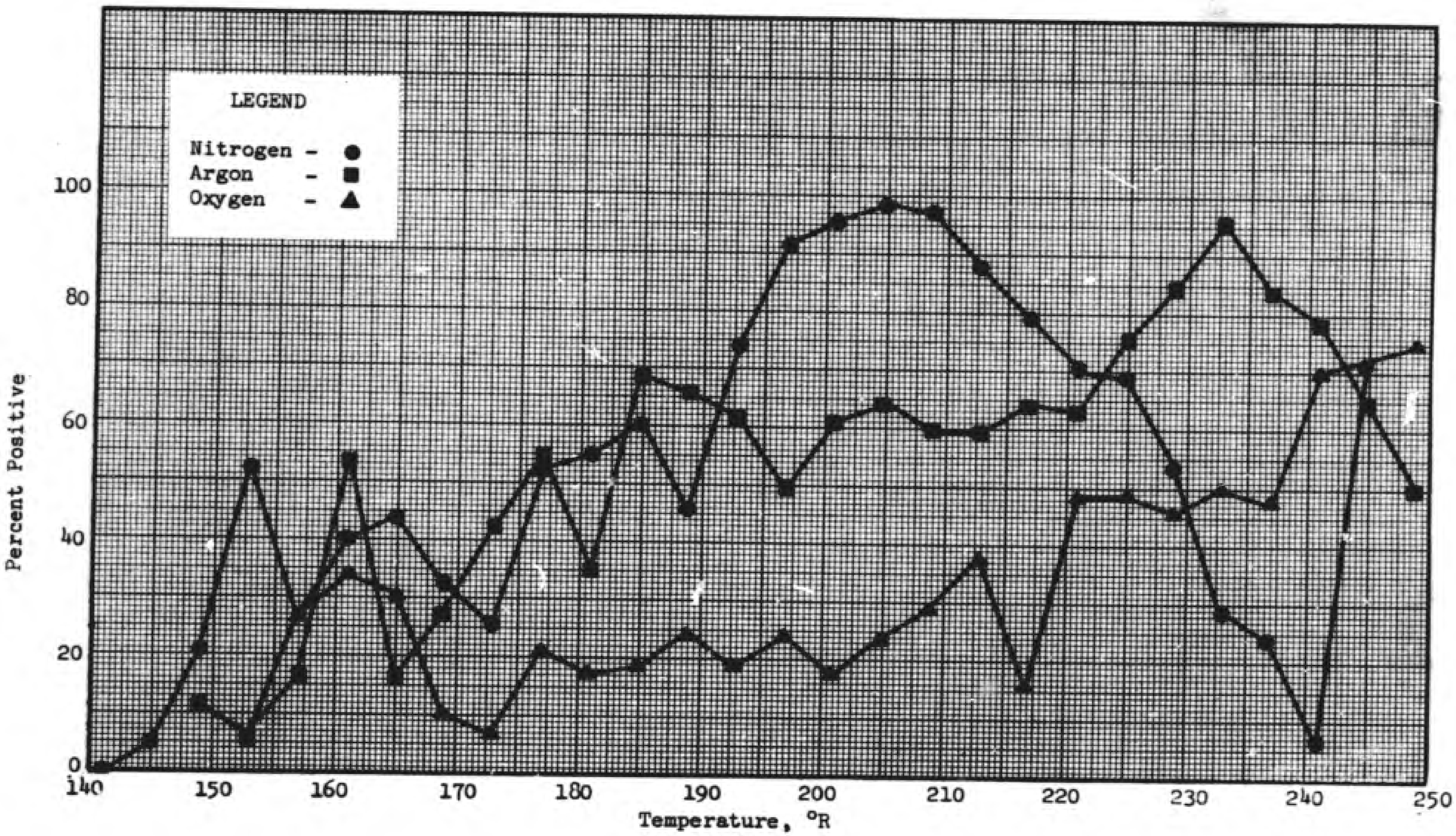

Figure 27. Summary of Bias of Points in Region I.

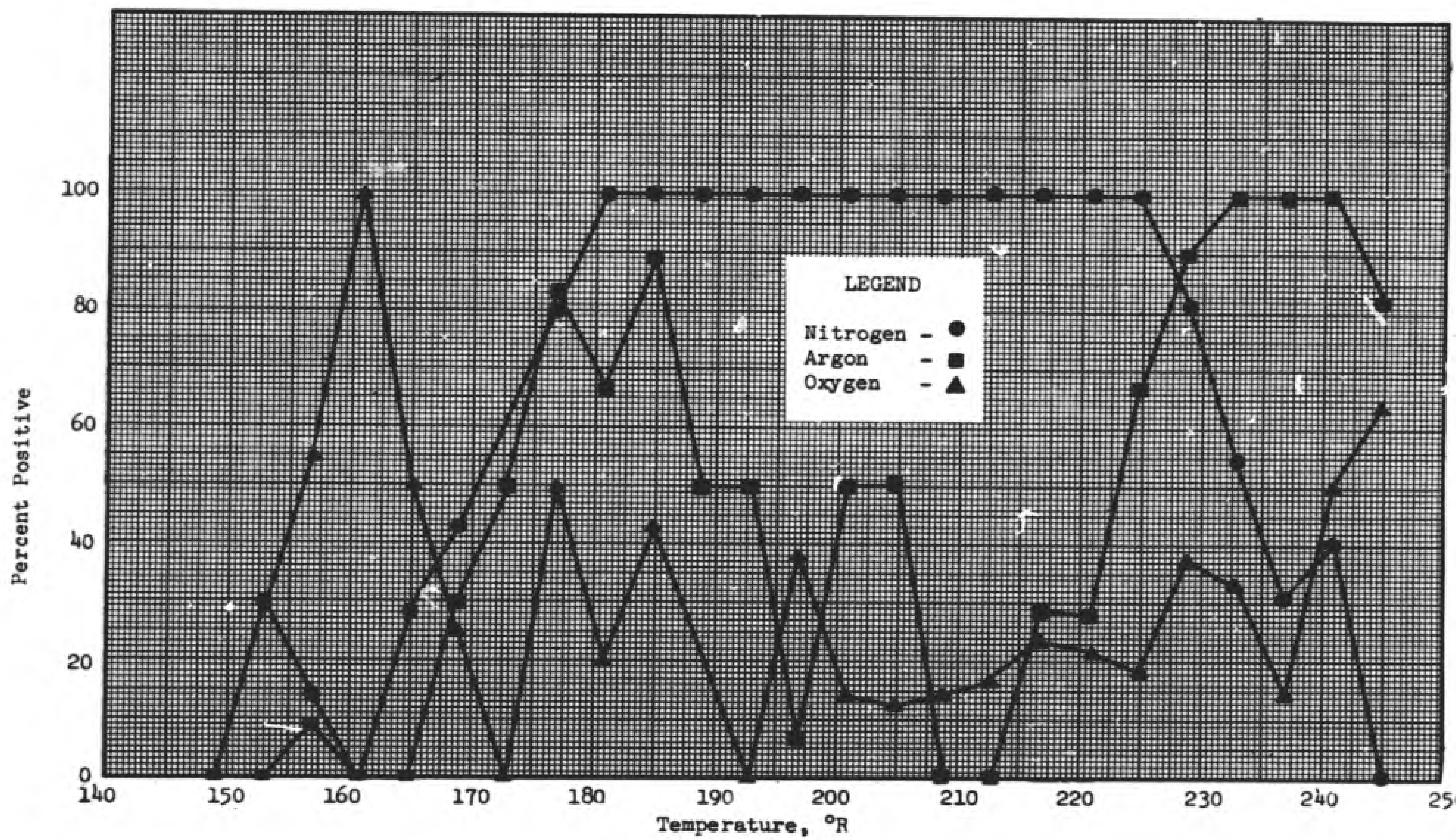

Figure 28. Summary of Bias of Points in Region II.

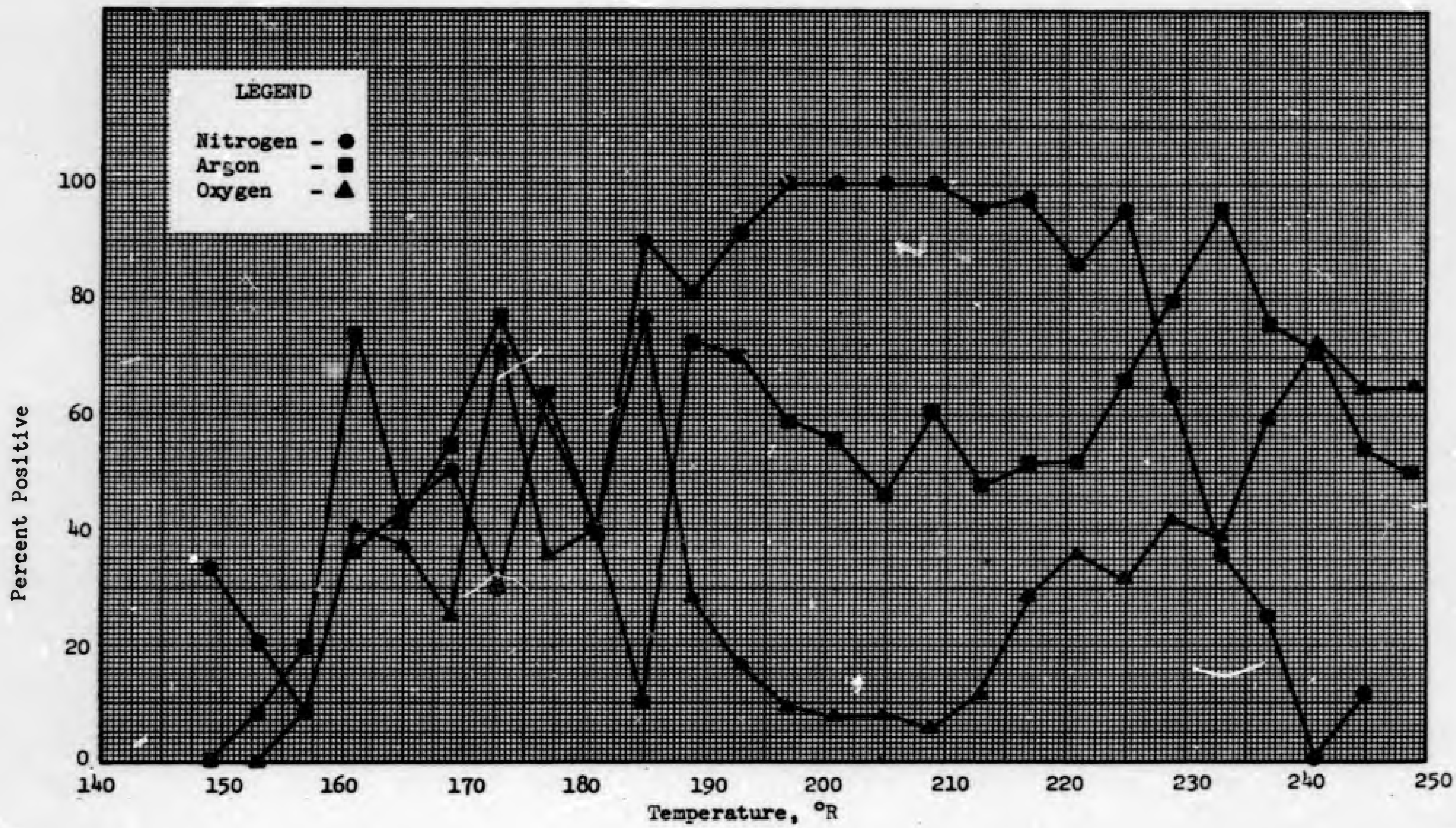

Figure 29. Summary of Bias of Points in Region III.

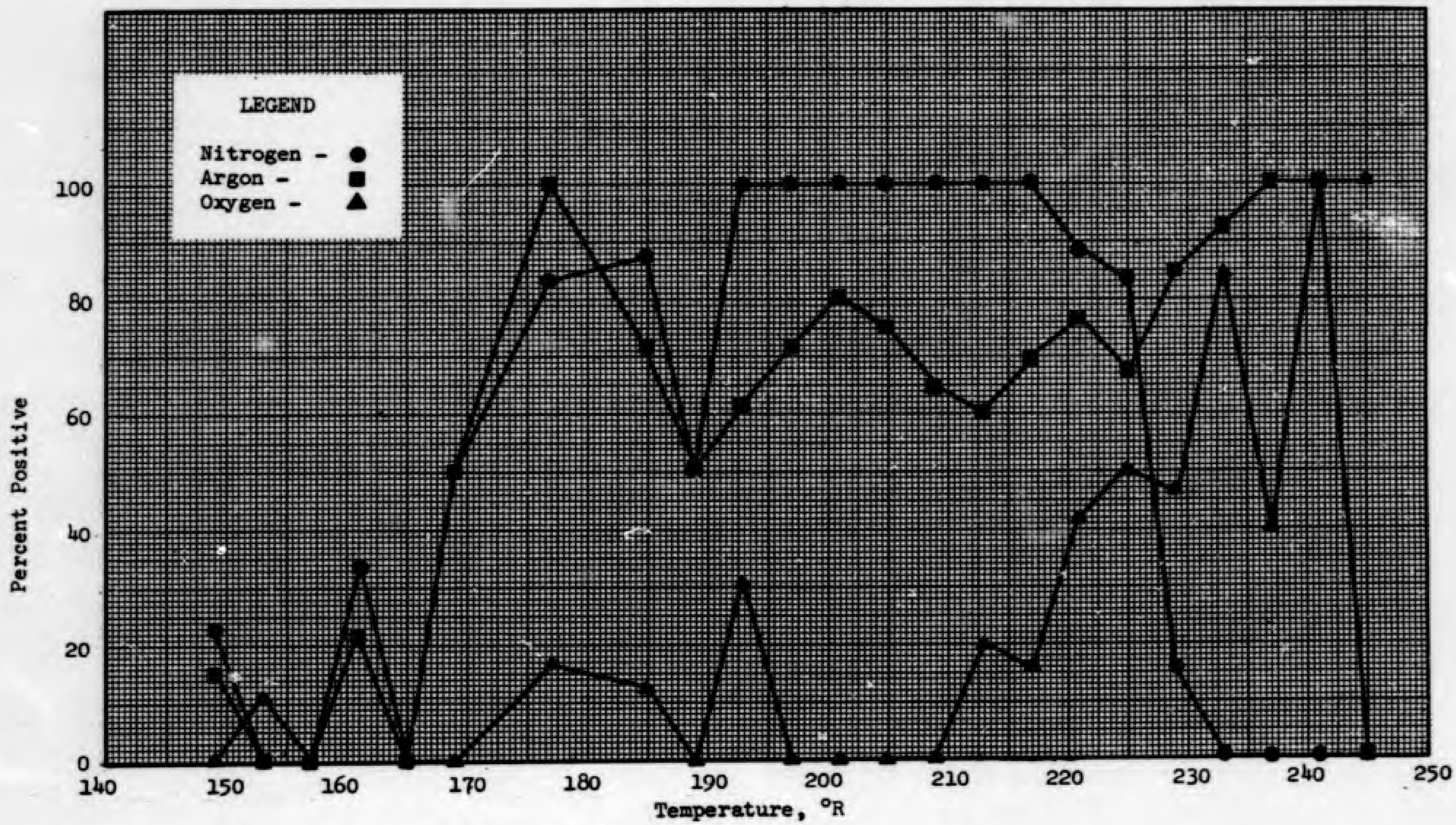

Figure 30. Summary of Bias of Points in Region IV.

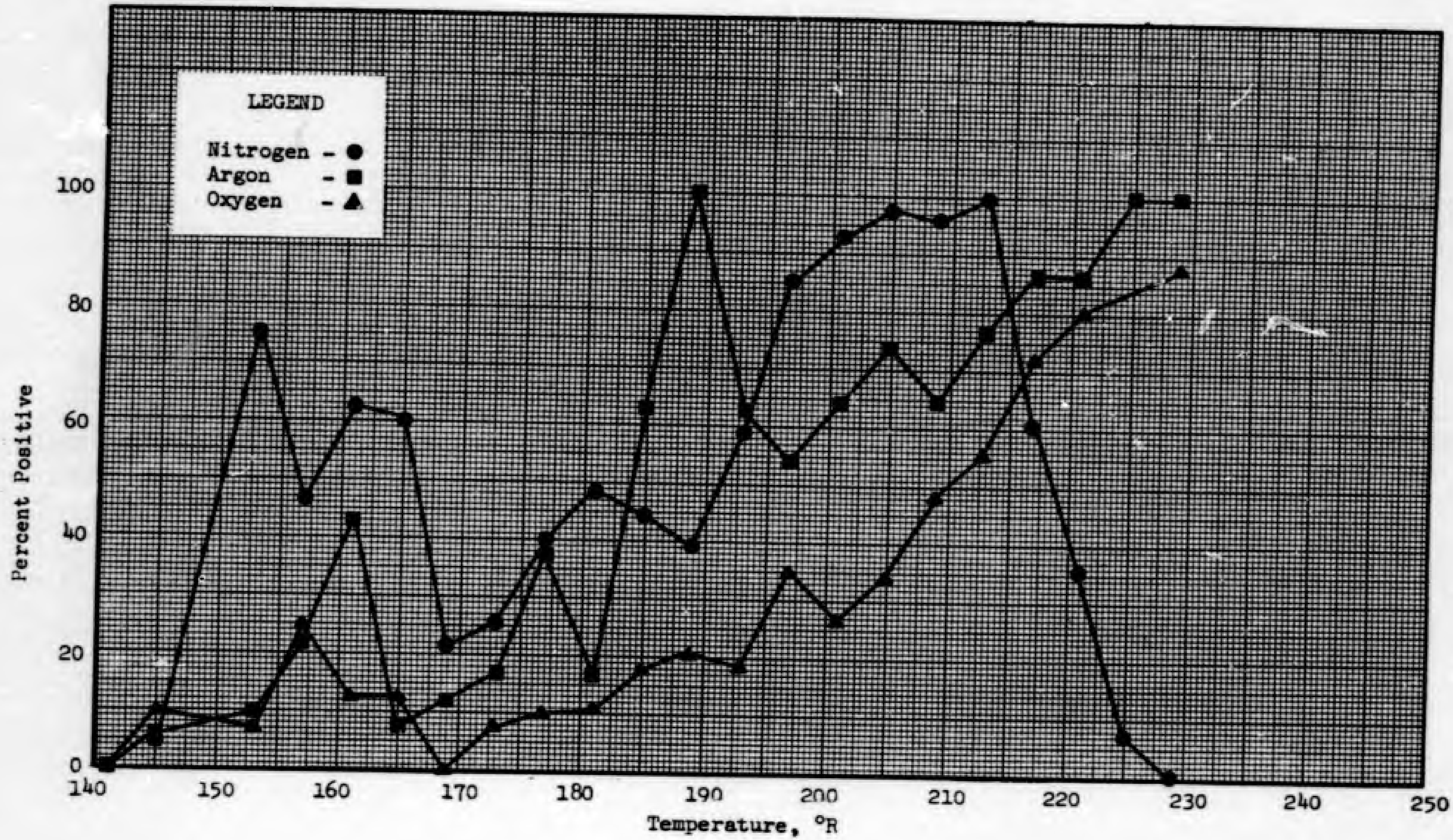

Figure 31. Summary of Bias of Points in all Regions.

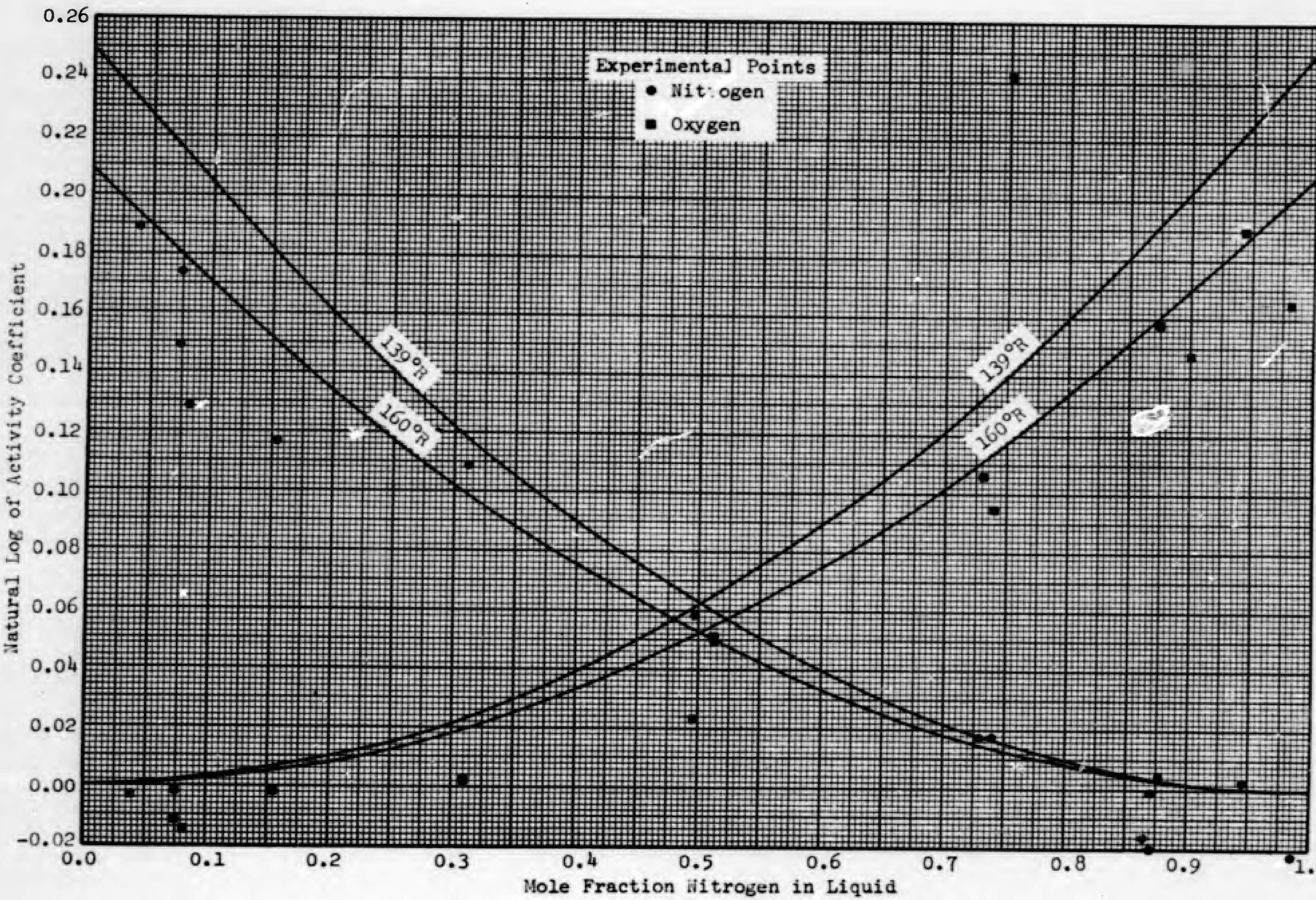

Figure 32. Activity Coefficients in the Nitrogen-Oxygen Binary System, Calculated vs. Experimental.

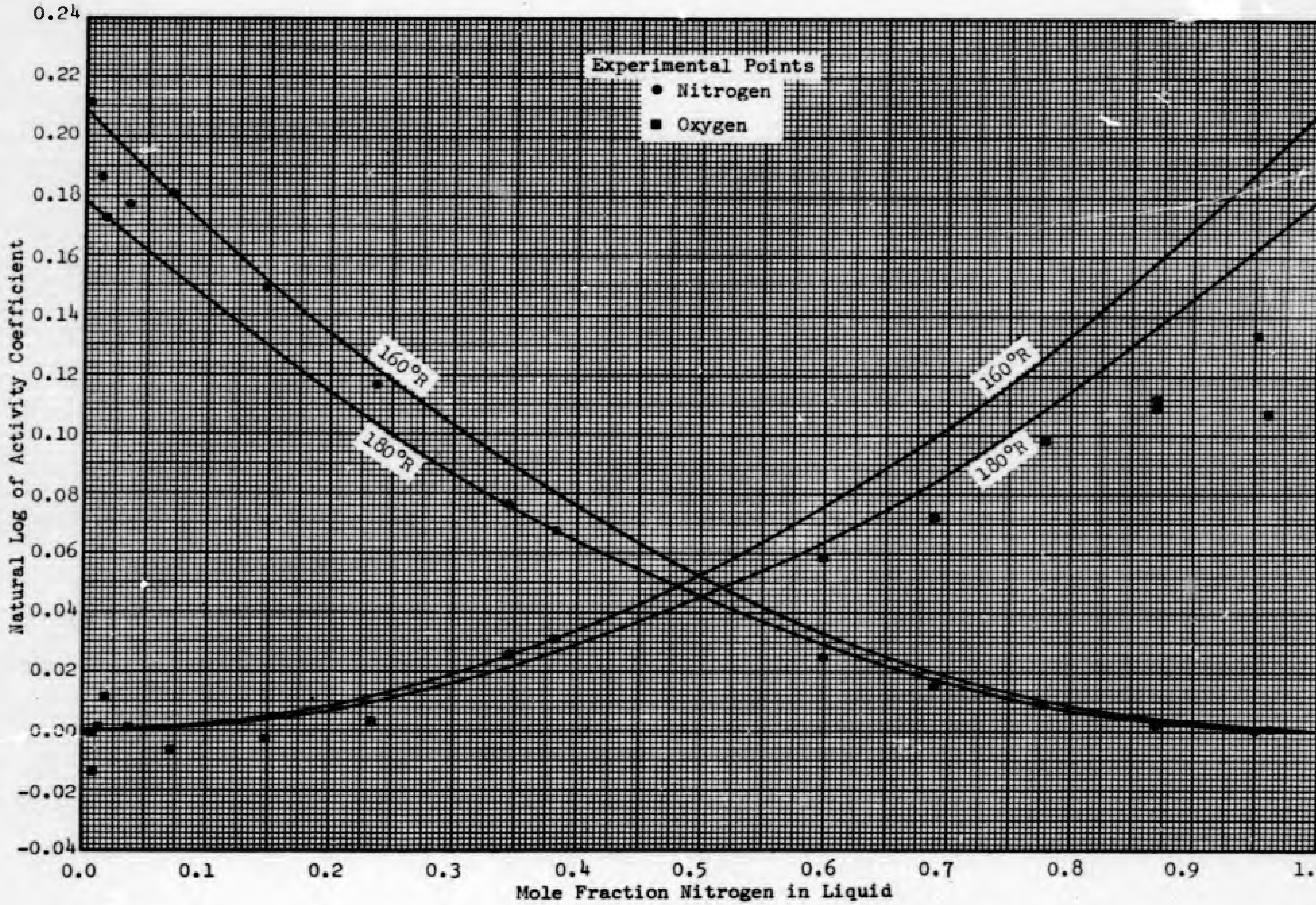

Figure 33. Activity Coefficients in the Nitrogen-Oxygen Binary System, Calculated vs. Experimental.

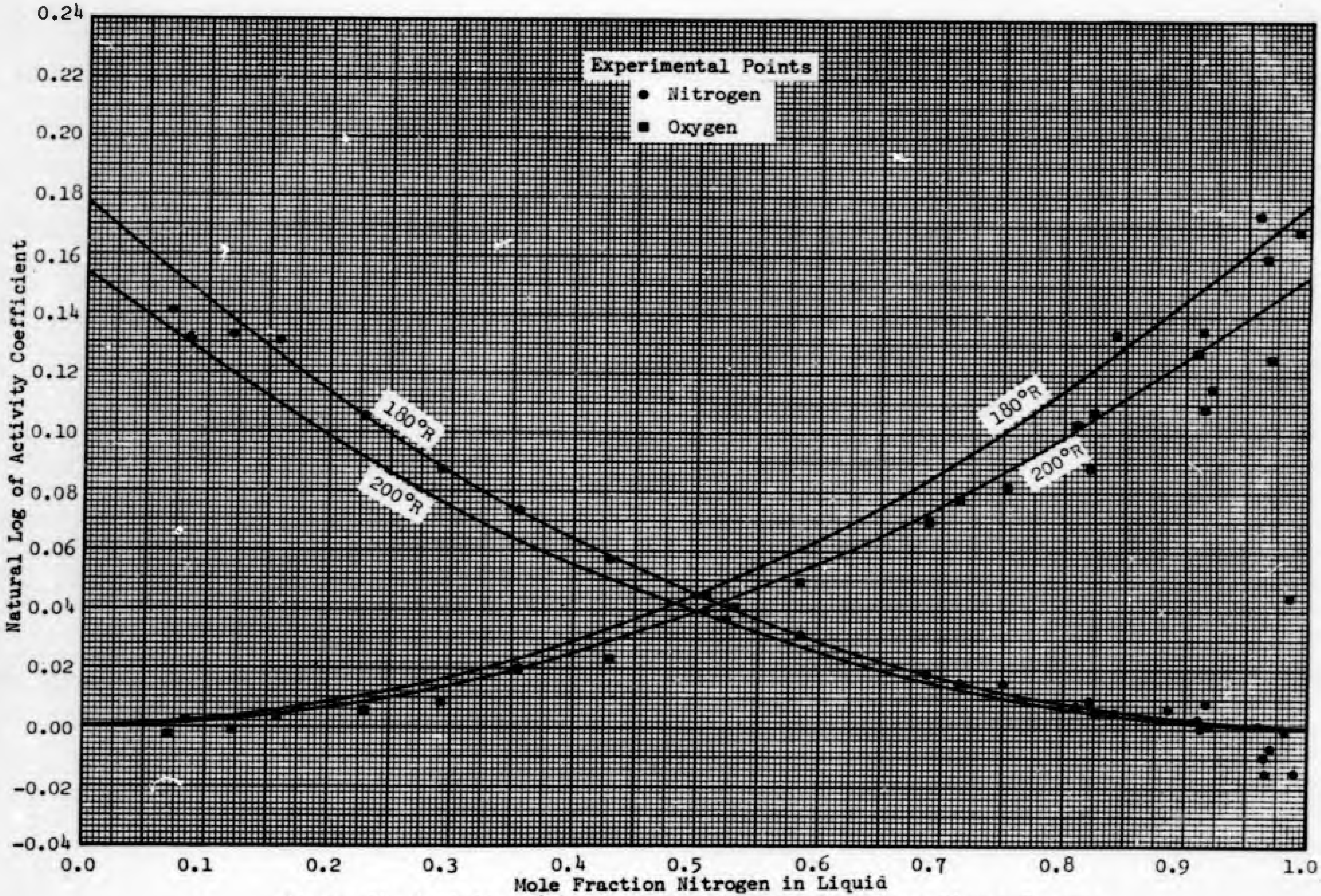

Figure 34. Activity Coefficients in the Nitrogen-Oxygen Binary System, Calculated vs. Experimental.

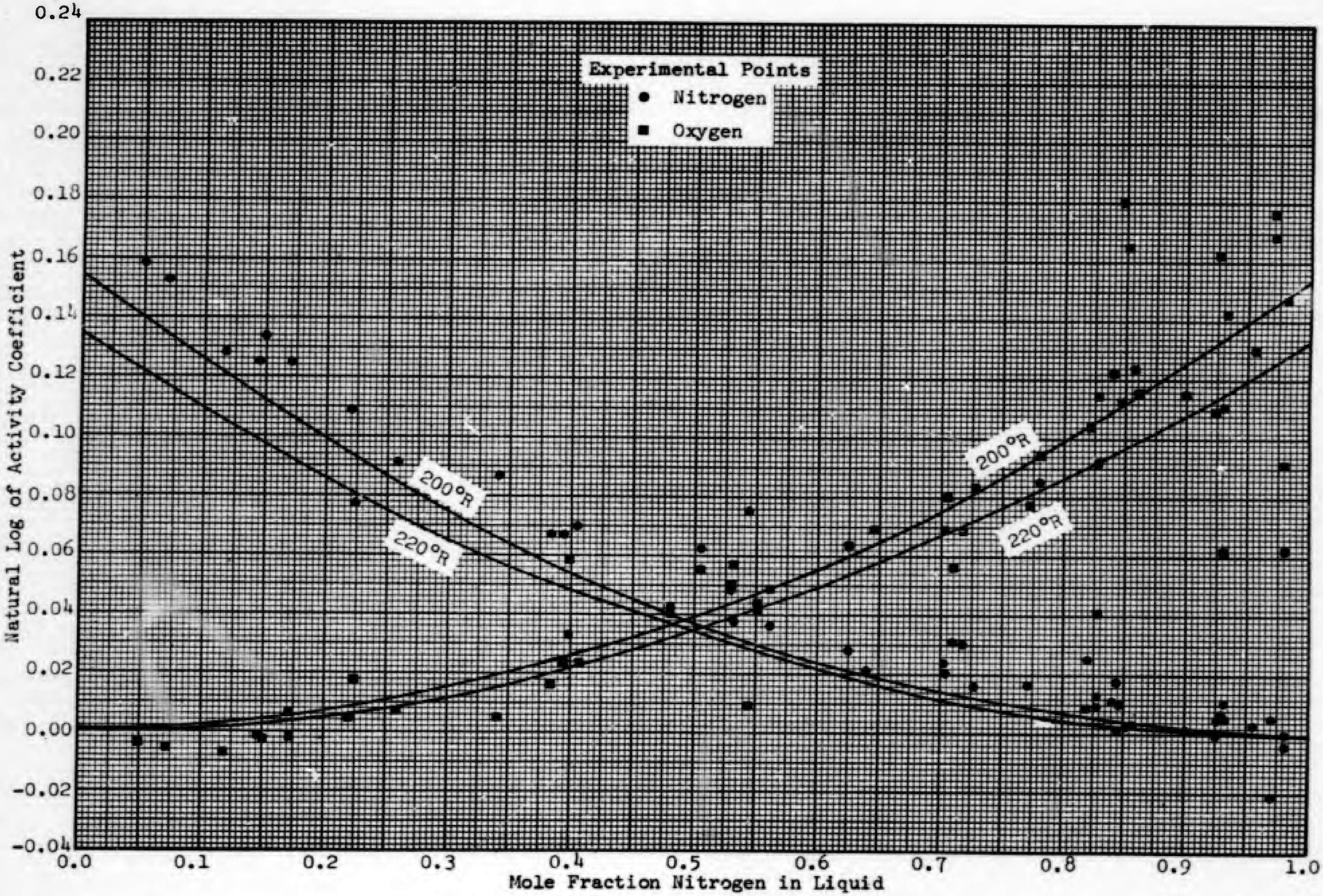

Figure 35. Activity Coefficients in the Nitrogen-Oxygen Binary System, Calculated vs. Experimental.

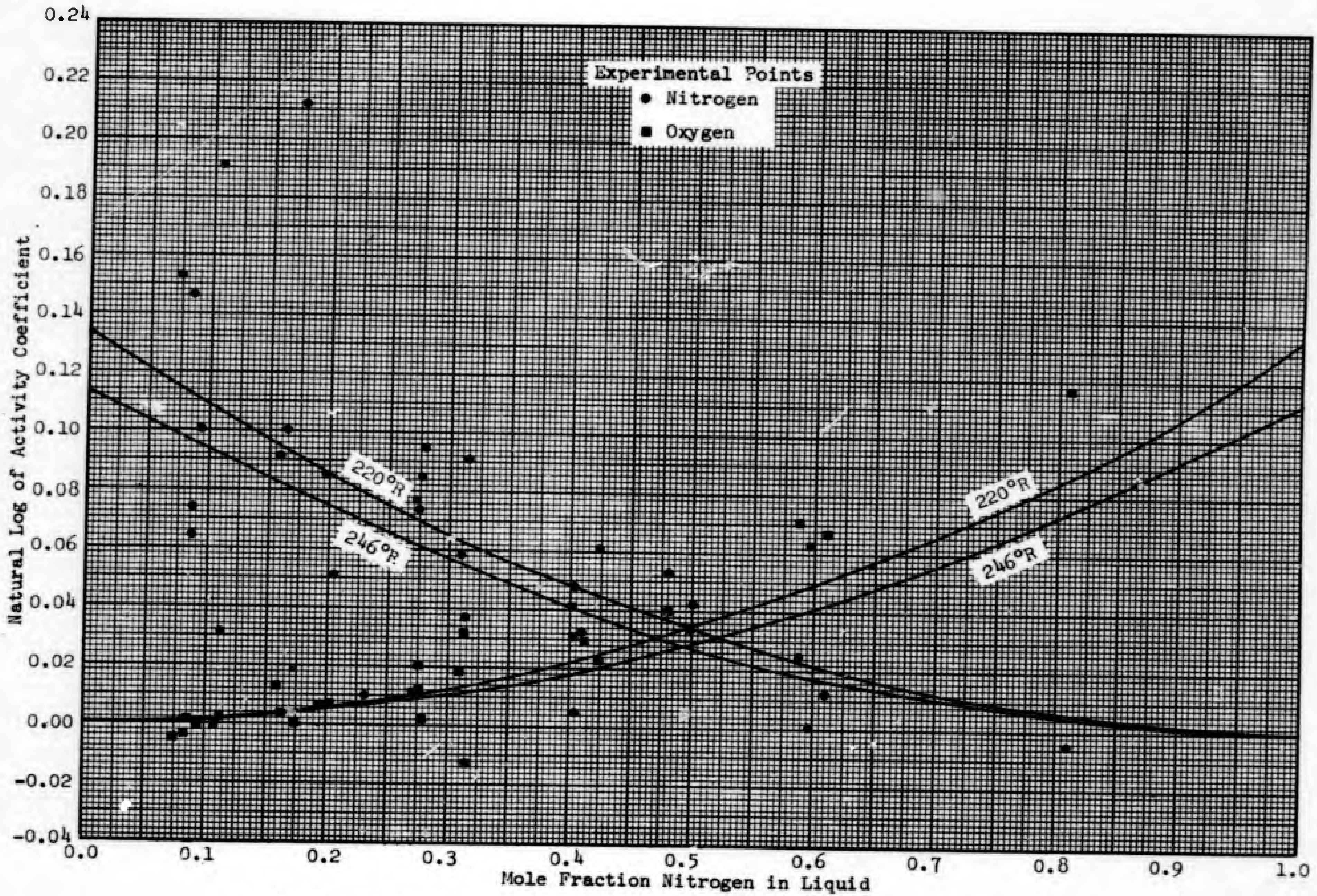

Figure 36. Activity Coefficients in the Nitrogen-Oxygen Binary System, Calculated vs. Experimental.

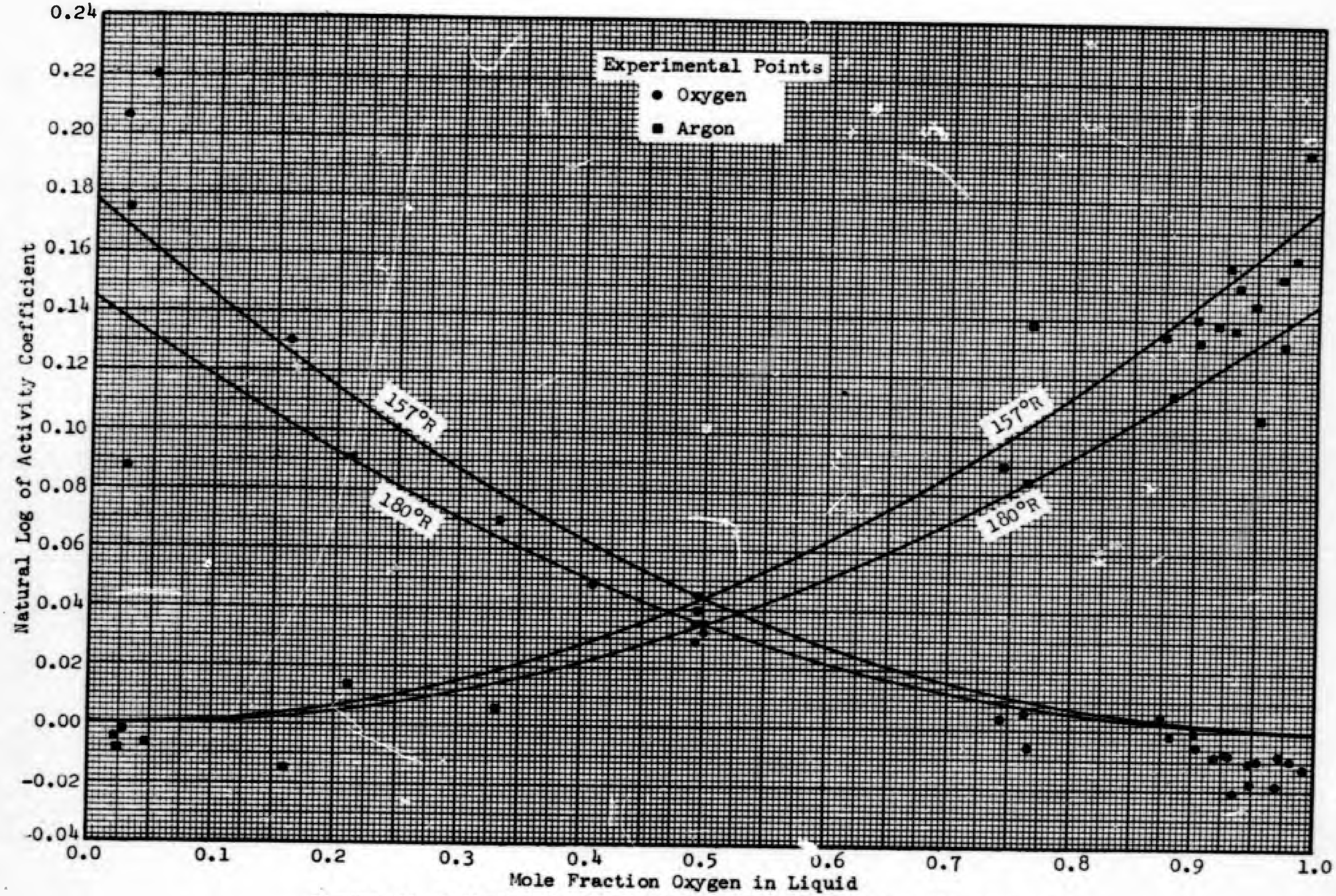

Figure 37. Activity Coefficients in the Oxygen-Argon Binary System, Calculated vs. Experimental.

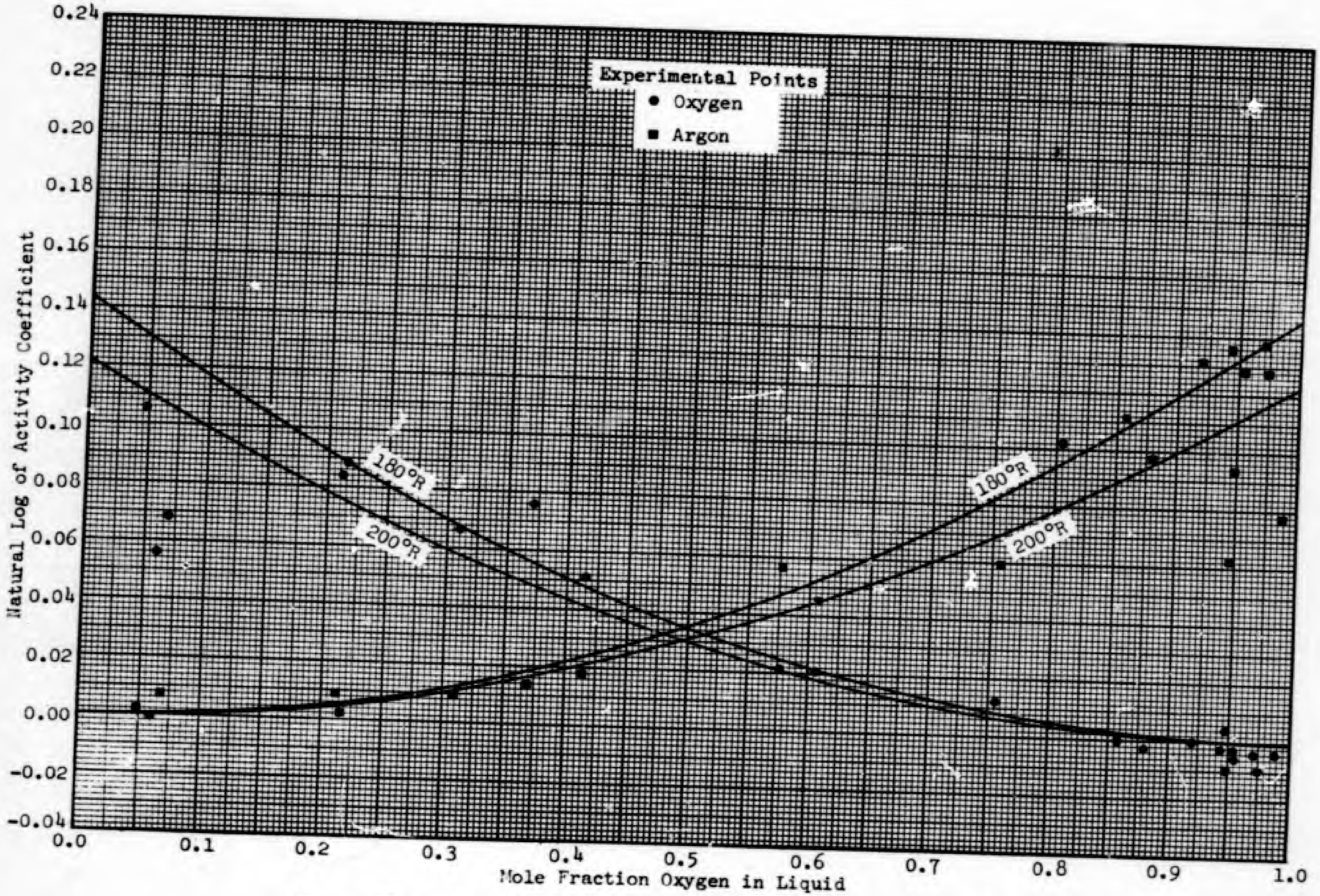

Figure 38. Activity Coefficients in the Oxygen-Argon Binary System, Calculated vs. Experimental.

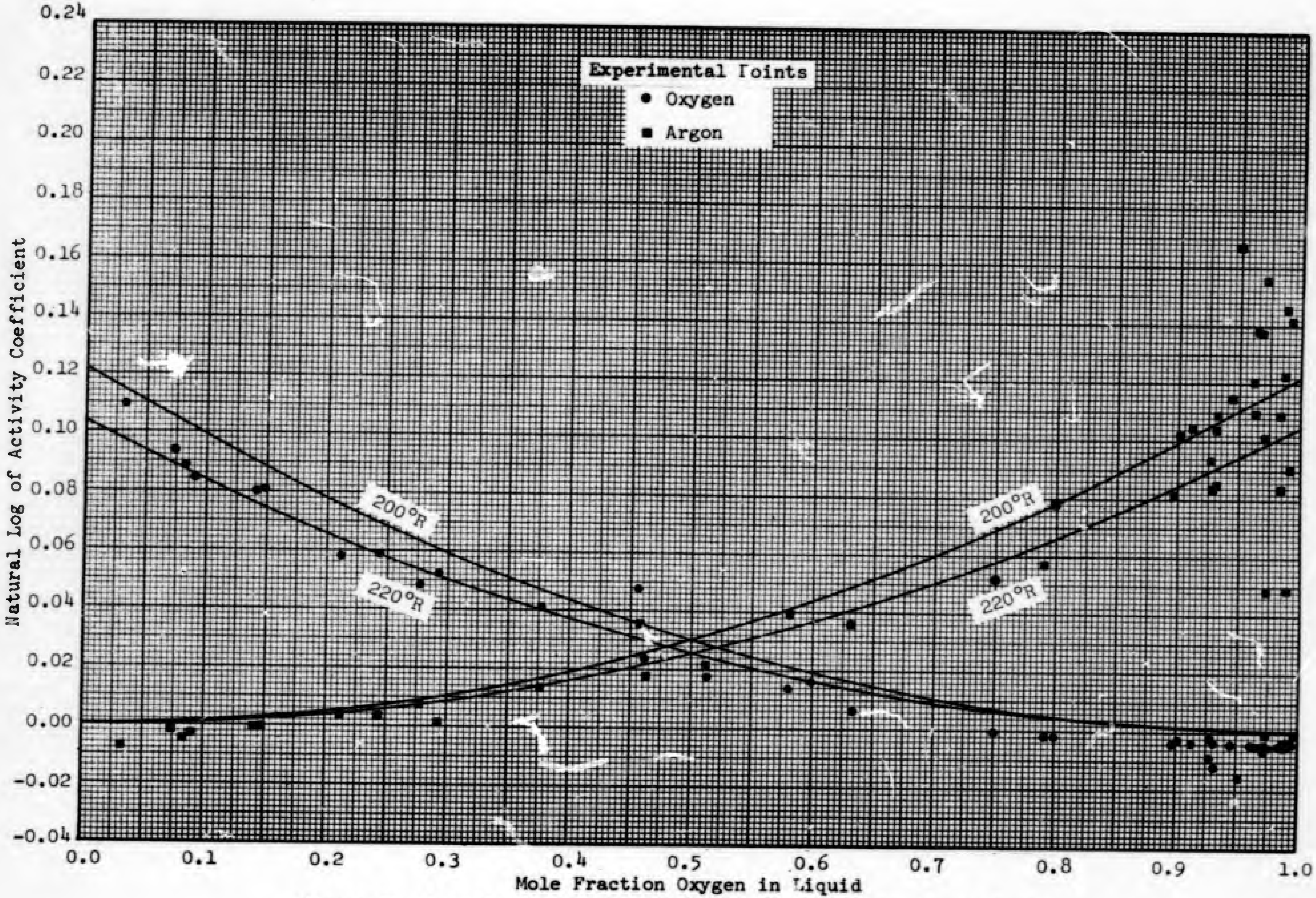

Figure 39. Activity Coefficients in the Oxygen-Argon Binary System, Calculated vs. Experimental.

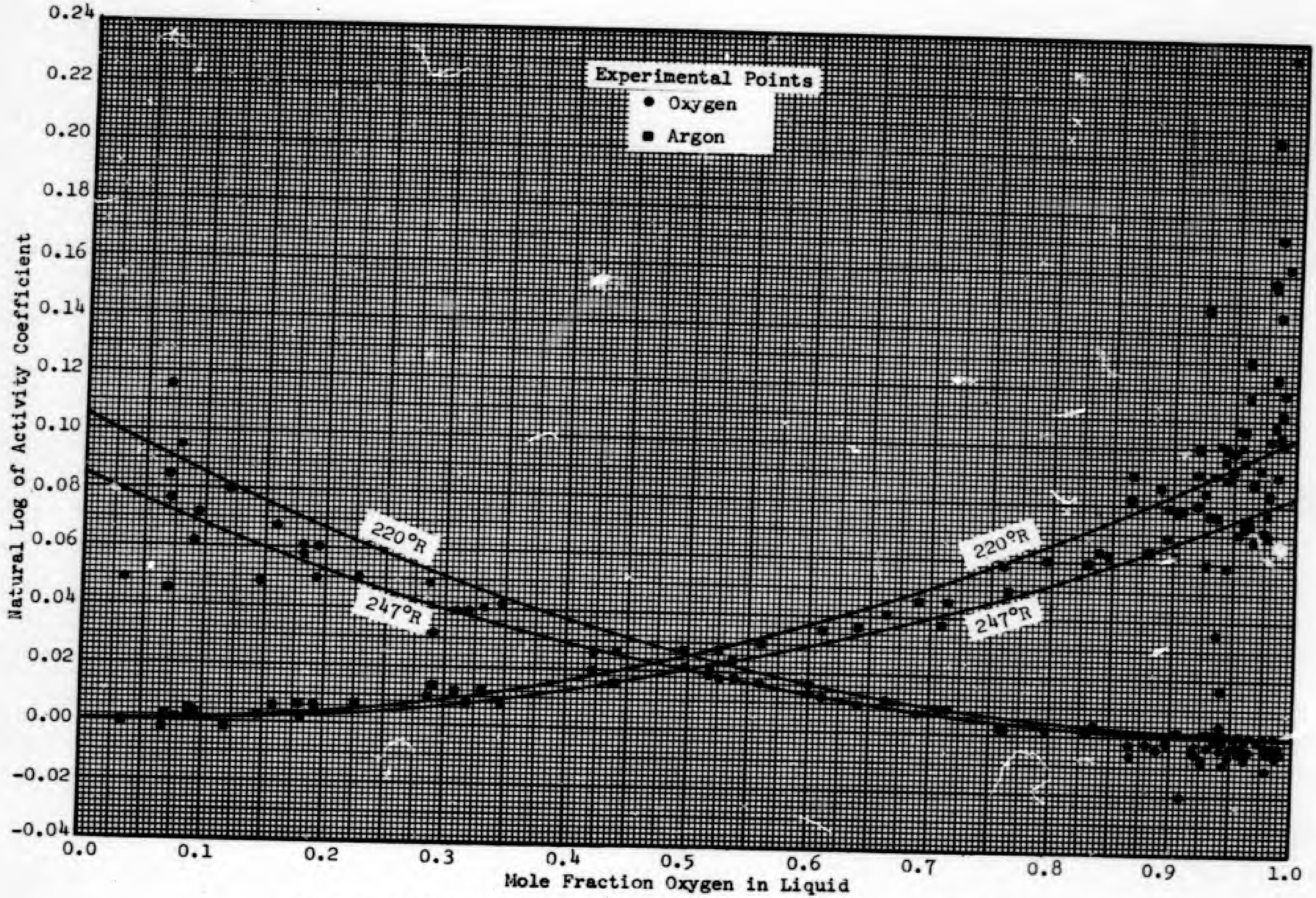

Figure 40. Activity Coefficients in the Oxygen-Argon Binary System, Calculated vs. Experimental.

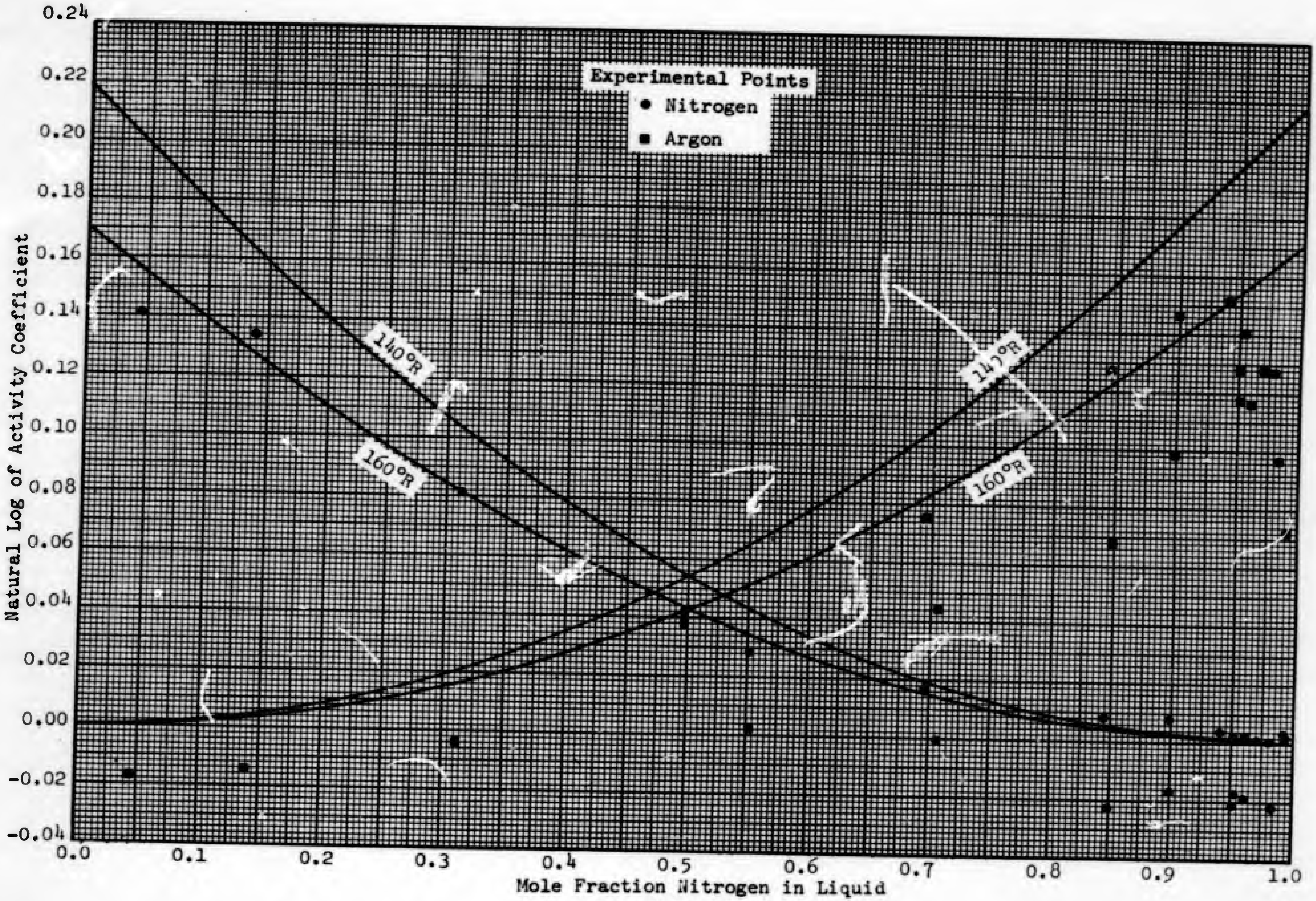

Figure 41. Activity Coefficients in the Nitrogen-Argon Binary System, Calculated vs. Experimental.

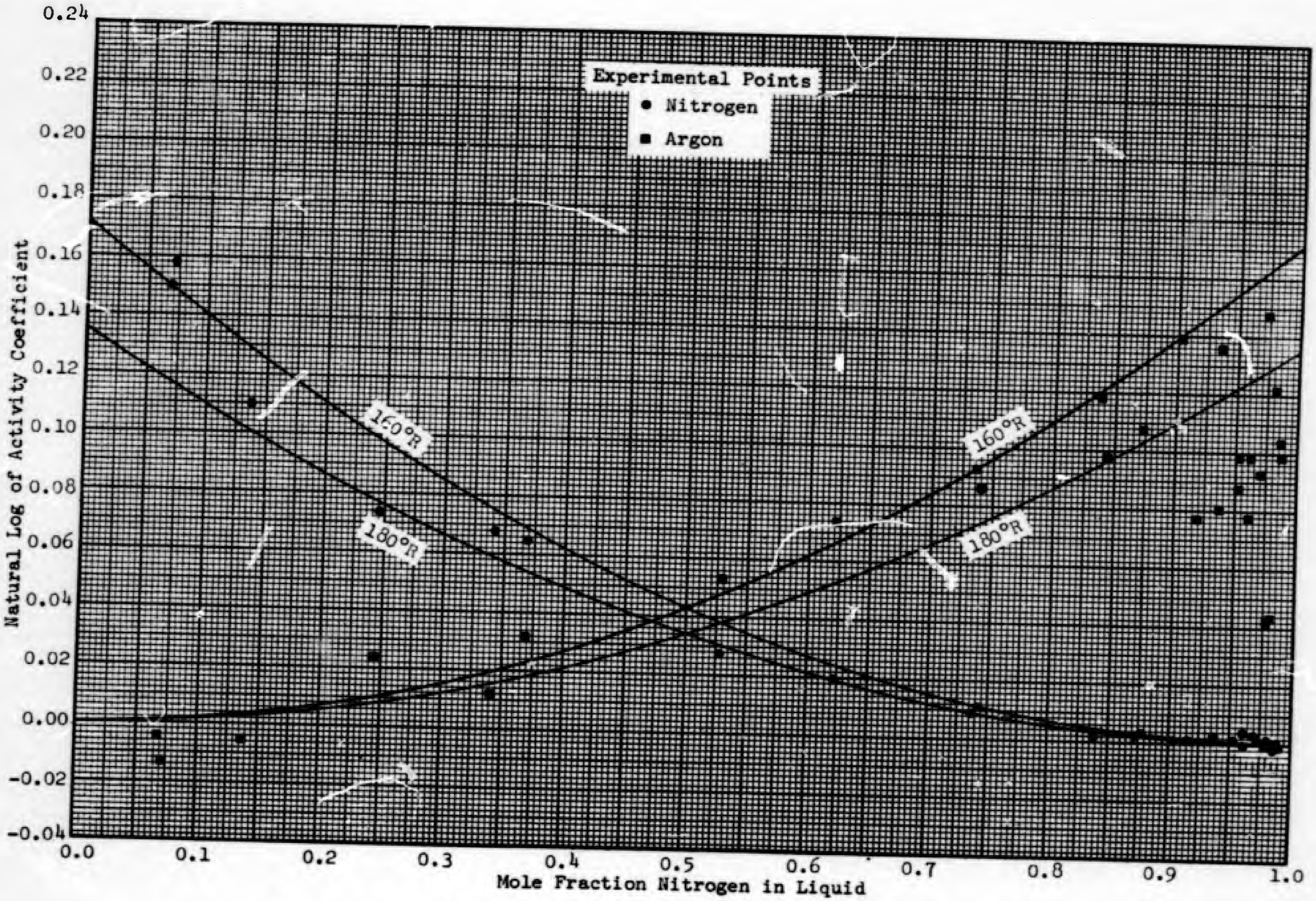

Figure 42. Activity Coefficients in the Nitrogen-Argon Binary System, Calculated vs. Experimental.

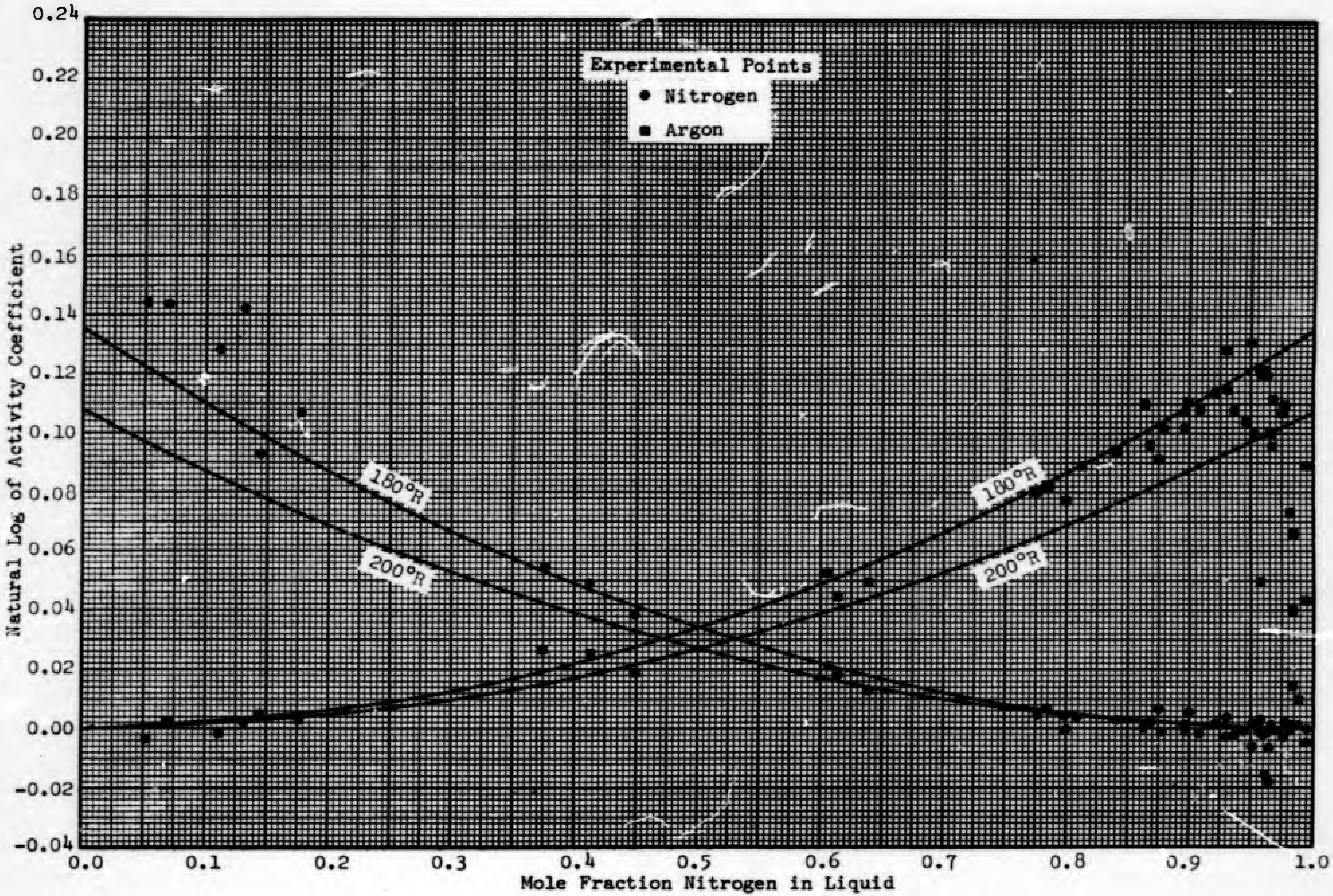

Figure 43. Activity Coefficients in the Nitrogen-Argon Binary System, Calculated vs. Experimental.

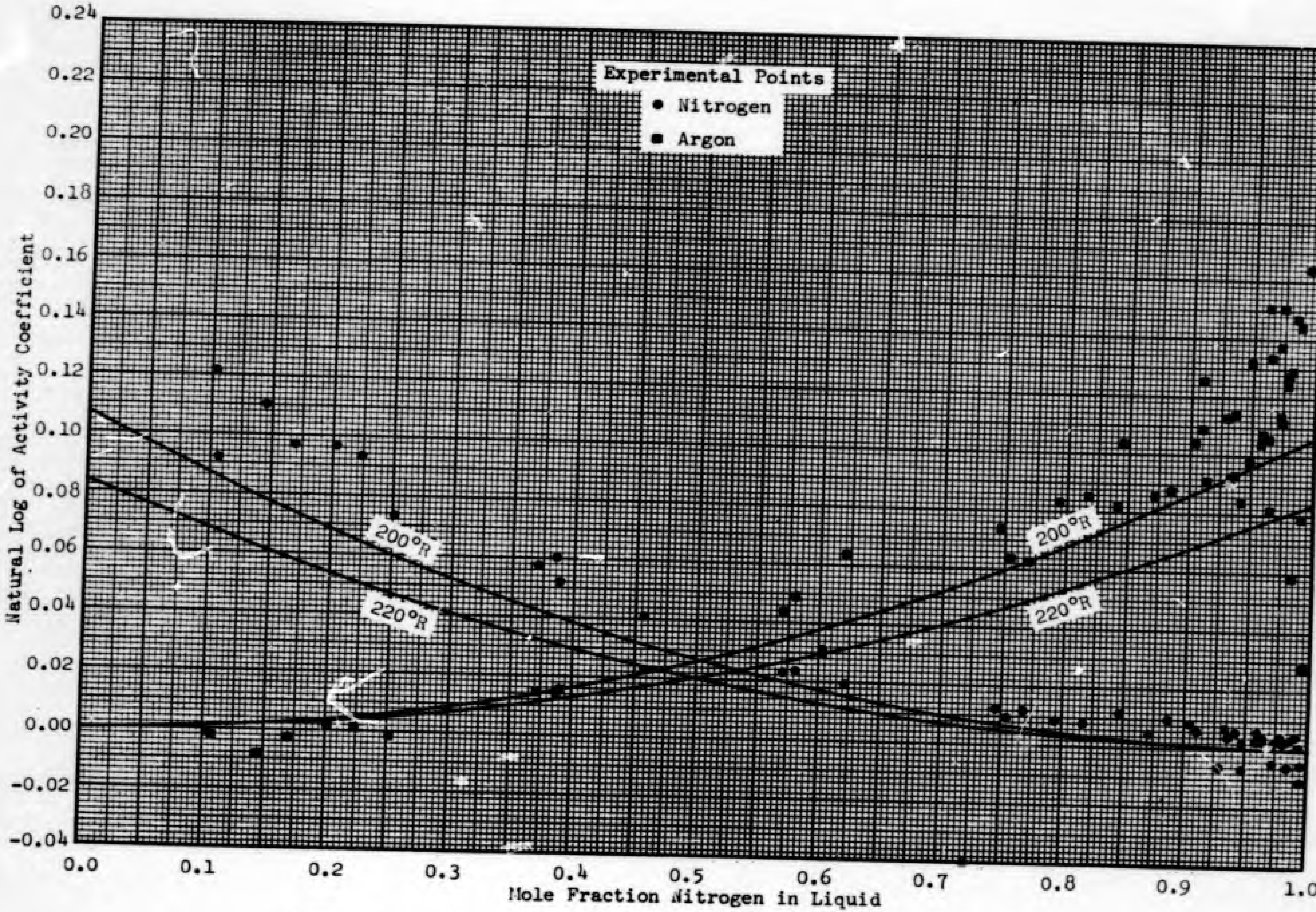

Figure 44. Activity Coefficients in the Nitrogen-Argon Binary System, Calculated vs. Experimental.

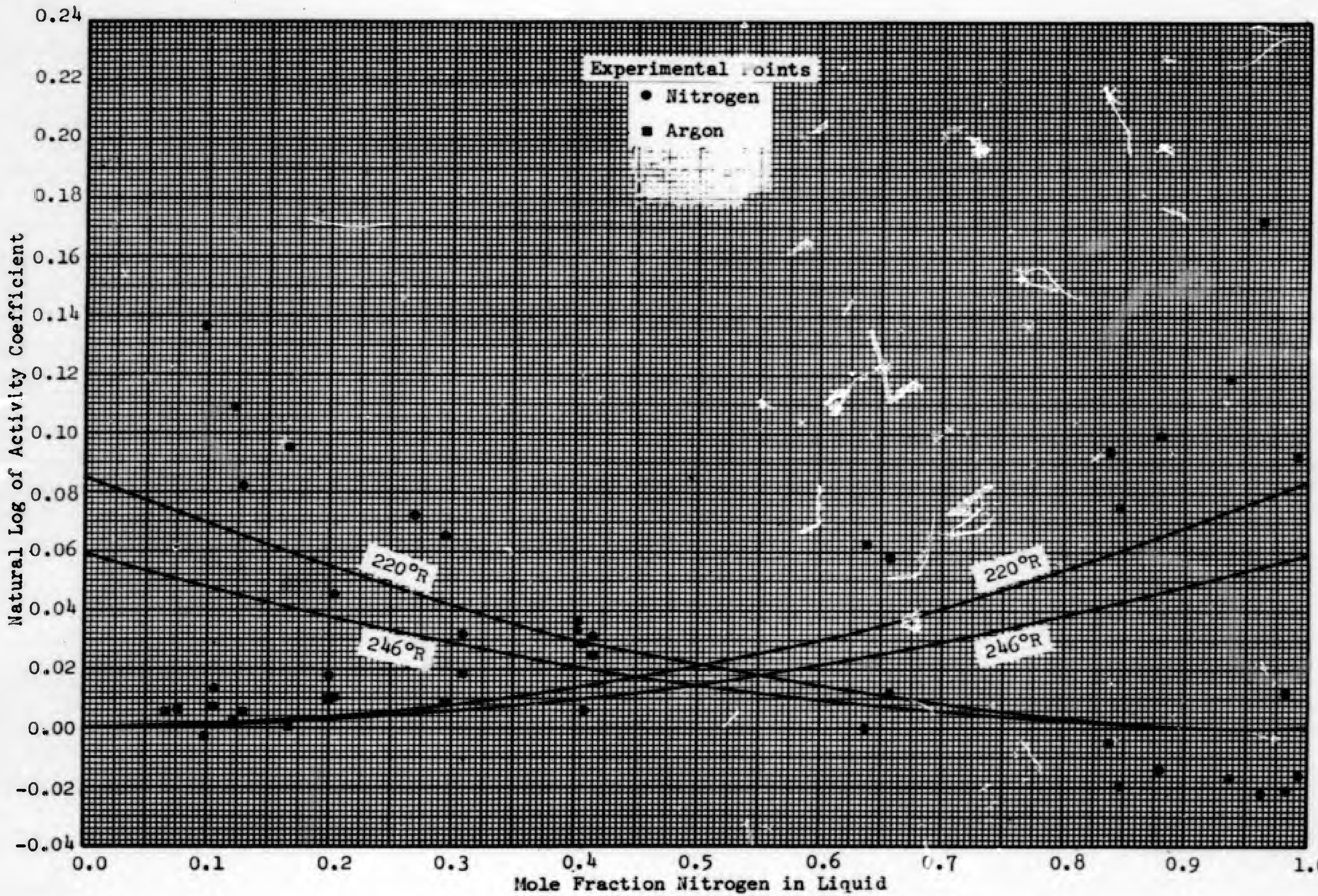

Figure 45. Activity Coefficients in the Nitrogen-Argon Binary System, Calculated vs. Experimental.

according to increasing pressure. The liquid phase corresponds to tie line points on the left and the vapor phase corresponds to tie line points on the right, and lines have been drawn connecting all points in both phases. These data show systematic deviations consistent with the deviations in activity coefficients. The largest error occurs at 20 atm where the difference corresponds to an error of 2.5% in the calculation of the pressure.

From an examination of the differences between calculated and measured data it is concluded that the correlation represents the data with a difference less than 2.5% in relative volatility and pressure in most regions. The largest difference is probably about 2.5%. The experimental data scatter less than this with an accuracy of about $\pm$ 0.5% in the pressure and $\pm$ 1% in the relative volatility.

A comparison of the correlation with literature data can probably be best made in terms of comparisons with the Latimer[34] correlation, since it represents a good summary of existing data. This comparison is given in Figures 83 to 85 for each of the binary systems. In the nitrogen-oxygen system the difference varies up to about 2% depending on the composition and pressure. In the nitrogen-argon system the difference varies up to 10% at 20 atm, and in the argon-oxygen system the difference varies up to about 5%.

Factors which influence this correlation are:

1. The properties of "liquid" nitrogen above the critical temperature of nitrogen.

2. The partial molar volume of the components at pressures approaching the critical pressure of a mixture.

3. The assumption of a separate free energy expression for the vapor phase and the liquid phase.

These factors are inherent problems in the correlation of data by means of activity coefficients based upon the pure liquid component as the standard state. The systematic errors observed with this correlation probably are due to the uncertainty of these factors.

An alternate but more difficult approach would be to correlate the data in terms of an equation of state applicable to both the vapor and the liquid phases. This method would eliminate the need for a pure liquid reference state. The partial molar volume could be calculated from the equation of state, and the free energy equation would be continuous in going from vapor to liquid.

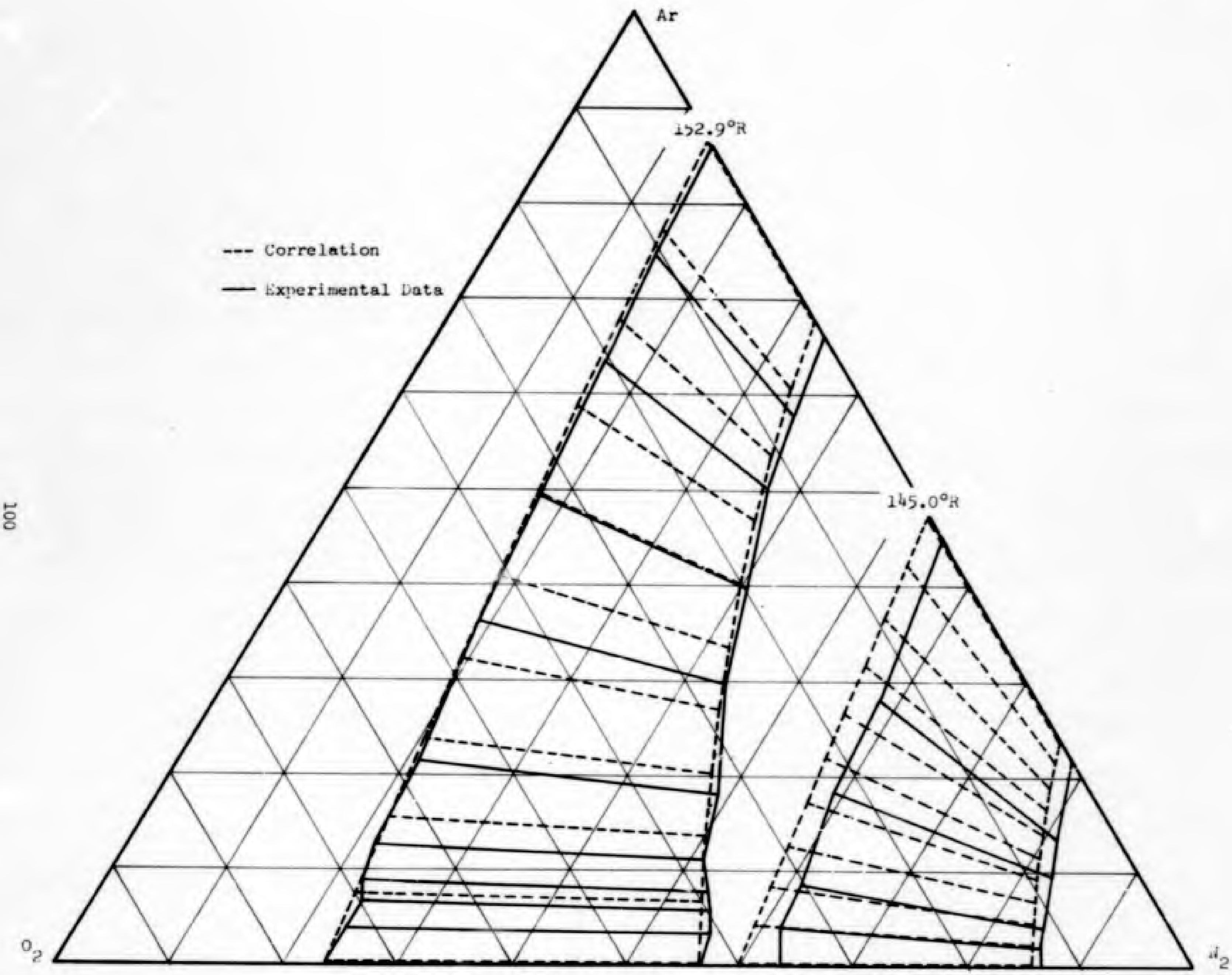

Figure 46. Comparison of Experimental Data and the Correlation, 1 Atmosphere.

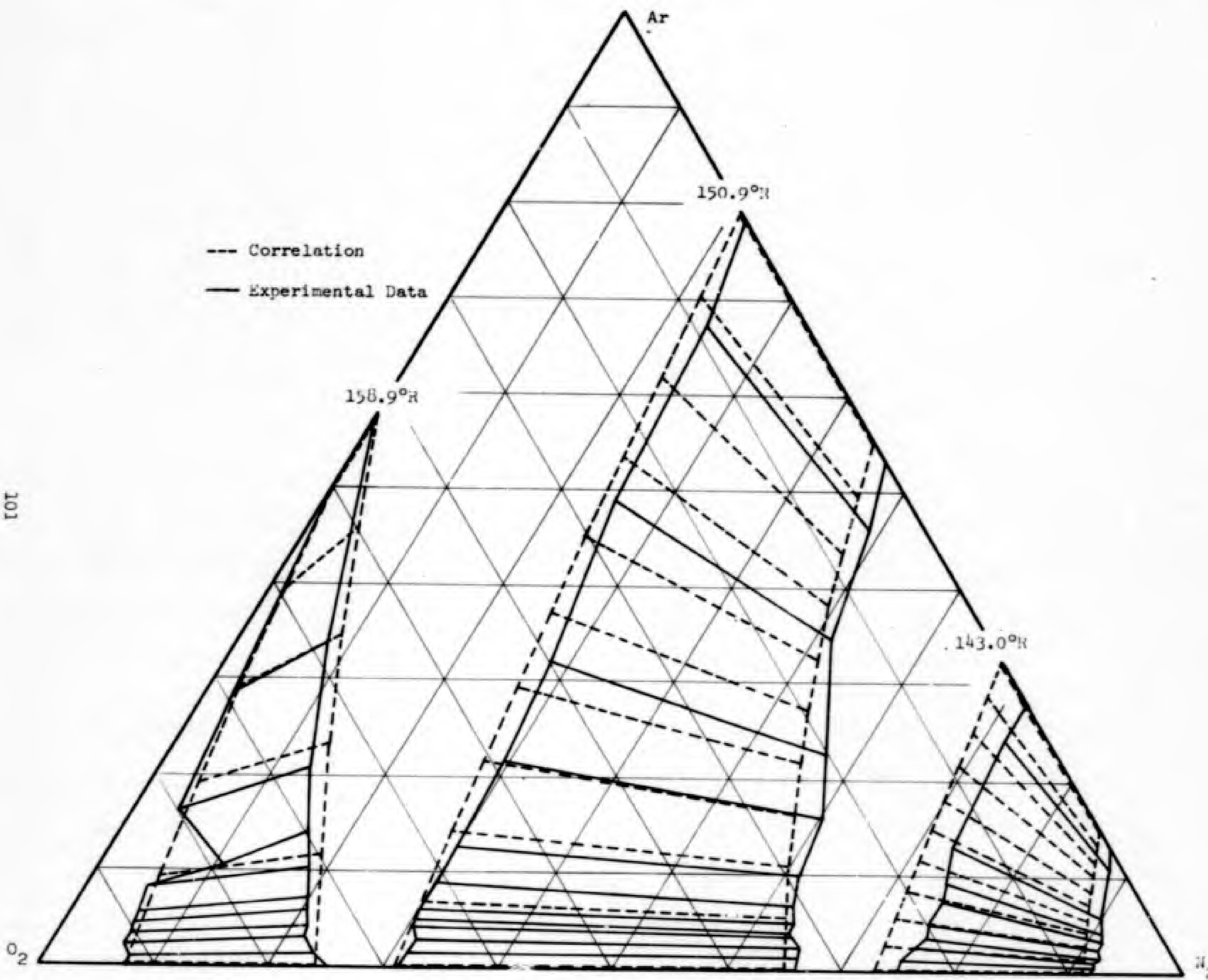

Figure 47. Comparison of Experimental Data and the Correlation, 1 Atmosphere.

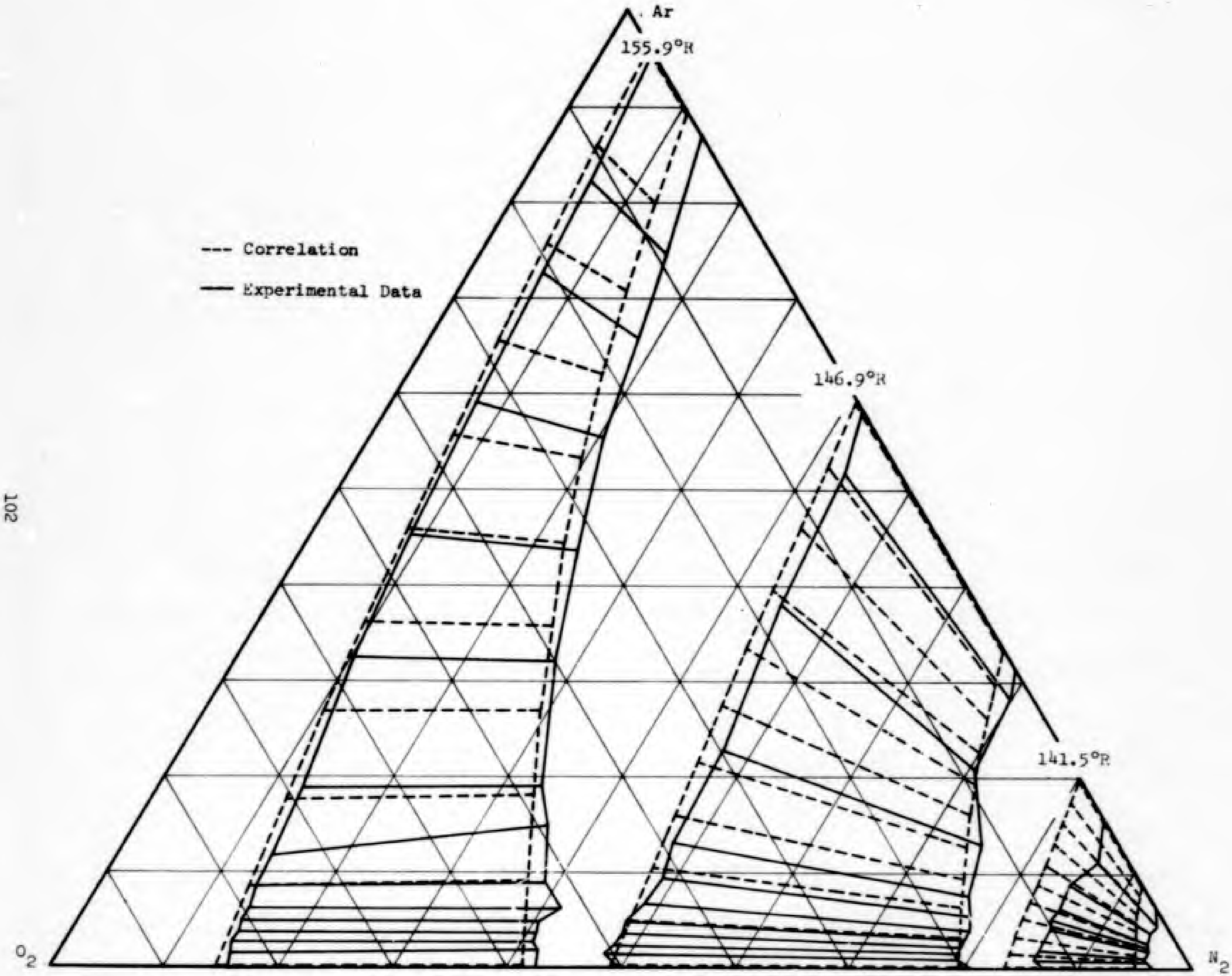

Figure 48. Comparison of Experimental Data and the Correlation, 1 Atmosphere.

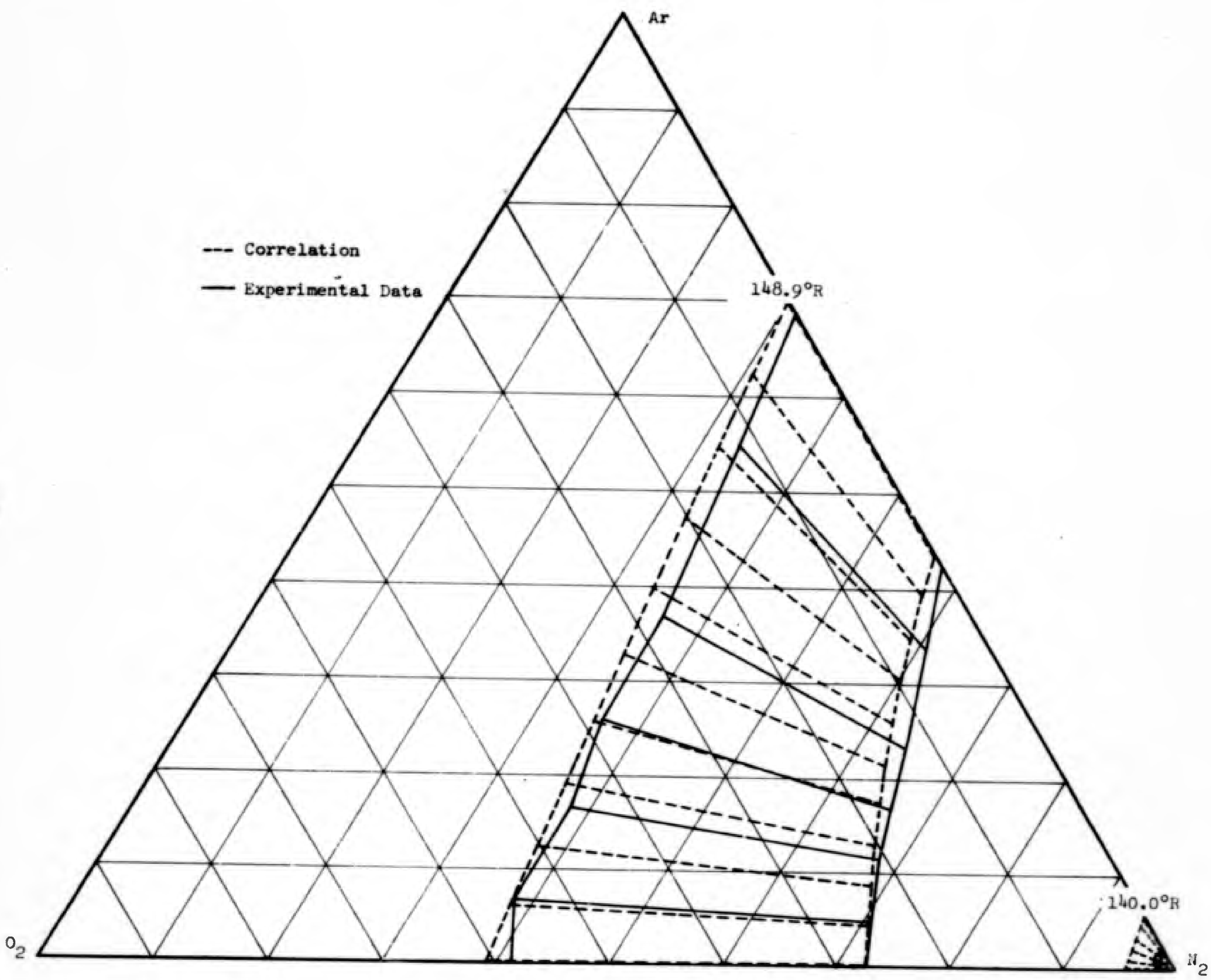

Figure 49. Comparison of Experimental Data and the Correlation, 1 Atmosphere.

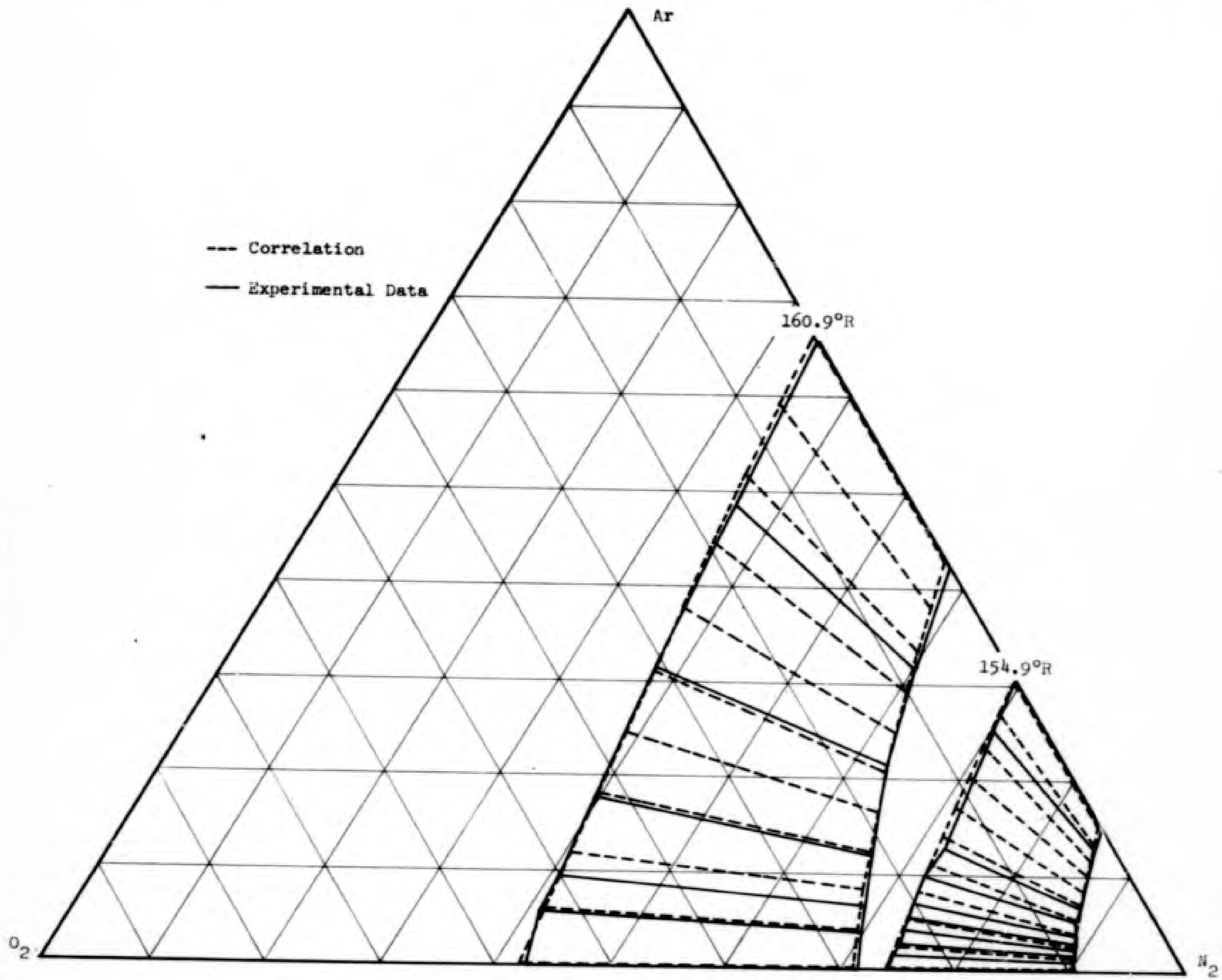

Figure 50. Comparison of Experimental Data and the Correlation, 2 Atmospheres.

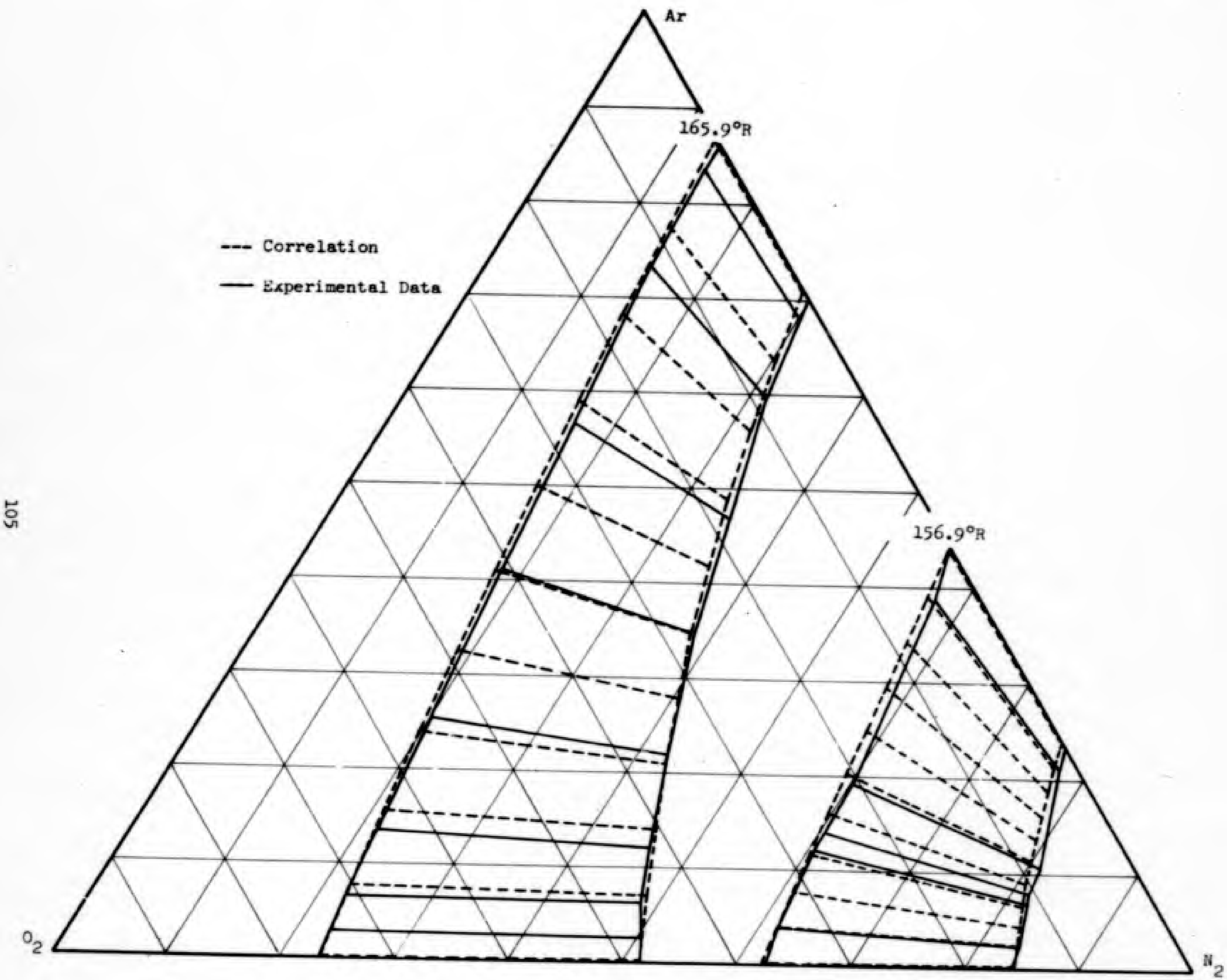

Figure 51. Comparison of Experimental Data and the Correlation, 2 Atmospheres.

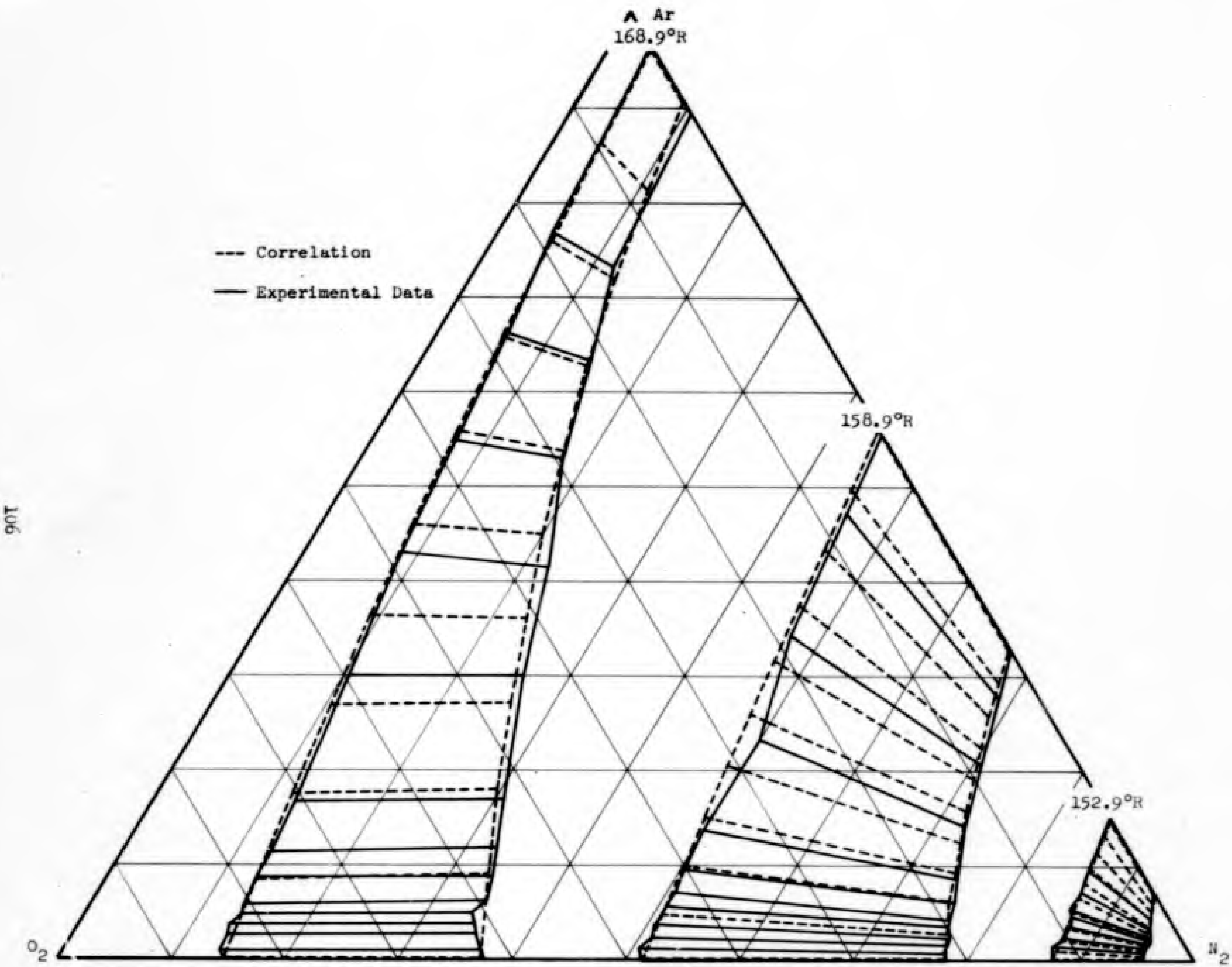

Figure 52. Comparison of Experimental Data and the Correlation, 2 Atmospheres.

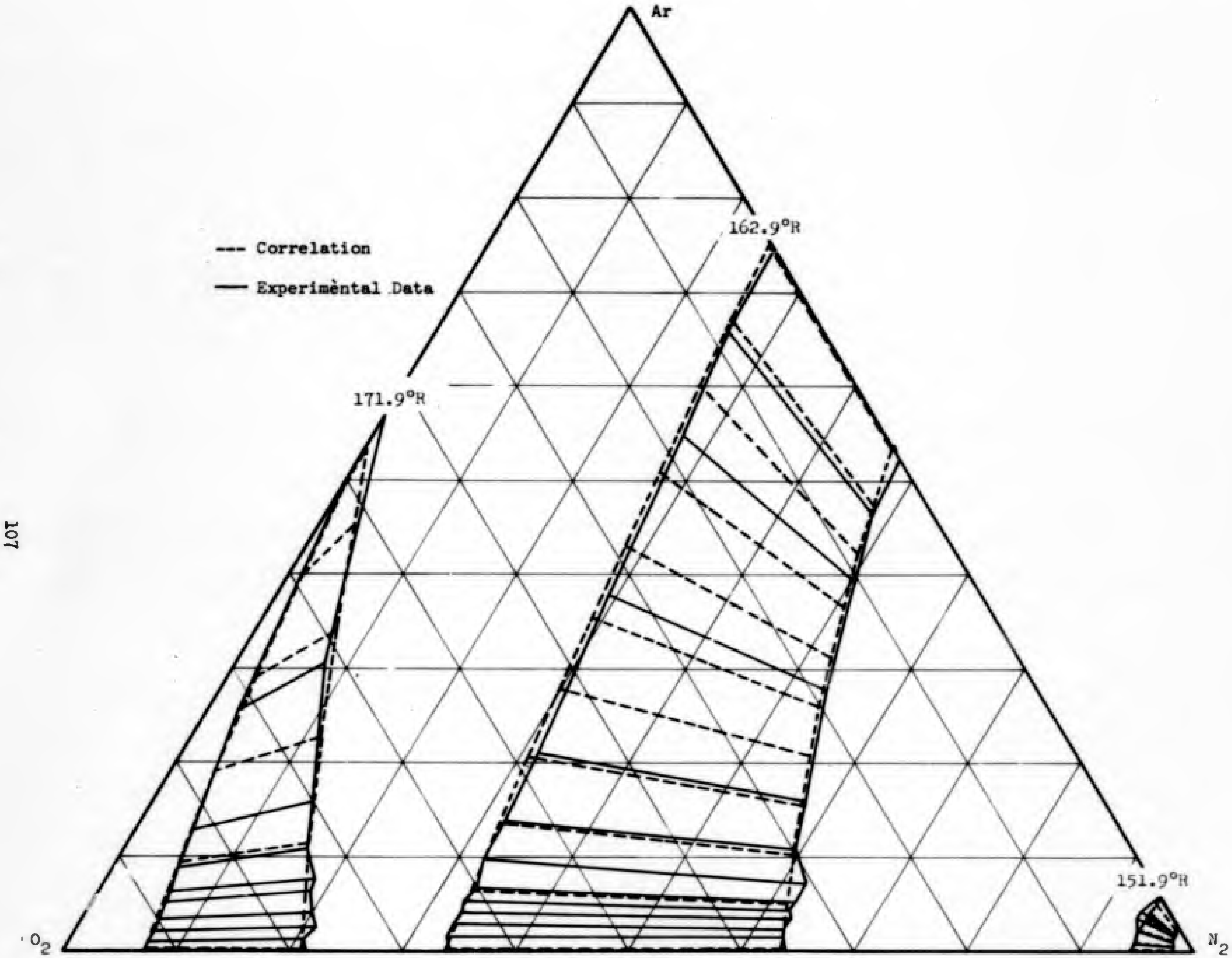

Figure 53. Comparison of Experimental Data and the Correlation, 2 Atmospheres.

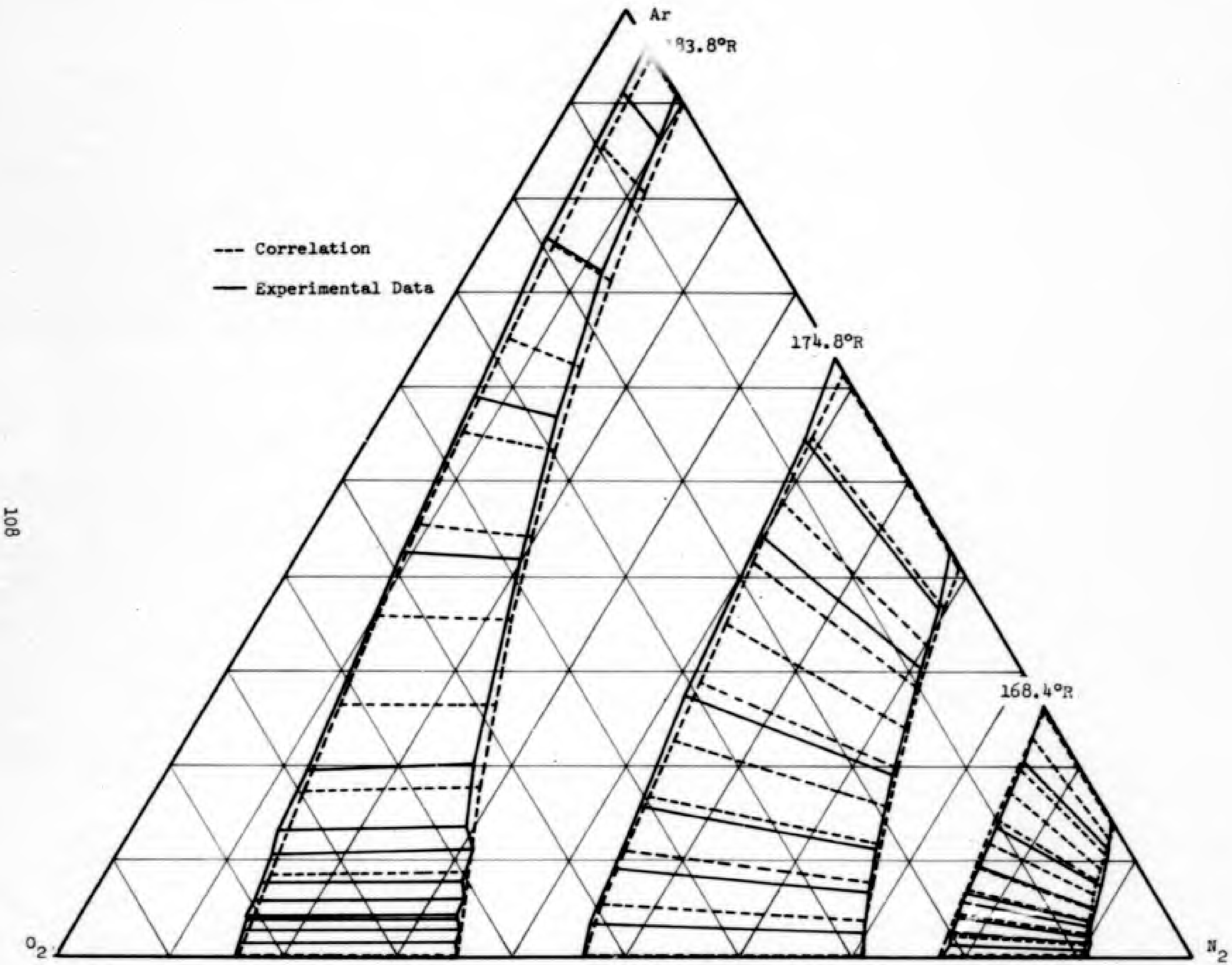

Figure 54. Comparison of Experimental Data and the Correlation, 4 Atmospheres.

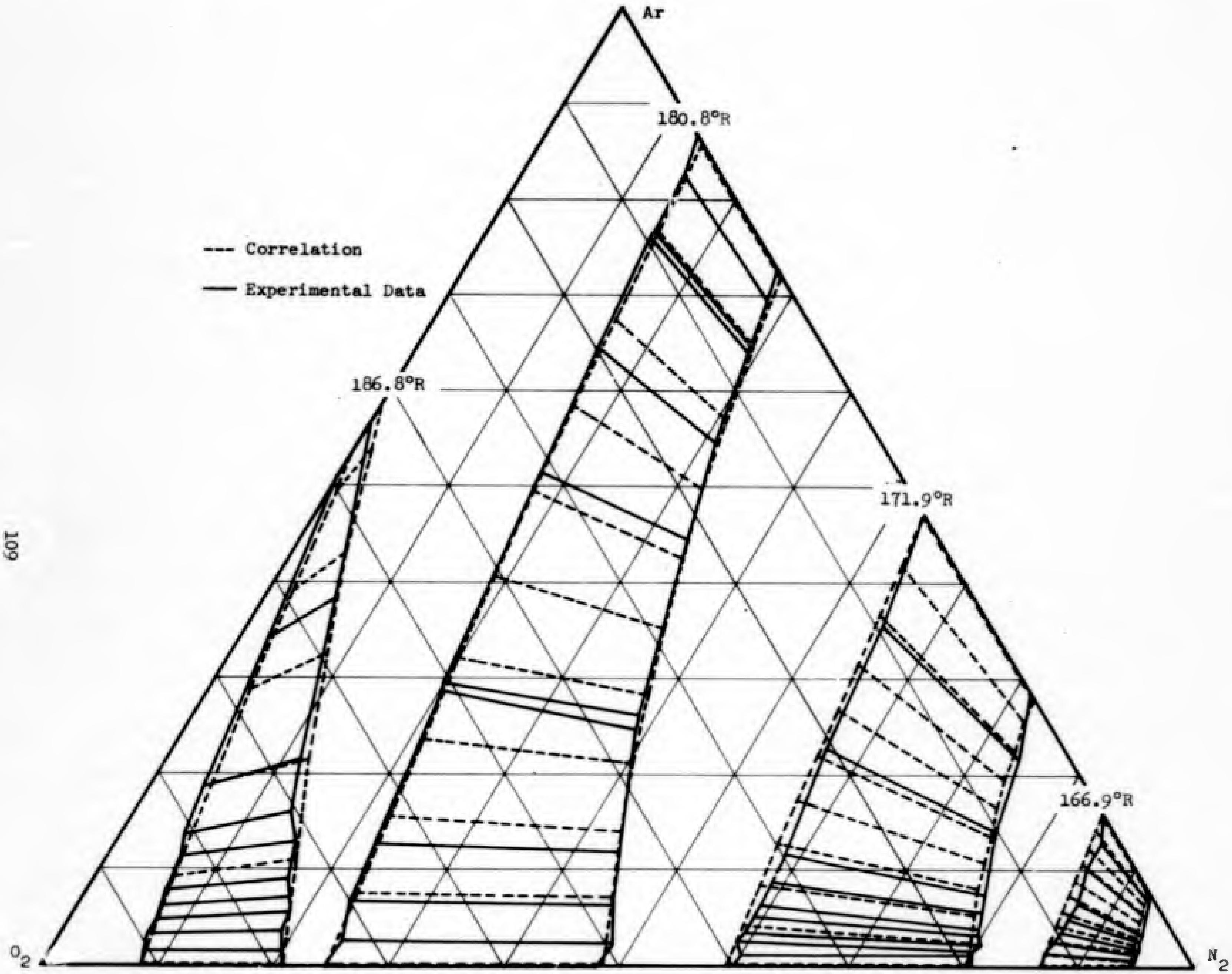

Figure 55. Comparison of Experimental Data and the Correlation, 4 Atmospheres.

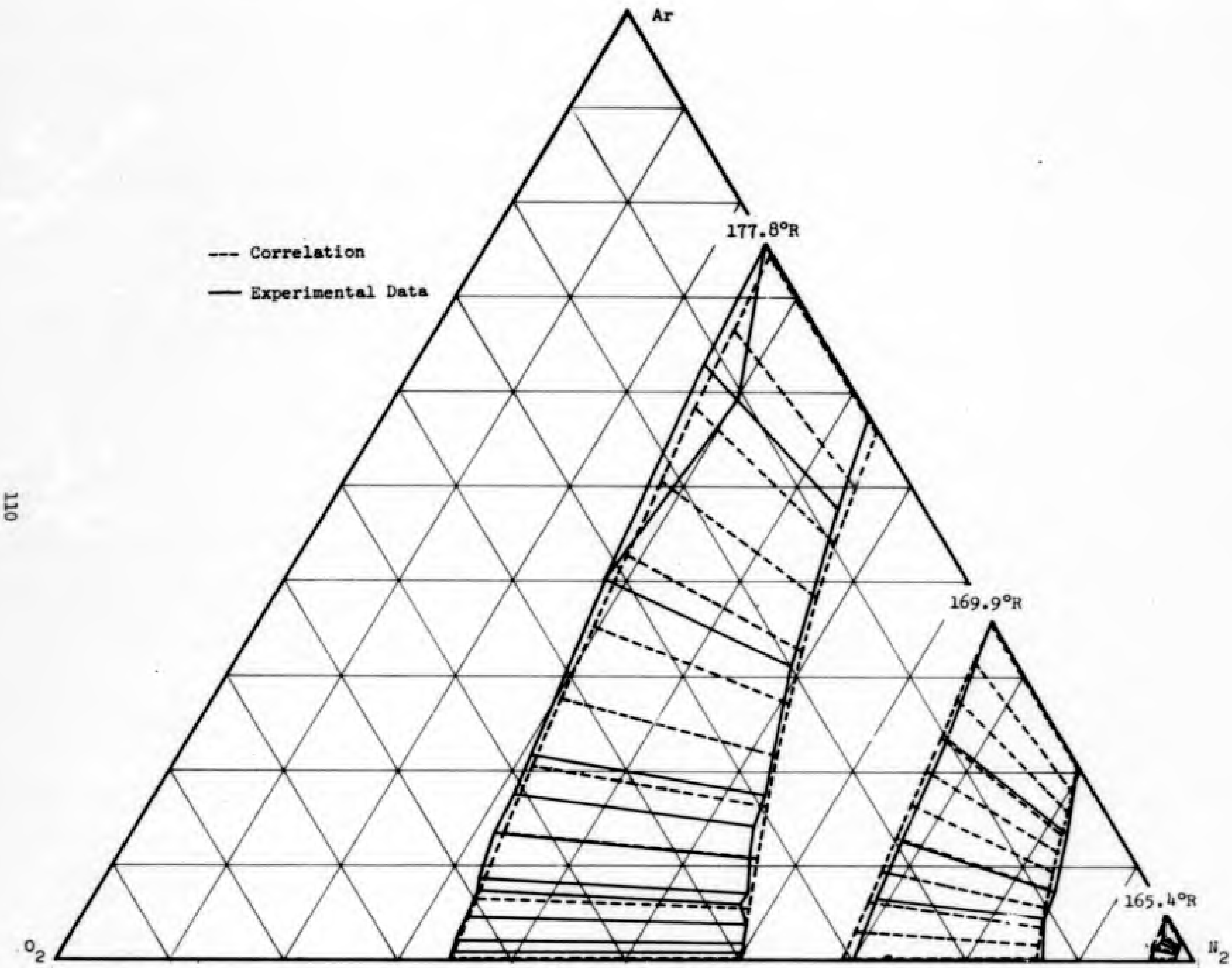

Figure 56. Comparison of Experimental Data and the Correlation, 4 Atmospheres.

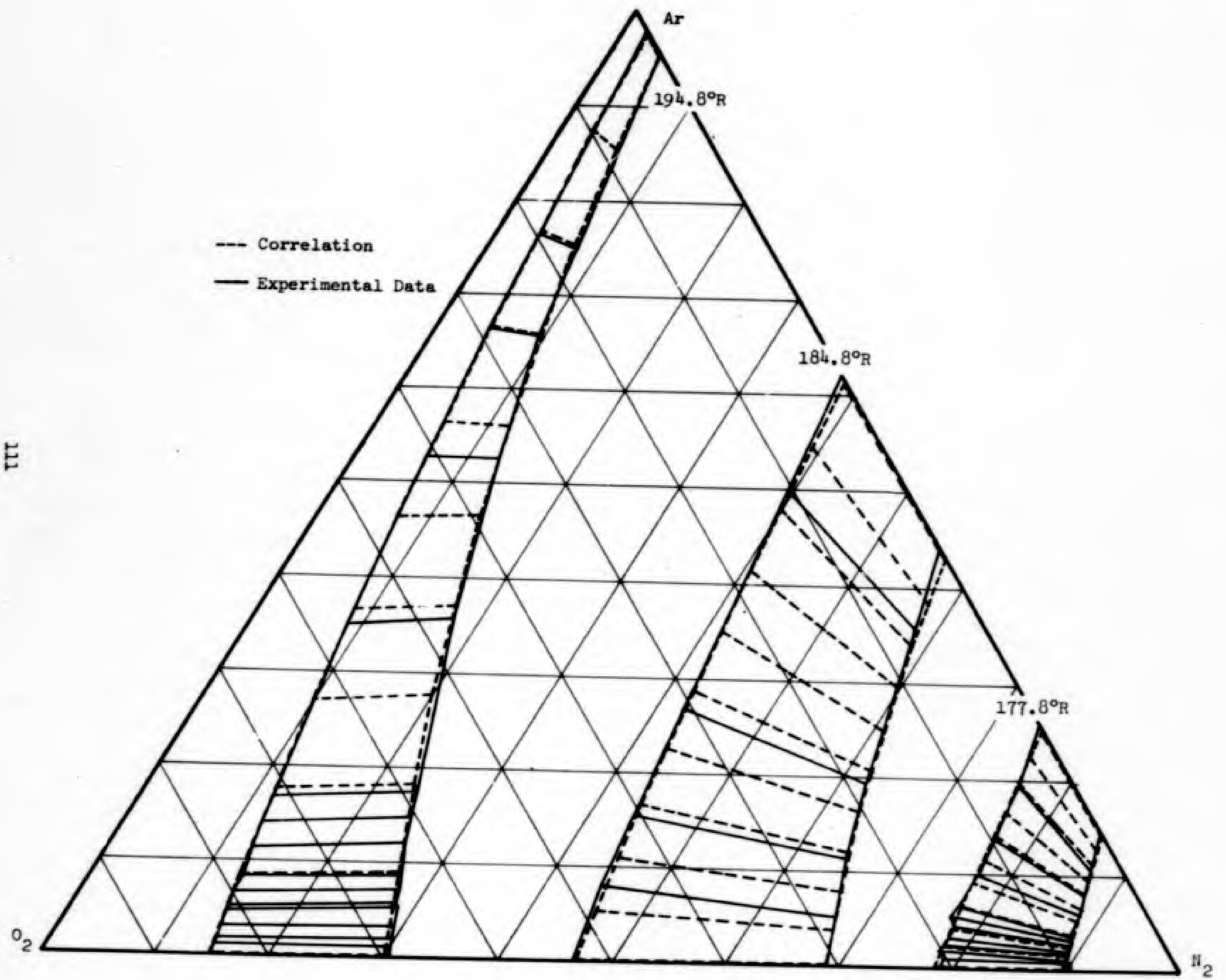

Figure 57. Comparison of Experimental Data and the Correlation, 6 Atmospheres.

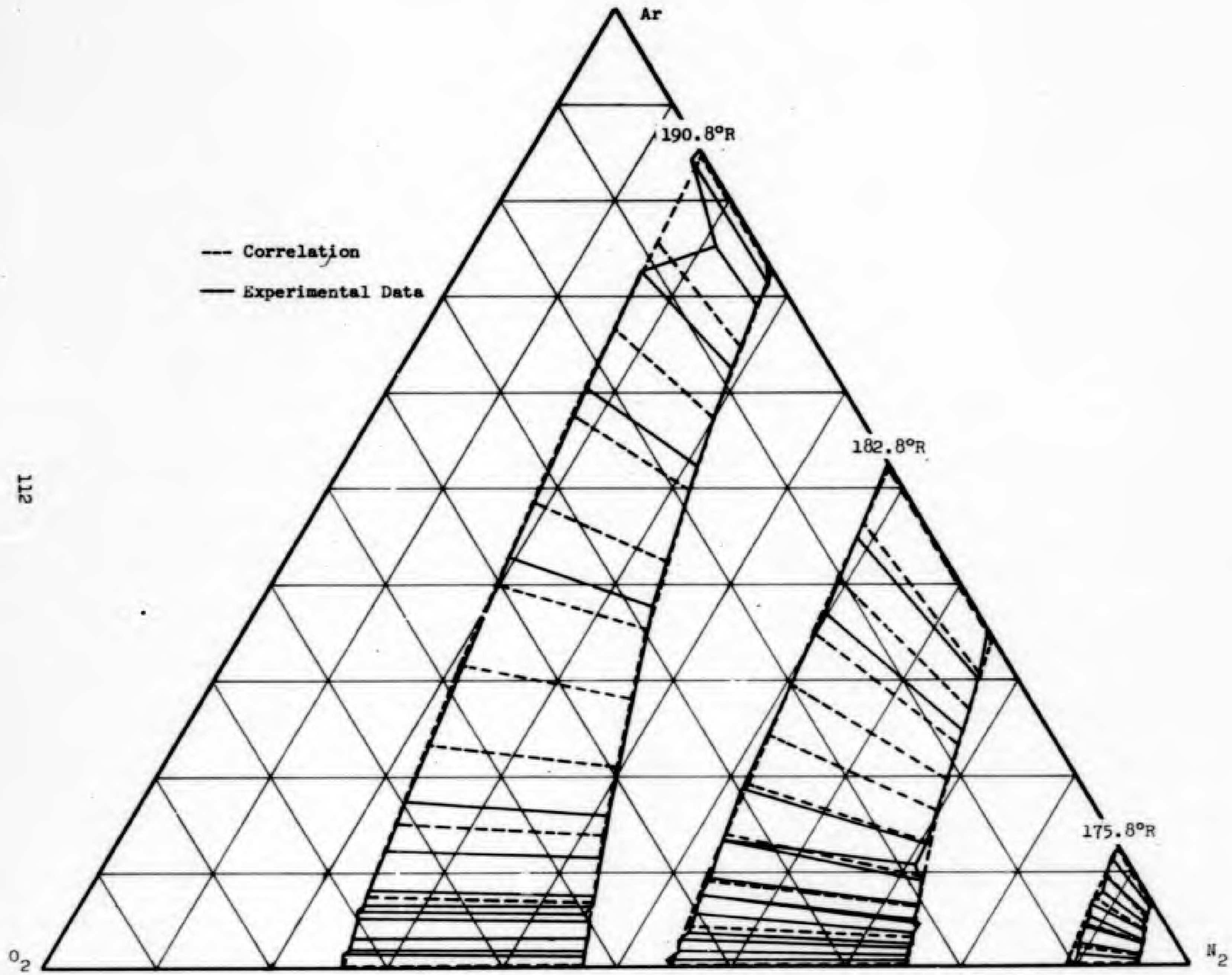

Figure 58. Comparison of Experimental Data and the Correlation, 6 Atmospheres.

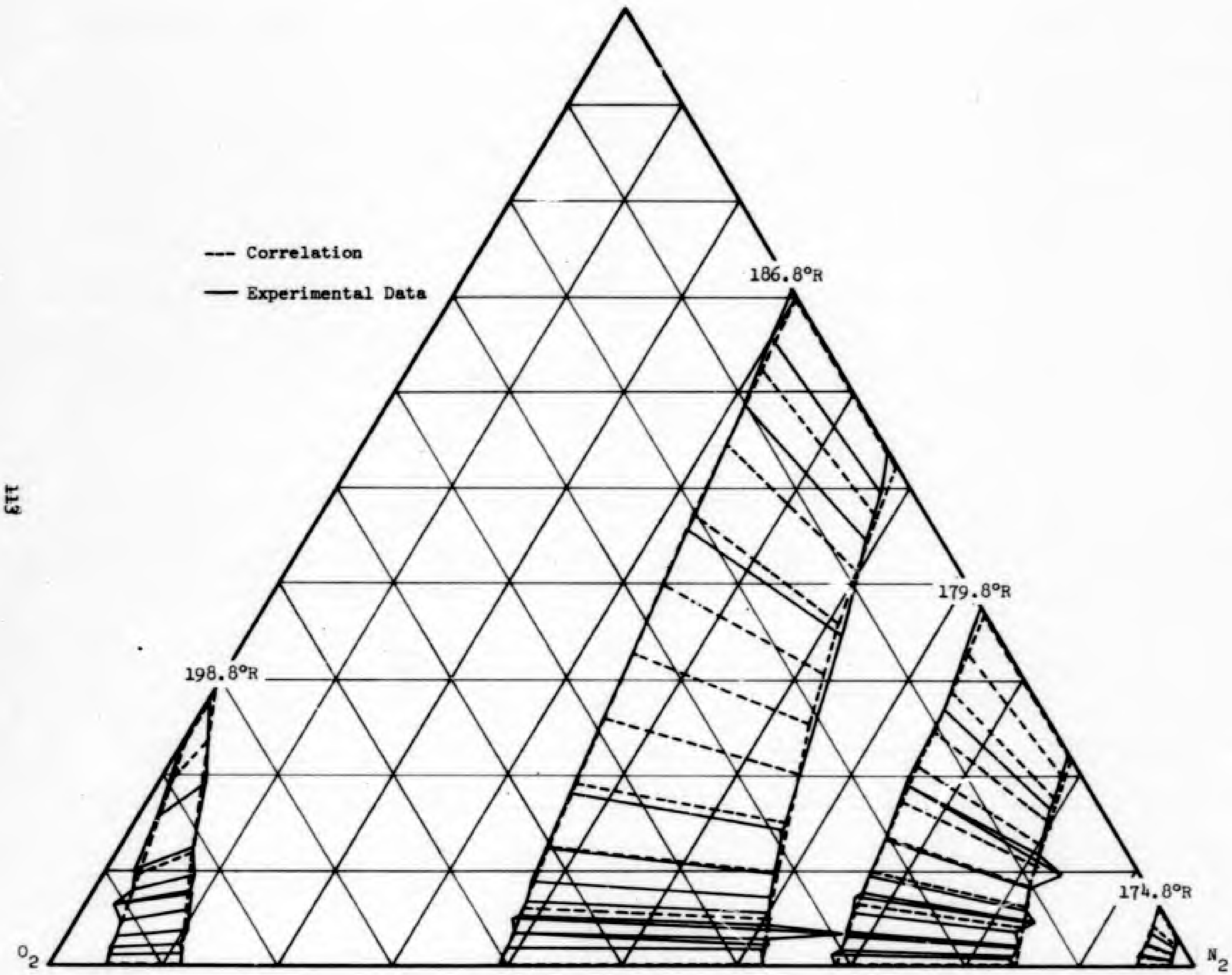

Figure 59. Comparison of Experimental Data and the Correlation, 6 Atmospheres.

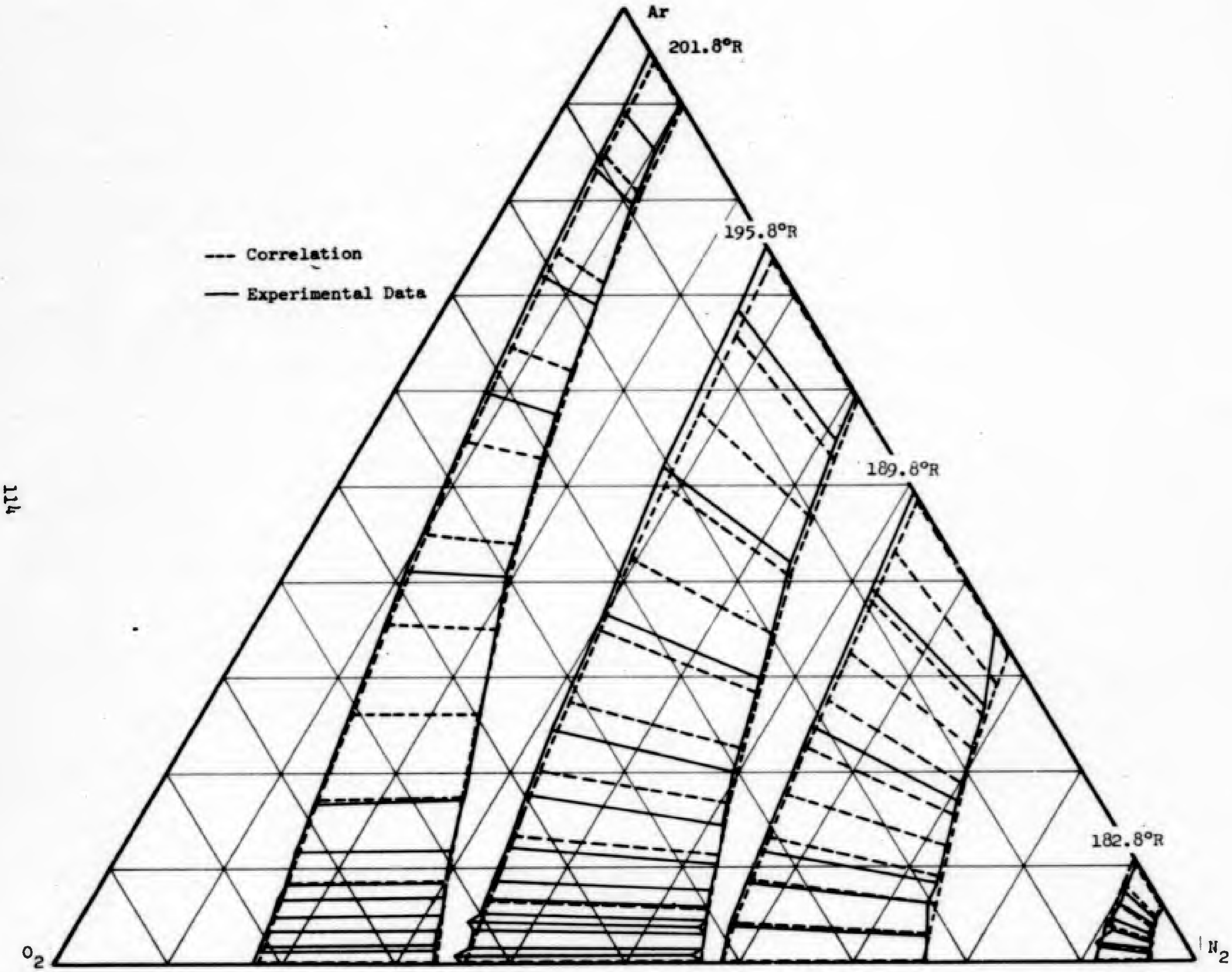

Figure 60. Comparison of Experimental Data and the Correlation, 8 Atmospheres.

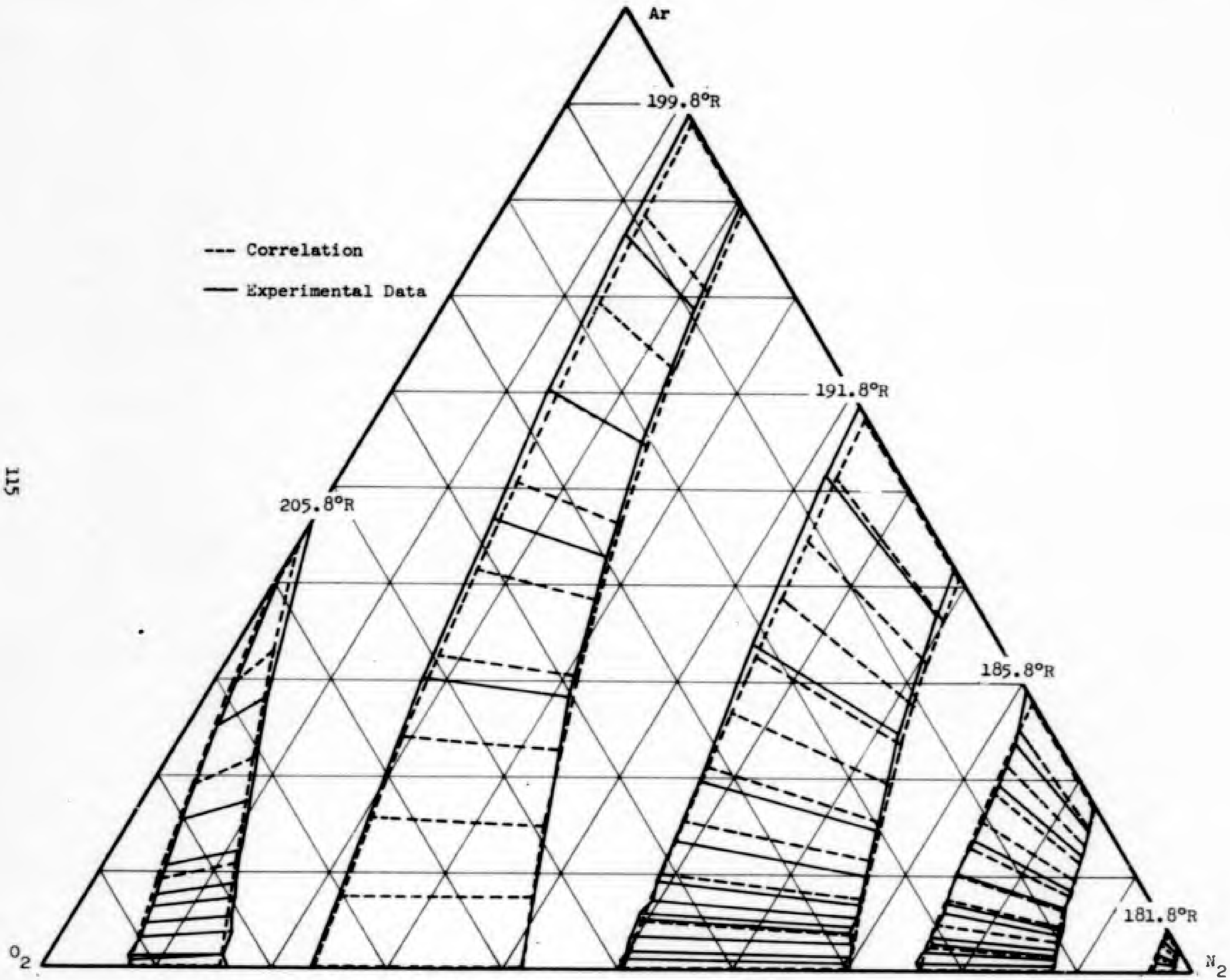

Figure 61. Comparison of Experimental Data and the Correlation, 8 Atmospheres.

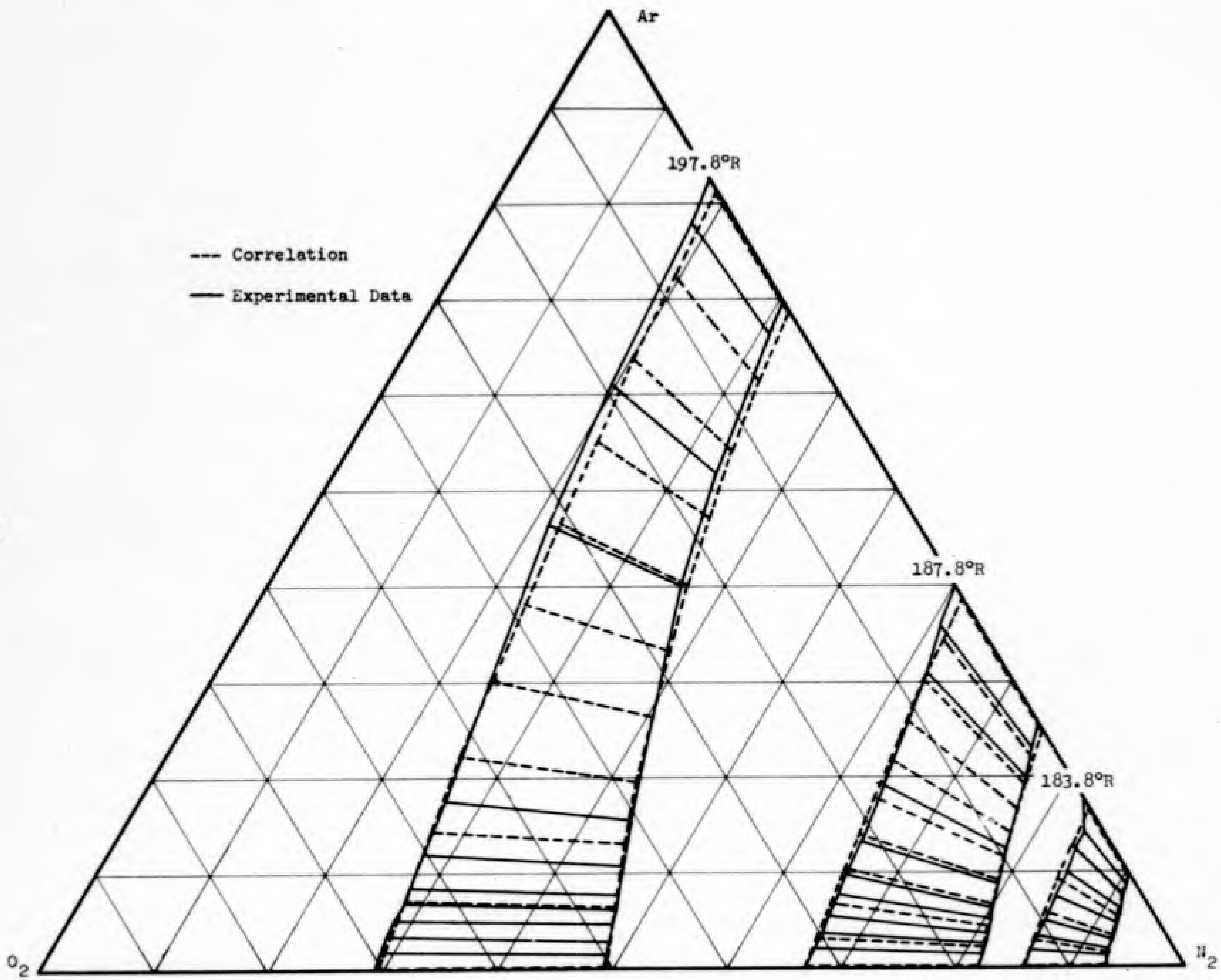

Figure 62. Comparison of Experimental Data and the Correlation, 8 Atmospheres.

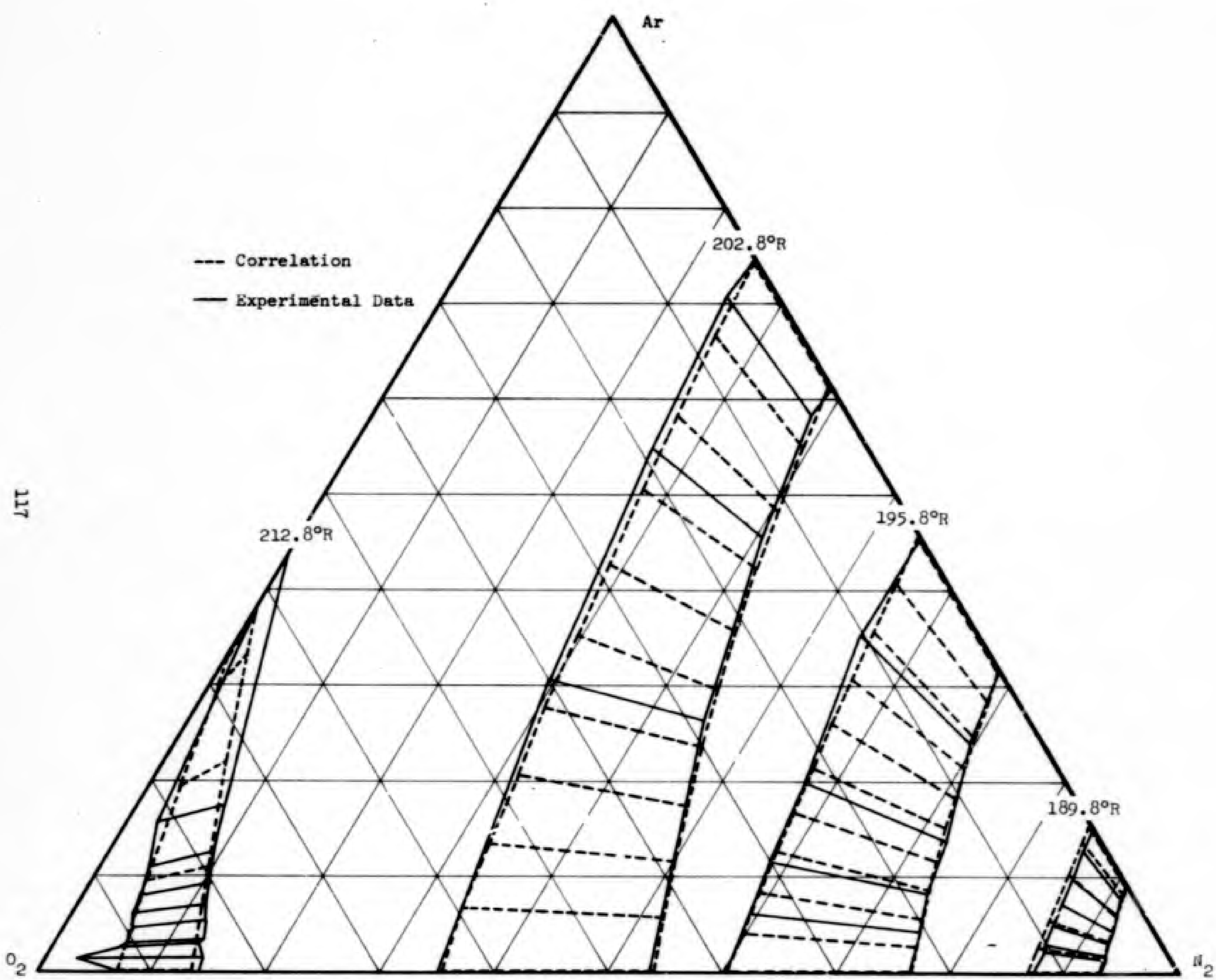

Figure 63. Comparison of Experimental Data and the Correlation, 10 Atmospheres.

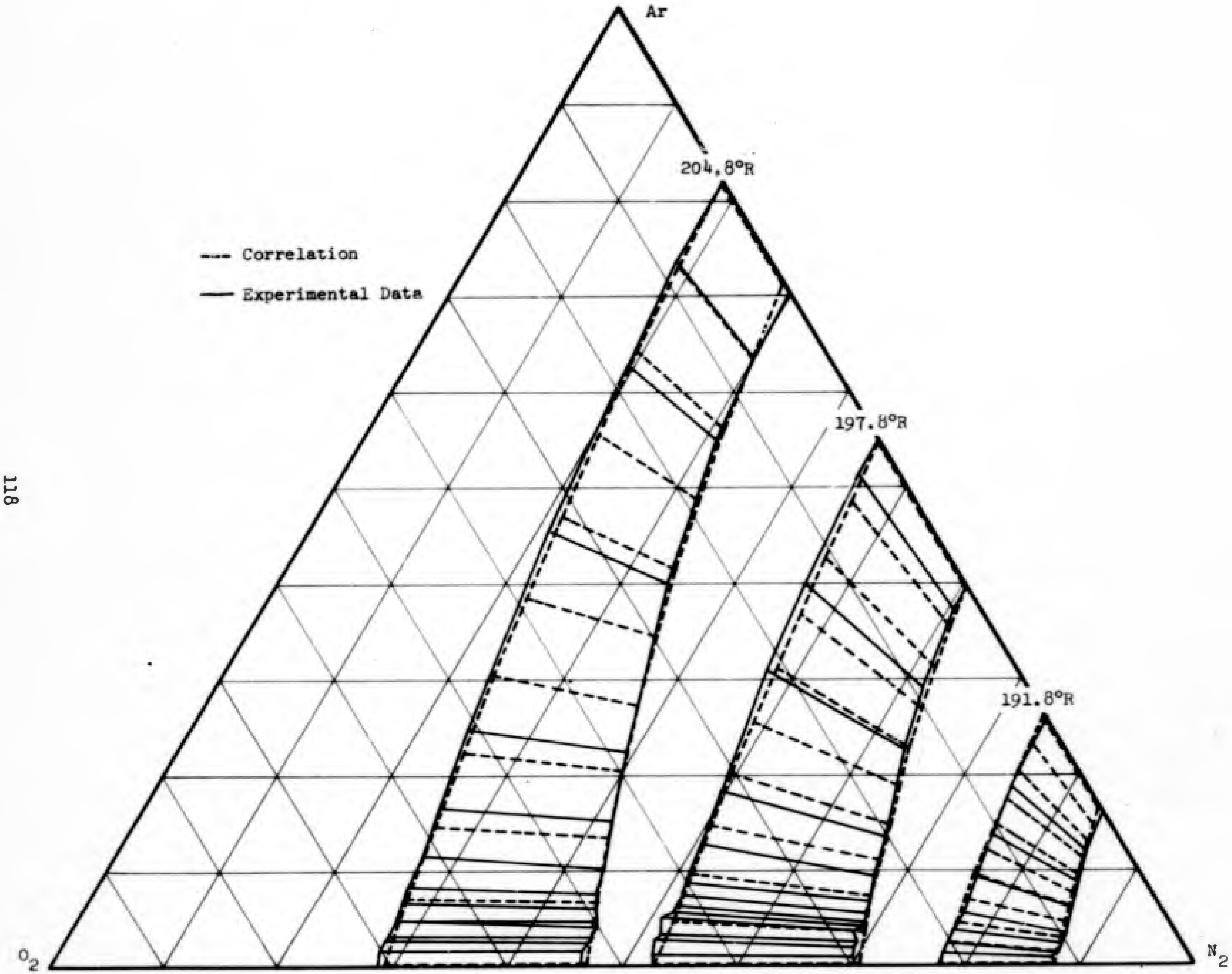

Figure 64. Comparison of Experimental Data and the Correlation, 10 Atmospheres.

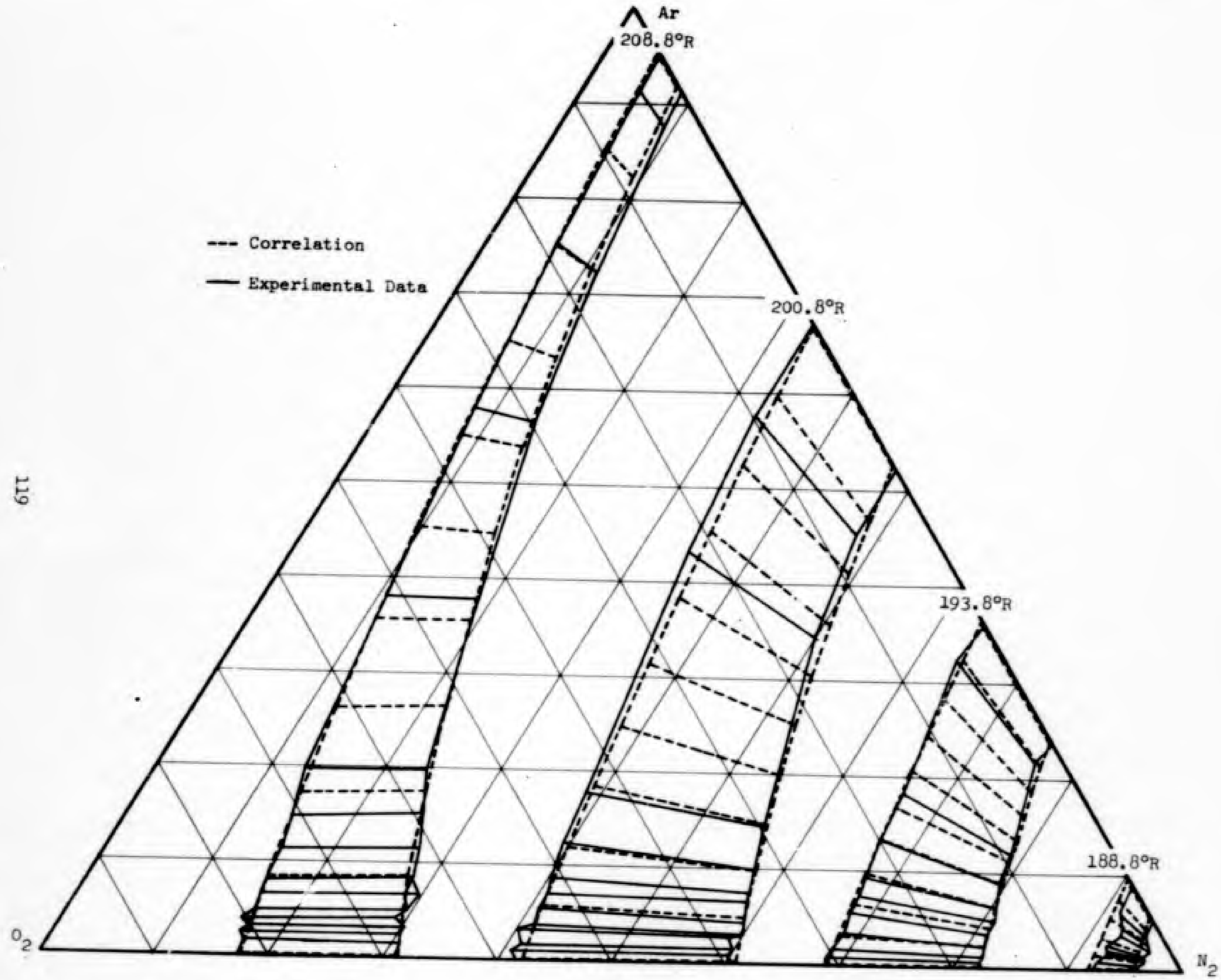

Figure 65. Comparison of Experimental Data and the Correlation, 10 Atmospheres.

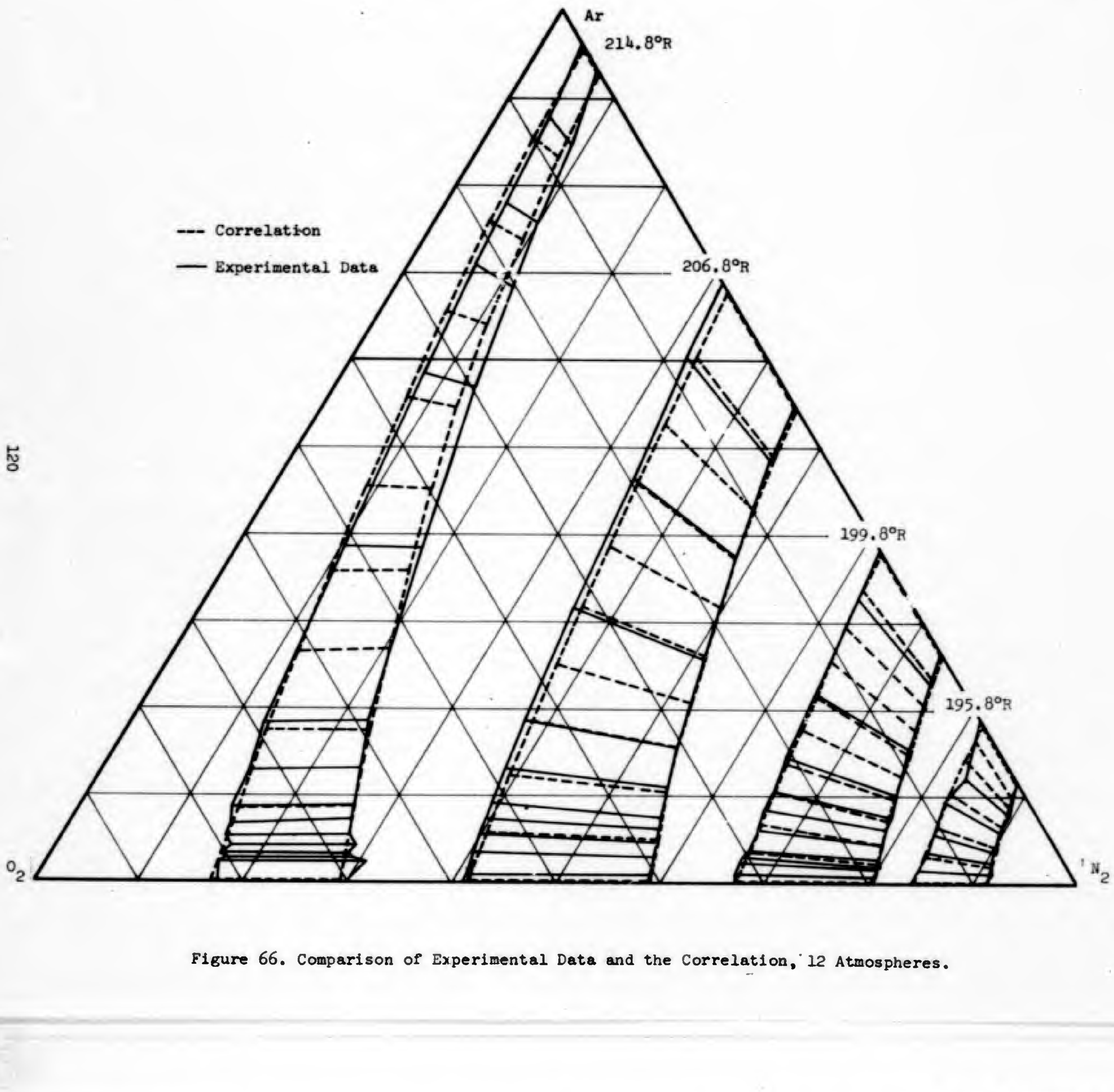

Figure 66. Comparison of Experimental Data and the Correlation, 12 Atmospheres.

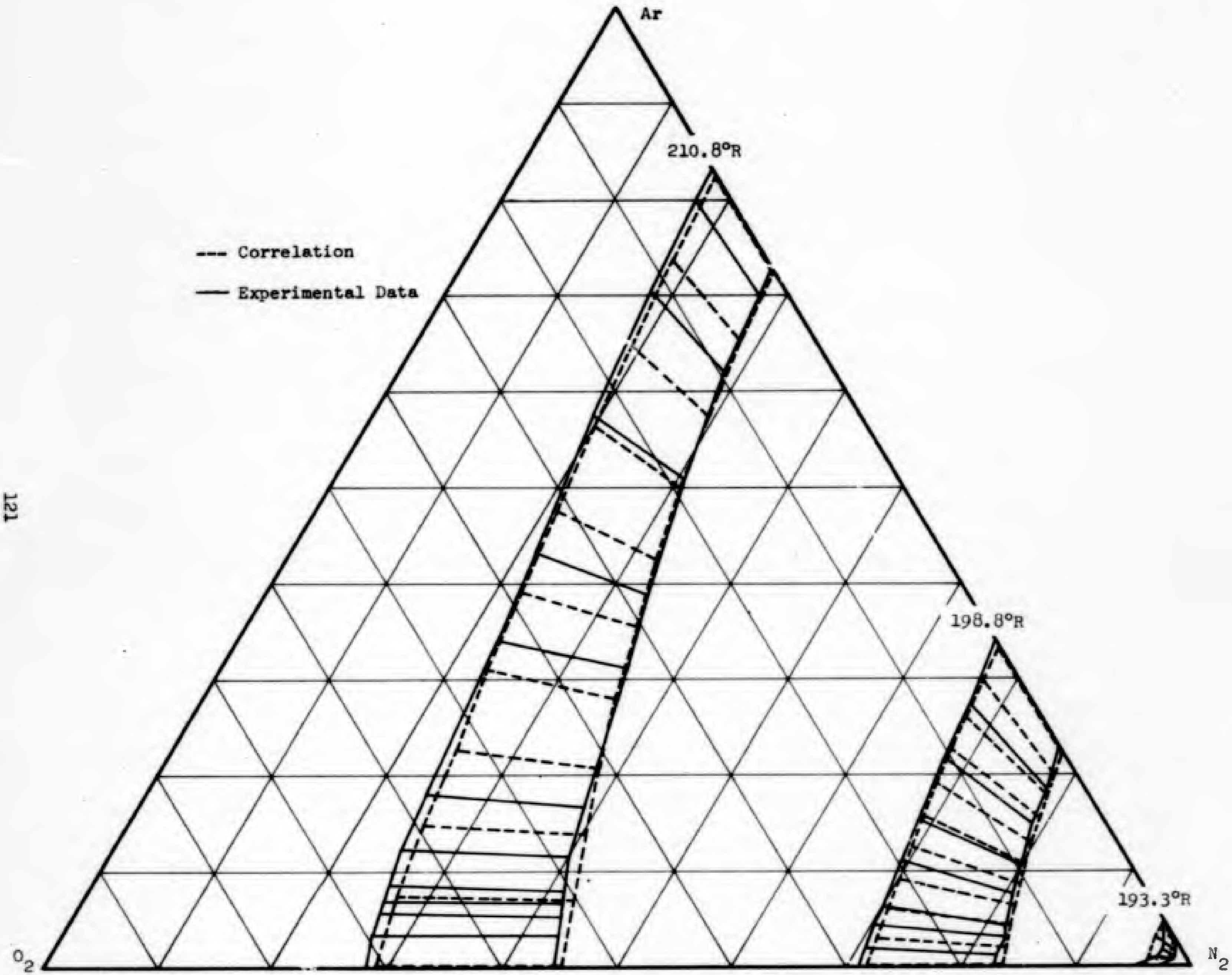

Figure 67. Comparison of Experimental Data and the Correlation, 12 Atmospheres.

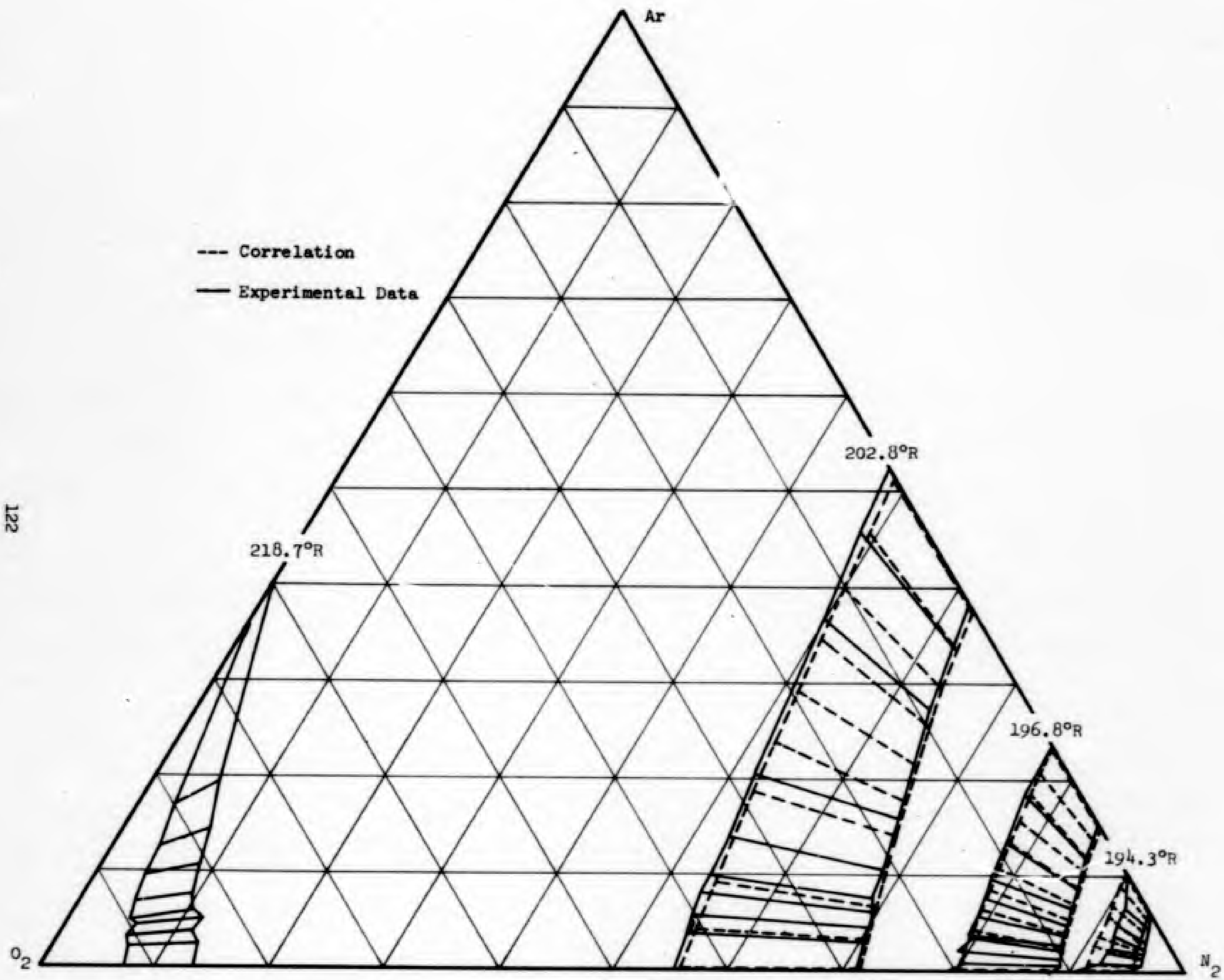

Figure 68. Comparison of Experimental Data and the Correlation, 12 Atmospheres.

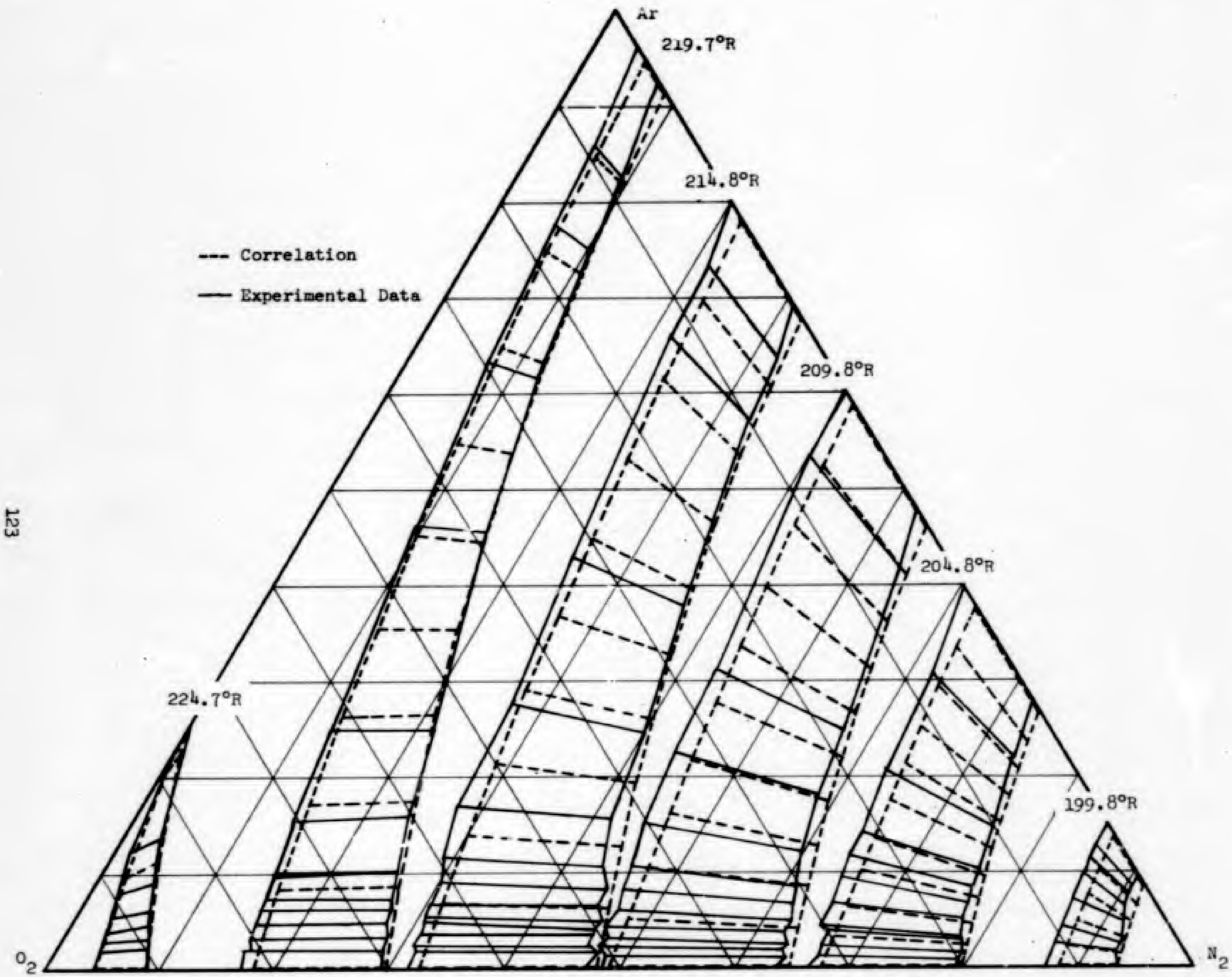

Figure 69. Comparison of Experimental Data and the Correlation, 14 Atmospheres.

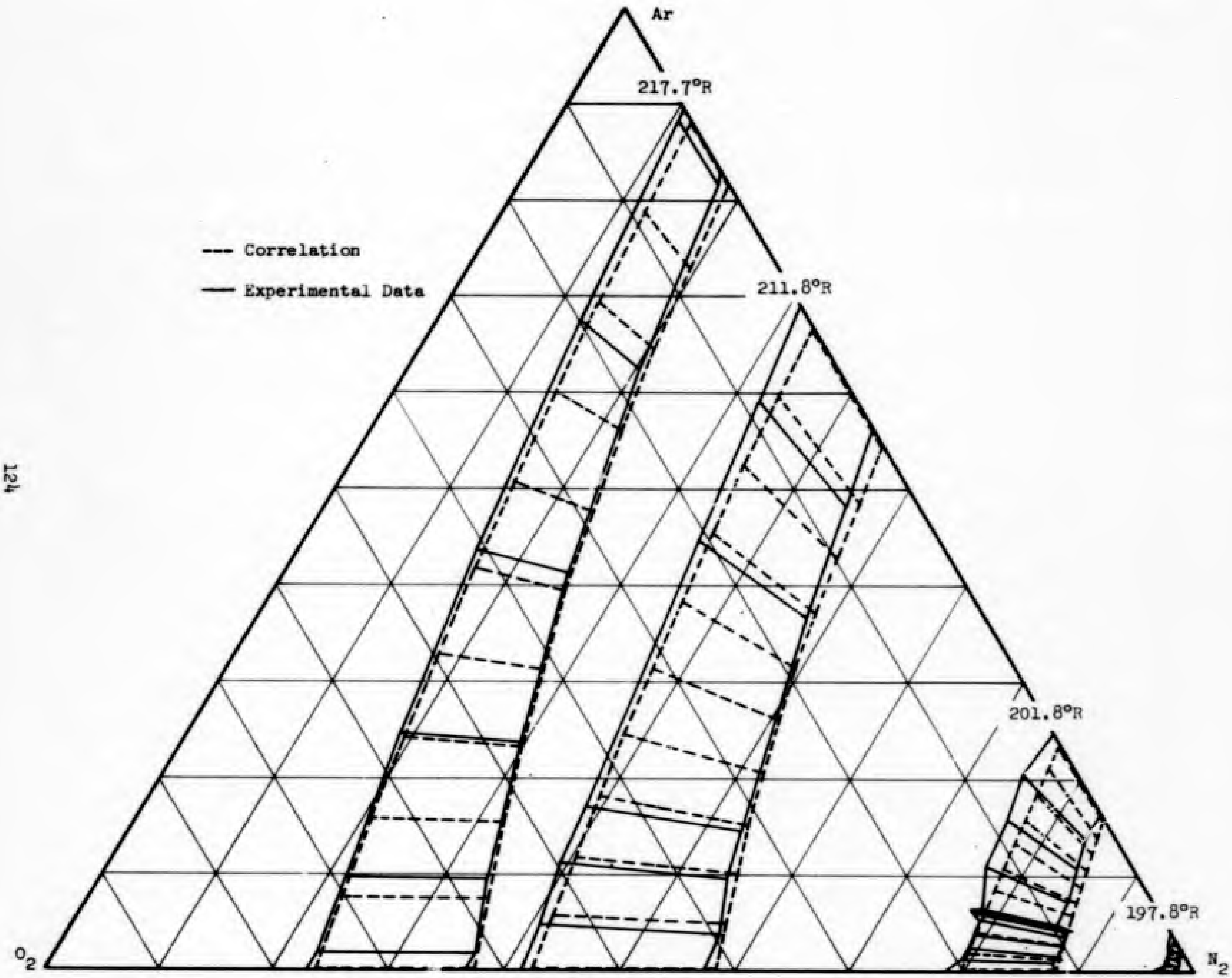

Figure 70. Comparison of Experimental Data and the Correlation, 14 Atmospheres.

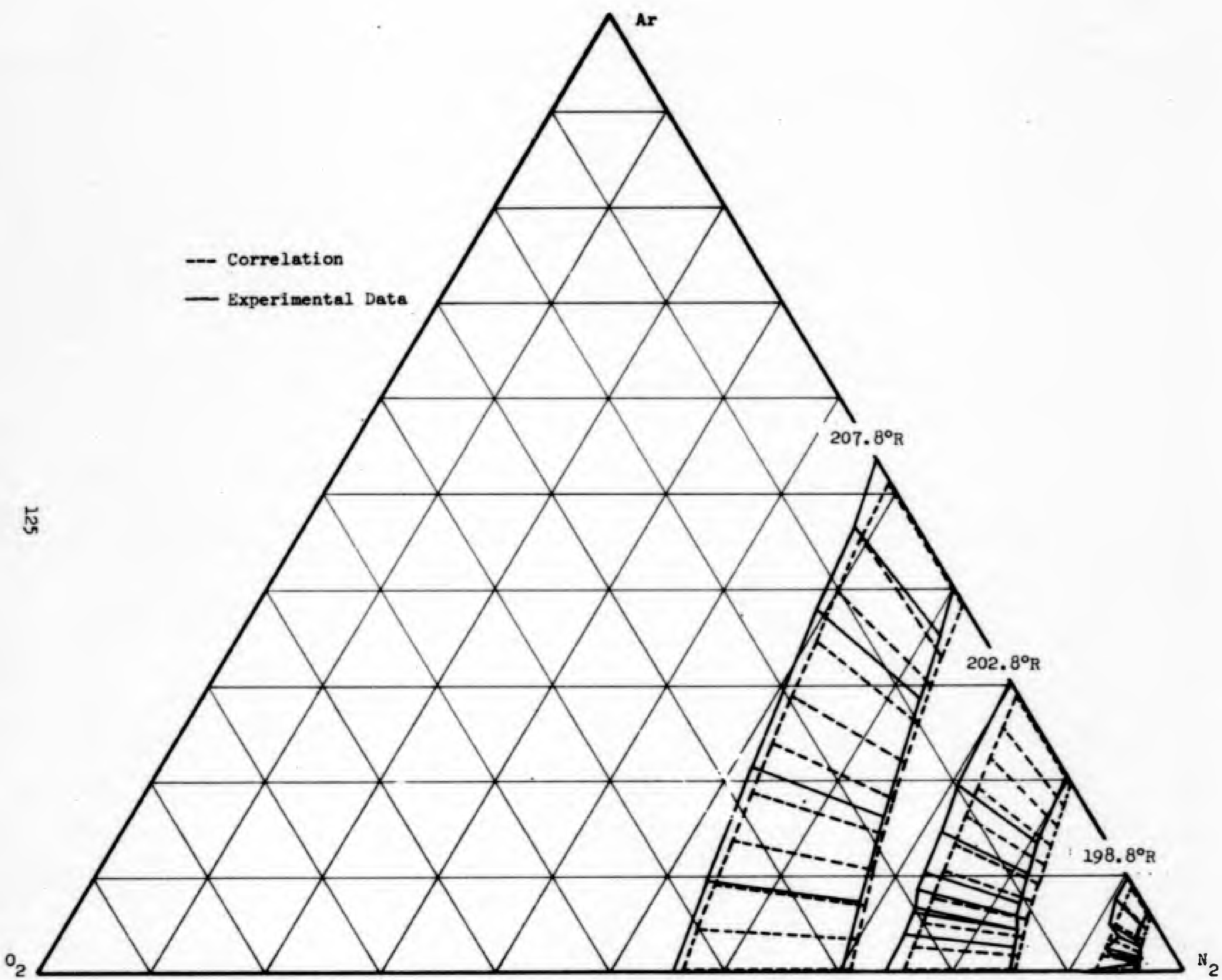

Figure 71. Comparison of Experimental Data and the Correlation, 14 Atmospheres.

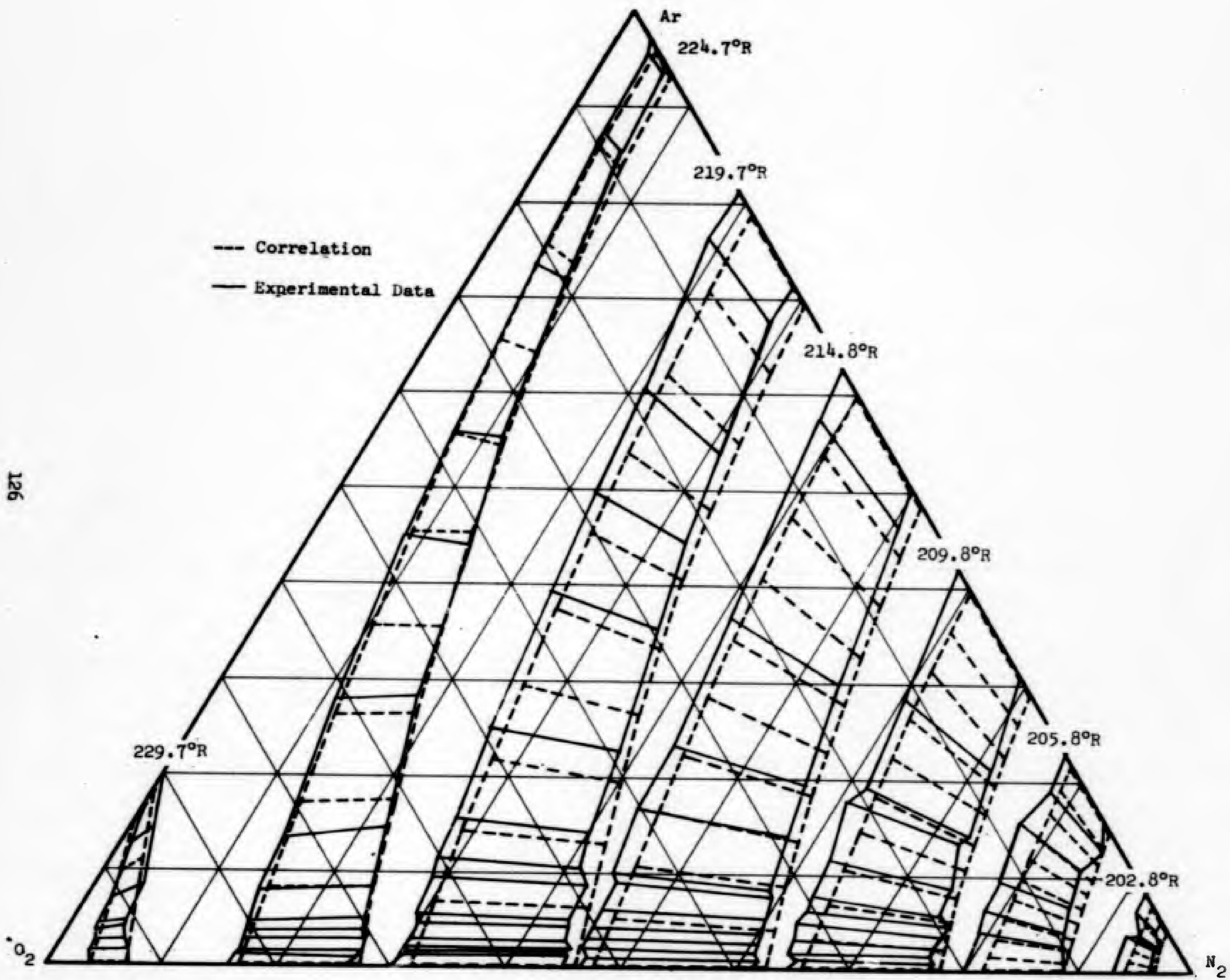

Figure 72. Comparison of Experimental Data and the Correlation, 16 Atmospheres.

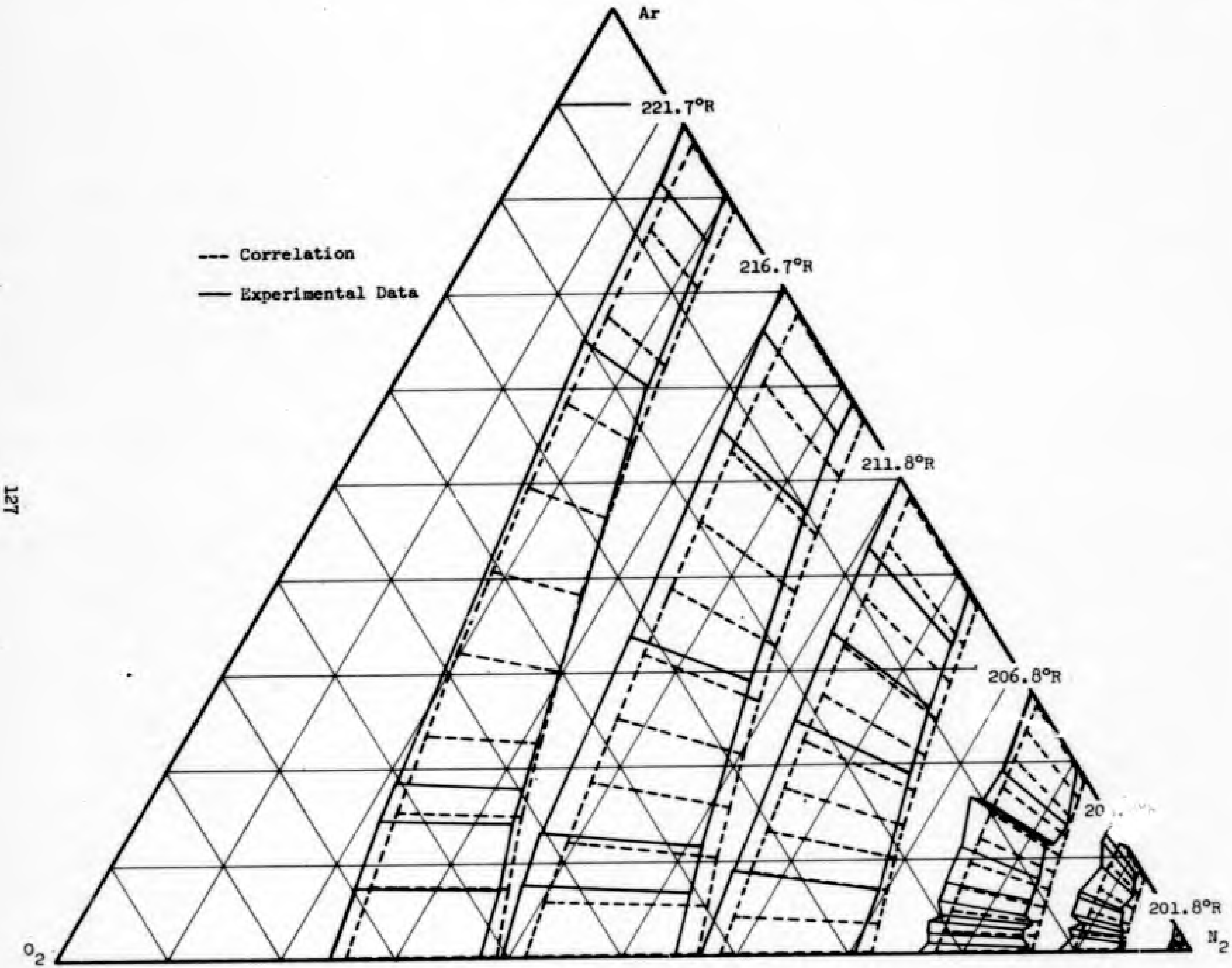

Figure 73. Comparison of Experimental Data and the Correlation, 16 Atmospheres.

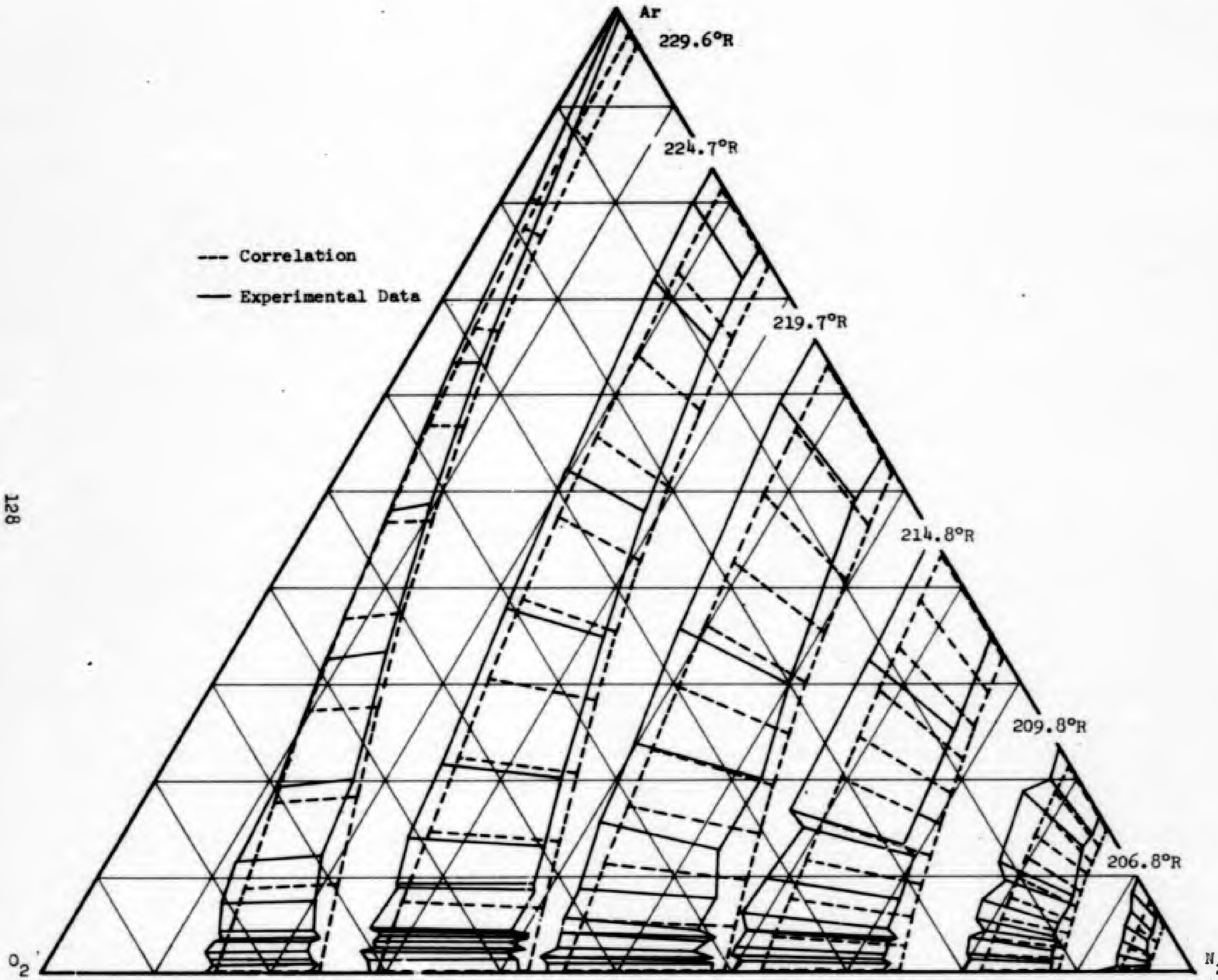

Figure 74. Comparison of Experimental Data and the Correlation, 18 Atmospheres.

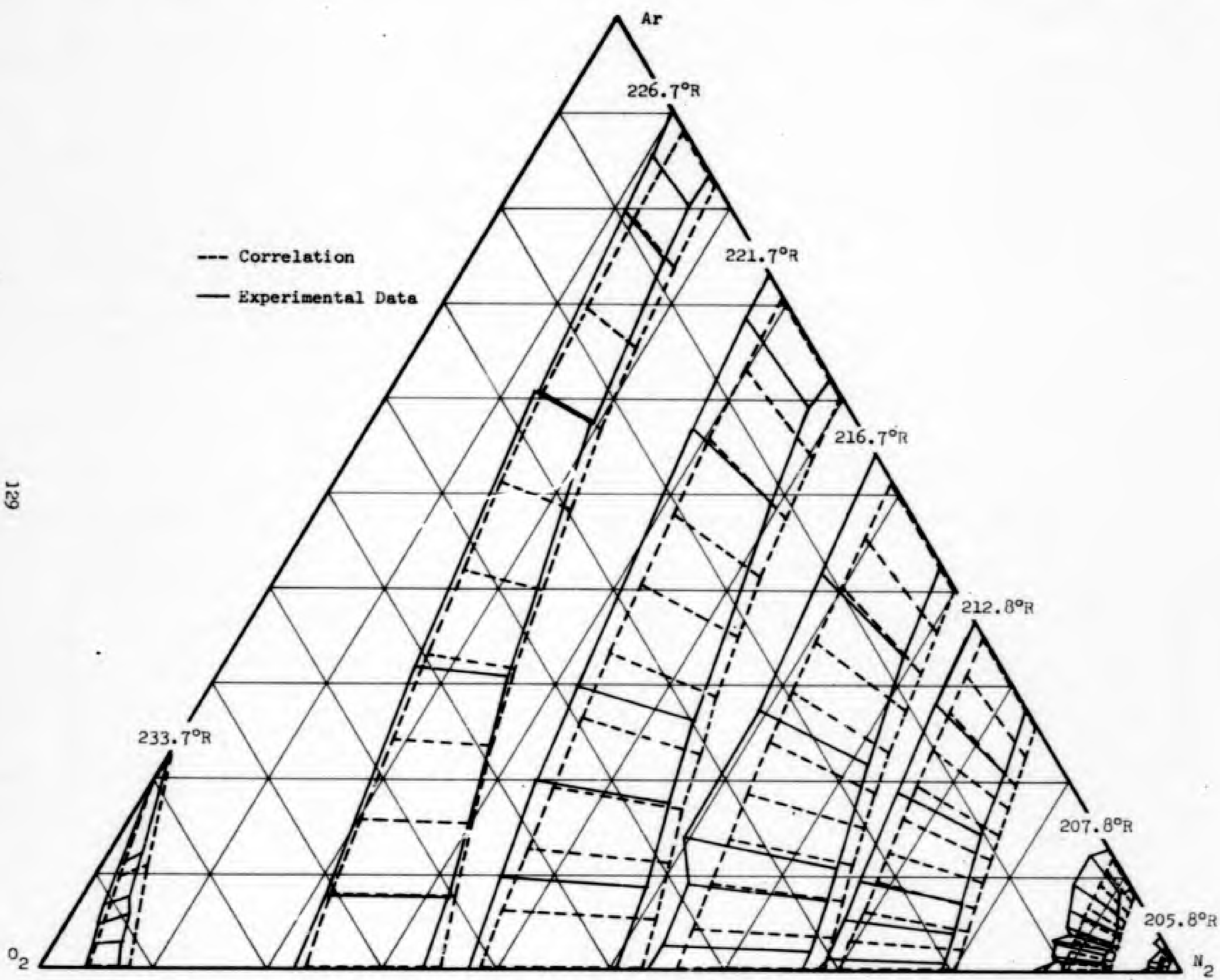

Figure 75. Comparison of Experimental Data and the Correlation, 18 Atmospheres.

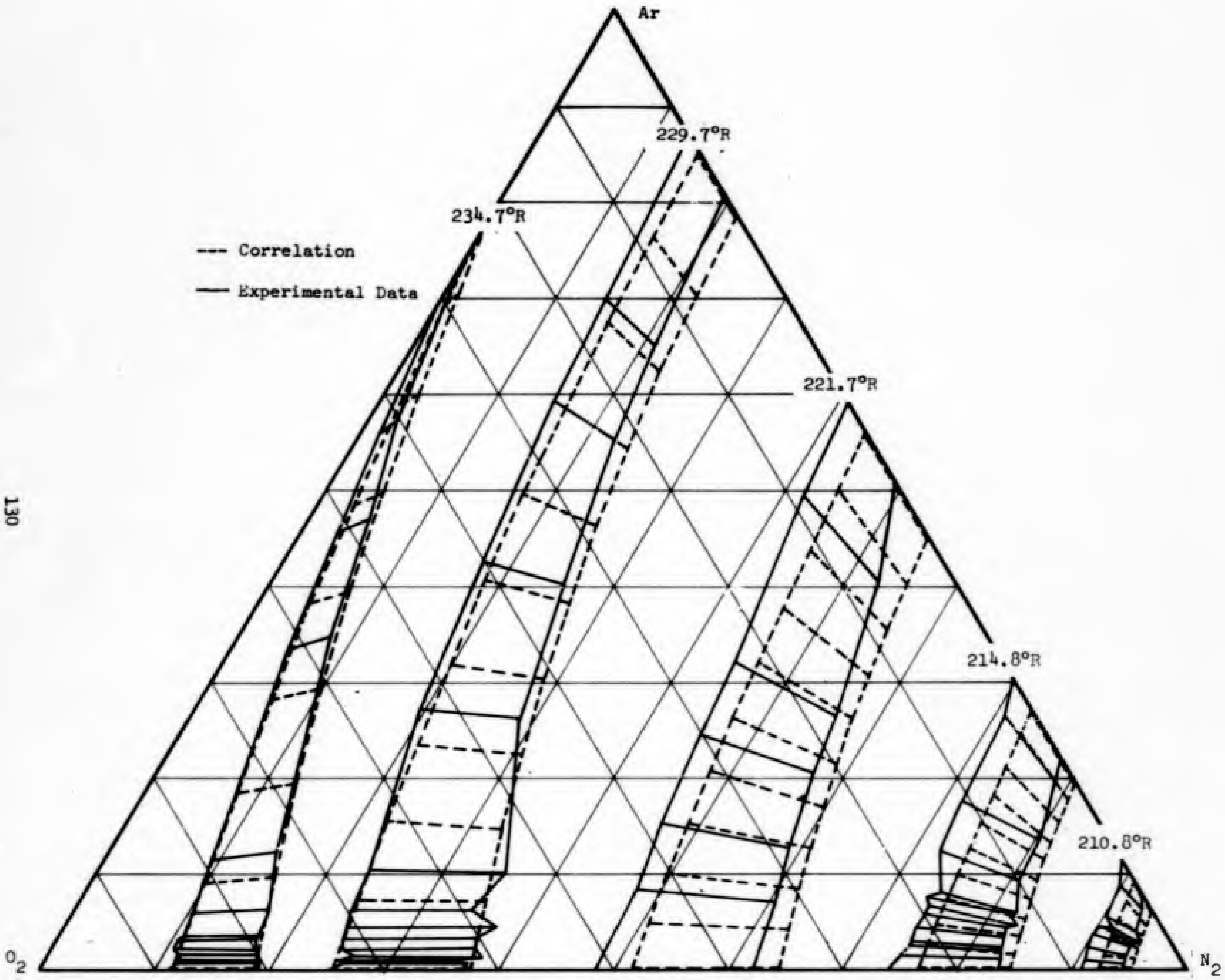

Figure 76. Comparison of Experimental Data and the Correlation, 20 Atmospheres.

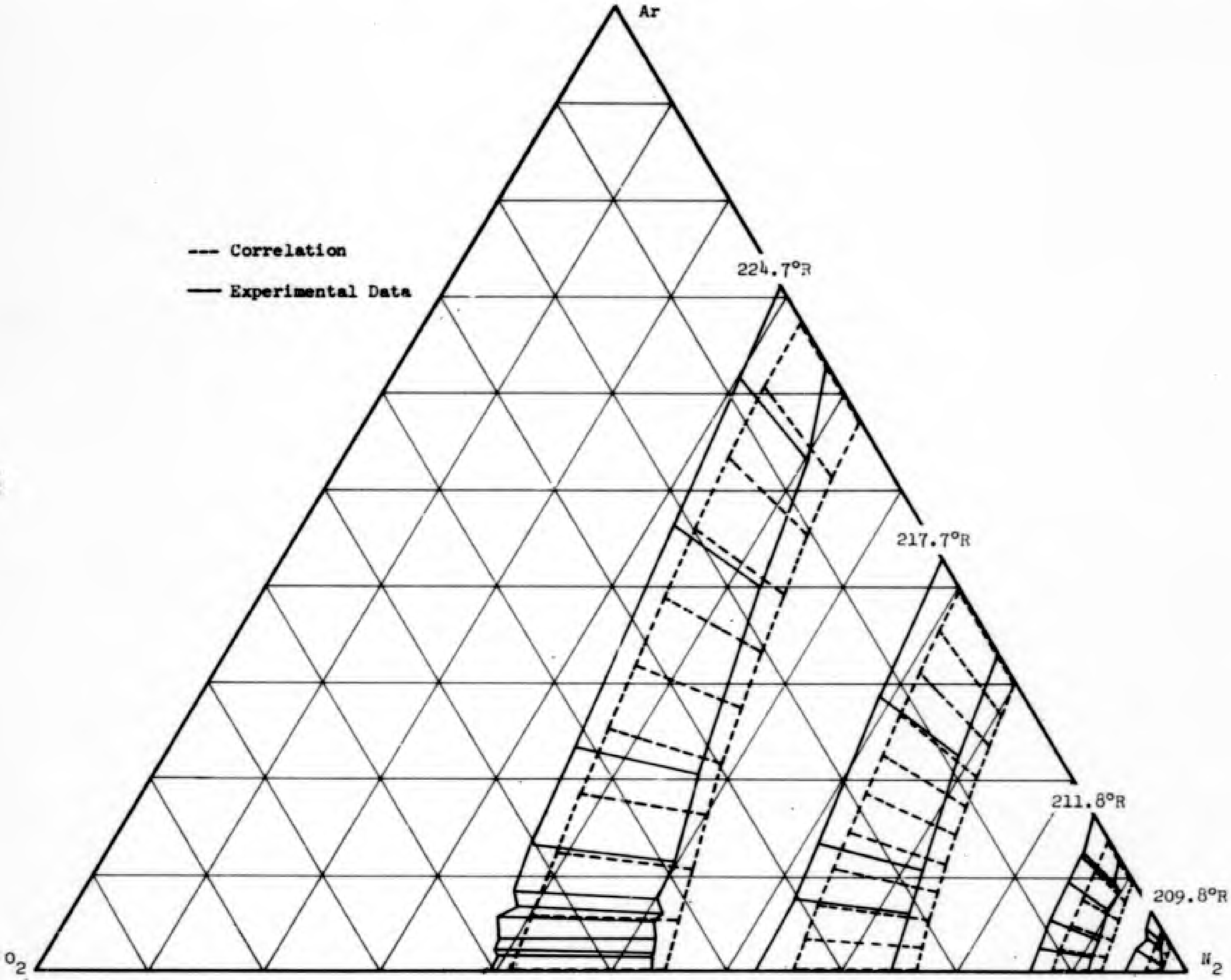

Figure 77. Comparison of Experimental Data and the Correlation, 20 Atmospheres.

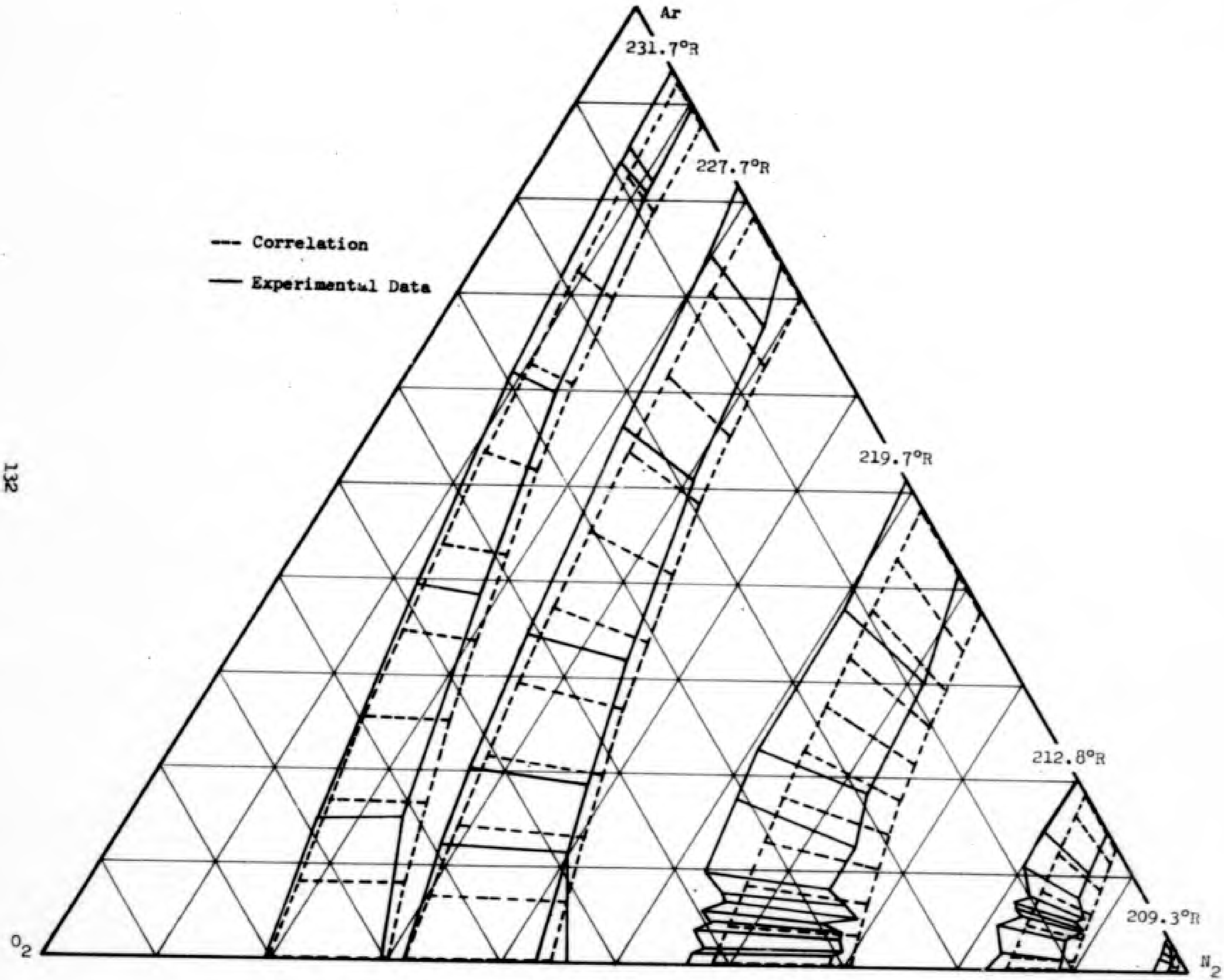

Figure 78. Comparison of Experimental Data and the Correlation, 20 Atmospheres.

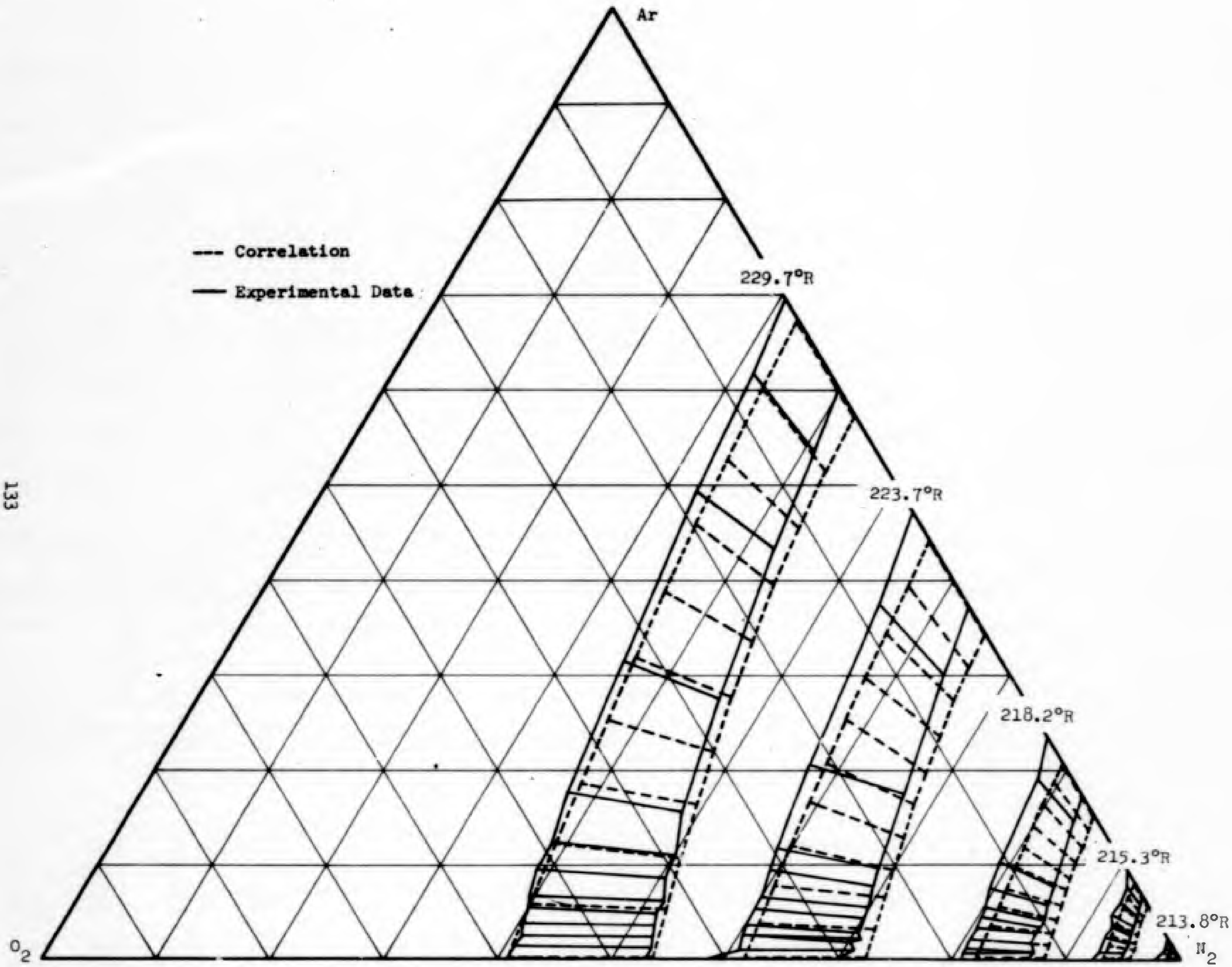

Figure 79. Comparison of Experimental Data and the Correlation, 23 Atmospheres.

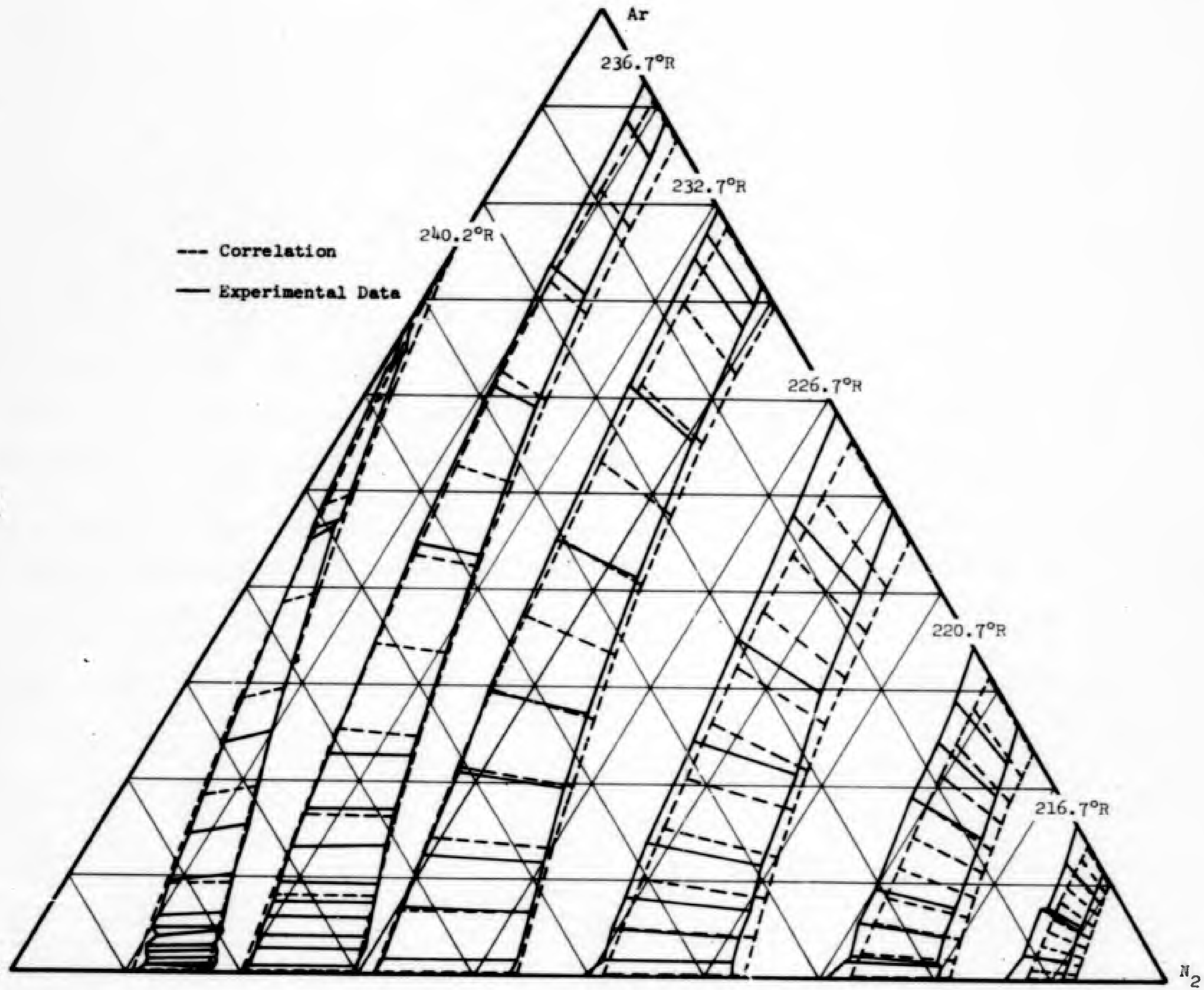

Figure 80. Comparison of Experimental Data and the Correlation, 23 Atmospheres.

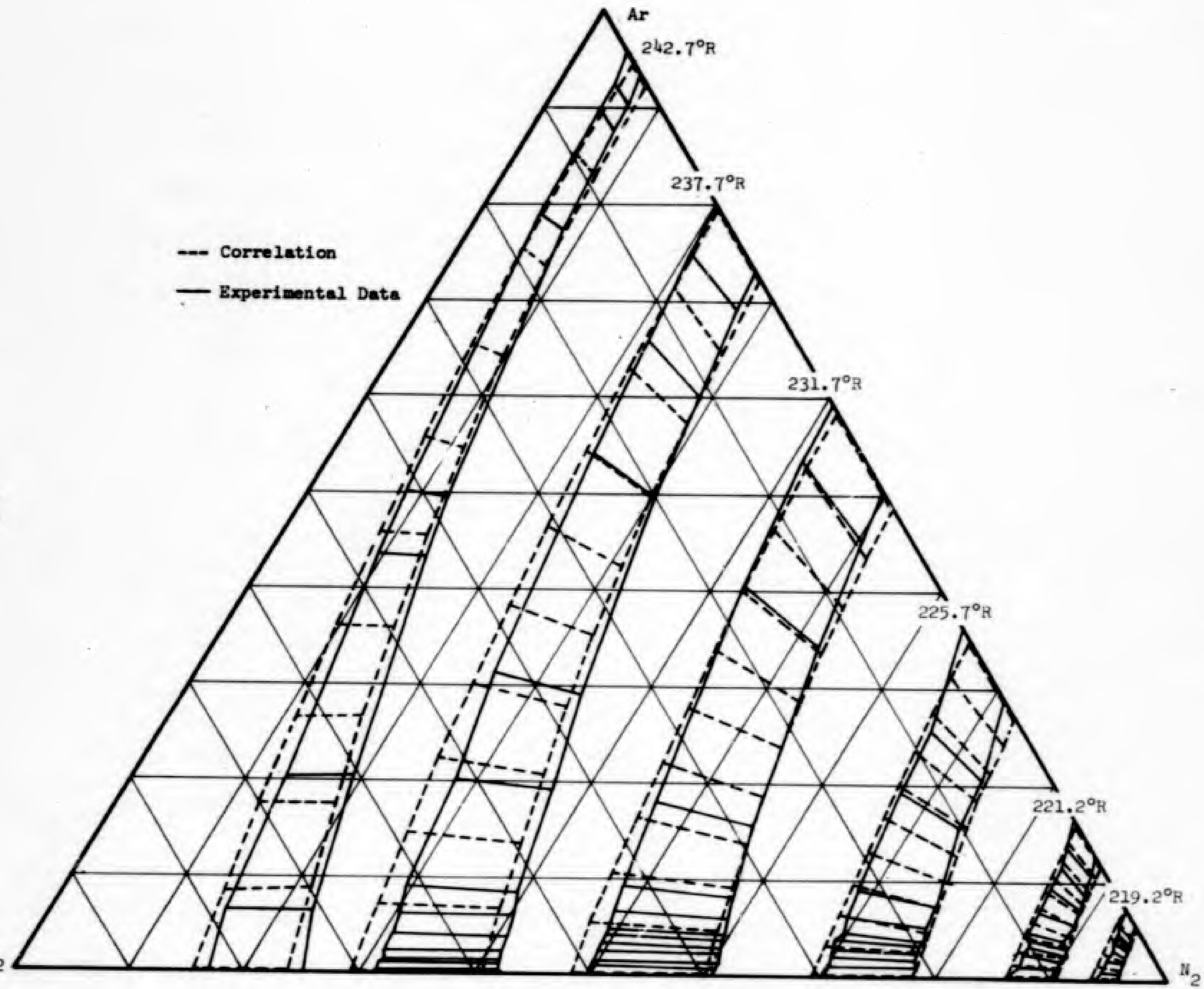

Figure 81. Comparison of Experimental Data and the Correlation, 26 Atmospheres.

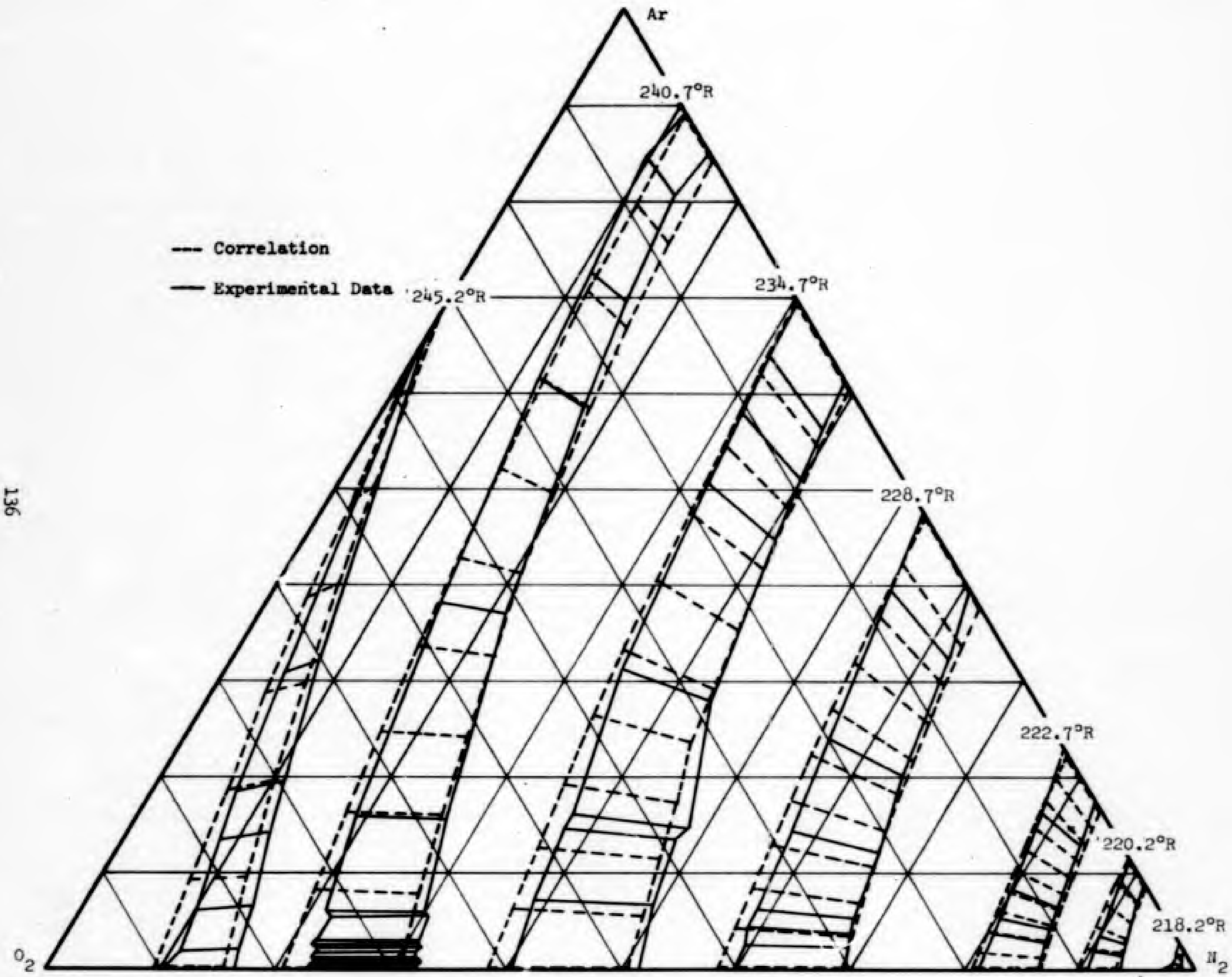

Figure 82. Comparison of Experimental Data and the Correlation, 26 Atmospheres.

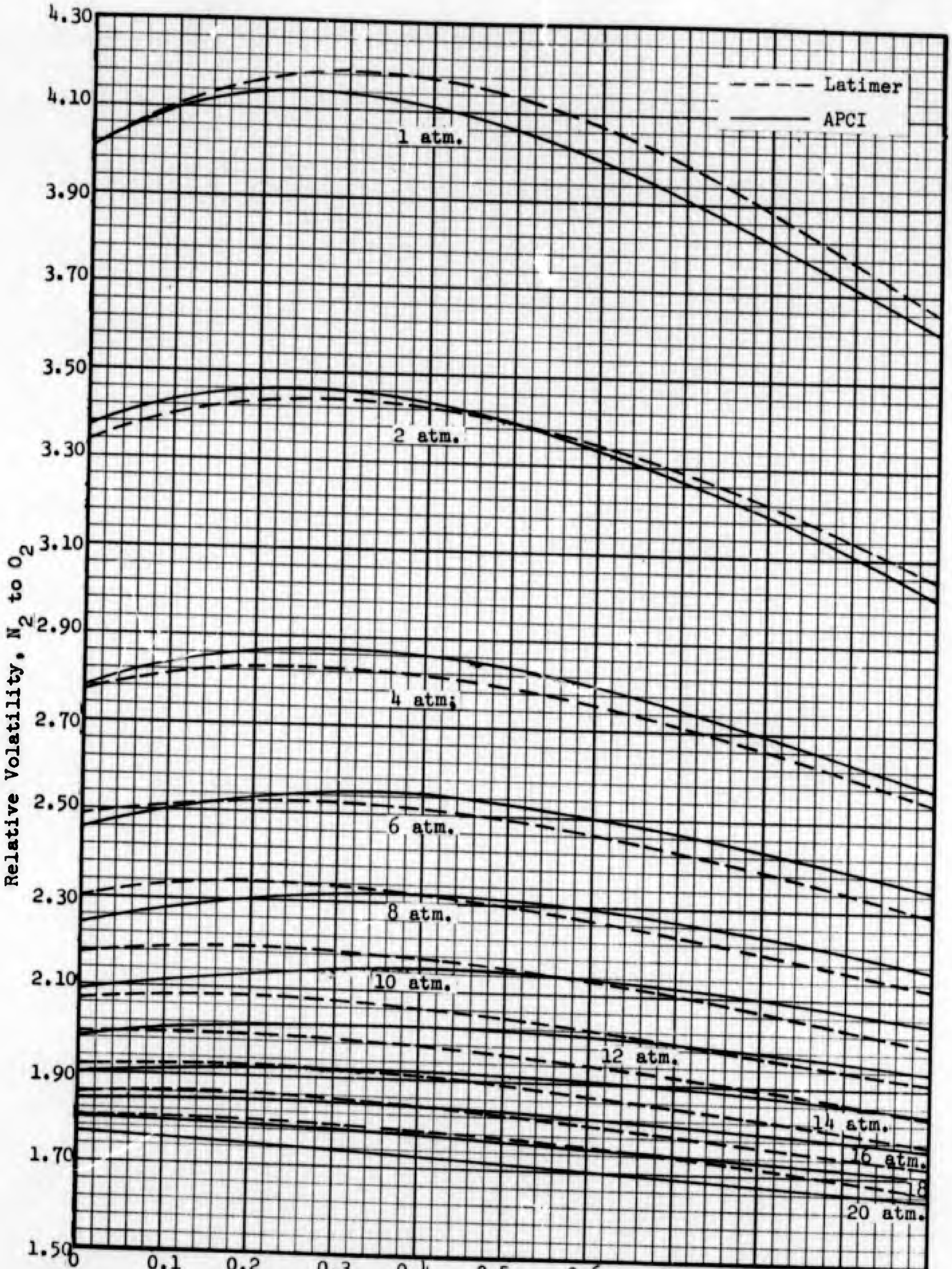

Figure 83. Comparison of APCI Correlation to Latimer Correlation for Nitrogen-Oxygen System.

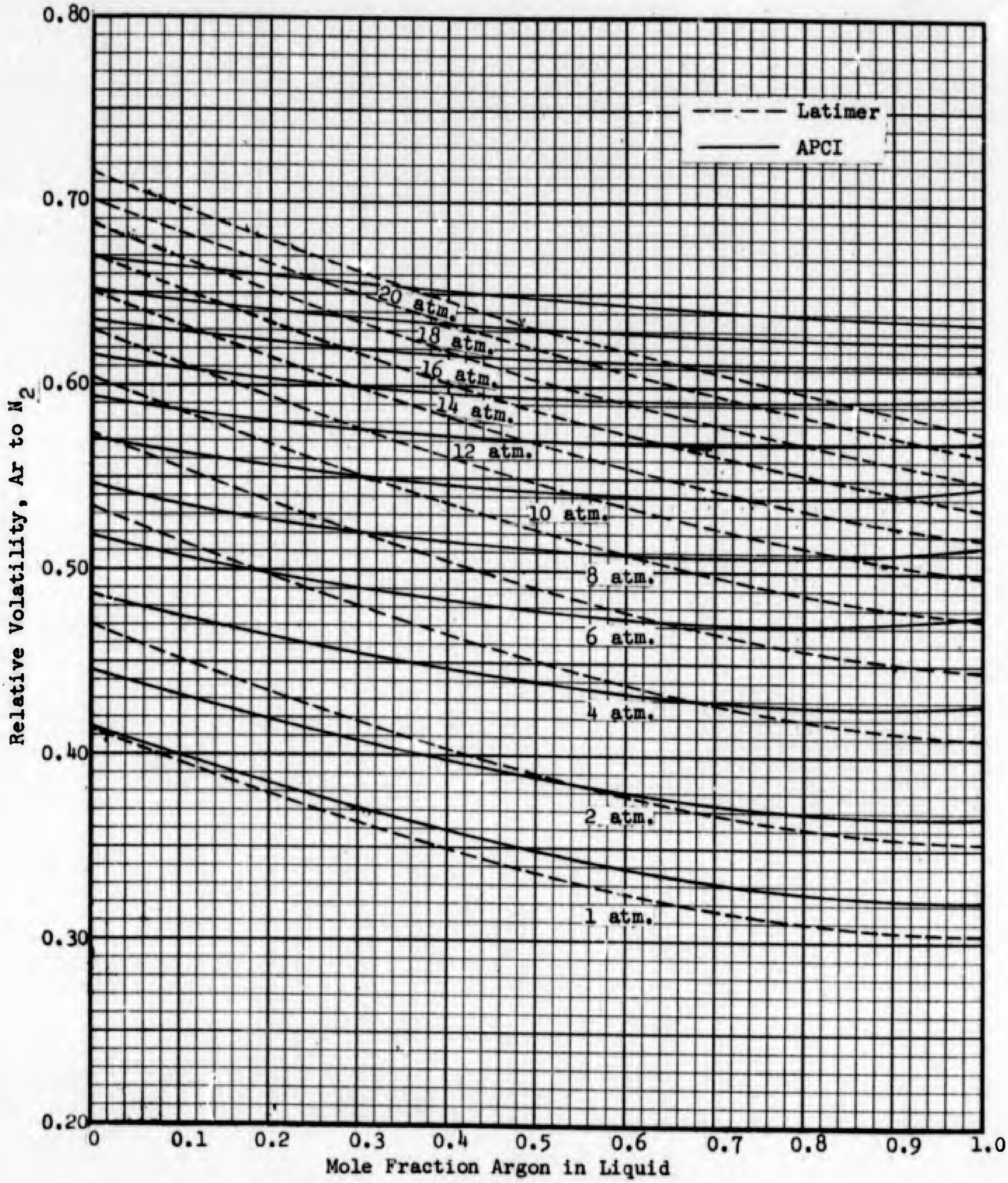

Figure 84. Comparison of APCI Correlation to Latimer Correlation for Argon-Nitrogen System.

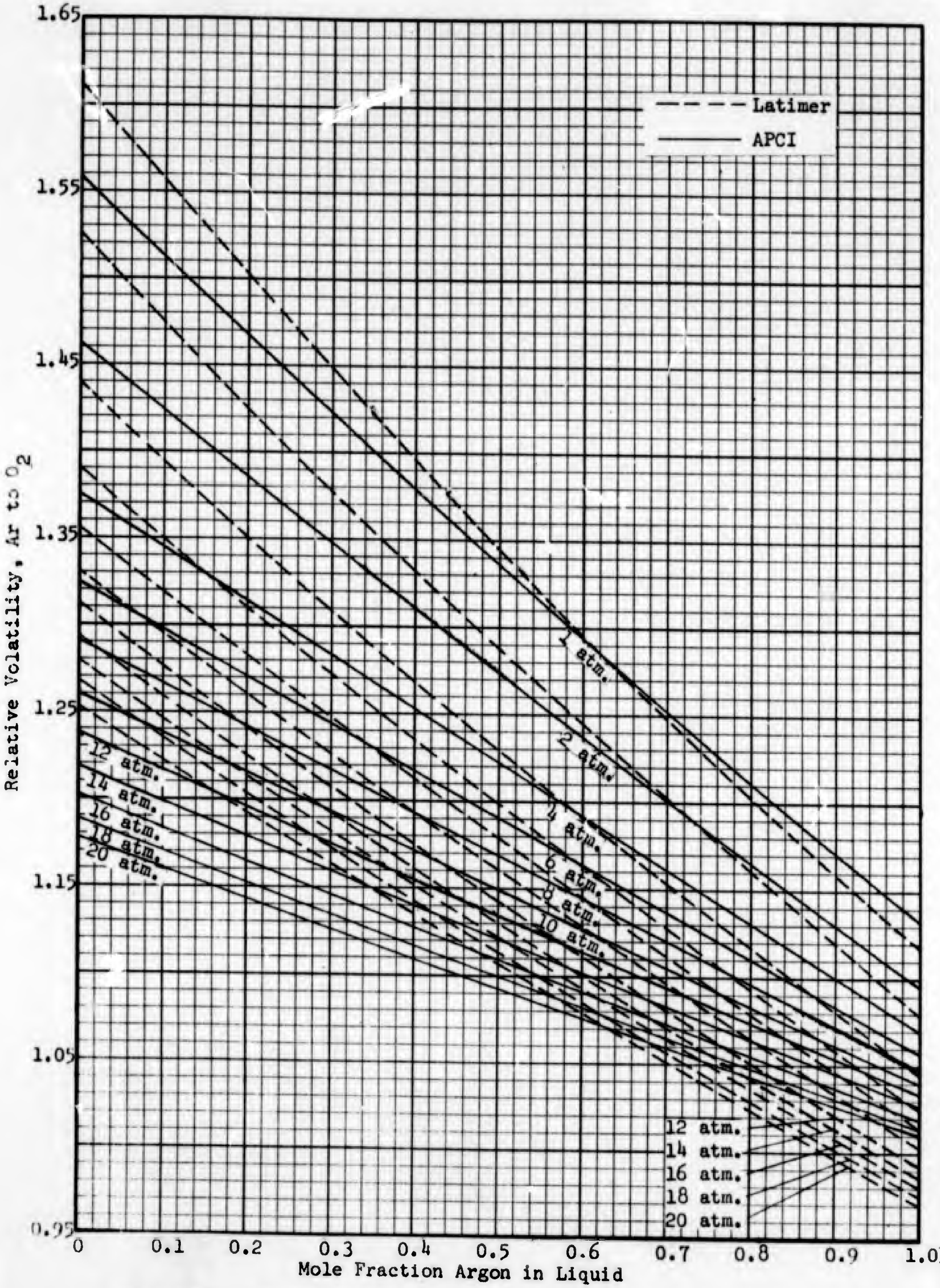

Figure 85. Comparison of APCI Correlation to Latimer Correlation for Argon-Oxygen System.

VIII. ENTHALPY CORRELATION

Enthalpy data obtained from the literature were correlated for computer usage in calculating the enthalpy of the vapor and enthalpy of the liquid according to the equations

$$H_{vap.} = \Sigma_i x_i H_i^* + \Sigma_i x_i (Hg_i - H_i^*) \qquad (22)$$

$$H_{liq.} = \Sigma_i x_i H_i^* + \Sigma_i x_i (\overset{o}{Hg}_i - H_i^*) - \Sigma_i x_i \Delta \overset{o}{H}_{vi} + \Sigma_i X_i \overset{o}{V}_i (p - \overset{o}{p}_i) + \Sigma_i x_i \Delta \overline{H}_{m_i} \qquad (23)$$

Reported below are the correlations to the data with referencing and commentary about accuracy.

A. <u>Heat of Mixing</u>

1. Argon-Oxygen - The data of Pool and co-workers(35) at 84°K appear more consistent than that of Knobler and co-workers(36) at 86°K. Pool's least squares fit of the data converted to BTU/lb-mole is:

$$Hm = x_{O_2} x_{Ar} [103 + 13.5 (x_{O_2} - x_{Ar})] \qquad (24)$$

2. Nitrogen-Argon - The only data found were that of Pool and co-workers(35) at 84°K. Their least squares fit converted to BTU/lb-mole is:

$$Hm = x_{Ar} x_{N_2} [86.9 - 23.2 (x_{Ar} - x_{N_2})] \qquad (25)$$

3. Nitrogen-Oxygen - The only data found were that of Knobler, van Heijningen and Beenakker(36) at 77°K. Weighting the points at oxygen mole fraction of 0.14 half as heavily as the rest, a method of averages curve fit gives within 10% accuracy:

$$Hm = x_{N_2} x_{O_2} [82.8 + 29 (x_{O_2} - x_{N_2})] \text{ BTU/lb-mole.} \qquad (26)$$

For a heat of mixing of the form $Hm = x_1 x_2 [A + B (x_1 - x_2)]$, the partial molal heat of mixing is:

$$\overline{\Delta Hm_1} = x_2^2 [A + B (3x_1 - x_2)] \quad (27)$$

$$\overline{\Delta Hm_1} = x_1^2 [A + B (x_1 - 3x_2)] \quad (28)$$

B. Ideal Gas Heat Capacity 140-250°R

1. Argon - from Nat. Bur. Stds.[37]: $Cp° = 4.9647$ BTU/mole °R (29)

2. Oxygen - tabulation by Wooley[38]: $Cp° = 6.9558$ BTU/mole °R (30)

3. Nitrogen - from Goff and Gratch[39]. Least squares curve fit:
$Cp° = 6.950571 + 0.27735687 \times 10^{-5} T + 0.3438922 \times 10^{-8} T^2$. (31)
Sum of squares error = 1×10^{-9}.

C. Latent Heat

1. Nitrogen - The correlation is a least squares curve fit of the data from Mage, Jones, Katz, and Roebuck[40] and of Strobridge[41]
ΔH°_{vi} in BTU/lb-mole, T in °R.

$$\ln \Delta H^\circ_{vi} = 6.36376 + 0.121474 \ln (226.91 - T) + 0.0880106 [\ln (226.91-T)]^2 - 0.00987388 [\ln (226.91-T)]^3 \quad (32)$$

Root mean square error = 8.1 BTU/lb-mole

A simpler fit is: $\ln \Delta H^\circ_{vi} = 6.19701 + 0.354836 \ln (226.91-T)$ (33)

Root mean square error = 22 BTU/lb-mole

2. Argon - The correlation is a least squares curve fit of the data of Flubacher, Leadbetter, and Morrison[42] and of Din[4].

ΔH°_{vi} in BTU/lb-mole, T in °R

$$\ln \Delta H^\circ_{vi} = 7.35231 - 0.733687 \ln (271.30-T) + 0.331584 [\ln (271.30-T)]^2 - 0.0317968 [\ln (271.30-T)]^3 \quad (34)$$

Root mean square error = 2.8 BTU/lb-mole

A simpler fit is: $\ln \Delta H^\circ_{vi} = 6.20952 + 0.366142 \ln (271.30-T)$ (35)

Root mean square error = 27.6 BTU/lb-mole

3. Oxygen - The correlation is a least squares fit synthesized from the data given by Fukurawa and McCoskey[43], Alikhanov[44], Claitor and Crawford[45] and the graphical data of Wilbers[46].

ΔH^{o}_{vi} in BTU/lb-mole, T in °R

$$\ln \Delta H^{o}_{vi} = 5.61017 + 0.733877 \ln (278.60-T) - 0.0572340 [\ln (278.60-T)]^2 + 0.0016562 [\ln (278.60-T)]^3 \quad (36)$$

Root mean square error = 6.9 BTU/lb-mole

A simple fit is: $$\ln \Delta H^{o}_{vi} = 6.16014 + 0.384736 \ln (278.60-T) \quad (37)$$

Root mean square error = 77 BTU/lb-mole

D. Enthalpy of the Real Gas - The commonly used symbol $(H-H^*)_T$ represents the effect of pressure at constant temperature on the enthalpy of a real gas. This quantity can be computed from the virial equation of state terminating with the third virial coefficient.

$$\frac{PV}{RT} = Z = 1 + \frac{B}{V} + \frac{C}{V^2} \quad (38)$$

Since B and C are functions of temperature only, the following equation is derived:

$$\frac{(H_{gi}-H^*_i)_T}{RT} = [\frac{1}{V}(B-T\frac{dB}{dT}) + \frac{1}{V^2}(C - \frac{1}{2}T\frac{dC}{dT}] \quad (39)$$

The coefficients for argon, oxygen, and nitrogen are given in Section VID.

E. Saturated Pure Component Heat Capacity

1. Argon Liquid - from WADD Compendium[5]

$$C_p = 0.22 + 0.00468 \frac{T}{(151-T)^{1/2}} \quad (40)$$

C_p units cal/gm-°K, T in °K

2. Oxygen Liquid - insufficient data to correlate.

3. Nitrogen Liquid - Correlation of Strobridge(41)

$$C_s = \frac{6.24688186T}{(126.26-T)^2} + 39.39006895 + 0.6821295539T - 0.01052432772T^2 + 0.00006001046981T^3 \quad (41)$$

C_s units joule/gm-mole °K, T in °K

4. Argon Vapor - from Din(4)

$$C_s = 325.63362 - 8.8669510T + 0.08828184T^2 - 0.00031196544T^3 \quad (42)$$

C_s units joule/gm-mole °K, T in °K

5. Oxygen Vapor - from Claitor and Crawford(45)

$$C_s = -468.26228 - 2.6649068T + 0.010328679T^2 + 9.0958184 \times 10^{-5}T^3 + 1.4860065 \times 10^{-7}T^4 \quad (43)$$

C_s units BTU/lb-mole °F, T in °F

6. Nitrogen Vapor - from Strobridge(41)

$$C_s = 48.332643 - 0.7791322T - 0.0065282424T^2 + 1.7403752 \times 10^{-4}T^3 - 7.9049655 \times 10^{-7}T^4 \quad (44)$$

C_s units joule/gm °K, T in °K

Enthalpy data presented in the Appendix were calculated for the vapor from the virial equation of state and the ideal gas heat capacities; the reference state is the ideal gas at 0°R. The liquid enthalpy was calculated from a curve fit of liquid enthalpy data for the pure components calculated from the latent heat of vaporization and the enthalpy of the vapor. The following are the analytical equations obtained for the saturated liquid enthalpy of nitrogen, argon, and oxygen; temperature in °R.

Nitrogen:

$$H_{liq.} = -9774 + 158.74T - 1.2087T^2 + 4.3451 \times 10^{-3}T^3 - 5.589 \times 10^{-6}T^4 \tag{45}$$

Argon:

$$H_{liq.} = -3634 + 12.71T - 2.976 \times 10^{-2}T^2 + 6.08 \times 10^{-5}T^3 + 1.418 \times 10^{-7}T^4 \tag{46}$$

Oxygen:

$$H_{liq.} = -882 - 56.32T + 0.58608T^2 - 2.2058 \times 10^{-3}T^3 + 3.131 \times 10^{-6}T^4 \tag{47}$$

Based upon the scatter in the experimental enthalpy data, these equations are estimated to be correct within $\pm$ 20 BTU/lb-mole. Because of this large uncertainty no correction was made for the effect of the heat of mixing and the effect of pressure on the enthalpy of the liquid. The enthalpy was calculated simply as

$$H_{liq.} = \Sigma_i \, x_i \, H_{i\,liq.} \tag{48}$$

The correction for the heat of mixing varies up to 25 BTU/lb-mole and the correction for the effect of pressure on the enthalpy is only significant at the higher pressures where it varies up to 40 BTU/lb-mole. A check on the thermodynamic consistency of the data was made by comparison of calculated values of the saturated heat capacity with experimental data by means of the following equation neglecting the second term.

$$C_{sat.} = \left(\frac{\partial H}{\partial T}\right)_{sat.} - V\left(\frac{\partial p}{\partial T}\right)_{sat.} \tag{49}$$

The comparison of the data is given in Table 24.

At low temperatures the calculated and experimental heat capacities are in good agreement for nitrogen and oxygen, and somewhat poorer agreement for argon. The largest deviations of about 10% occur at high temperatures where the effect of pressure on the enthalpy may begin to be significant. The agreement is considered good enough that the calculated heat capacities given in the appendix are based upon a temperature differentiation of the enthalpy equations.

TABLE 24

COMPARISON OF CALCULATED AND EXPERIMENTAL SATURATED LIQUID HEAT CAPACITIES, BTU/lb-MOLE-°R

Temperature °F	Nitrogen Exp.(41)	Nitrogen Calc.	Argon Exp.(5)	Argon Calc.	Oxygen Exp.(47)	Oxygen Calc.
-320	....	....	....	....	12.8	12.4
-310	13.9	14.0	10.7	9.8	12.9	12.9
-300	14.2	14.1	10.9	10.2	13.0	13.1
-290	14.6	14.6	11.2	10.6	....	13.2
-280	15.1	15.5	11.5	11.2	....	13.3
-270	15.8	16.6	11.7	11.9	....	13.4
-260	16.9	17.8	12.0	12.6	....	13.6
-250	18.9	18.9	12.2	13.5	....	14.0
-240	....	....	13.1	14.4	....	14.6
-230	....	....	14.6	15.5	....	15.6

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APPENDIXES

APPENDIX I

GRAPHICAL PRESENTATION OF CORRELATION

A. K-Values Vs. Pressure

The 36 graphs to follow present the K-values defined as:

$$K_i = \frac{y_i}{x_i} \tag{50}$$

of the three components as a function of pressure along selected isotherms. Envelopes defining the binary compositions are drawn as dashed lines.

The graphs are grouped in order of component: nitrogen, argon, oxygen. Inside each group they are ordered with respect to increasing mole fraction nitrogen in the liquid.

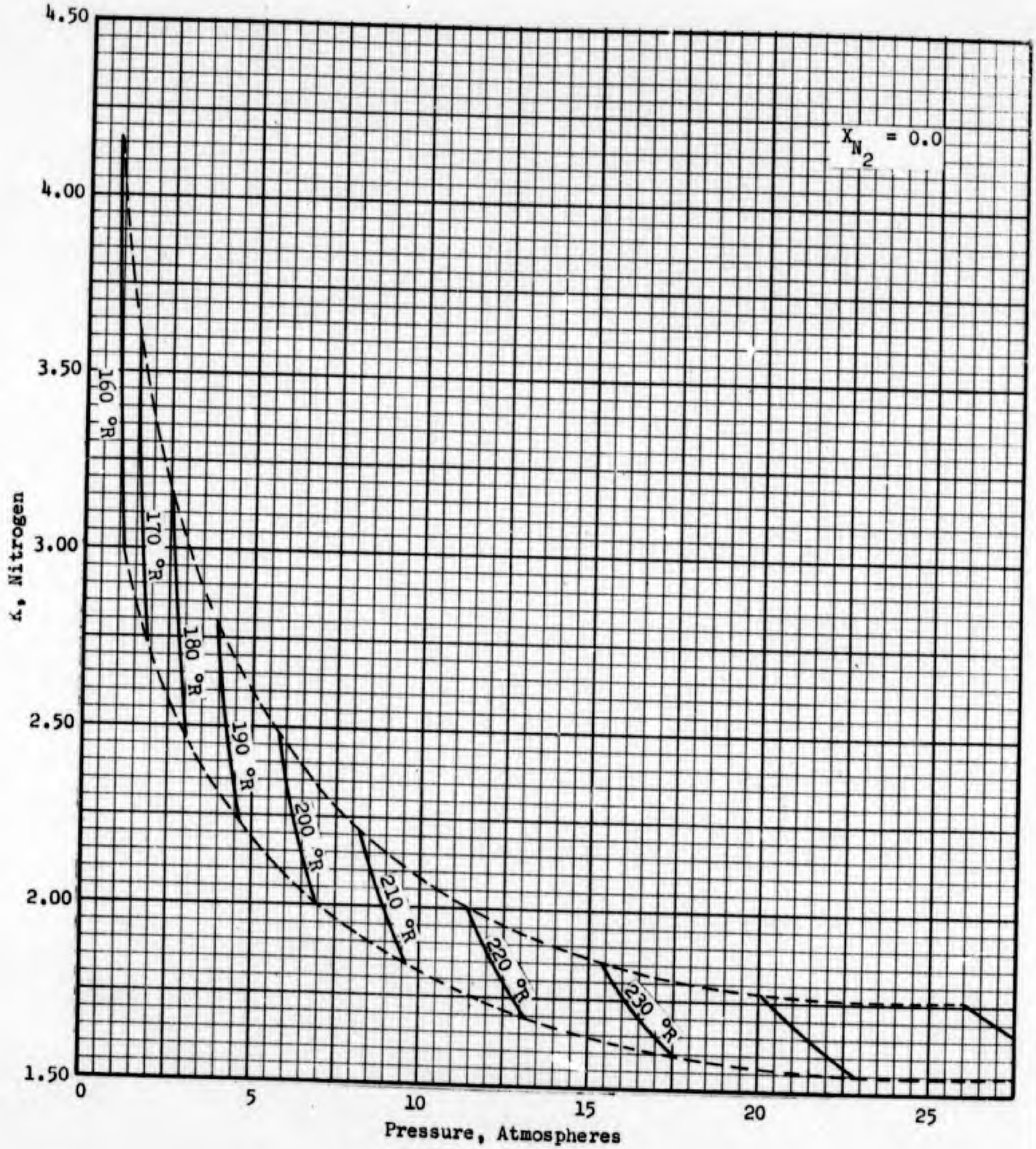


Figure 86. K-Values of Nitrogen.

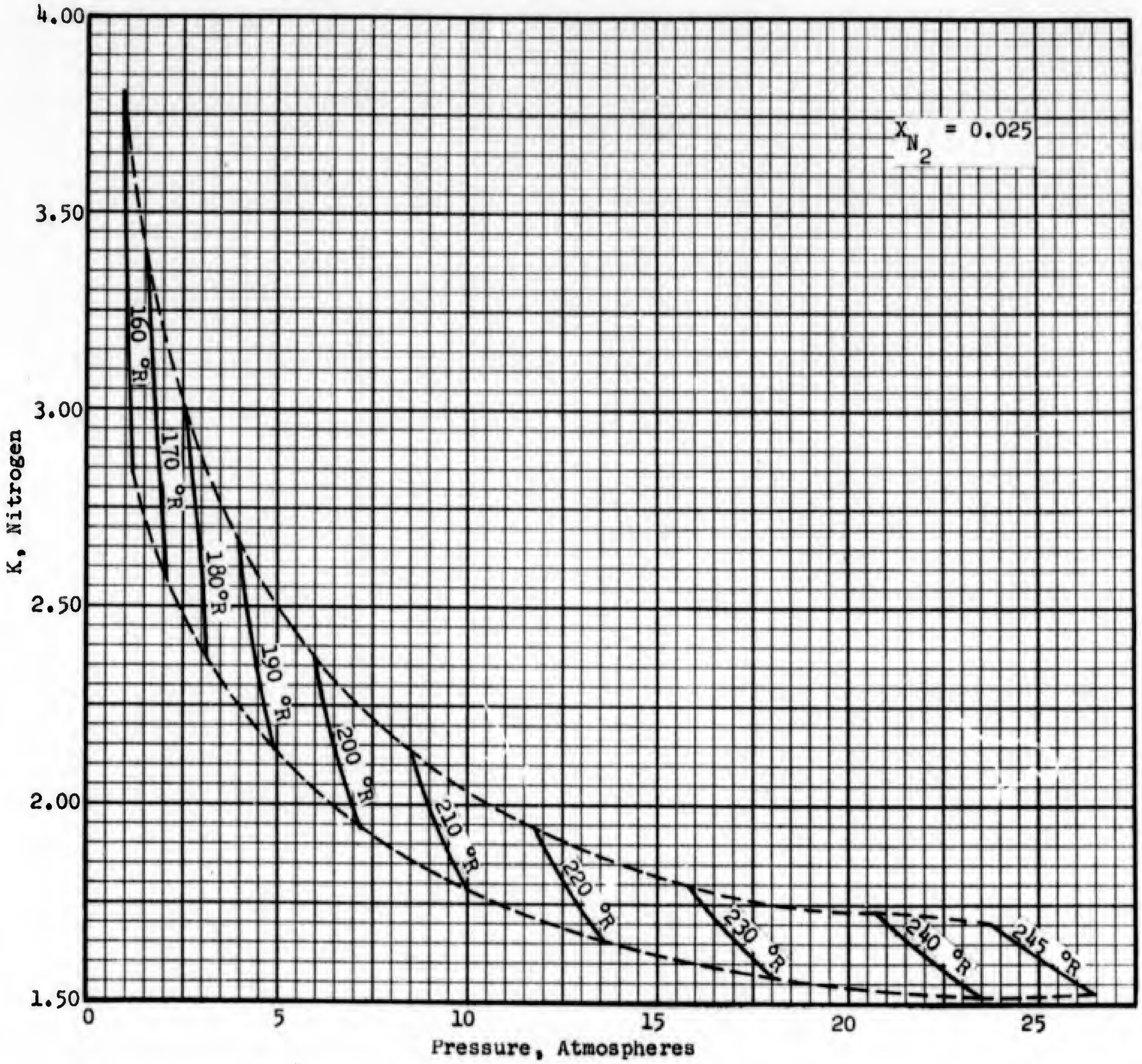


Figure 87. K-Values of Nitrogen.

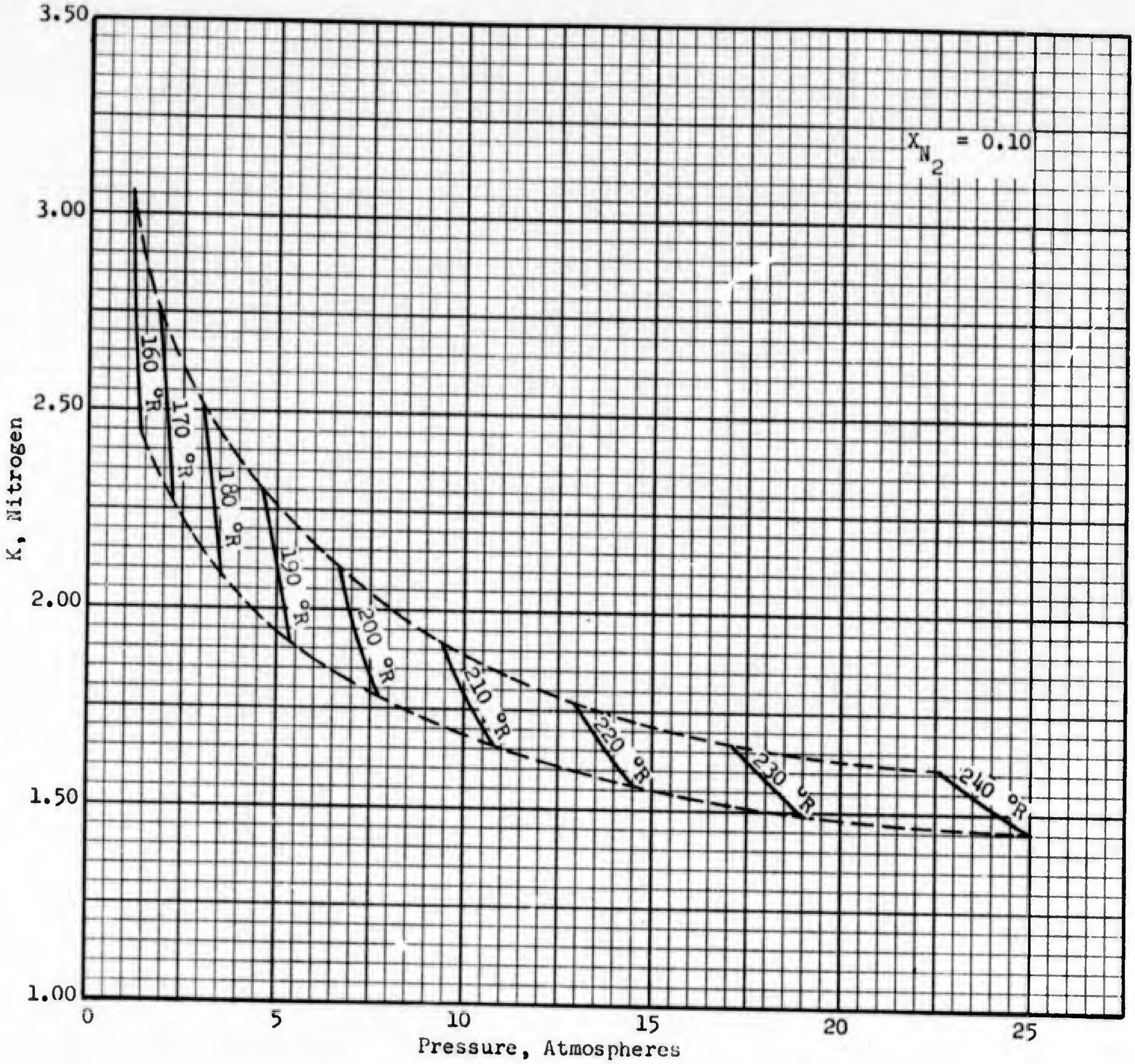


Figure 88. K-Values of Nitrogen.

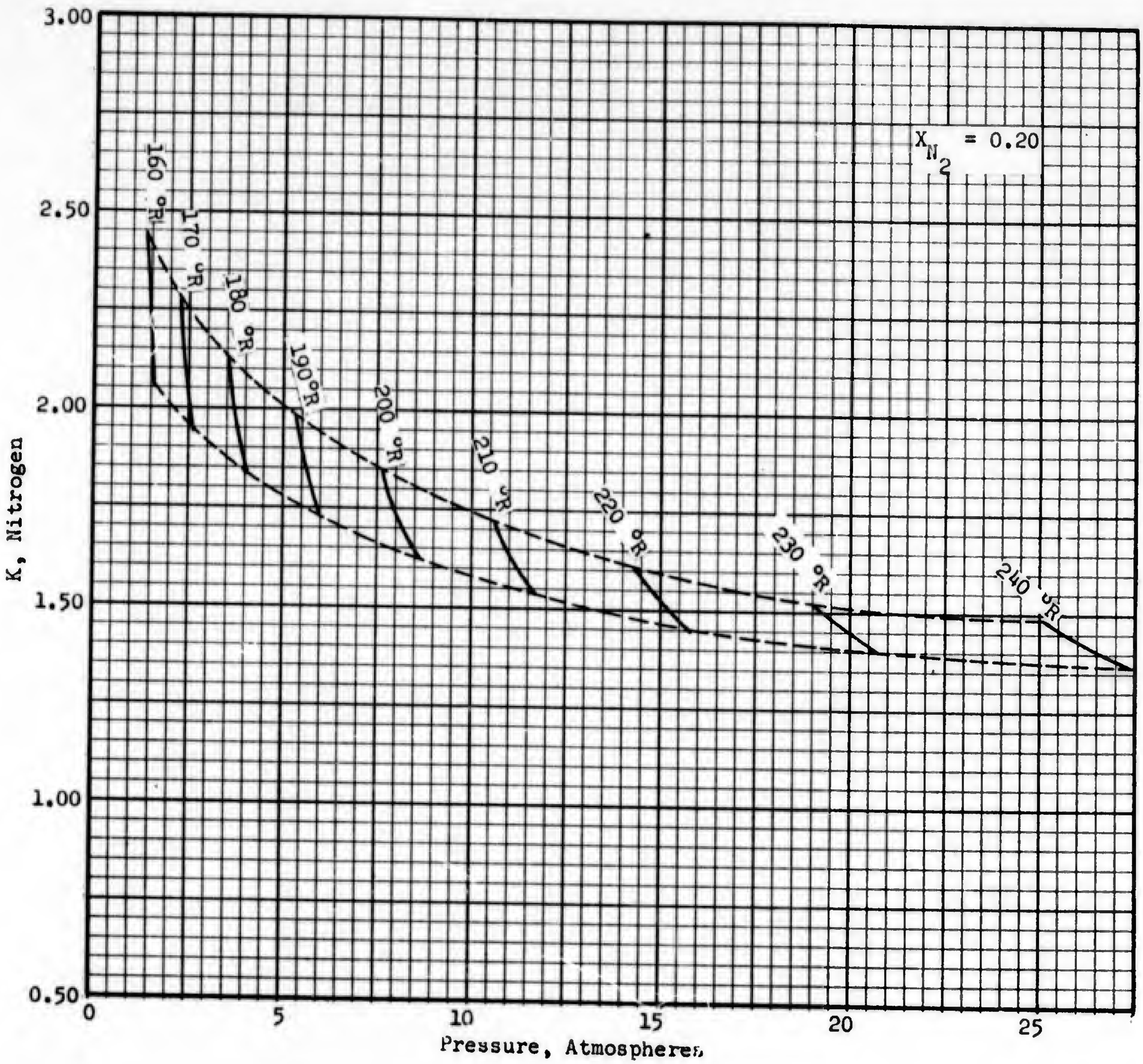
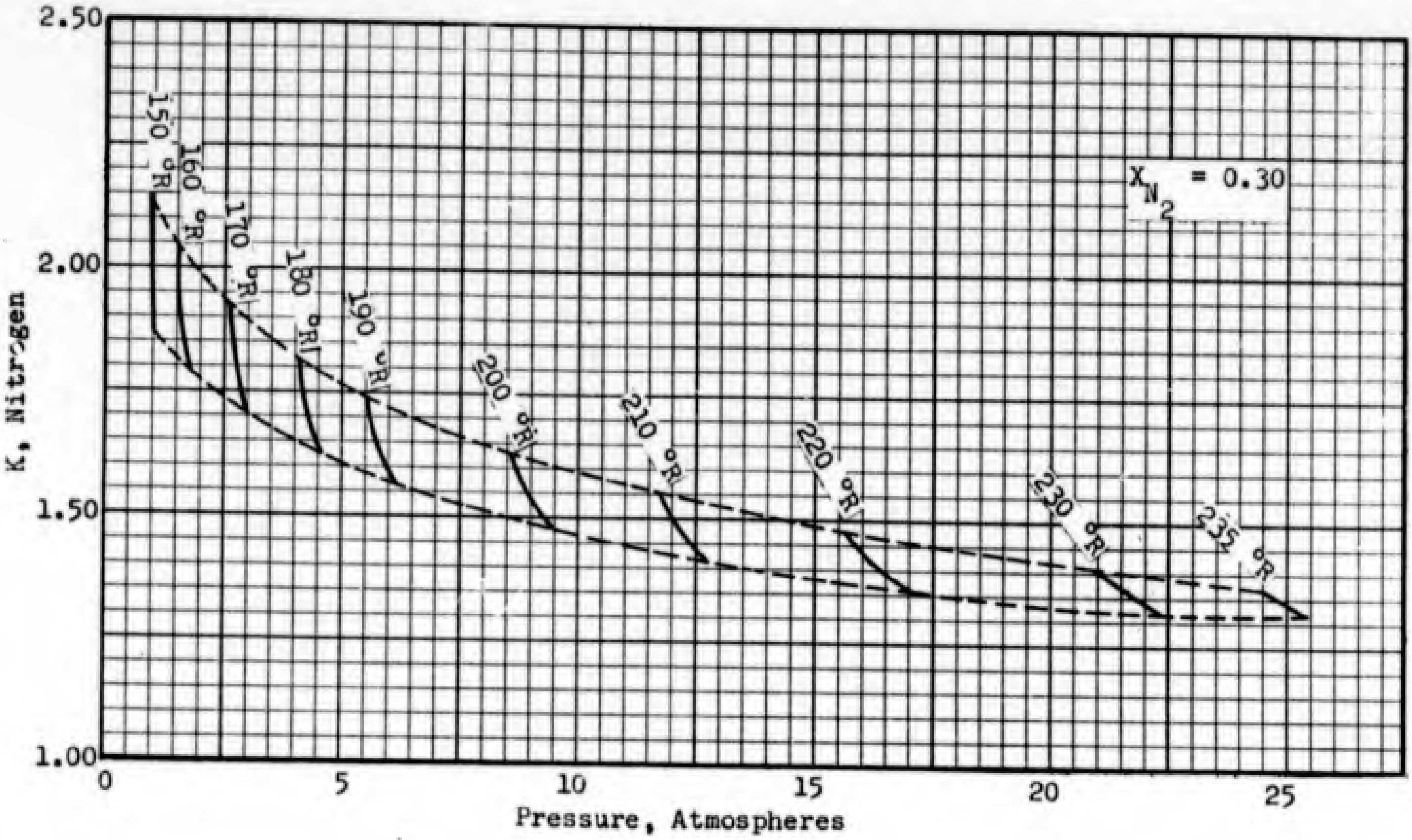


Figure 89. K-Values of Nitrogen.



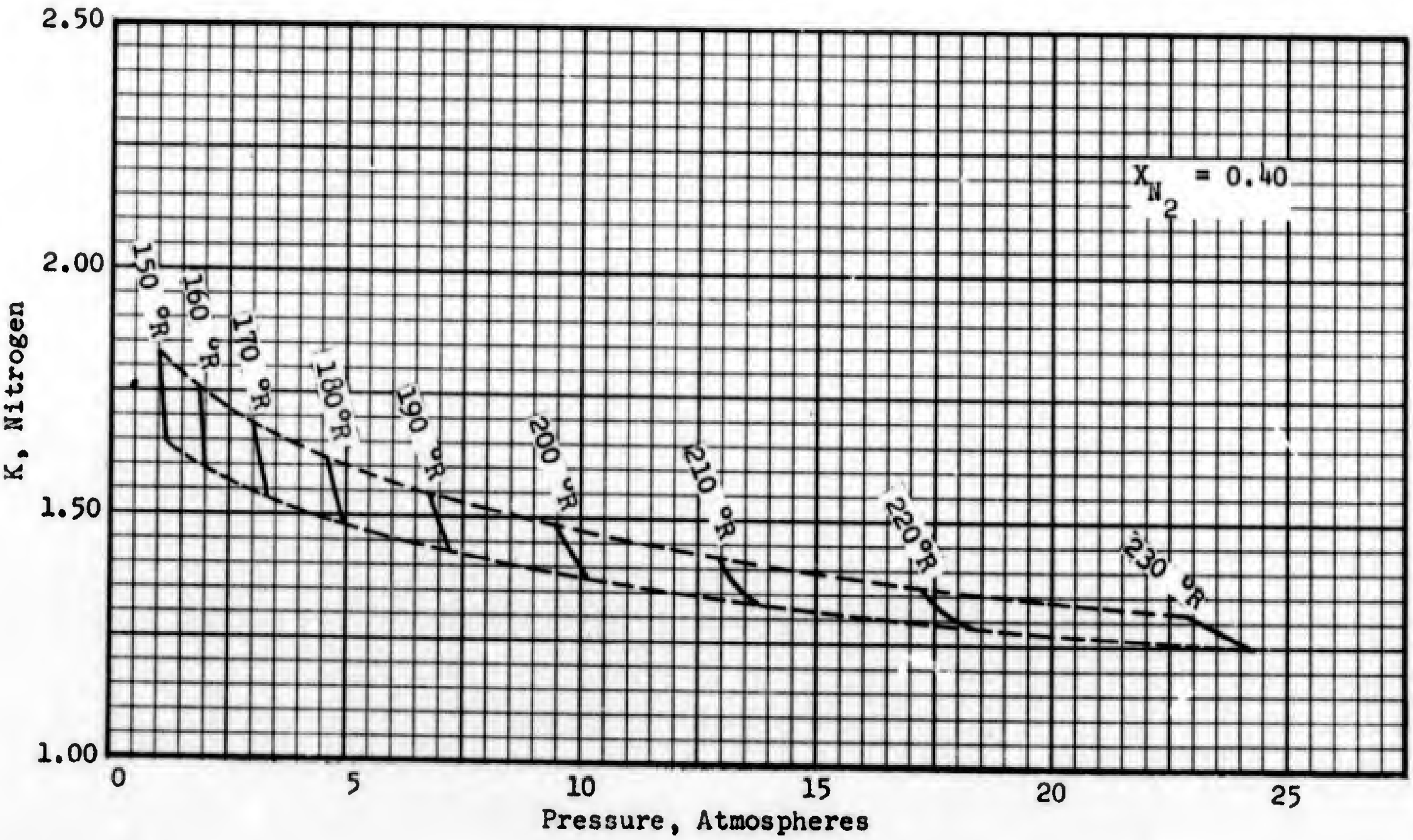
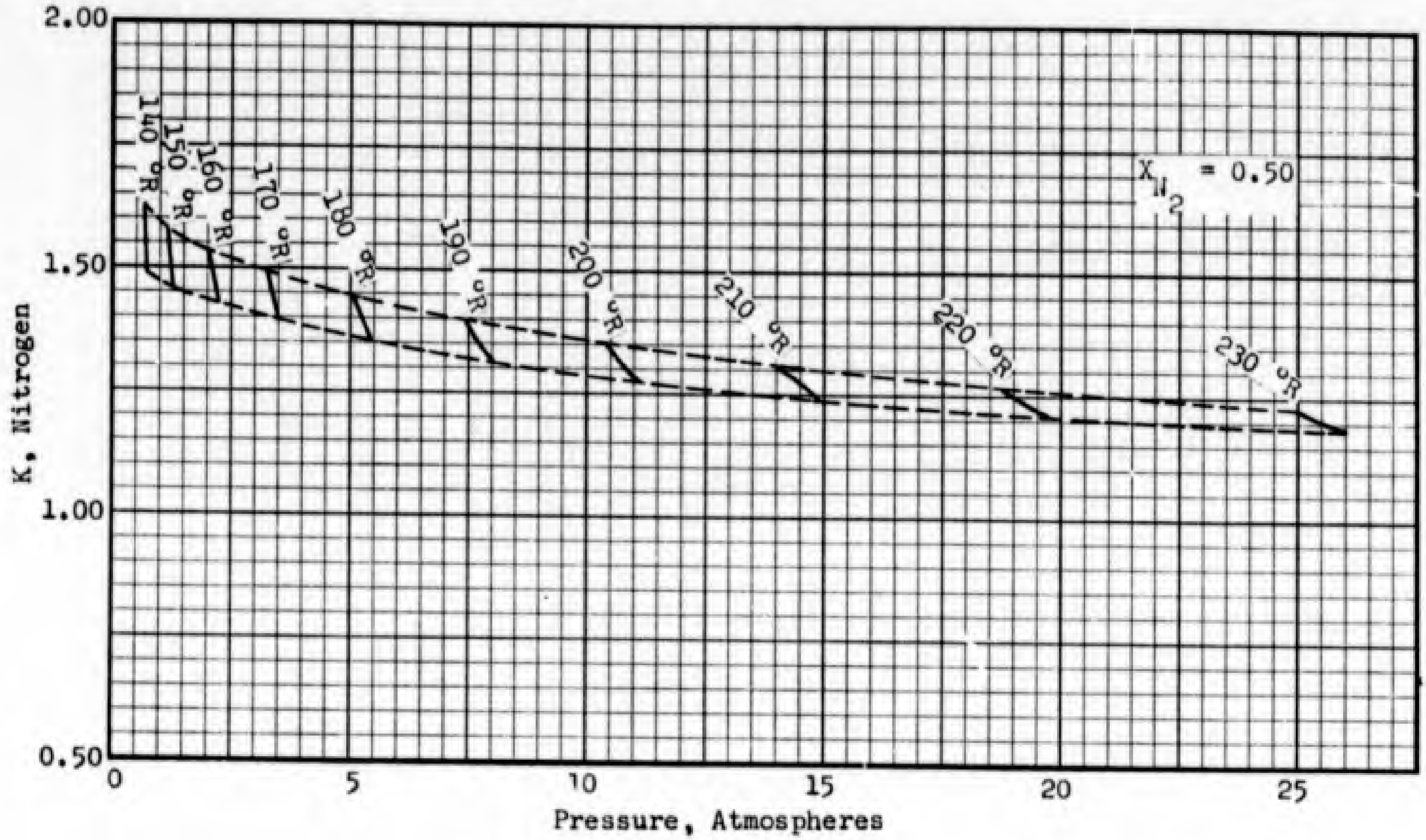


Figure 90. K-Values of Nitrogen.



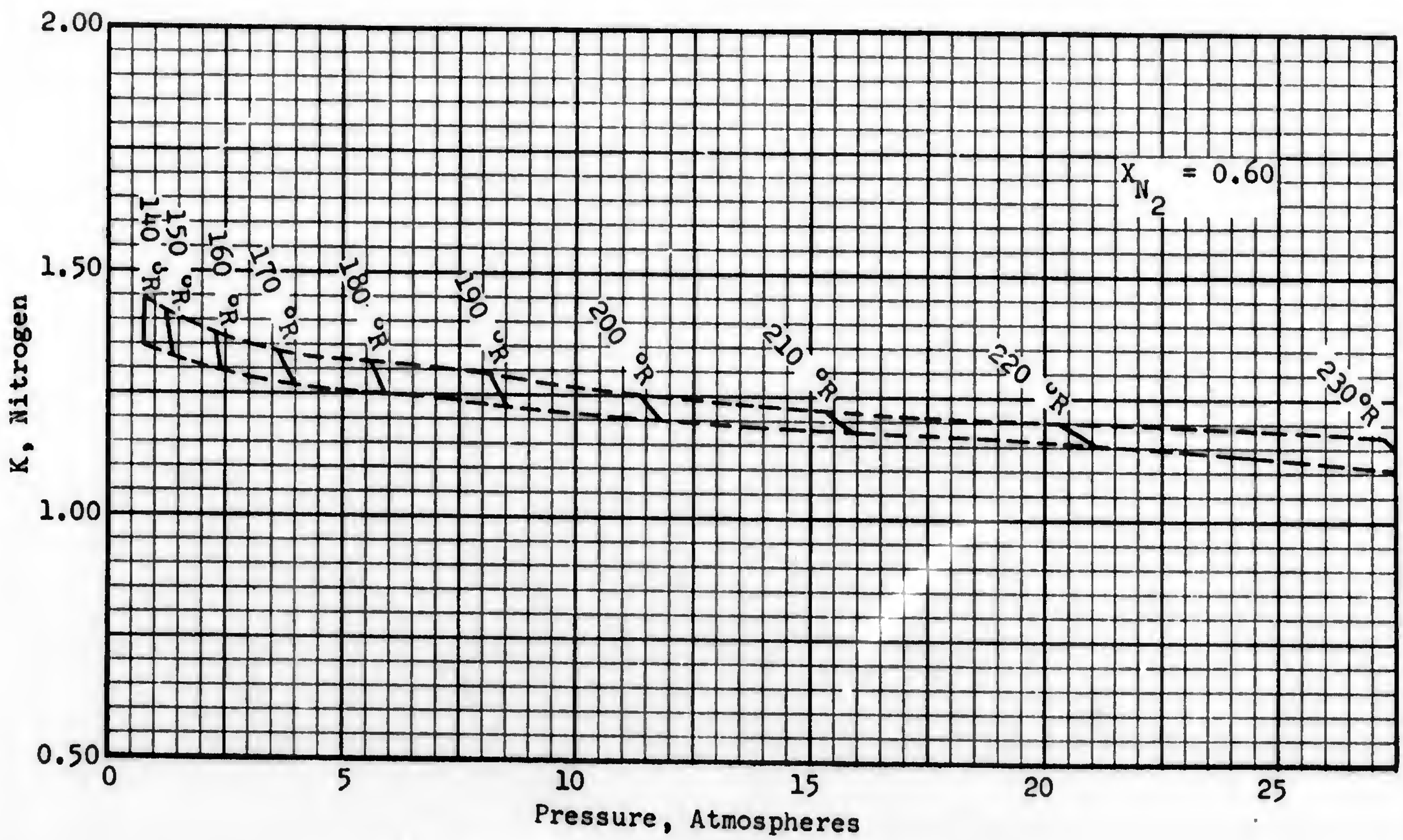
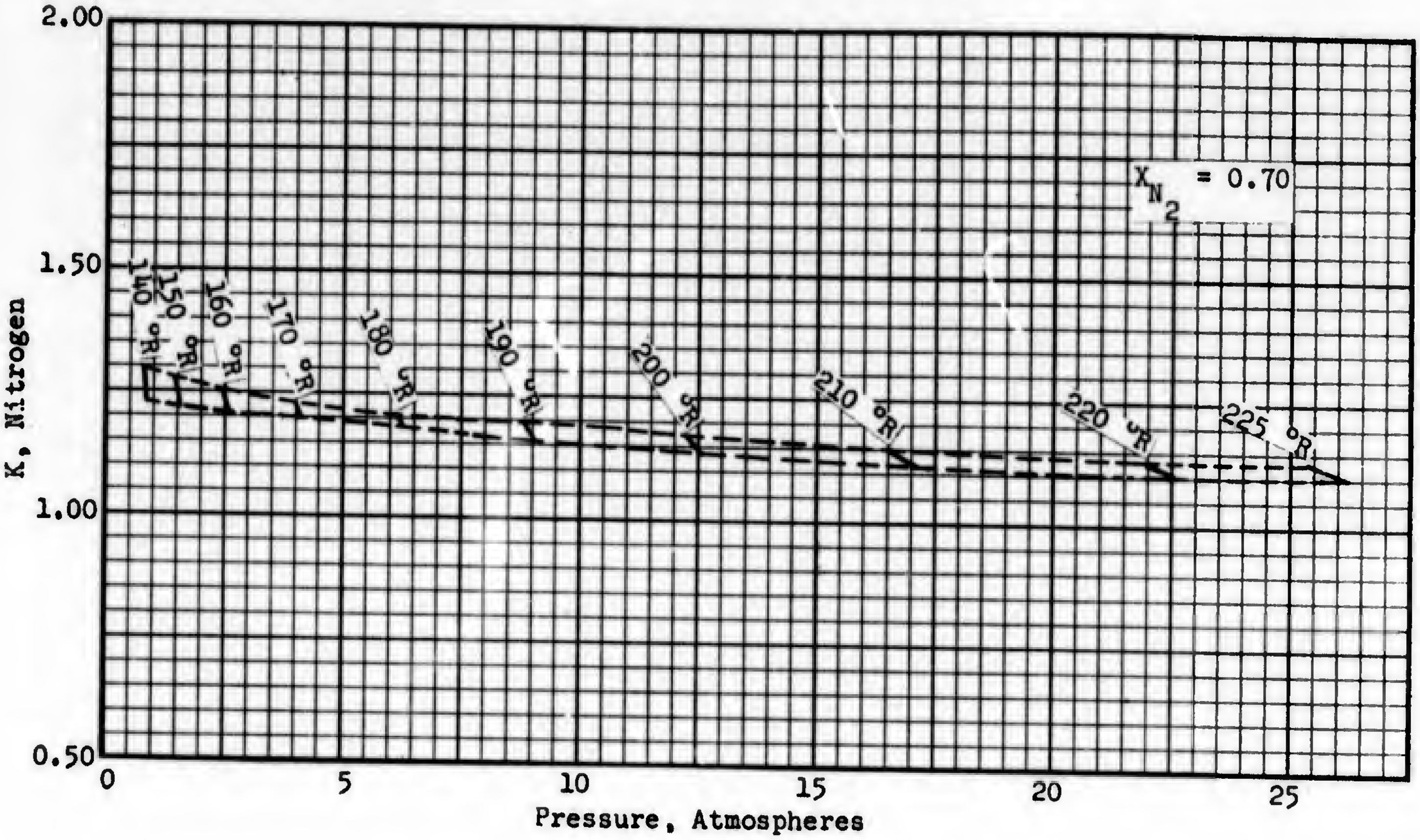


Figure 91. K-Values of Nitrogen.



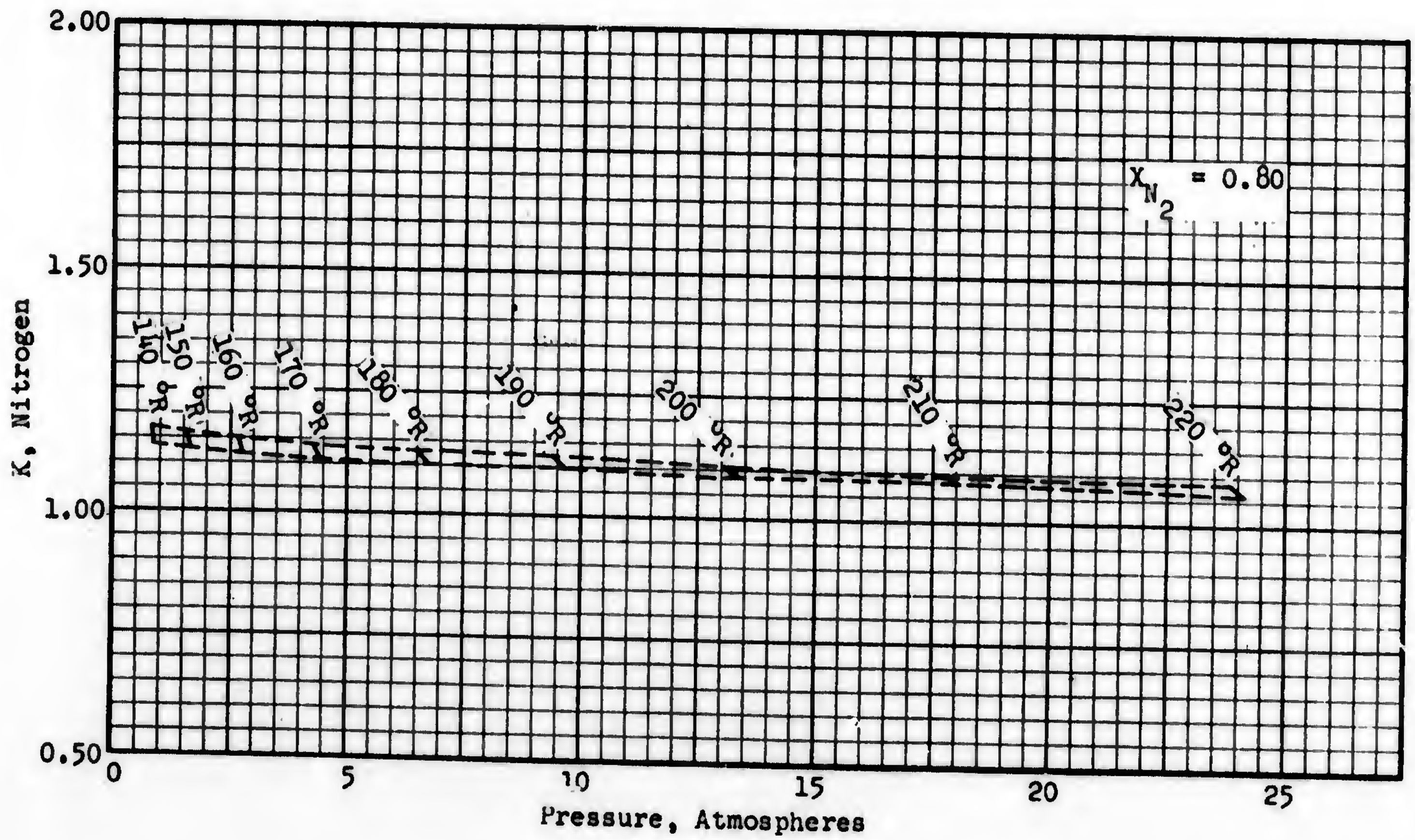
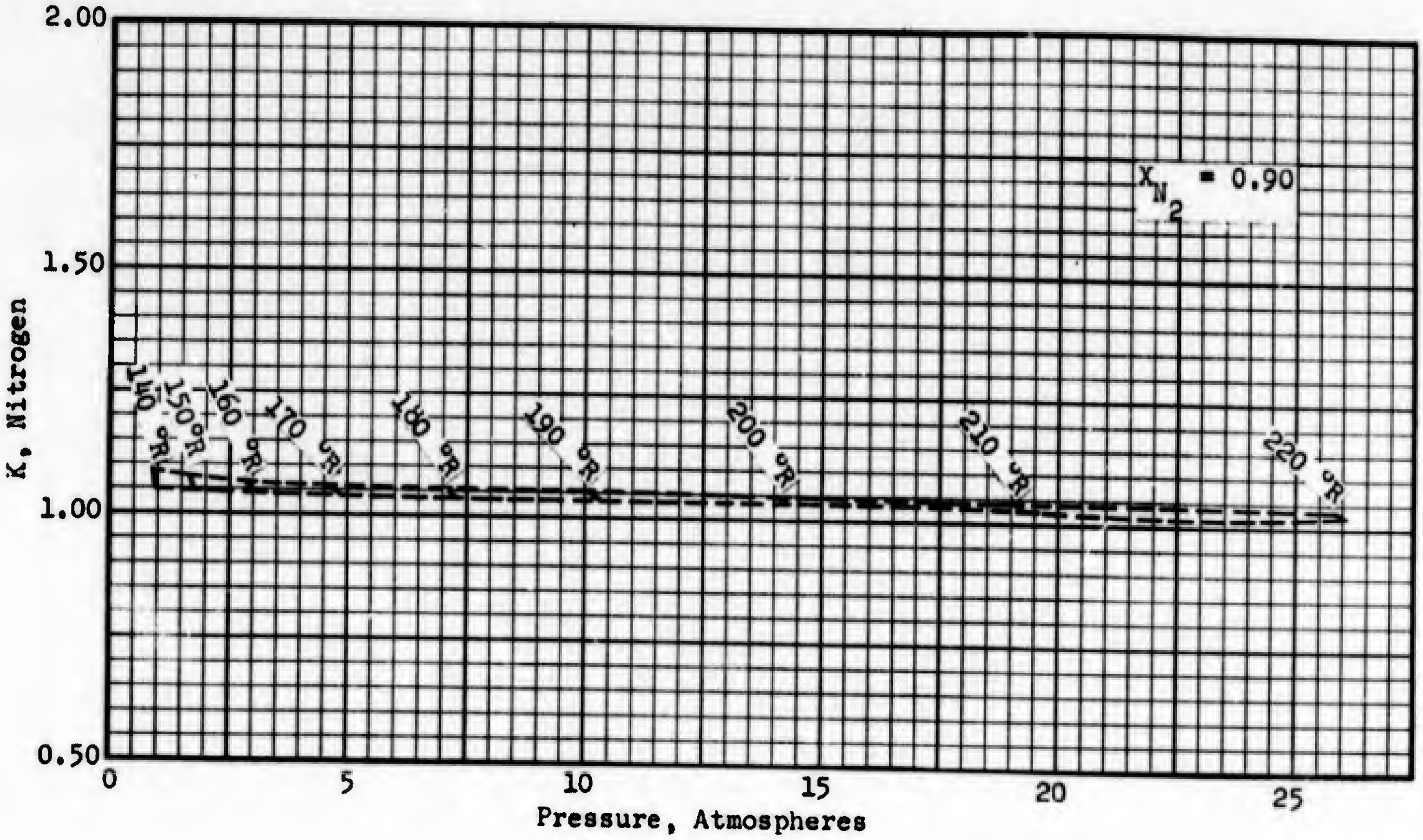


Figure 92. K-Values of Nitrogen.



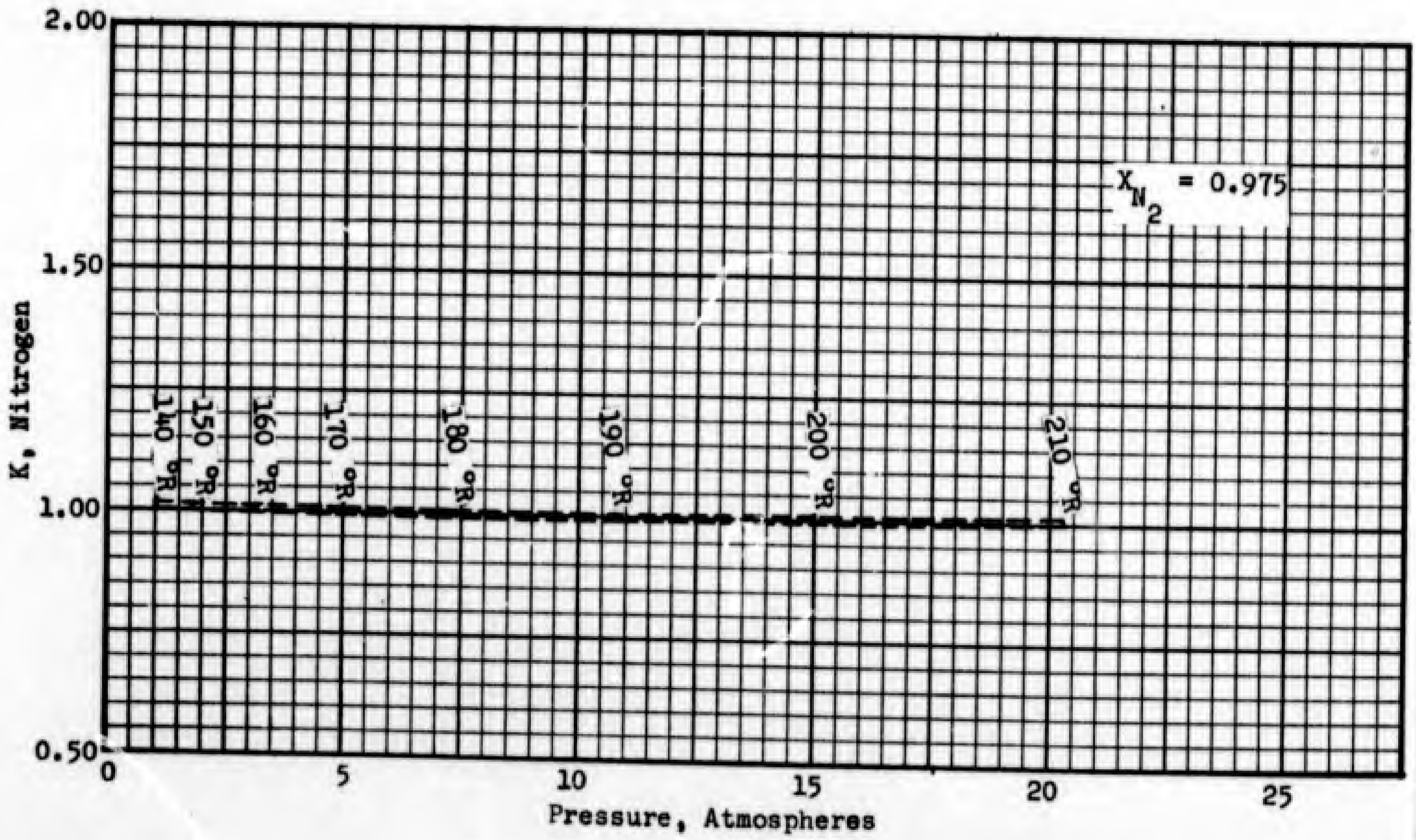


Figure 93. K-Values of Nitrogen.

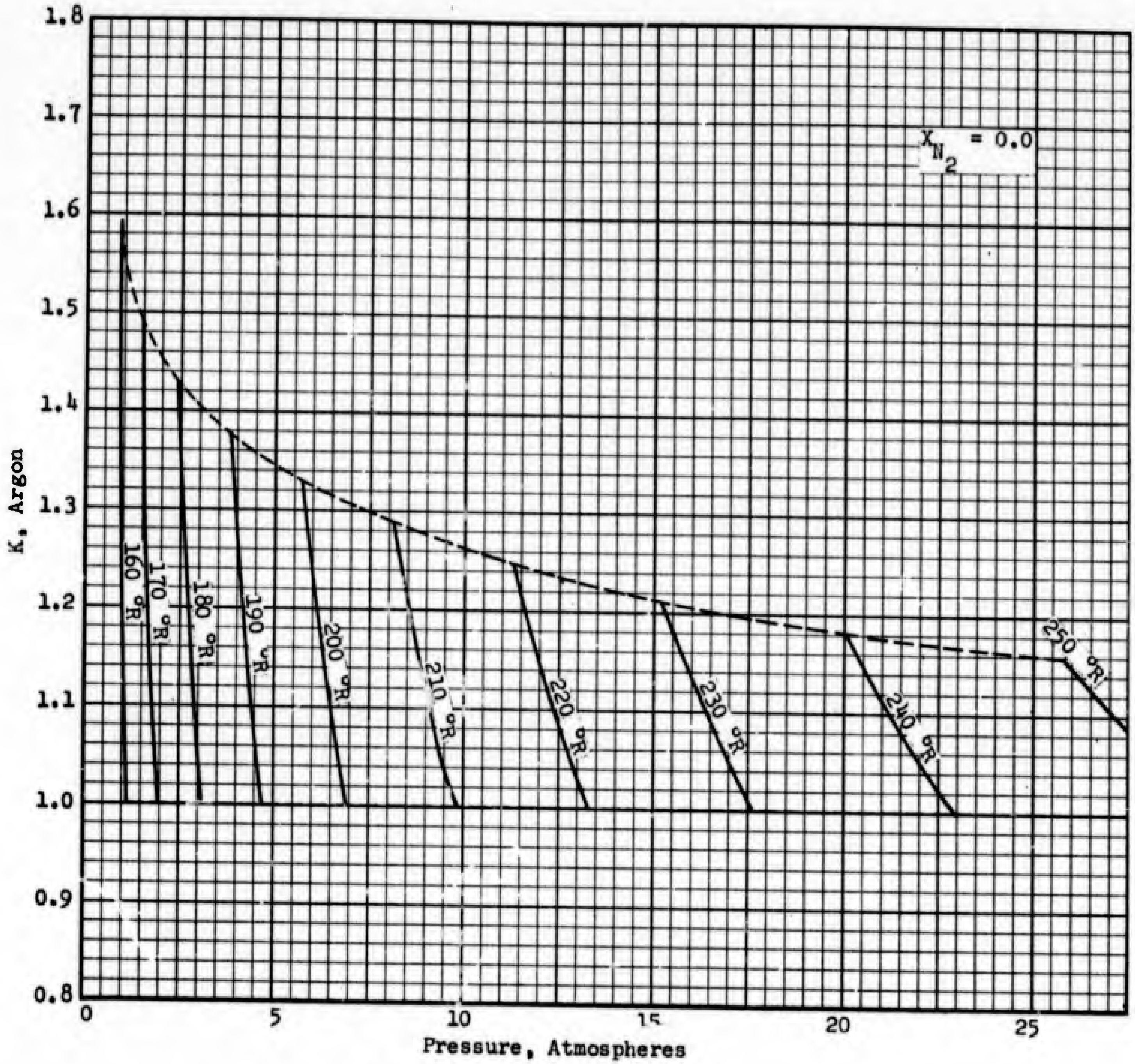


Figure 94. K-Values of Argon.

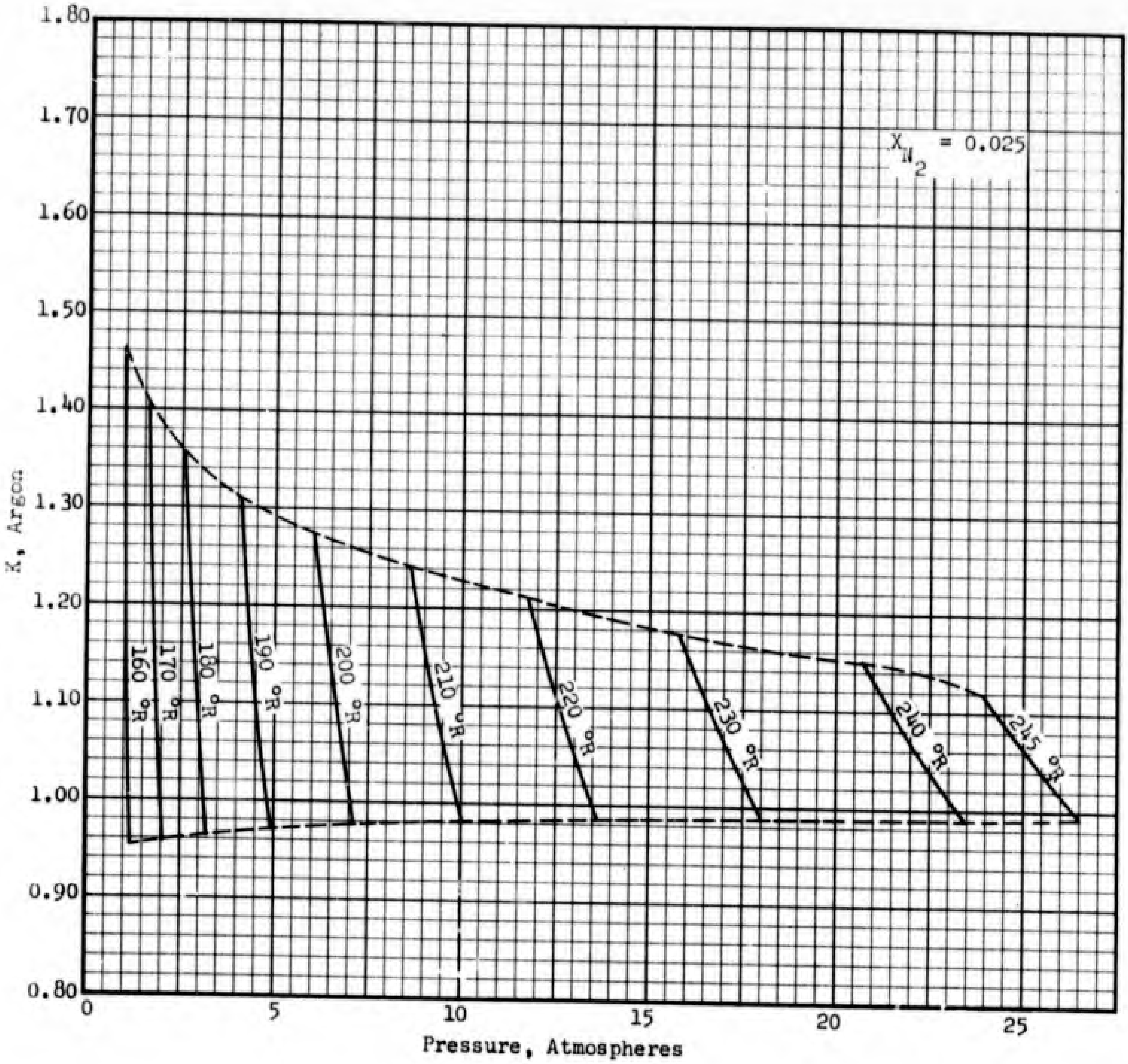
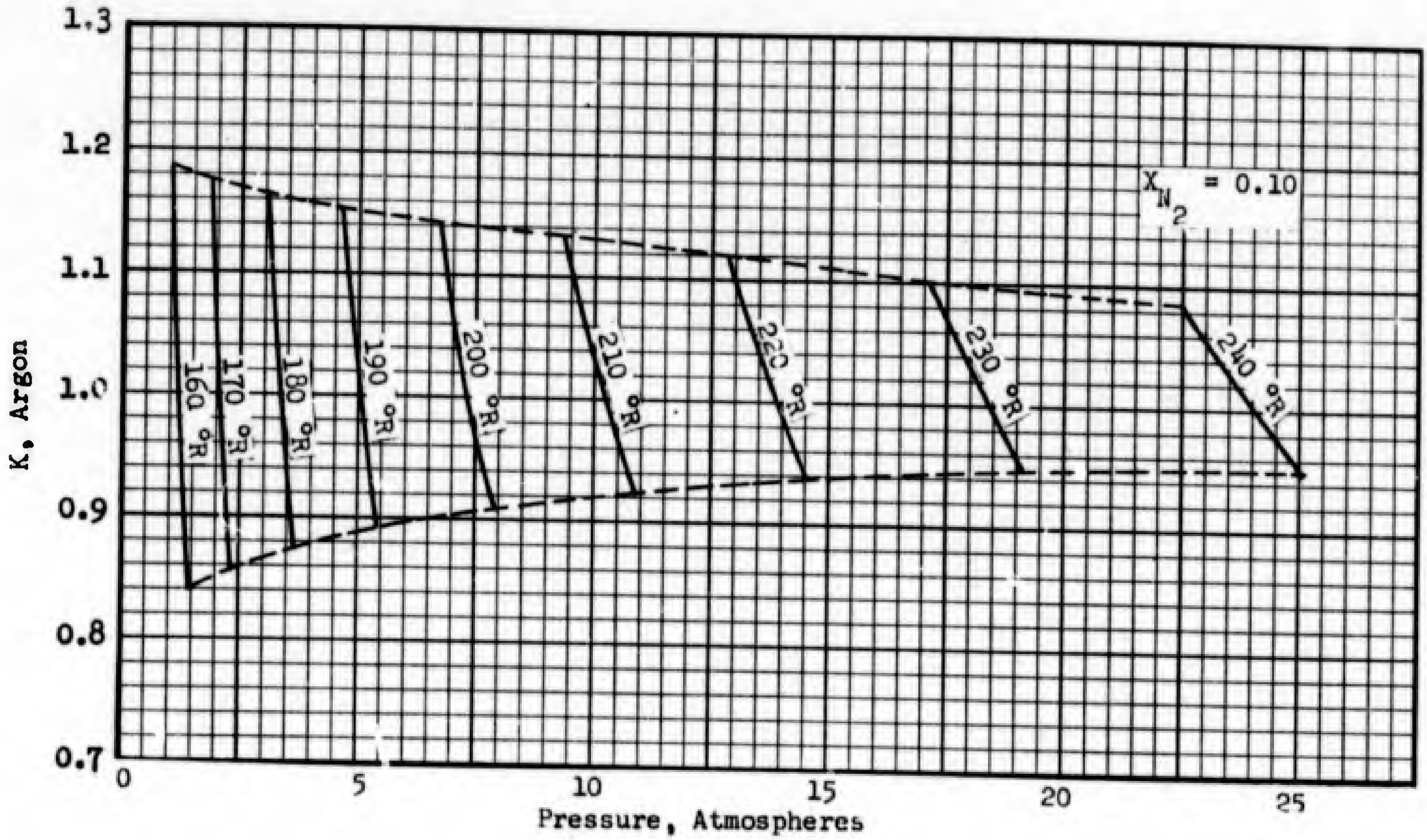


Figure 95. K-Values of Argon



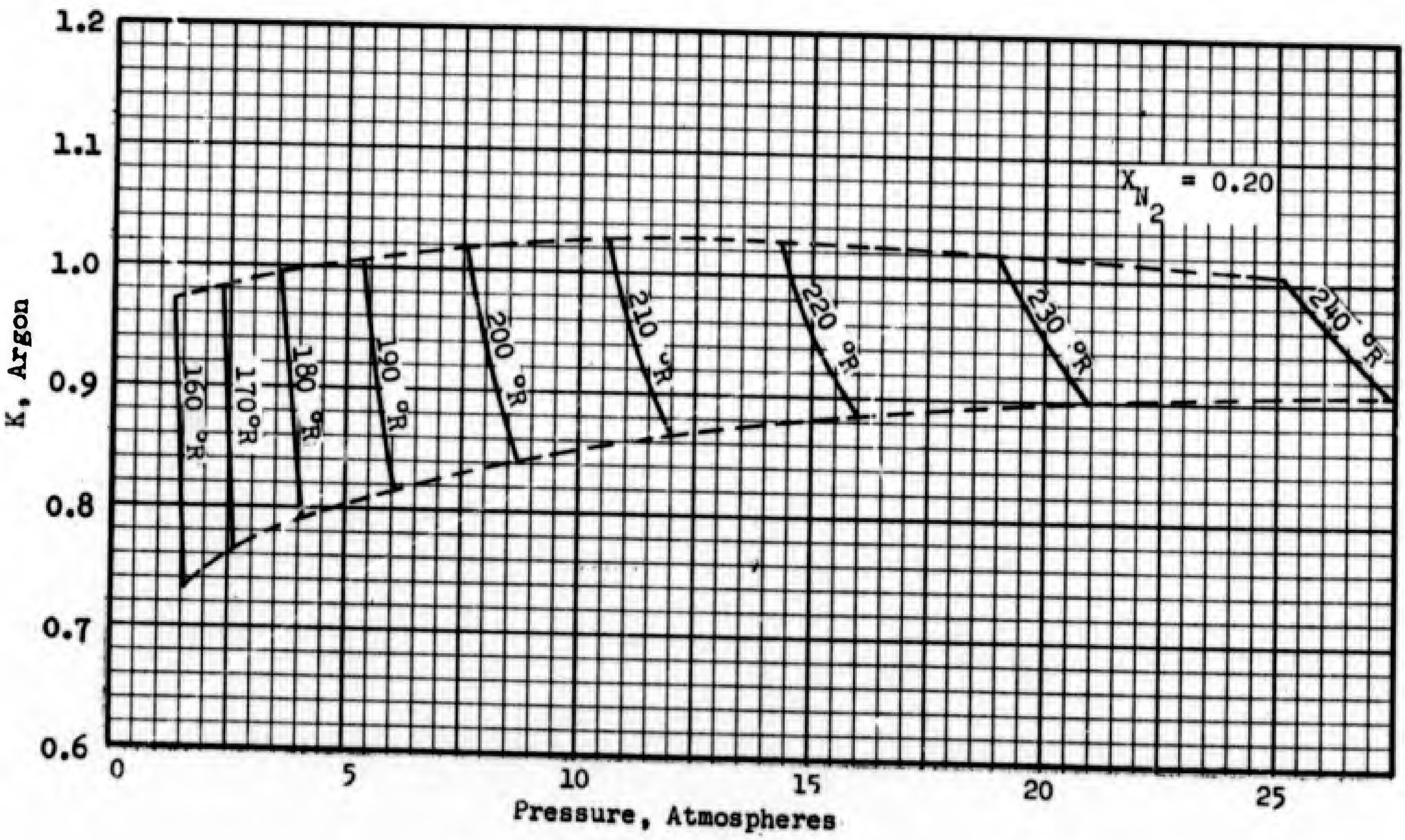


Figure 96. K-Values of Argon.

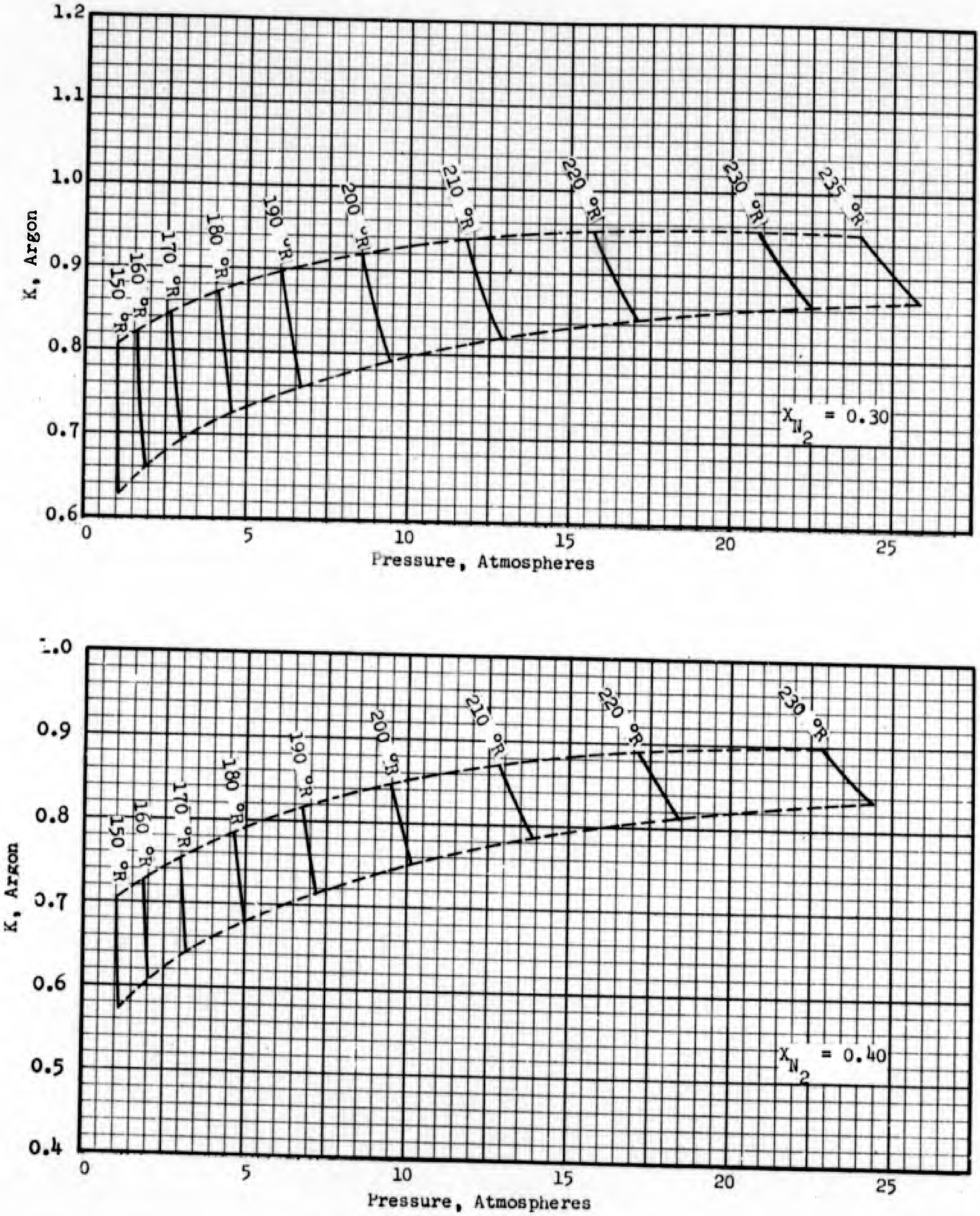
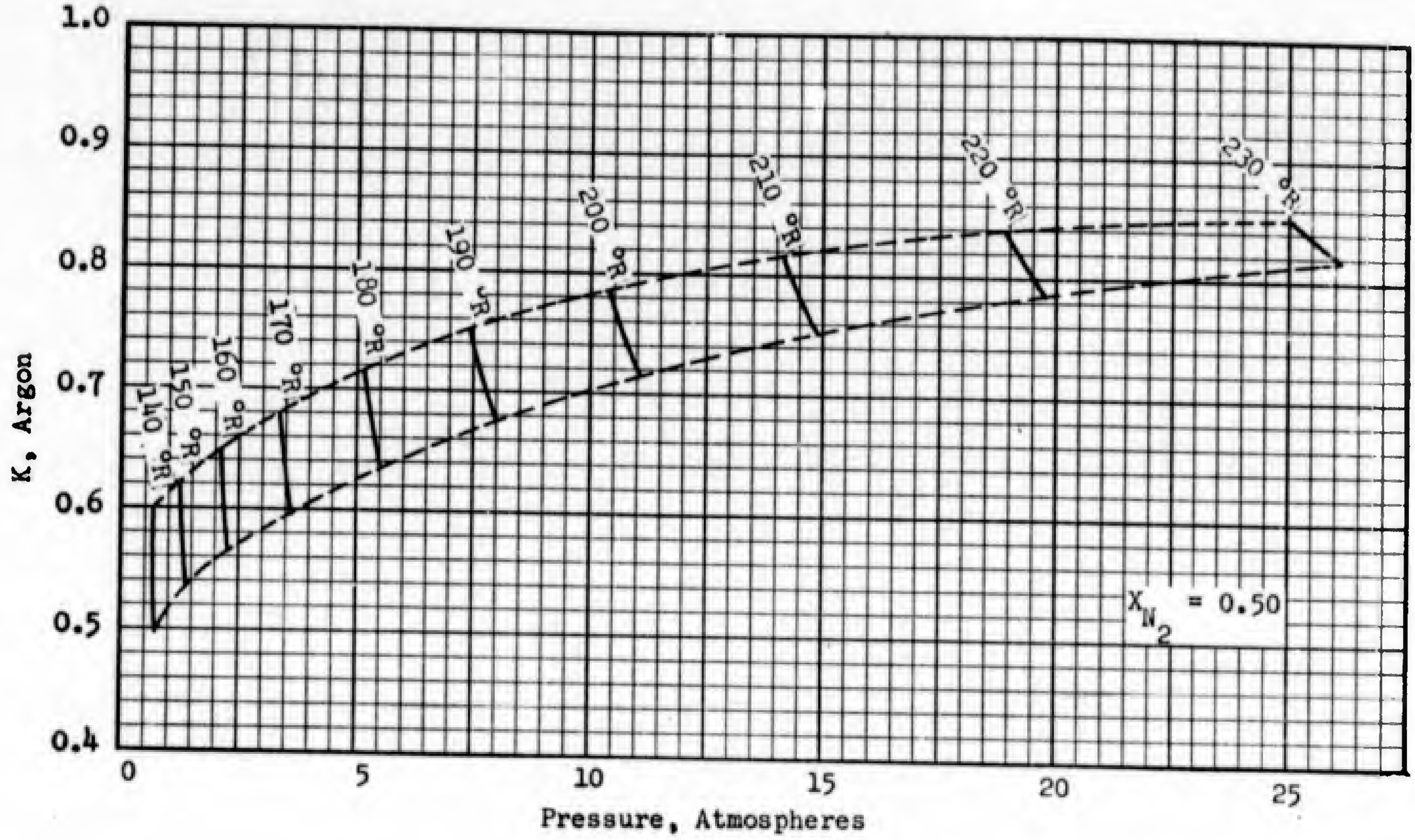


Figure 97. K-Values of Argon.



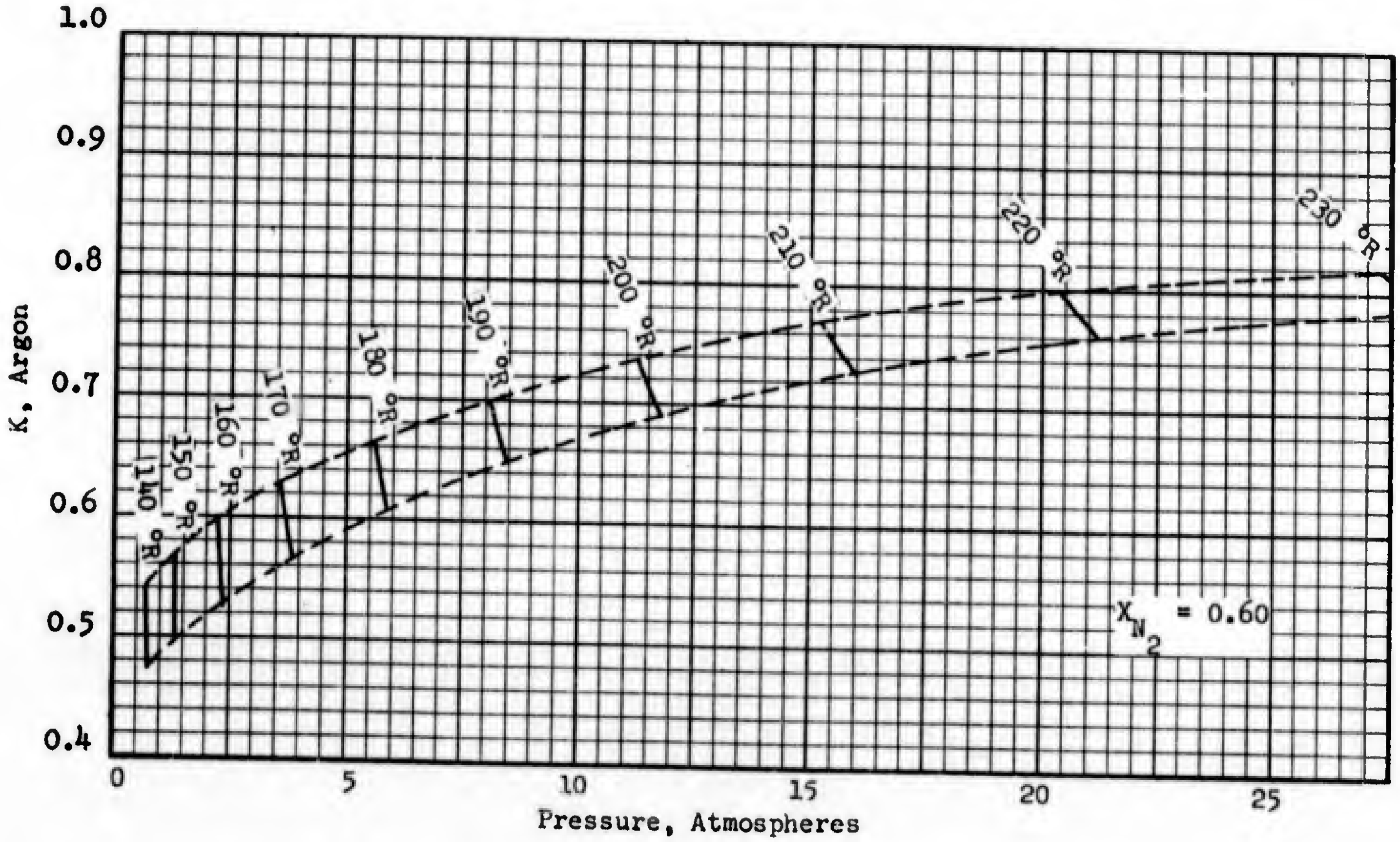


Figure 98. K-Values of Argon.

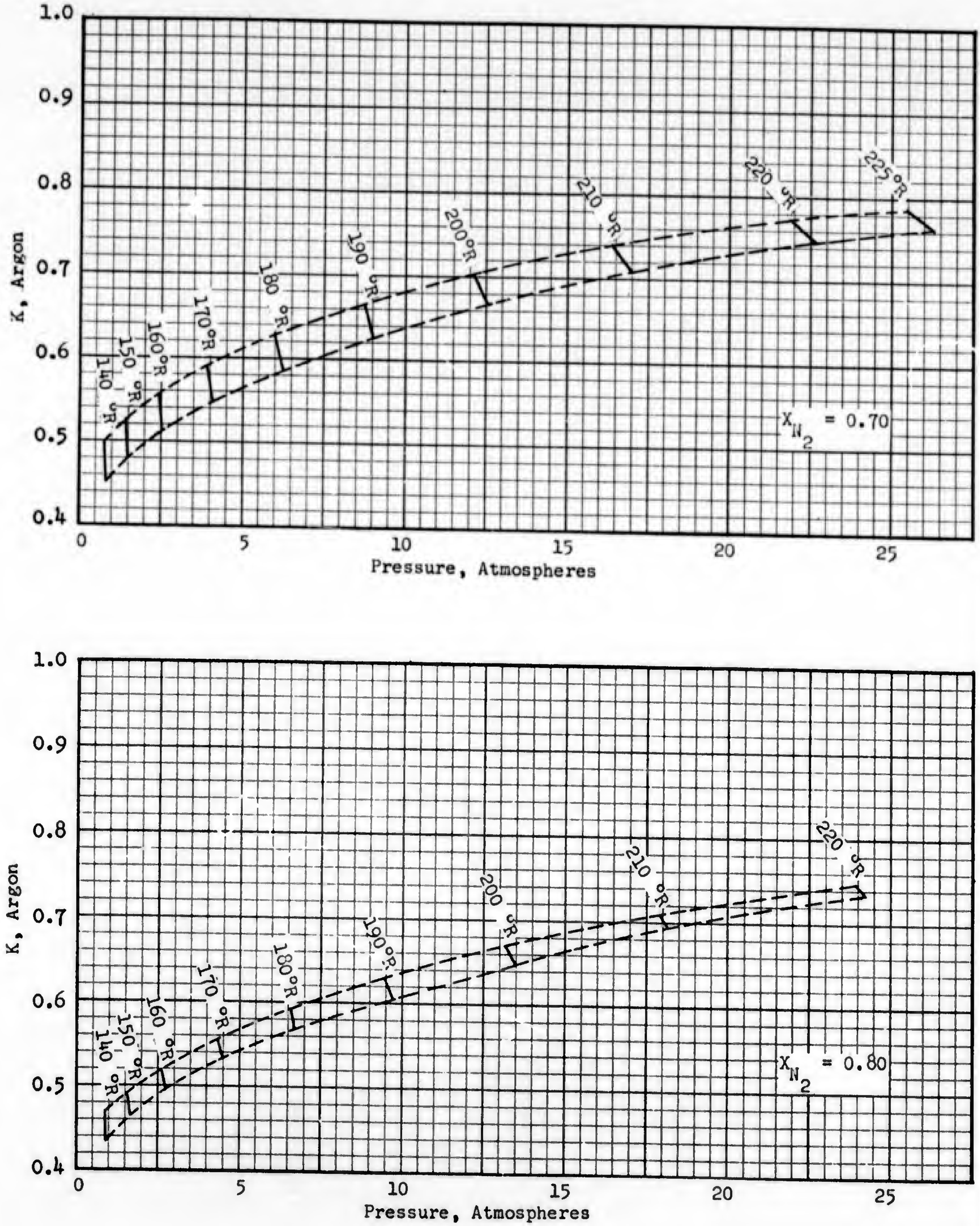
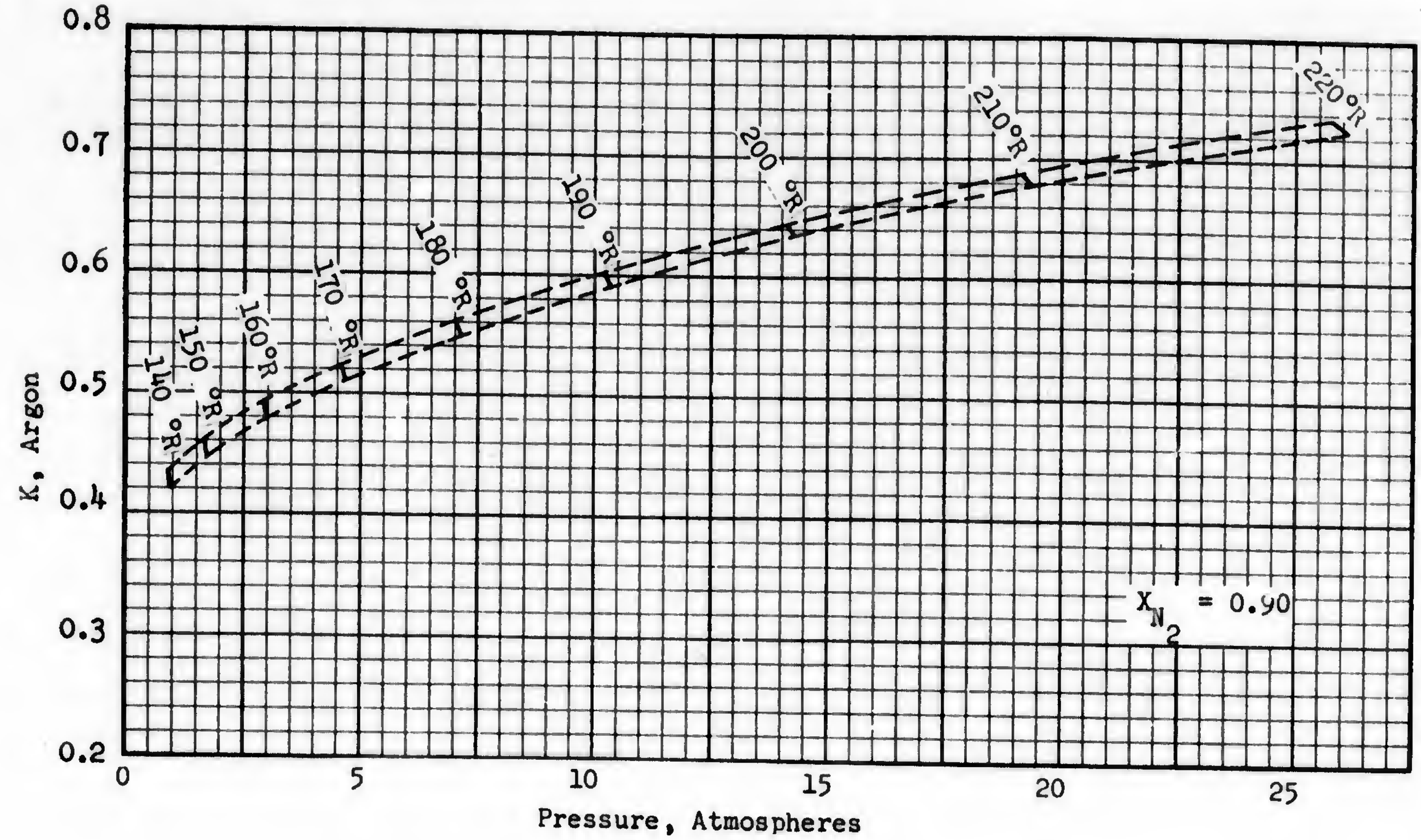


Figure 99. K-Values of Argon.



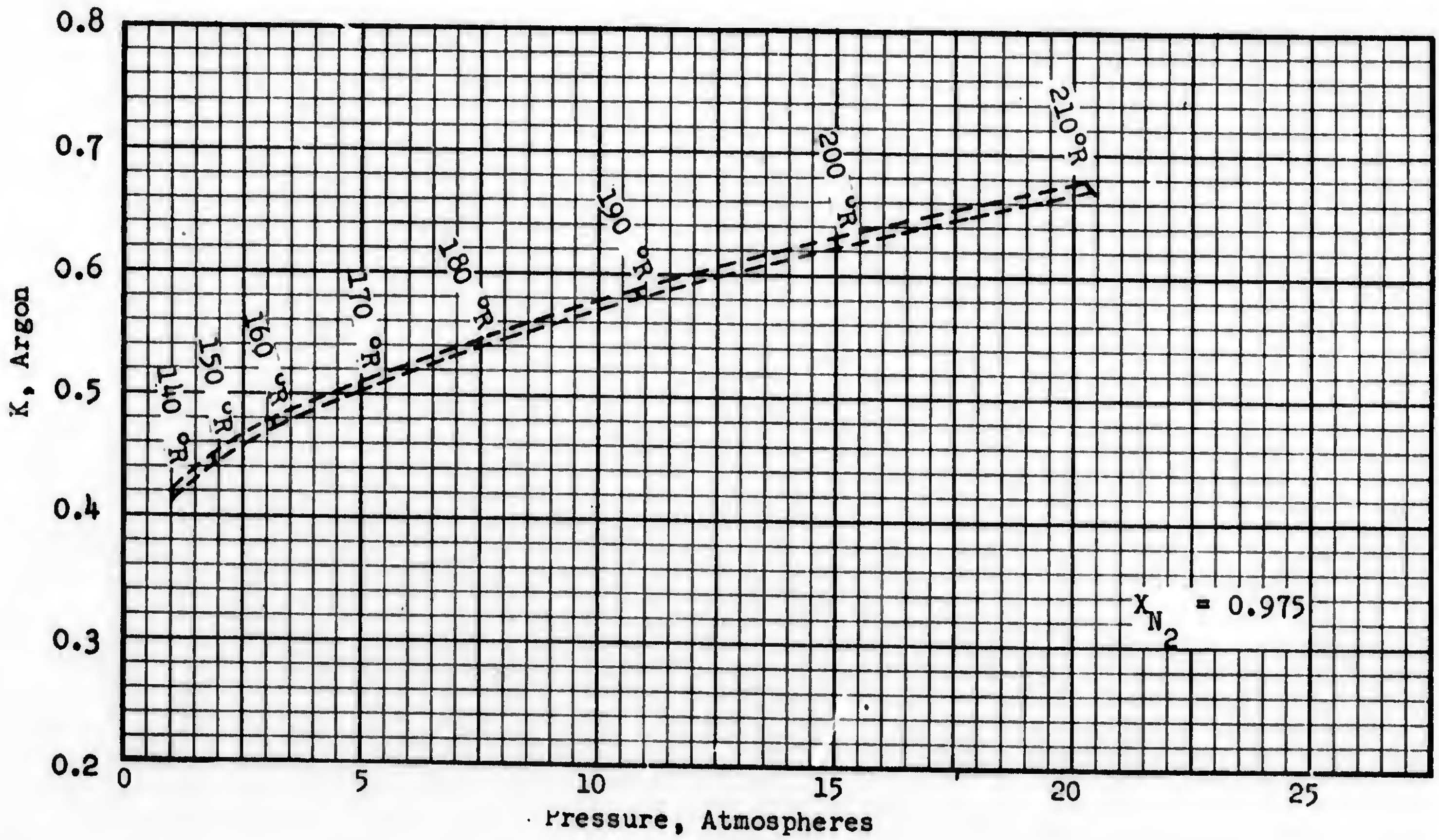
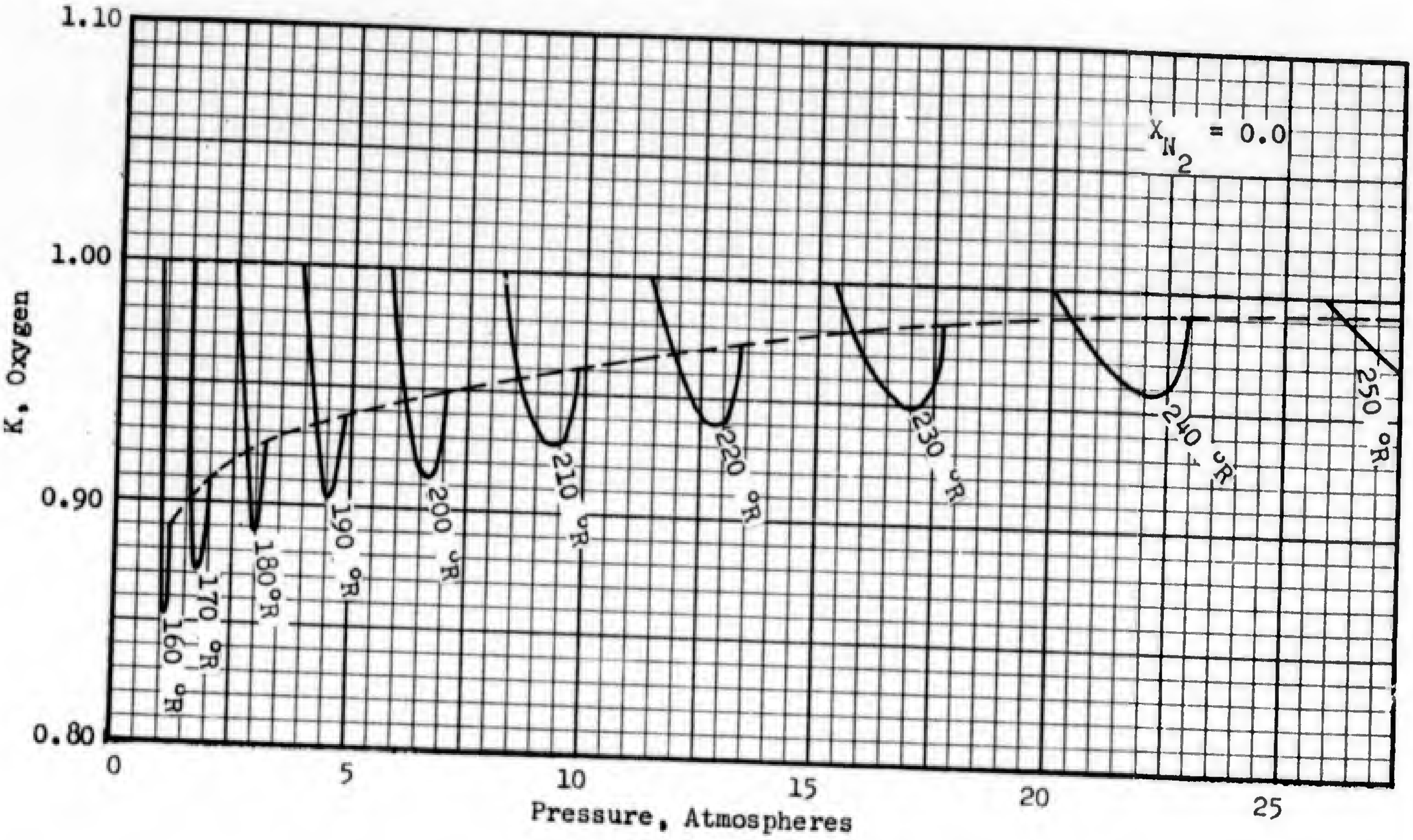


Figure 100. K-Values of Argon.



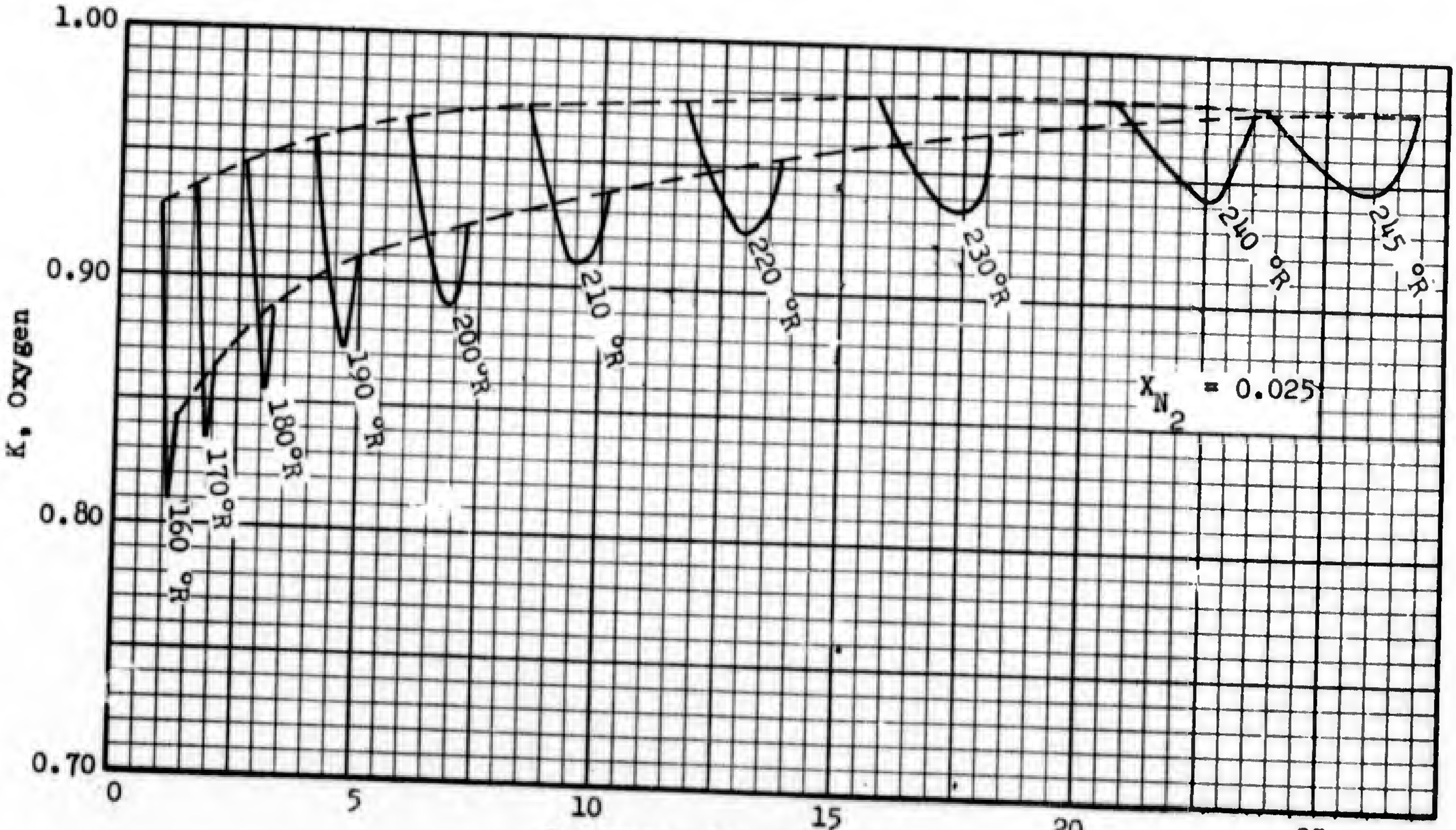


Figure 101. K-Values of Oxygen.

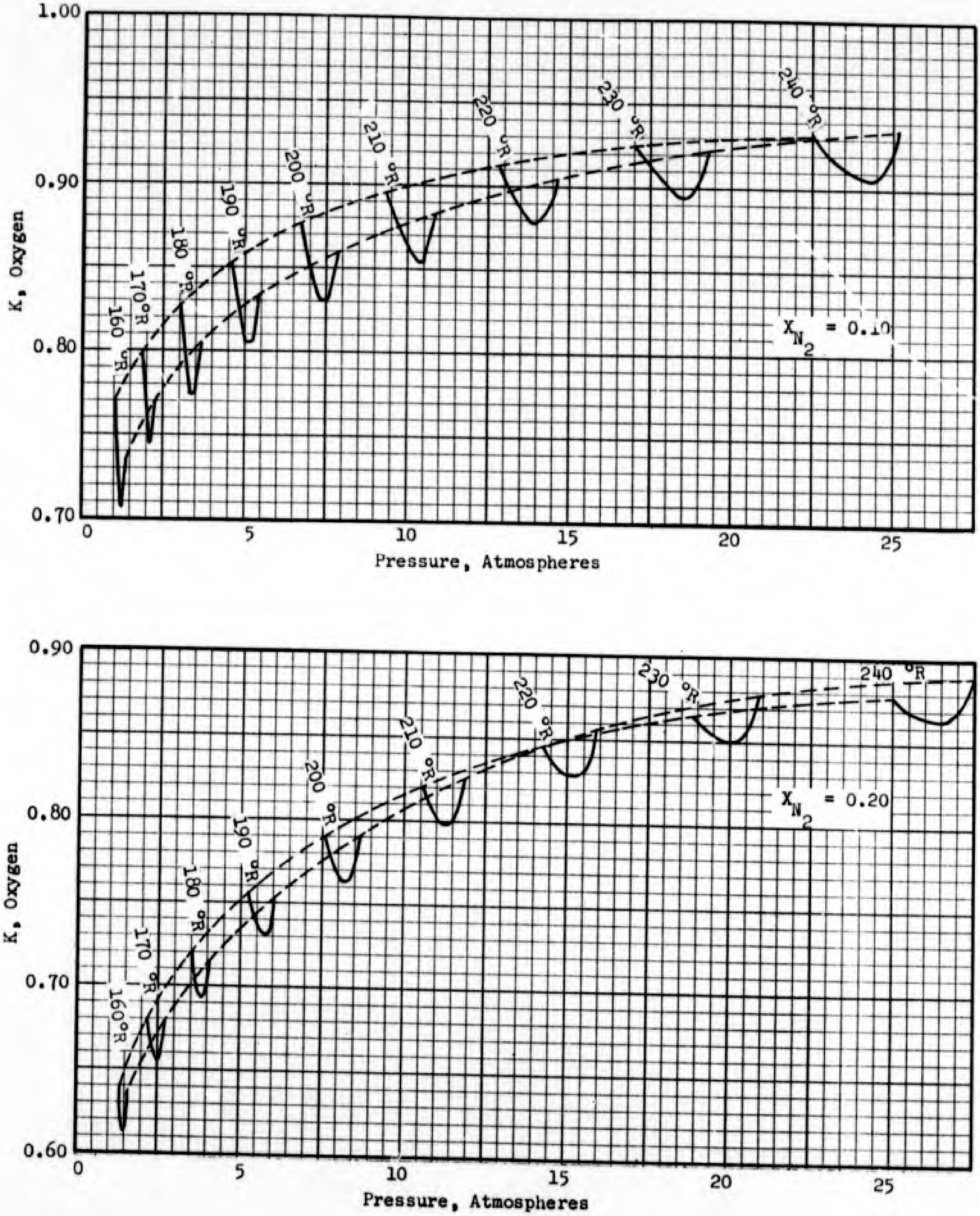


Figure 102. K-Values of Oxygen.

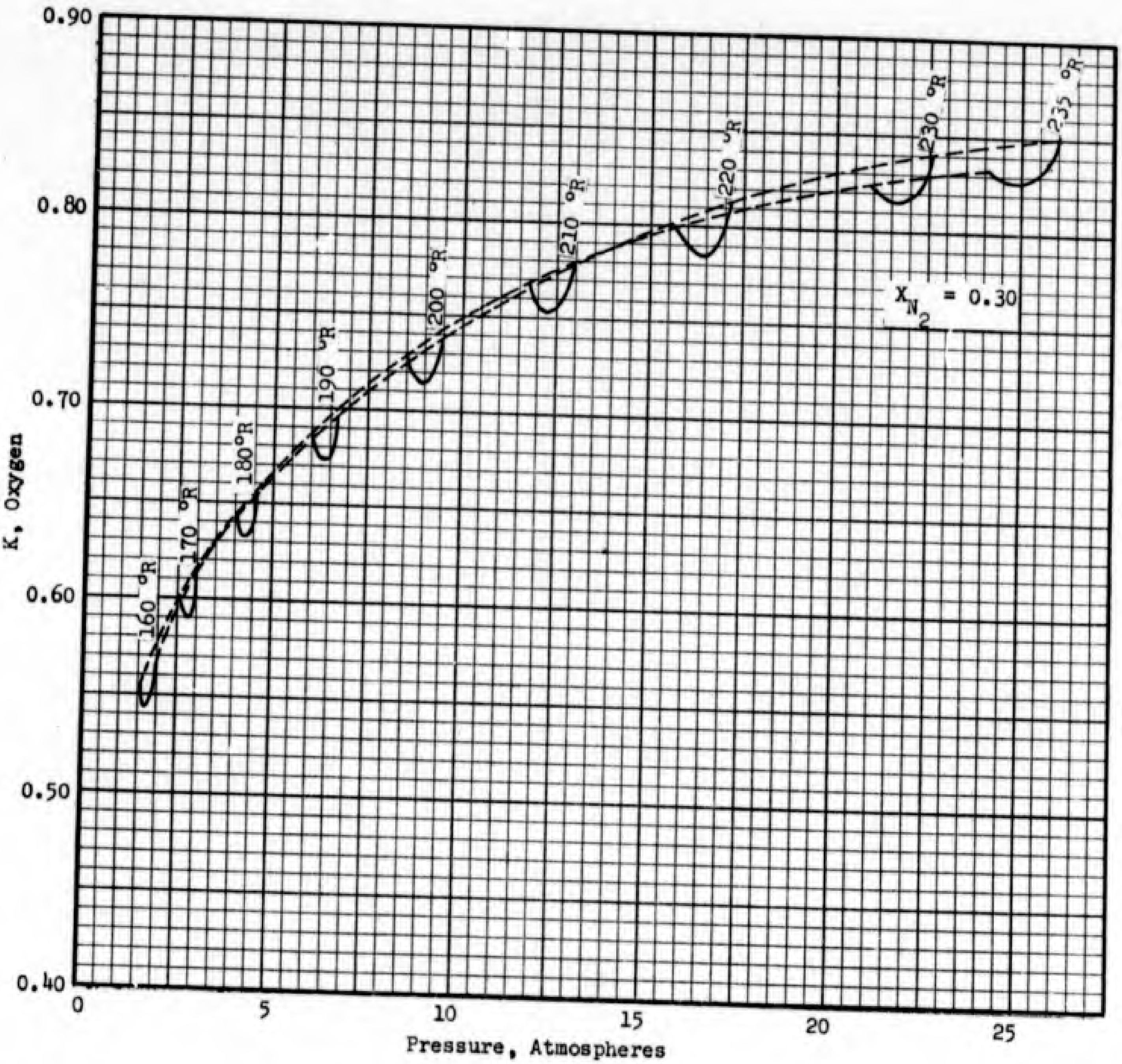


Figure 103. K-Values of Oxygen.

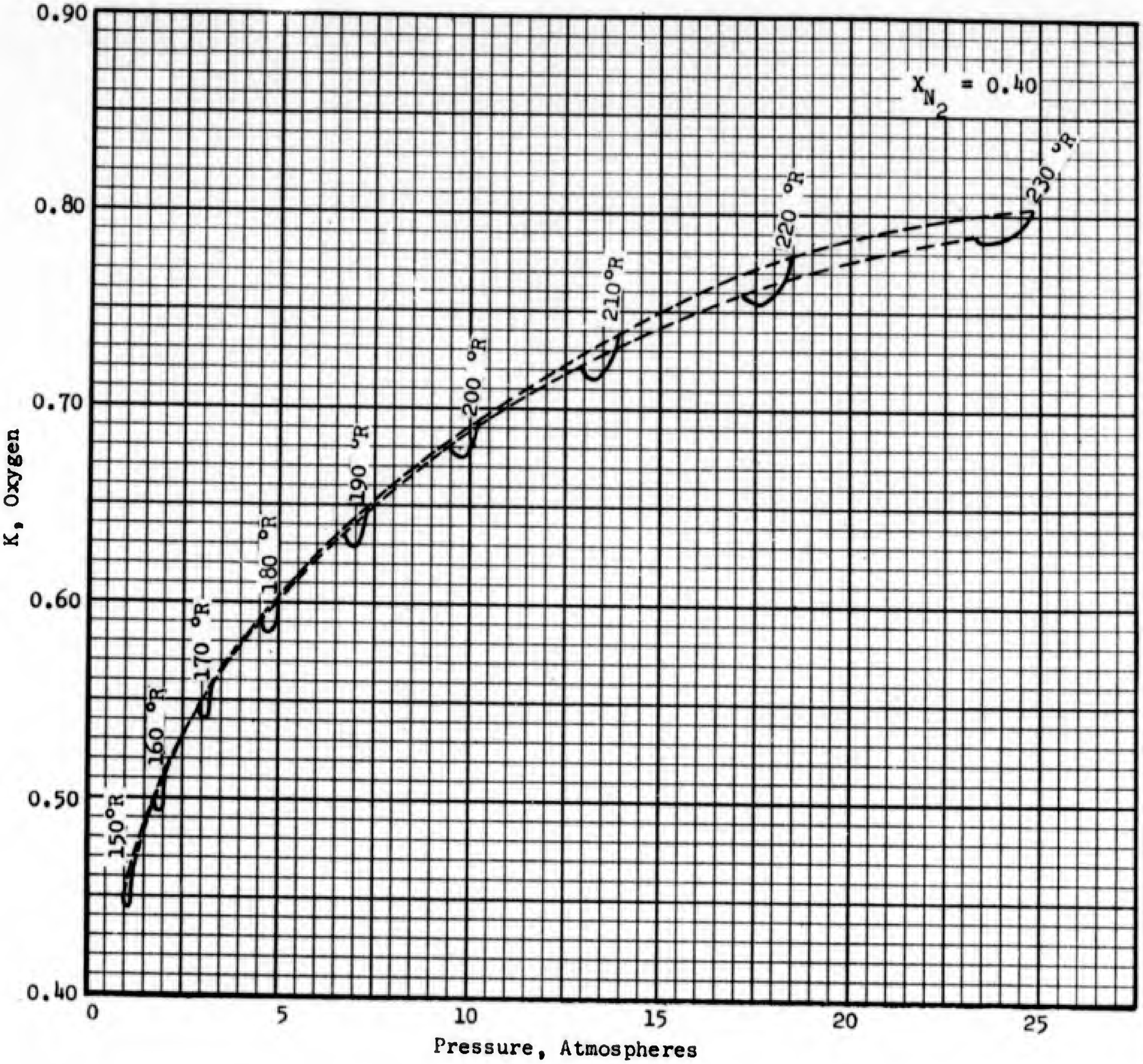


Figure 104. K-Values of Oxygen.

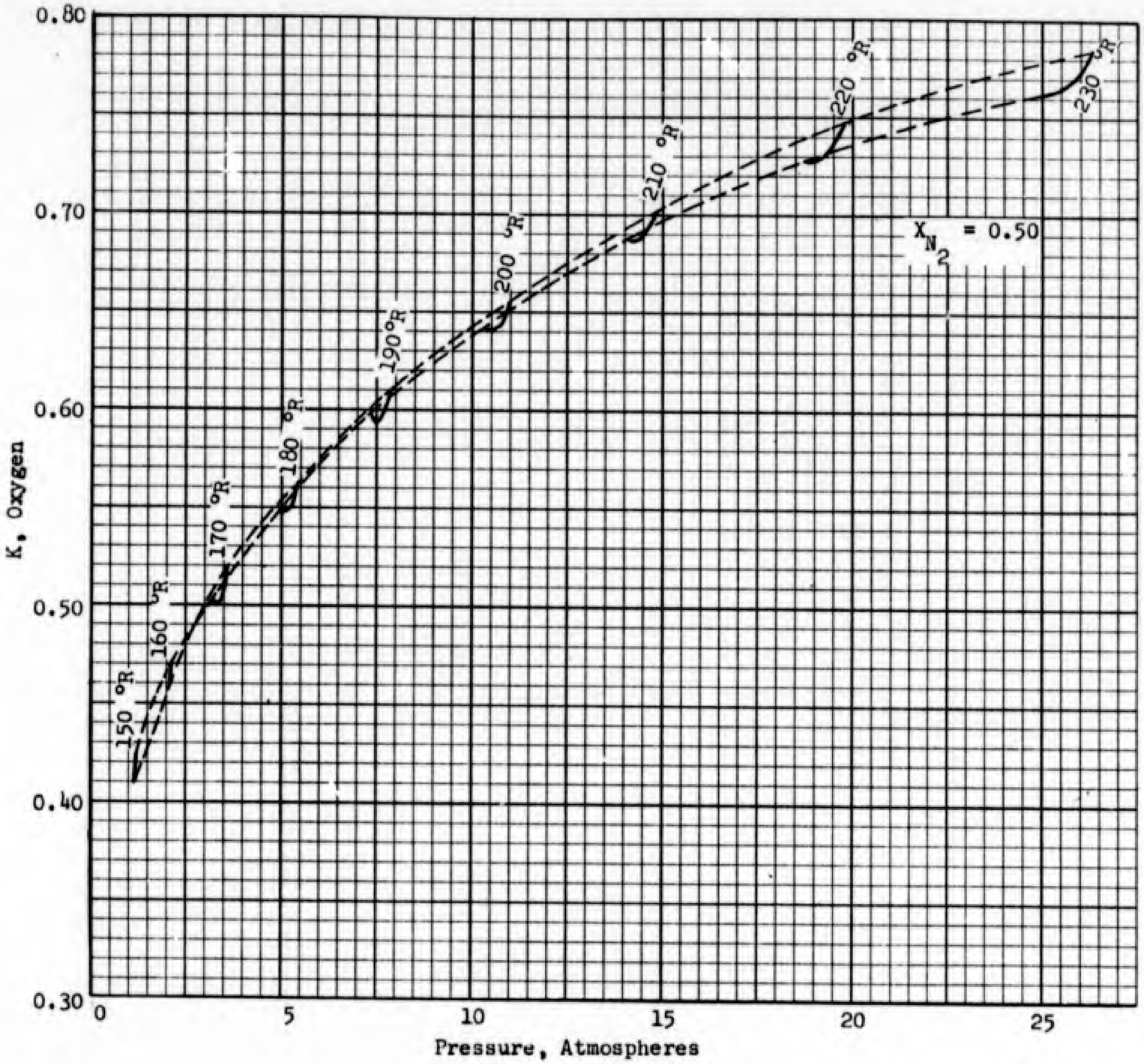


Figure 105. K-Values of Oxygen

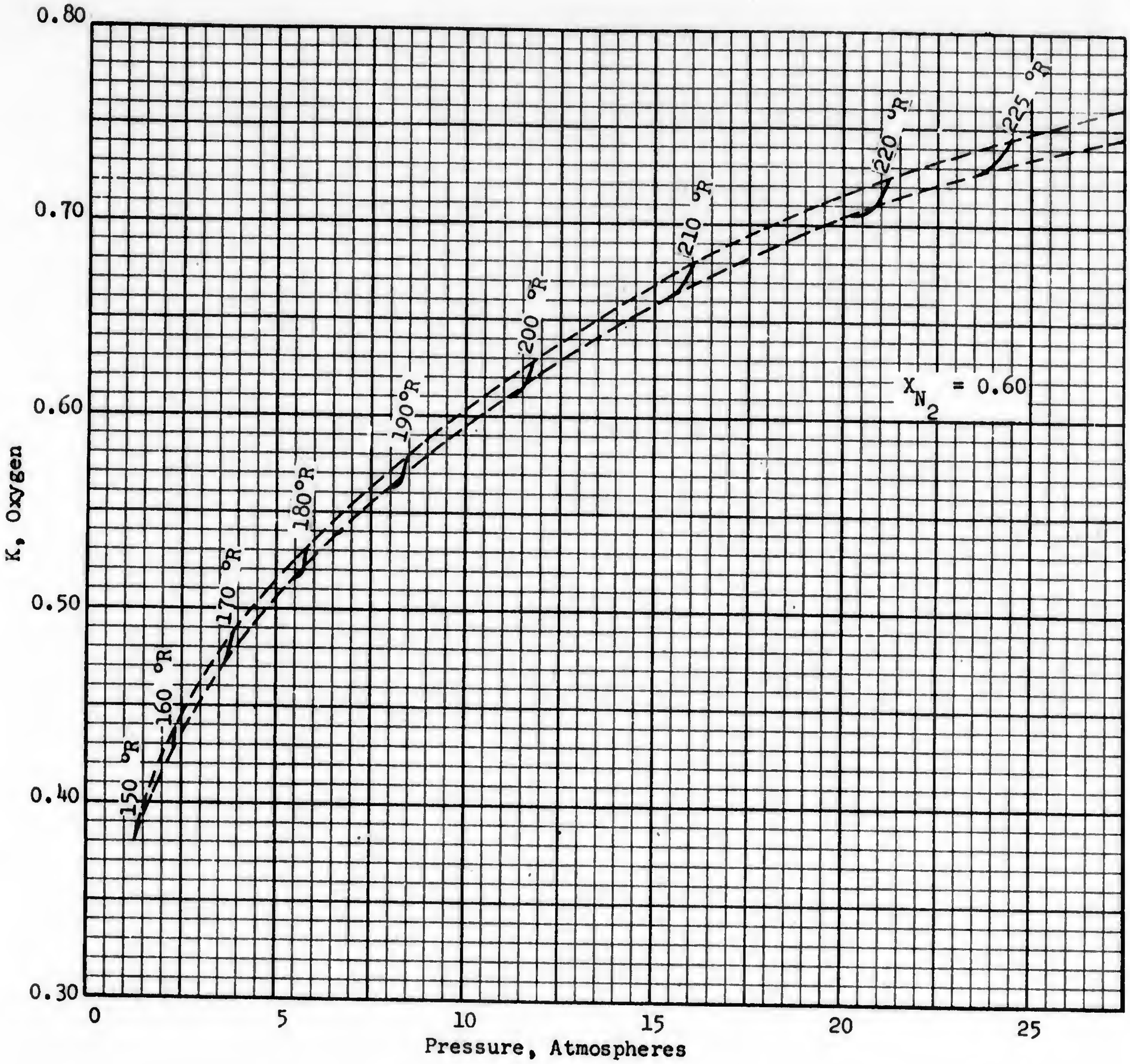


Figure 106. K-Values of Oxygen

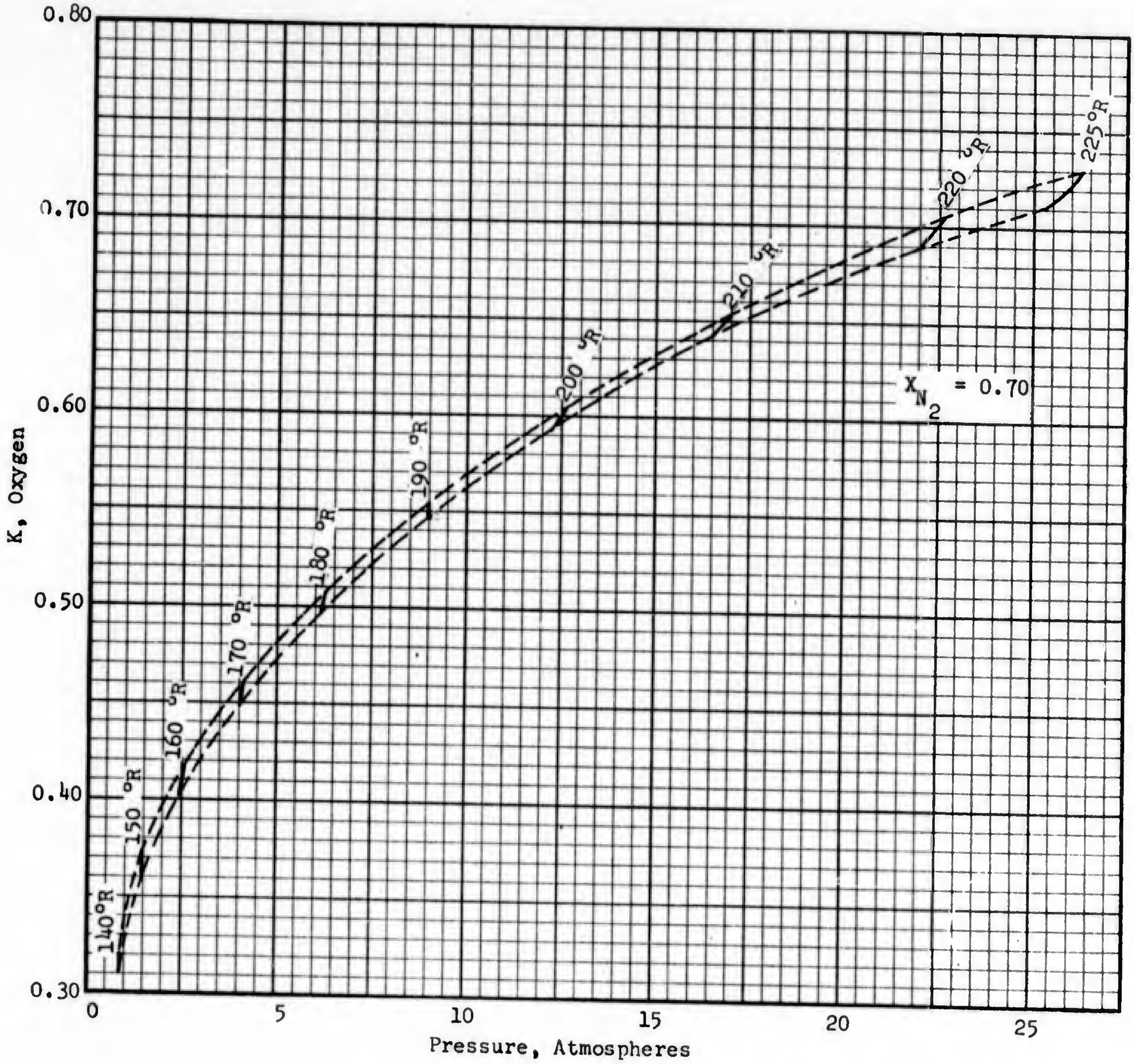


Figure 107. K-Values of Oxygen.

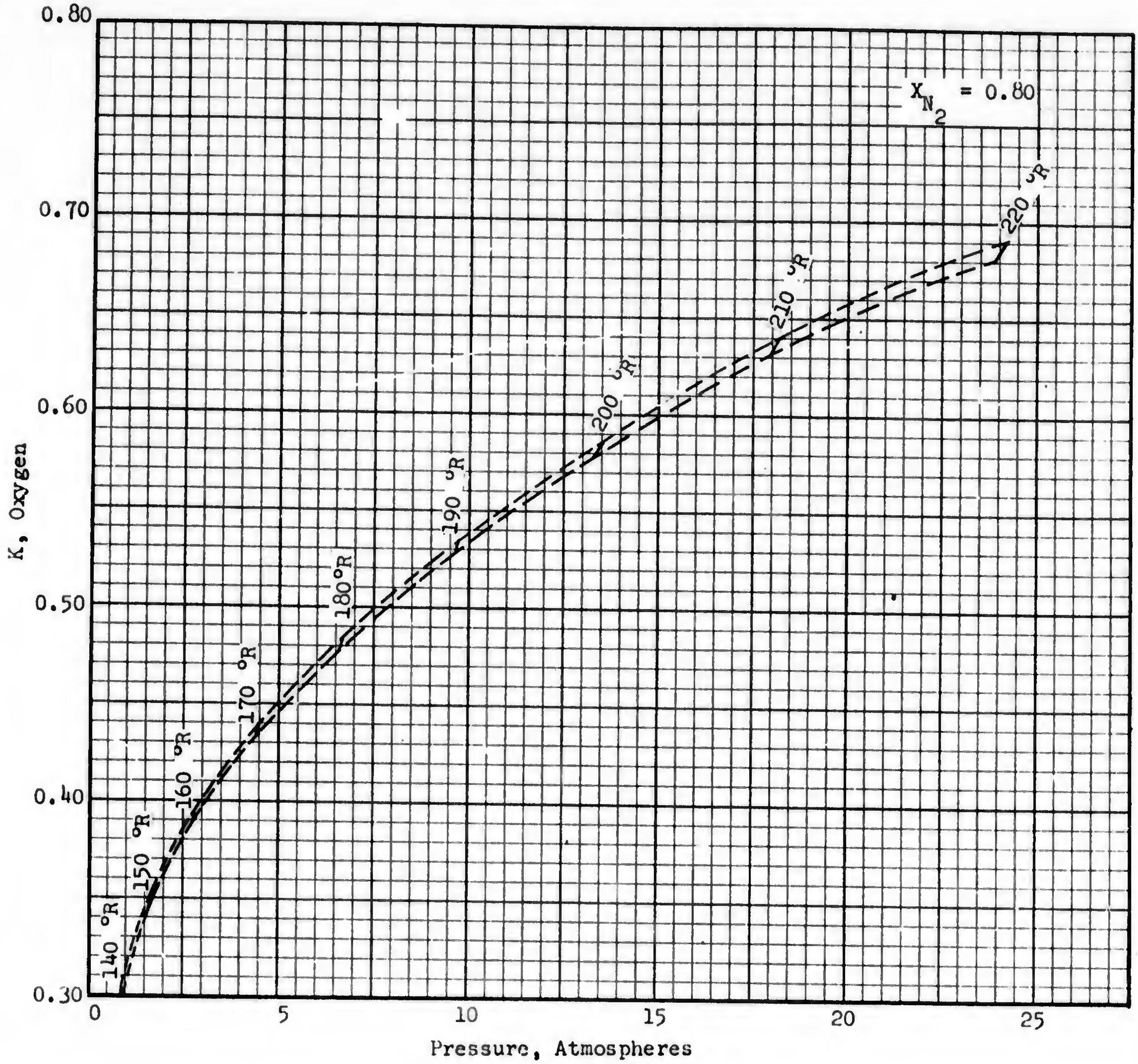


Figure 108. K-Values of Oxygen.

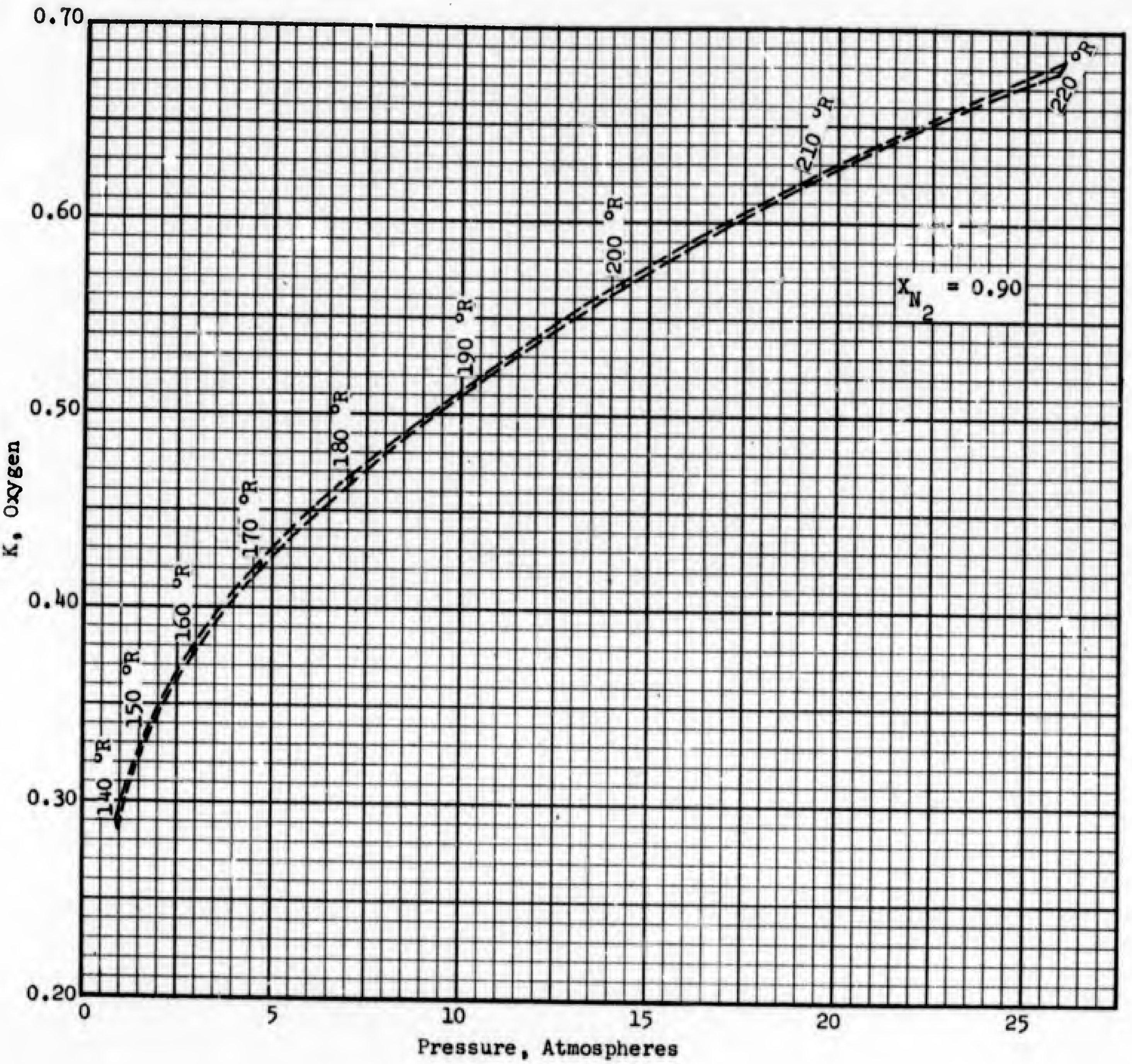


Figure 109. K-Values of Oxygen.

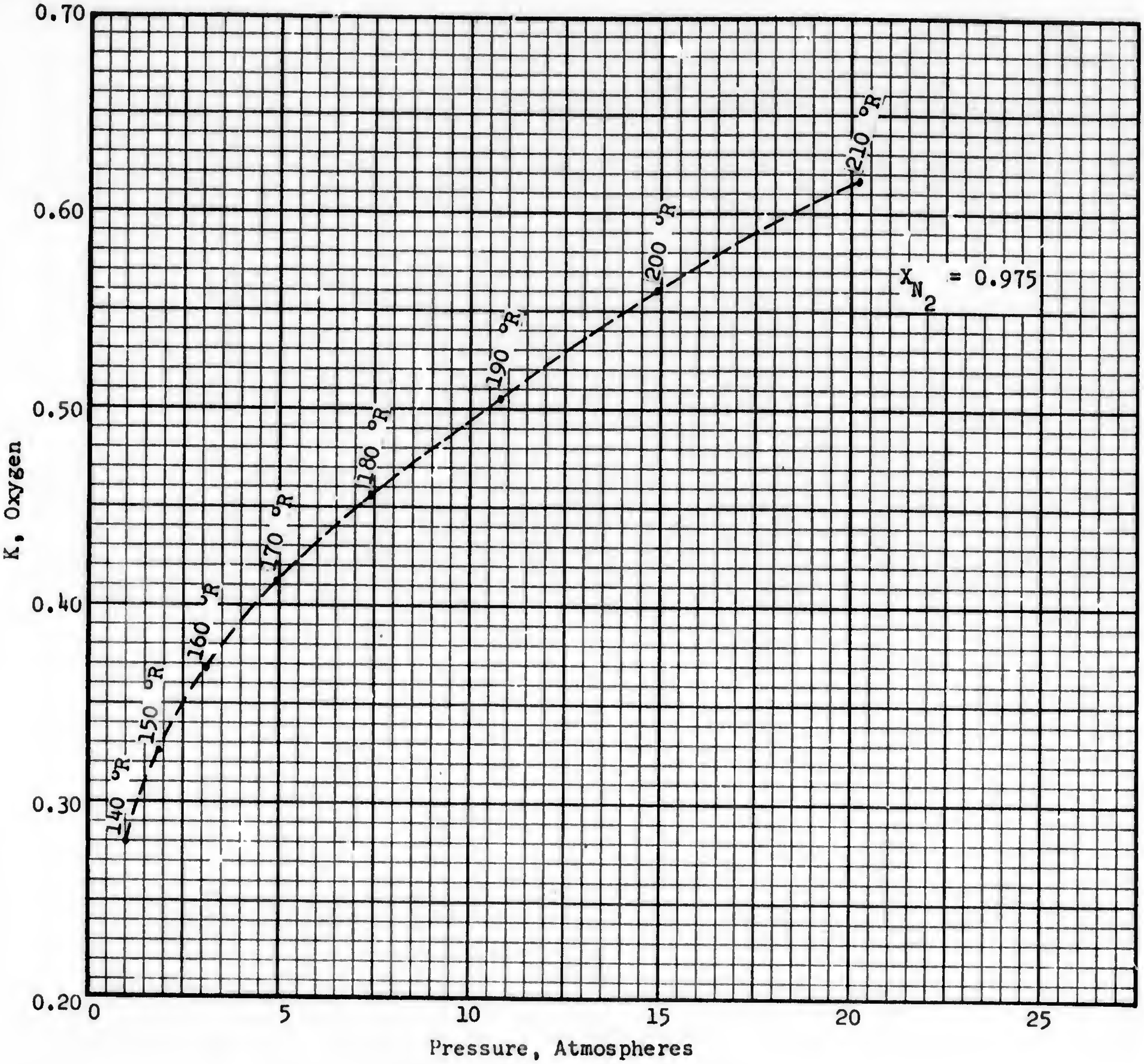


Figure 110. K-Values of Oxygen.

B. <u>Relative Volatility of Argon to Nitrogen in Ternary System</u>

The 12 graphs to follow present the relative volatility of argon to nitrogen defined

$$\alpha_{Ar-N_2} = \frac{y_{Ar}}{x_{Ar}} \quad \frac{x_{N_2}}{y_{N_2}} \tag{51}$$

as a function of mole fraction argon in the liquid along selected isobars. The graphs are arranged in order of increasing mole percent nitrogen in the liquid.

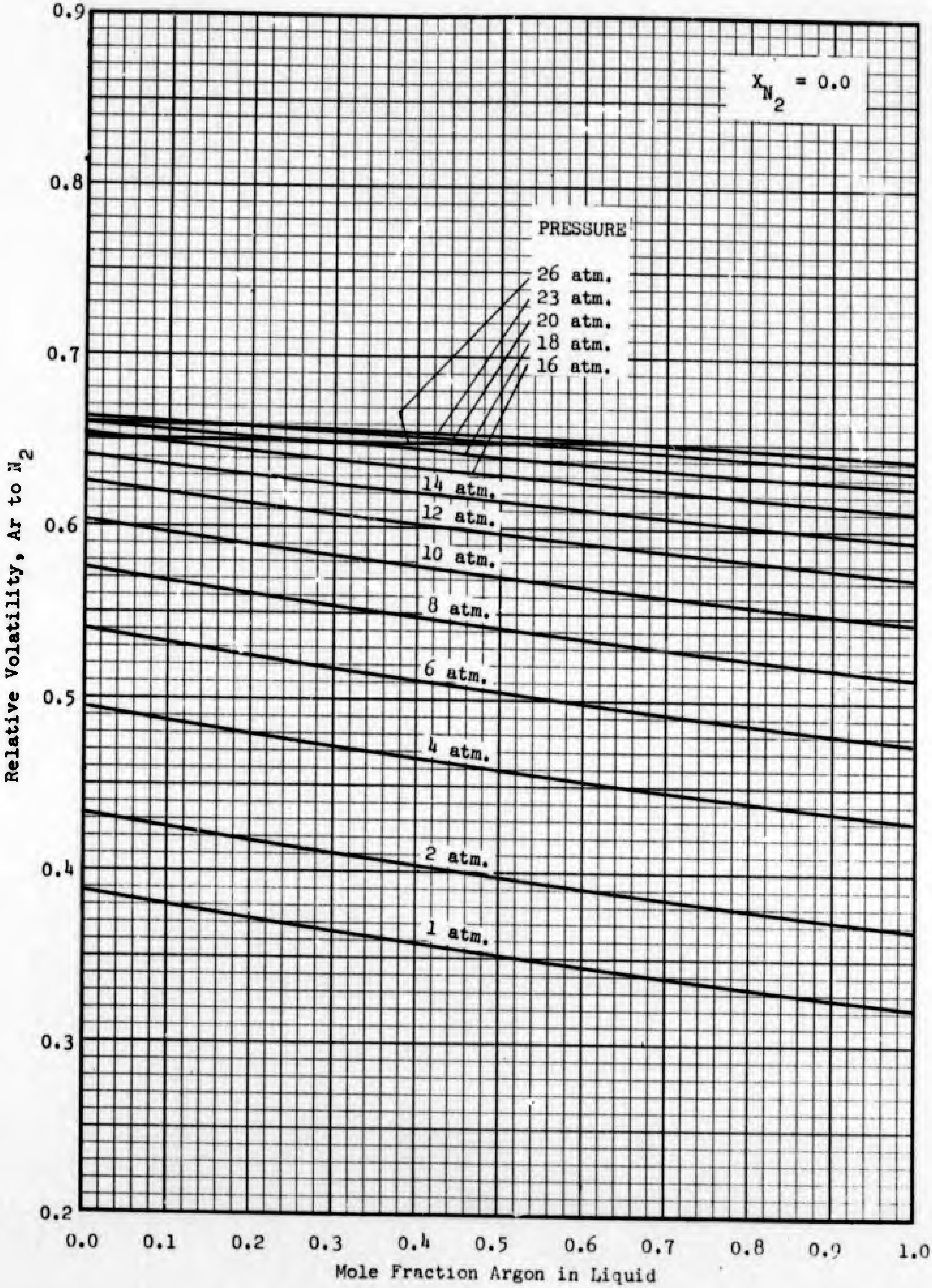


Figure 111. Relative Volatility of Argon to Nitrogen.

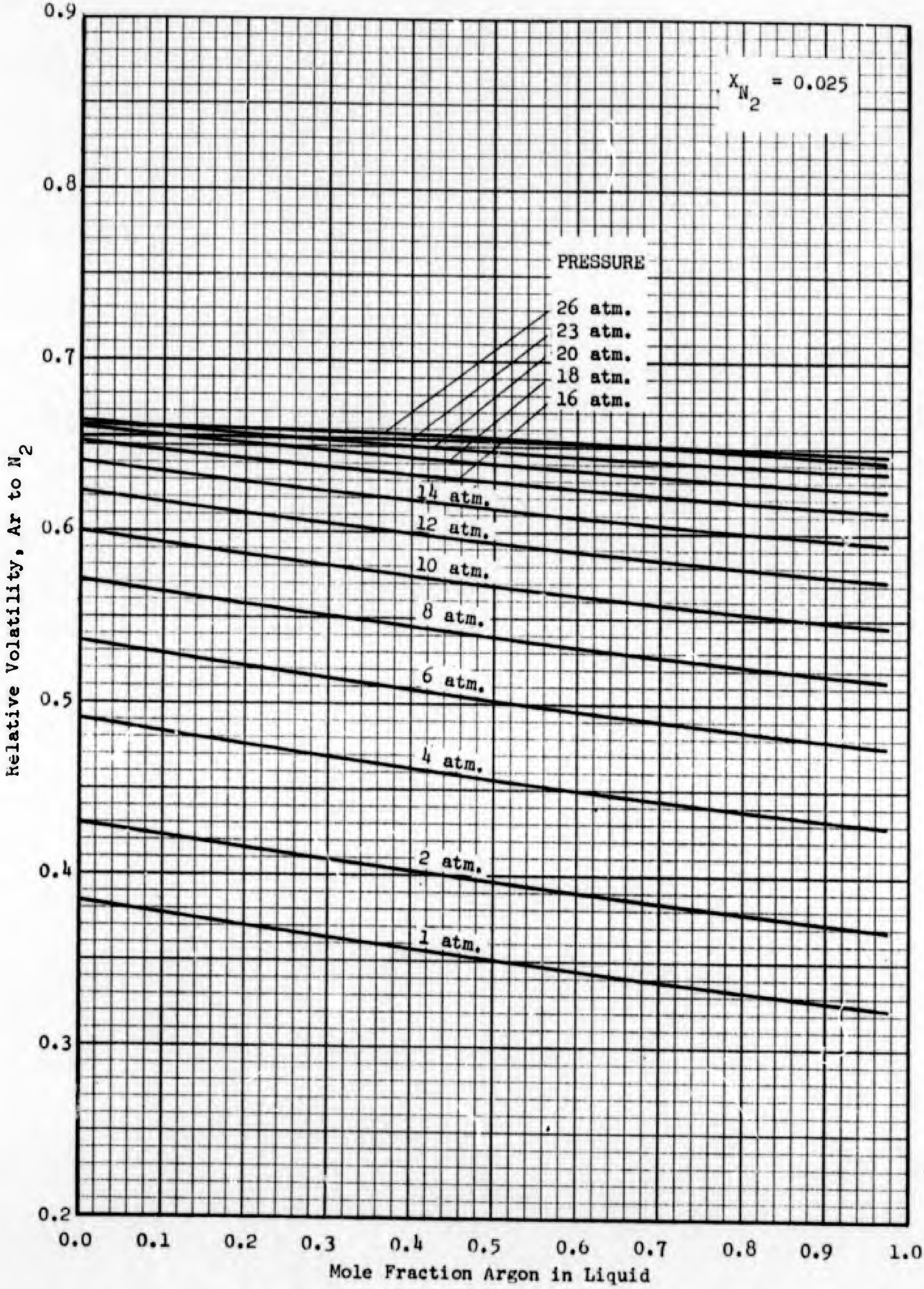


Figure 112. Relative Volatility of Argon to Nitrogen.

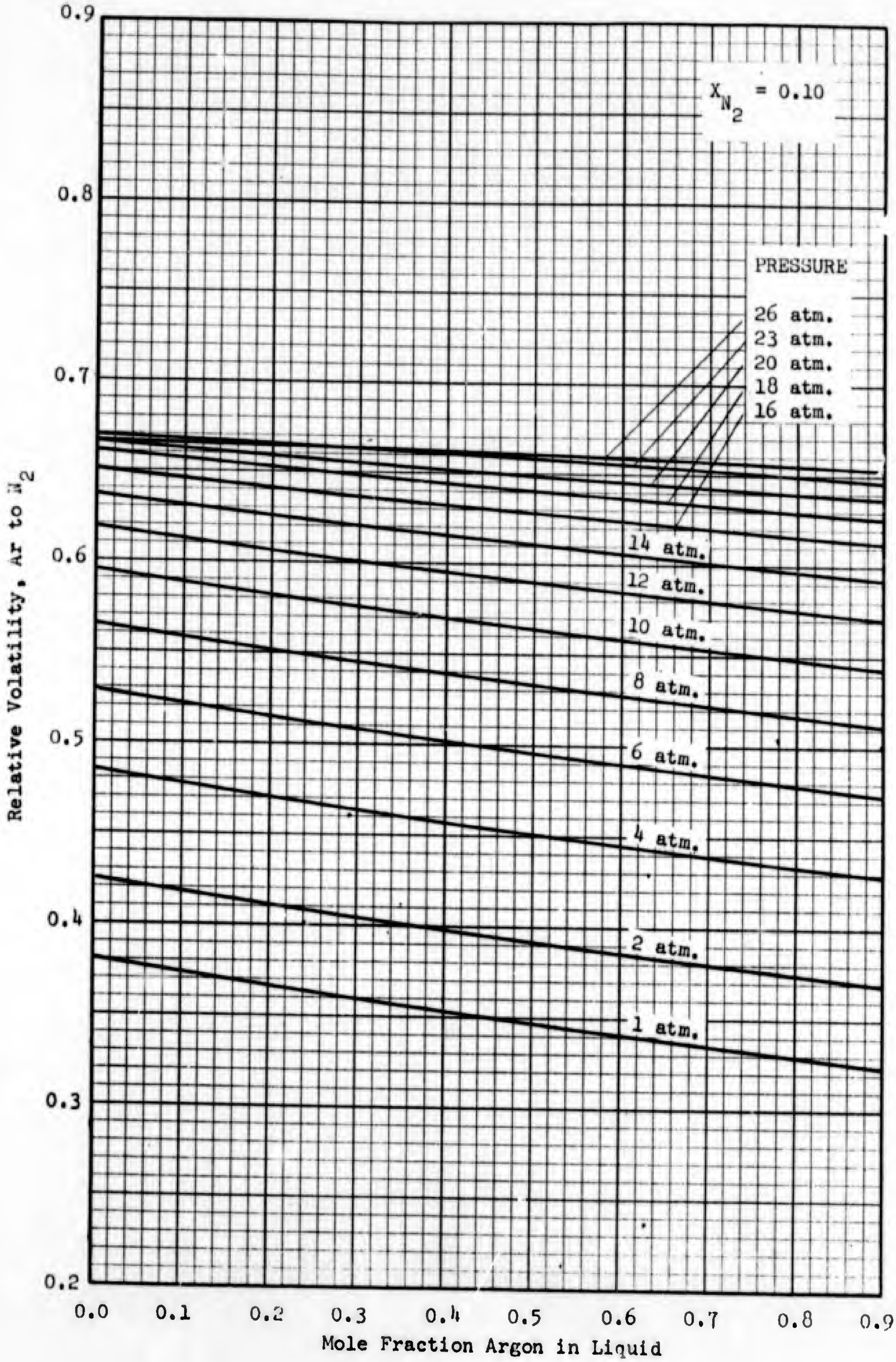


Figure 113. Relative Volatility of Argon to Nitrogen.

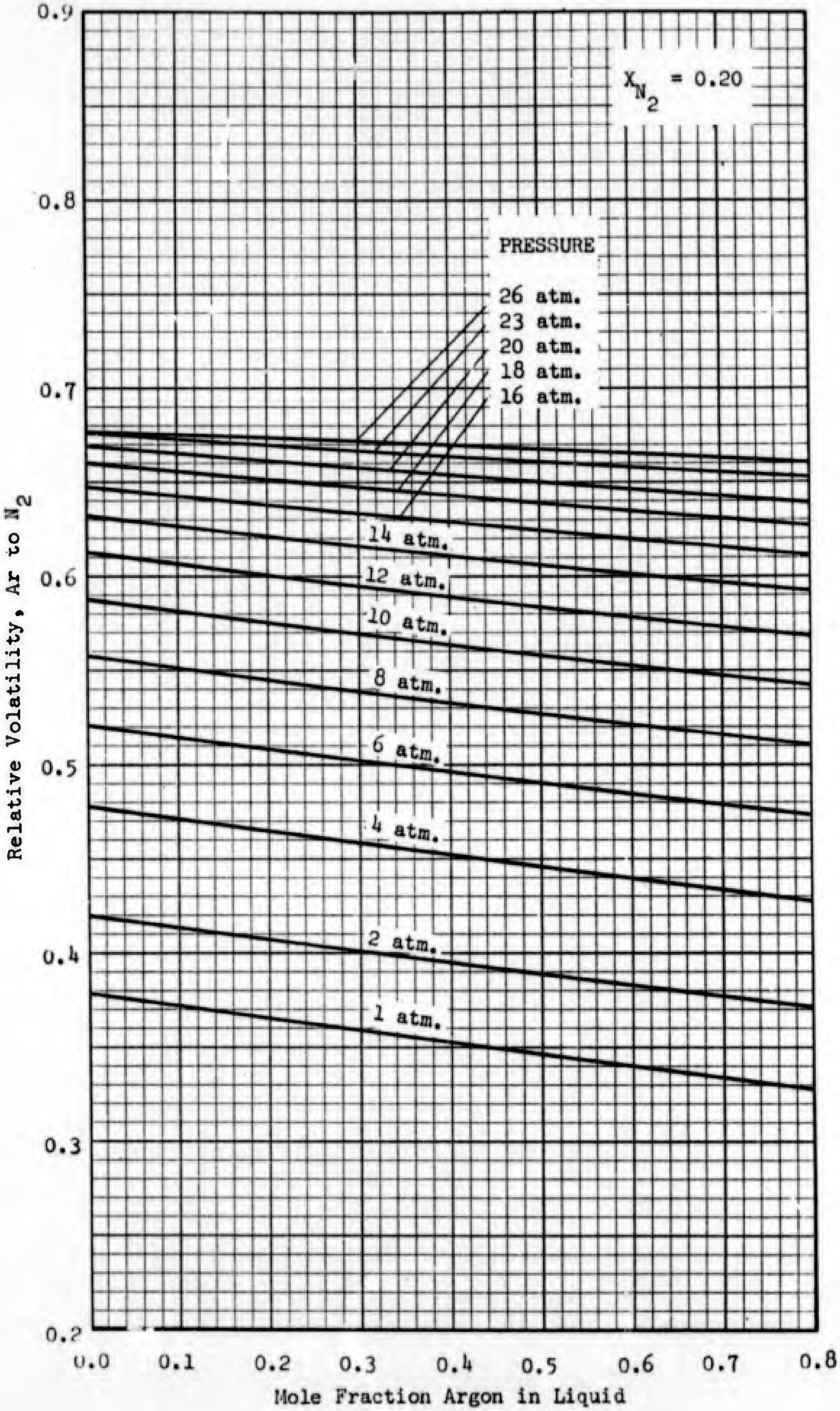


Figure 114. Relative Volatility of Argon to Nitrogen.

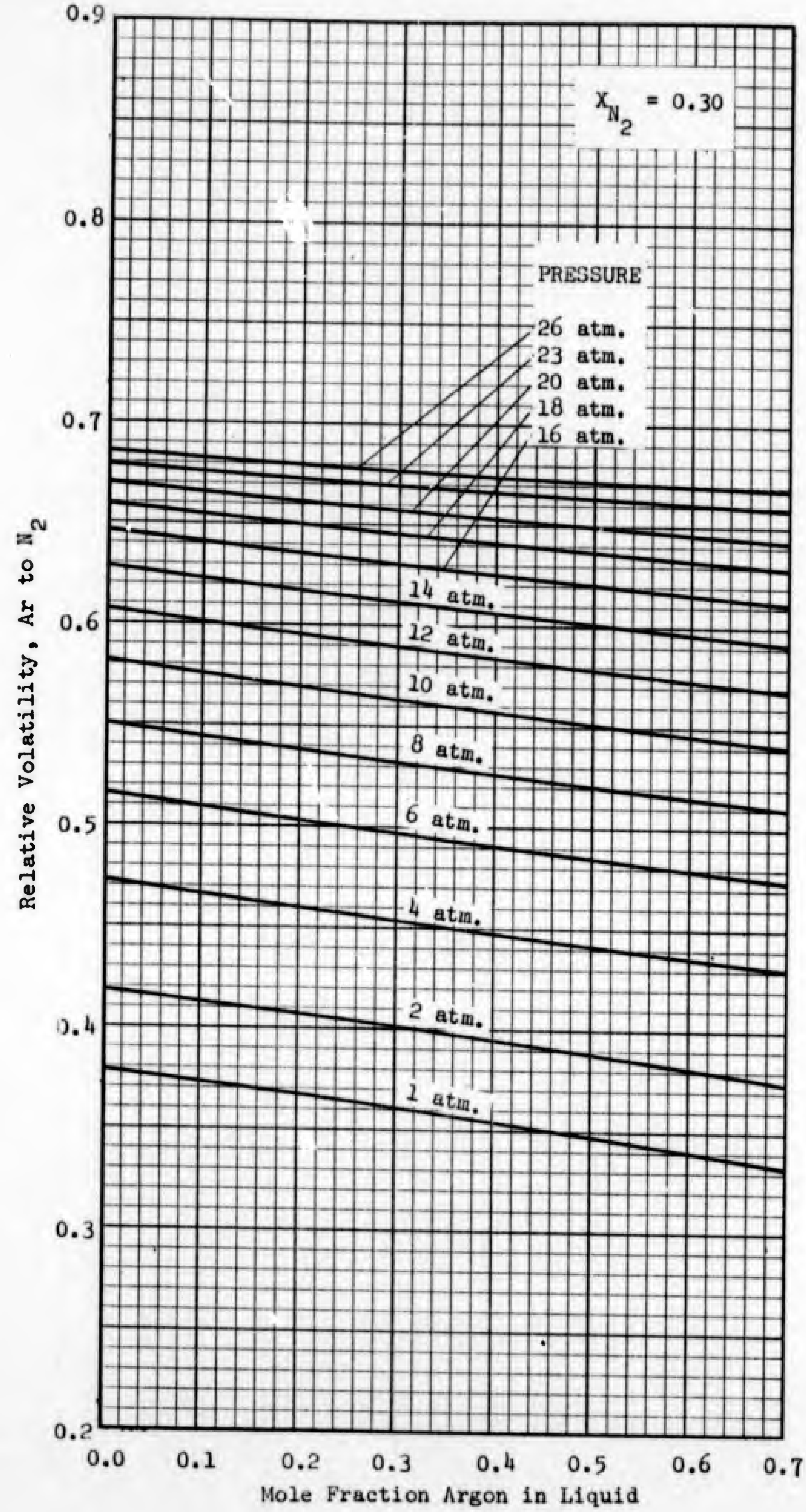


Figure 115. Relative Volatility of Argon to Nitrogen.

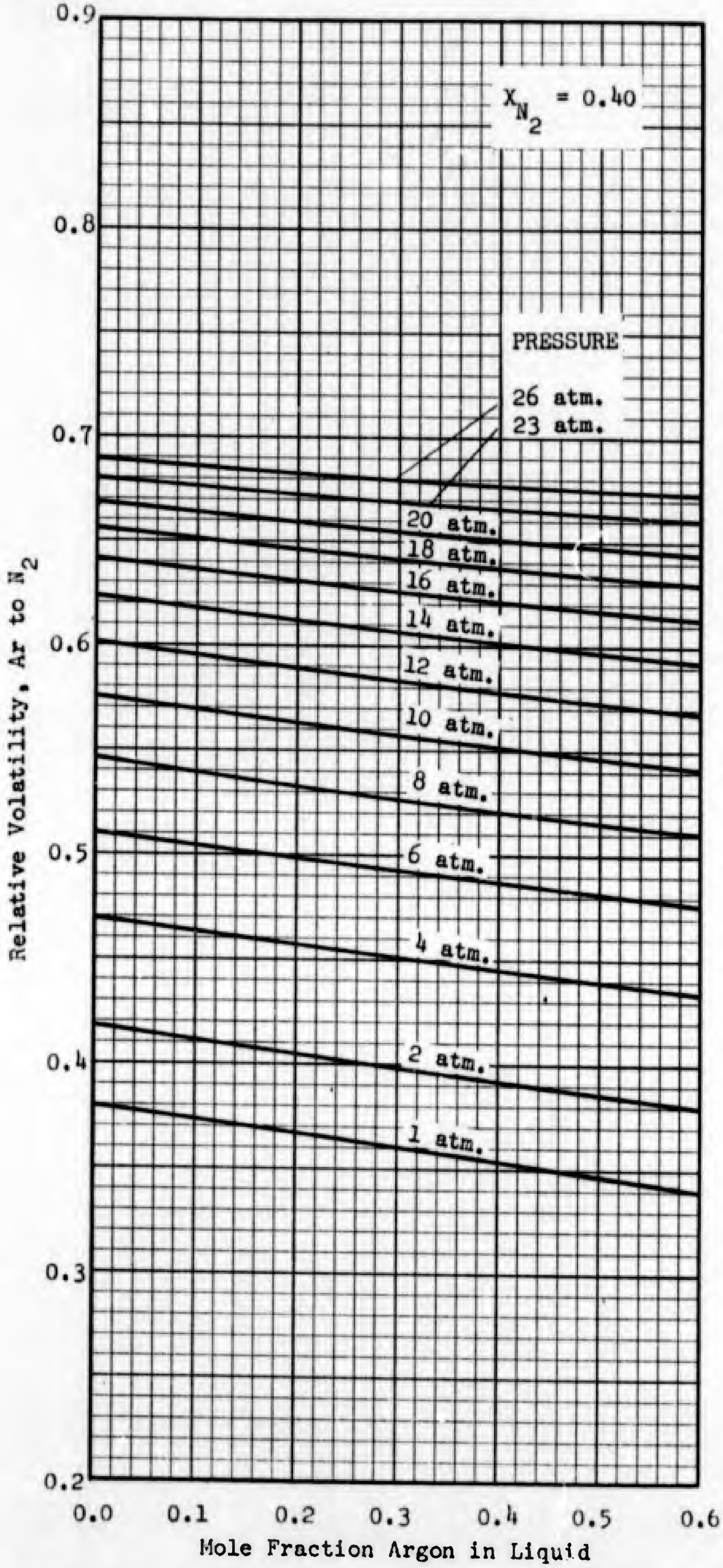


Figure 116. Relative Volatility of Argon to Nitrogen.

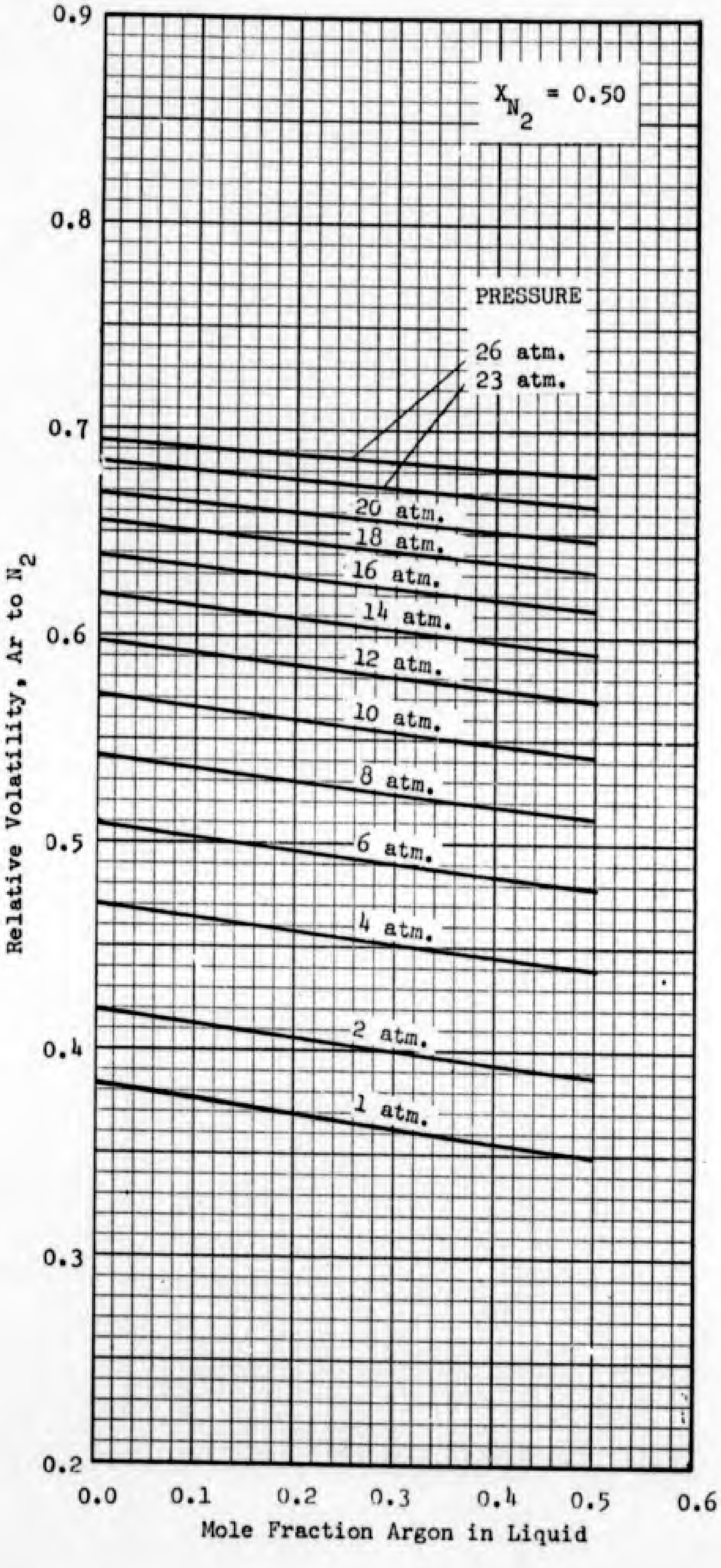


Figure 117. Relative Volatility of Argon to Nitrogen.

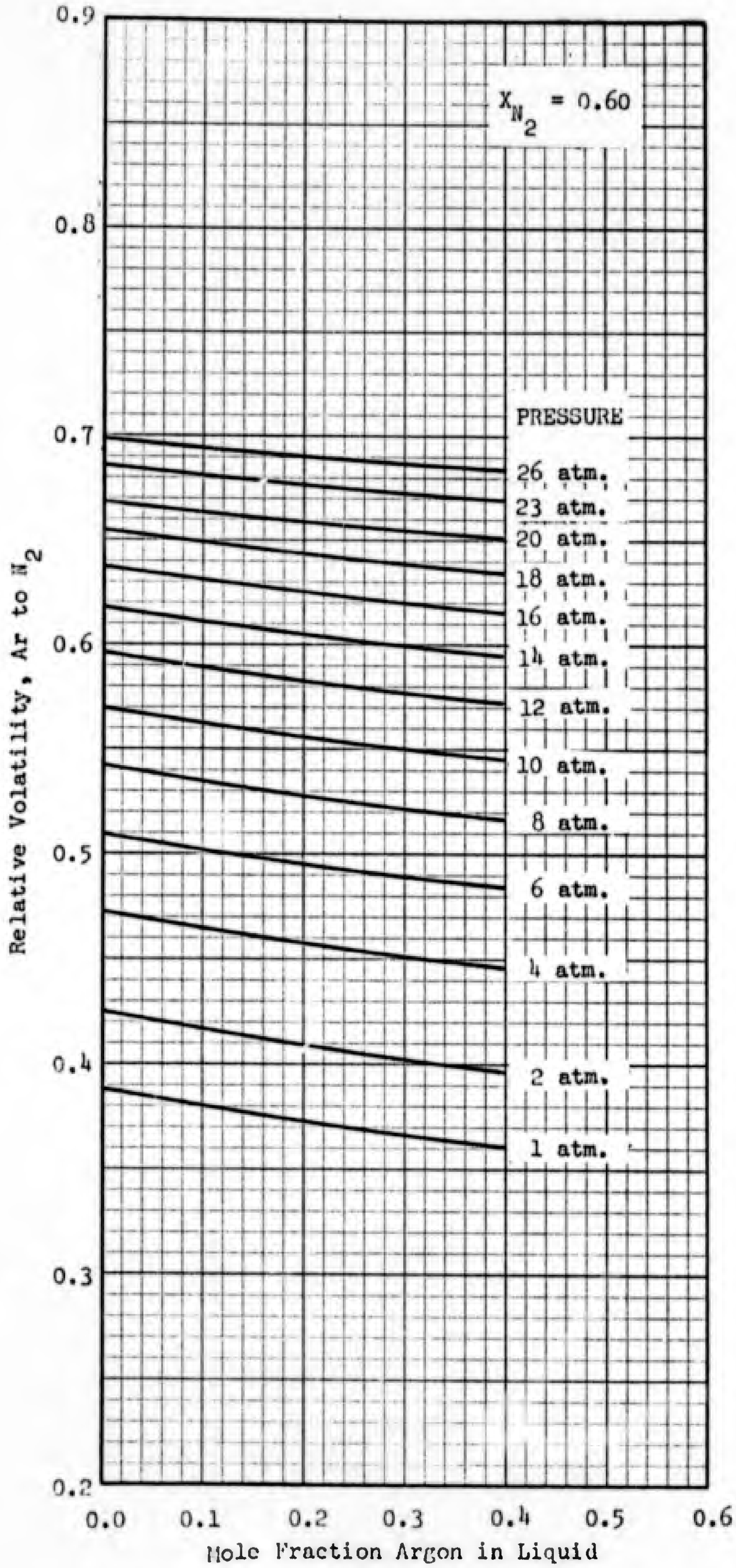


Figure 118. Relative Volatility of Argon to Nitrogen.

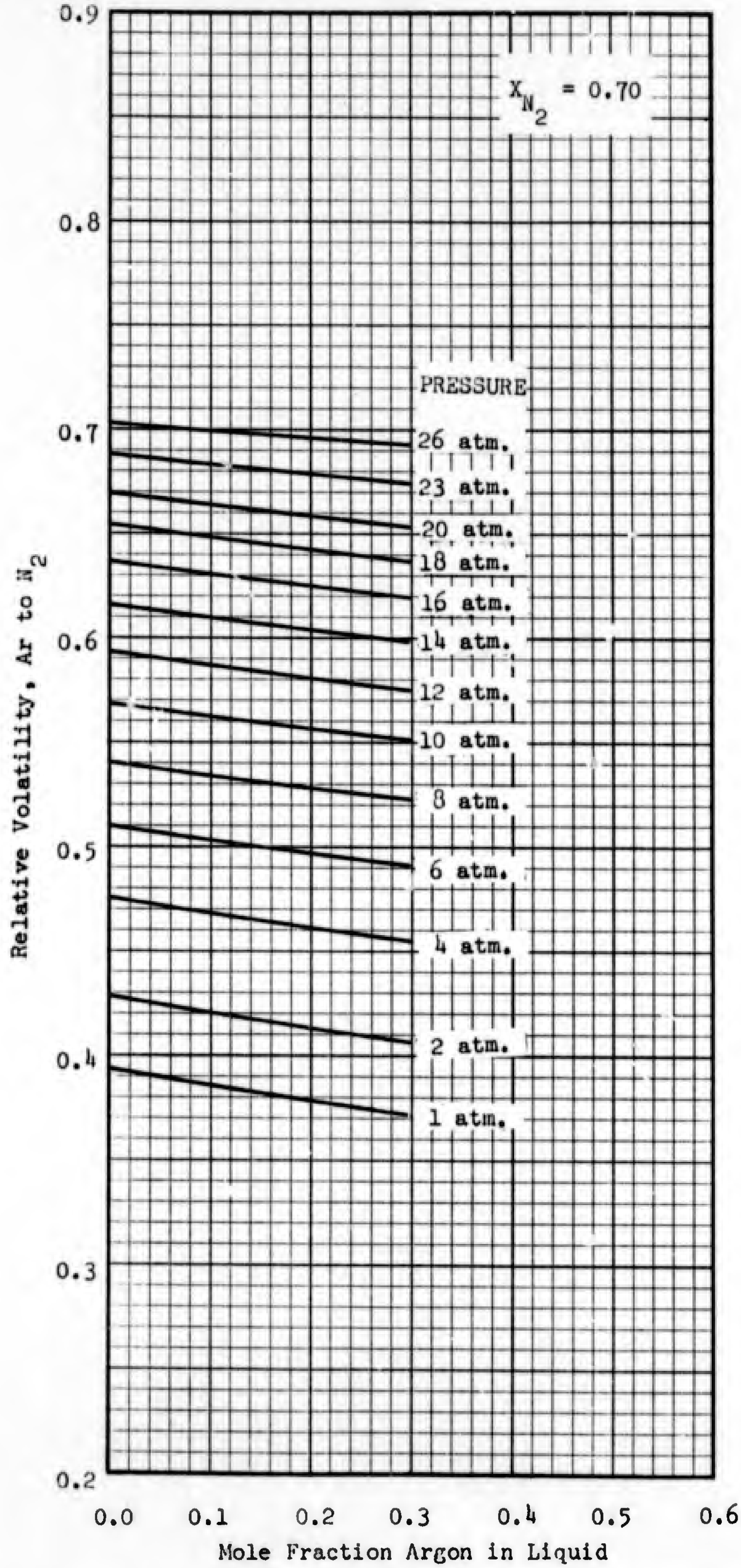


Figure 119. Relative Volatility of Argon to Nitrogen.

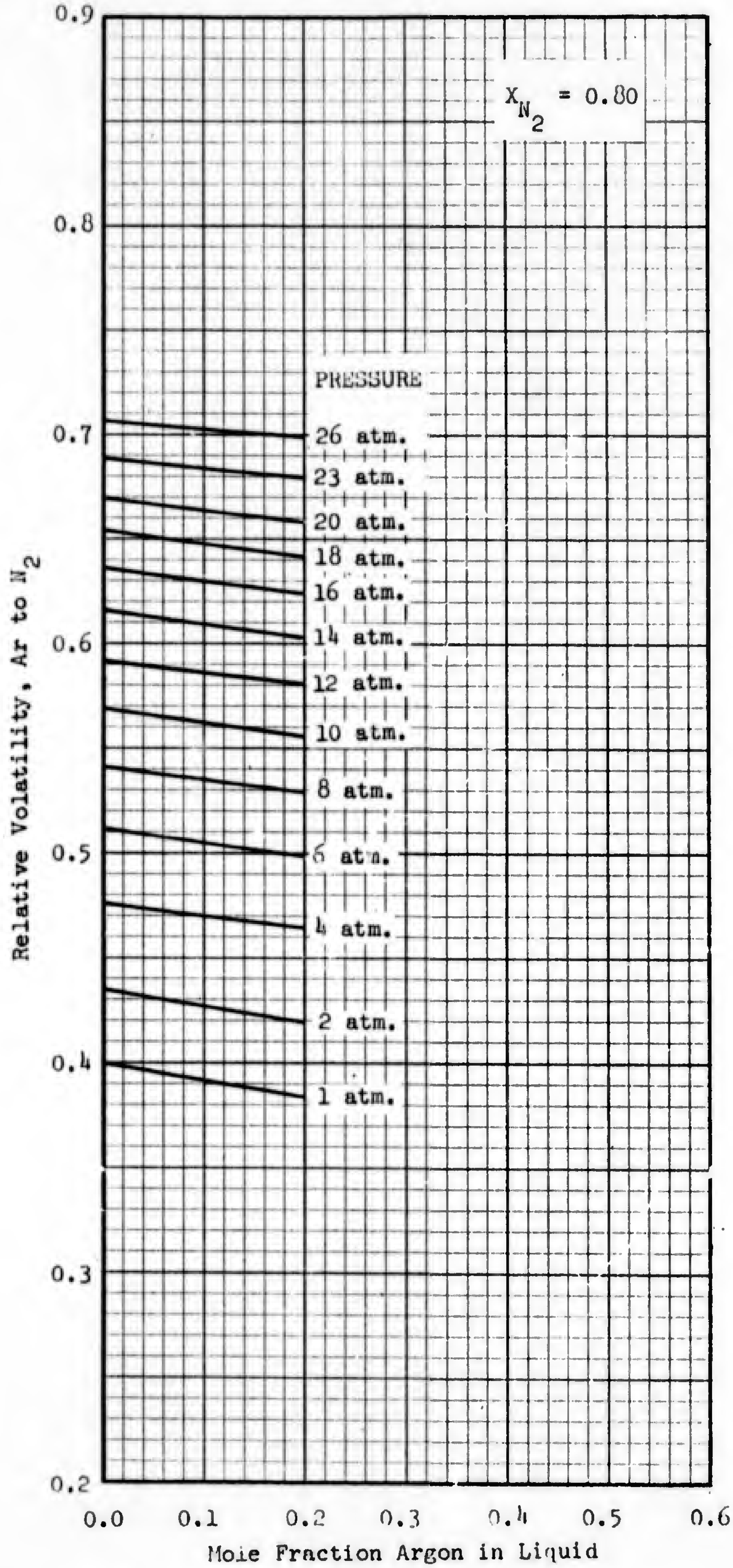


Figure 120. Relative Volatility of Argon to Nitrogen.

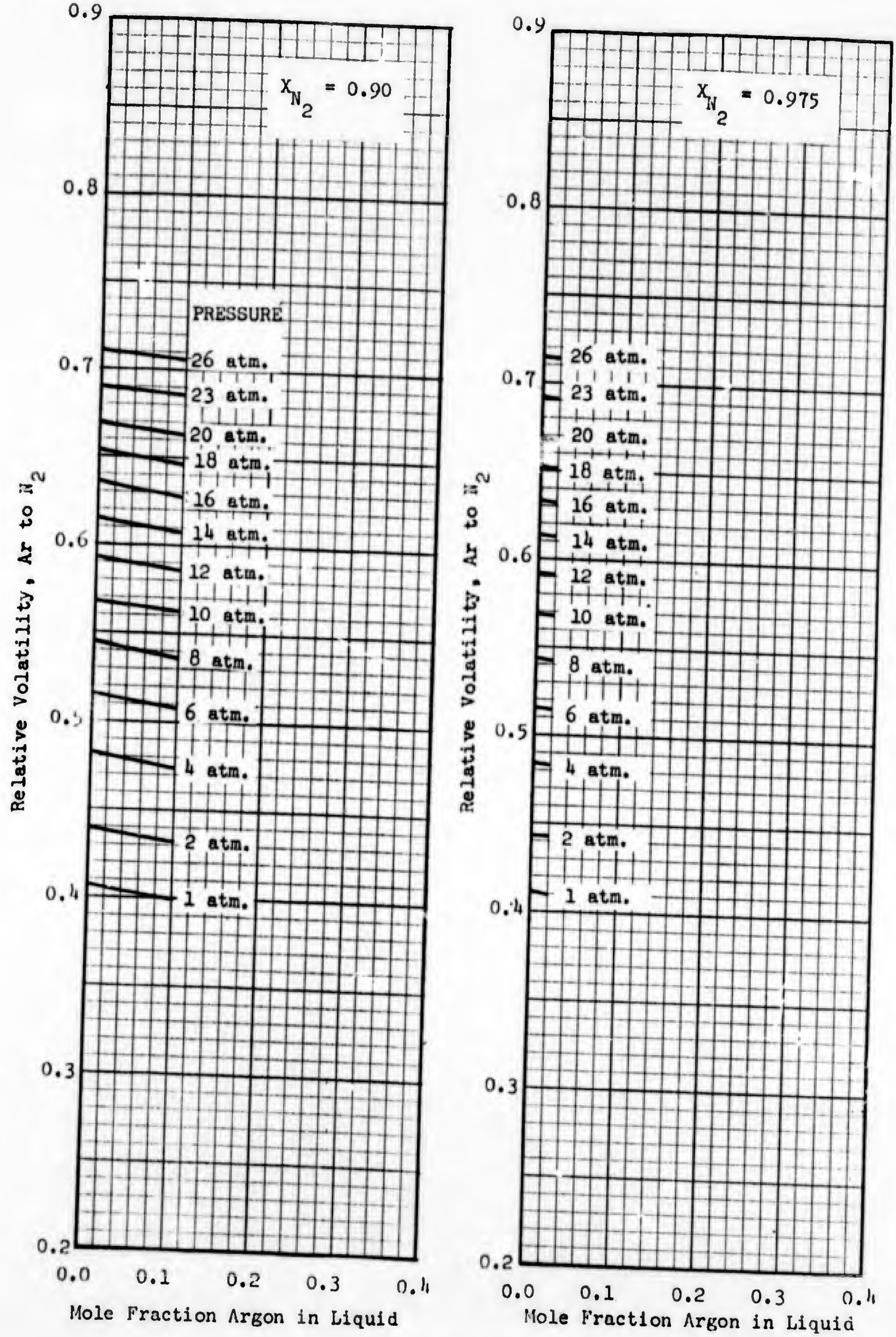


Figure 121. Relative Volatility of Argon to Nitrogen.

C. <u>Relative Volatility of Argon to Oxygen in Ternary System</u>

The 12 graphs to follow present the relative volatility of argon to oxygen defined

$$\alpha_{Ar-O_2} = \frac{y_{Ar}}{x_{Ar}} \cdot \frac{x_{O_2}}{y_{O_2}} \tag{52}$$

as a function of mole fraction argon in the liquid along selected isobars. The graphs are arranged in order of increasing mole percent nitrogen in the liquid.

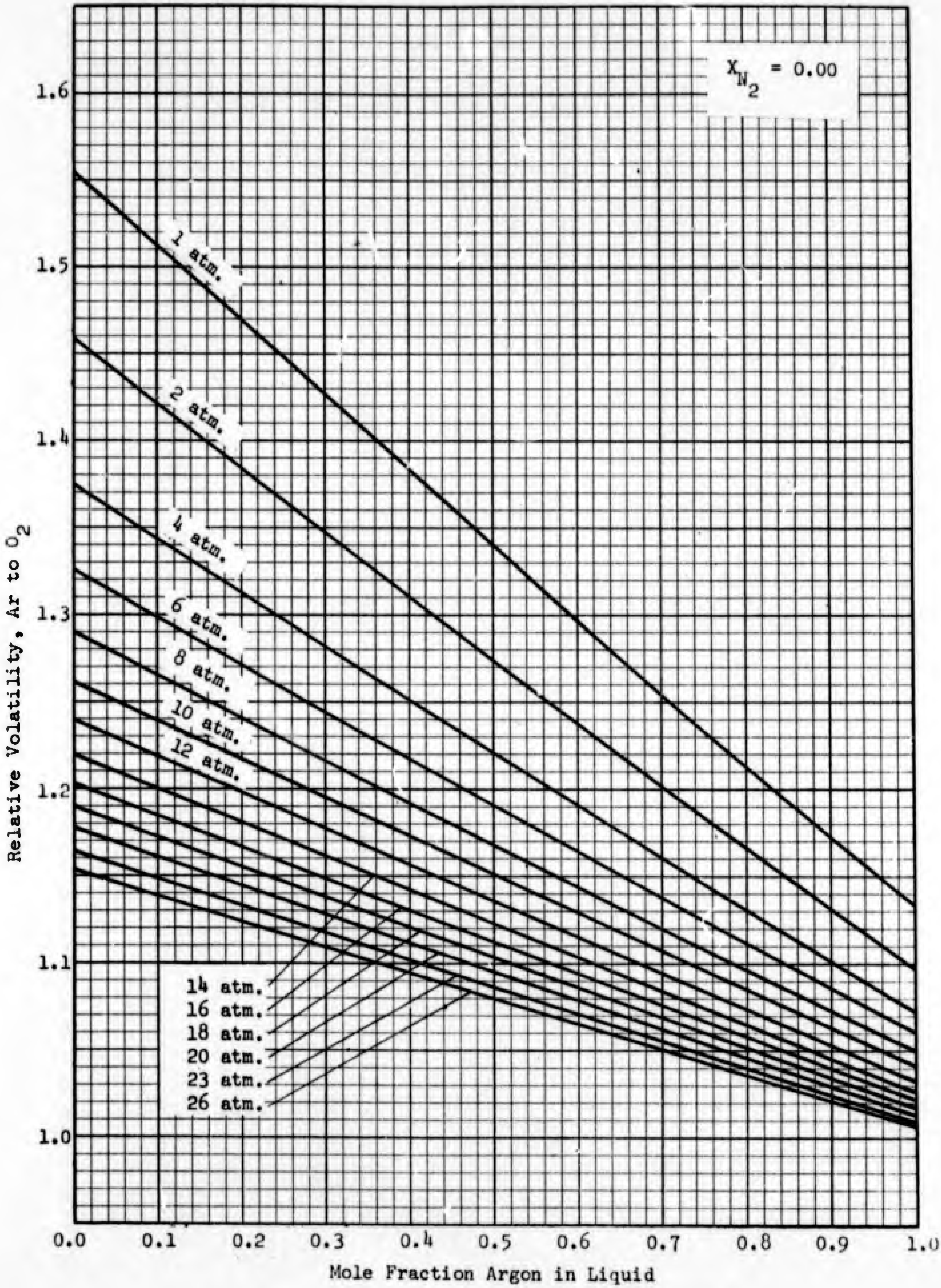


Figure 122. Relative Volatility of Argon to Oxygen.

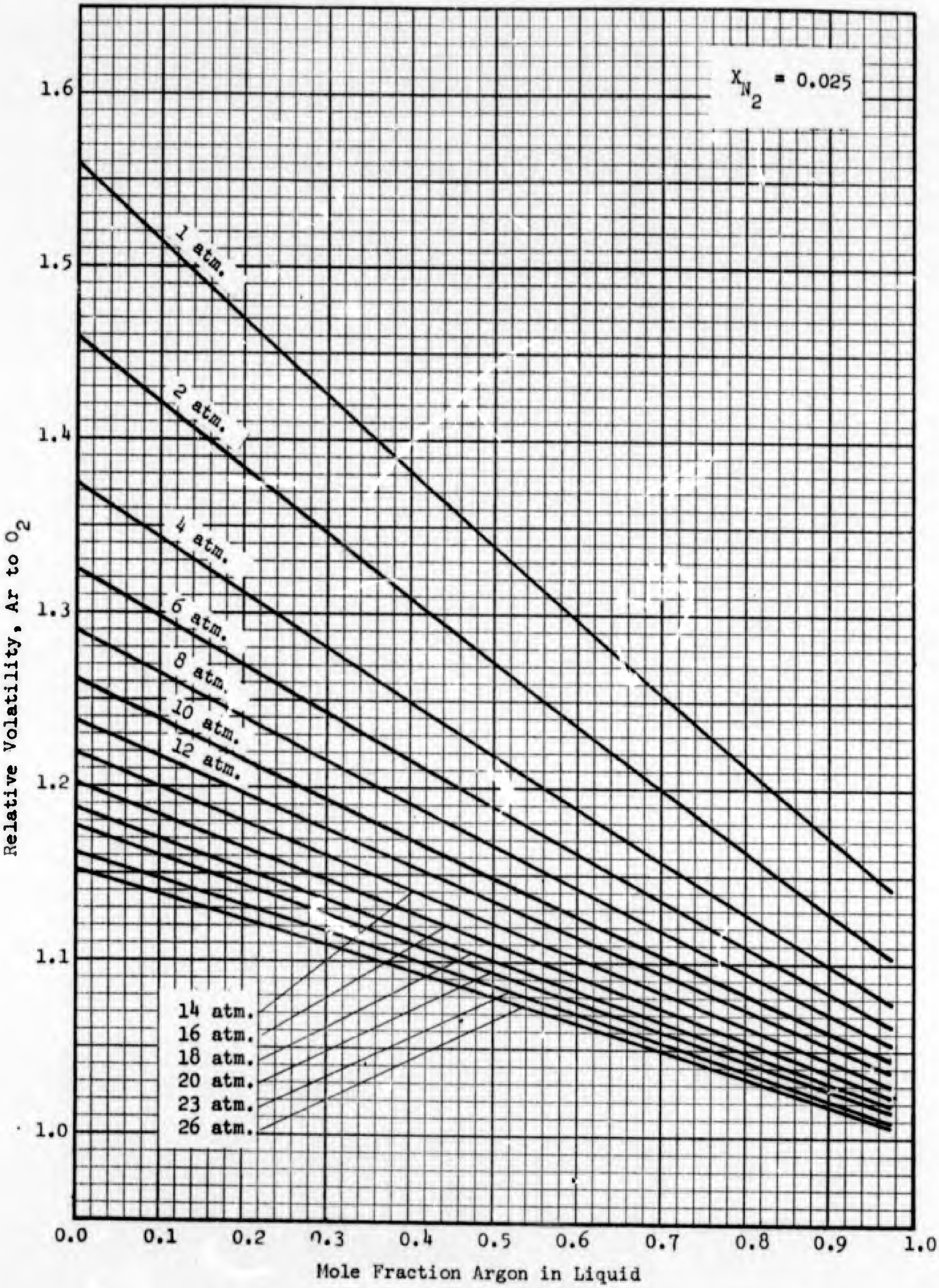


Figure 123. Relative Volatility of Argon to Oxygen.

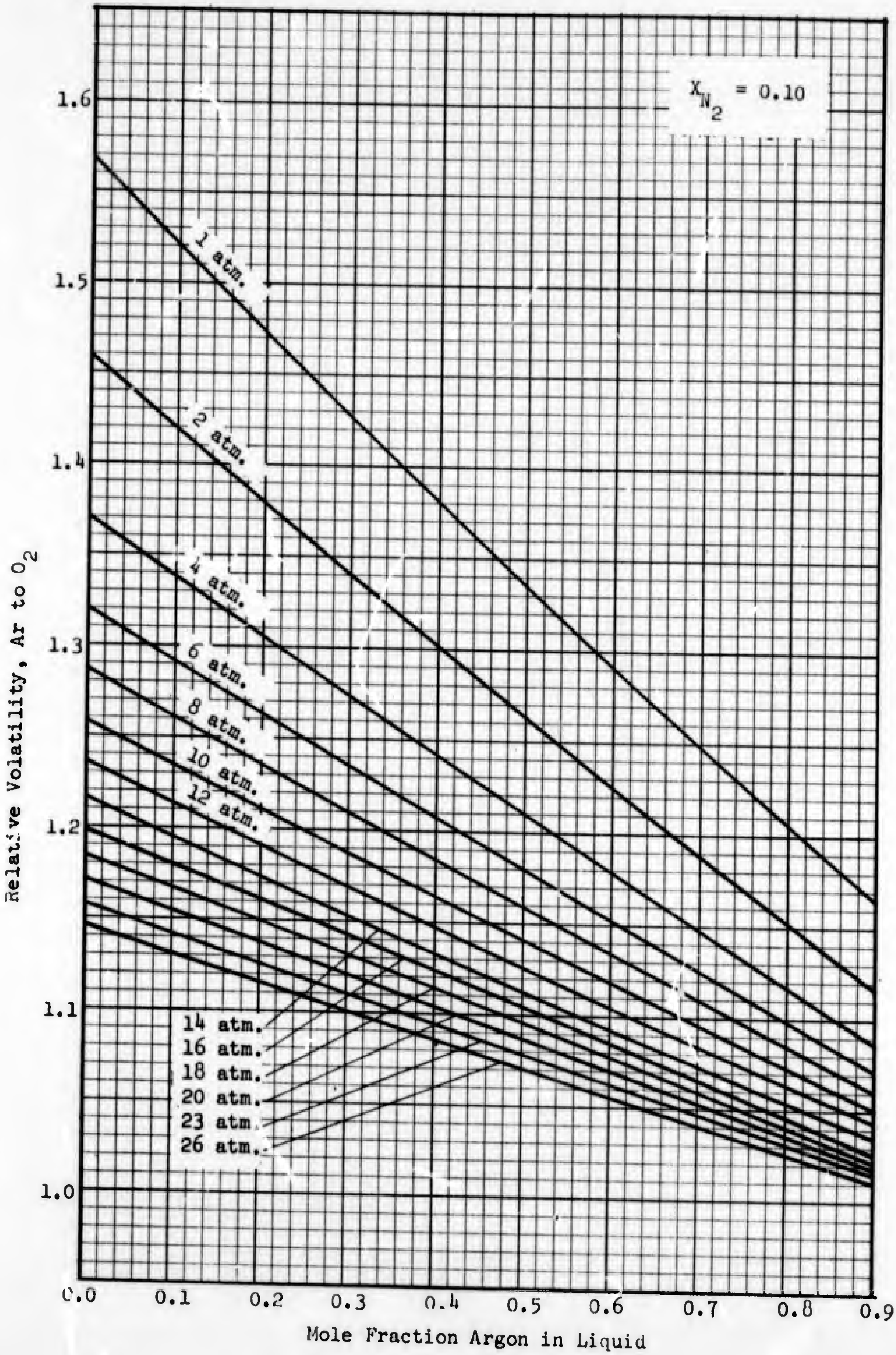


Figure 124. Relative Volatility of Argon to Oxygen.

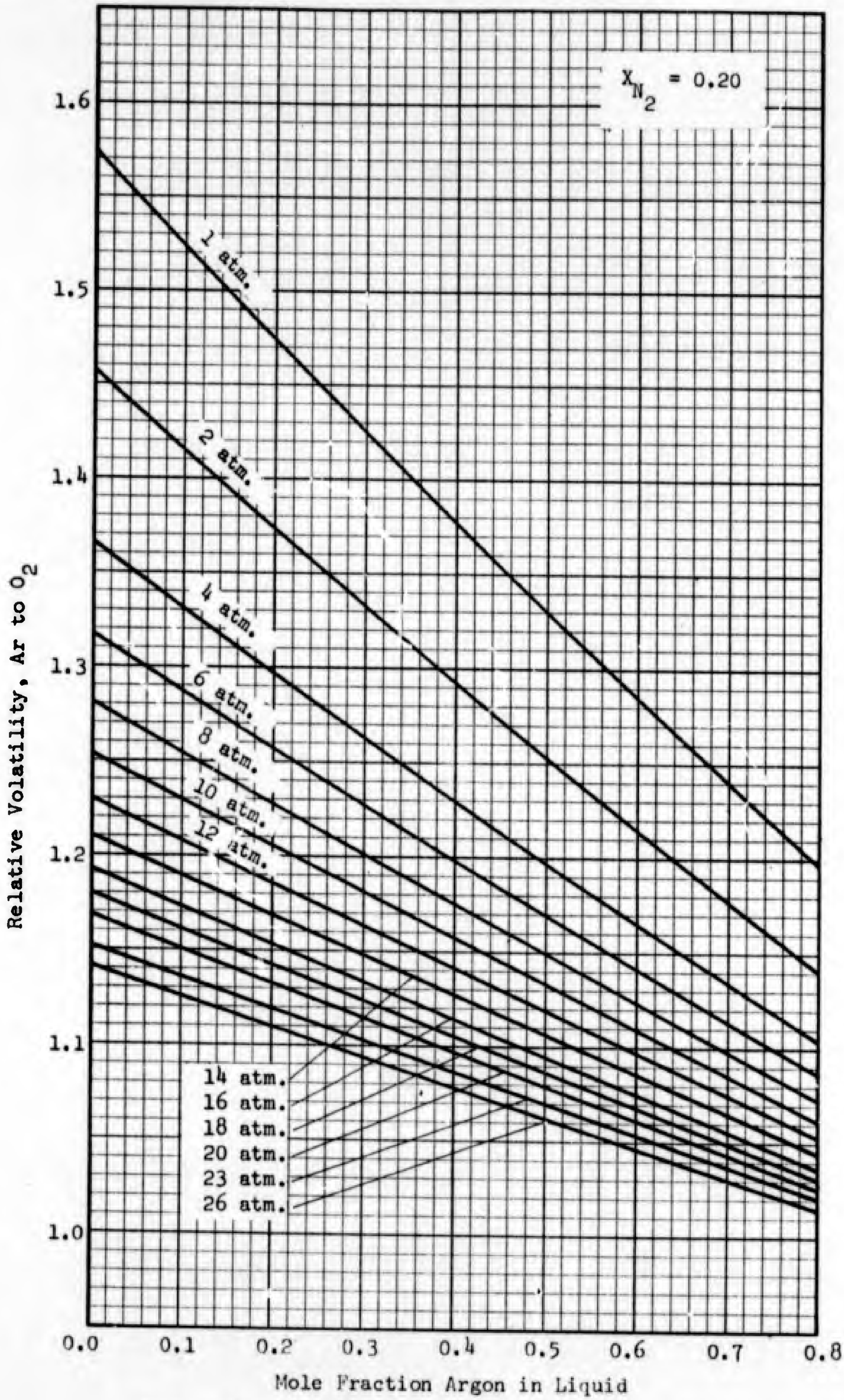


Figure 125. Relative Volatility of Argon to Oxygen.

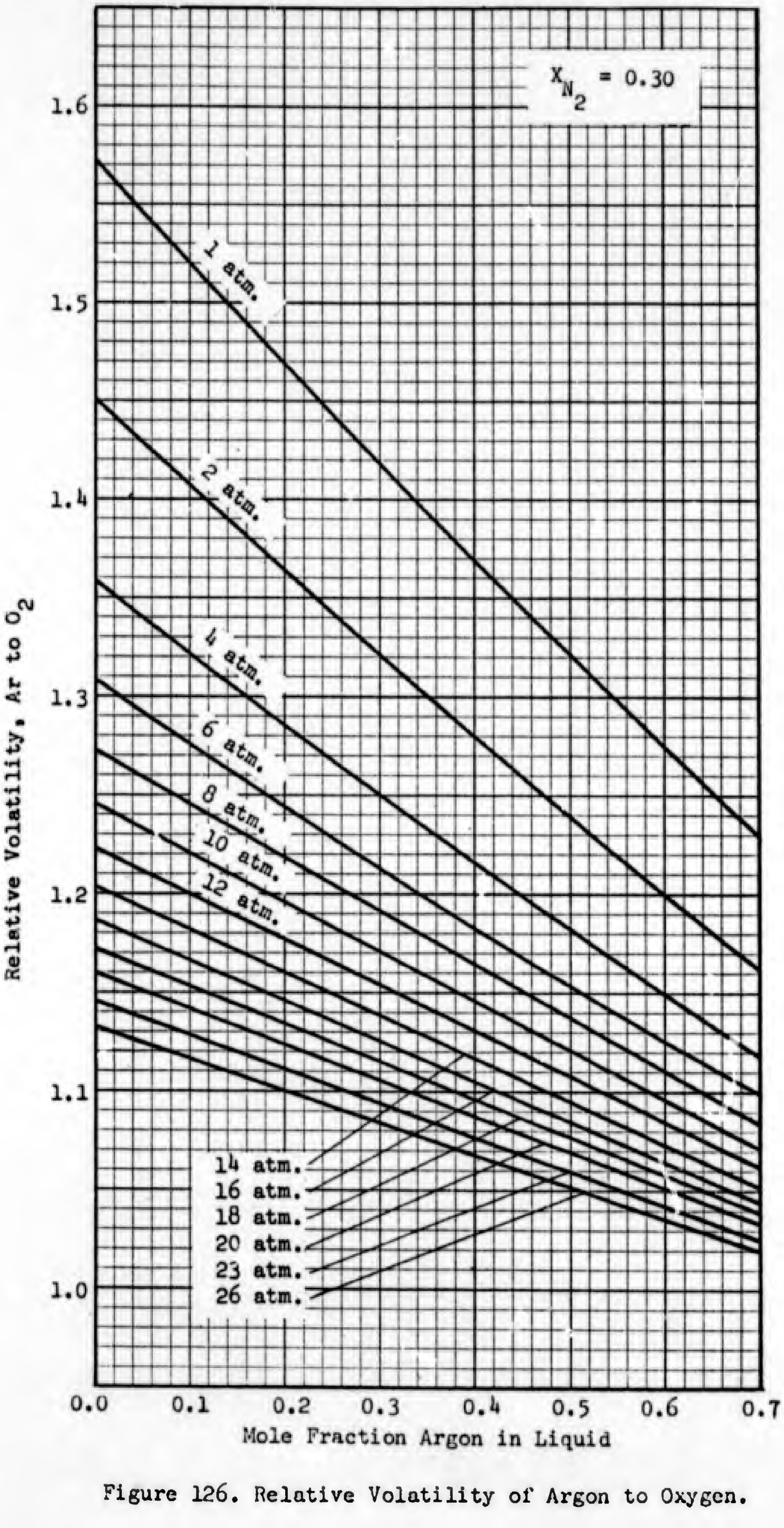


Figure 126. Relative Volatility of Argon to Oxygen.

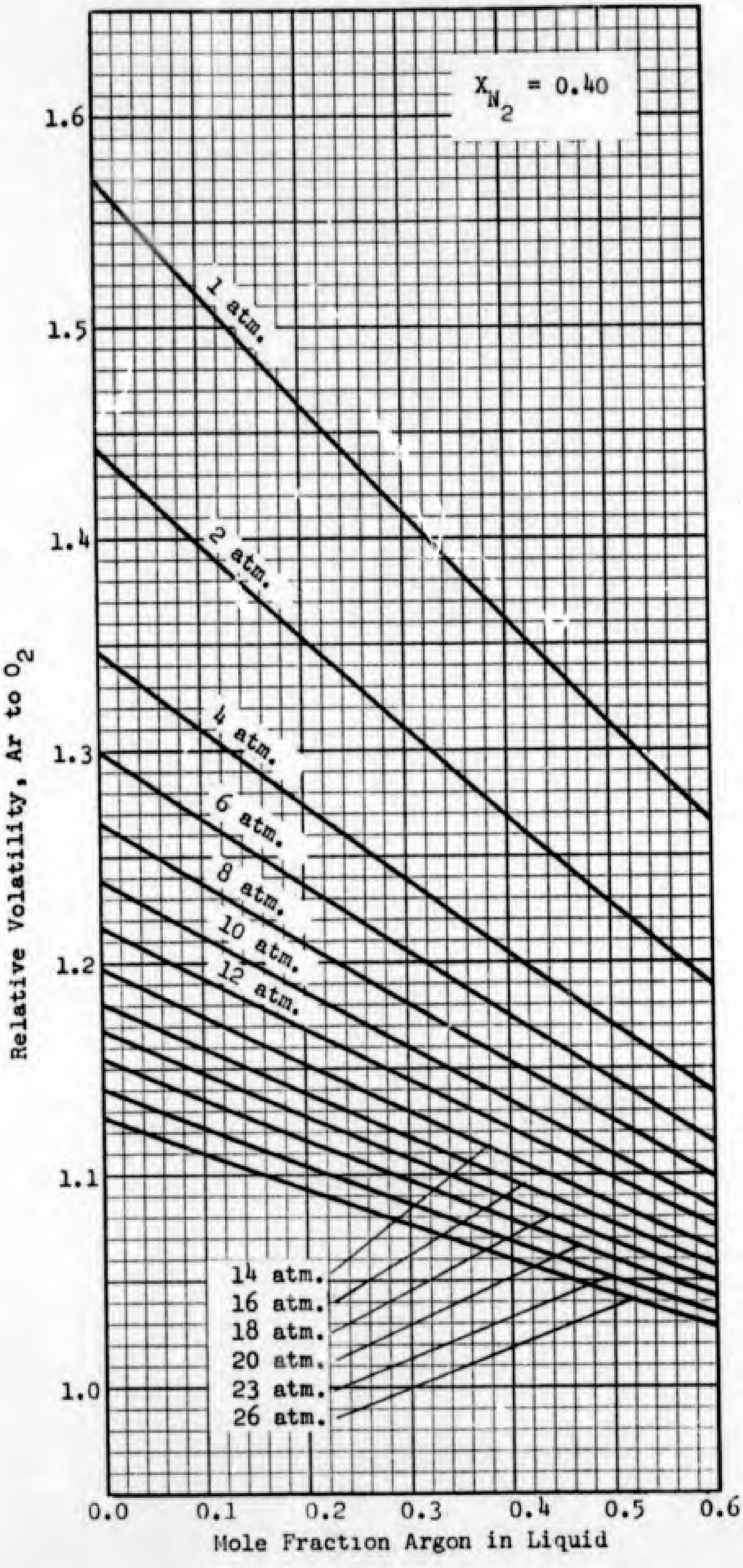


Figure 127. Relative Volatility of Argon to Oxygen.

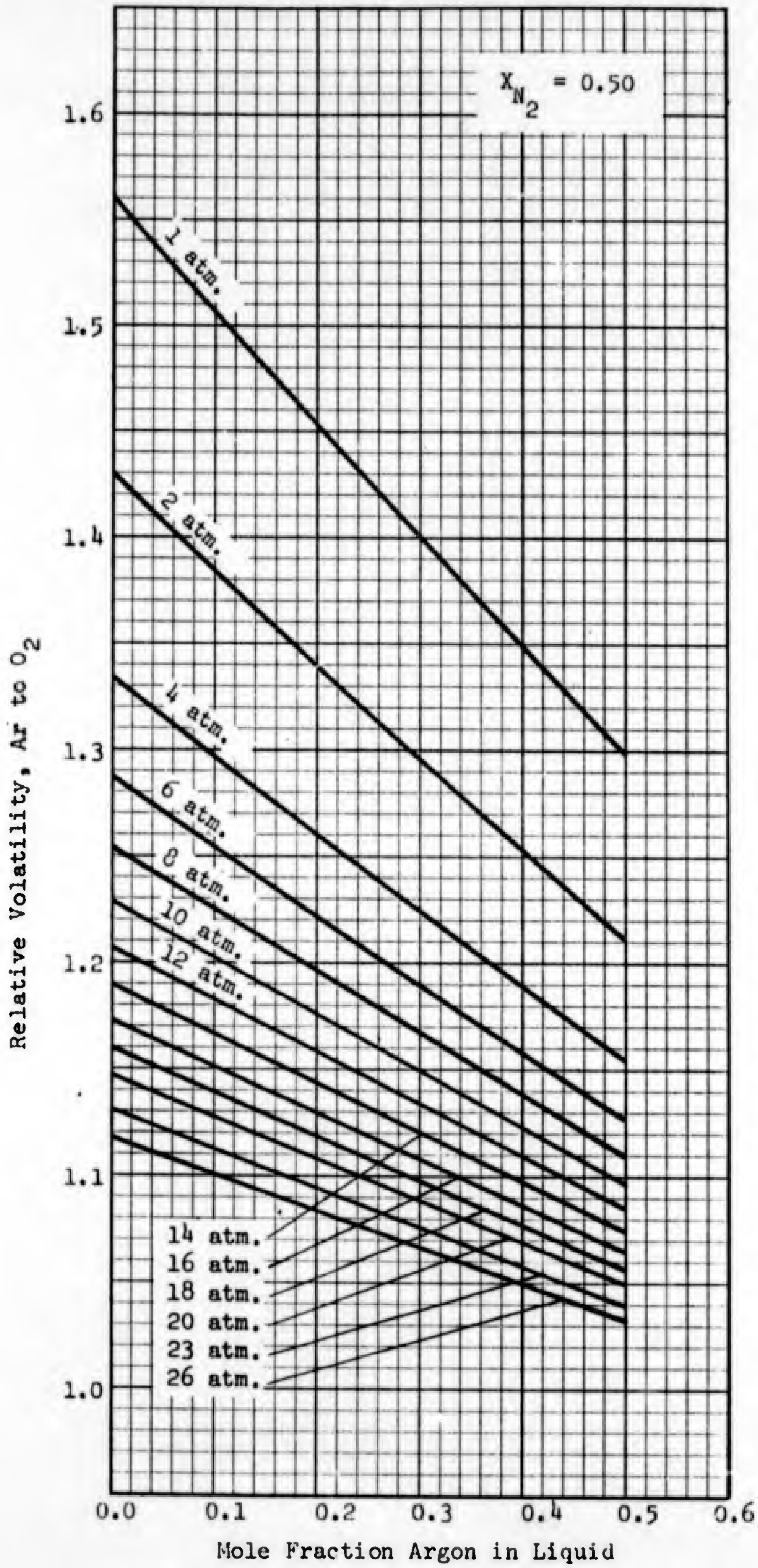


Figure 128. Relative Volatility of Argon to Oxygen.

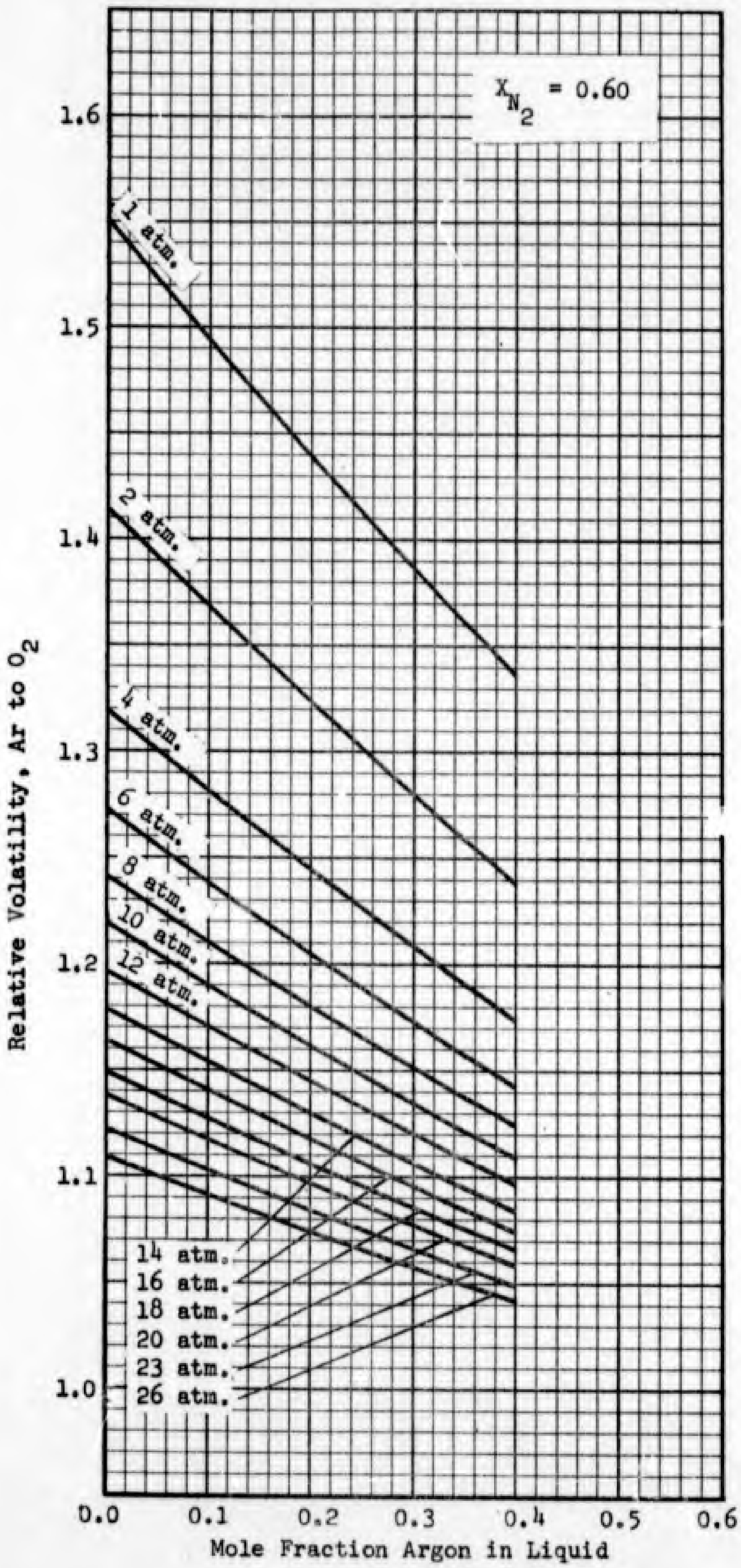


Figure 129. Relative Volatility of Argon to Oxygen.

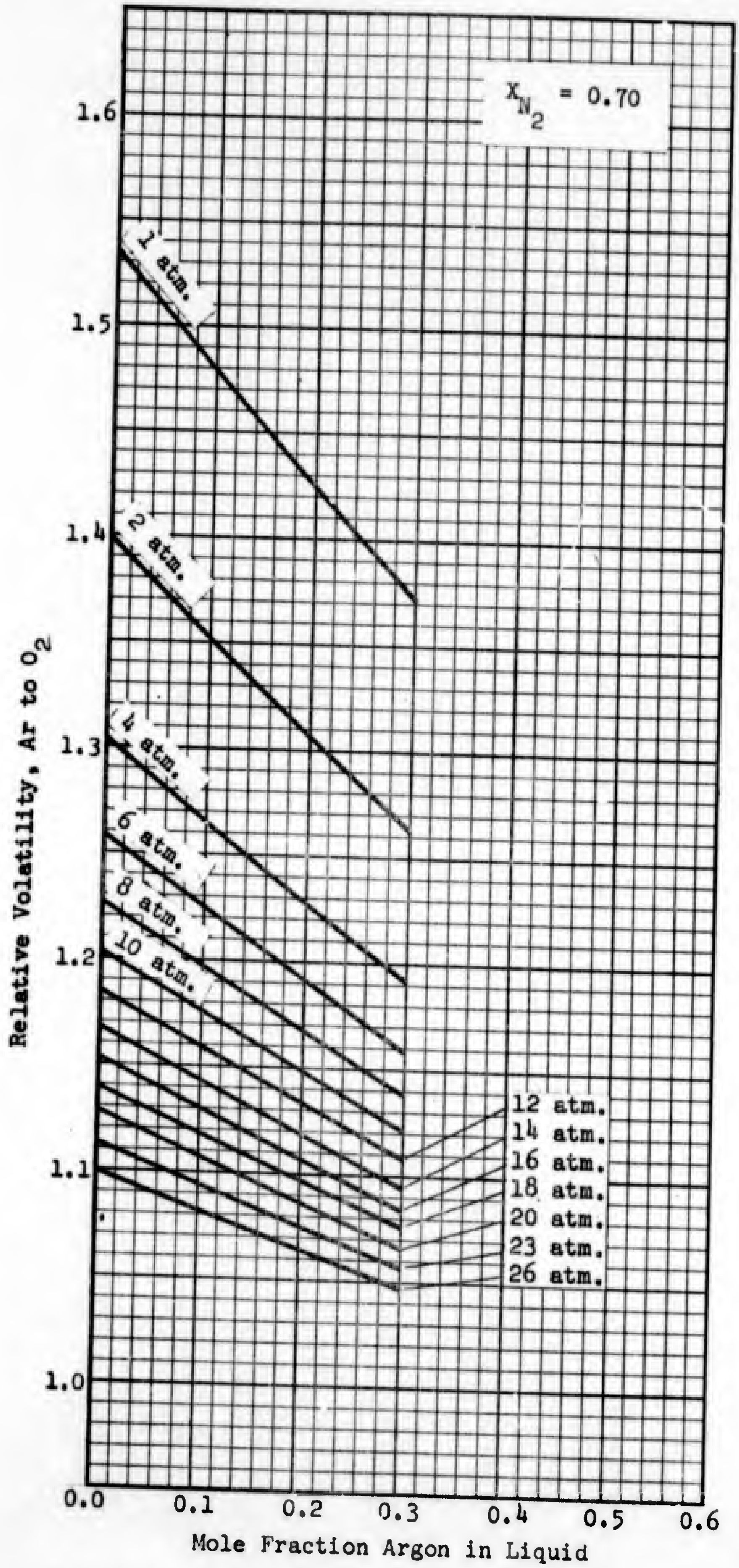


Figure 130. Relative Volatility of Argon to Oxygen.

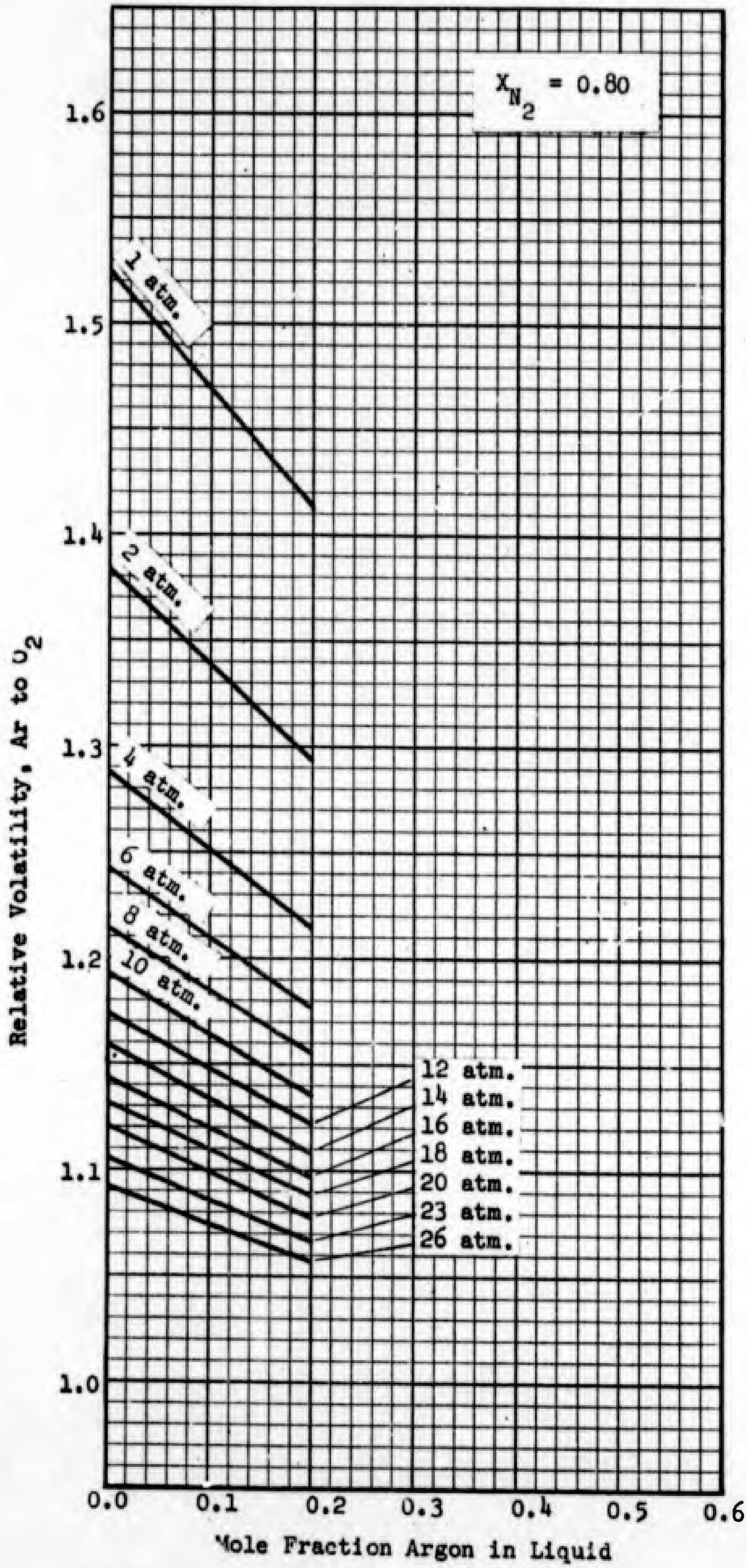


Figure 131. Relative Volatility of Argon to Oxygen.

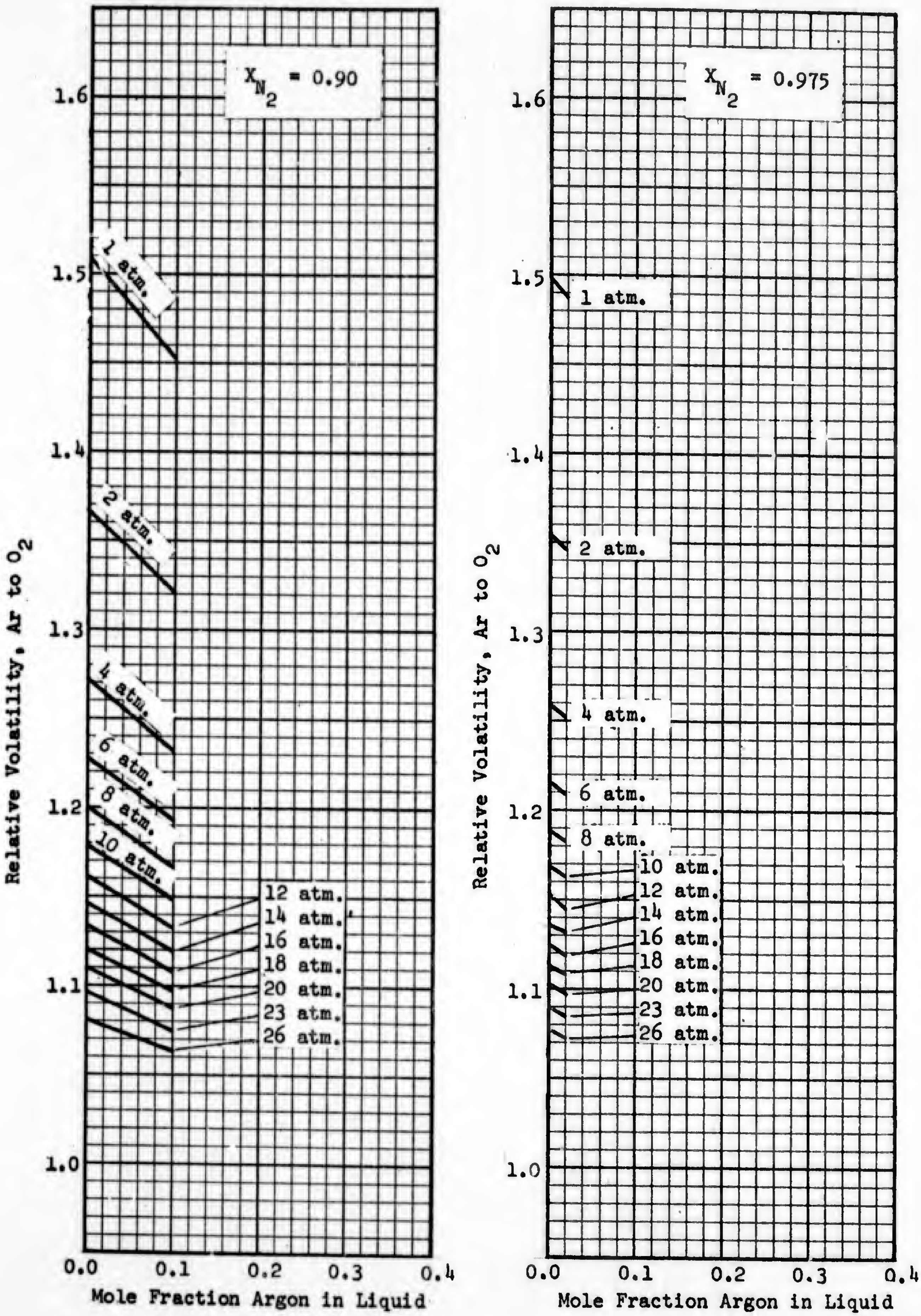


Figure 132. Relative Volatility of Argon to Oxygen.

D. <u>Relative Volatility of Argon to Nitrogen, Binary System</u>

The graph to follow presents the relative volatility of argon to nitrogen in the binary system along selected isobars.

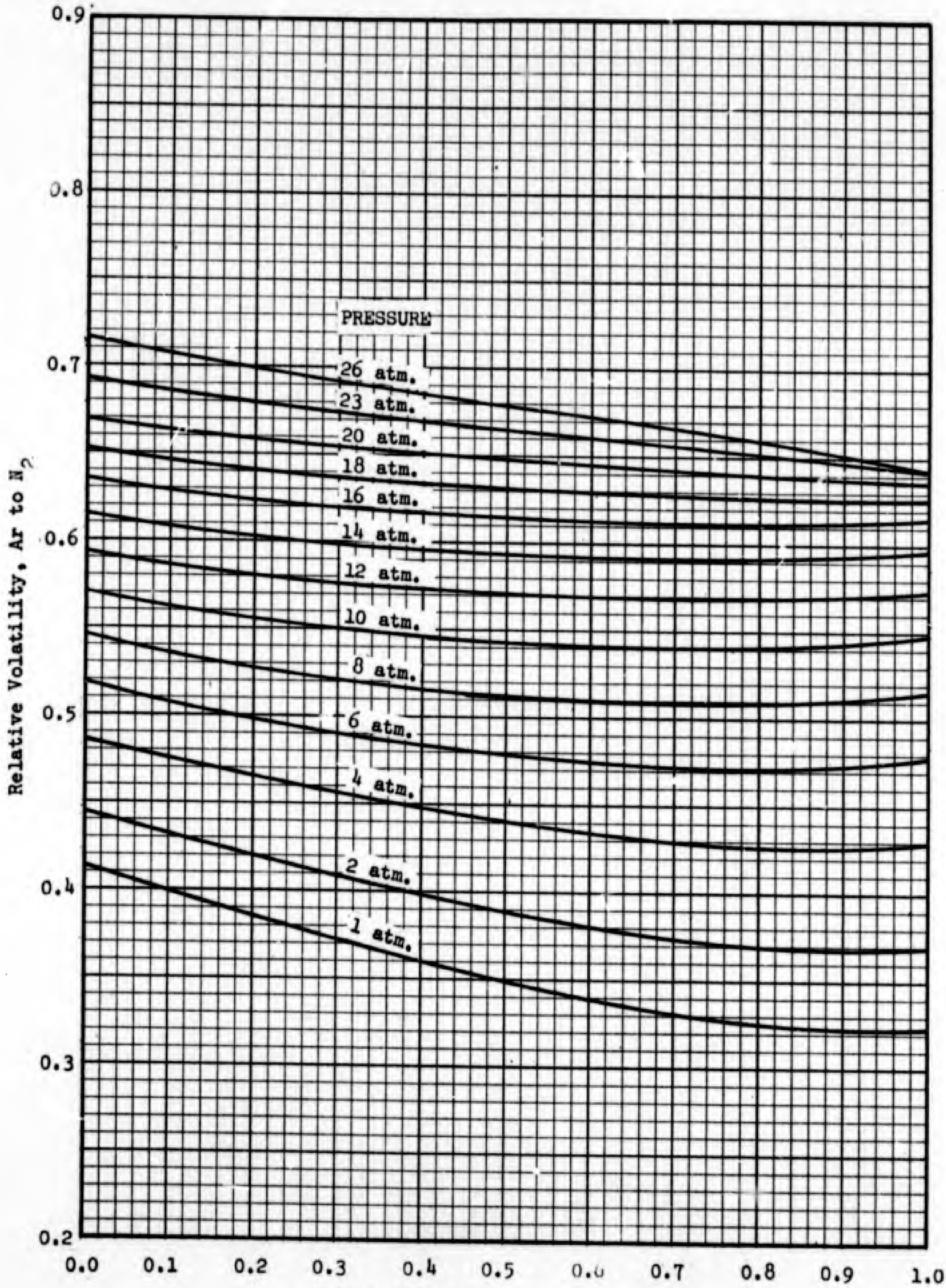


Figure 133. Relative Volatility of Argon to Nitrogen with no Oxygen present in the System.

E. Relative Volatility of Argon to Oxygen, Binary System

The graph to follow presents the relative volatility of argon to oxygen in the binary system along selected isobars.

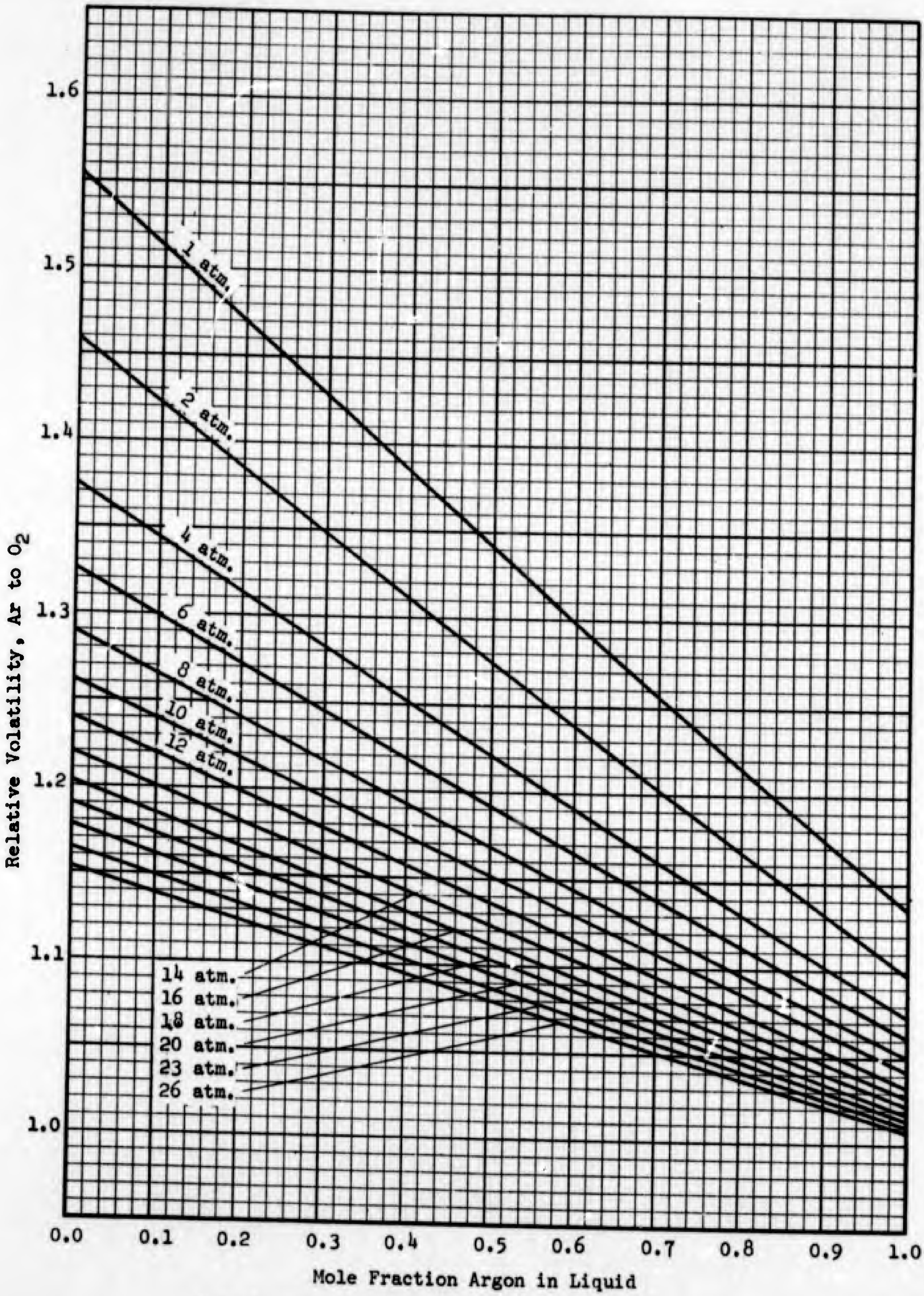


Figure 134. Relative Volatility of Argon to Oxygen with no Nitrogen present in the System.

F. Pressure Activity Coefficients

The 39 graphs to follow present the pressure activity coefficients of oxygen-argon-nitrogen as a function of composition. The pressure activity coefficient is defined as

$$\gamma_{\pi i} = \frac{y_i P}{x_i P^o} \tag{53}$$

This function is best understood as expressing the deviations from Raoult's Law.

The graphs are grouped in order of component: nitrogen, argon, oxygen. Inside each group they are ordered with respect to pressure.

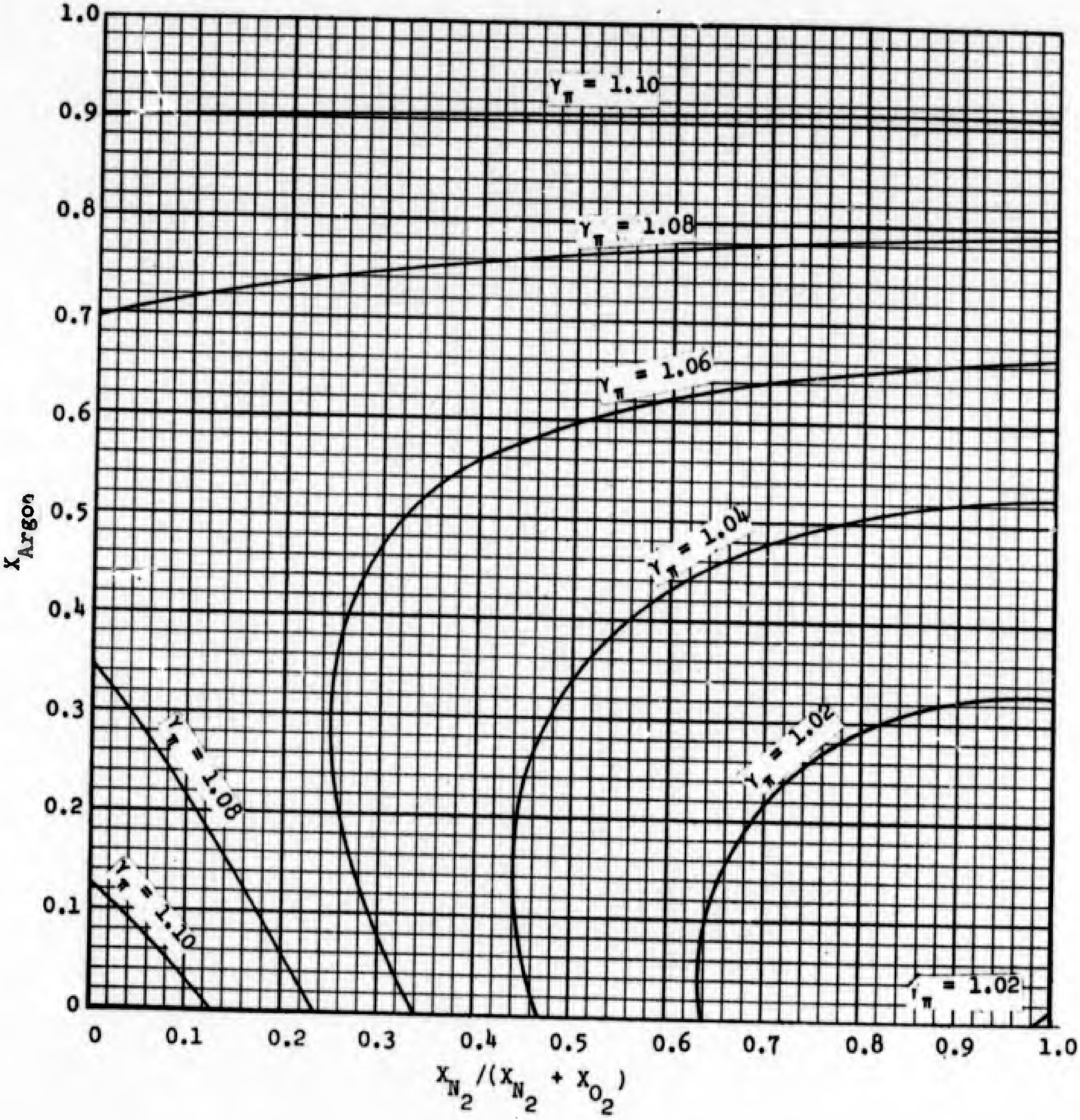


Figure 135. Nitrogen Pressure Activity Coefficients, 1 Atmosphere

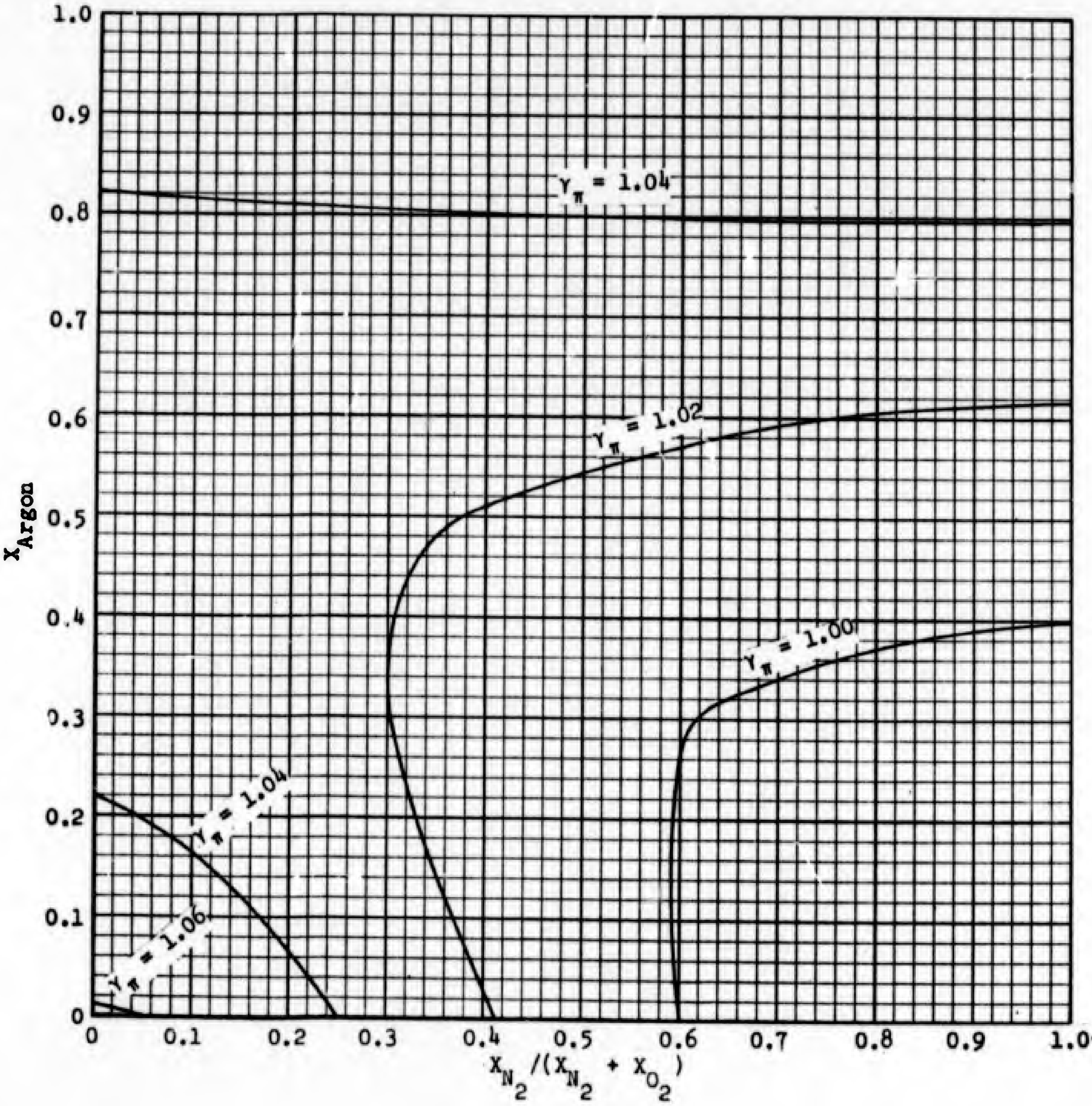


Figure 136. Nitrogen Pressure Activity Coefficients, 2 Atmospheres

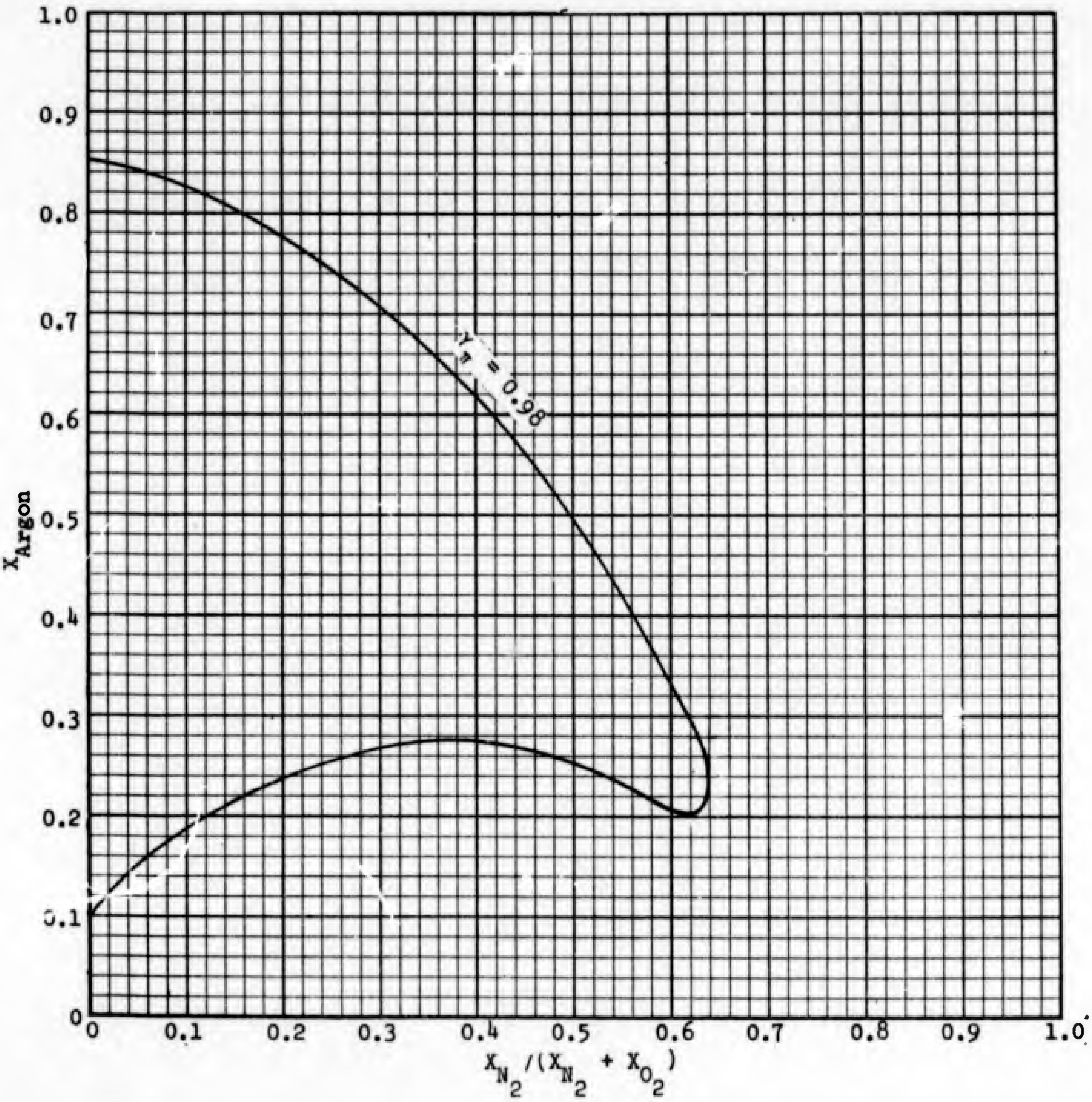


Figure 137. Nitrogen Pressure Activity Coefficients, 4 Atmospheres

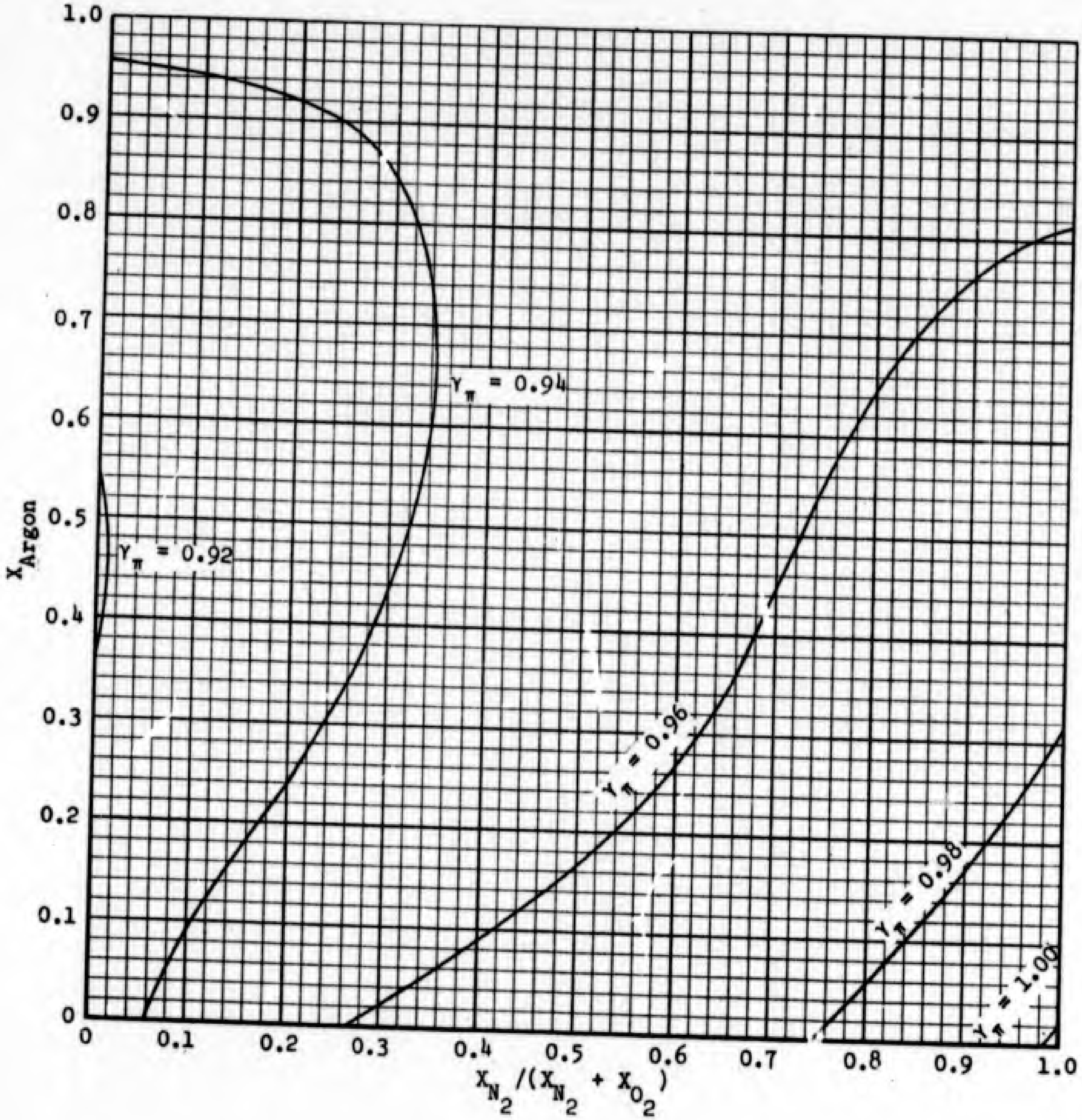


Figure 138. Nitrogen Pressure Activity Coefficients, 6 Atmospheres.

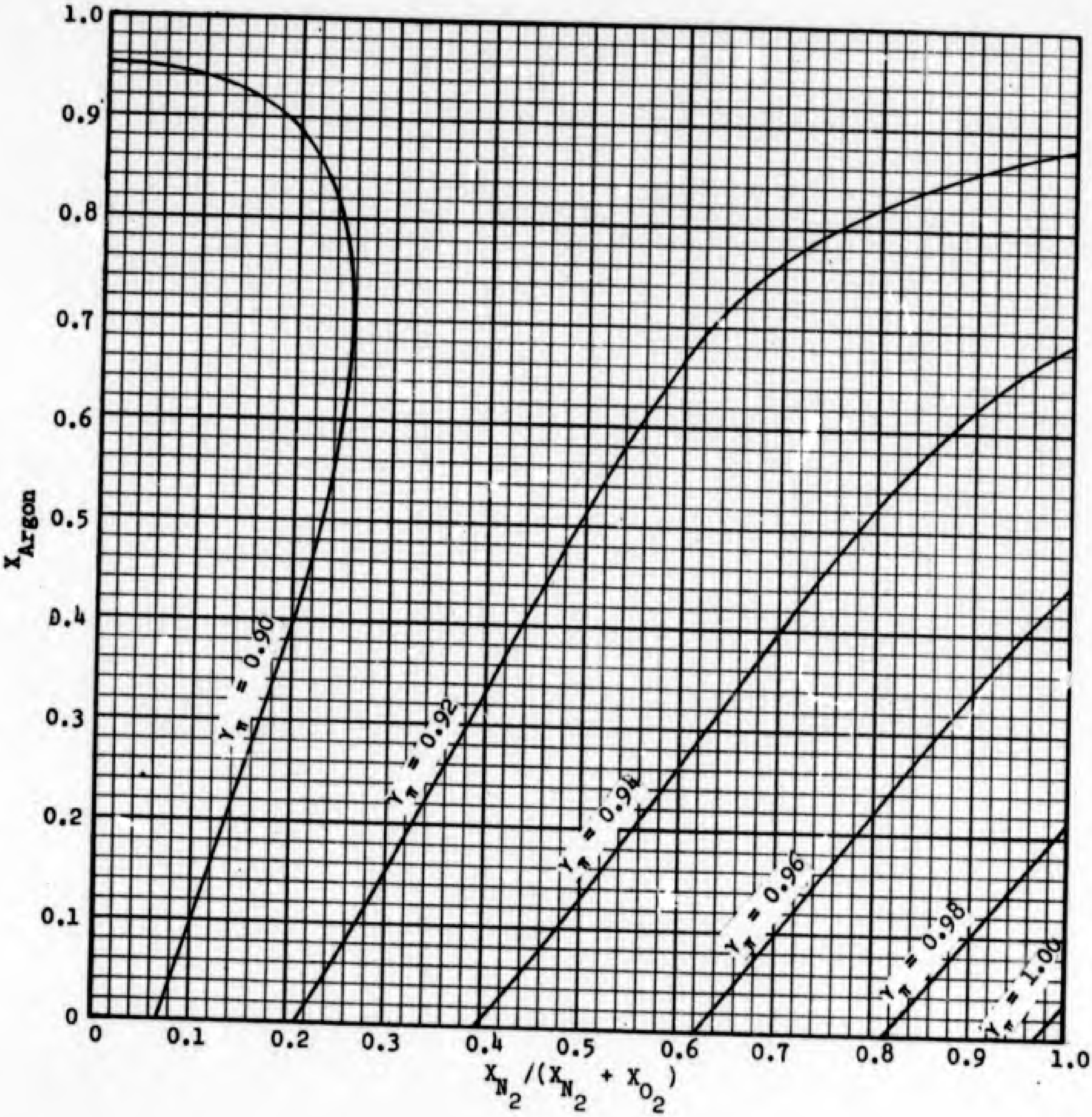


Figure 139. Nitrogen Pressure Activity Coefficients, 8 Atmospheres.

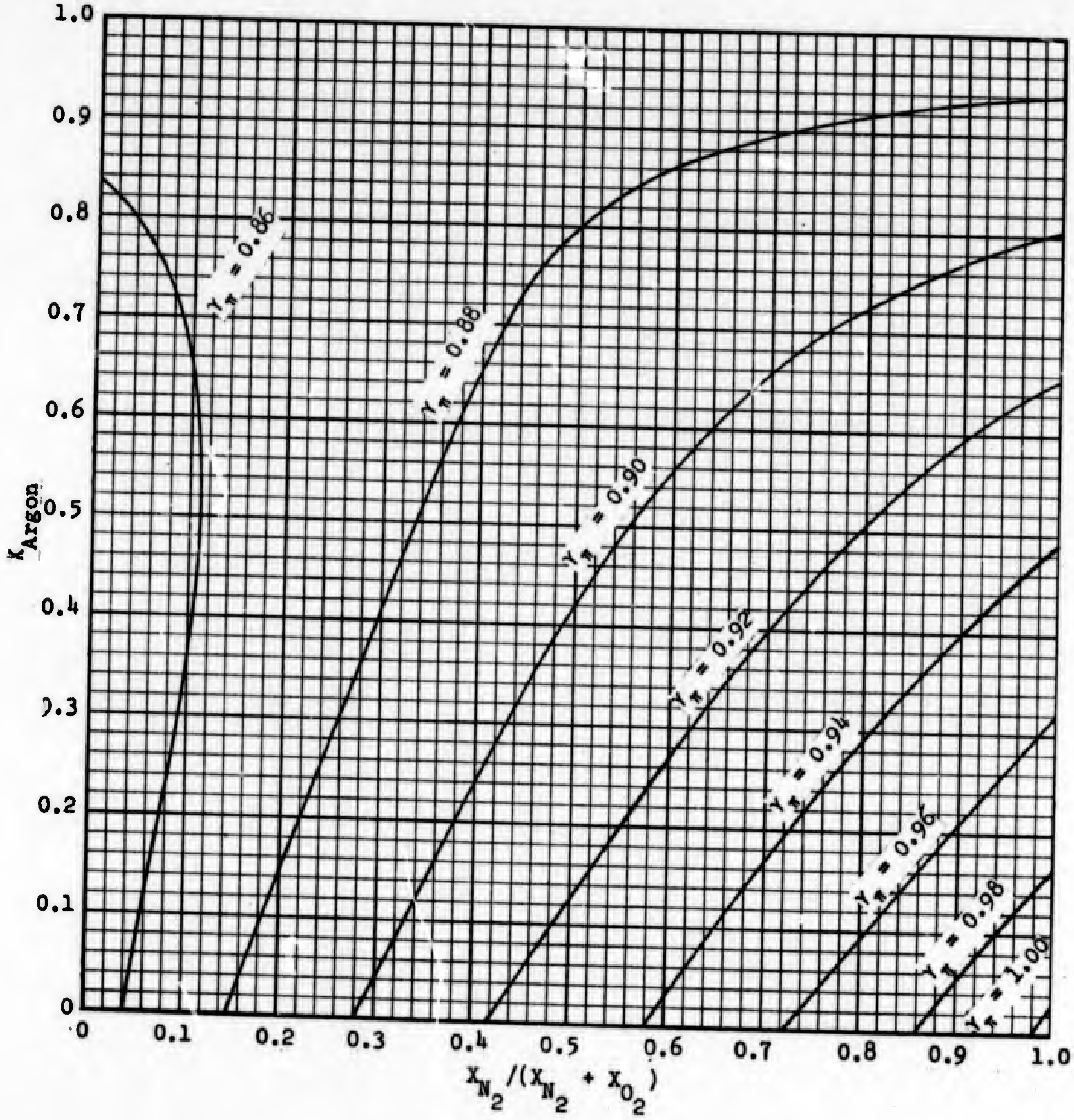


Figure 1l0. Nitrogen Pressure Activity Coefficients, 10 Atmospheres.

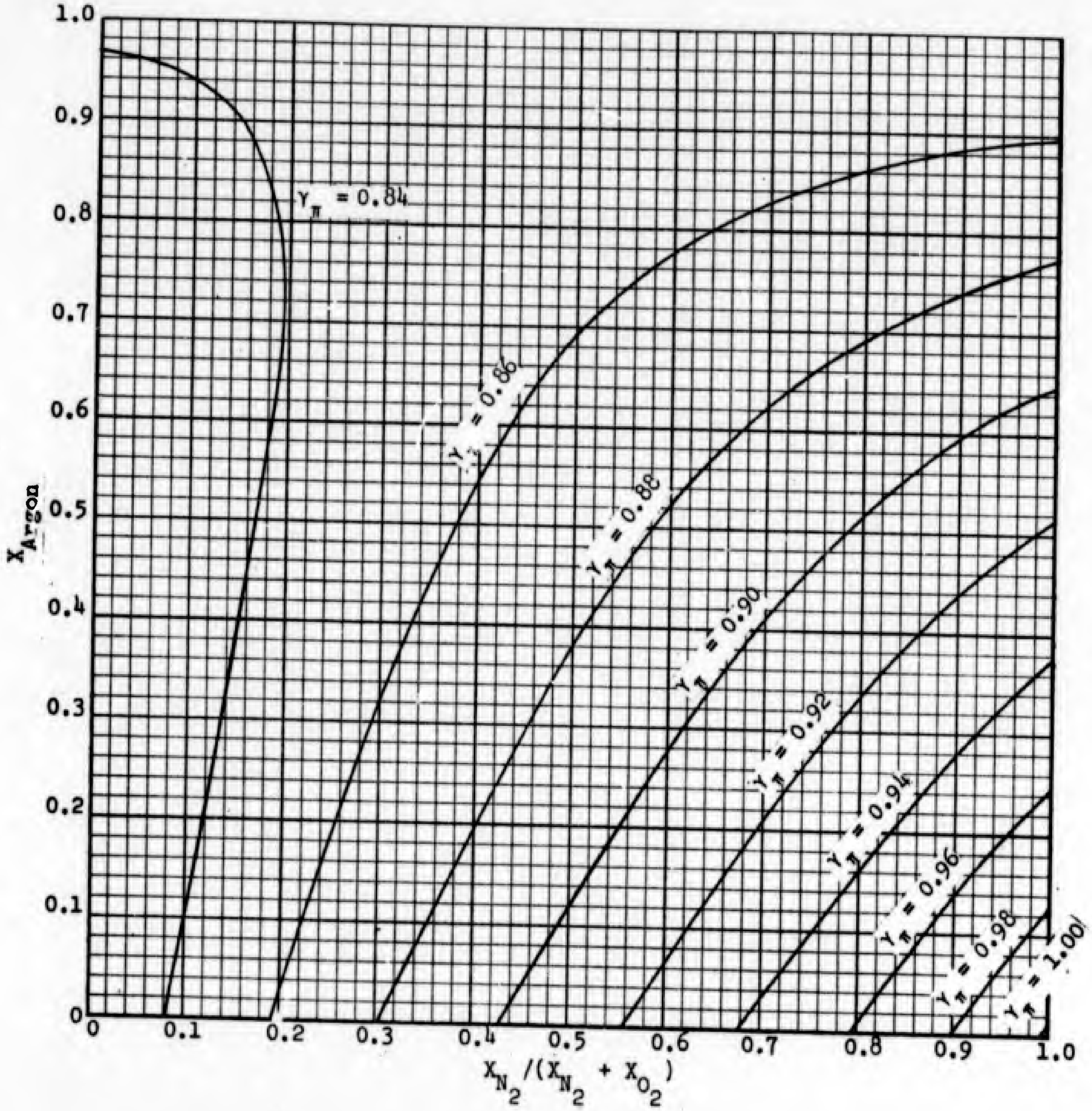


Figure 141. Nitrogen Pressure Activity Coefficients, 12 Atmospheres.

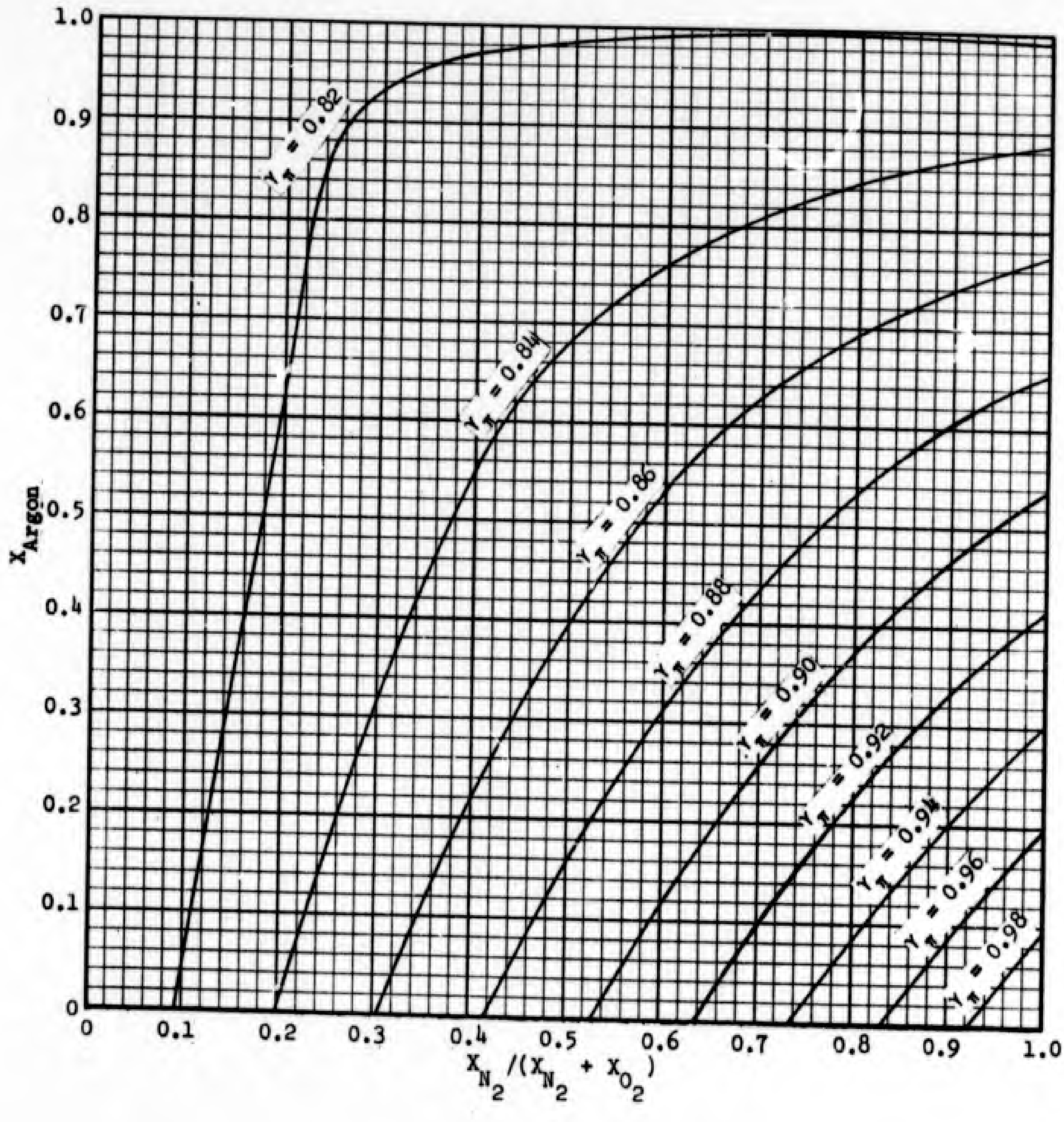


Figure 142. Nitrogen Pressure Activity Coefficients, 14 Atmospheres.

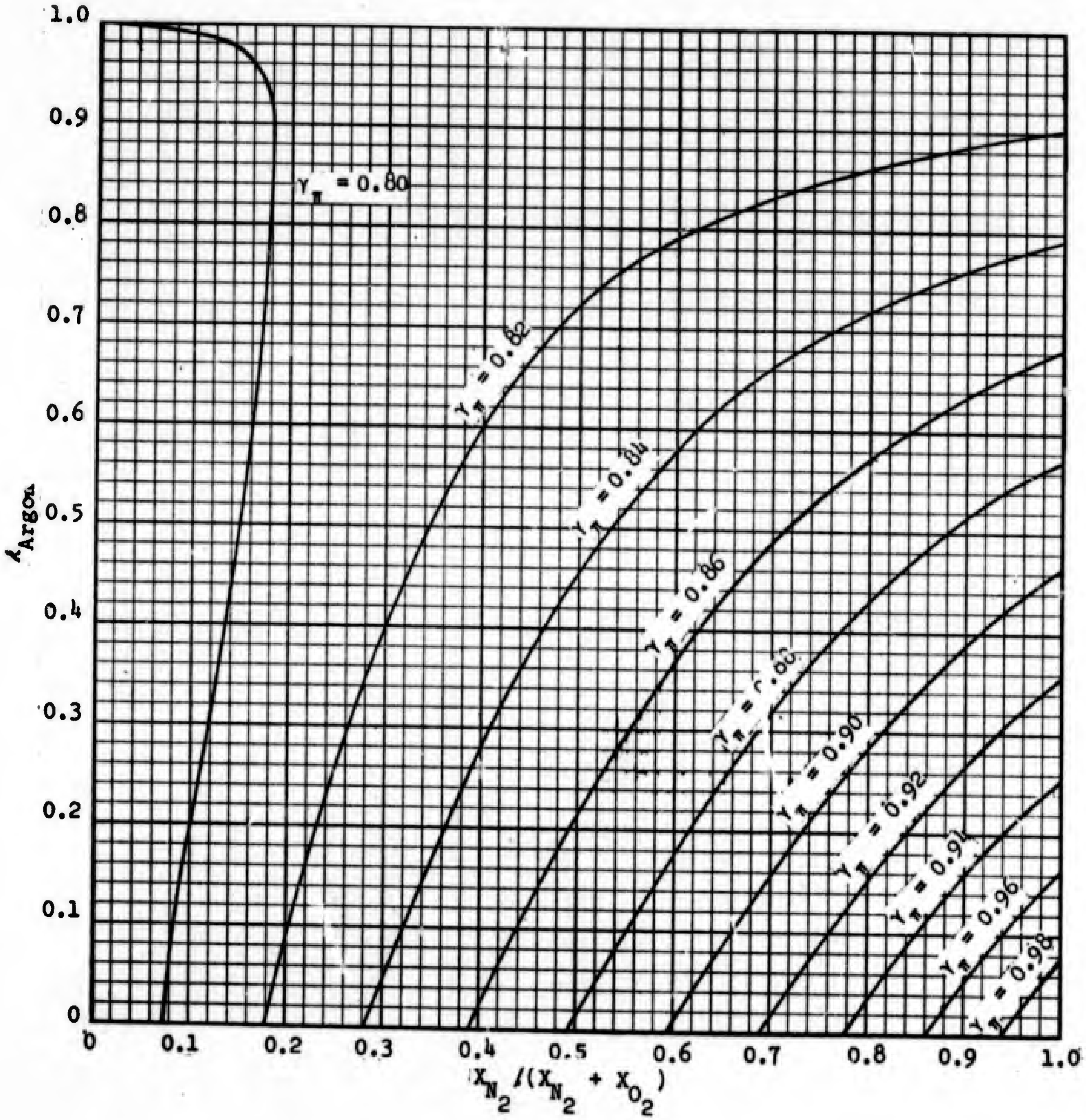


Figure 143. Nitrogen Pressure Activity Coefficients, 16 Atmospheres.

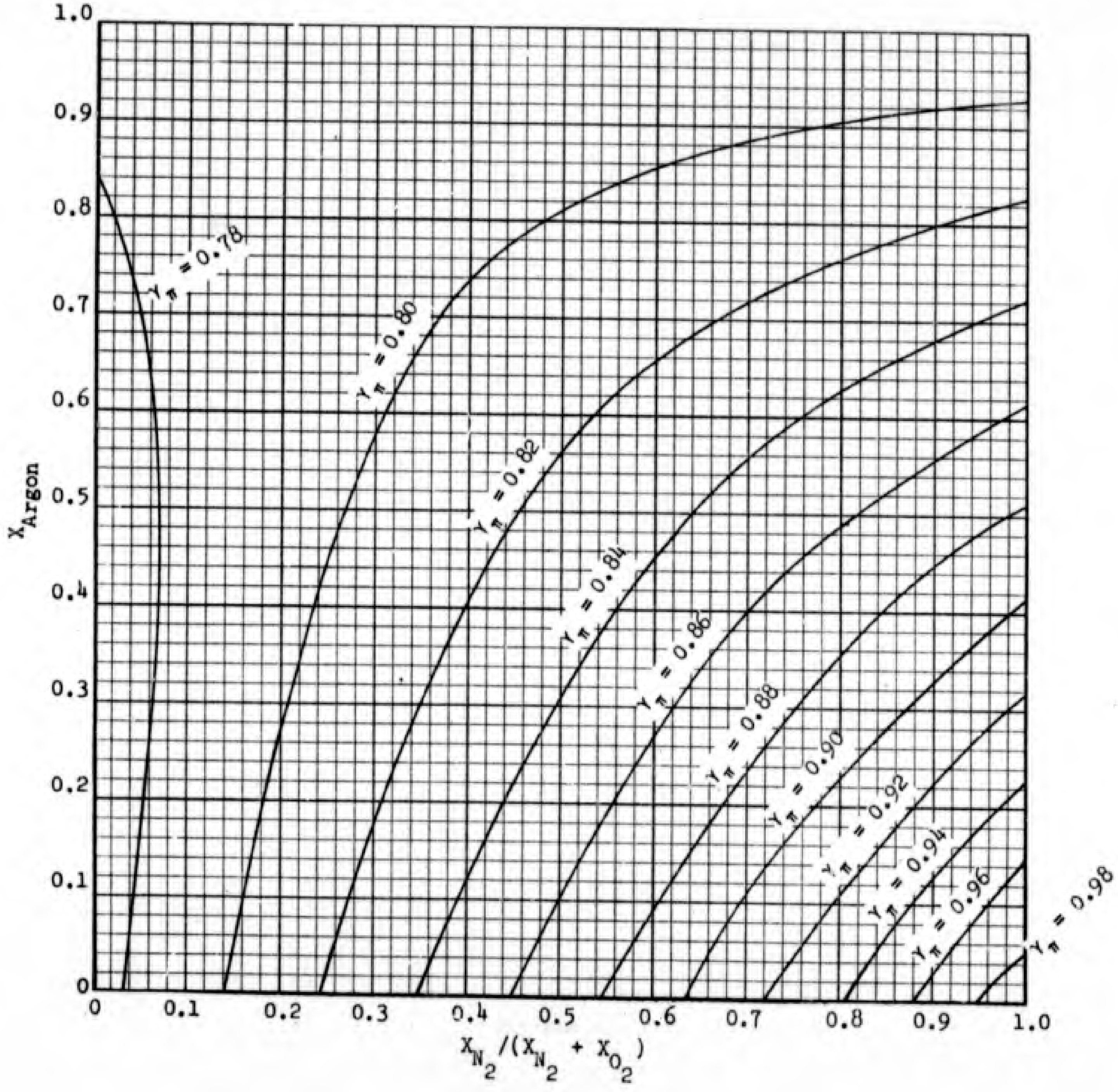


Figure 144. Nitrogen Pressure Activity Coefficients, 18 Atmospheres.

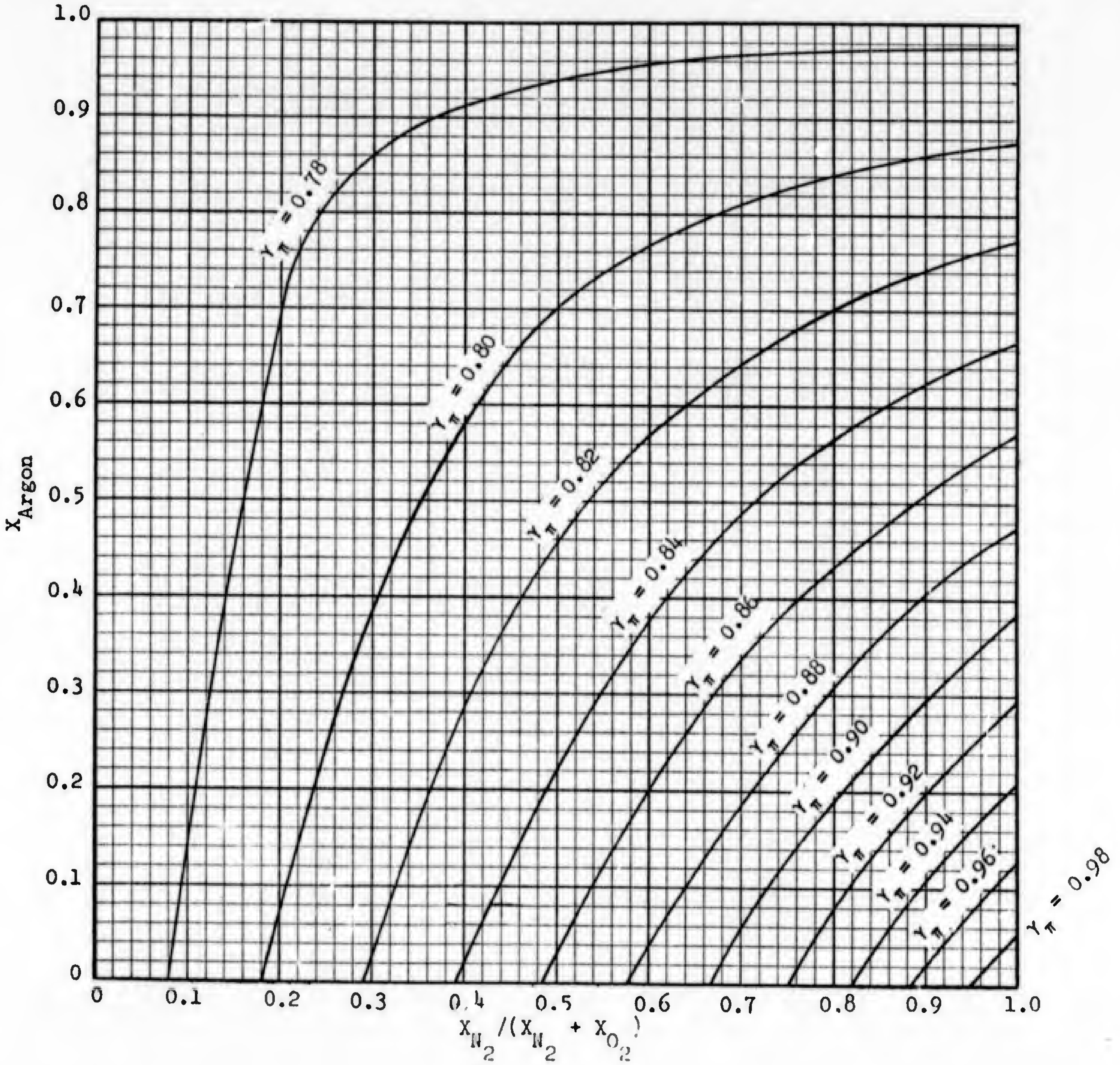


Figure 145. Nitrogen Pressure Activity Coefficients, 20 Atmospheres.

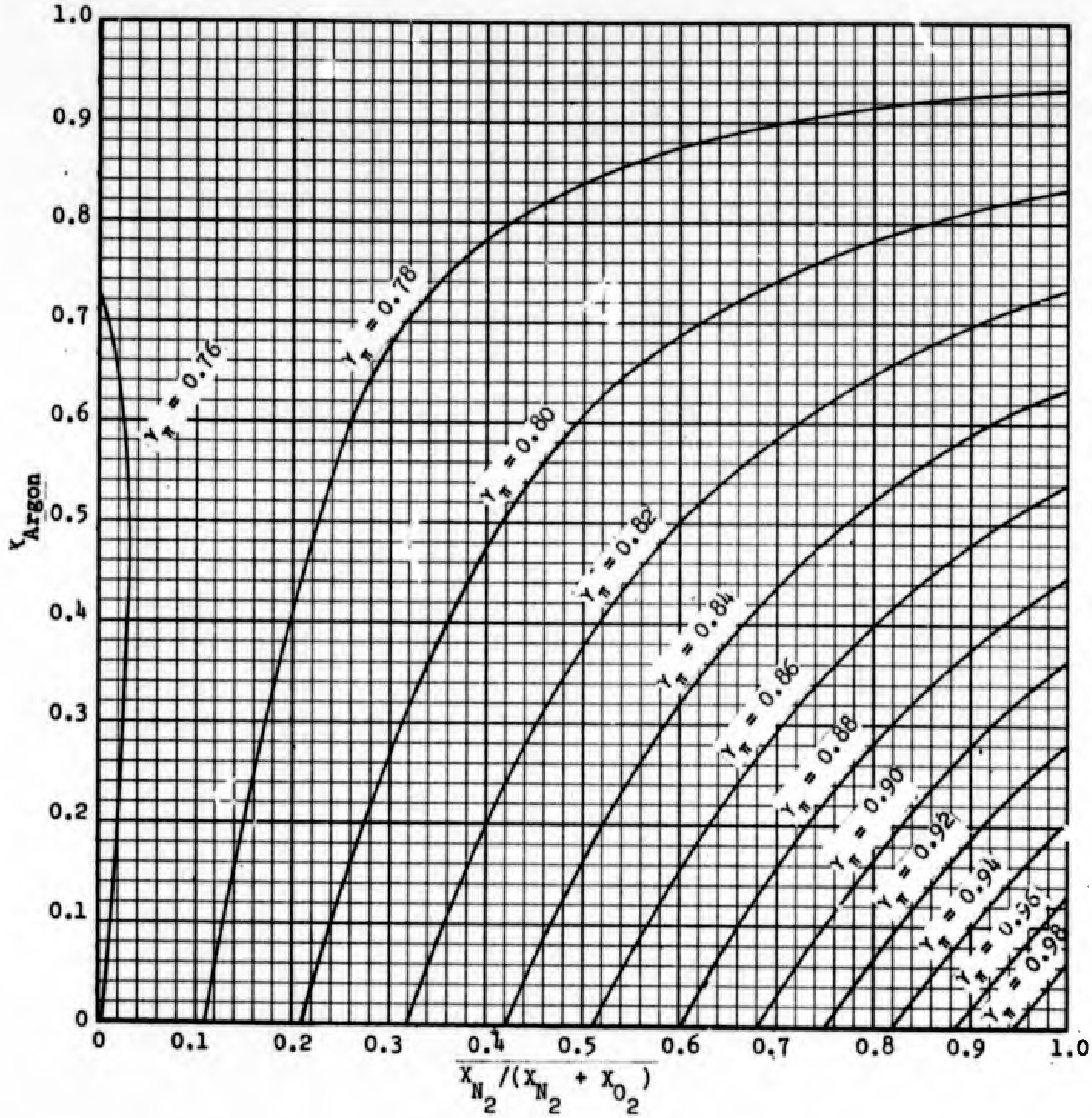


Figure 146. Nitrogen Pressure Activity Coefficients, 23 Atmospheres.

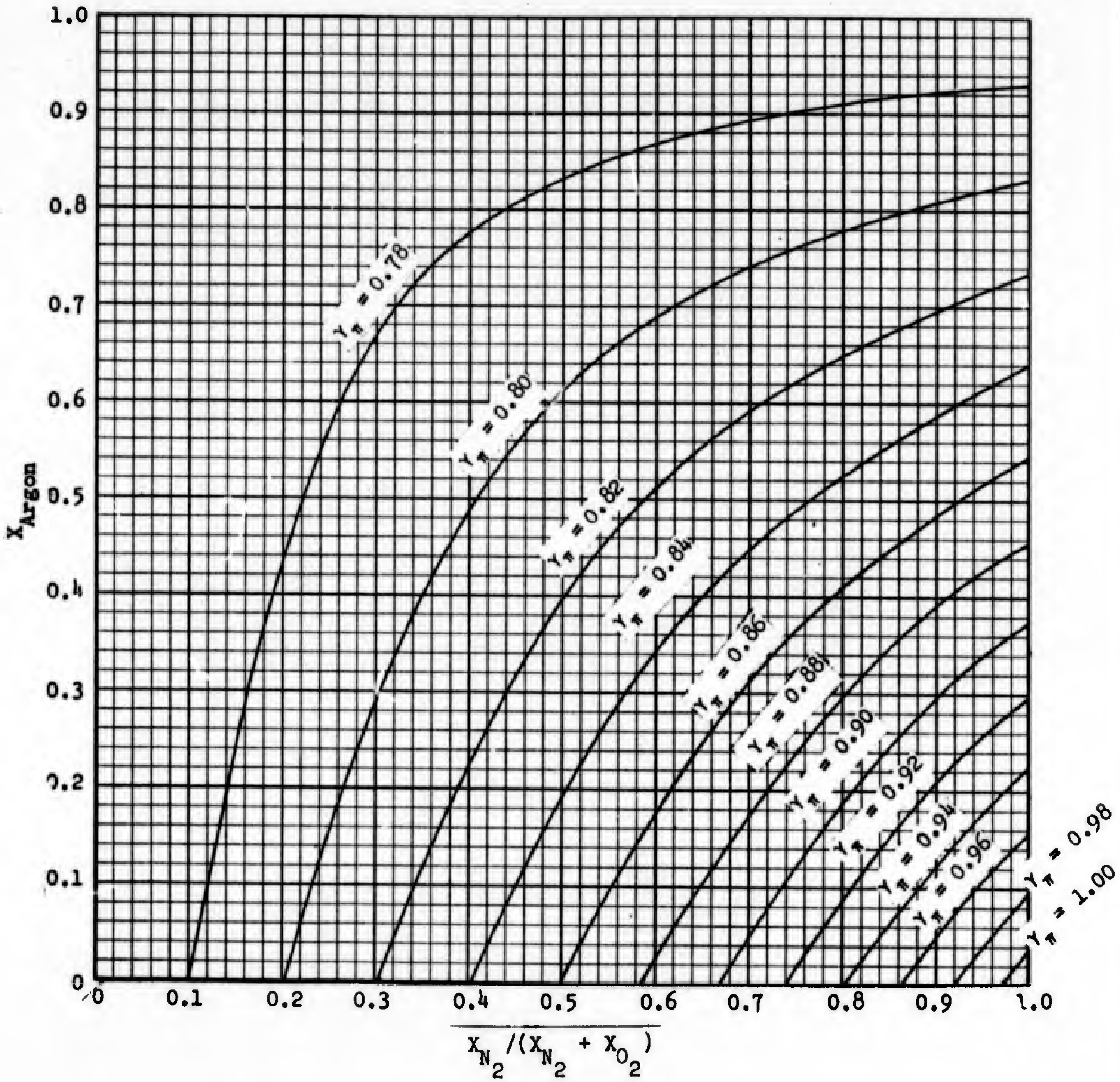


Figure 147. Nitrogen Pressure Activity Coefficients, 26 Atmospheres.

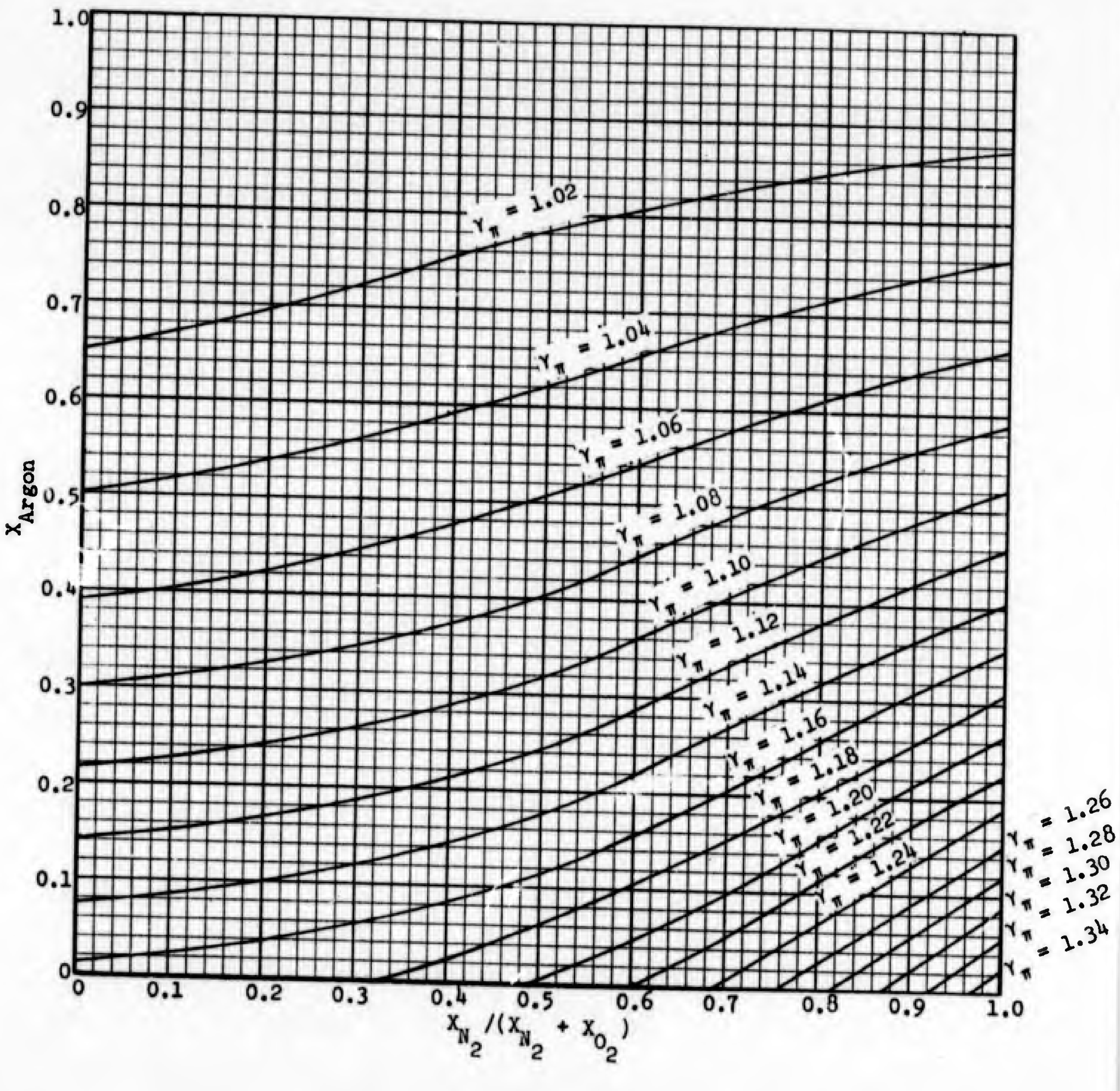


Figure 148. Argon Pressure Activity Coefficients, 1 Atmosphere.

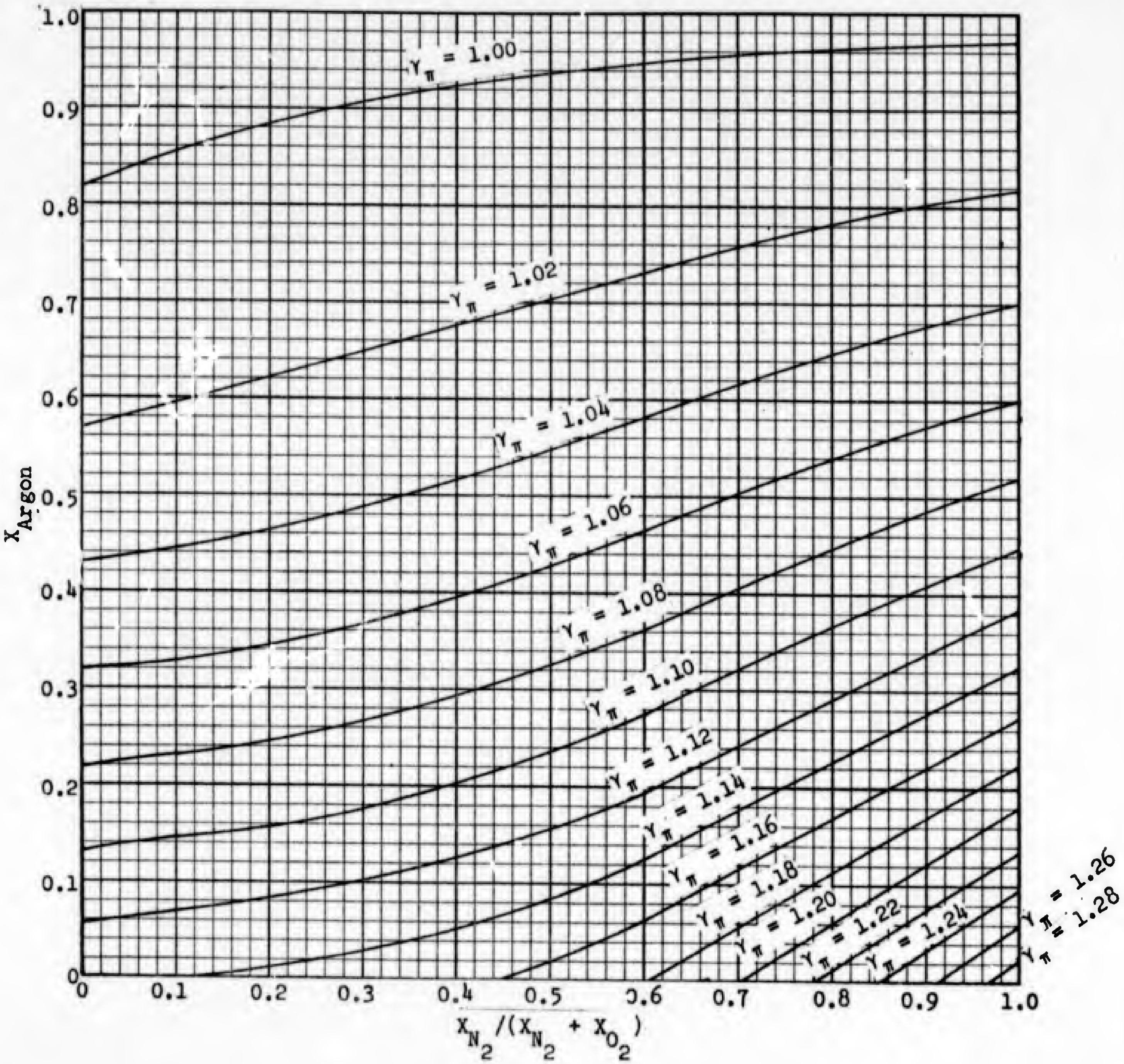


Figure 149. Argon Pressure Activity Coefficients, 2 Atmospheres.

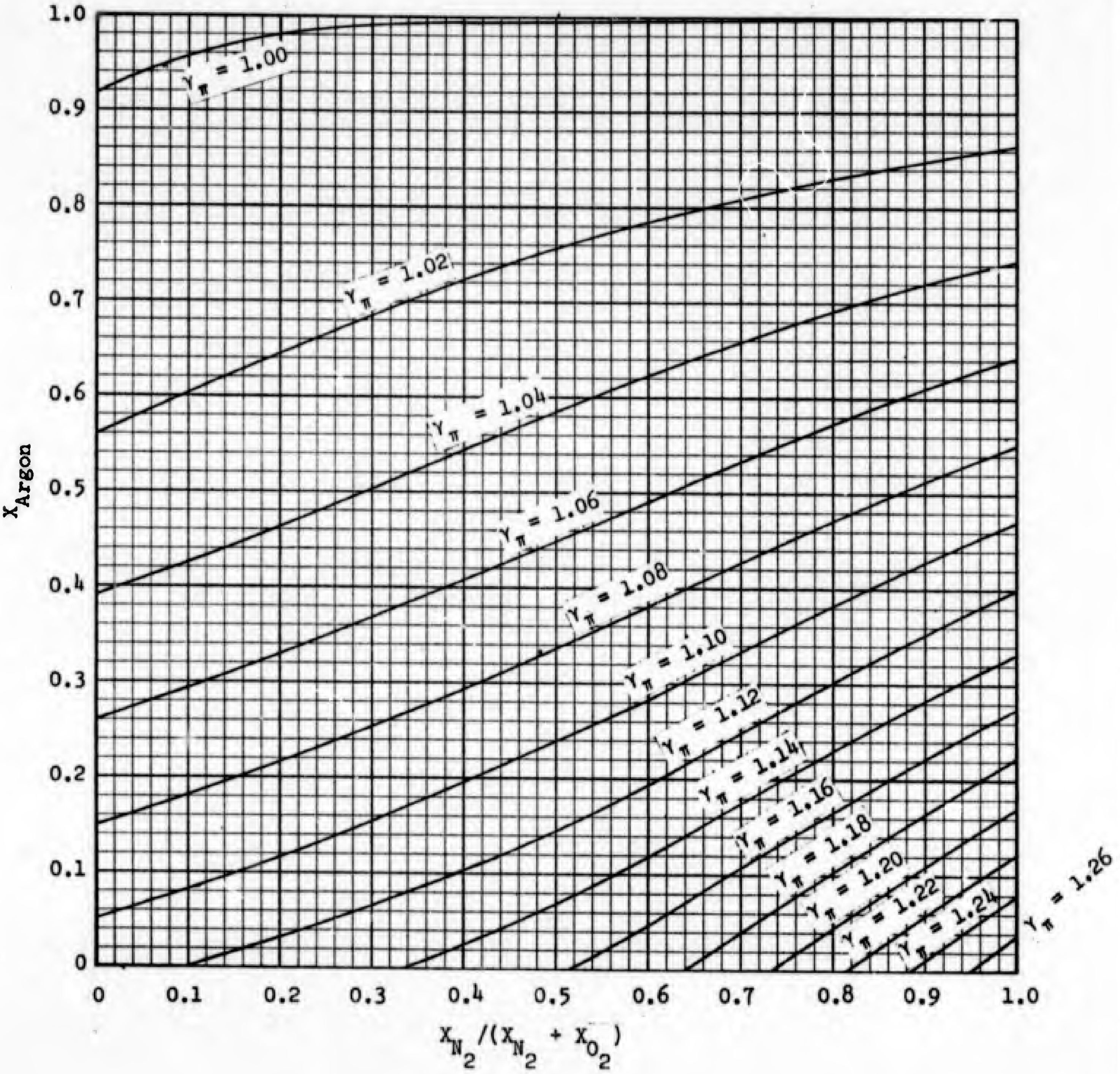


Figure 150. Argon Pressure Activity Coefficients, 4 Atmospheres.

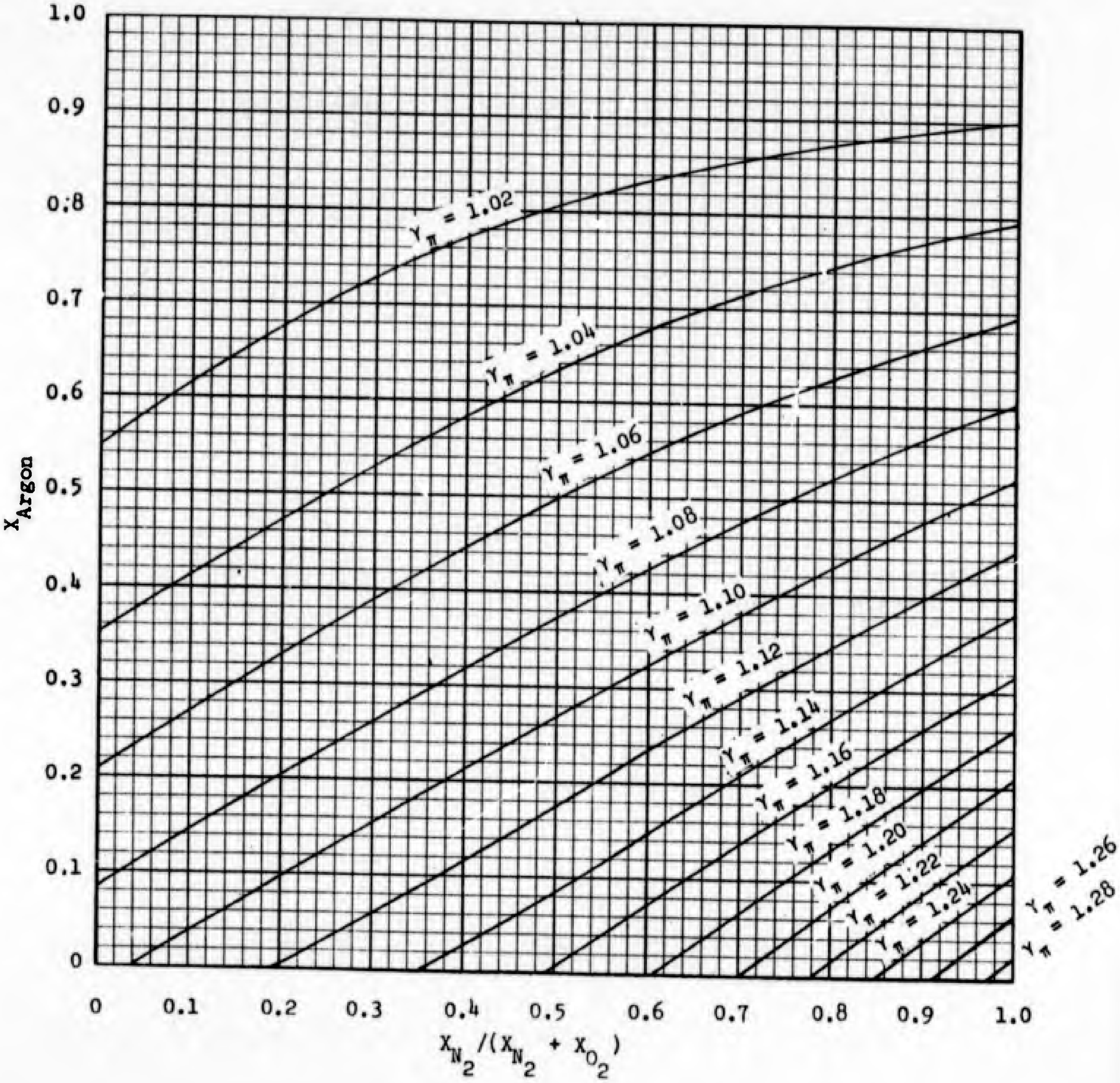


Figure 151. Argon Pressure Activity Coefficients, 6 Atmospheres.

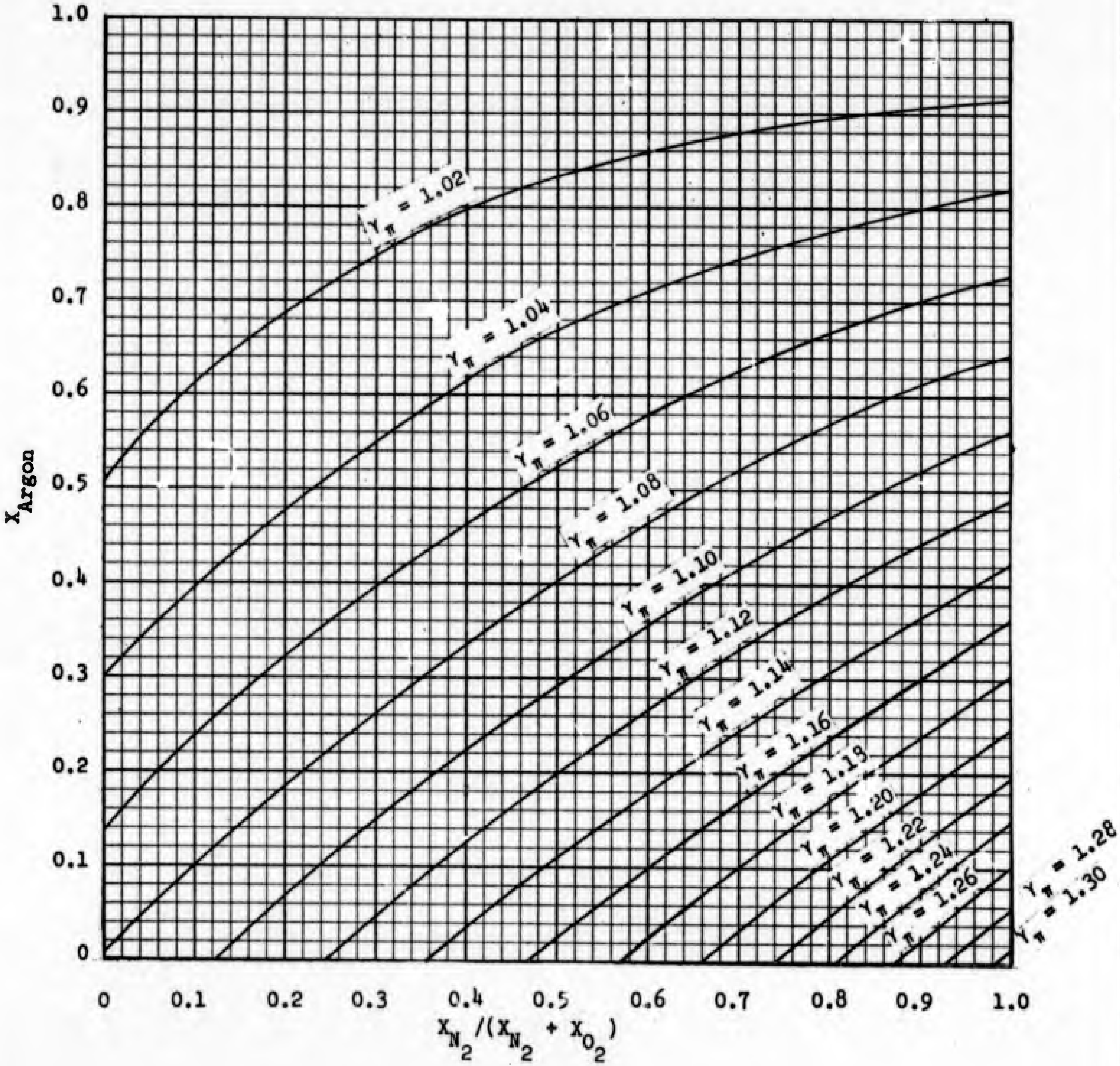


Figure 152. Argon Pressure Activity Coefficients, 8 Atmospheres.

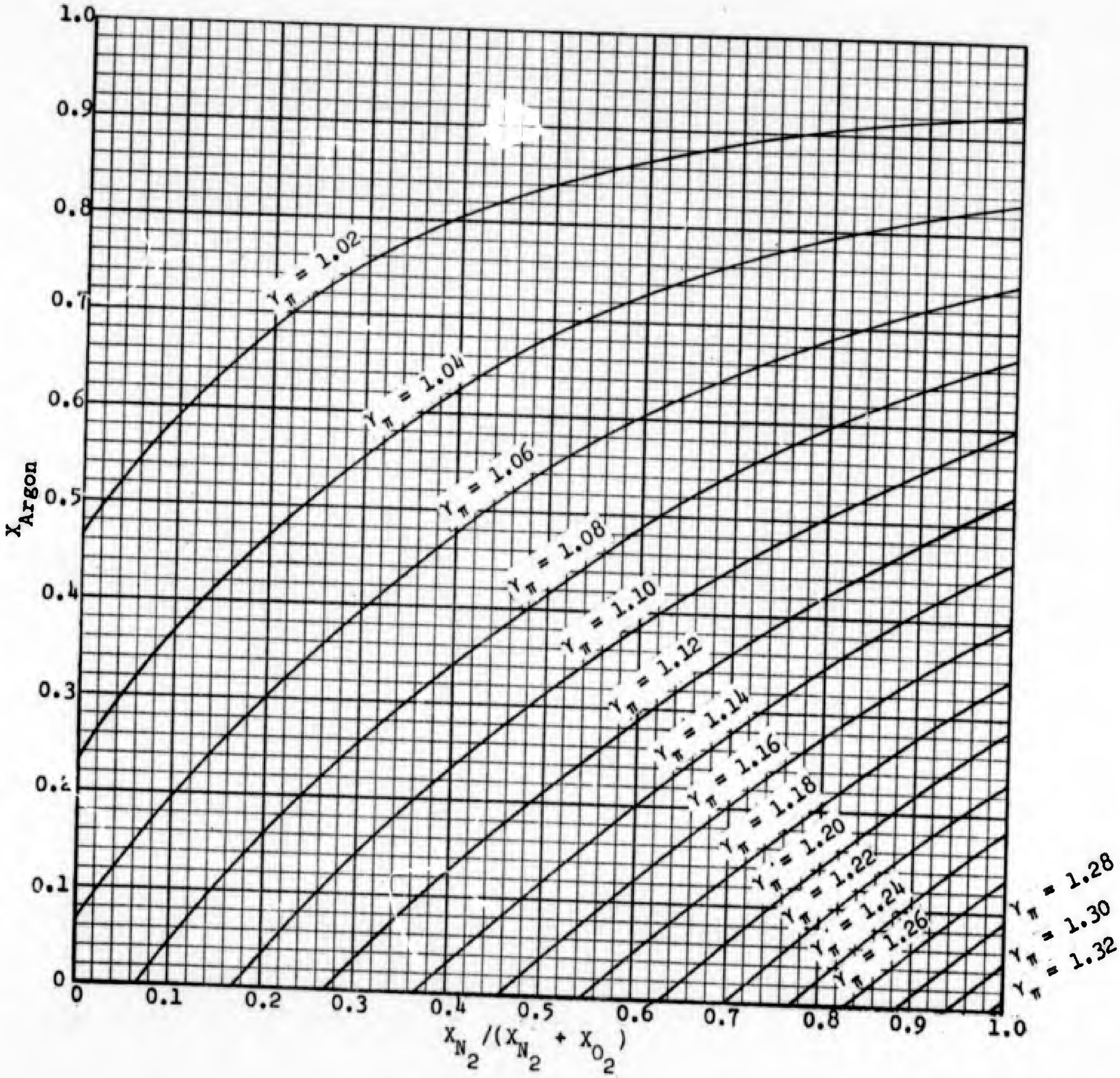


Figure 153. Argon Pressure Activity Coefficients, 10 Atmospheres.

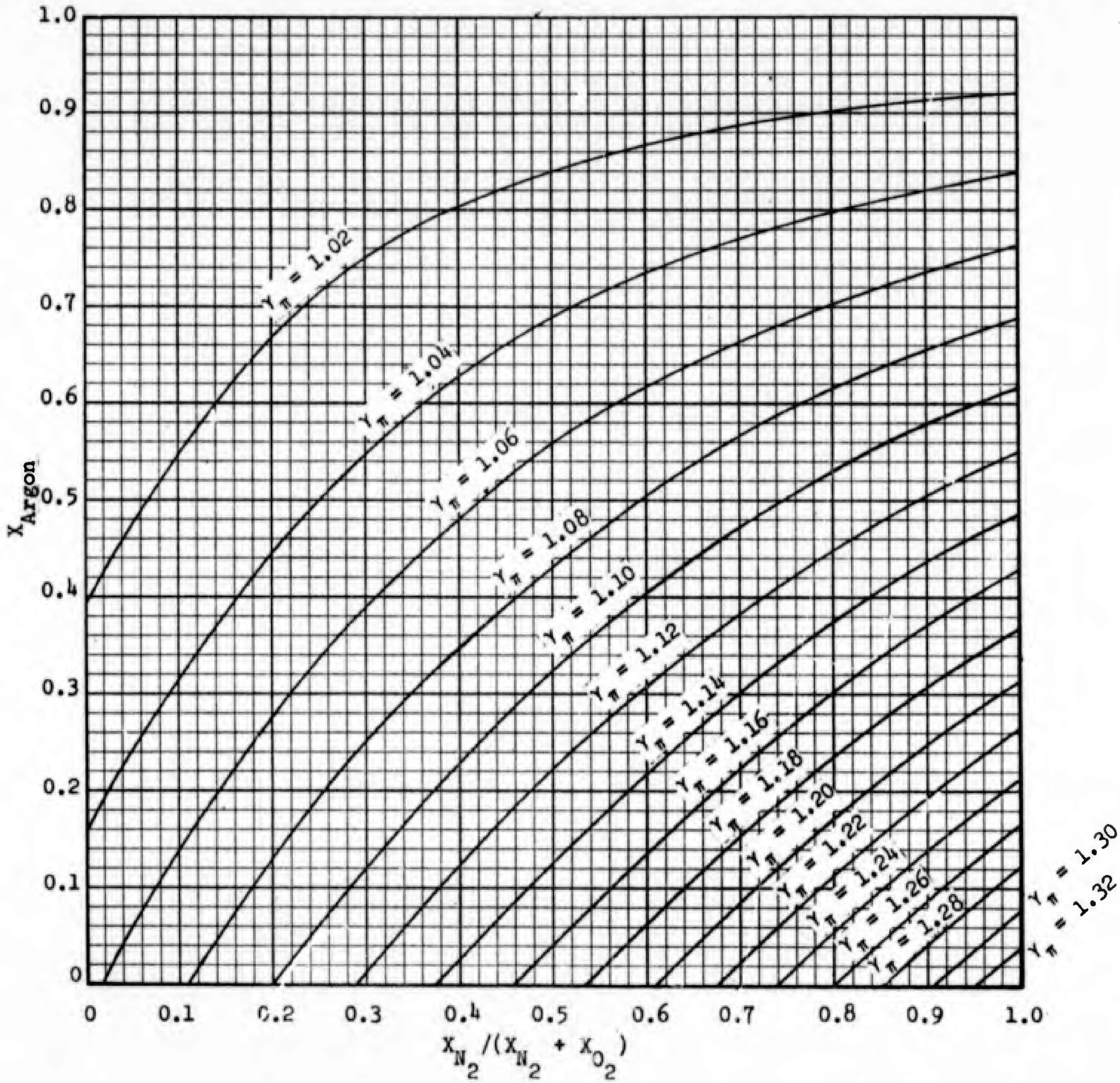


Figure 154. Argon Pressure Activity Coefficients, 12 Atmospheres.

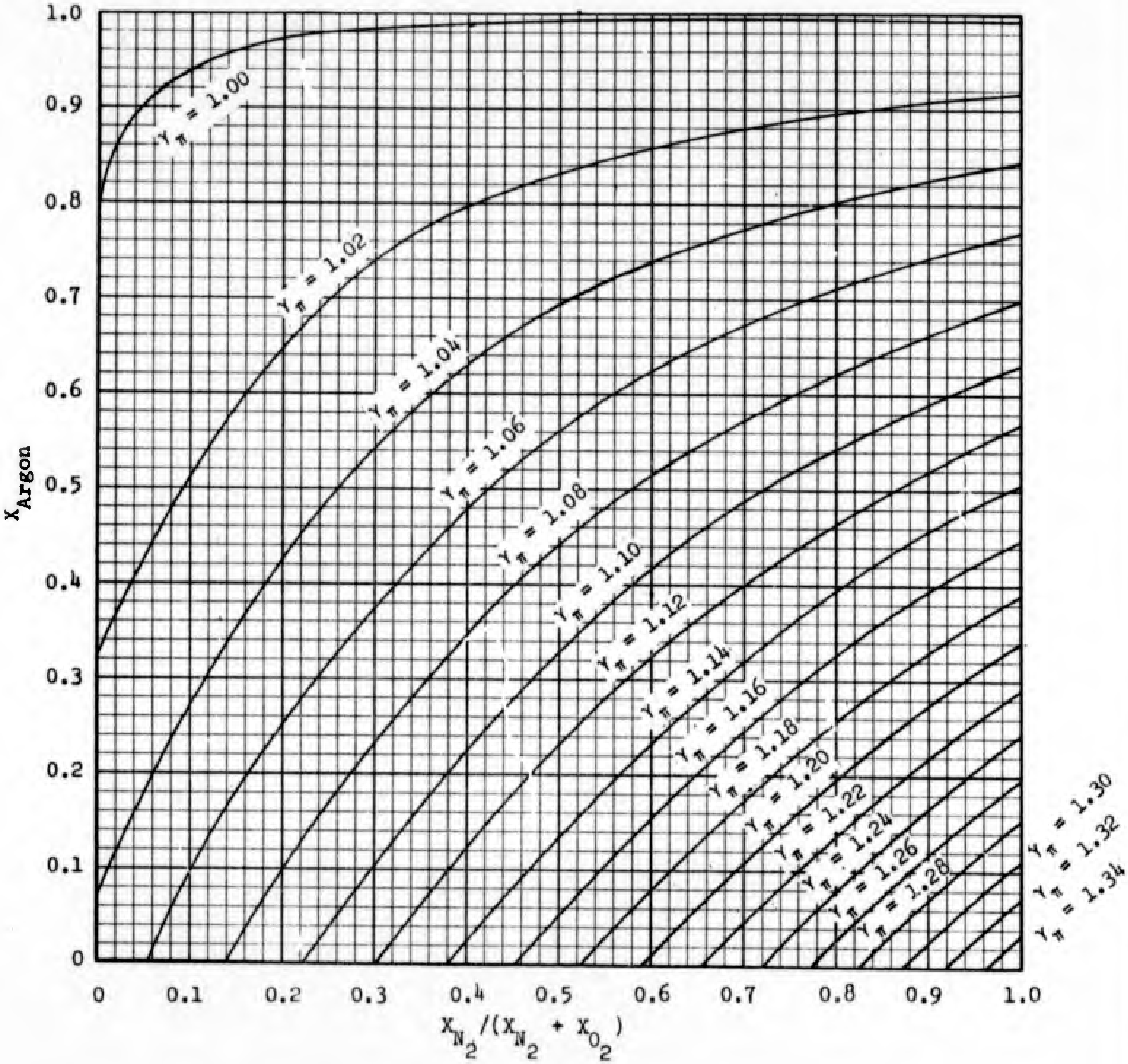


Figure 155. Argon Pressure Activity Coefficients, 14 Atmospheres.

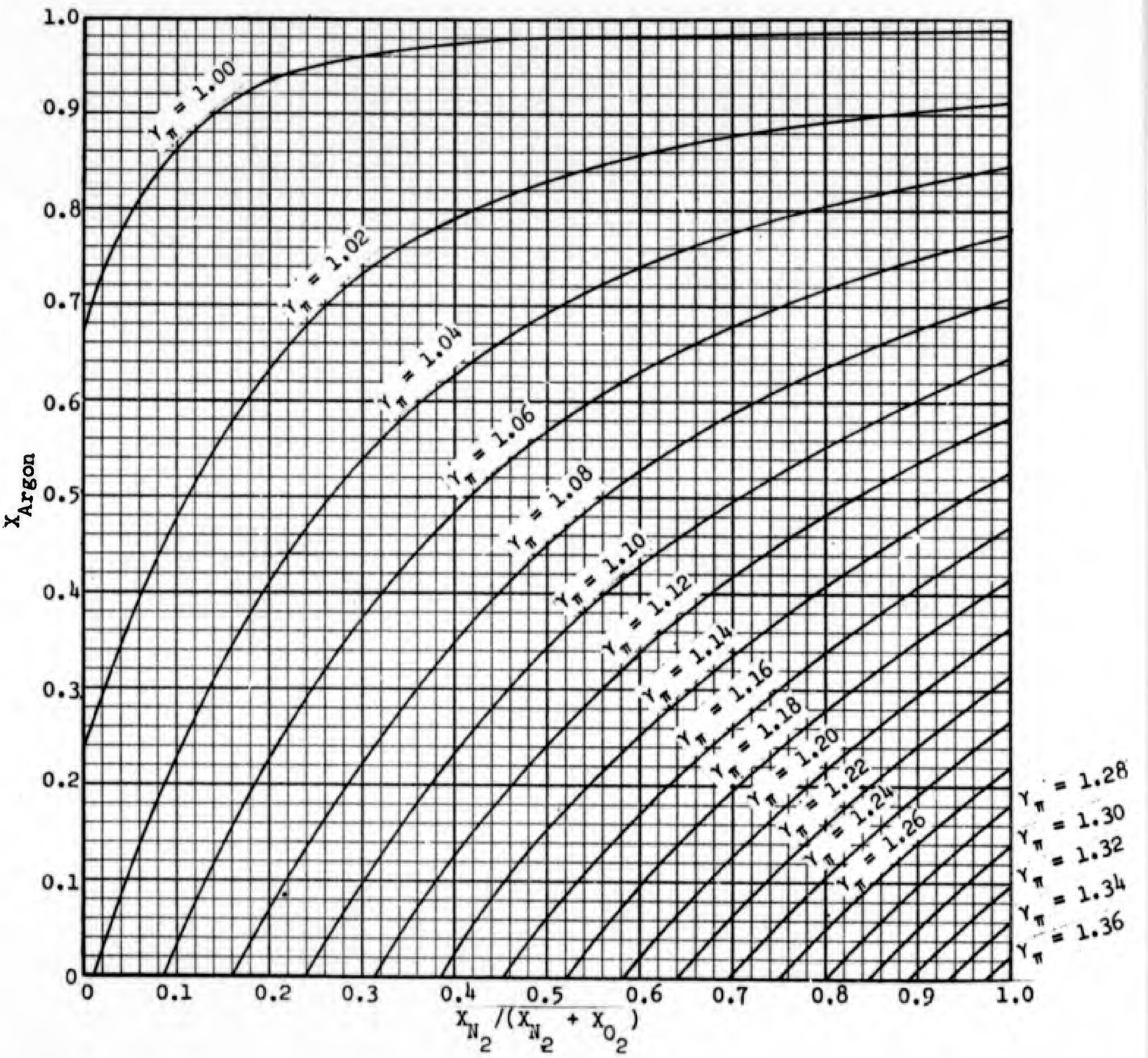


Figure 156. Argon Pressure Activity Coefficients, 16 Atmospheres.

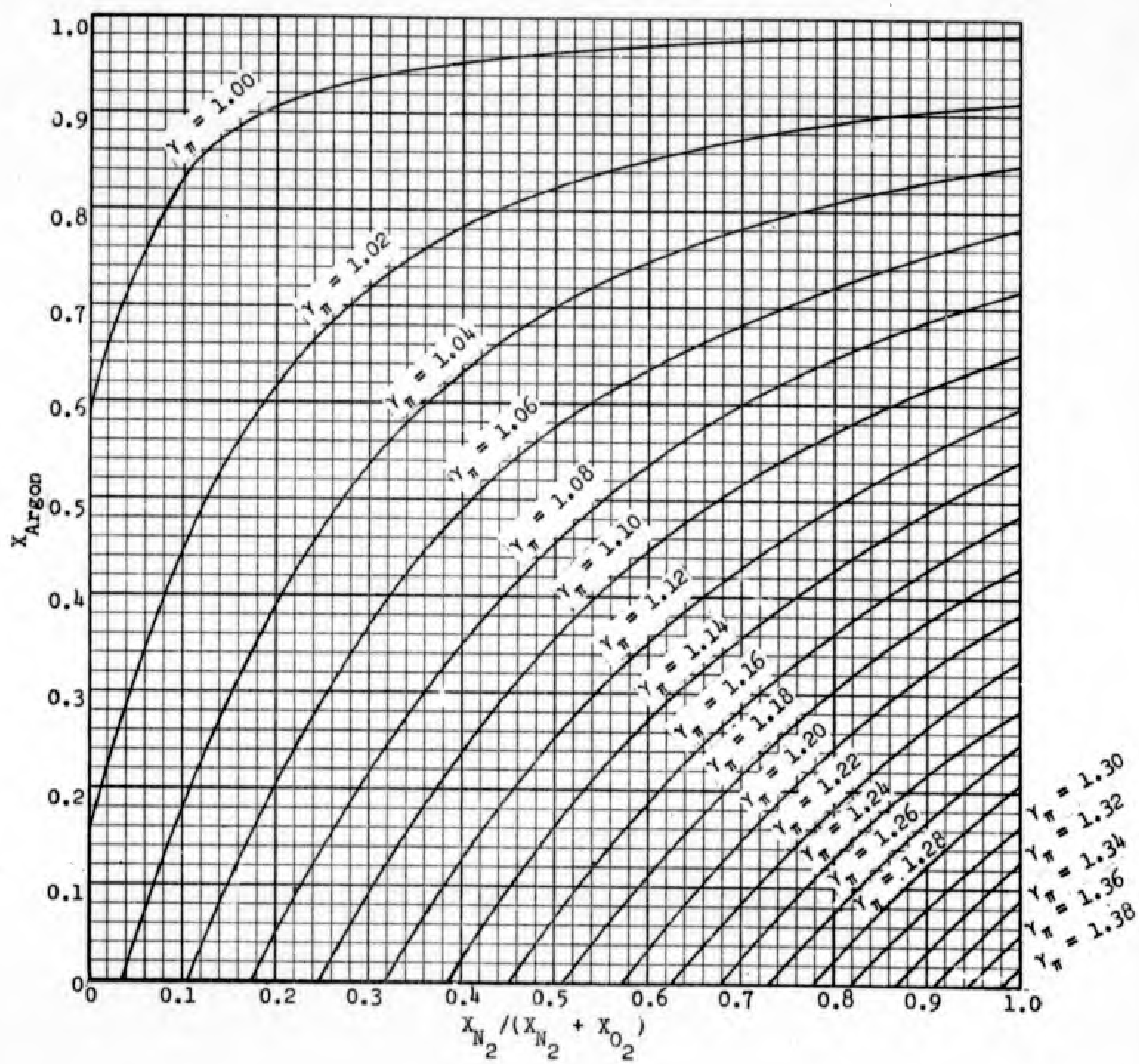


Figure 157. Argon Pressure Activity Coefficients, 18 Atmospheres.

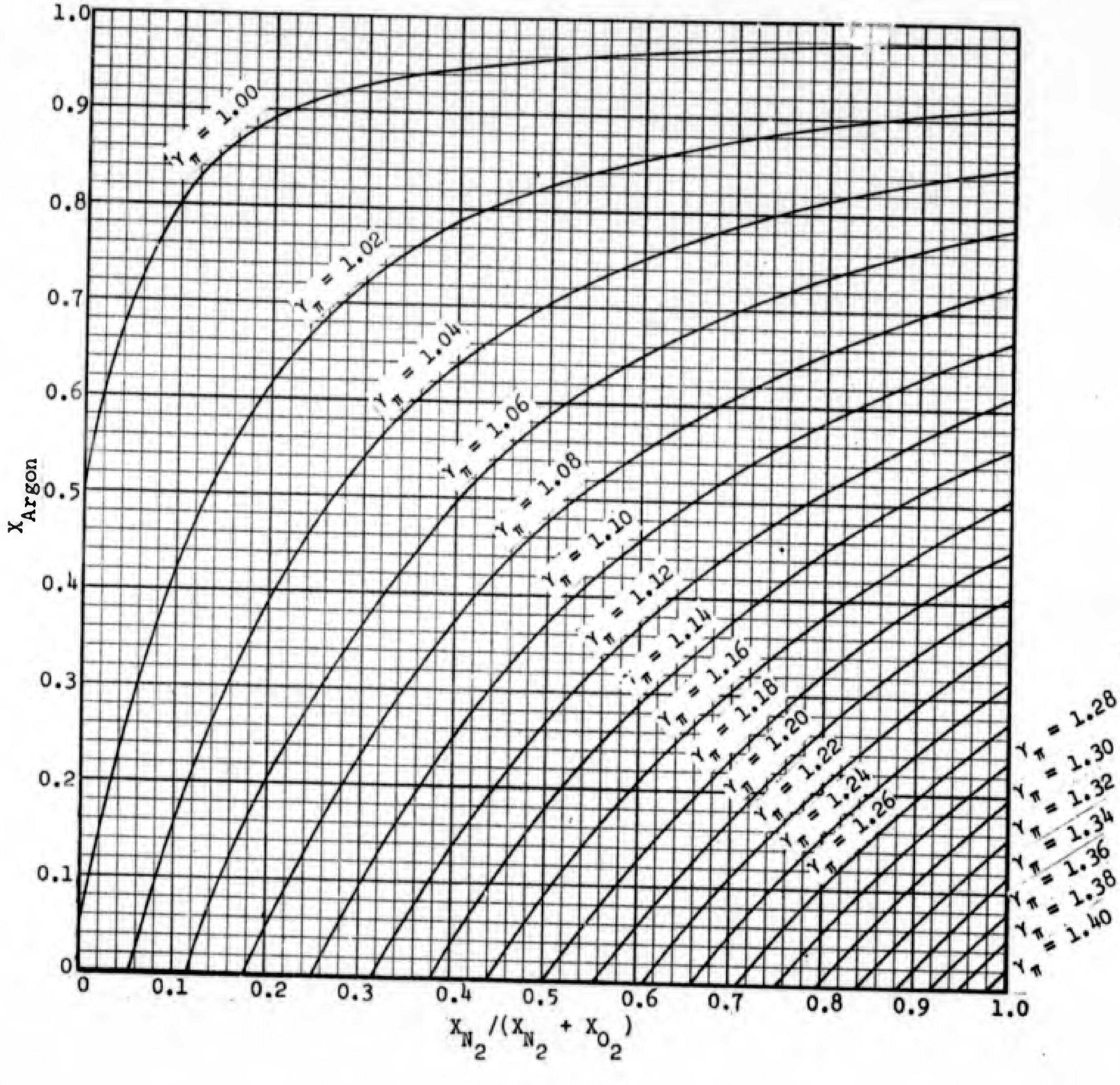


Figure 158. Argon Pressure Activity Coefficients, 20 Atmospheres.

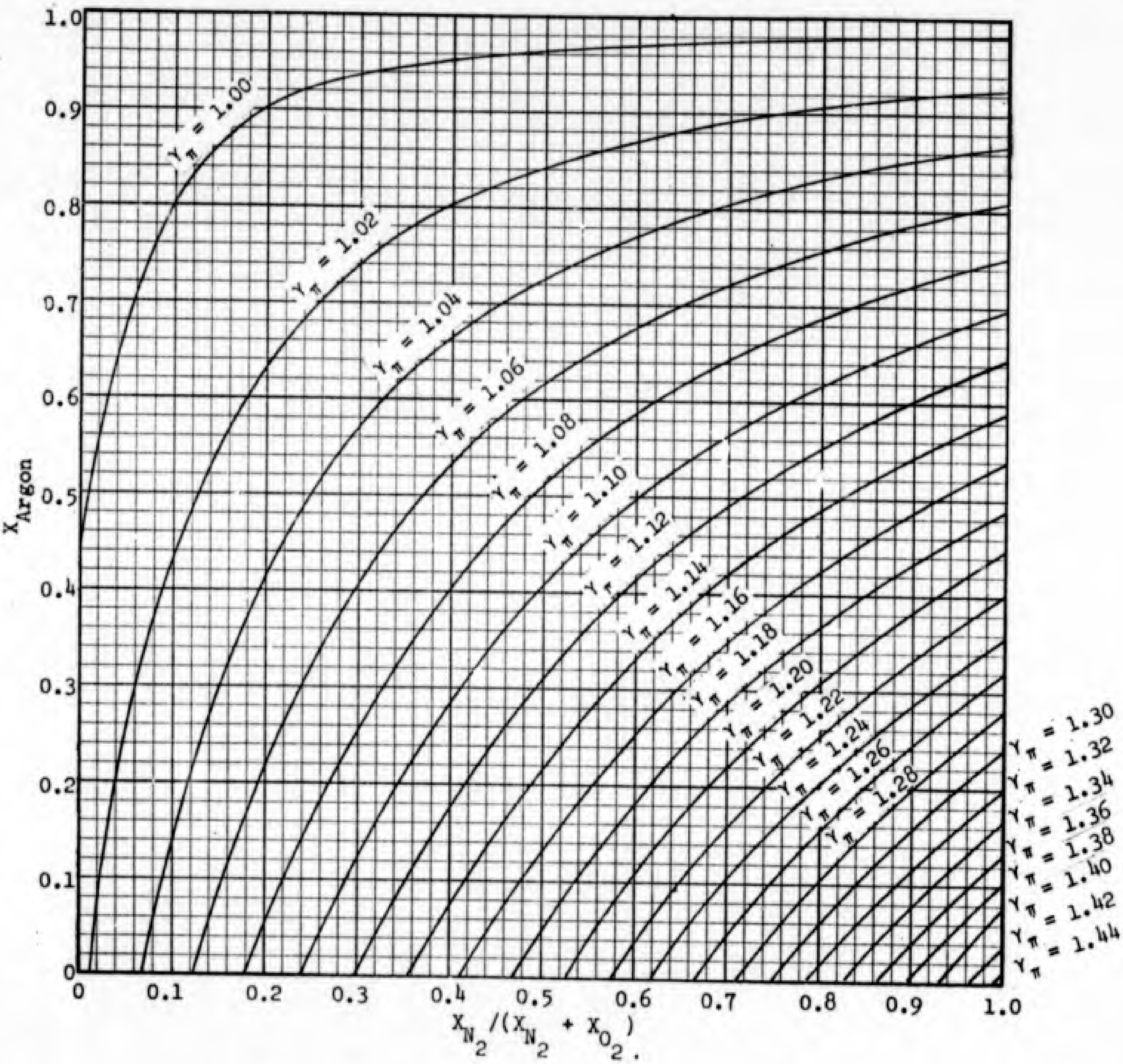


Figure 159. Argon Pressure Activity Coefficients, 23 Atmospheres.

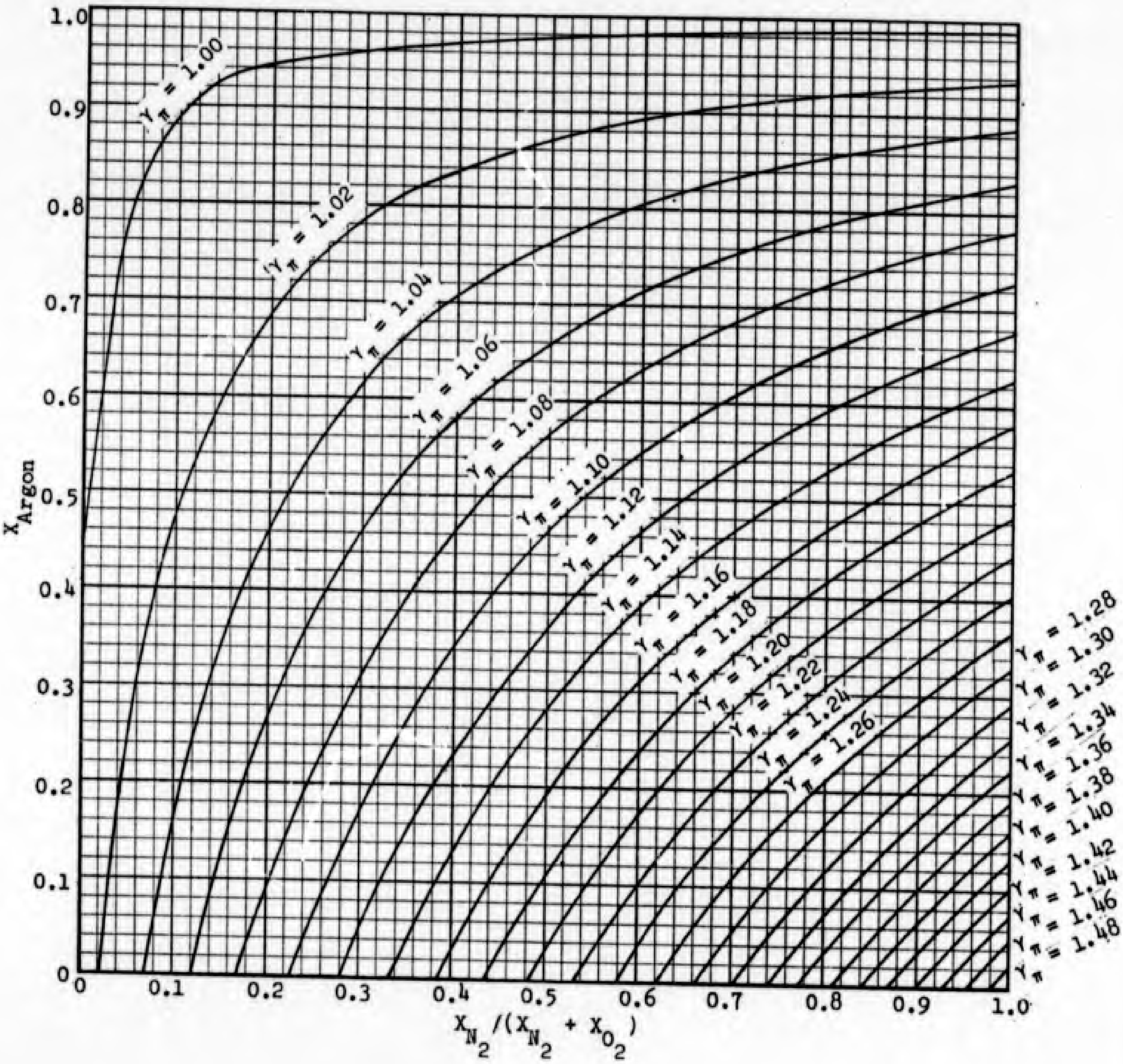


Figure 160. Argon Pressure Activity Coefficients, 26 Atmospheres.

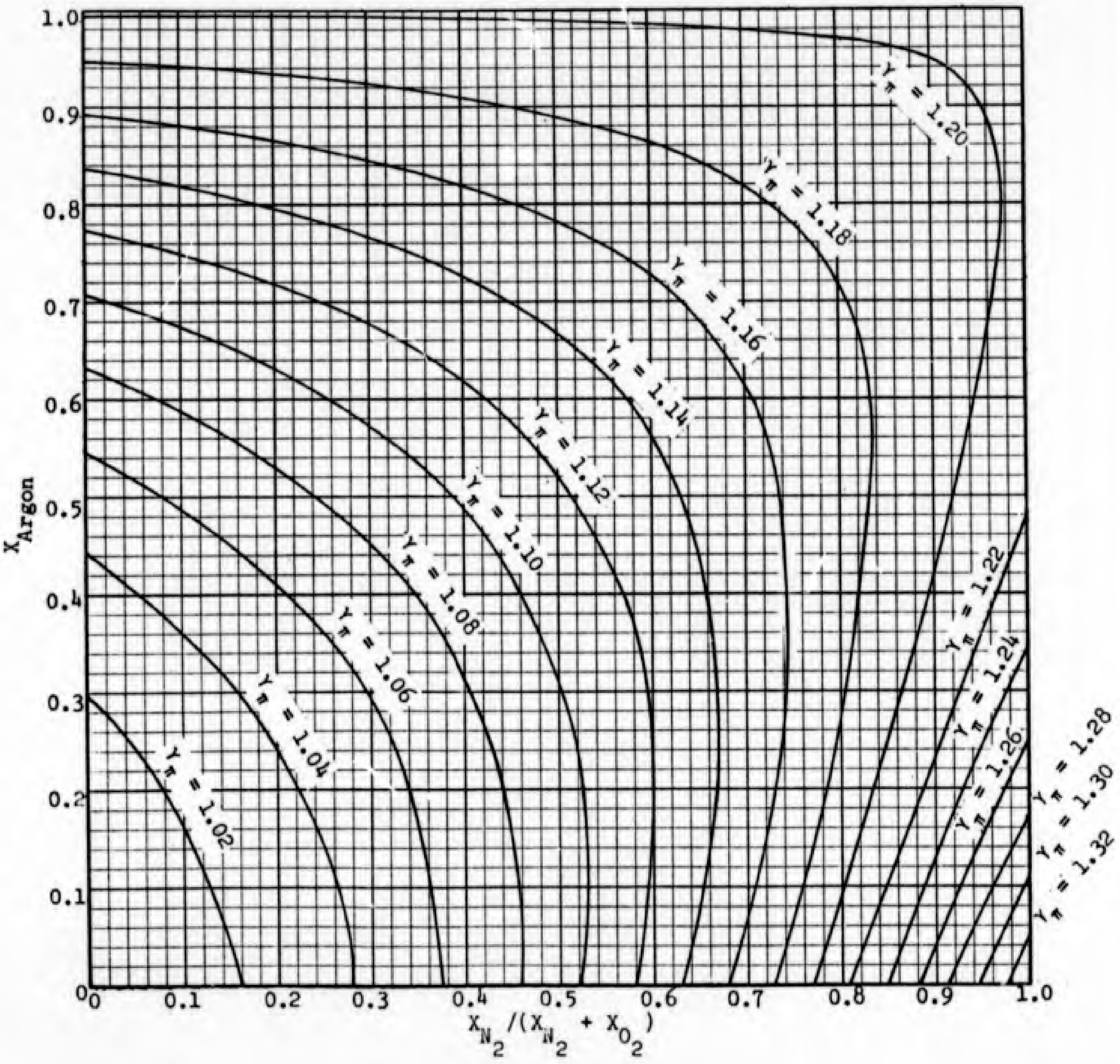


Figure 161. Oxygen Pressure Activity Coefficients, 1 Atmosphere.

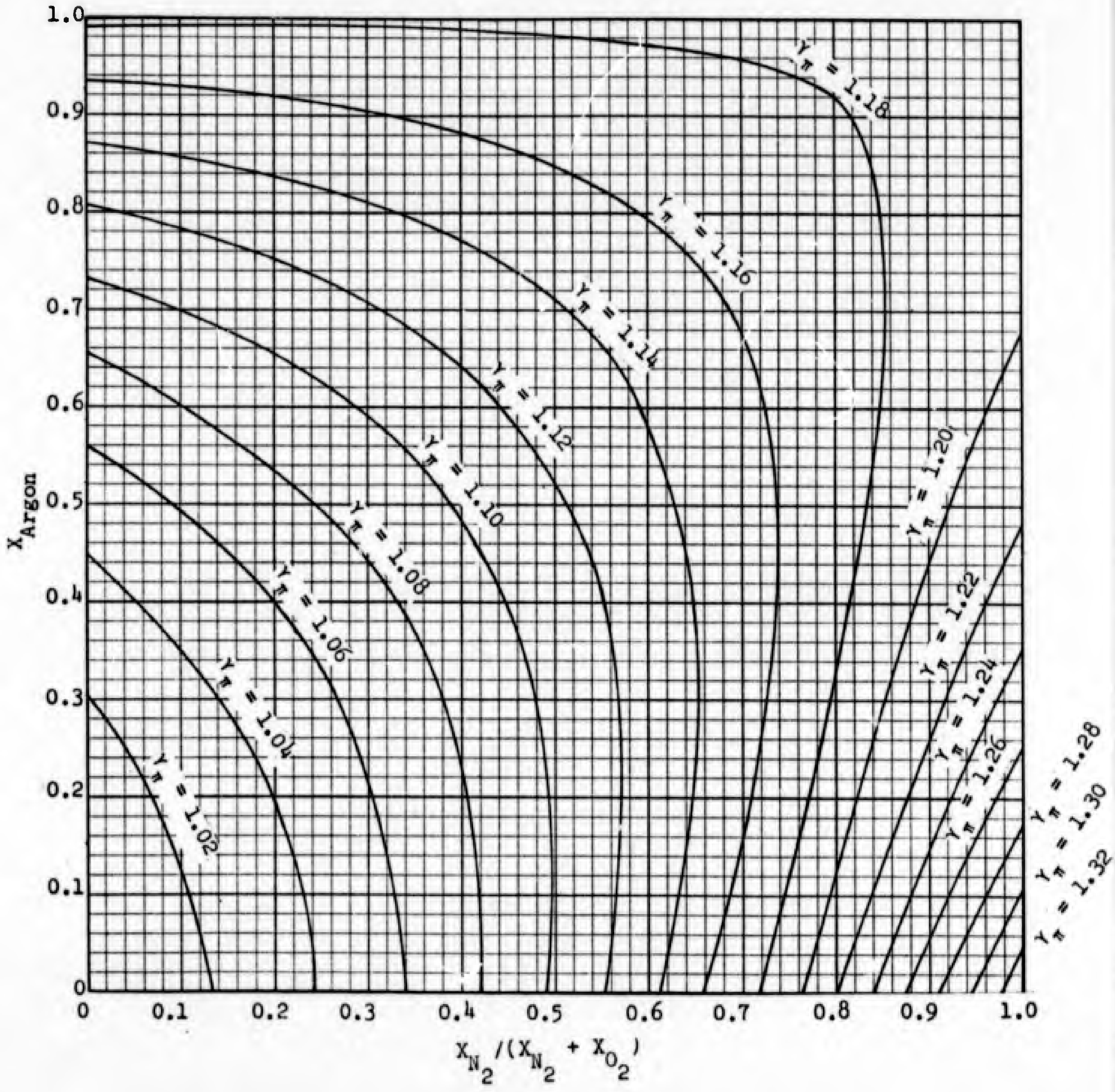


Figure 162. Oxygen Pressure Activity Coefficients, 2 Atmospheres.

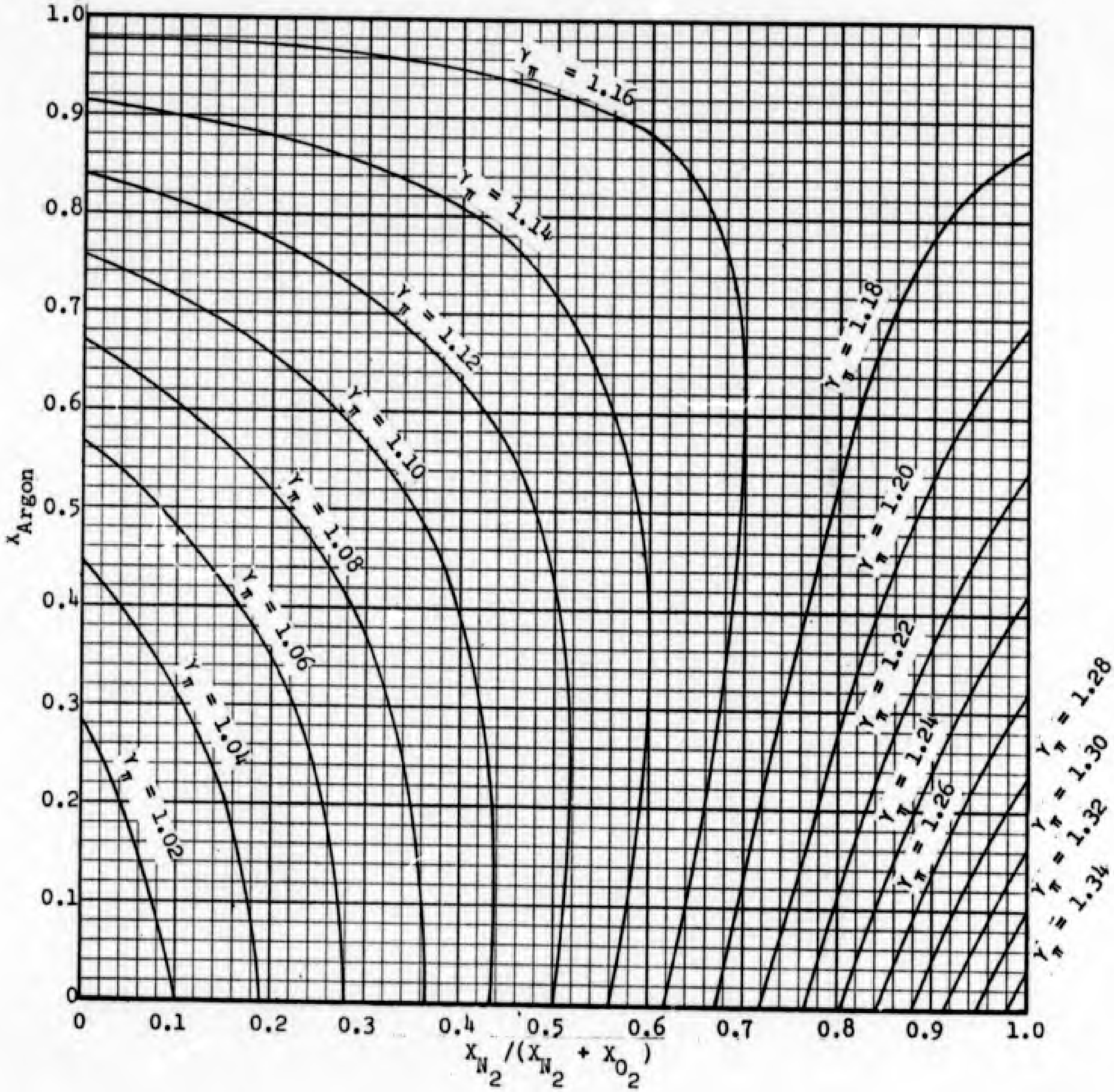


Figure 163. Oxygen Pressure Activity Coefficients, 4 Atmospheres.

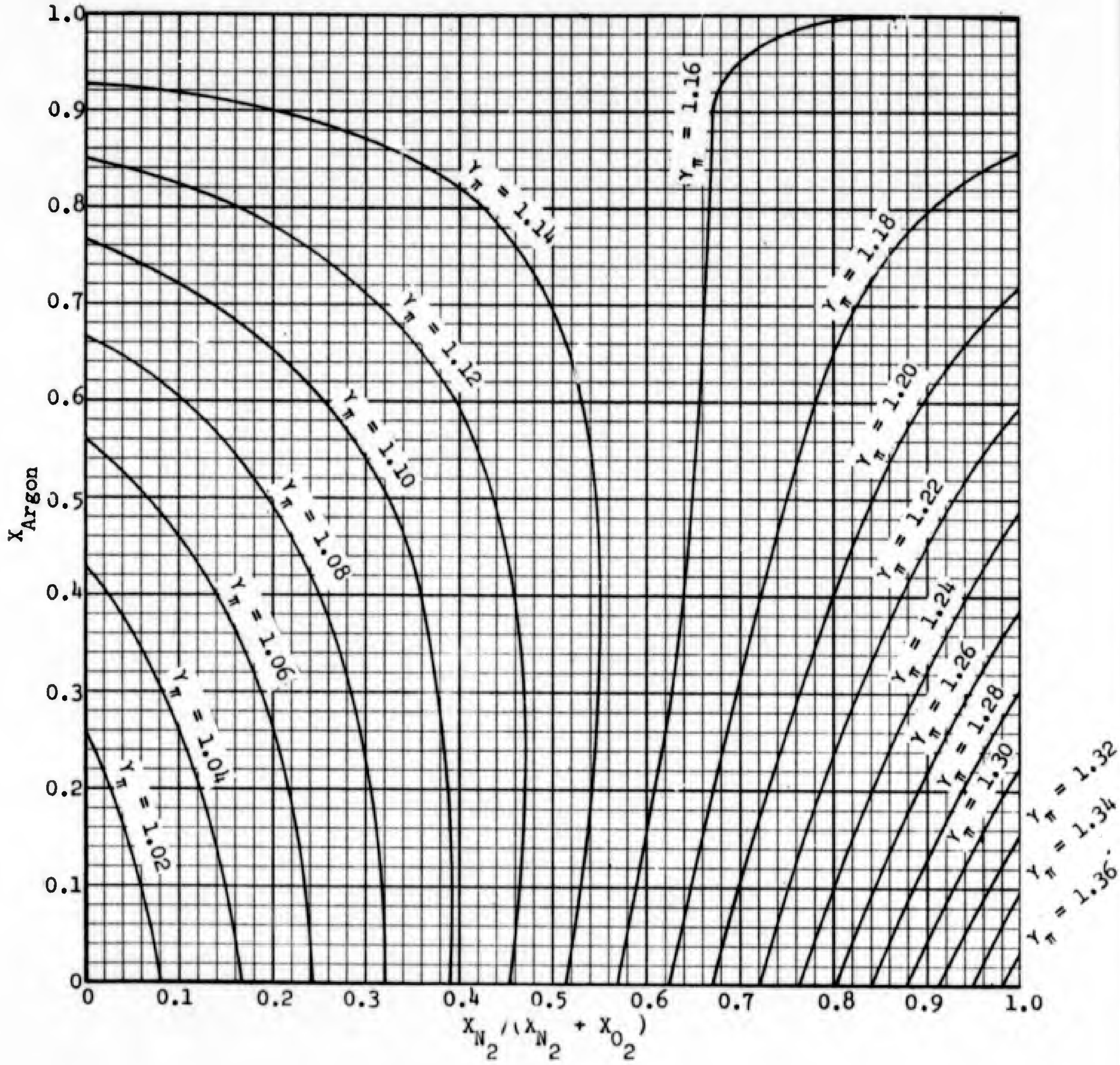


Figure 164. Oxygen Pressure Activity Coefficients, 6 Atmospheres.

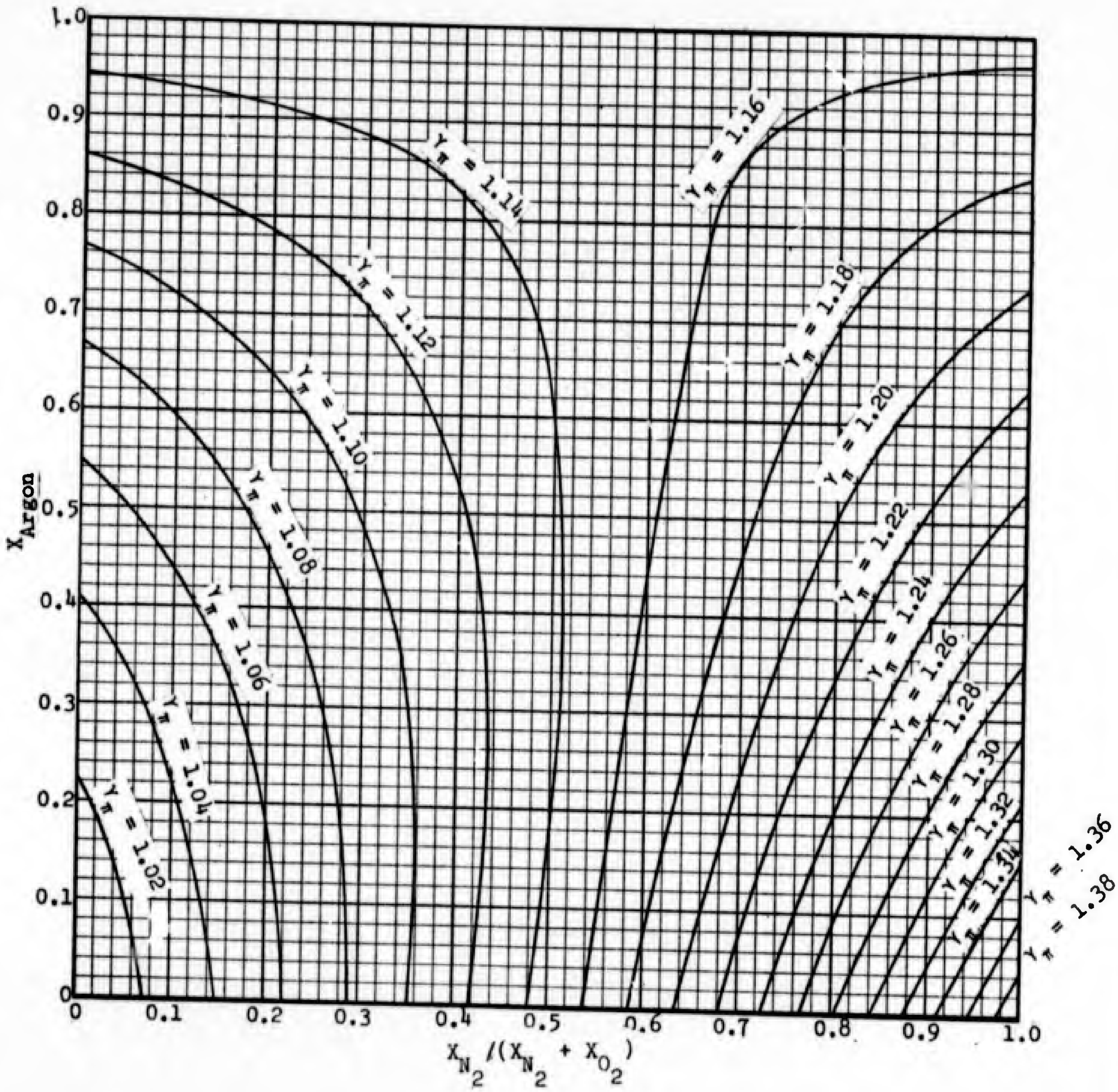


Figure 165. Oxygen Pressure Activity Coefficients, 8 Atmospheres.

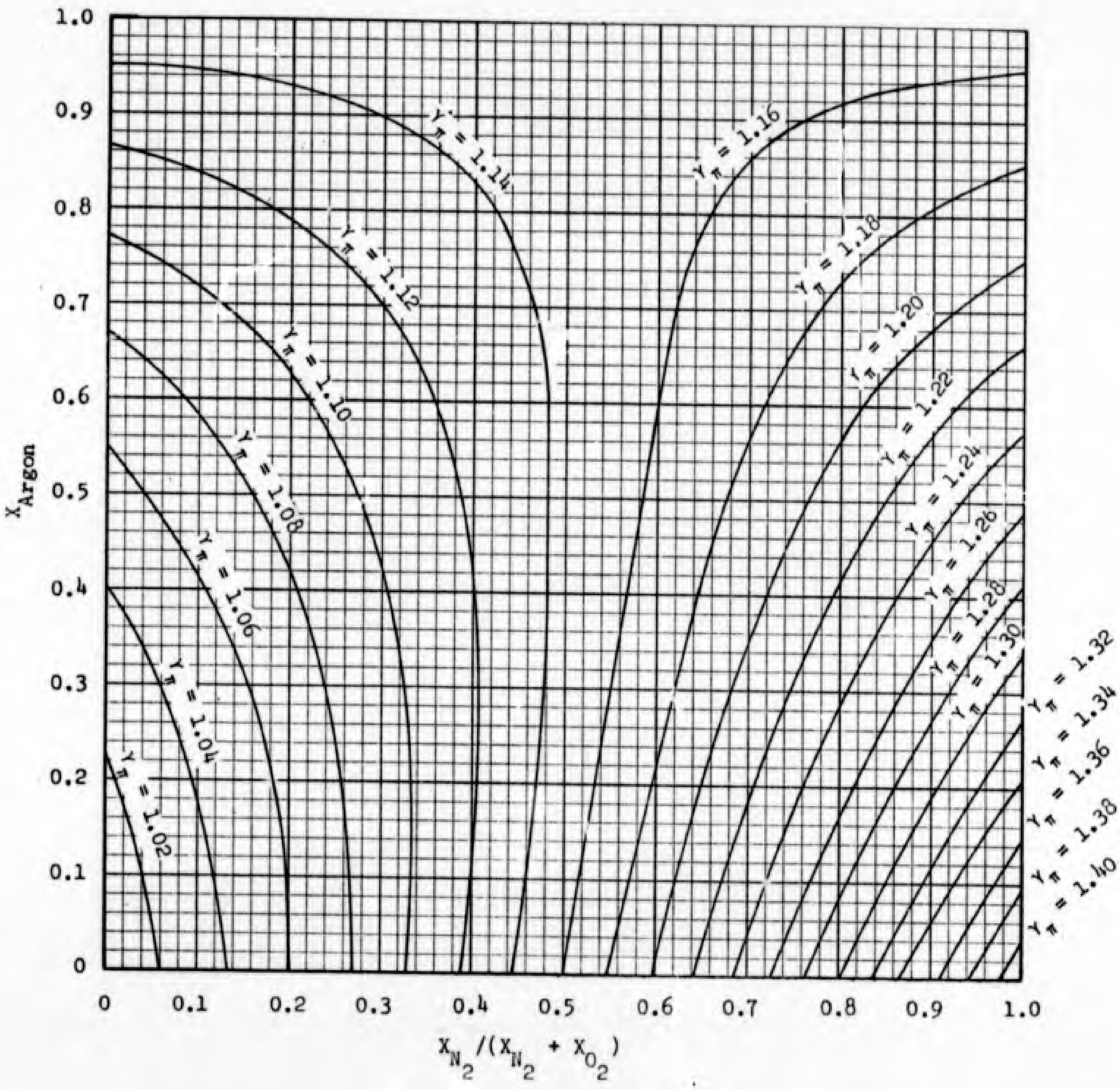


Figure 166. Oxygen Pressure Activity Coefficients, 10 Atmospheres.

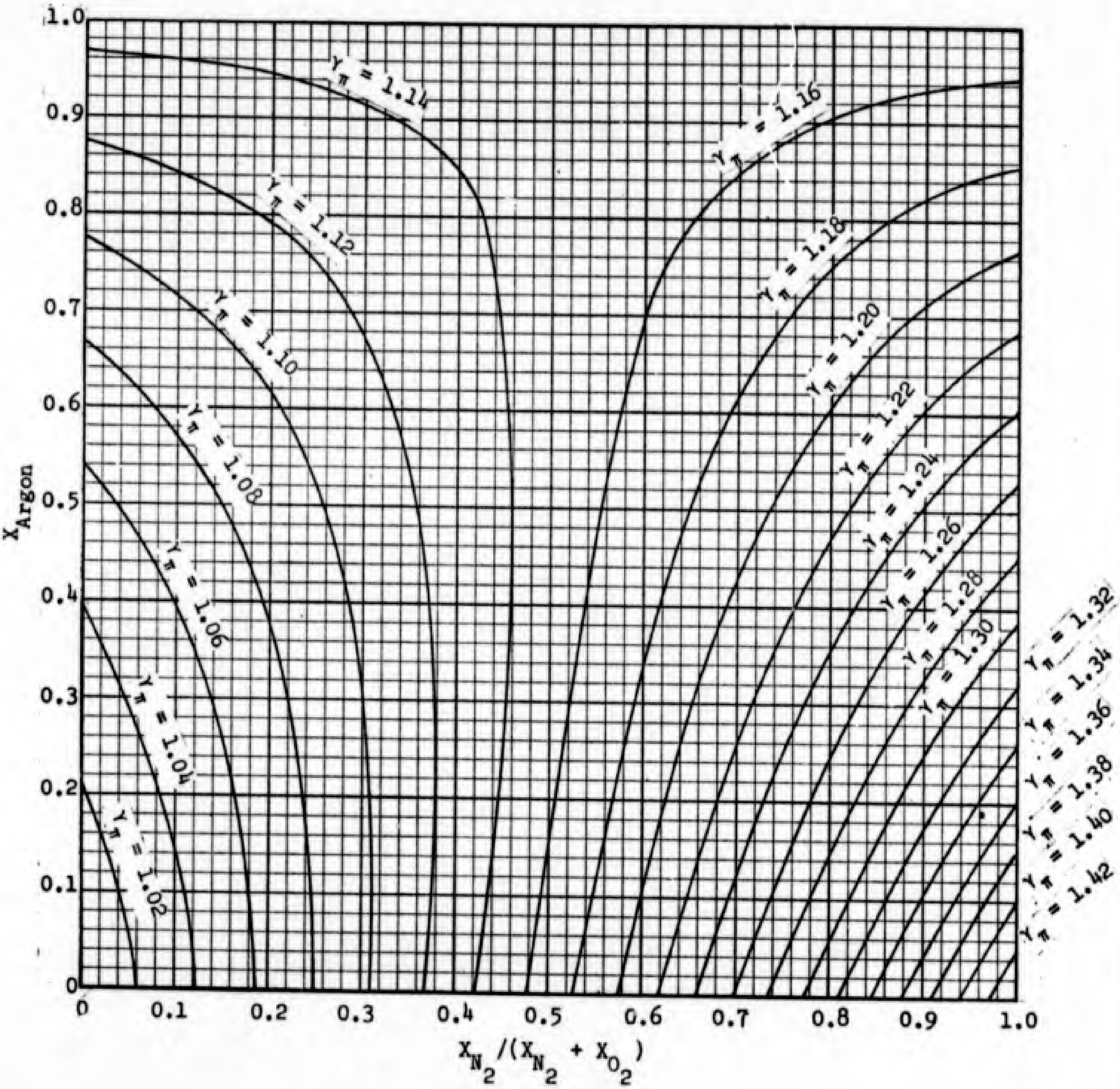


Figure 167. Oxygen Pressure Activity Coefficients, 12 Atmospheres.

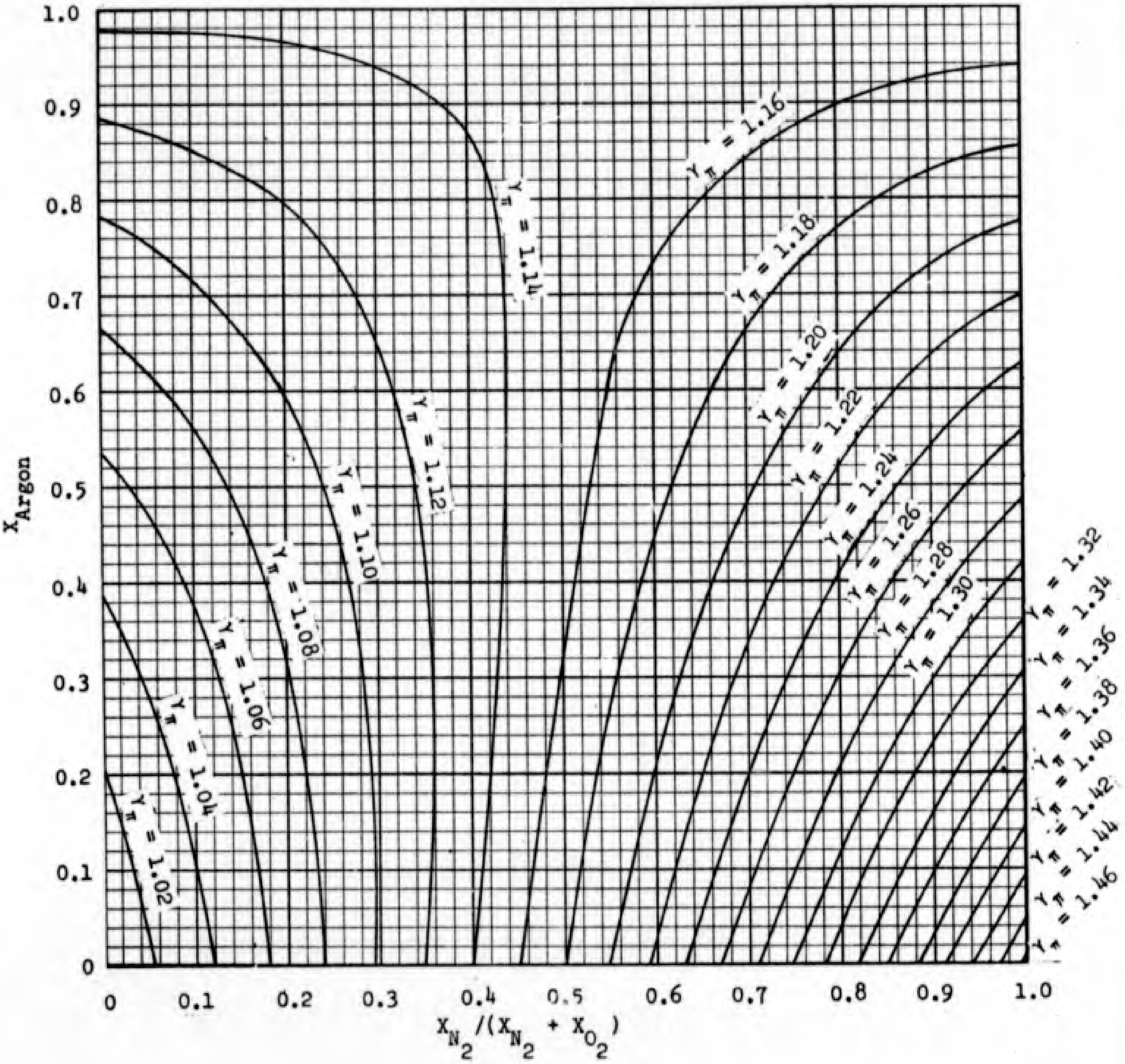


Figure 168. Oxygen Pressure Activity Coefficients, 14 Atmospheres.

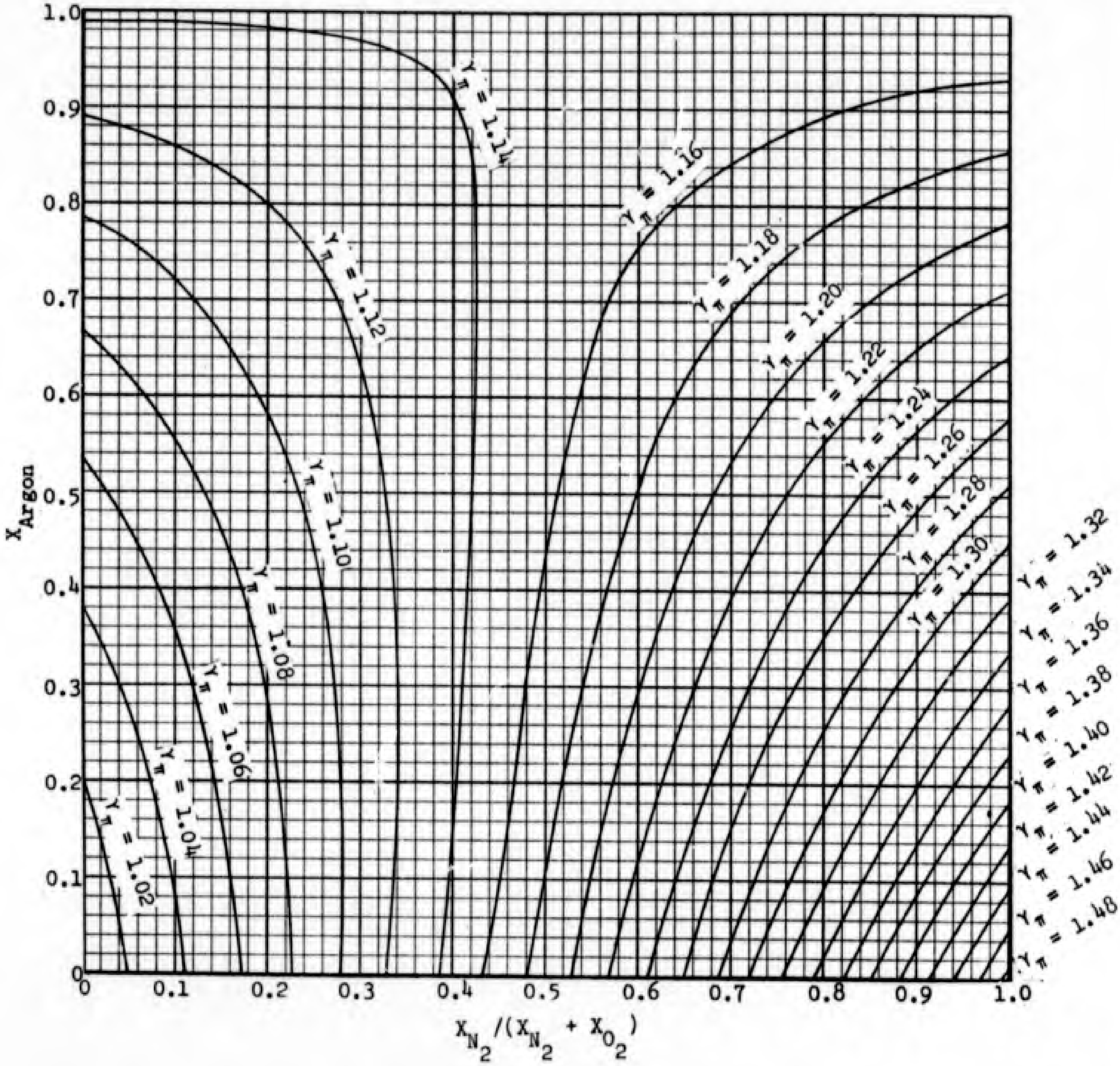


Figure 169. Oxygen Pressure Activity Coefficients, 16 Atmospheres.

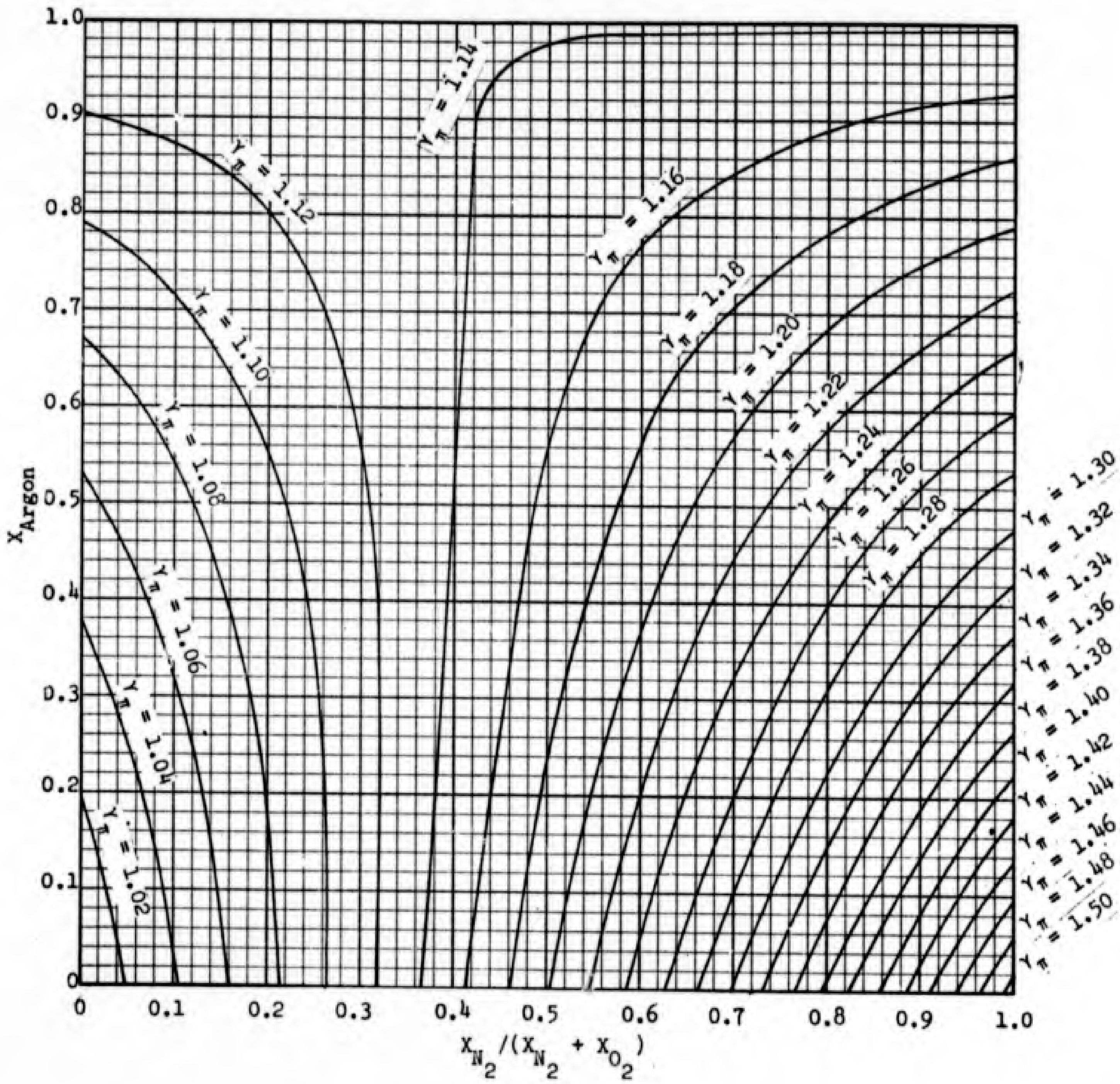


Figure 170. Oxygen Pressure Activity Coefficients, 18 Atmospheres.

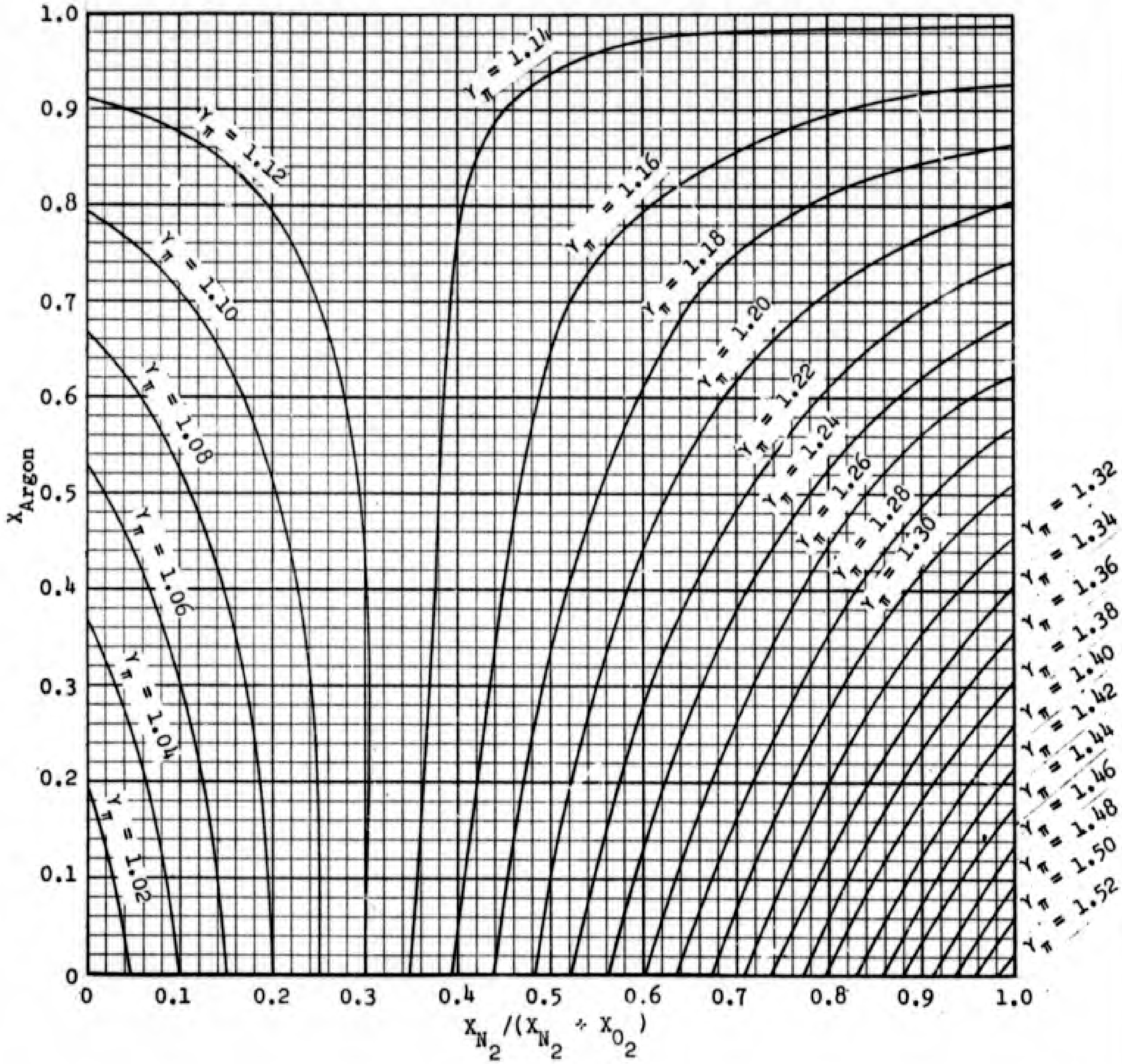


Figure 171. Oxygen Pressure Activity Coefficients, 20 Atmospheres.

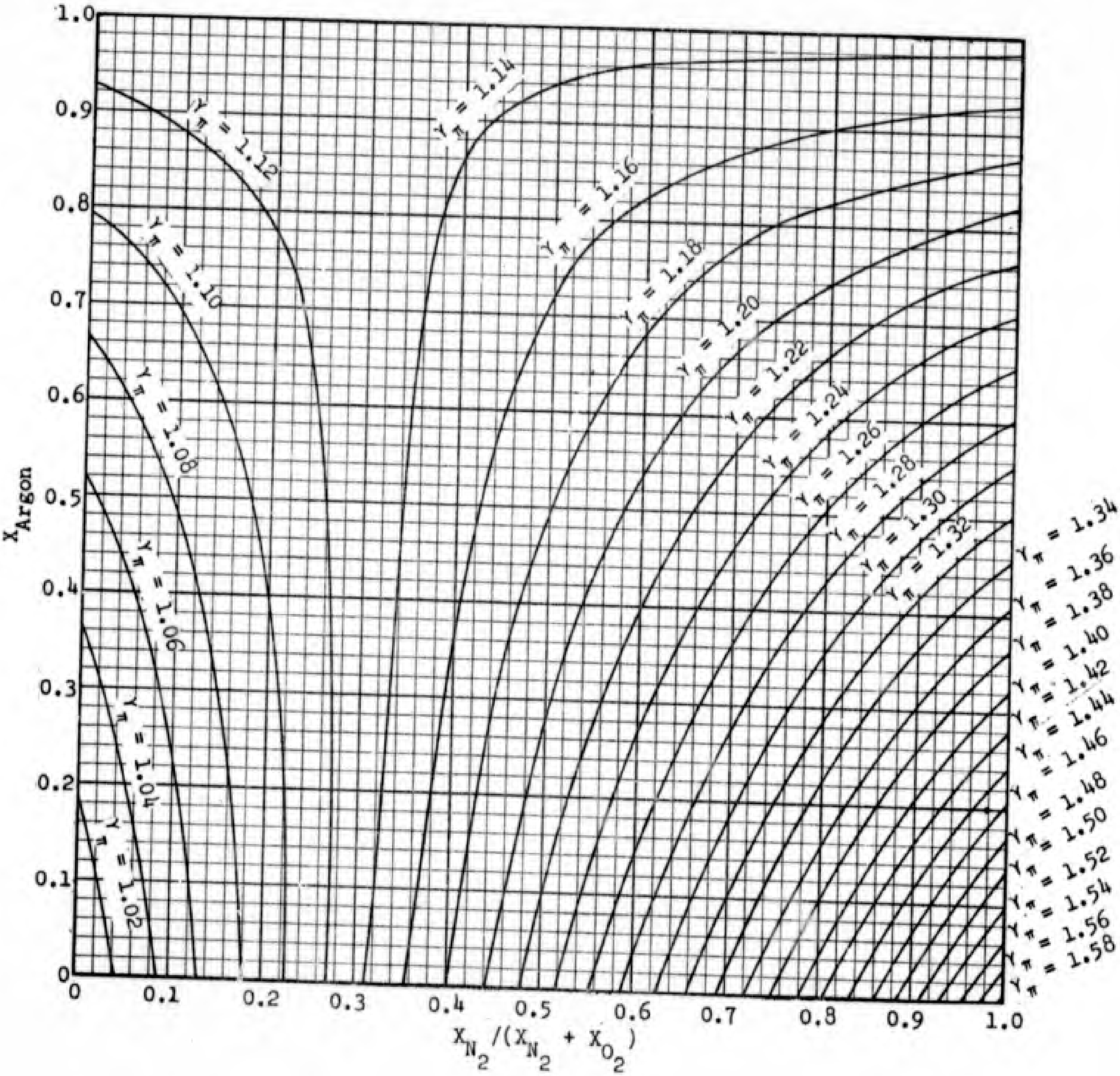


Figure 172. Oxygen Pressure Activity Coefficients, 23 Atmospheres.

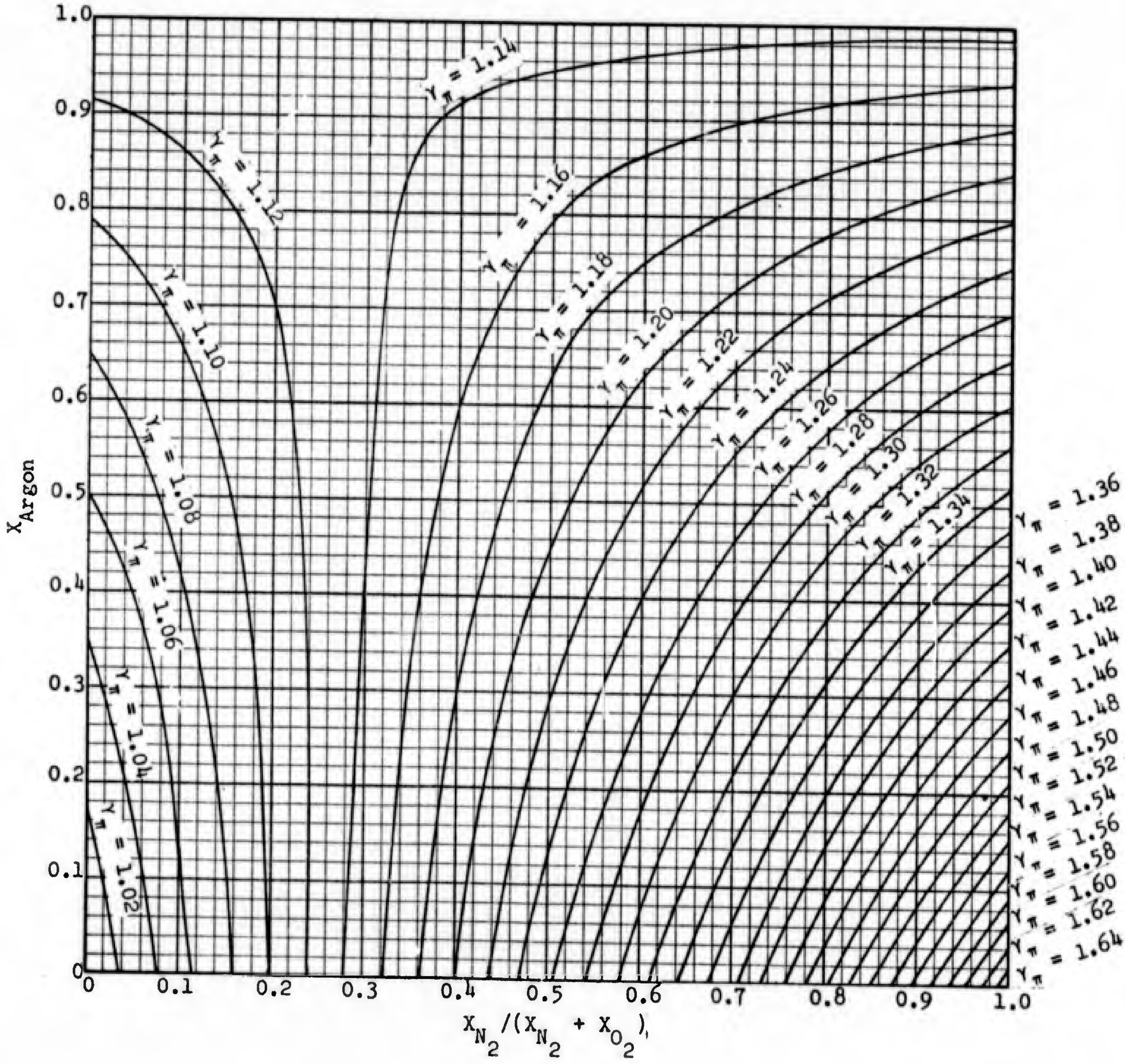


Figure 173. Oxygen Pressure Activity Coefficients, 26 Atmospheres.

G. Mixture Vapor Pressures Vs. Temperatures

The 13 graphs to follow present the vapor pressure of a number of specific mixtures as it varies with temperature. These graphs are plotted as logP vs. 1/T. The graphs are ordered with respect to increasing mole fraction argon in the liquid.

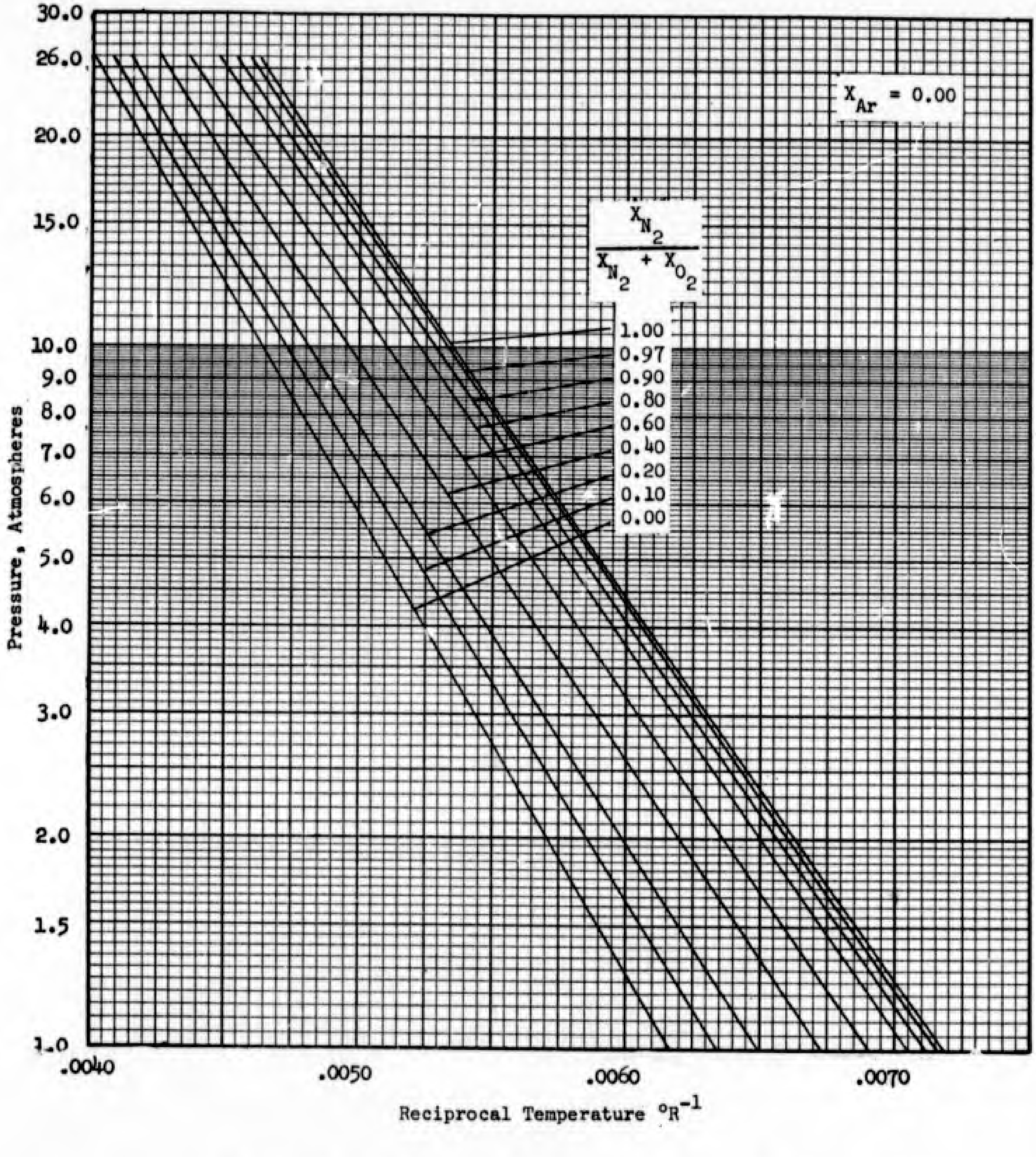


Figure 174. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

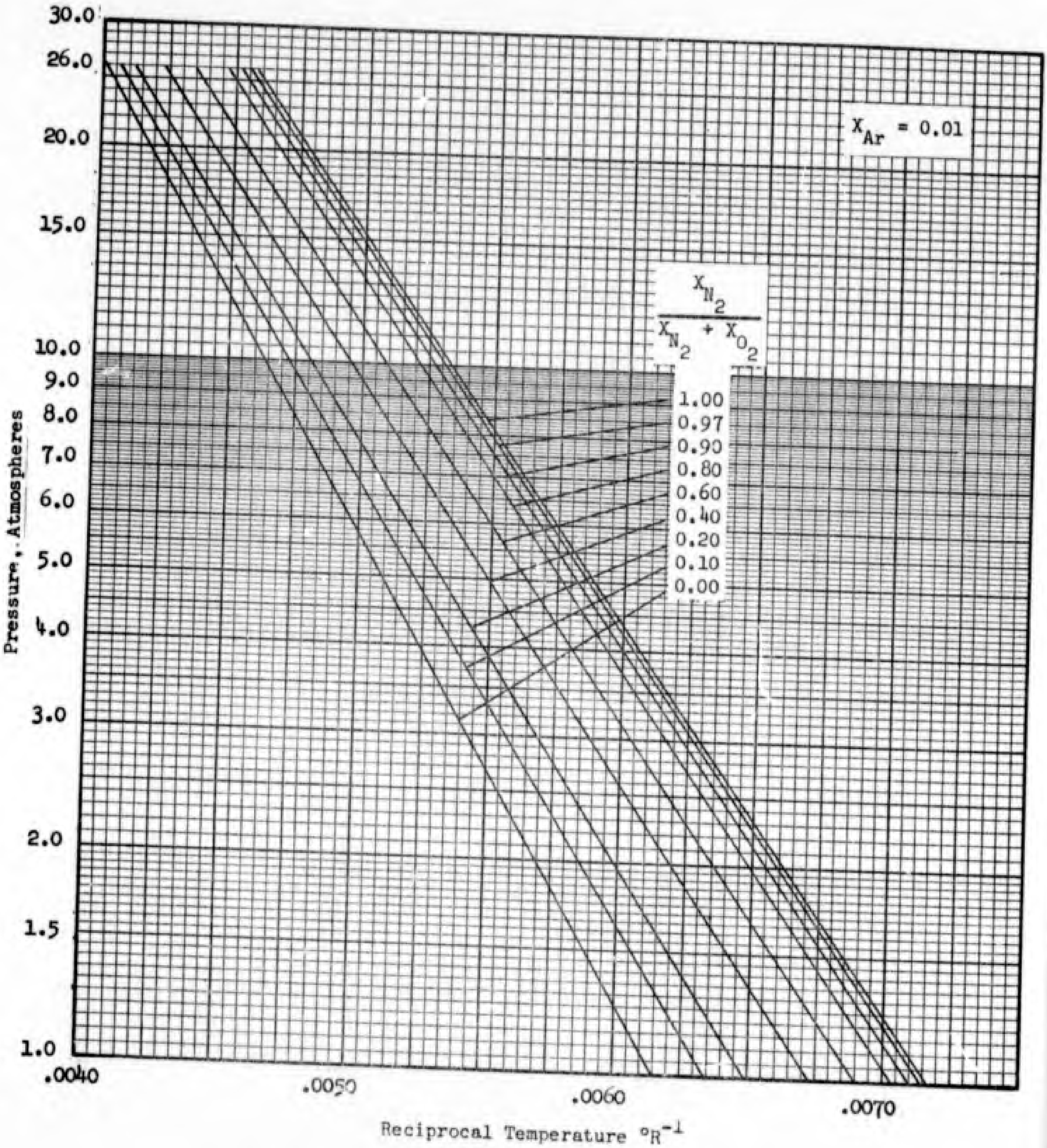


Figure 175. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

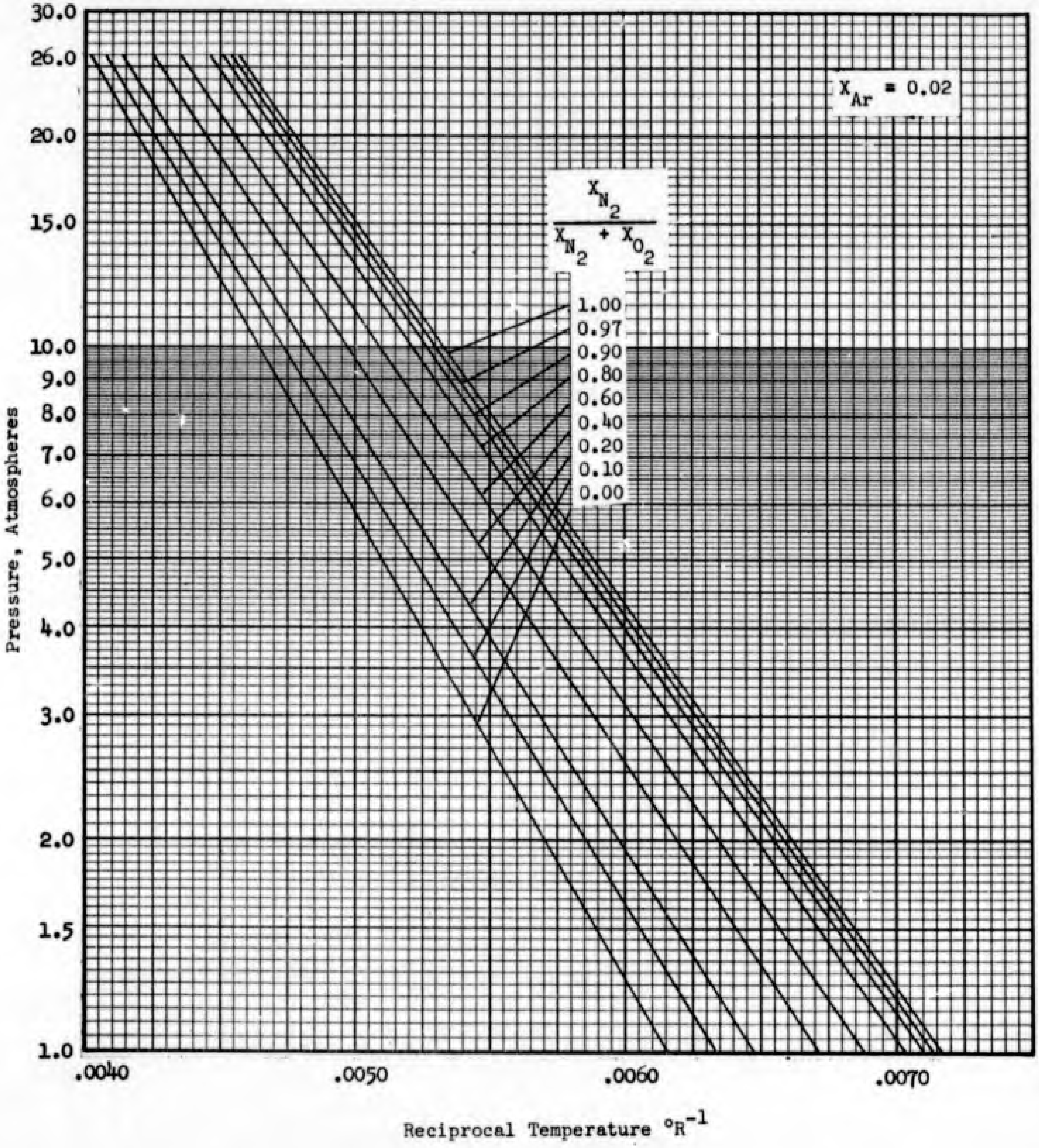


Figure 176. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

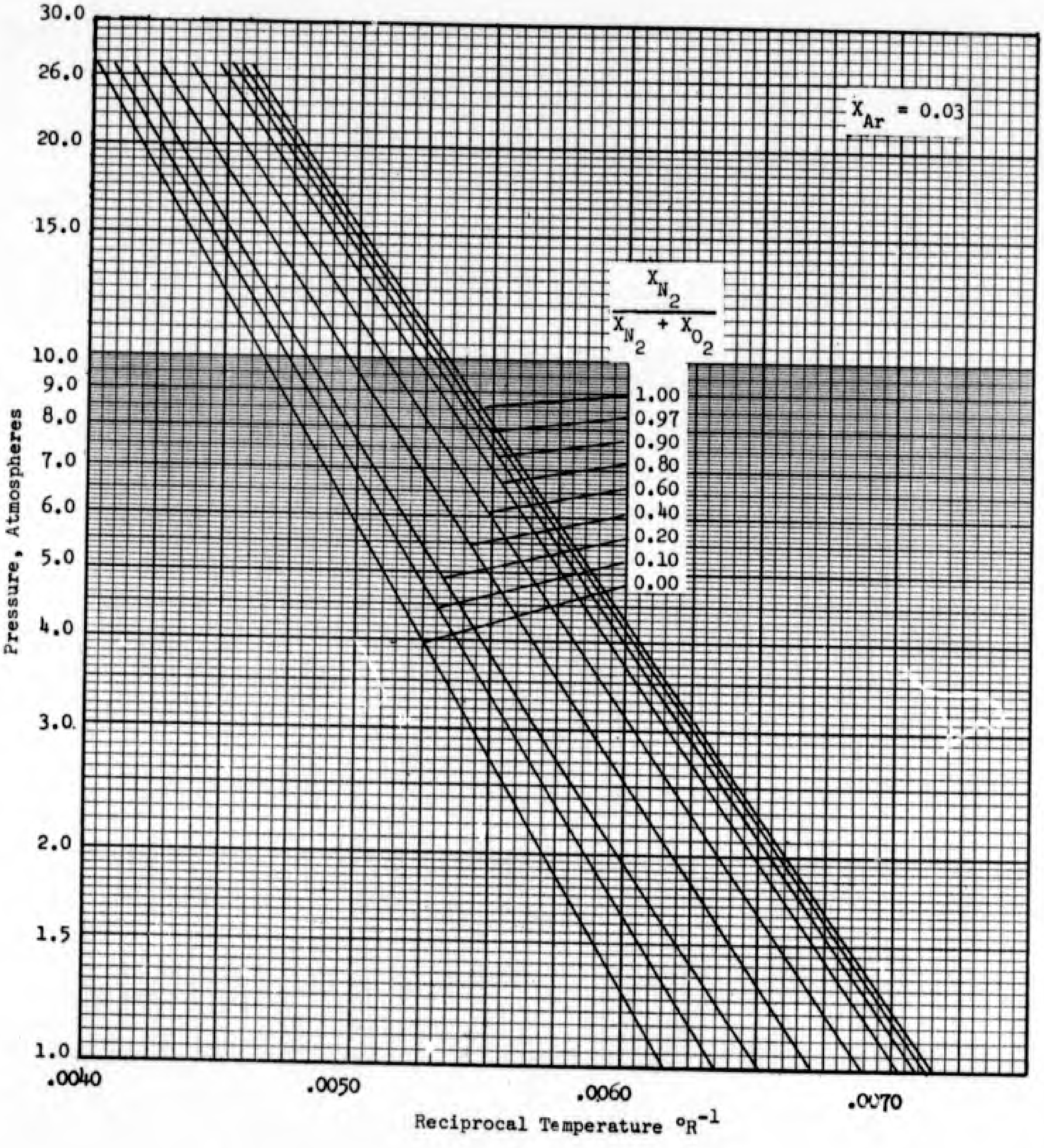


Figure 177. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

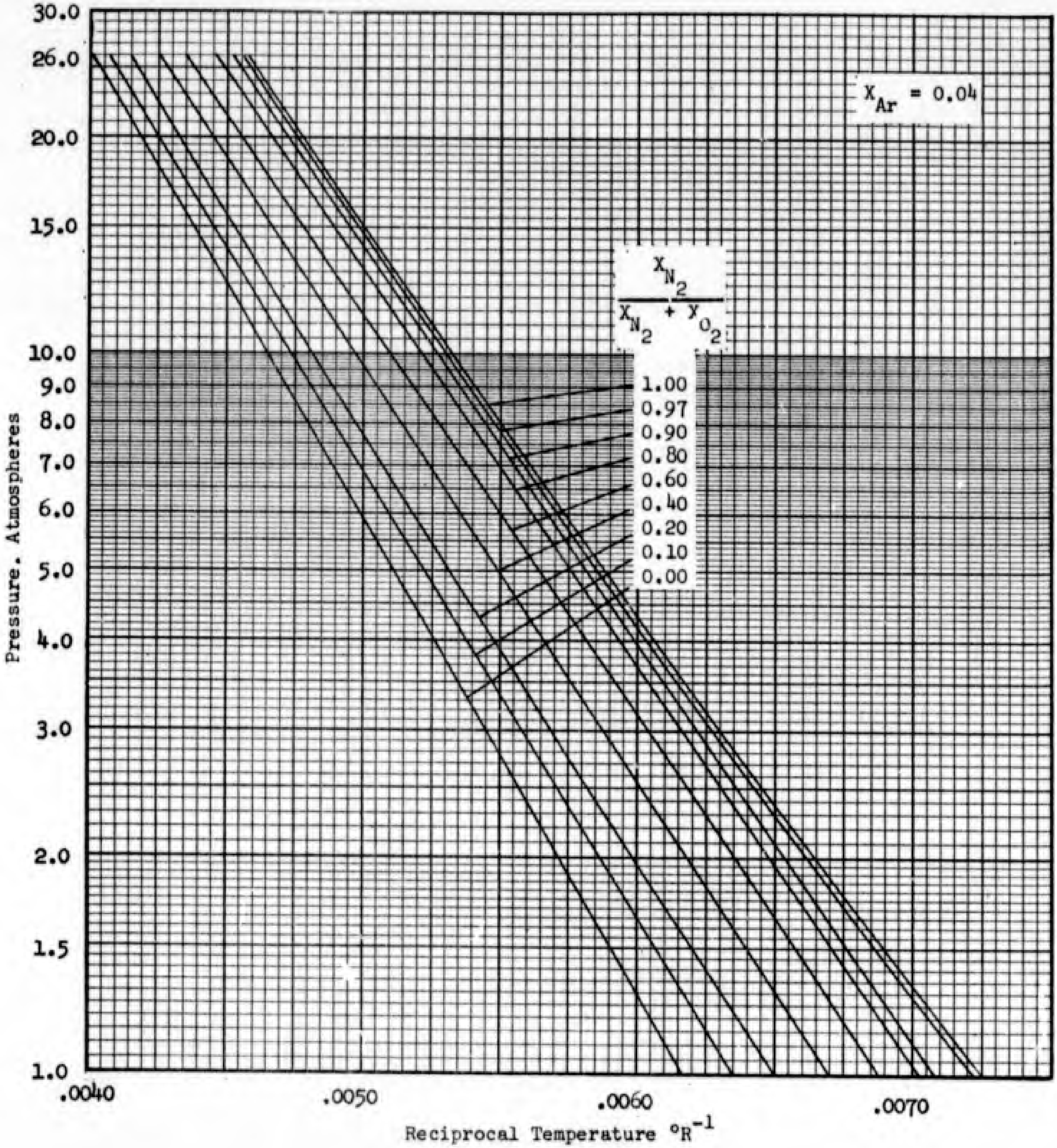


Figure 178. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

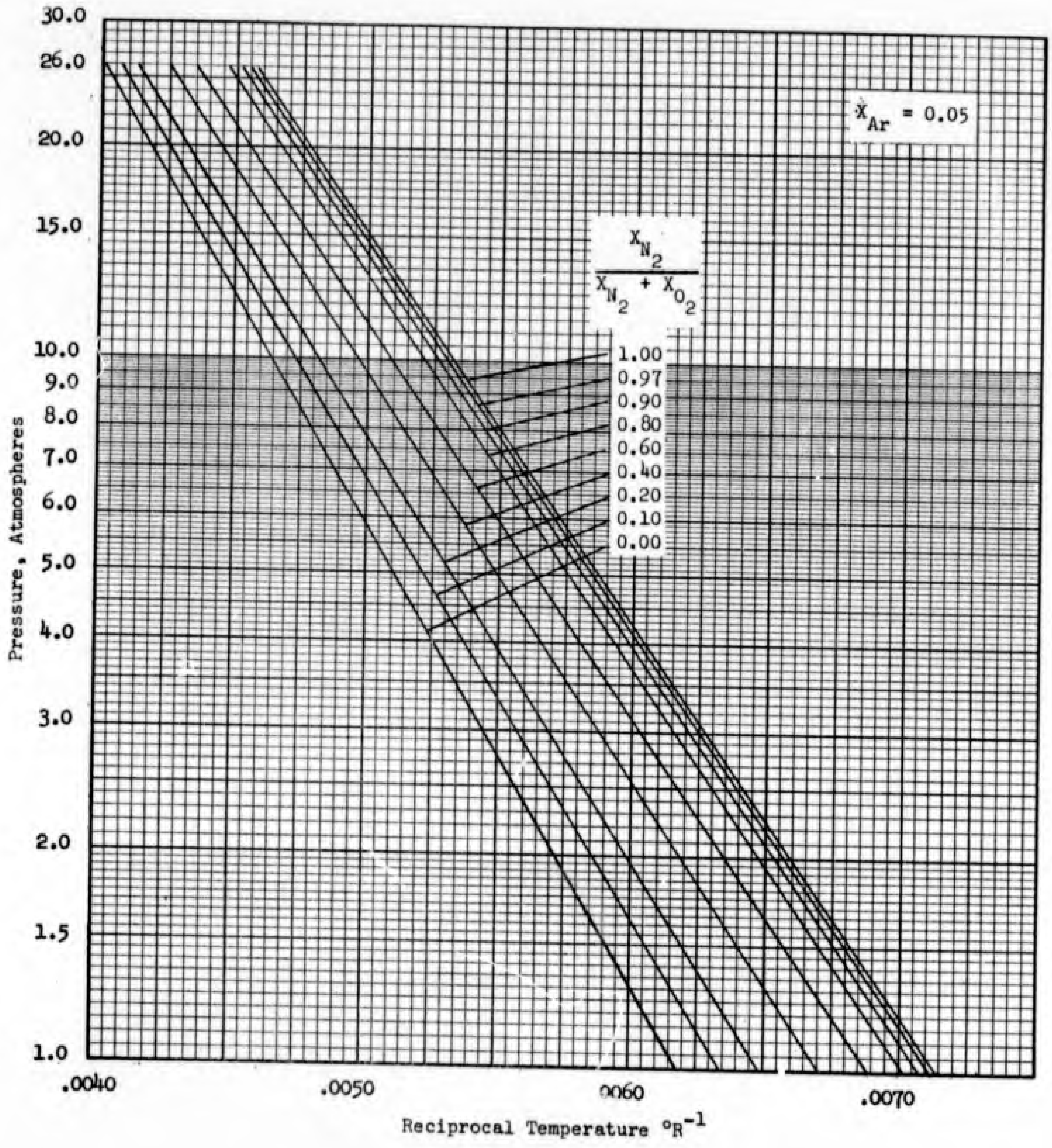


Figure 179. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

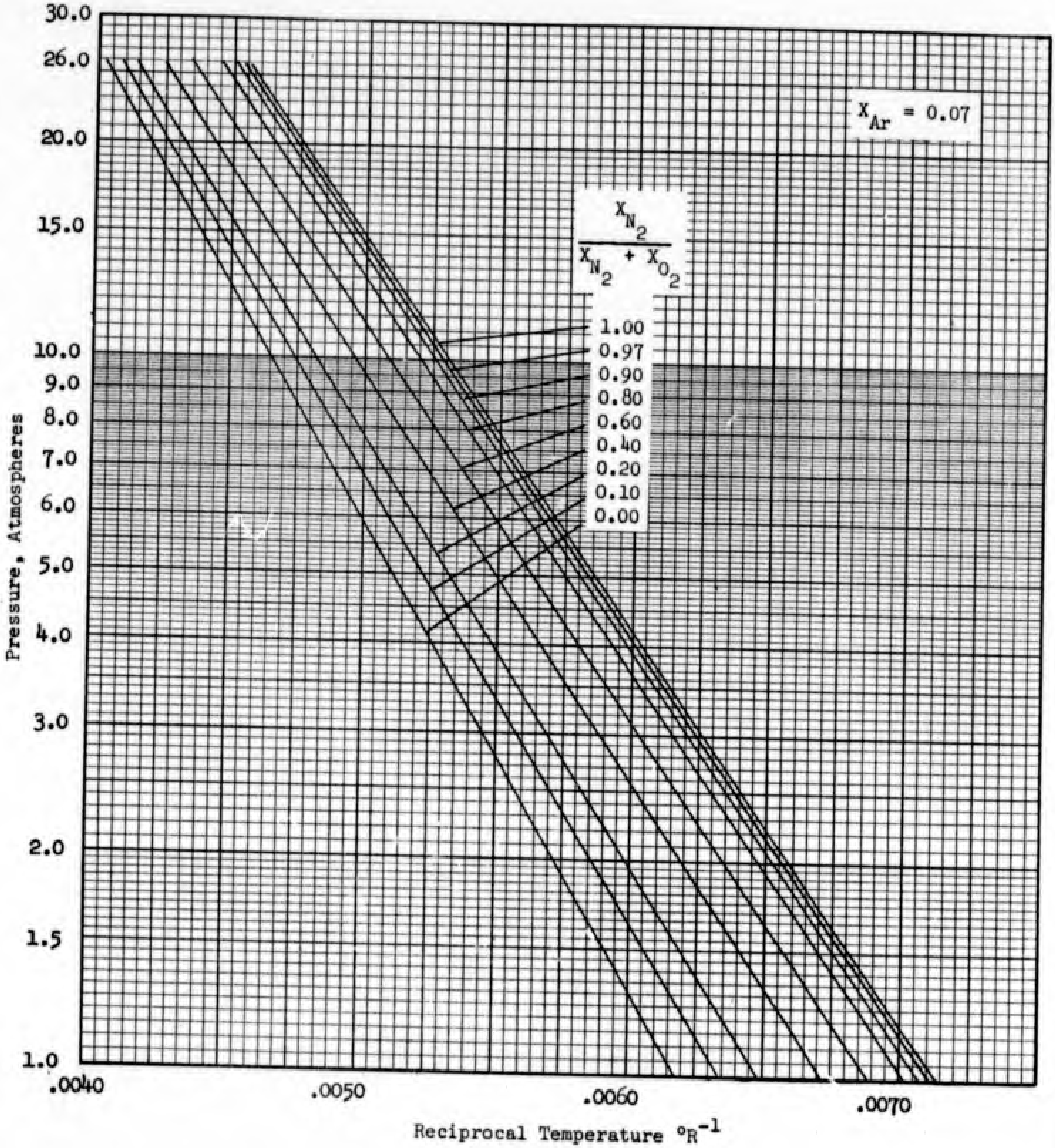


Figure 180. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

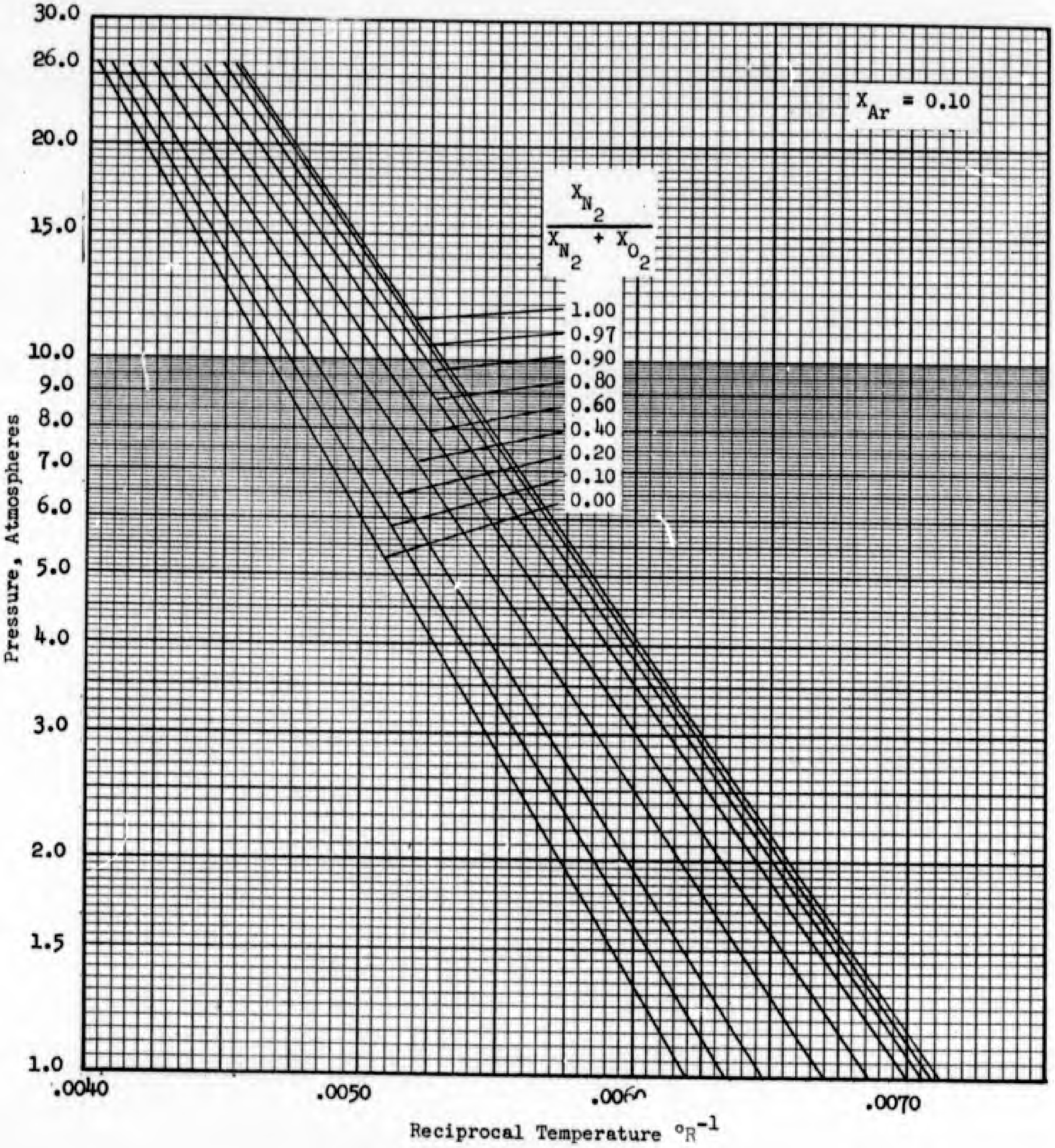


Figure 181. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

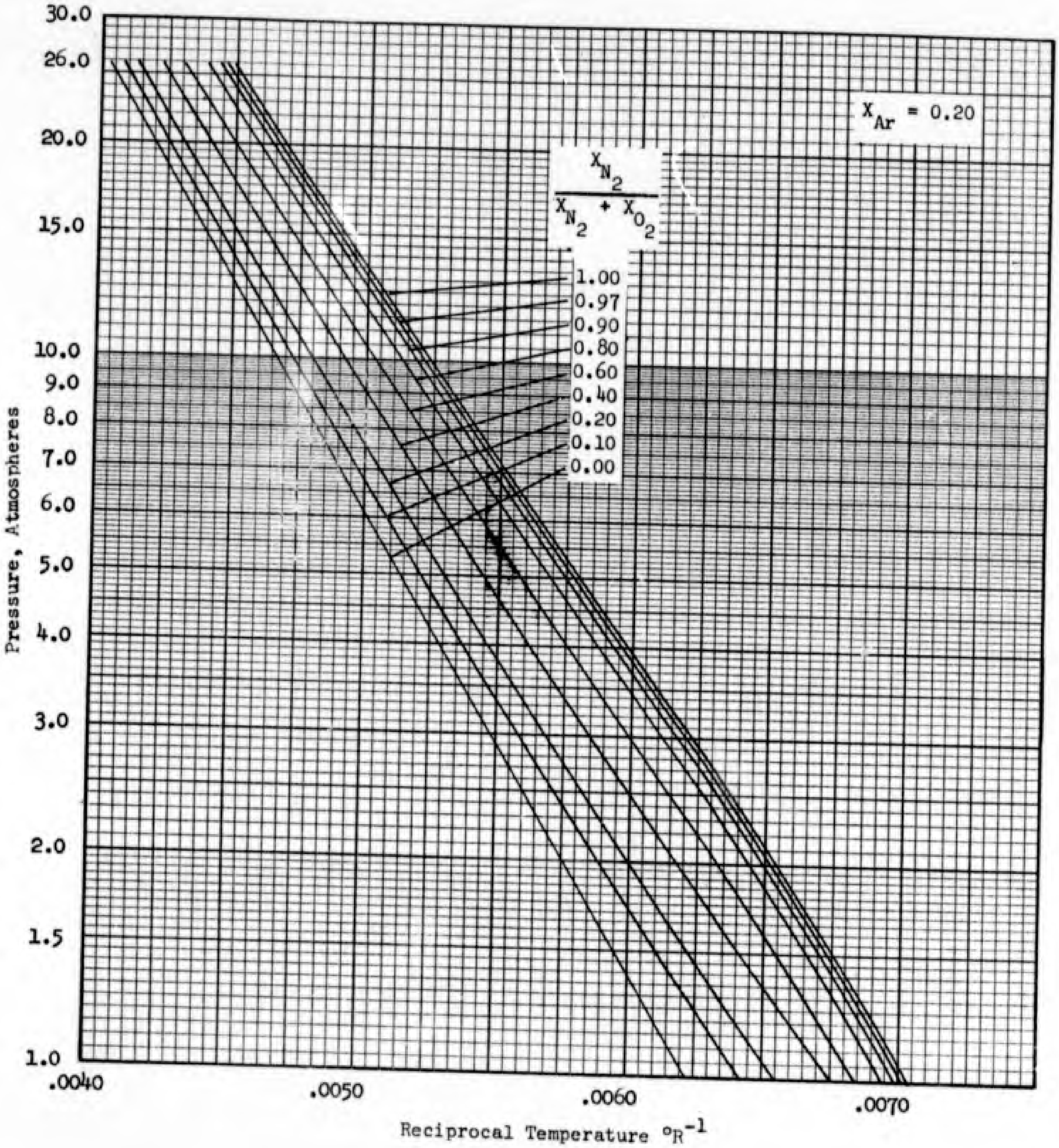


Figure 182. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

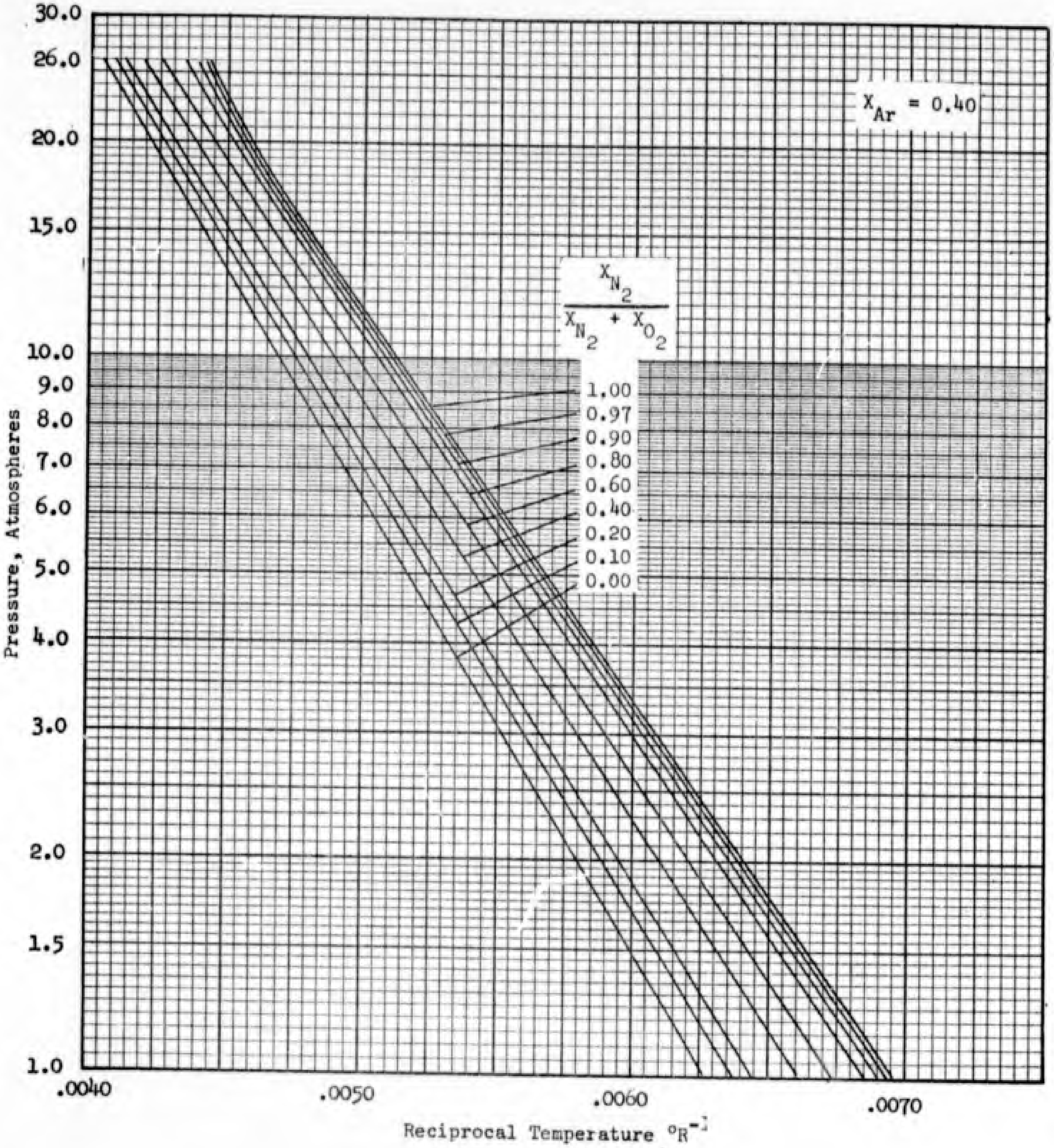


Figure 183. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

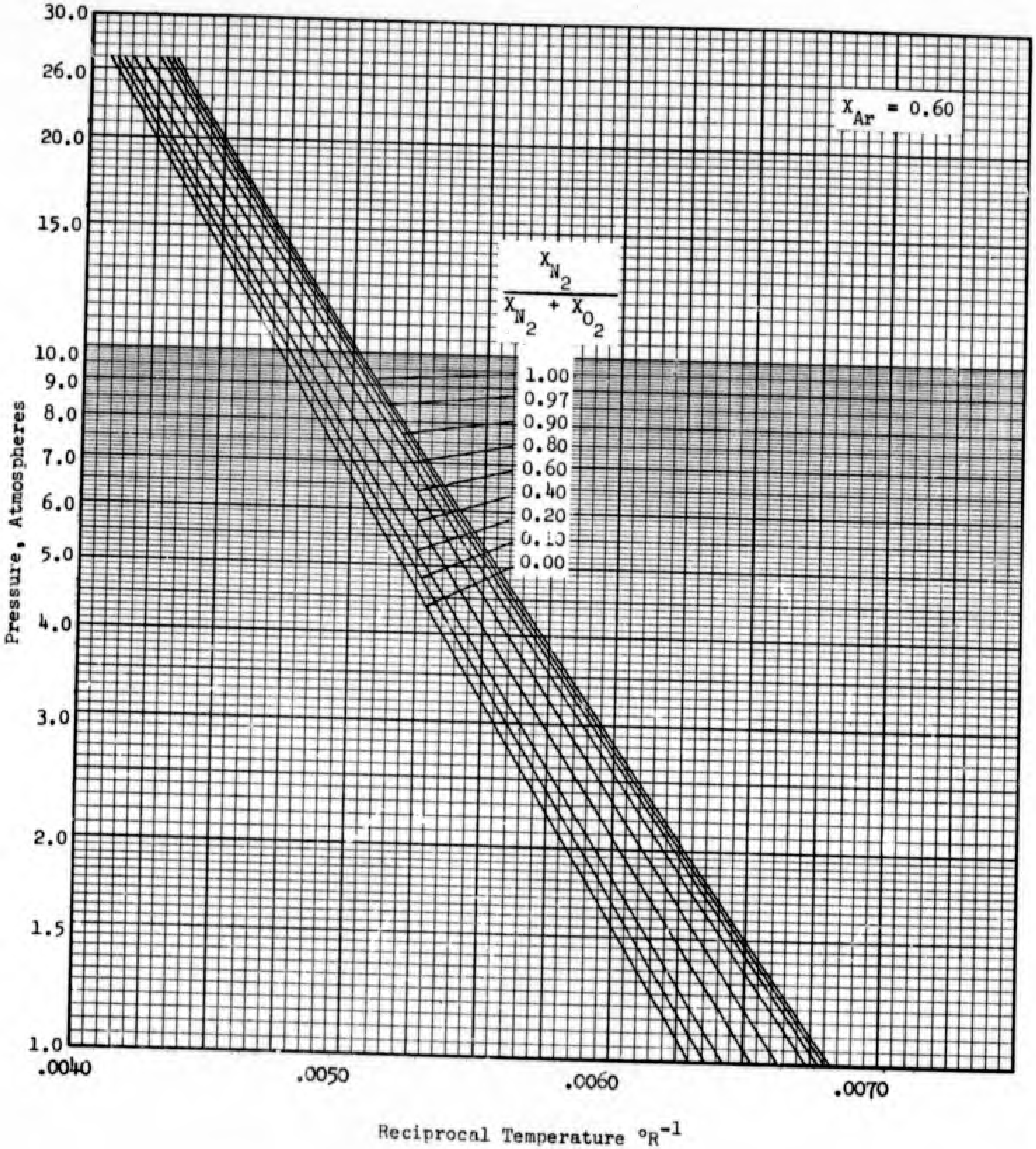


Figure 184. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

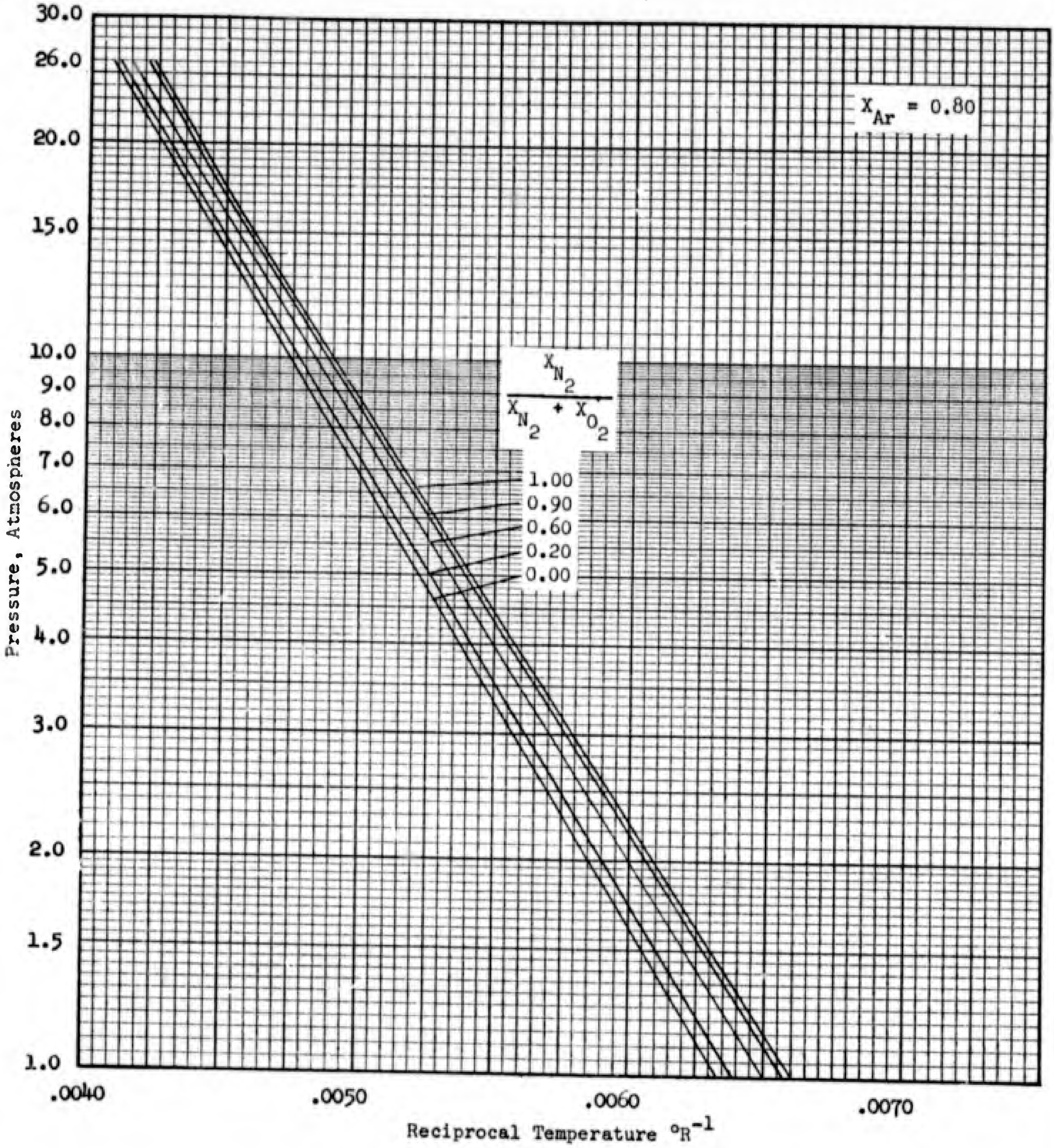


Figure 185. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

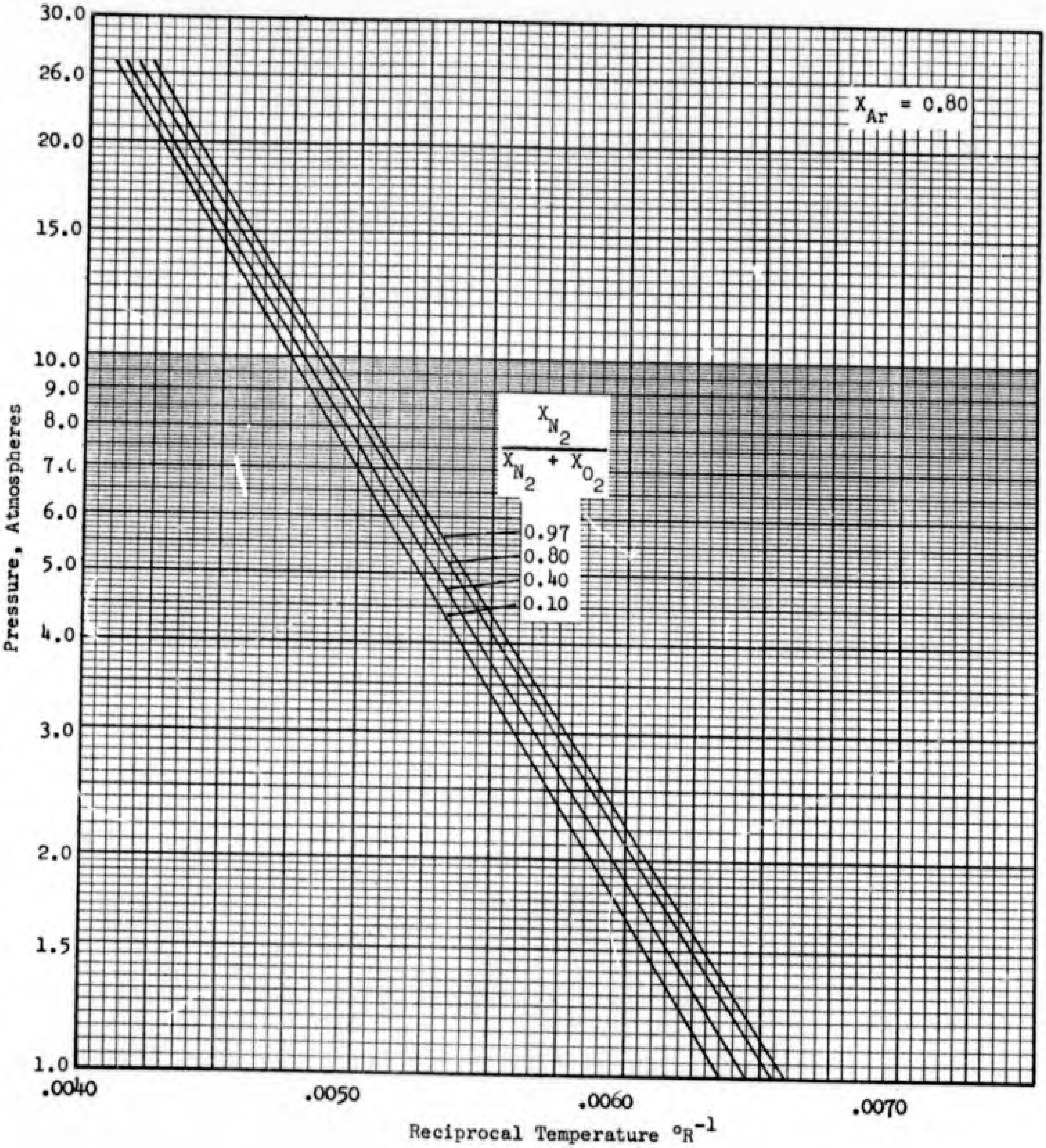


Figure 186. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

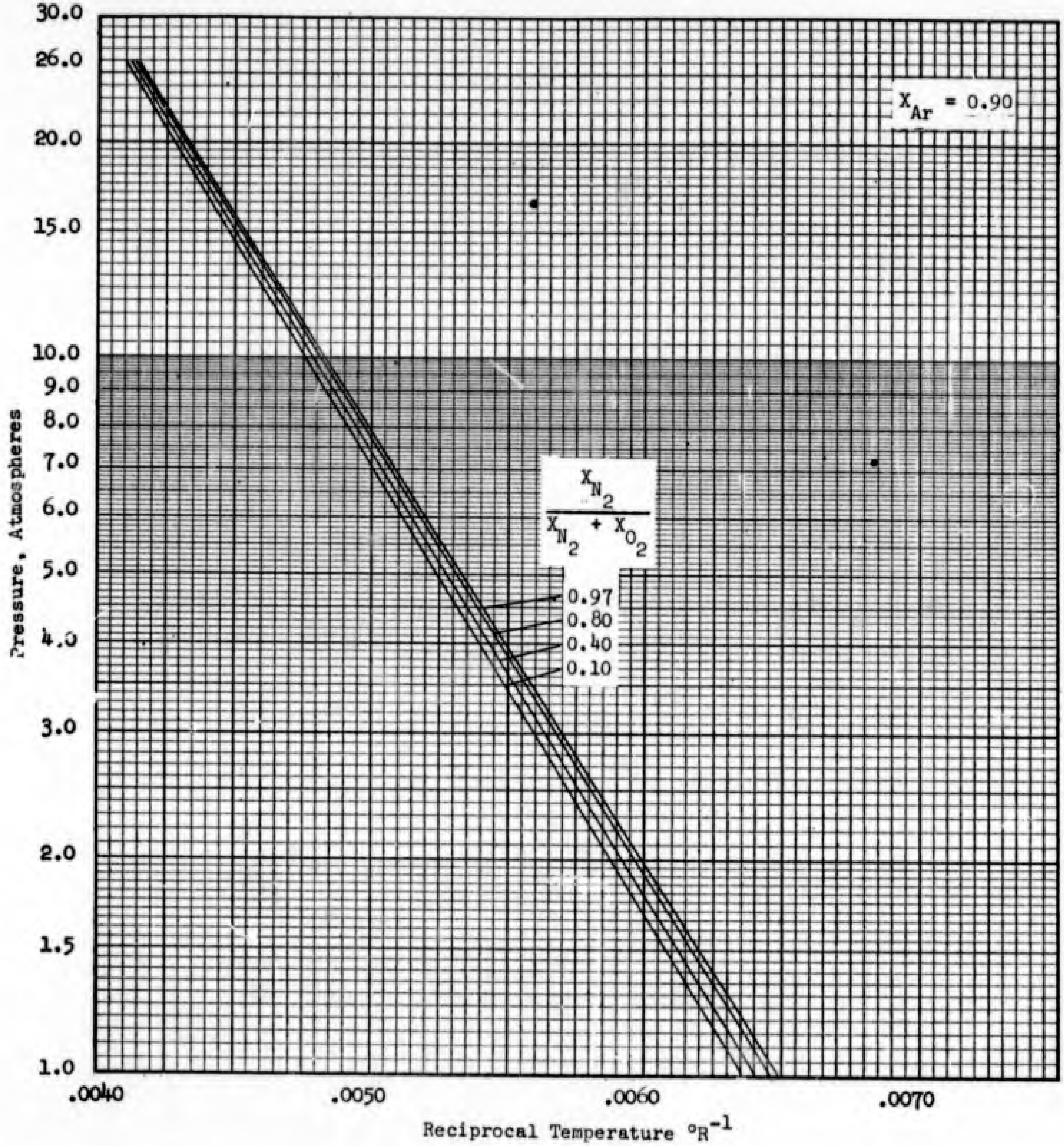


Figure 187. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

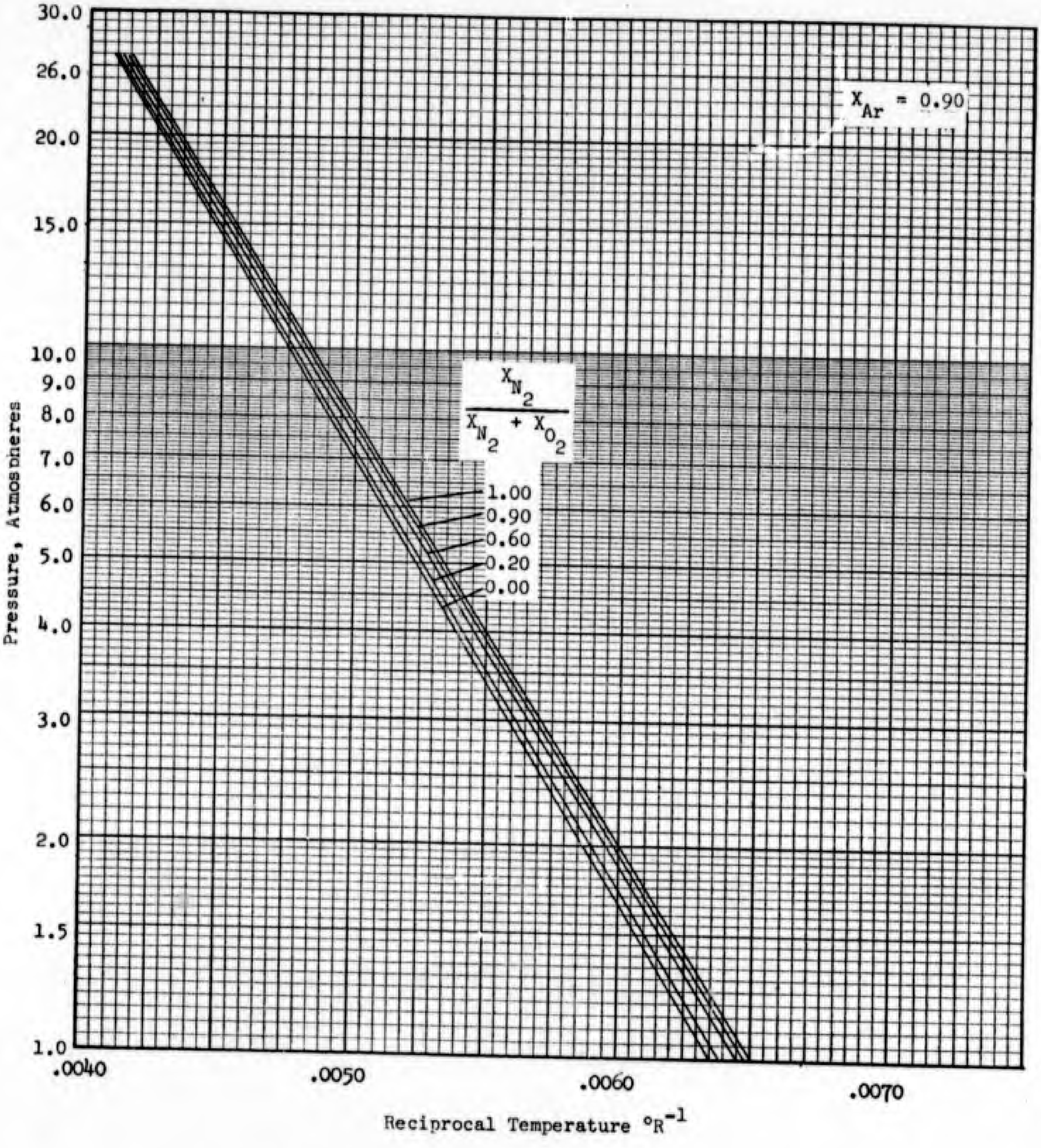


Figure 188. Vapor Pressures of Specific Mixtures of N_2-Ar-O_2.

APPENDIX II

TABULAR PRESENTATION OF CORRELATION

A. Isobaric Table

The table to follow presents values calculated at even pressure levels of 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 23, and 26 atmospheres. They are arranged in order of increasing liquid mole fraction ratio

$$\frac{N_2}{N_2 + O_2}$$

and sub-ordered according to increasing mole fraction of argon. The quantities calculated are vapor composition, temperature, relative volatility, pressure, activity coefficient, enthalpy, and heat capacity.

Table 25. Isobaric Calculated Values

PRESSURE = 1. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	162.4	2.575	4.010	1.557	1.118	1.165	0.999	-1841.	1093.	13.2	7.406
0.	0.01	0.	0.0154	0.9845	162.3	2.581	4.007	1.553	1.117	1.161	1.000	-1844.	1087.	13.1	7.374
0.	0.02	0.	0.0306	0.9694	162.2	2.586	4.004	1.548	1.115	1.158	1.000	-1847.	1082.	13.1	7.342
0.	0.03	0.	0.0456	0.9544	162.1	2.592	4.001	1.544	1.113	1.155	1.000	-1850.	1076.	13.1	7.311
0.	0.04	0.	0.0603	0.9397	162.0	2.597	3.998	1.540	1.112	1.151	1.001	-1852.	1071.	13.0	7.281
0.	0.05	0.	0.0748	0.9253	161.9	2.602	3.995	1.535	1.110	1.148	1.001	-1855.	1066.	13.0	7.251
0.	0.07	0.	0.1031	0.8970	161.7	2.613	3.989	1.526	1.107	1.142	1.002	-1860.	1056.	12.9	7.192
0.	0.10	0.	0.1439	0.8561	161.5	2.629	3.979	1.513	1.103	1.132	1.003	-1868.	1041.	12.9	7.107
0.	0.20	0.	0.2687	0.7313	160.7	2.682	3.941	1.469	1.091	1.104	1.010	-1893.	997.	12.6	6.847
0.	0.40	0.	0.4796	0.5204	159.4	2.784	3.852	1.382	1.076	1.058	1.034	-1938.	924.	11.9	6.406
0.	0.60	0.	0.6605	0.3395	158.5	2.888	3.746	1.297	1.075	1.024	1.072	-1978.	862.	11.3	6.026
0.	0.80	0.	0.8293	0.1707	157.7	2.991	3.632	1.214	1.087	1.008	1.127	-2015.	807.	10.7	5.689
0.	0.90	0.	0.9136	0.0865	157.5	3.042	3.572	1.174	1.099	1.003	1.162	-2032.	779.	10.4	5.491
0.10	0.	0.3135	0.	0.6865	157.7	2.621	4.111	1.568	1.103	1.168	1.012	-1834.	1060.	13.2	7.410
0.10	0.01	0.3095	0.0119	0.6786	157.6	2.626	4.106	1.563	1.102	1.164	1.012	-1837.	1057.	13.1	7.386
0.10	0.02	0.3056	0.0237	0.6707	157.6	2.631	4.100	1.558	1.100	1.161	1.012	-1839.	1053.	13.1	7.361
0.10	0.03	0.3017	0.0354	0.6630	157.6	2.636	4.095	1.554	1.099	1.157	1.013	-1842.	1049.	13.1	7.337
0.10	0.04	0.2978	0.0470	0.6553	157.6	2.641	4.090	1.549	1.098	1.154	1.013	-1844.	1045.	13.1	7.313
0.10	0.05	0.2939	0.0585	0.6476	157.5	2.645	4.085	1.544	1.096	1.151	1.013	-1846.	1042.	13.0	7.289
0.10	0.07	0.2863	0.0812	0.6325	157.5	2.655	4.074	1.534	1.094	1.144	1.014	-1851.	1034.	13.0	7.242
0.10	0.10	0.2752	0.1145	0.6103	157.4	2.669	4.058	1.520	1.090	1.135	1.015	-1858.	1024.	12.9	7.173
0.10	0.20	0.2399	0.2207	0.5394	157.2	2.717	4.003	1.473	1.080	1.106	1.022	-1882.	990.	12.5	6.951
0.10	0.40	0.1759	0.4170	0.4072	157.0	2.812	3.887	1.382	1.070	1.061	1.045	-1926.	926.	11.9	6.549
0.10	0.60	0.1169	0.6036	0.2795	156.9	2.906	3.766	1.296	1.072	1.029	1.082	-1969.	871.	11.3	6.147
0.10	0.80	0.0595	0.7933	0.1471	156.9	3.001	3.640	1.213	1.086	1.009	1.134	-2009.	813.	10.7	5.746
0.10	0.90	0.0303	0.8937	0.0762	157.1	3.048	3.576	1.173	1.099	1.004	1.166	-2029.	783.	10.4	5.534
0.20	0.	0.5095	0.	0.4905	154.0	2.641	4.155	1.573	1.085	1.171	1.026	-1814.	1035.	13.2	7.429
0.20	0.01	0.5042	0.0096	0.4861	154.0	2.646	4.149	1.568	1.084	1.168	1.026	-1816.	1032.	13.2	7.402
0.20	0.02	0.4990	0.0192	0.4818	154.0	2.651	4.143	1.563	1.083	1.164	1.026	-1819.	1029.	13.1	7.382
0.20	0.03	0.4938	0.0288	0.4779	154.1	2.655	4.137	1.558	1.082	1.161	1.027	-1821.	1027.	13.1	7.362
0.20	0.04	0.4886	0.0383	0.4731	154.1	2.660	4.131	1.553	1.081	1.158	1.027	-1824.	1024.	13.1	7.342
0.20	0.05	0.4834	0.0477	0.4688	154.1	2.665	4.125	1.548	1.080	1.154	1.027	-1826.	1021.	13.0	7.323
0.20	0.07	0.4732	0.0666	0.4602	154.1	2.674	4.112	1.538	1.078	1.148	1.028	-1831.	1016.	13.0	7.283
0.20	0.10	0.4580	0.0946	0.4474	154.2	2.688	4.094	1.523	1.075	1.139	1.030	-1839.	1008.	12.9	7.224
0.20	0.20	0.4083	0.1866	0.4051	154.3	2.735	4.032	1.474	1.068	1.110	1.036	-1863.	981.	12.6	7.031
0.20	0.40	0.3123	0.3680	0.3197	154.8	2.829	3.907	1.381	1.062	1.064	1.056	-1911.	930.	11.9	6.640
0.20	0.60	0.2162	0.5550	0.2288	155.4	2.921	3.779	1.294	1.066	1.032	1.093	-1958.	877.	11.3	6.252
0.20	0.80	0.1144	0.7602	0.1254	156.2	3.009	3.647	1.212	1.086	1.011	1.140	-2004.	819.	10.7	5.817
0.20	0.90	0.0593	0.8744	0.0663	156.7	3.052	3.584	1.173	1.099	1.006	1.169	-2026.	787.	10.4	5.574
0.40	0.	0.7333	0.	0.2667	148.7	2.629	4.124	1.569	1.050	1.187	1.065	-1748.	997.	13.3	7.452
0.40	0.01	0.7279	0.0070	0.2651	148.8	2.634	4.119	1.564	1.049	1.183	1.065	-1751.	996.	13.3	7.437
0.40	0.02	0.7226	0.0140	0.2635	148.8	2.640	4.114	1.559	1.049	1.179	1.065	-1754.	994.	13.2	7.422
0.40	0.03	0.7172	0.0210	0.2619	148.9	2.645	4.108	1.553	1.048	1.176	1.066	-1757.	992.	13.2	7.407
0.40	0.04	0.7118	0.0280	0.2602	148.9	2.650	4.103	1.548	1.048	1.172	1.066	-1760.	991.	13.2	7.392
0.40	0.05	0.7064	0.0350	0.2586	149.0	2.656	4.098	1.543	1.047	1.169	1.066	-1763.	989.	13.1	7.377
0.40	0.07	0.6956	0.0491	0.2553	149.1	2.667	4.087	1.533	1.047	1.162	1.066	-1770.	986.	13.1	7.347
0.40	0.10	0.6794	0.0703	0.2503	149.3	2.683	4.072	1.517	1.046	1.152	1.067	-1779.	981.	13.0	7.301
0.40	0.20	0.6244	0.1426	0.2331	149.9	2.737	4.018	1.468	1.044	1.122	1.071	-1810.	964.	12.6	7.149
0.40	0.40	0.5075	0.2977	0.1948	151.2	2.841	3.907	1.375	1.040	1.074	1.088	-1871.	928.	11.9	6.811
0.40	0.60	0.3743	0.4776	0.1482	152.8	2.939	3.786	1.289	1.042	1.039	1.116	-1932.	885.	11.3	6.423
0.40	0.80	0.2121	0.7016	0.0870	154.8	3.025	3.657	1.209	1.064	1.016	1.154	-1991.	829.	10.7	5.944
0.40	0.90	0.1141	0.8382	0.0477	155.9	3.063	3.586	1.171	1.099	1.008	1.177	-2020.	794.	10.4	5.651
0.60	0.	0.8569	0.	0.1431	144.9	2.579	3.993	1.551	1.024	1.218	1.126	-1663.	970.	13.6	7.483
0.60	0.01	0.8521	0.0056	0.1424	145.0	2.582	3.991	1.546	1.024	1.214	1.125	-1667.	969.	13.5	7.471
0.60	0.02	0.8472	0.0111	0.1416	145.1	2.589	3.988	1.541	1.024	1.210	1.125	-1672.	968.	13.5	7.459
0.60	0.03	0.8424	0.0167	0.1409	145.1	2.595	3.985	1.536	1.024	1.206	1.124	-1676.	967.	13.4	7.446
0.60	0.04	0.8375	0.0224	0.1402	145.2	2.602	3.983	1.531	1.024	1.202	1.124	-1680.	966.	13.4	7.434
0.60	0.05	0.8326	0.0280	0.1395	145.3	2.609	3.980	1.526	1.023	1.198	1.123	-1684.	965.	13.4	7.421
0.60	0.07	0.8227	0.0394	0.1380	145.5	2.622	3.975	1.516	1.023	1.190	1.122	-1692.	963.	13.3	7.396
0.60	0.10	0.8076	0.0566	0.1357	145.7	2.642	3.966	1.501	1.023	1.179	1.121	-1704.	960.	13.2	7.357
0.60	0.20	0.7557	0.1143	0.1300	146.5	2.707	3.937	1.454	1.025	1.149	1.120	-1744.	948.	12.8	7.224
0.60	0.40	0.6391	0.2507	0.1102	148.4	2.833	3.867	1.365	1.036	1.090	1.126	-1824.	923.	12.1	6.926
0.60	0.60	0.4938	0.4191	0.0871	150.6	2.949	3.777	1.283	1.056	1.049	1.143	-1903.	888.	11.3	6.556
0.60	0.80	0.2961	0.6500	0.0539	153.5	3.037	3.660	1.206	1.083	1.021	1.169	-1976.	837.	10.7	6.055
0.60	0.90	0.1647	0.8047	0.0306	155.2	3.071	3.592	1.170	1.096	1.010	1.185	-2014.	801.	10.4	5.723
0.80	0.	0.9384	0.	0.0616	142.0	2.501	3.811	1.524	1.013	1.273	1.214	-1570.	949.	14.0	7.514
0.80	0.01	0.9340	0.0047	0.0613	142.0	2.509	3.811	1.519	1.013	1.268	1.212	-1575.	948.	13.9	7.503
0.80	0.02	0.9296	0.0094	0.0610	142.1	2.517	3.812	1.515	1.013	1.263	1.210	-1580.	947.	13.9	7.492
0.80	0.03	0.9252	0.0142	0.0607	142.2	2.525	3.812	1.510	1.013	1.257	1.209	-1585.	947.	13.8	7.481
0.80	0.04	0.9207	0.0189	0.0604	142.3	2.533	3.813	1.506	1.013	1.252	1.207	-1590.	946.	13.8	7.470
0.80	0.05	0.9160	0.0237	0.0601	142.4	2.540	3.813	1.501	1.013	1.247	1.205	-1595.	945.	13.7	7.459
0.80	0.07	0.9071	0.0334	0.0595	142.6	2.556	3.814	1.492	1.012	1.236	1.202	-1606.	944.	13.6	7.437
0.80	0.10	0.8934	0.0481	0.0586	142.8	2.580	3.814	1.478	1.013	1.220	1.197	-1621.	942.	13.5	7.403
0.80	0.20	0.8452	0.0994	0.0554	143.8	2.658	3.814	1.435	1.017	1.181	1.185	-1671.	934.	13.0	7.284
0.80	0.40	0.7339	0.2177	0.0483	146.0	2.809	3.797	1.352	1.028	1.112	1.173	-1772.	916.	12.2	7.013
0.80	0.60	0.5869	0.3740	0.0391	148.7	2.943	3.751	1.275	1.051	1.060	1.173	-1870.	889.	11.4	6.668
0.80	0.80	0.3695	0.6059	0.0250	152.0	3.045	3.662	1.202	1.080	1.026	1.184	-1964.	843.	10.7	6.153
0.80	0.90	0.2117	0.7736	0.0147	154.5	3.078	3.599	1.168	1.096	1.012	1.193	-2007.	806.	10.3	5.790
0.90	0.	0.9709	0.	0.0291	140.6	2.459	3.710	1.509	1.015	1.311	1.271	-1522.	939.	14.2	7.528
0.90	0.01	0.9667	0.0044	0.0289	140.7	2.468	3.712	1.504	1.014	1.305	1.268	-1527.	938.	14.2	7.518
0.90	0.02	0.9624	0.0088	0.0288	140.8	2.476	3.714	1.500	1.014	1.299	1.265	-1532.	938.	14.1	7.509
0.90	0.03	0.9581	0.0133	0.0286	140.9	2.485	3.716	1.496	1.013	1.293	1.263	-1538.	937.	14.1	7.498
0.90	0.04	0.9538	0.0177	0.0285	141.0	2.493	3.718	1.491	1.013	1.287	1.260	-1544.	937.	14.0	7.488
0.90	0.05	0.9494	0.0222	0.0284	141.1	2.502	3.720	1.487	1.013	1.281	1.257	-1550.	936.	14.0	7.477
0.90	0.07	0.9407	0.0312	0.0281	141.3	2.519	3.724	1.478	1.013	1.270	1.252	-1561.	935.	13.8	7.456
0.90	0.10	0.9274	0.0450	0.0276	141.6	2.545	3.729	1.465	1.013	1.254	1.245	-1578.	934.	13.7	7.423
0.90	0.20	0.8808	0.0931	0.0261	142.8	2.629	3.743	1.424	1.014	1.204	1.226	-1632.	926.	13.2	7.310
0.90	0.40	0.7723	0.2048	0.0229	144.9	2.793	3.755	1.344	1.026	1.126	1.200	-1745.	912.	12.3	7.053
0.90	0.60	0.6242	0.3592	0.0186	147.8	2.936	3.733	1.270	1.050	1.069	1.191	-1852.	889.	11.4	6.704
0.90	0.80	0.4018	0.5860	0.0122	151.7	3.048	3.660	1.201	1.081	1.029	1.192	-1956.	846.	10.7	6.197
0.90	0.90	0.2339	0.7589	0.0072	154.2	3.082	3.597	1.167	1.098	1.014	1.197	-2004.	[illegible]	10.3	[illegible]
0.97	0.	0.9916	0.	0.0084	139.8	[illegible]	3.638	1.498	[illegible]	1.343	1.316	-1488.	933.	14.4	[illegible]
0.97	0.01	0.9874	0.0042	0.0084	139.9	2.436	3.641	1.494	[illegible]	1.338	1.313	-1494.	932.	14.4	7.531
0.97	0.02	0.9832	0.0085	0.0083	140.0	2.447	3.644	1.489	1.017	1.329	1.309	-1500.	932.	14.3	7.520
0.97	0.03	0.9790	0.0127	0.0083	140.1	2.456	3.647	1.485	1.017	1.322	1.306	-1505.	931.	14.2	7.510
0.97	0.04	0.9748	0.0170	0.0083	140.2	2.465	3.650	1.481	1.016	1.315	1.302	-1511.	931.	14.2	7.500
0.97	0.05	0.9705	0.0213	0.0082	140.3	2.474	3.653	1.477	1.016	1.309	1.299	-1517.	930.	14.1	7.489
0.97	0.07	0.9619	0.0300	0.0081	140.5	2.492	3.658	1.468	1.015	1.296	1.293	-1529.	929.	14.0	7.468
0.97	0.10	0.9488	0.0432	0.0080	140.8	2.519	3.667	1.456	1.014	1.276	1.284	-1547.	926.	13.8	7.437
0.97	0.20	0.9038	0.0893	0.0076	141.8	2.604	3.691	1.419	1.014	1.224	1.257	-1606.	923.	13.3	7.327
0.97	0.40	0.7969	0.1966	0.0066	144.2	2.780	3.789	1.339	1.025	1.137	1.226	-1720.	910.	12.3	7.073
0.97	0.60	0.6513	0.3433	0.0054	147.3	2.934	3.718	1.267	1.049	1.075	1.208	-1841.	889.	11.4	6.737
0.97	0.80	0.4236	0.5728	0.0036	151.3	3.050	3.656	1.199	1.081	1.031	1.198	-1951.	847.	10.7	6.226
0.97	0.90	0.2489	0.7489	0.0021	153.9	3.084	3.597	1.167	1.098	1.015	1.200	-2002.	[illegible]	10.3	5.844
1.00	0.	1.0000	0.	0.	139.4	2.418	3.607	1.492	1.021	1.357	1.338	-1473.	930.	14.5	7.540
1.00	0.01	0.9959	0.0041	0.0000	139.5	2.425	3.611	1.489	1.020	1.350	1.334	-1479.	930.	14.4	7.530
1.00	0.02	0.9917	0.0083	0.0000	139.6	2.434	3.614	1.485	1.019	1.343	1.330	-1485.	929.	14.4	7.520
1.00	0.03	0.9875	0.0125	0.0000	139.7	2.443	3.617	1.480	1.019	1.336	1.326	-1491.	929.	14.3	7.510
1.00	0.04	0.9833	0.0167	0.0000	139.8	2.450	3.621	1.476	1.018	1.329	1.322	-1497.	928.	14.3	7.500
1.00	0.05	0.9791	0.0209	0.0000	139.9	2.460	3.624	1.472	1.018	1.322	1.318	-1503.	928.	14.2	7.490
1.00	0.07	0.9708	0.0292	0.0000	140.1	2.480	3.630	1.464	1.017	1.309	1.311	-1514.	927.	14.1	7.470
1.00	0.10	0.9576	0.0424	0.0000	140.4	2.507	3.640	1.450	1.016	1.290	1.301	-1534.	926.	13.9	7.443
1.00	0.20	0.9130	0.0870	0.0000	141.5	2.596	3.666	1.412	1.015	1.232	1.271	-1595.	921.	13.4	7.333
1.00	0.40	0.8063	0.1937	0.0000	143.9	2.774	3.708	1.337	1.025	1.143	1.230	-1716.	909.	12.4	7.080
1.00	0.60	0.6616	0.3384	0.	147.0	2.930	3.710	1.266	1.048	1.077	1.208	-1836.	888.	11.4	6.749
1.00	0.80	0.4327	0.5674	0.	151.1	3.050	3.657	1.199	1.080	1.030	1.201	-1949.	848.	10.7	6.230
1.00	0.90	0.2553	0.7447	0.	153.8	3.085	3.598	1.166	1.098	1.015	1.201	-2001.	811.	10.3	5.893

Table 2[illegible]. (cont.)

PRESSURE = 2. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	A	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	175.3	2.307	3.368	1.460	1.062	1.136	0.999	-1670.	1159.	13.3	7.664
0.	0.01	0.	0.0145	0.9855	175.2	2.311	3.365	1.456	1.060	1.133	1.000	-1673.	1154.	13.3	7.634
0.	0.02	0.	0.0288	0.9712	175.1	2.315	3.363	1.452	1.059	1.130	1.000	-1677.	1148.	13.2	7.604
0.	0.03	0.	0.0429	0.9571	175.0	2.320	3.361	1.449	1.058	1.127	1.000	-1680.	1143.	13.2	7.575
0.	0.04	0.	0.0568	0.9432	174.9	2.324	3.358	1.445	1.057	1.125	1.001	-1683.	1137.	13.2	7.546
0.	0.05	0.	0.0705	0.9295	174.8	2.329	3.356	1.441	1.056	1.122	1.001	-1686.	1132.	13.2	7.517
0.	0.07	0.	0.0974	0.9026	174.6	2.337	3.351	1.434	1.053	1.116	1.002	-1692.	1122.	13.1	7.461
0.	0.10	0.	0.1365	0.8635	174.4	2.350	3.343	1.422	1.050	1.109	1.004	-1701.	1107.	13.0	7.379
0.	0.20	0.	0.2572	0.7428	173.6	2.392	3.313	1.389	1.040	1.084	1.010	-1730.	1061.	12.8	7.126
0.	0.40	0.	0.4663	0.5337	172.3	2.474	3.242	1.310	1.029	1.045	1.033	-1782.	983.	12.3	6.687
0.	0.60	0.	0.6499	0.3501	171.4	2.553	3.160	1.237	1.027	1.017	1.068	-1830.	916.	11.7	6.299
0.	0.80	0.	0.8235	0.1765	170.6	2.632	3.070	1.166	1.038	1.001	1.117	-1873.	854.	11.2	5.930
0.	0.90	0.	0.9106	0.0894	170.4	2.671	3.022	1.132	1.047	0.997	1.148	-1894.	824.	10.9	5.744
0.10	0.	0.2764	0.	0.7236	170.7	2.353	3.438	1.461	1.057	1.139	1.015	-1661.	1127.	13.4	7.678
0.10	0.01	0.2730	0.0117	0.7154	170.7	2.357	3.434	1.457	1.055	1.137	1.015	-1664.	1123.	13.4	7.653
0.10	0.02	0.2696	0.0233	0.7072	170.6	2.361	3.430	1.453	1.054	1.134	1.015	-1667.	1119.	13.3	7.629
0.10	0.03	0.2662	0.0348	0.6991	170.6	2.365	3.427	1.449	1.053	1.131	1.016	-1670.	1115.	13.3	7.605
0.10	0.04	0.2628	0.0462	0.6910	170.6	2.368	3.422	1.445	1.052	1.128	1.016	-1672.	1111.	13.3	7.581
0.10	0.05	0.2594	0.0576	0.6831	170.6	2.372	3.418	1.441	1.051	1.125	1.016	-1675.	1107.	13.3	7.558
0.10	0.07	0.2520	0.0800	0.6673	170.5	2.380	3.410	1.433	1.048	1.120	1.017	-1681.	1100.	13.2	7.511
0.10	0.10	0.2431	0.1130	0.6439	170.4	2.391	3.398	1.421	1.045	1.112	1.019	-1689.	1088.	13.1	7.441
0.10	0.20	0.2122	0.2185	0.5692	170.2	2.428	3.356	1.382	1.036	1.087	1.025	-1717.	1052.	12.8	7.219
0.10	0.40	0.1557	0.4152	0.4291	169.9	2.501	3.266	1.306	1.027	1.047	1.046	-1770.	985.	12.3	6.803
0.10	0.60	0.1034	0.6032	0.2934	169.8	2.572	3.173	1.234	1.027	1.020	1.078	-1820.	922.	11.7	6.403
0.10	0.80	0.0524	0.7941	0.1535	169.9	2.642	3.075	1.164	1.038	1.003	1.124	-1868.	860.	11.2	5.995
0.10	0.90	0.0266	0.8943	0.0791	170.0	2.676	3.025	1.130	1.048	0.998	1.152	-1891.	827.	10.9	5.780
0.20	0.	0.4644	0.	0.5356	167.0	2.380	3.469	1.457	1.046	1.143	1.032	-1641.	1101.	13.5	7.698
0.20	0.01	0.4596	0.0097	0.5307	167.0	2.384	3.464	1.453	1.045	1.140	1.032	-1644.	1098.	13.4	7.677
0.20	0.02	0.4548	0.0194	0.5258	167.0	2.387	3.459	1.449	1.044	1.137	1.032	-1647.	1095.	13.4	7.657
0.20	0.03	0.4499	0.0291	0.5210	167.0	2.391	3.455	1.445	1.043	1.134	1.033	-1650.	1092.	13.4	7.636
0.20	0.04	0.4452	0.0387	0.5161	167.0	2.394	3.450	1.441	1.042	1.131	1.033	-1653.	1089.	13.3	7.616
0.20	0.05	0.4404	0.0483	0.5113	167.0	2.398	3.446	1.437	1.041	1.128	1.033	-1656.	1086.	13.3	7.596
0.20	0.07	0.4309	0.0674	0.5016	167.1	2.405	3.436	1.429	1.039	1.123	1.034	-1661.	1080.	13.3	7.555
0.20	0.10	0.4169	0.0959	0.4873	167.1	2.416	3.422	1.417	1.037	1.115	1.035	-1670.	1071.	13.2	7.495
0.20	0.20	0.3710	0.1892	0.4397	167.3	2.451	3.375	1.377	1.030	1.090	1.041	-1698.	1042.	12.9	7.296
0.20	0.40	0.2823	0.3734	0.3444	167.7	2.520	3.279	1.301	1.023	1.050	1.060	-1754.	985.	12.3	6.902
0.20	0.60	0.1939	0.5622	0.2439	168.4	2.587	3.180	1.229	1.026	1.022	1.090	-1809.	927.	11.7	6.496
0.20	0.80	0.1016	0.7665	0.1320	169.1	2.651	3.079	1.162	1.039	1.005	1.131	-1862.	865.	11.2	6.056
0.20	0.90	0.0523	0.8785	0.0692	169.6	2.681	3.027	1.129	1.048	0.999	1.156	-1888.	831.	10.9	5.814
0.40	0.	0.6964	0.	0.3036	161.3	2.389	3.441	1.441	1.021	1.154	1.075	-1578.	1061.	13.5	7.747
0.40	0.01	0.6911	0.0073	0.3016	161.4	2.393	3.437	1.437	1.020	1.151	1.074	-1582.	1059.	13.5	7.731
0.40	0.02	0.6858	0.0146	0.2996	161.5	2.397	3.433	1.433	1.020	1.148	1.074	-1585.	1057.	13.5	7.714
0.40	0.03	0.6805	0.0219	0.2976	161.5	2.401	3.429	1.429	1.019	1.145	1.075	-1588.	1055.	13.5	7.698
0.40	0.04	0.6751	0.0292	0.2956	161.6	2.405	3.425	1.425	1.019	1.142	1.075	-1592.	1053.	13.4	7.682
0.40	0.05	0.6698	0.0366	0.2936	161.6	2.409	3.421	1.420	1.018	1.139	1.075	-1596.	1051.	13.4	7.666
0.40	0.07	0.6591	0.0513	0.2896	161.8	2.417	3.413	1.412	1.017	1.134	1.075	-1603.	1048.	13.3	7.633
0.40	0.10	0.6429	0.0735	0.2835	162.0	2.429	3.401	1.401	1.016	1.125	1.075	-1613.	1042.	13.2	7.584
0.40	0.20	0.5883	0.1490	0.2626	162.6	2.468	3.360	1.362	1.014	1.100	1.079	-1648.	1023.	12.9	7.418
0.40	0.40	0.4731	0.3102	0.2167	164.1	2.542	3.279	1.288	1.015	1.059	1.092	-1716.	982.	12.3	7.061
0.40	0.60	0.3438	0.4942	0.1620	165.7	2.609	3.183	1.220	1.024	1.029	1.114	-1784.	933.	11.7	6.656
0.40	0.80	0.1910	0.7162	0.0929	167.7	2.666	3.084	1.157	1.039	1.008	1.145	-1850.	874.	11.2	6.169
0.40	0.90	0.1014	0.8484	0.0502	168.9	2.690	3.030	1.127	1.049	1.001	1.163	-1883.	837.	10.9	5.881
0.60	0.	0.8336	0.	0.1665	157.2	2.359	3.338	1.415	1.000	1.180	1.135	-1497.	1031.	13.6	7.797
0.60	0.01	0.8286	0.0059	0.1656	157.3	2.364	3.336	1.411	1.000	1.177	1.134	-1501.	1029.	13.6	7.784
0.60	0.02	0.8236	0.0118	0.1647	157.4	2.369	3.334	1.408	1.000	1.173	1.134	-1505.	1028.	13.6	7.770
0.60	0.03	0.8185	0.0178	0.1638	157.5	2.374	3.332	1.404	1.000	1.170	1.133	-1510.	1027.	13.5	7.755
0.60	0.04	0.8134	0.0237	0.1629	157.6	2.379	3.330	1.400	0.999	1.166	1.133	-1514.	1026.	13.5	7.741
0.60	0.05	0.8083	0.0297	0.1619	157.6	2.383	3.328	1.396	0.999	1.163	1.132	-1519.	1024.	13.5	7.728
0.60	0.07	0.7981	0.0418	0.1601	157.8	2.393	3.324	1.389	0.999	1.157	1.131	-1527.	1022.	13.4	7.700
0.60	0.10	0.7826	0.0602	0.1573	158.1	2.408	3.317	1.378	0.999	1.147	1.130	-1540.	1018.	13.3	7.657
0.60	0.20	0.7289	0.1237	0.1475	159.0	2.456	3.294	1.341	1.000	1.118	1.128	-1584.	1009.	13.0	7.510
0.60	0.40	0.6089	0.2658	0.1253	161.0	2.545	3.241	1.273	1.007	1.072	1.130	-1671.	975.	12.3	7.103
0.60	0.60	0.4622	0.4407	0.0971	163.4	2.622	3.172	1.210	1.021	1.037	1.141	-1755.	936.	11.7	6.786
0.60	0.80	0.2699	0.6717	0.0583	166.4	2.679	3.085	1.152	1.040	1.013	1.160	-1837.	880.	11.2	6.270
0.60	0.90	0.1475	0.8201	0.0324	168.2	2.698	3.033	1.124	1.050	1.004	1.171	-1876.	842.	10.9	5.944
0.80	0.	0.9274	0.	0.0726	154.0	2.306	3.192	1.384	0.991	1.225	1.220	-1404.	1006.	13.8	7.845
0.80	0.01	0.9227	0.0050	0.0723	154.0	2.313	3.192	1.380	0.991	1.221	1.218	-1410.	1005.	13.7	7.833
0.80	0.02	0.9180	0.0101	0.0719	154.1	2.319	3.193	1.377	0.990	1.216	1.216	-1415.	1005.	13.7	7.821
0.80	0.03	0.9133	0.0152	0.0715	154.2	2.325	3.193	1.374	0.990	1.212	1.215	-1421.	1004.	13.7	7.808
0.80	0.04	0.9086	0.0203	0.0711	154.3	2.331	3.194	1.370	0.990	1.208	1.213	-1426.	1003.	13.6	7.796
0.80	0.05	0.9038	0.0254	0.0707	154.4	2.337	3.194	1.367	0.990	1.204	1.211	-1431.	1002.	13.6	7.783
0.80	0.07	0.8942	0.0358	0.0700	154.6	2.348	3.195	1.360	0.990	1.196	1.208	-1442.	1001.	13.5	7.758
0.80	0.10	0.8796	0.0516	0.0688	154.9	2.367	3.195	1.350	0.990	1.184	1.204	-1459.	998.	13.4	7.719
0.80	0.20	0.8285	0.1067	0.0648	156.0	2.426	3.196	1.317	0.992	1.148	1.191	-1513.	989.	13.0	7.585
0.80	0.40	0.7106	0.2336	0.0558	158.4	2.535	3.184	1.256	1.002	1.090	1.176	-1620.	968.	12.4	7.280
0.80	0.60	0.5576	0.3981	0.0443	161.4	2.626	3.149	1.199	1.019	1.048	1.171	-1724.	936.	11.7	6.894
0.80	0.80	0.3401	0.6323	0.0276	165.2	2.689	3.083	1.146	1.040	1.018	1.175	-1823.	886.	11.2	6.362
0.80	0.90	0.1908	0.7935	0.0157	167.5	2.706	3.034	1.121	1.050	1.006	1.179	-1870.	847.	10.9	6.004
0.90	0.	0.9655	0.	0.0345	152.5	2.275	3.110	1.367	0.991	1.256	1.274	-1356.	995.	13.9	7.870
0.90	0.01	0.9610	0.0047	0.0343	152.6	2.282	3.112	1.364	0.991	1.251	1.271	-1362.	995.	13.8	7.858
0.90	0.02	0.9564	[illegible]	0.0341	152.7	2.289	3.114	1.361	0.991	1.246	1.269	-1368.	994.	13.8	7.846
0.90	0.03	0.9518	[illegible]	0.0339	152.8	2.295	3.116	1.357	0.991	1.241	1.266	-1374.	993.	13.7	7.834
0.90	0.04	0.9472	0.0190	0.0338	152.9	2.302	3.117	1.354	0.990	1.236	1.264	-1380.	993.	13.7	7.821
0.90	0.05	0.9425	0.0239	0.0336	153.0	2.309	3.119	1.351	0.990	1.232	1.261	-1386.	992.	13.7	7.809
0.90	0.07	0.9332	0.0336	0.0332	153.2	2.322	3.122	1.345	0.990	1.222	1.256	-1398.	991.	13.6	7.785
0.90	0.10	0.9189	0.0485	0.0327	153.6	2.341	3.126	1.335	0.990	1.209	1.250	-1416.	989.	13.5	7.747
0.90	0.20	0.8689	0.1003	0.0308	154.7	2.406	3.138	1.305	0.991	1.168	1.230	-1475.	982.	13.1	7.610
0.90	0.40	0.7527	0.2208	0.0266	157.3	2.526	3.140	1.247	1.000	1.102	1.202	-1593.	964.	12.4	7.322
0.90	0.60	0.5988	0.3800	0.0212	160.5	2.626	3.134	1.193	1.018	1.054	1.188	-1707.	936.	11.7	6.942
0.90	0.80	0.3723	0.6143	0.0134	164.6	2.694	3.080	1.144	1.040	1.020	1.183	-1816.	888.	11.1	6.404
0.90	0.90	0.2115	0.7807	0.0077	167.1	2.709	3.039	1.120	1.051	1.007	1.183	-1867.	849.	10.9	6.033
0.97	0.	0.9900	0.	0.0100	151.6	2.253	3.052	1.355	0.994	1.282	1.317	-1321.	988.	13.9	7.887
0.97	0.01	0.9855	0.0045	0.0100	151.7	2.260	3.054	1.352	0.994	1.276	1.313	-1328.	988.	13.9	7.875
0.97	0.02	0.9810	0.0091	0.0099	151.8	2.267	3.057	1.349	0.993	1.271	1.310	-1334.	987.	13.8	7.863
0.97	0.03	0.9764	0.0137	0.0099	151.9	2.274	3.059	1.346	0.993	1.265	1.307	-1340.	987.	13.8	7.851
0.97	0.04	0.9719	0.0183	0.0098	152.0	2.280	3.062	1.343	0.993	1.260	1.304	-1347.	986.	13.8	7.839
0.97	0.05	0.9673	0.0229	0.0098	152.1	2.287	3.064	1.339	0.992	1.255	1.301	-1353.	985.	13.7	7.827
0.97	0.07	0.9580	0.0323	0.0097	152.3	2.301	3.069	1.333	0.992	1.244	1.294	-1366.	984.	13.6	7.803
0.97	0.10	0.9439	0.0466	0.0095	152.7	2.322	3.076	1.324	0.991	1.229	1.286	-1385.	983.	13.5	7.767
0.97	0.20	0.8946	0.0965	0.0089	153.8	2.390	3.096	1.295	0.991	1.184	1.260	-1448.	977.	13.1	7.639
0.97	0.40	0.7795	0.2128	0.0077	156.5	2.518	3.123	1.240	1.000	1.111	1.222	-1573.	961.	12.4	7.349
0.97	0.60	0.6254	0.3684	0.0062	159.8	2.625	3.122	1.189	1.018	1.059	1.200	-1695.	936.	11.7	6.973
0.97	0.80	0.3938	0.6023	0.0040	164.2	2.696	3.078	1.142	1.040	1.022	1.189	-1811.	889.	11.1	6.432
0.97	0.90	0.2257	0.7721	0.0023	166.9	2.712	3.035	1.119	1.051	1.008	1.186	-1864.	851.	10.9	6.052
1.00	0.	1.0000	0.	0.	151.2	2.242	3.026	1.350	0.996	1.294	1.337	-1307.	985.	14.0	7.894
1.00	0.01	0.9955	0.0045	0.0000	151.3	2.250	3.029	1.347	0.996	1.288	1.333	-1313.	985.	13.9	7.882
1.00	0.02	0.9910	0.0090	0.0000	151.4	2.257	3.032	1.343	0.995	1.282	1.329	-1320.	984.	13.9	7.870
1.00	0.03	0.9865	0.0135	0.0000	151.5	2.264	3.035	1.340	0.995	1.277	1.326	-1326.	984.	13.8	7.859
1.00	0.04	0.9820	0.0180	0.0000	151.6	2.271	3.038	1.338	0.994	1.271	1.322	-1333.	983.	13.8	7.847
1.00	0.05	0.9774	0.0226	0.0000	151.7	2.278	3.040	1.335	0.994	1.265	1.319	-1339.	983.	13.8	7.835
1.00	0.07	0.9682	0.0318	0.0000	151.9	2.292	3.046	1.329	0.993	1.254	1.312	-1352.	982.	13.7	7.811
1.00	0.10	0.9542	0.0458	0.0000	152.3	2.314	3.054	1.320	0.992	1.239	1.302	-1371.	980.	13.6	7.775
1.00	0.20	0.9051	0.0949	0.0000	153.5	2.383	3.078	1.291	0.992	1.191	1.273	-1436.	974.	13.2	7.640
1.00	0.40	0.7904	0.2096	0.0000	156.2	2.514	3.112	1.238	1.000	1.115	1.231	-1565.	959.	12.4	7.360
1.00	0.60	0.6364	0.3637	0.	159.6	2.625	3.116	1.187	1.018	1.061	1.206	-1690.	935.	11.7	6.987
1.00	0.80	0.4028	0.5972	0.	164.0	2.697	3.077	1.141	1.040	1.023	1.192	-1808.	890.	11.1	6.444
1.00	0.90	0.2316	0.7684	0.	166.8	2.713	3.035	1.119	1.051	1.009	1.187	-1863.	851.	10.9	6.061

PRESSURE = 4. ATM

LIQUID MOLE FRACTION N2/N2+O2	LIQUID MOLE FRACTION AR	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	TEMP R	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	PRESSURE ACT COEF N2	PRESSURE ACT COEF AR	PRESSURE ACT COEF O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
0.	0.	0.	0.	1.0000	190.6	2.020	2.776	1.375	0.98	1.111	1.000	-1466.	1224.	13.4	8.122
0.	0.01	0.	0.0137	0.9863	190.5	2.023	2.775	1.372	0.986	1.109	1.001	-1470.	1218.	13.4	8.094
0.	0.02	0.	0.0272	0.9728	190.4	2.026	2.773	1.369	0.985	1.106	1.001	-1473.	1212.	13.4	8.065
0.	0.03	0.	0.0405	0.9595	190.3	2.030	2.772	1.366	0.985	1.104	1.002	-1477.	1207.	13.4	8.037
0.	0.04	0.	0.0537	0.9463	190.2	2.033	2.770	1.362	0.984	1.102	1.002	-1480.	1201.	13.4	8.010
0.	0.05	0.	0.0668	0.9332	190.1	2.037	2.768	1.359	0.983	1.100	1.003	-1484.	1196.	13.3	7.982
0.	0.07	0.	0.0924	0.9076	189.9	2.043	2.765	1.353	0.982	1.096	1.004	-1490.	1185.	13.3	7.929
0.	0.10	0.	0.1299	0.8701	189.6	2.053	2.759	1.344	0.980	1.089	1.005	-1500.	1169.	13.3	7.850
0.	0.20	0.	0.2471	0.7529	188.8	2.086	2.738	1.313	0.974	1.070	1.013	-1533.	1121.	13.1	7.605
0.	0.40	0.	0.4548	0.5452	187.5	2.148	2.688	1.251	0.967	1.038	1.034	-1593.	1037.	12.7	7.166
0.	0.60	0.	0.6410	0.3590	186.5	2.207	2.627	1.190	0.967	1.016	1.066	-1647.	964.	12.3	6.771
0.	0.80	0.	0.8190	0.1811	185.8	2.264	2.560	1.131	0.976	1.003	1.110	-1698.	896.	11.9	6.389
0.	0.90	0.	0.9084	0.0916	185.5	2.292	2.524	1.101	0.983	1.000	1.137	-1723.	862.	11.8	6.196
0.10	0.	0.2393	0.	0.7607	186.2	2.063	2.831	1.372	0.994	1.120	1.020	-1452.	1193.	13.7	8.150
0.10	0.01	0.2363	0.0116	0.7521	186.1	2.066	2.828	1.369	0.994	1.117	1.021	-1455.	1188.	13.6	8.126
0.10	0.02	0.2334	0.0230	0.7436	186.1	2.069	2.825	1.365	0.993	1.115	1.021	-1459.	1184.	13.6	8.102
0.10	0.03	0.2305	0.0344	0.7351	186.0	2.072	2.822	1.362	0.992	1.113	1.021	-1462.	1180.	13.6	8.078
0.10	0.04	0.2277	0.0457	0.7267	186.0	2.075	2.820	1.359	0.991	1.110	1.022	-1465.	1175.	13.6	8.054
0.10	0.05	0.2248	0.0569	0.7183	186.0	2.078	2.817	1.356	0.990	1.108	1.022	-1469.	1171.	13.5	8.031
0.10	0.07	0.2192	0.0792	0.7017	185.9	2.083	2.811	1.349	0.988	1.104	1.023	-1475.	1163.	13.5	7.984
0.10	0.10	0.2109	0.1120	0.6772	185.8	2.092	2.802	1.340	0.986	1.097	1.024	-1485.	1150.	13.4	[illegible].915
0.10	0.20	0.1843	0.2174	0.5983	185.5	2.119	2.772	1.308	0.979	1.077	1.030	-1517.	1110.	13.2	7.691
0.10	0.40	0.1353	0.4150	0.4497	185.2	2.173	2.707	1.246	0.971	1.044	1.049	-1578.	1037.	12.8	7.269
0.10	0.60	0.0896	0.6045	0.3058	185.0	2.224	2.638	1.186	0.971	1.020	1.078	-1637.	968.	12.4	6.860
0.10	0.80	0.0452	0.7961	0.1588	185.1	2.273	2.564	1.128	0.978	1.006	1.117	-1693.	900.	12.0	6.[illegible]44
0.10	0.90	0.0229	0.8957	0.0814	185.2	2.296	2.526	1.100	0.985	1.002	1.141	-1720.	865.	11.8	6.276
0.20	0.	0.4170	0.	0.5831	182.4	2.094	2.861	1.366	0.997	1.128	1.041	-1431.	1166.	13.8	8.189
0.20	0.01	0.4126	0.0099	0.5776	182.4	2.097	2.857	1.363	0.996	1.125	1.041	-1434.	1162.	13.8	8.167
0.20	0.02	0.4082	0.0198	0.5721	182.4	2.100	2.854	1.359	0.995	1.123	1.042	-1438.	1159.	13.8	8.146
0.20	0.03	0.4038	0.0297	0.5666	182.4	2.102	2.851	1.356	0.994	1.120	1.042	-1441.	1155.	13.8	8.125
0.20	0.04	0.3994	0.0395	0.5611	182.4	2.105	2.847	1.353	0.993	1.118	1.042	-1445.	1152.	13.7	8.104
0.20	0.05	0.3951	0.0493	0.5557	182.4	2.107	2.844	1.349	0.992	1.116	1.042	-1448.	1149.	13.7	8.083
0.20	0.07	0.3864	0.0688	0.5448	182.4	2.112	2.837	1.343	0.990	1.111	1.043	-1455.	1142.	13.7	8.041
0.20	0.10	0.3735	0.0979	0.5286	182.5	2.120	2.827	1.333	0.988	1.104	1.044	-1465.	1132.	13.6	7.978
0.20	0.20	0.3316	0.1932	0.4752	182.6	2.145	2.792	1.301	0.982	1.083	1.049	-1498.	1099.	13.3	7.771
0.20	0.40	0.2506	0.3808	0.3686	183.0	2.194	2.720	1.240	0.974	1.049	1.065	-1562.	1035.	12.9	7.363
0.20	0.60	0.1706	0.5714	0.2580	183.6	2.230	2.645	1.181	0.974	1.024	1.090	-1625.	971.	12.4	6.944
0.20	0.80	0.0883	0.7742	0.1376	184.3	2.281	2.568	1.126	0.980	1.008	1.124	-1687.	904.	12.0	6.497
0.20	0.90	0.0452	0.8834	0.0715	184.8	2.301	2.528	1.099	0.986	1.003	1.145	-1717.	867.	11.8	6.255
0.40	0.	0.6560	0.	0.3441	176.3	2.124	2.859	1.346	0.992	1.146	1.090	-1372.	1121.	14.1	8.277
0.40	0.01	0.6506	0.0077	0.3417	176.4	2.127	2.856	1.343	0.991	1.143	1.090	-1376.	1119.	14.0	8.260
0.40	0.02	0.6453	0.0155	0.3393	176.4	2.129	2.853	1.340	0.991	1.140	1.090	-1380.	1117.	14.0	8.242
0.40	0.03	0.6400	0.0232	0.3369	176.5	2.132	2.850	1.337	0.990	1.138	1.090	-1384.	1115.	14.0	8.224
0.40	0.04	0.6347	0.0310	0.3345	176.6	2.135	2.846	1.333	0.990	1.135	1.090	-1387.	1112.	13.9	8.206
0.40	0.05	0.6293	0.0387	0.3320	176.6	2.137	2.843	1.330	0.989	1.133	1.090	-1391.	1110.	13.9	8.188
0.40	0.07	0.6186	0.0543	0.3271	176.8	2.143	2.837	1.324	0.988	1.128	1.090	-1399.	1106.	13.9	8.153
0.40	0.10	0.6025	0.0778	0.3197	177.0	2.151	2.827	1.315	0.986	1.120	1.090	-1410.	1099.	13.8	8.098
0.40	0.20	0.5482	0.1575	0.2943	177.7	2.176	2.794	1.284	0.982	1.098	1.091	-1449.	1077.	13.5	7.915
0.40	0.40	0.4348	0.3259	0.2393	179.2	2.223	2.725	1.226	0.979	1.061	1.100	-1525.	1029.	13.0	7.527
0.40	0.60	0.3104	0.5141	0.1756	180.9	2.264	2.652	1.171	0.979	1.033	1.116	-1600.	975.	12.5	7.095
0.40	0.80	0.1684	0.7334	0.0982	182.9	2.297	2.573	1.120	0.985	1.013	1.139	-1674.	910.	12.0	6.597
0.40	0.90	0.0882	0.8595	0.0523	184.1	2.309	2.531	1.096	0.989	1.000	1.153	-1710.	872.	11.8	6.312
0.60	0.	0.8076	0.	0.1924	171.7	2.120	2.798	1.320	0.986	1.173	1.154	-1296.	1086.	14.2	8.369
0.60	0.01	0.8023	0.0064	0.1913	171.8	2.123	2.796	1.317	0.986	1.170	1.153	-1301.	1084.	14.2	8.354
0.60	0.02	0.7971	0.0127	0.1902	171.9	2.127	2.794	1.314	0.985	1.167	1.152	-1305.	1083.	14.1	8.338
0.60	0.03	0.7918	0.0192	0.1891	172.0	2.130	2.792	1.311	0.985	1.164	1.152	-1310.	1082.	14.1	8.322
0.60	0.04	0.7865	0.0256	0.1879	172.1	2.133	2.790	1.308	0.985	1.161	1.151	-1315.	1080.	14.1	8.306
0.60	0.05	0.7812	0.0321	0.1868	172.2	2.137	2.788	1.305	0.984	1.159	1.150	-1319.	1079.	14.0	8.289
0.60	0.07	0.7704	0.0451	0.1845	172.4	2.143	2.784	1.299	0.984	1.153	1.149	-1329.	1076.	14.0	8.257
0.60	0.10	0.7542	0.0649	0.1810	172.6	2.153	2.778	1.290	0.983	1.144	1.148	-1343.	1072.	13.9	8.208
0.60	0.20	0.6980	0.1332	0.1688	173.7	2.184	2.757	1.262	0.981	1.119	1.143	-1389.	1056.	13.6	8.038
0.60	0.40	0.5739	0.2848	0.1413	175.9	2.239	2.708	1.209	0.980	1.076	1.141	-1482.	1021.	13.0	7.668
0.60	0.60	0.4261	0.4667	0.1073	178.5	2.283	2.648	1.160	0.984	1.043	1.145	-1573.	976.	12.5	7.228
0.60	0.80	0.2413	0.6963	0.0625	181.6	2.311	2.576	1.115	0.989	1.019	1.155	-1661.	916.	12.0	6.690
0.60	0.90	0.1293	0.8367	0.0340	183.4	2.317	2.533	1.093	0.992	1.009	1.161	-1734.	876.	11.8	6.367
0.80	0.	0.9152	0.	0.0848	168.0	2.095	2.699	1.288	0.986	1.216	1.239	-1209.	1057.	14.3	8.462
0.80	0.01	0.9102	0.0055	0.0843	168.1	2.099	2.699	1.286	0.986	1.212	1.237	-1215.	1056.	14.2	8.447
0.80	0.02	0.9052	0.0110	0.0839	168.2	2.103	2.699	1.283	0.986	1.209	1.235	-1220.	1055.	14.2	8.432
0.80	0.03	0.9001	0.0165	0.0834	168.3	2.107	2.699	1.280	0.985	1.205	1.234	-1226.	1054.	14.2	8.417
0.80	0.04	0.8950	0.0221	0.0829	168.4	2.112	2.698	1.278	0.985	1.201	1.232	-1232.	1053.	14.1	8.402
0.80	0.05	0.8899	0.0277	0.0825	168.5	2.116	2.698	1.275	0.984	1.198	1.230	-1237.	1052.	14.1	8.387
0.80	0.07	0.8795	0.0390	0.0815	168.7	2.124	2.698	1.270	0.984	1.190	1.227	-1249.	1050.	14.0	8.356
0.80	0.10	0.8638	0.0562	0.0801	169.1	2.136	2.697	1.263	0.983	1.180	1.222	-1266.	1047.	14.0	8.309
0.80	0.20	0.8087	0.1162	0.0751	170.3	2.175	2.693	1.238	0.981	1.148	1.208	-1322.	1037.	13.7	8.148
0.80	0.40	0.6826	0.2535	0.0638	173.1	2.244	2.674	1.192	0.983	1.095	1.188	-1434.	1012.	13.1	7.786
0.80	0.60	0.5231	0.4274	0.0496	176.4	2.295	2.636	1.149	0.988	1.055	1.176	-1543.	976.	12.5	7.347
0.80	0.80	0.3077	0.6624	0.0299	180.3	2.323	2.576	1.109	0.993	1.024	1.171	-1647.	920.	12.0	6.777
0.80	0.90	0.1684	0.8150	0.0166	182.7	2.325	2.535	1.090	0.994	1.012	1.169	-1698.	880.	11.8	6.420
0.90	0.	0.9596	0.	0.0404	166.3	2.077	2.641	1.271	0.990	1.245	1.292	-1163.	1044.	14.3	8.509
0.90	0.01	0.9547	0.0051	0.0402	166.4	2.081	2.641	1.269	0.990	1.241	1.289	-1169.	1043.	14.3	8.494
0.90	0.02	0.9497	0.0103	0.0399	166.5	2.086	2.642	1.267	0.989	1.236	1.287	-1175.	1042.	14.2	8.479
0.90	0.03	0.9448	0.0155	0.0397	166.7	2.091	2.643	1.264	0.989	1.232	1.284	-1181.	1042.	14.2	8.464
0.90	0.04	0.9397	0.0208	0.0395	166.8	2.095	2.644	1.262	0.988	1.228	1.281	-1188.	1041.	14.2	8.449
0.90	0.05	0.9347	0.0260	0.0393	166.9	2.100	2.645	1.260	0.988	1.224	1.279	-1194.	1040.	14.1	8.434
0.90	0.07	0.9245	0.0367	0.0388	167.2	2.109	2.646	1.255	0.987	1.215	1.274	-1206.	1039.	14.1	8.404
0.90	0.10	0.9090	0.0529	0.0381	167.5	2.122	2.649	1.248	0.986	1.203	1.267	-1225.	1036.	14.0	8.358
0.90	0.20	0.8546	0.1096	0.0358	168.8	2.166	2.653	1.225	0.984	1.167	1.246	-1287.	1028.	13.7	8.198
0.90	0.40	0.7287	0.2407	0.0305	171.8	2.242	2.651	1.182	0.985	1.107	1.215	-1409.	1007.	13.1	7.840
0.90	0.60	0.5659	0.4102	0.0239	175.3	2.299	2.627	1.143	0.990	1.062	1.193	-1527.	975.	12.5	7.400
0.90	0.80	0.3387	0.6467	0.0146	179.7	2.328	2.579	1.106	0.995	1.027	1.179	-1640.	922.	12.0	6.818
0.90	0.90	0.1873	0.8045	0.0082	182.4	2.329	2.538	1.089	0.995	1.013	1.173	-1694.	882.	11.8	6.446
0.97	0.	0.9882	0.	0.0118	165.2	2.062	2.598	1.260	0.995	1.269	1.334	-1130.	1035.	14.3	8.541
0.97	0.01	0.9834	0.0050	0.0117	165.3	2.067	2.599	1.257	0.994	1.264	1.330	-1136.	1035.	14.3	8.527
0.97	0.02	0.9784	0.0099	0.0116	165.5	2.072	2.601	1.255	0.994	1.259	1.327	-1143.	1034.	14.2	8.512
0.97	0.03	0.9735	0.0149	0.0116	165.6	2.077	2.602	1.253	0.993	1.254	1.324	-1149.	1033.	14.2	8.497
0.97	0.04	0.9685	0.0200	0.0115	165.7	2.082	2.604	1.251	0.992	1.250	1.321	-1156.	1033.	14.2	8.482
0.97	0.05	0.9635	0.0250	0.0114	165.8	2.087	2.605	1.248	0.992	1.249	1.317	-1163.	1032.	14.2	8.467
0.97	0.07	0.9534	0.0353	0.0113	166.1	2.097	2.608	1.244	0.991	1.236	1.311	-1176.	1031.	14.1	8.437
0.97	0.10	0.9380	0.0509	0.0111	166.5	2.111	2.612	1.237	0.989	1.222	1.302	-1195.	1029.	14.0	8.391
0.97	0.20	0.8840	0.1056	0.0104	167.9	2.158	2.624	1.216	0.987	1.182	1.276	-1261.	1022.	13.7	8.233
0.97	0.40	0.7584	0.2327	0.0089	170.9	2.240	2.633	1.176	0.986	1.116	1.235	-1390.	1003.	13.1	7.877
0.97	0.60	0.5940	0.3990	0.0070	174.6	2.302	2.620	1.138	0.991	1.067	1.206	-1516.	974.	12.5	7.436
0.97	0.80	0.3597	0.6361	0.0043	179.3	2.332	2.574	1.104	0.996	1.030	1.185	-1635.	923.	12.0	6.846
0.97	0.90	0.2003	0.7972	0.0024	182.1	2.331	2.537	1.088	0.996	1.014	1.176	-1692.	883.	11.8	6.464
1.00	0.	1.0000	0.	0.	164.7	2.057	2.580	1.254	0.997	1.280	1.352	-1115.	1032.	14.3	8.555
1.00	0.01	0.9951	0.0049	0.0000	164.9	2.061	2.581	1.252	0.997	1.275	1.349	-1122.	1031.	14.3	8.541
1.00	0.02	0.9902	0.0098	0.0000	165.0	2.066	2.583	1.250	0.996	1.270	1.346	-1129.	1031.	14.3	8.526
1.00	0.03	0.9853	0.0147	0.0000	165.1	2.071	2.584	1.248	0.995	1.265	1.342	-1136.	1030.	14.2	8.511
1.00	0.04	0.9803	0.0197	0.0000	165.3	2.076	2.586	1.246	0.995	1.260	1.338	-1142.	1029.	14.2	8.496
1.00	0.05	0.9753	0.0247	0.0000	165.4	2.081	2.588	1.243	0.994	1.255	1.335	-1149.	1029.	14.2	8.481
1.00	0.07	0.9653	0.0347	0.0000	165.7	2.091	2.591	1.239	0.993	1.245	1.328	-1163.	1028.	14.1	8.451
1.00	0.10	0.9499	0.0501	0.0000	166.1	2.106	2.596	1.233	0.991	1.231	1.319	-1183.	1026.	14.0	8.405
1.00	0.20	0.8960	0.1040	0.0000	167.4	2.154	2.610	1.212	0.988	1.189	1.289	-1250.	1019.	13.7	8.247
1.00	0.40	0.7706	0.2294	0.0000	170.6	2.239	2.626	1.173	0.987	1.120	1.244	-1382.	1002.	13.1	7.892
1.00	0.60	0.6055	0.3945	0.	174.4	2.303	2.617	1.136	0.992	1.069	1.211	-1511.	973.	12.5	7.451
1.00	0.80	0.3684	0.6316	0.	179.1	2.333	2.574	1.103	0.996	1.030	1.188	-1633.	923.	12.0	6.858
1.00	0.90	0.2058	0.7942	0.	182.0	2.332	2.537	1.088	0.996	1.015	1.177	-1691.	884.	11.8	6.471

Table 25. (cont.)

PRESSURE = 6. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	200.9	1.851	2.453	1.325	0.931	1.094	1.001	-1327.	1256.	13.6	8.566
0.	0.01	0.	0.0132	0.9868	200.8	1.853	2.452	1.323	0.931	1.092	1.002	-1331.	1251.	13.6	8.538
0.	0.02	0.	0.0262	0.9738	200.7	1.856	2.450	1.320	0.930	1.090	1.002	-1334.	1245.	13.6	8.511
0.	0.03	0.	0.0391	0.9609	200.6	1.859	2.449	1.317	0.930	1.089	1.003	-1338.	1239.	13.6	8.484
0.	0.04	0.	0.0519	0.9481	200.5	1.862	2.448	1.315	0.929	1.087	1.003	-1342.	1234.	13.6	8.457
0.	0.05	0.	0.0646	0.9354	200.4	1.865	2.446	1.312	0.929	1.085	1.004	-1345.	1228.	13.6	8.430
0.	0.07	0.	0.0895	0.9105	200.2	1.870	2.444	1.307	0.928	1.082	1.005	-1352.	1217.	13.6	8.378
0.	0.10	0.	0.1261	0.8739	199.9	1.878	2.439	1.299	0.926	1.076	1.007	-1363.	1201.	13.5	8.302
0.	0.20	0.	0.2412	0.7588	199.1	1.905	2.422	1.272	0.923	1.068	1.015	-1397.	1151.	13.4	8.080
0.	0.40	0.	0.4481	0.5519	197.8	1.956	2.381	1.218	0.919	1.034	1.036	-1460.	1063.	13.1	7.623
0.	0.60	0.	0.6358	0.3642	196.8	2.004	2.332	1.164	0.920	1.018	1.066	-1519.	986.	12.8	7.223
0.	0.80	0.	0.8163	0.1837	196.0	2.049	2.277	1.111	0.928	1.009	1.107	-1573.	913.	12.6	6.833
0.	0.90	0.	0.9072	0.0929	195.7	2.071	2.247	1.085	0.939	1.003	1.132	-1599.	877.	12.4	6.636
0.10	0.	0.2172	0.	0.7828	196.6	1.888	2.497	1.322	0.945	1.108	1.024	-1308.	1227.	13.9	8.608
0.10	0.01	0.2145	0.0115	0.7740	196.6	1.891	2.494	1.319	0.945	1.106	1.025	-1311.	1222.	13.9	8.584
0.10	0.02	0.2119	0.0228	0.7653	196.5	1.893	2.492	1.317	0.944	1.104	1.025	-1315.	1217.	13.9	8.560
0.10	0.03	0.2093	0.0342	0.7566	196.5	1.895	2.490	1.314	0.943	1.102	1.025	-1319.	1213.	13.9	8.536
0.10	0.04	0.2067	0.0454	0.7479	196.5	1.898	2.488	1.311	0.943	1.100	1.026	-1322.	1208.	13.9	8.512
0.10	0.05	0.2042	0.0566	0.7393	196.4	1.900	2.486	1.308	0.942	1.098	1.026	-1326.	1204.	13.8	8.489
0.10	0.07	0.1991	0.0787	0.7223	196.3	1.905	2.481	1.303	0.941	1.094	1.027	-1333.	1195.	13.8	8.442
0.10	0.10	0.1916	0.1114	0.6971	196.2	1.912	2.474	1.294	0.939	1.088	1.029	-1343.	1182.	13.8	8.373
0.10	0.20	0.1676	0.2166	0.6157	195.9	1.934	2.450	1.267	0.933	1.070	1.035	-1378.	1139.	13.6	8.148
0.10	0.40	0.1231	0.4149	0.4620	195.5	1.978	2.398	1.212	0.927	1.042	1.053	-1444.	1062.	13.2	7.722
0.10	0.60	0.0815	0.6054	0.3132	195.3	2.018	2.341	1.160	0.926	1.021	1.079	-1507.	988.	12.9	7.306
0.10	0.80	0.0410	0.7972	0.1618	195.3	2.057	2.281	1.109	0.932	1.008	1.114	-1567.	916.	12.6	6.893
0.10	0.90	0.0207	0.8966	0.0827	195.4	2.075	2.249	1.084	0.937	1.004	1.136	-1596.	879.	12.4	6.662
0.20	0.	0.3870	0.	0.6130	192.8	1.918	2.525	1.317	0.955	1.120	1.048	-1285.	1199.	14.2	8.663
0.20	0.01	0.3829	0.0101	0.6071	192.8	1.920	2.523	1.314	0.955	1.118	1.049	-1288.	1195.	14.1	8.641
0.20	0.02	0.3787	0.0201	0.6012	192.8	1.922	2.520	1.311	0.954	1.116	1.049	-1292.	1192.	14.1	8.619
0.20	0.03	0.3746	0.0301	0.5953	192.8	1.924	2.517	1.308	0.953	1.114	1.049	-1296.	1188.	14.1	8.597
0.20	0.04	0.3705	0.0401	0.5894	192.8	1.927	2.514	1.305	0.952	1.112	1.049	-1299.	1184.	14.1	8.576
0.20	0.05	0.3664	0.0500	0.5836	192.9	1.929	2.512	1.302	0.951	1.110	1.050	-1303.	1181.	14.1	8.554
0.20	0.07	0.3583	0.0698	0.5719	192.9	1.933	2.506	1.297	0.950	1.105	1.050	-1310.	1173.	14.0	8.511
0.20	0.10	0.3463	0.0992	0.5545	192.9	1.939	2.498	1.288	0.948	1.099	1.051	-1321.	1162.	14.0	8.447
0.20	0.20	0.3069	0.1958	0.4973	193.0	1.959	2.460	1.260	0.942	1.080	1.056	-1357.	1127.	13.8	8.235
0.20	0.40	0.2310	0.3856	0.3834	193.4	1.997	2.410	1.207	0.934	1.049	1.070	-1427.	1059.	13.4	7.815
0.20	0.60	0.1564	0.5772	0.2664	193.9	2.032	2.348	1.155	0.932	1.027	1.092	-1495.	990.	13.0	7.386
0.20	0.80	0.0804	0.7789	0.1408	194.6	2.064	2.284	1.106	0.935	1.011	1.122	-1561.	919.	12.6	6.933
0.20	0.90	0.0409	0.8863	0.0728	195.0	2.079	2.250	1.083	0.939	1.006	1.140	-1593.	881.	12.5	6.689
0.40	0.	0.6285	0.	0.3715	186.5	1.955	2.537	1.298	0.966	1.146	1.103	-1226.	1152.	14.5	8.794
0.40	0.01	0.6232	0.0080	0.3688	186.6	1.957	2.534	1.295	0.966	1.144	1.103	-1230.	1149.	14.5	8.775
0.40	0.02	0.6178	0.0161	0.3661	186.7	1.959	2.532	1.292	0.965	1.141	1.103	-1234.	1147.	14.5	8.756
0.40	0.03	0.6125	0.0242	0.3633	186.7	1.961	2.529	1.290	0.964	1.139	1.102	-1238.	1144.	14.5	8.737
0.40	0.04	0.6072	0.0322	0.3606	186.8	1.963	2.526	1.287	0.963	1.137	1.102	-1242.	1142.	14.4	8.718
0.40	0.05	0.6019	0.0403	0.3578	186.9	1.965	2.523	1.284	0.963	1.134	1.102	-1246.	1140.	14.4	8.698
0.40	0.07	0.5912	0.0565	0.3523	187.0	1.969	2.518	1.279	0.961	1.130	1.102	-1255.	1135.	14.4	8.660
0.40	0.10	0.5752	0.0809	0.3439	187.2	1.975	2.509	1.271	0.959	1.123	1.102	-1267.	1127.	14.3	8.602
0.40	0.20	0.5213	0.1634	0.3153	187.9	1.994	2.480	1.244	0.954	1.101	1.102	-1308.	1103.	14.0	8.405
0.40	0.40	0.4096	0.3366	0.2539	189.5	2.028	2.420	1.193	0.946	1.066	1.108	-1389.	1051.	13.6	7.991
0.40	0.60	0.2891	0.5270	0.1840	191.2	2.057	2.357	1.146	0.942	1.038	1.120	-1469.	993.	13.1	7.530
0.40	0.80	0.1546	0.7441	0.1014	193.2	2.078	2.289	1.101	0.942	1.018	1.138	-1548.	924.	12.7	7.027
0.40	0.90	0.0803	0.8662	0.0535	194.3	2.086	2.253	1.080	0.943	1.010	1.148	-1586.	885.	12.5	6.741
0.60	0.	0.7895	0.	0.2105	181.5	1.965	2.501	1.273	0.973	1.180	1.171	-1153.	1112.	14.8	8.939
0.60	0.01	0.7841	0.0067	0.2092	181.6	1.967	2.499	1.270	0.973	1.177	1.170	-1158.	1111.	14.7	8.921
0.60	0.02	0.7787	0.0134	0.2079	181.7	1.970	2.497	1.268	0.972	1.174	1.169	-1163.	1109.	14.7	8.902
0.60	0.03	0.7732	0.0202	0.2066	181.8	1.972	2.495	1.265	0.971	1.171	1.169	-1168.	1108.	14.7	8.884
0.60	0.04	0.7677	0.0270	0.2053	182.0	1.974	2.493	1.263	0.971	1.168	1.168	-1173.	1106.	14.7	8.866
0.60	0.05	0.7622	0.0338	0.2040	182.1	1.977	2.491	1.260	0.970	1.165	1.167	-1178.	1105.	14.6	8.848
0.60	0.07	0.7511	0.0476	0.2013	182.3	1.981	2.487	1.255	0.969	1.160	1.165	-1187.	1101.	14.6	8.811
0.60	0.10	0.7343	0.0684	0.1973	182.6	1.988	2.481	1.248	0.967	1.152	1.163	-1202.	1097.	14.5	8.755
0.60	0.20	0.6765	0.1402	0.1833	183.7	2.011	2.460	1.224	0.963	1.127	1.158	-1250.	1080.	14.2	8.564
0.60	0.40	0.5499	0.2982	0.1519	186.1	2.049	2.413	1.178	0.956	1.085	1.151	-1347.	1041.	13.7	8.151
0.60	0.60	0.4021	0.4842	0.1137	188.8	2.076	2.358	1.135	0.952	1.051	1.150	-1441.	992.	13.2	7.677
0.60	0.80	0.2233	0.7117	0.0649	191.9	2.092	2.292	1.096	0.949	1.024	1.154	-1534.	929.	12.7	7.117
0.60	0.90	0.1182	0.8469	0.0349	193.6	2.094	2.256	1.077	0.946	1.013	1.156	-1580.	888.	12.5	6.792
0.80	0.	0.9068	0.	0.0933	177.4	1.954	2.431	1.244	0.984	1.226	1.259	-1071.	1079.	14.9	9.089
0.80	0.01	0.9015	0.0058	0.0927	177.6	1.957	2.430	1.241	0.983	1.223	1.257	-1076.	1078.	14.9	9.071
0.80	0.02	0.8961	0.0117	0.0922	177.7	1.961	2.430	1.239	0.982	1.219	1.255	-1082.	1077.	14.9	9.053
0.80	0.03	0.8908	0.0175	0.0917	177.8	1.964	2.430	1.237	0.981	1.215	1.253	-1088.	1076.	14.8	9.035
0.80	0.04	0.8854	0.0234	0.0911	177.9	1.967	2.429	1.235	0.981	1.211	1.251	-1094.	1075.	14.8	9.017
0.80	0.05	0.8800	0.0294	0.0906	178.1	1.970	2.429	1.233	0.980	1.208	1.249	-1100.	1074.	14.8	8.999
0.80	0.07	0.8691	0.0414	0.0895	178.3	1.976	2.427	1.228	0.979	1.201	1.246	-1111.	1072.	14.7	8.962
0.80	0.10	0.8525	0.0596	0.0879	178.7	1.985	2.424	1.222	0.977	1.191	1.241	-1129.	1069.	14.6	8.907
0.80	0.20	0.7945	0.1233	0.0822	180.0	2.013	2.417	1.201	0.972	1.160	1.225	-1186.	1058.	14.3	8.716
0.80	0.40	0.6627	0.2681	0.0693	183.0	2.060	2.392	1.161	0.966	1.107	1.201	-1300.	1030.	13.8	8.298
0.80	0.60	0.4993	0.4476	0.0531	186.5	2.092	2.352	1.124	0.961	1.065	1.183	-1412.	990.	13.3	7.807
0.80	0.80	0.2869	0.6818	0.0313	190.6	2.104	2.294	1.090	0.955	1.031	1.171	-1520.	932.	12.8	7.203
0.80	0.90	0.1547	0.8282	0.0171	193.0	2.101	2.258	1.074	0.950	1.017	1.165	-1573.	892.	12.9	6.842
0.90	0.	0.9555	0.	0.0445	175.6	1.944	2.387	1.228	0.992	1.256	1.313	-1027.	1064.	15.0	9.166
0.90	0.01	0.9503	0.0055	0.0442	175.7	1.948	2.387	1.226	0.991	1.252	1.310	-1033.	1063.	14.9	9.148
0.90	0.02	0.9451	0.0110	0.0440	175.9	1.951	2.388	1.224	0.990	1.248	1.307	-1039.	1063.	14.9	9.130
0.90	0.03	0.9398	0.0165	0.0437	176.0	1.955	2.388	1.222	0.989	1.244	1.305	-1046.	1062.	14.9	9.111
0.90	0.04	0.9344	0.0221	0.0435	176.1	1.958	2.388	1.220	0.988	1.239	1.302	-1052.	1061.	14.8	9.093
0.90	0.05	0.9291	0.0277	0.0432	176.3	1.961	2.389	1.218	0.988	1.235	1.299	-1058.	1060.	14.8	9.075
0.90	0.07	0.9183	0.0390	0.0427	176.6	1.968	2.389	1.214	0.986	1.227	1.294	-1071.	1059.	14.8	9.038
0.90	0.10	0.9018	0.0563	0.0419	177.0	1.978	2.389	1.208	0.984	1.216	1.287	-1090.	1056.	14.7	8.982
0.90	0.20	0.8441	0.1166	0.0393	178.4	2.010	2.389	1.189	0.979	1.180	1.264	-1152.	1047.	14.4	8.790
0.90	0.40	0.7113	0.2554	0.0332	181.6	2.063	2.377	1.152	0.971	1.120	1.228	-1276.	1024.	13.8	8.360
0.90	0.60	0.5429	0.4314	0.0257	185.4	2.098	2.347	1.119	0.965	1.073	1.201	-1397.	989.	13.3	7.868
0.90	0.80	0.3169	0.6677	0.0153	190.0	2.109	2.294	1.088	0.958	1.035	1.179	-1513.	933.	12.8	7.244
0.90	0.90	0.1724	0.8191	0.0085	192.6	2.105	2.259	1.073	0.952	1.018	1.170	-1569.	893.	12.9	6.867
0.97	0.	0.9870	0.	0.0130	174.4	1.935	2.354	1.217	0.999	1.280	1.355	-995.	1054.	15.0	9.220
0.97	0.01	0.9818	0.0053	0.0129	174.5	1.939	2.355	1.215	0.998	1.275	1.352	-1002.	1054.	15.0	9.202
0.97	0.02	0.9766	0.0106	0.0128	174.7	1.943	2.356	1.213	0.997	1.271	1.348	-1009.	1053.	14.9	9.184
0.97	0.03	0.9714	0.0159	0.0127	174.8	1.947	2.357	1.211	0.996	1.266	1.345	-1015.	1052.	14.9	9.165
0.97	0.04	0.9661	0.0213	0.0127	175.0	1.950	2.358	1.209	0.995	1.262	1.342	-1022.	1052.	14.9	9.147
0.97	0.05	0.9607	0.0267	0.0126	175.1	1.954	2.359	1.207	0.994	1.257	1.338	-1029.	1051.	14.8	9.120
0.97	0.07	0.9500	0.0376	0.0124	175.4	1.961	2.360	1.203	0.993	1.248	1.332	-1042.	1050.	14.8	9.091
0.97	0.10	0.9336	0.0542	0.0122	175.8	1.972	2.362	1.198	0.990	1.235	1.323	-1062.	1048.	14.7	9.035
0.97	0.20	0.8760	0.1125	0.0114	177.3	2.006	2.367	1.180	0.984	1.196	1.295	-1128.	1040.	14.4	8.841
0.97	0.40	0.7429	0.2474	0.0097	180.7	2.064	2.365	1.146	0.975	1.130	1.248	-1259.	1020.	13.9	8.415
0.97	0.60	0.5717	0.4207	0.0075	184.7	2.101	2.342	1.115	0.968	1.079	1.214	-1386.	980.	13.3	7.909
0.97	0.80	0.3373	0.6582	0.0045	189.6	2.113	2.294	1.086	0.960	1.038	1.186	-1508.	934.	12.8	7.273
0.97	0.90	0.1846	0.8129	0.0025	192.4	2.107	2.259	1.072	0.953	1.020	1.173	-1567.	894.	12.9	6.884
1.00	0.	1.0000	0.	0.	173.9	1.931	2.340	1.212	1.002	1.291	1.374	-982.	1050.	15.0	9.244
1.00	0.01	0.9948	0.0052	0.0000	174.0	1.935	2.341	1.210	1.001	1.286	1.371	-988.	1049.	15.0	9.226
1.00	0.02	0.9896	0.0104	0.0000	174.2	1.939	2.342	1.208	1.000	1.281	1.367	-995.	1049.	14.9	9.207
1.00	0.03	0.9843	0.0157	0.0000	174.3	1.943	2.343	1.206	0.999	1.277	1.363	-1002.	1048.	14.9	9.189
1.00	0.04	0.9791	0.0210	0.0000	174.5	1.947	2.344	1.204	0.998	1.272	1.360	-1009.	1048.	14.9	9.170
1.00	0.05	0.9737	0.0263	0.0000	174.6	1.950	2.345	1.202	0.997	1.267	1.356	-1016.	1047.	14.8	9.152
1.00	0.07	0.9630	0.0370	0.0000	174.9	1.958	2.347	1.199	0.996	1.258	1.349	-1029.	1046.	14.8	9.114
1.00	0.10	0.9466	0.0534	0.0000	175.3	1.969	2.350	1.194	0.993	1.244	1.339	-1050.	1044.	14.7	9.057
1.00	0.20	0.8891	0.1109	0.0000	176.9	2.004	2.357	1.176	0.986	1.203	1.308	-1117.	1037.	14.4	8.863
1.00	0.40	0.7558	0.2442	0.0000	180.3	2.064	2.359	1.143	0.977	1.134	1.258	-1251.	1018.	13.9	8.435
1.00	0.60	0.5837	0.4163	0.	184.4	2.103	2.340	1.113	0.970	1.081	1.219	-1381.	987.	13.3	7.927
1.00	0.80	0.3458	0.6542	0.	189.4	2.119	2.294	1.085	0.961	1.039	1.188	-1506.	934.	12.8	7.289
1.00	0.90	0.1898	0.8102	0.	192.3	2.108	2.259	1.072	0.954	1.020	1.174	-1566.	894.	12.9	6.891

Table 25. (cont.)

PRESSURE = 4. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	208.9	1.737	2.240	1.290	0.888	1.090	1.002	-1216.	1275.	14.0	9.020
0.	0.01	0.	0.0128	0.9872	208.8	1.739	2.239	1.287	0.887	1.079	1.003	-1220.	1269.	13.9	8.993
0.	0.02	0.	0.0256	0.9744	208.7	1.742	2.238	1.285	0.887	1.077	1.003	-1224.	1263.	13.9	8.966
0.	0.03	0.	0.0382	0.9618	208.6	1.744	2.237	1.283	0.887	1.075	1.004	-1227.	1258.	13.9	8.940
0.	0.04	0.	0.0506	0.9494	208.5	1.746	2.236	1.280	0.886	1.074	1.004	-1231.	1252.	13.9	8.914
0.	0.05	0.	0.0630	0.9370	208.4	1.749	2.234	1.278	0.886	1.073	1.005	-1235.	1246.	13.9	8.888
0.	0.07	0.	0.0874	0.9126	208.2	1.753	2.232	1.273	0.885	1.070	1.006	-1242.	1235.	13.9	8.837
0.	0.10	0.	0.1233	0.8767	208.0	1.760	2.228	1.266	0.884	1.065	1.009	-1253.	1219.	13.9	8.762
0.	0.20	0.	0.2369	0.7632	207.1	1.782	2.213	1.242	0.882	1.052	1.017	-1288.	1168.	13.7	8.524
0.	0.40	0.	0.4430	0.5570	205.8	1.825	2.177	1.193	0.880	1.030	1.038	-1354.	1077.	13.5	8.089
0.	0.60	0.	0.6319	0.3681	204.7	1.865	2.135	1.144	0.882	1.014	1.067	-1414.	996.	13.3	7.686
0.	0.80	0.	0.8143	0.1857	204.0	1.903	2.086	1.096	0.890	1.005	1.106	-1471.	920.	13.1	7.288
0.	0.90	0.	0.9061	0.0939	203.7	1.921	2.060	1.072	0.896	1.003	1.129	-1498.	882.	13.0	7.086
0.10	0.	0.2018	0.	0.7983	204.8	1.768	2.275	1.287	0.905	1.098	1.027	-1193.	1246.	14.2	9.076
0.10	0.01	0.1994	0.0114	0.7893	204.7	1.770	2.273	1.285	0.905	1.096	1.028	-1197.	1241.	14.2	9.052
0.10	0.02	0.1969	0.0227	0.7804	204.7	1.772	2.271	1.282	0.904	1.094	1.028	-1201.	1236.	14.2	9.028
0.10	0.03	0.1946	0.0339	0.7715	204.6	1.774	2.270	1.279	0.904	1.092	1.029	-1204.	1231.	14.2	9.004
0.10	0.04	0.1922	0.0451	0.7627	204.6	1.776	2.268	1.277	0.903	1.091	1.029	-1208.	1227.	14.2	8.981
0.10	0.05	0.1898	0.0562	0.7540	204.6	1.778	2.266	1.274	0.903	1.089	1.030	-1212.	1222.	14.2	8.957
0.10	0.07	0.1851	0.0782	0.7367	204.5	1.782	2.262	1.269	0.901	1.085	1.031	-1219.	1213.	14.1	8.911
0.10	0.10	0.1782	0.1108	0.7110	204.4	1.788	2.256	1.262	0.900	1.080	1.032	-1230.	1199.	14.1	8.841
0.10	0.20	0.1560	0.2159	0.6281	204.0	1.807	2.236	1.237	0.896	1.065	1.038	-1266.	1155.	14.0	8.617
0.10	0.40	0.1146	0.4145	0.4709	203.5	1.844	2.191	1.188	0.890	1.039	1.056	-1336.	1074.	13.7	8.187
0.10	0.60	0.0758	0.6056	0.3186	203.3	1.878	2.142	1.140	0.890	1.021	1.081	-1401.	998.	13.4	7.766
0.10	0.80	0.0381	0.7979	0.1641	203.3	1.909	2.089	1.094	0.894	1.009	1.114	-1464.	922.	13.2	7.336
0.10	0.90	0.0192	0.8971	0.0837	203.4	1.924	2.061	1.071	0.898	1.005	1.133	-1494.	884.	13.1	7.111
0.20	0.	0.3649	0.	0.6351	201.0	1.794	2.298	1.281	0.919	1.114	1.054	-1167.	1218.	14.5	9.149
0.20	0.01	0.3610	0.0102	0.6289	201.0	1.796	2.296	1.279	0.919	1.112	1.054	-1171.	1214.	14.5	9.127
0.20	0.02	0.3571	0.0203	0.6226	201.0	1.798	2.294	1.276	0.918	1.110	1.055	-1175.	1210.	14.5	9.104
0.20	0.03	0.3532	0.0304	0.6165	201.0	1.799	2.292	1.274	0.917	1.108	1.055	-1179.	1207.	14.5	9.082
0.20	0.04	0.3493	0.0404	0.6103	201.0	1.801	2.289	1.271	0.917	1.106	1.055	-1183.	1203.	14.4	9.060
0.20	0.05	0.3454	0.0504	0.6042	201.0	1.803	2.287	1.269	0.916	1.104	1.055	-1187.	1199.	14.4	9.038
0.20	0.07	0.3377	0.0704	0.5919	201.0	1.806	2.282	1.263	0.915	1.100	1.056	-1194.	1191.	14.4	8.995
0.20	0.10	0.3263	0.1001	0.5736	201.1	1.812	2.275	1.256	0.913	1.095	1.057	-1206.	1180.	14.3	8.929
0.20	0.20	0.2890	0.1975	0.5135	201.1	1.829	2.251	1.231	0.907	1.077	1.061	-1243.	1142.	14.2	8.714
0.20	0.40	0.2170	0.3887	0.3944	201.4	1.861	2.200	1.183	0.899	1.049	1.075	-1317.	1070.	13.8	8.285
0.20	0.60	0.1464	0.5810	0.2727	201.9	1.890	2.147	1.136	0.897	1.027	1.095	-1388.	999.	13.5	7.846
0.20	0.80	0.0749	0.7819	0.1432	202.6	1.916	2.092	1.092	0.898	1.012	1.121	-1457.	925.	13.2	7.383
0.20	0.90	0.0380	0.8882	0.0738	203.0	1.928	2.063	1.070	0.900	1.007	1.137	-1491.	886.	13.1	7.136
0.40	0.	0.6068	0.	0.3932	194.6	1.831	2.315	1.264	0.941	1.147	1.114	-1107.	1169.	15.0	9.328
0.40	0.01	0.6015	0.0083	0.3902	194.7	1.833	2.312	1.262	0.940	1.145	1.113	-1111.	1166.	15.0	9.307
0.40	0.02	0.5962	0.0166	0.3872	194.7	1.834	2.310	1.259	0.939	1.142	1.113	-1116.	1164.	14.9	9.287
0.40	0.03	0.5909	0.0249	0.3842	194.8	1.836	2.307	1.257	0.939	1.140	1.113	-1120.	1161.	14.9	9.266
0.40	0.04	0.5857	0.0332	0.3811	194.9	1.837	2.305	1.254	0.938	1.138	1.113	-1124.	1159.	14.9	9.246
0.40	0.05	0.5804	0.0415	0.3781	194.9	1.839	2.302	1.252	0.937	1.135	1.112	-1128.	1156.	14.9	9.225
0.40	0.07	0.5698	0.0582	0.3720	195.1	1.842	2.297	1.247	0.935	1.131	1.112	-1137.	1151.	14.8	9.184
0.40	0.10	0.5539	0.0833	0.3628	195.3	1.847	2.290	1.240	0.933	1.124	1.112	-1150.	1143.	14.7	9.122
0.40	0.20	0.5005	0.1680	0.3316	196.0	1.862	2.264	1.216	0.927	1.104	1.111	-1193.	1116.	14.5	8.913
0.40	0.40	0.3905	0.3445	0.2650	197.5	1.889	2.211	1.170	0.917	1.069	1.115	-1277.	1061.	14.1	8.475
0.40	0.60	0.2734	0.5363	0.1903	199.3	1.911	2.155	1.127	0.910	1.042	1.124	-1361.	999.	13.7	8.001
0.40	0.80	0.1449	0.7514	0.1037	201.3	1.928	2.096	1.087	0.906	1.020	1.138	-1443.	929.	13.3	7.475
0.40	0.90	0.0749	0.8708	0.0544	202.4	1.934	2.065	1.068	0.905	1.011	1.146	-1484.	889.	13.1	7.186
0.60	0.	0.7748	0.	0.2252	189.3	1.847	2.293	1.241	0.959	1.187	1.186	-1036.	1126.	15.3	9.534
0.60	0.01	0.7692	0.0070	0.2238	189.4	1.849	2.291	1.239	0.958	1.184	1.185	-1041.	1125.	15.3	9.514
0.60	0.02	0.7636	0.0140	0.2223	189.6	1.851	2.290	1.237	0.957	1.181	1.184	-1046.	1123.	15.3	9.494
0.60	0.03	0.7580	0.0211	0.2209	189.7	1.853	2.288	1.235	0.956	1.178	1.183	-1051.	1121.	15.2	9.473
0.60	0.04	0.7524	0.0282	0.2194	189.8	1.855	2.286	1.232	0.955	1.175	1.183	-1056.	1120.	15.2	9.453
0.60	0.05	0.7468	0.0353	0.2180	189.9	1.857	2.284	1.230	0.954	1.173	1.182	-1061.	1118.	15.2	9.432
0.60	0.07	0.7354	0.0496	0.2150	190.1	1.860	2.280	1.226	0.953	1.167	1.180	-1071.	1114.	15.1	9.391
0.60	0.10	0.7182	0.0713	0.2105	190.4	1.866	2.274	1.219	0.951	1.159	1.177	-1086.	1109.	15.1	9.328
0.60	0.20	0.6591	0.1459	0.1950	191.6	1.882	2.254	1.197	0.944	1.134	1.170	-1136.	1091.	14.8	9.115
0.60	0.40	0.5310	0.3088	0.1603	194.0	1.911	2.209	1.156	0.932	1.092	1.160	-1235.	1049.	14.3	8.659
0.60	0.60	0.3840	0.4974	0.1187	196.8	1.936	2.157	1.118	0.923	1.057	1.156	-1333.	998.	13.8	8.150
0.60	0.80	0.2103	0.7229	0.0668	200.0	1.948	2.099	1.082	0.914	1.028	1.154	-1429.	932.	13.3	7.565
0.60	0.90	0.1105	0.8539	0.0356	201.7	1.941	2.067	1.065	0.909	1.015	1.154	-1477.	891.	13.1	7.236
0.80	0.	0.8997	0.	0.1003	184.9	1.847	2.243	1.214	0.978	1.238	1.278	-957.	1089.	15.6	9.758
0.80	0.01	0.8942	0.0061	0.0997	185.1	1.849	2.242	1.212	0.977	1.234	1.276	-963.	1088.	15.5	9.737
0.80	0.02	0.8886	0.0122	0.0991	185.2	1.852	2.241	1.210	0.976	1.231	1.274	-968.	1087.	15.5	9.716
0.80	0.03	0.8831	0.0184	0.0985	185.3	1.854	2.240	1.208	0.975	1.227	1.272	-974.	1086.	15.5	9.694
0.80	0.04	0.8774	0.0246	0.0979	185.5	1.857	2.240	1.206	0.974	1.224	1.270	-980.	1085.	15.4	9.673
0.80	0.05	0.8718	0.0309	0.0973	185.6	1.859	2.239	1.204	0.973	1.220	1.268	-986.	1084.	15.4	9.651
0.80	0.07	0.8604	0.0434	0.0961	185.9	1.863	2.237	1.201	0.972	1.213	1.264	-998.	1082.	15.4	9.608
0.80	0.10	0.8431	0.0626	0.0943	186.3	1.870	2.235	1.195	0.969	1.203	1.258	-1015.	1078.	15.3	9.543
0.80	0.20	0.7827	0.1293	0.0880	187.7	1.891	2.224	1.176	0.961	1.172	1.241	-1074.	1066.	15.0	9.319
0.80	0.40	0.6465	0.2799	0.0736	190.9	1.925	2.196	1.140	0.948	1.118	1.212	-1190.	1036.	14.4	8.838
0.80	0.60	0.4808	0.4634	0.0558	194.5	1.946	2.155	1.108	0.939	1.073	1.190	-1304.	995.	13.9	8.293
0.80	0.80	0.2716	0.6961	0.0323	198.7	1.951	2.101	1.077	0.921	1.036	1.172	-1415.	934.	13.4	7.653
0.80	0.90	0.1449	0.8376	0.0175	201.0	1.947	2.069	1.063	0.913	1.019	1.163	-1469.	894.	13.2	7.284
0.90	0.	0.9521	0.	0.0479	182.9	1.842	2.209	1.200	0.990	1.270	1.333	-915.	1072.	15.6	9.876
0.90	0.01	0.9466	0.0058	0.0476	183.1	1.845	2.209	1.198	0.989	1.266	1.331	-921.	1071.	15.6	9.854
0.90	0.02	0.9411	0.0116	0.0473	183.2	1.847	2.209	1.196	0.988	1.262	1.328	-927.	1071.	15.6	9.832
0.90	0.03	0.9356	0.0174	0.0471	183.4	1.850	2.209	1.194	0.987	1.257	1.325	-934.	1070.	15.5	9.810
0.90	0.04	0.9300	0.0232	0.0468	183.5	1.853	2.209	1.192	0.986	1.254	1.322	-940.	1069.	15.5	9.788
0.90	0.05	0.9244	0.0291	0.0465	183.7	1.855	2.209	1.191	0.985	1.249	1.319	-946.	1068.	15.5	9.765
0.90	0.07	0.9130	0.0410	0.0459	184.0	1.861	2.209	1.187	0.983	1.241	1.314	-959.	1066.	15.4	9.721
0.90	0.10	0.8957	0.0592	0.0451	184.4	1.868	2.208	1.182	0.980	1.230	1.306	-978.	1064.	15.3	9.653
0.90	0.20	0.8352	0.1226	0.0421	186.0	1.892	2.203	1.165	0.971	1.193	1.281	-1041.	1054.	15.1	9.422
0.90	0.40	0.6970	0.2675	0.0354	189.4	1.930	2.185	1.132	0.956	1.132	1.241	-1166.	1030.	14.9	8.926
0.90	0.60	0.5248	0.4481	0.0271	193.4	1.952	2.152	1.102	0.941	1.082	1.208	-1288.	993.	14.0	8.363
0.90	0.80	0.3007	0.6834	0.0159	198.1	1.956	2.101	1.074	0.925	1.040	1.181	-1408.	935.	13.4	7.696
0.90	0.90	0.1617	0.8296	0.0087	200.7	1.950	2.069	1.061	0.919	1.021	1.168	-1466.	895.	13.2	7.309
0.97	0.	0.9860	0.	0.0140	181.6	1.837	2.184	1.189	1.000	1.295	1.377	-885.	1061.	15.7	9.962
0.97	0.01	0.9806	0.0056	0.0139	181.8	1.840	2.184	1.187	0.999	1.291	1.373	-891.	1060.	15.6	9.939
0.97	0.02	0.9751	0.0111	0.0138	181.9	1.843	2.185	1.186	0.997	1.286	1.369	-898.	1059.	15.6	9.916
0.97	0.03	0.9695	0.0167	0.0137	182.1	1.846	2.185	1.184	0.996	1.281	1.366	-905.	1059.	15.6	9.893
0.97	0.04	0.9640	0.0224	0.0136	182.2	1.849	2.185	1.182	0.995	1.277	1.362	-911.	1058.	15.6	9.871
0.97	0.05	0.9584	0.0281	0.0136	182.4	1.851	2.186	1.181	0.994	1.272	1.359	-918.	1057.	15.5	9.848
0.97	0.07	0.9470	0.0396	0.0134	182.7	1.857	2.186	1.177	0.992	1.263	1.352	-931.	1056.	15.5	9.801
0.97	0.10	0.9298	0.0571	0.0131	183.2	1.865	2.187	1.172	0.988	1.250	1.342	-951.	1054.	15.4	9.732
0.97	0.20	0.8692	0.1185	0.0123	184.8	1.891	2.187	1.156	0.978	1.210	1.312	-1018.	1046.	15.1	9.495
0.97	0.40	0.7300	0.2596	0.0104	188.4	1.932	2.176	1.126	0.961	1.143	1.262	-1149.	1025.	14.5	8.988
0.97	0.60	0.5541	0.4379	0.0080	192.6	1.957	2.149	1.098	0.946	1.089	1.221	-1278.	991.	14.0	8.411
0.97	0.80	0.3206	0.6747	0.0047	197.6	1.959	2.101	1.073	0.928	1.043	1.187	-1403.	936.	13.5	7.725
0.97	0.90	0.1734	0.8241	0.0026	200.5	1.952	2.070	1.060	0.917	1.023	1.171	-1463.	896.	13.2	7.325
1.00	0.	1.0000	0.	0.	181.1	1.834	2.172	1.184	1.004	1.307	1.396	-872.	1056.	15.7	9.999
1.00	0.01	0.9945	0.0055	0.0000	181.2	1.837	2.173	1.183	1.003	1.302	1.392	-878.	1055.	15.7	9.976
1.00	0.02	0.9890	0.0110	0.0000	181.4	1.840	2.174	1.181	1.002	1.297	1.389	-885.	1055.	15.6	9.953
1.00	0.03	0.9835	0.0165	0.0000	181.5	1.843	2.174	1.179	1.000	1.292	1.385	-892.	1054.	15.6	9.930
1.00	0.04	0.9779	0.0221	0.0000	181.7	1.846	2.175	1.178	0.999	1.288	1.381	-899.	1053.	15.6	9.907
1.00	0.05	0.9723	0.0277	0.0000	181.8	1.849	2.175	1.176	0.998	1.283	1.377	-906.	1053.	15.5	9.883
1.00	0.07	0.9610	0.0390	0.0000	182.2	1.855	2.176	1.173	0.996	1.273	1.370	-919.	1052.	15.5	9.837
1.00	0.10	0.9437	0.0563	0.0000	182.6	1.864	2.177	1.168	0.993	1.260	1.359	-940.	1050.	15.4	9.766
1.00	0.20	0.8832	0.1168	0.0000	184.1	1.890	2.179	1.153	0.982	1.218	1.326	-1008.	1043.	15.1	9.526
1.00	0.40	0.7436	0.2564	0.0000	188.0	1.933	2.172	1.124	0.964	1.148	1.271	-1142.	1023.	14.6	9.014
1.00	0.60	0.5663	0.4337	0.	192.3	1.958	2.148	1.097	0.948	1.091	1.227	-1273.	990.	14.0	8.432
1.00	0.80	0.3289	0.6710	0.	197.5	1.961	2.102	1.072	0.929	1.045	1.190	-1400.	936.	13.5	7.738
1.00	0.90	0.1783	0.8217	0.	200.4	1.953	2.070	1.060	0.917	1.023	1.172	-1462.	896.	13.2	7.332

PRESSURE = 1[illegible]. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	215.6	1.656	2.089	1.262	0.852	1.068	1.002	-1121.	1285.	14.3	9.498
0.	0.01	0.	0.0126	0.9874	215.5	1.658	2.088	1.259	0.852	1.066	1.003	-1125.	1279.	14.3	9.472
0.	0.02	0.	0.0250	0.9750	215.4	1.660	2.087	1.257	0.852	1.065	1.004	-1129.	1274.	14.3	9.446
0.	0.03	0.	0.0374	0.9626	215.3	1.662	2.086	1.255	0.852	1.064	1.004	-1133.	1268.	14.3	9.420
0.	0.04	0.	0.0496	0.9504	215.2	1.664	2.085	1.253	0.852	1.062	1.005	-1137.	1262.	14.3	9.395
0.	0.05	0.	0.0618	0.9382	215.1	1.666	2.084	1.251	0.851	1.061	1.006	-1140.	1256.	14.3	9.369
0.	0.07	0.	0.0858	0.9142	214.9	1.670	2.081	1.246	0.851	1.059	1.007	-1148.	1245.	14.3	9.319
0.	0.10	0.	0.1211	0.8789	214.7	1.676	2.078	1.240	0.851	1.055	1.010	-1159.	1228.	14.2	9.245
0.	0.20	0.	0.2334	0.7666	213.8	1.695	2.064	1.218	0.849	1.044	1.018	-1195.	1177.	14.1	9.011
0.	0.40	0.	0.4389	0.5611	212.5	1.731	2.030	1.173	0.848	1.025	1.039	-1262.	1083.	14.0	8.577
0.	0.60	0.	0.6286	0.3714	211.4	1.765	1.991	1.128	0.851	1.011	1.068	-1323.	999.	13.8	8.170
0.	0.80	0.	0.8126	0.1874	210.7	1.796	1.948	1.084	0.858	1.004	1.105	-1381.	921.	13.7	7.767
0.	0.90	0.	0.9053	0.0947	210.4	1.812	1.924	1.062	0.863	1.002	1.127	-1408.	882.	13.6	7.559
0.10	0.	0.1903	0.	0.8097	211.6	1.680	2.115	1.259	0.872	1.088	1.030	-1095.	1257.	14.6	9.570
0.10	0.01	0.1880	0.0113	0.8007	211.5	1.682	2.113	1.256	0.871	1.086	1.030	-1099.	1252.	14.6	9.546
0.10	0.02	0.1858	0.0225	0.7917	211.5	1.684	2.112	1.254	0.871	1.085	1.031	-1103.	1247.	14.6	9.522
0.10	0.03	0.1835	0.0337	0.7828	211.4	1.686	2.110	1.252	0.870	1.083	1.031	-1107.	1242.	14.5	9.499
0.10	0.04	0.1813	0.0448	0.7739	211.4	1.687	2.108	1.249	0.870	1.082	1.032	-1111.	1237.	14.5	9.475
0.10	0.05	0.1791	0.0558	0.7651	211.3	1.689	2.107	1.247	0.869	1.080	1.032	-1114.	1232.	14.5	9.452
0.10	0.07	0.1747	0.0777	0.7476	211.3	1.693	2.103	1.243	0.869	1.077	1.033	-1122.	1223.	14.5	9.405
0.10	0.10	0.1682	0.1101	0.7217	211.1	1.698	2.098	1.236	0.867	1.073	1.035	-1134.	1209.	14.5	9.336
0.10	0.20	0.1474	0.2149	0.6377	210.8	1.714	2.080	1.213	0.864	1.059	1.041	-1171.	1163.	14.3	9.112
0.10	0.40	0.1083	0.4137	0.4780	210.3	1.746	2.040	1.169	0.859	1.036	1.058	-1242.	1079.	14.1	8.680
0.10	0.60	0.0716	0.6054	0.3230	210.0	1.775	1.996	1.125	0.859	1.019	1.082	-1310.	1000.	13.9	8.253
0.10	0.80	0.0360	0.7981	0.1660	210.0	1.802	1.949	1.082	0.862	1.008	1.113	-1374.	923.	13.7	7.814
0.10	0.90	0.0181	0.8973	0.0846	210.1	1.814	1.925	1.061	0.866	1.005	1.131	-1405.	883.	13.6	7.584
0.20	0.	0.3479	0.	0.6522	207.9	1.702	2.134	1.254	0.889	1.107	1.059	-1067.	1229.	14.9	9.663
0.20	0.01	0.3441	0.0102	0.6457	207.9	1.704	2.132	1.251	0.888	1.106	1.059	-1071.	1225.	14.8	9.640
0.20	0.02	0.3404	0.0204	0.6393	207.9	1.705	2.130	1.249	0.887	1.104	1.059	-1075.	1221.	14.8	9.618
0.20	0.03	0.3366	0.0305	0.6329	207.9	1.707	2.128	1.247	0.887	1.102	1.060	-1079.	1217.	14.8	9.596
0.20	0.04	0.3329	0.0406	0.6265	207.9	1.708	2.126	1.244	0.886	1.100	1.060	-1083.	1213.	14.8	9.573
0.20	0.05	0.3292	0.0507	0.6201	207.9	1.710	2.124	1.242	0.886	1.098	1.060	-1087.	1209.	14.8	9.551
0.20	0.07	0.3219	0.0707	0.6074	207.9	1.713	2.120	1.237	0.884	1.095	1.061	-1095.	1201.	14.8	9.506
0.20	0.10	0.3109	0.1006	0.5885	207.9	1.718	2.113	1.230	0.883	1.090	1.062	-1107.	1189.	14.7	9.440
0.20	0.20	0.2752	0.1986	0.5262	207.9	1.732	2.092	1.208	0.877	1.074	1.066	-1146.	1150.	14.6	9.221
0.20	0.40	0.2063	0.3907	0.4030	208.2	1.760	2.048	1.163	0.870	1.047	1.078	-1222.	1075.	14.3	8.782
0.20	0.60	0.1389	0.5835	0.2777	208.7	1.785	2.001	1.121	0.866	1.027	1.097	-1296.	1001.	14.0	8.334
0.20	0.80	0.0708	0.7840	0.1452	209.3	1.807	1.951	1.080	0.866	1.012	1.121	-1367.	924.	13.7	7.861
0.20	0.90	0.0359	0.8895	0.0746	209.8	1.817	1.926	1.060	0.868	1.007	1.135	-1401.	884.	13.6	7.609
0.40	0.	0.5889	0.	0.4111	201.4	1.735	2.149	1.238	0.917	1.147	1.123	-1004.	1178.	15.4	9.895
0.40	0.01	0.5837	0.0085	0.4079	201.4	1.737	2.147	1.236	0.917	1.145	1.123	-1009.	1175.	15.4	9.874
0.40	0.02	0.5784	0.0170	0.4046	201.5	1.738	2.144	1.234	0.916	1.143	1.122	-1013.	1173.	15.3	9.852
0.40	0.03	0.5732	0.0255	0.4014	201.6	1.740	2.142	1.231	0.915	1.140	1.122	-1018.	1170.	15.3	9.830
0.40	0.04	0.5679	0.0340	0.3981	201.6	1.741	2.140	1.229	0.914	1.138	1.122	-1022.	1167.	15.3	9.808
0.40	0.05	0.5627	0.0425	0.3949	201.7	1.742	2.138	1.227	0.913	1.136	1.121	-1026.	1164.	15.3	9.787
0.40	0.07	0.5522	0.0595	0.3883	201.8	1.745	2.133	1.222	0.912	1.132	1.121	-1035.	1159.	15.2	9.743
0.40	0.10	0.5364	0.0852	0.3784	202.0	1.749	2.126	1.216	0.909	1.125	1.120	-1049.	1150.	15.2	9.677
0.40	0.20	0.4836	0.1715	0.3449	202.8	1.762	2.103	1.194	0.902	1.105	1.119	-1093.	1122.	15.0	9.454
0.40	0.40	0.3755	0.3506	0.2739	204.3	1.785	2.056	1.152	0.891	1.071	1.121	-1181.	1063.	14.5	8.993
0.40	0.60	0.2613	0.5433	0.1954	206.0	1.804	2.006	1.112	0.882	1.043	1.127	-1267.	1000.	14.2	8.497
0.40	0.80	0.1370	0.7568	0.1058	208.0	1.818	1.954	1.075	0.875	1.021	1.138	-1352.	927.	13.8	7.953
0.40	0.90	0.0708	0.8741	0.0551	209.1	1.823	1.927	1.057	0.872	1.011	1.144	-1394.	887.	13.7	7.659
0.60	0.	0.7621	0.	0.2380	195.9	1.754	2.135	1.217	0.943	1.193	1.200	-934.	1133.	15.8	10.175
0.60	0.01	0.7564	0.0073	0.2364	196.0	1.756	2.133	1.215	0.942	1.190	1.199	-939.	1131.	15.8	10.152
0.60	0.02	0.7507	0.0145	0.2348	196.1	1.757	2.131	1.213	0.941	1.187	1.198	-944.	1129.	15.8	10.129
0.60	0.03	0.7450	0.0218	0.2332	196.2	1.759	2.130	1.211	0.940	1.184	1.197	-949.	1127.	15.7	10.106
0.60	0.04	0.7392	0.0292	0.2316	196.4	1.760	2.128	1.209	0.939	1.181	1.196	-954.	1125.	15.7	10.083
0.60	0.05	0.7335	0.0365	0.2300	196.5	1.762	2.126	1.207	0.938	1.179	1.195	-959.	1124.	15.7	10.060
0.60	0.07	0.7219	0.0513	0.2268	196.7	1.765	2.122	1.203	0.936	1.173	1.193	-969.	1120.	15.6	10.014
0.60	0.10	0.7044	0.0737	0.2219	197.0	1.769	2.117	1.196	0.934	1.165	1.190	-985.	1114.	15.6	9.944
0.60	0.20	0.6445	0.1506	0.2049	198.7	1.783	2.097	1.177	0.925	1.140	1.181	-1036.	1095.	15.3	9.707
0.60	0.40	0.5155	0.3173	0.1672	200.7	1.805	2.055	1.139	0.910	1.097	1.169	-1137.	1050.	14.8	9.206
0.60	0.60	0.3696	0.5077	0.1227	203.6	1.820	2.008	1.103	0.897	1.060	1.160	-1238.	997.	14.3	8.658
0.60	0.80	0.2005	0.7312	0.0683	206.7	1.828	1.956	1.070	0.884	1.030	1.155	-1337.	929.	13.9	8.045
0.60	0.90	0.1047	0.8591	0.0362	208.4	1.828	1.929	1.055	0.877	1.016	1.153	-1386.	889.	13.7	7.708
0.80	0.	0.8935	0.	0.1065	191.2	1.759	2.097	1.192	0.970	1.250	1.296	-857.	1092.	16.1	10.494
0.80	0.01	0.8878	0.0064	0.1059	191.4	1.761	2.096	1.190	0.969	1.246	1.294	-863.	1091.	16.1	10.469
0.80	0.02	0.8820	0.0128	0.1052	191.5	1.763	2.095	1.188	0.968	1.243	1.292	-868.	1090.	16.1	10.444
0.80	0.03	0.8762	0.0192	0.1046	191.7	1.765	2.094	1.186	0.967	1.239	1.290	-874.	1088.	16.1	10.418
0.80	0.04	0.8704	0.0257	0.1040	191.8	1.767	2.093	1.185	0.966	1.235	1.287	-880.	1087.	16.0	10.392
0.80	0.05	0.8646	0.0322	0.1033	191.9	1.769	2.092	1.183	0.965	1.232	1.285	-886.	1086.	16.0	10.367
0.80	0.07	0.8528	0.0453	0.1020	192.2	1.773	2.090	1.179	0.962	1.225	1.281	-898.	1084.	15.9	10.315
0.80	0.10	0.8348	0.0652	0.1000	192.7	1.778	2.087	1.174	0.959	1.214	1.275	-916.	1080.	15.9	10.238
0.80	0.20	0.7725	0.1345	0.0930	194.2	1.794	2.076	1.157	0.949	1.182	1.255	-975.	1068.	15.6	9.975
0.80	0.40	0.6329	0.2898	0.0773	197.5	1.820	2.046	1.124	0.930	1.125	1.223	-1092.	1036.	15.0	9.423
0.80	0.60	0.4659	0.4761	0.0580	201.2	1.835	2.007	1.094	0.912	1.079	1.196	-1208.	993.	14.5	8.819
0.80	0.80	0.2596	0.7070	0.0332	205.4	1.837	1.958	1.066	0.893	1.039	1.173	-1322.	931.	14.0	8.137
0.80	0.90	0.1376	0.8445	0.0178	207.8	1.833	1.930	1.053	0.882	1.020	1.162	-1379.	891.	13.7	7.757
0.90	0.	0.9491	0.	0.0509	189.1	1.758	2.071	1.178	0.986	1.284	1.354	-816.	1073.	16.3	10.669
0.90	0.01	0.9434	0.0060	0.0506	189.3	1.760	2.071	1.176	0.985	1.280	1.351	-823.	1072.	16.2	10.642
0.90	0.02	0.9376	0.0121	0.0503	189.4	1.762	2.070	1.175	0.984	1.276	1.348	-829.	1071.	16.2	10.614
0.90	0.03	0.9318	0.0182	0.0500	189.6	1.764	2.070	1.173	0.982	1.272	1.345	-835.	1070.	16.2	10.587
0.90	0.04	0.9260	0.0243	0.0497	189.7	1.766	2.069	1.172	0.981	1.267	1.342	-842.	1069.	16.1	10.560
0.90	0.05	0.9202	0.0304	0.0494	189.9	1.768	2.069	1.170	0.980	1.263	1.339	-848.	1069.	16.1	10.532
0.90	0.07	0.9083	0.0429	0.0488	190.2	1.773	2.068	1.167	0.977	1.255	1.333	-861.	1067.	16.1	10.477
0.90	0.10	0.8903	0.0618	0.0479	190.7	1.779	2.067	1.162	0.973	1.243	1.324	-880.	1064.	16.0	10.395
0.90	0.20	0.8275	0.1279	0.0446	192.3	1.797	2.060	1.146	0.961	1.206	1.298	-943.	1054.	15.7	10.116
0.90	0.40	0.6848	0.2779	0.0373	196.0	1.826	2.038	1.117	0.940	1.142	1.252	-1069.	1029.	15.1	9.534
0.90	0.60	0.5110	0.4617	0.0273	200.1	1.841	2.005	1.089	0.919	1.089	1.215	-1193.	990.	14.6	8.899
0.90	0.80	0.2882	0.6955	0.0163	204.6	1.842	1.958	1.063	0.897	1.043	1.182	-1315.	932.	14.0	8.182
0.90	0.90	0.1537	0.8374	0.0089	207.4	1.836	1.930	1.051	0.884	1.023	1.167	-1375.	892.	13.8	7.781
0.97	0.	0.9851	0.	0.0149	187.7	1.755	2.050	1.168	0.998	1.312	1.398	-787.	1059.	16.3	10.797
0.97	0.01	0.9794	0.0058	0.0148	187.9	1.758	2.051	1.167	0.997	1.307	1.395	-794.	1059.	16.3	10.769
0.97	0.02	0.9737	0.0116	0.0147	188.0	1.760	2.051	1.165	0.996	1.302	1.391	-801.	1058.	16.3	10.740
0.97	0.03	0.9679	0.0175	0.0146	188.2	1.762	2.051	1.164	0.994	1.297	1.387	-807.	1058.	16.2	10.711
0.97	0.04	0.9621	0.0234	0.0145	188.4	1.765	2.051	1.162	0.993	1.293	1.383	-814.	1057.	16.2	10.682
0.97	0.05	0.9562	0.0294	0.0144	188.5	1.767	2.051	1.161	0.991	1.288	1.380	-821.	1056.	16.2	10.653
0.97	0.07	0.9444	0.0414	0.0142	188.9	1.771	2.050	1.158	0.988	1.279	1.373	-834.	1055.	16.1	10.596
0.97	0.10	0.9263	0.0597	0.0140	189.4	1.778	2.050	1.153	0.984	1.266	1.362	-854.	1053.	16.0	10.509
0.97	0.20	0.8632	0.1237	0.0130	191.1	1.798	2.047	1.139	0.971	1.224	1.330	-920.	1045.	15.8	10.217
0.97	0.40	0.7189	0.2701	0.0109	194.9	1.829	2.032	1.111	0.947	1.154	1.274	-1052.	1023.	15.2	9.612
0.97	0.60	0.5395	0.4521	0.0083	199.3	1.845	2.003	1.085	0.925	1.096	1.228	-1182.	988.	14.6	8.955
0.97	0.80	0.3076	0.6876	0.0049	204.4	1.845	1.958	1.061	0.900	1.047	1.189	-1310.	932.	14.0	8.214
0.97	0.90	0.1649	0.8325	0.0026	207.2	1.838	1.931	1.051	0.886	1.024	1.170	-1372.	892.	13.8	7.798
1.00	0.	1.0000	0.	0.	187.1	1.754	2.041	1.164	1.004	1.324	1.419	-775.	1054.	16.3	10.854
1.00	0.01	0.9943	0.0057	0.0000	187.3	1.756	2.041	1.162	1.003	1.319	1.415	-782.	1053.	16.3	10.825
1.00	0.02	0.9885	0.0115	0.0000	187.4	1.759	2.042	1.161	1.001	1.314	1.411	-788.	1053.	16.3	10.795
1.00	0.03	0.9827	0.0173	0.0000	187.6	1.761	2.042	1.159	0.999	1.309	1.406	-795.	1052.	16.3	10.766
1.00	0.04	0.9769	0.0231	0.0000	187.8	1.763	2.042	1.158	0.998	1.304	1.402	-802.	1052.	16.2	10.736
1.00	0.05	0.9711	0.0289	0.0000	187.9	1.766	2.042	1.157	0.994	1.299	1.398	-809.	1051.	16.2	10.707
1.00	0.07	0.9592	0.0408	0.0000	188.3	1.770	2.042	1.154	0.993	1.290	1.391	-822.	1050.	16.1	10.648
1.00	0.10	0.9412	0.0588	0.0000	188.8	1.777	2.043	1.149	0.989	1.276	1.379	-843.	1048.	16.1	10.559
1.00	0.20	0.8779	0.1221	0.0000	190.6	1.798	2.041	1.135	0.975	1.233	1.344	-911.	1041.	15.8	10.261
1.00	0.40	0.7330	0.2670	0.0000	194.5	1.830	2.020	1.109	0.950	1.159	1.284	-1045.	1021.	15.2	9.645
1.00	0.60	0.5518	0.4482	0.	199.0	1.847	2.002	1.084	0.927	1.099	1.234	-1178.	988.	14.6	8.979
1.00	0.80	0.3158	0.6842	0.	204.2	1.846	1.958	1.061	0.901	1.048	1.192	-1307.	932.	14.1	8.224
1.00	0.90	0.1696	0.8304	0.	207.1	1.838	1.931	1.050	0.886	1.025	1.171	-1371.	893.	13.8	7.805

Table 25. (cont.)

PRESSURE = 12. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	221.4	1.598	1.980	1.239	0.825	1.057	1.003	-1037.	1290.	14.8	10.012
0.	0.01	0.	0.0123	0.9877	221.3	1.600	1.979	1.237	0.824	1.055	1.003	-1041.	1284.	14.8	9.986
0.	0.02	0.	0.0246	0.9754	221.2	1.602	1.977	1.235	0.824	1.054	1.004	-1045.	1278.	14.7	9.961
0.	0.03	0.	0.0367	0.9633	221.1	1.603	1.976	1.233	0.824	1.053	1.005	-1049.	1272.	14.7	9.935
0.	0.04	0.	0.0488	0.9512	221.0	1.605	1.975	1.231	0.824	1.052	1.005	-1052.	1266.	14.7	9.910
0.	0.05	0.	0.0607	0.9393	220.9	1.607	1.974	1.229	0.824	1.051	1.006	-1056.	1260.	14.7	9.885
0.	0.07	0.	0.0844	0.9156	220.8	1.610	1.971	1.225	0.824	1.049	1.008	-1064.	1249.	14.7	9.836
0.	0.10	0.	0.1192	0.8808	220.5	1.615	1.967	1.218	0.823	1.046	1.010	-1075.	1232.	14.7	9.764
0.	0.20	0.	0.2305	0.7696	219.6	1.631	1.953	1.198	0.822	1.038	1.019	-1111.	1180.	14.6	9.532
0.	0.40	0.	0.4354	0.5647	218.3	1.661	1.921	1.157	0.822	1.020	1.041	-1179.	1084.	14.4	9.101
0.	0.60	0.	0.6259	0.3742	217.2	1.690	1.884	1.115	0.829	1.008	1.069	-1242.	998.	14.3	8.691
0.	0.80	0.	0.8112	0.1889	216.5	1.717	1.844	1.074	0.831	1.002	1.104	-1300.	917.	14.2	8.279
0.	0.90	0.	0.9046	0.0954	216.3	1.730	1.822	1.053	0.836	1.001	1.125	-1328.	877.	14.1	8.067
0.10	0.	0.1816	0.	0.8184	217.4	1.616	1.997	1.235	0.845	1.079	1.032	-1008.	1261.	15.0	10.102
0.10	0.01	0.1794	0.0112	0.8094	217.4	1.618	1.995	1.233	0.844	1.078	1.033	-1012.	1256.	15.0	10.078
0.10	0.02	0.1773	0.0223	0.8004	217.4	1.619	1.994	1.231	0.844	1.076	1.033	-1016.	1251.	14.9	10.055
0.10	0.03	0.1752	0.0334	0.7914	217.3	1.621	1.992	1.229	0.843	1.075	1.034	-1020.	1246.	14.9	10.031
0.10	0.04	0.1731	0.0445	0.7825	217.3	1.622	1.990	1.227	0.843	1.074	1.034	-1024.	1241.	14.9	10.008
0.10	0.05	0.1710	0.0554	0.7736	217.2	1.624	1.989	1.225	0.843	1.072	1.035	-1028.	1236.	14.9	9.985
0.10	0.07	0.1668	0.0772	0.7560	217.1	1.627	1.986	1.221	0.842	1.069	1.036	-1036.	1227.	14.9	9.938
0.10	0.10	0.1607	0.1094	0.7299	217.0	1.631	1.981	1.214	0.841	1.065	1.037	-1048.	1212.	14.9	9.870
0.10	0.20	0.1408	0.2139	0.6453	216.6	1.646	1.964	1.194	0.838	1.053	1.044	-1086.	1166.	14.8	9.645
0.10	0.40	0.1036	0.4128	0.4837	216.1	1.673	1.927	1.152	0.834	1.032	1.061	-1158.	1080.	14.6	9.209
0.10	0.60	0.0685	0.6050	0.3266	215.9	1.698	1.887	1.111	0.833	1.017	1.083	-1227.	998.	14.4	8.776
0.10	0.80	0.0343	0.7981	0.1676	215.8	1.721	1.845	1.072	0.836	1.006	1.112	-1292.	918.	14.2	8.327
0.10	0.90	0.0173	0.8974	0.0853	215.9	1.732	1.822	1.052	0.838	1.003	1.129	-1324.	878.	14.2	8.092
0.20	0.	0.3344	0.	0.6656	213.8	1.633	2.010	1.231	0.863	1.101	1.063	-978.	1234.	15.2	10.216
0.20	0.01	0.3308	0.0102	0.6590	213.8	1.634	2.008	1.229	0.862	1.100	1.063	-982.	1229.	15.2	10.194
0.20	0.02	0.3272	0.0204	0.6524	213.8	1.636	2.006	1.226	0.862	1.098	1.063	-986.	1225.	15.2	10.171
0.20	0.03	0.3236	0.0306	0.6459	213.8	1.637	2.004	1.224	0.861	1.096	1.064	-990.	1221.	15.2	10.150
0.20	0.04	0.3200	0.0407	0.6393	213.8	1.638	2.002	1.222	0.861	1.095	1.064	-995.	1217.	15.2	10.128
0.20	0.05	0.3165	0.0509	0.6328	213.8	1.640	2.001	1.220	0.860	1.093	1.064	-999.	1213.	15.2	10.105
0.20	0.07	0.3094	0.0707	0.6198	213.8	1.643	1.997	1.216	0.859	1.090	1.065	-1007.	1204.	15.1	10.060
0.20	0.10	0.2989	0.1003	0.6003	213.8	1.647	1.991	1.209	0.857	1.085	1.066	-1019.	1192.	15.1	9.992
0.20	0.20	0.2645	0.1992	0.5364	213.8	1.660	1.972	1.188	0.852	1.070	1.070	-1059.	1152.	15.0	9.769
0.20	0.40	0.1981	0.3920	0.4100	214.0	1.684	1.932	1.147	0.845	1.045	1.082	-1137.	1074.	14.7	9.322
0.20	0.60	0.1331	0.5851	0.2817	214.5	1.706	1.890	1.108	0.841	1.026	1.099	-1213.	998.	14.5	8.862
0.20	0.80	0.0678	0.7853	0.1469	215.2	1.726	1.846	1.069	0.841	1.011	1.121	-1285.	920.	14.3	8.375
0.20	0.90	0.0343	0.8904	0.0753	215.6	1.734	1.822	1.051	0.841	1.006	1.134	-1320.	879.	14.2	8.118
0.40	0.	0.5739	0.	0.4261	207.2	1.661	2.020	1.216	0.896	1.147	1.131	-913.	1182.	15.8	10.510
0.40	0.01	0.5687	0.0086	0.4227	207.3	1.662	2.018	1.214	0.895	1.144	1.131	-917.	1179.	15.8	10.487
0.40	0.02	0.5635	0.0173	0.4192	207.4	1.663	2.016	1.212	0.894	1.142	1.130	-922.	1176.	15.7	10.464
0.40	0.03	0.5583	0.0259	0.4158	207.4	1.665	2.014	1.210	0.894	1.140	1.130	-926.	1173.	15.7	10.441
0.40	0.04	0.5531	0.0346	0.4123	207.5	1.666	2.012	1.208	0.893	1.138	1.130	-931.	1170.	15.7	10.418
0.40	0.05	0.5479	0.0432	0.4089	207.6	1.667	2.010	1.205	0.892	1.136	1.130	-936.	1167.	15.7	10.395
0.40	0.07	0.5375	0.0606	0.4019	207.7	1.669	2.006	1.202	0.890	1.131	1.129	-945.	1161.	15.6	10.349
0.40	0.10	0.5219	0.0867	0.3915	207.9	1.673	2.000	1.195	0.888	1.125	1.128	-958.	1152.	15.6	10.281
0.40	0.20	0.4698	0.1743	0.3560	208.6	1.684	1.979	1.175	0.880	1.106	1.126	-1004.	1123.	15.4	10.045
0.40	0.40	0.3634	0.3553	0.2814	210.2	1.705	1.937	1.136	0.868	1.072	1.126	-1094.	1062.	15.0	9.557
0.40	0.60	0.2518	0.5486	0.1996	211.9	1.721	1.893	1.100	0.858	1.044	1.130	-1183.	996.	14.7	9.036
0.40	0.80	0.1320	0.7609	0.1072	213.8	1.734	1.847	1.065	0.849	1.021	1.138	-1270.	922.	14.3	8.472
0.40	0.90	0.0677	0.8765	0.0557	214.9	1.739	1.823	1.048	0.846	1.010	1.143	-1312.	881.	14.2	8.168
0.60	0.	0.7509	0.	0.2492	201.7	1.679	2.009	1.197	0.928	1.198	1.213	-842.	1134.	16.3	10.881
0.60	0.01	0.7452	0.0075	0.2475	201.8	1.680	2.007	1.195	0.927	1.195	1.211	-847.	1132.	16.2	10.855
0.60	0.02	0.7394	0.0150	0.2458	201.9	1.681	2.006	1.193	0.926	1.192	1.210	-852.	1130.	16.2	10.829
0.60	0.03	0.7336	0.0225	0.2440	202.0	1.683	2.004	1.191	0.925	1.189	1.209	-857.	1128.	16.2	10.804
0.60	0.04	0.7278	0.0300	0.2423	202.1	1.684	2.002	1.189	0.923	1.187	1.208	-863.	1126.	16.2	10.778
0.60	0.05	0.7219	0.0376	0.2406	202.2	1.685	2.001	1.187	0.922	1.184	1.207	-868.	1124.	16.1	10.752
0.60	0.07	0.7102	0.0528	0.2371	202.5	1.688	1.997	1.183	0.920	1.178	1.205	-878.	1120.	16.1	10.700
0.60	0.10	0.6925	0.0758	0.2318	202.8	1.692	1.992	1.178	0.917	1.170	1.201	-894.	1114.	16.0	10.622
0.60	0.20	0.6320	0.1546	0.2134	204.0	1.703	1.974	1.159	0.908	1.145	1.192	-946.	1093.	15.8	10.357
0.60	0.40	0.5026	0.3243	0.1731	206.6	1.722	1.936	1.124	0.890	1.101	1.176	-1050.	1047.	15.3	9.806
0.60	0.60	0.3581	0.5159	0.1261	209.4	1.735	1.894	1.091	0.874	1.063	1.165	-1153.	992.	14.8	9.214
0.60	0.80	0.1928	0.7377	0.0695	212.6	1.742	1.848	1.061	0.858	1.030	1.156	-1254.	923.	14.4	8.568
0.60	0.90	0.1003	0.8630	0.0367	214.3	1.743	1.824	1.046	0.850	1.015	1.152	-1304.	883.	14.3	8.219
0.80	0.	0.8879	0.	0.1122	196.8	1.687	1.979	1.173	0.962	1.261	1.313	-766.	1089.	16.7	11.322
0.80	0.01	0.8820	0.0066	0.1115	196.9	1.688	1.978	1.172	0.960	1.257	1.311	-772.	1088.	16.6	11.291
0.80	0.02	0.8760	0.0132	0.1108	197.1	1.690	1.977	1.170	0.959	1.253	1.309	-778.	1087.	16.6	11.260
0.80	0.03	0.8701	0.0199	0.1101	197.2	1.691	1.976	1.168	0.958	1.249	1.306	-784.	1086.	16.6	11.229
0.80	0.04	0.8641	0.0266	0.1094	197.4	1.693	1.975	1.167	0.956	1.246	1.304	-790.	1084.	16.6	11.199
0.80	0.05	0.8580	0.0333	0.1087	197.5	1.695	1.974	1.165	0.955	1.242	1.301	-796.	1083.	16.5	11.168
0.80	0.07	0.8459	0.0469	0.1072	197.8	1.698	1.972	1.162	0.952	1.235	1.297	-808.	1081.	16.5	11.107
0.80	0.10	0.8274	0.0678	0.1051	198.3	1.702	1.969	1.157	0.948	1.224	1.290	-826.	1077.	16.4	11.014
0.80	0.20	0.7634	0.1391	0.0975	199.8	1.715	1.957	1.141	0.936	1.191	1.269	-885.	1064.	16.1	10.705
0.80	0.40	0.6213	0.2982	0.0806	203.3	1.736	1.928	1.110	0.913	1.133	1.232	-1004.	1031.	15.9	10.069
0.80	0.60	0.4536	0.4865	0.0599	207.1	1.748	1.892	1.082	0.891	1.083	1.202	-1122.	987.	15.0	9.397
0.80	0.80	0.2505	0.7157	0.0339	211.3	1.750	1.848	1.056	0.867	1.040	1.174	-1239.	924.	14.5	8.665
0.80	0.90	0.1320	0.8499	0.0181	213.6	1.747	1.824	1.044	0.855	1.020	1.161	-1297.	884.	14.3	8.269
0.90	0.	0.9463	0.	0.0537	194.5	1.687	1.958	1.161	0.981	1.298	1.373	-727.	1068.	16.8	11.572
0.90	0.01	0.9404	0.0062	0.0534	194.7	1.689	1.958	1.159	0.979	1.294	1.370	-733.	1067.	16.8	11.540
0.90	0.02	0.9344	0.0125	0.0531	194.8	1.691	1.957	1.157	0.978	1.289	1.367	-740.	1066.	16.8	11.504
0.90	0.03	0.9284	0.0188	0.0527	195.0	1.693	1.957	1.156	0.976	1.285	1.363	-746.	1065.	16.7	11.470
0.90	0.04	0.9224	0.0252	0.0524	195.2	1.694	1.956	1.154	0.975	1.281	1.360	-752.	1064.	16.7	11.436
0.90	0.05	0.9163	0.0316	0.0521	195.3	1.696	1.955	1.153	0.973	1.276	1.357	-759.	1064.	16.7	11.402
0.90	0.07	0.9041	0.0445	0.0514	195.7	1.699	1.954	1.150	0.970	1.268	1.351	-771.	1062.	16.6	11.334
0.90	0.10	0.8855	0.0641	0.0504	196.2	1.704	1.952	1.145	0.966	1.256	1.342	-791.	1059.	16.5	11.232
0.90	0.20	0.8205	0.1326	0.0469	197.9	1.719	1.944	1.131	0.951	1.217	1.313	-854.	1049.	16.2	10.893
0.90	0.40	0.6743	0.2866	0.0390	201.7	1.742	1.922	1.103	0.925	1.151	1.263	-981.	1023.	15.7	10.207
0.90	0.60	0.4977	0.4730	0.0293	205.9	1.754	1.890	1.077	0.899	1.094	1.221	-1107.	984.	15.1	9.490
0.90	0.80	0.2782	0.7051	0.0167	210.7	1.754	1.848	1.054	0.872	1.045	1.184	-1231.	925.	14.6	8.713
0.90	0.90	0.1476	0.8435	0.0090	213.3	1.749	1.824	1.043	0.858	1.023	1.166	-1293.	885.	14.3	8.294
0.97	0.	0.9843	0.	0.0157	193.0	1.686	1.942	1.151	0.996	1.327	1.420	-699.	1053.	16.9	11.762
0.97	0.01	0.9784	0.0060	0.0156	193.2	1.688	1.941	1.150	0.994	1.322	1.416	-706.	1052.	16.9	11.725
0.97	0.02	0.9724	0.0121	0.0155	193.4	1.690	1.941	1.148	0.992	1.317	1.412	-712.	1052.	16.9	11.688
0.97	0.03	0.9664	0.0182	0.0154	193.5	1.692	1.941	1.147	0.990	1.312	1.408	-719.	1051.	16.8	11.651
0.97	0.04	0.9603	0.0244	0.0153	193.7	1.694	1.941	1.146	0.989	1.308	1.404	-726.	1051.	16.8	11.614
0.97	0.05	0.9543	0.0305	0.0152	193.9	1.696	1.940	1.144	0.987	1.303	1.400	-732.	1050.	16.8	11.578
0.97	0.07	0.9420	0.0430	0.0150	194.2	1.700	1.940	1.141	0.984	1.294	1.392	-746.	1049.	16.7	11.504
0.97	0.10	0.9232	0.0620	0.0147	194.8	1.705	1.939	1.137	0.978	1.280	1.381	-766.	1047.	16.6	11.395
0.97	0.20	0.8578	0.1285	0.0137	196.6	1.721	1.934	1.124	0.962	1.237	1.346	-832.	1039.	16.3	11.032
0.97	0.40	0.7093	0.2793	0.0114	200.6	1.745	1.916	1.098	0.933	1.164	1.286	-965.	1017.	15.7	10.306
0.97	0.60	0.5274	0.4640	0.0086	205.1	1.758	1.888	1.074	0.905	1.102	1.235	-1096.	981.	15.1	9.556
0.97	0.80	0.2972	0.6978	0.0050	210.3	1.756	1.848	1.052	0.875	1.049	1.190	-1226.	925.	14.6	8.747
0.97	0.90	0.1583	0.8390	0.0027	213.1	1.751	1.825	1.042	0.859	1.025	1.169	-1290.	885.	14.3	8.312
1.00	0.	1.0000	0.	0.	192.4	1.685	1.934	1.147	1.002	1.341	1.441	-687.	1047.	16.9	11.847
1.00	0.01	0.9941	0.0059	0.0000	192.6	1.688	1.934	1.146	1.001	1.335	1.436	-694.	1046.	16.9	11.809
1.00	0.02	0.9881	0.0119	0.0000	192.7	1.690	1.934	1.144	0.999	1.330	1.432	-701.	1046.	16.9	11.771
1.00	0.03	0.9820	0.0180	0.0000	192.9	1.692	1.934	1.143	0.997	1.325	1.428	-707.	1045.	16.9	11.732
1.00	0.04	0.9760	0.0240	0.0000	193.1	1.694	1.934	1.142	0.995	1.320	1.423	-714.	1045.	16.8	11.694
1.00	0.05	0.9699	0.0301	0.0000	193.3	1.696	1.934	1.140	0.993	1.315	1.419	-721.	1044.	16.8	11.656
1.00	0.07	0.9576	0.0424	0.0000	193.6	1.699	1.933	1.138	0.990	1.305	1.411	-734.	1043.	16.7	11.580
1.00	0.10	0.9388	0.0612	0.0000	194.2	1.705	1.933	1.134	0.984	1.291	1.399	-755.	1042.	16.7	11.467
1.00	0.20	0.8732	0.1268	0.0000	196.1	1.721	1.929	1.121	0.967	1.246	1.361	-823.	1035.	16.4	11.093
1.00	0.40	0.7238	0.2763	0.0000	200.2	1.747	1.914	1.096	0.937	1.169	1.296	-957.	1015.	15.8	10.349
1.00	0.60	0.5398	0.4603	0.	204.8	1.759	1.887	1.073	0.908	1.106	1.242	-1091.	980.	15.2	9.584
1.00	0.80	0.3052	0.6948	0.	210.1	1.757	1.848	1.052	0.876	1.050	1.193	-1223.	925.	14.6	8.761
1.00	0.90	0.1629	0.8371	0.	213.0	1.752	1.825	1.042	0.860	1.025	1.170	-1289.	886.	14.3	8.319

Table 25. (cont.)

PRESSURE = 14. ATM

Liquid Mole Fraction N2/N2+O2	Liquid Mole Fraction AR	Vapor Mole Fraction N2	Vapor Mole Fraction AR	Vapor Mole Fraction O2	Temp R	Relative Vol N2/AR	Relative Vol N2/O2	Relative Vol AR/O2	Pressure Act Coef N2	Pressure Act Coef AR	Pressure Act Coef O2	Enthalpy BTU/LB Mole LIQ	Enthalpy BTU/LB Mole VAP	Heat Capacity BTU/LB Mole-R LIQ	Heat Capacity BTU/LB Mole-R VAP
0.	0.	0.	0.	1.0000	226.6	1.557	1.899	1.219	0.802	1.046	1.002	-960.	1290.	15.2	10.571
0.	0.01	0.	0.0121	0.9879	226.5	1.559	1.897	1.217	0.802	1.045	1.003	-964.	1284.	15.2	10.546
0.	0.02	0.	0.0242	0.9757	226.4	1.560	1.896	1.215	0.802	1.045	1.004	-968.	1278.	15.2	10.520
0.	0.03	0.	0.0362	0.9638	226.3	1.561	1.895	1.213	0.802	1.044	1.005	-971.	1272.	15.2	10.496
0.	0.04	0.	0.0481	0.9519	226.2	1.563	1.893	1.212	0.802	1.043	1.006	-975.	1266.	15.2	10.472
0.	0.05	0.	0.0599	0.9401	226.1	1.564	1.892	1.210	0.802	1.042	1.006	-979.	1260.	15.2	10.448
0.	0.07	0.	0.0832	0.9168	225.9	1.567	1.889	1.206	0.801	1.040	1.008	-987.	1249.	15.2	10.399
0.	0.10	0.	0.1177	0.8823	225.6	1.571	1.885	1.200	0.801	1.037	1.011	-998.	1232.	15.1	10.328
0.	0.20	0.	0.2280	0.7721	224.8	1.584	1.871	1.181	0.800	1.029	1.020	-1035.	1179.	15.1	10.100
0.	0.40	0.	0.4324	0.5677	223.4	1.610	1.839	1.143	0.801	1.015	1.041	-1103.	1082.	14.9	9.670
0.	0.60	0.	0.6234	0.3766	222.4	1.635	1.804	1.104	0.804	1.005	1.069	-1167.	994.	14.8	9.254
0.	0.80	0.	0.8098	0.1902	221.7	1.658	1.765	1.065	0.810	1.000	1.103	-1225.	910.	14.7	8.837
0.	0.90	0.	0.9039	0.0961	221.5	1.669	1.744	1.045	0.814	0.999	1.123	-1253.	869.	14.7	8.620
0.10	0.	0.1749	0.	0.8251	222.6	1.569	1.908	1.216	0.823	1.072	1.034	-930.	1261.	15.4	10.684
0.10	0.01	0.1729	0.0111	0.8161	222.6	1.570	1.907	1.214	0.822	1.070	1.035	-934.	1256.	15.4	10.662
0.10	0.02	0.1708	0.0222	0.8071	222.5	1.572	1.905	1.212	0.822	1.069	1.035	-938.	1251.	15.4	10.639
0.10	0.03	0.1688	0.0332	0.7981	222.5	1.573	1.904	1.210	0.822	1.068	1.036	-942.	1246.	15.3	10.615
0.10	0.04	0.1668	0.0441	0.7891	222.4	1.574	1.902	1.208	0.821	1.066	1.036	-946.	1241.	15.3	10.592
0.10	0.05	0.1648	0.0550	0.7802	222.4	1.576	1.901	1.206	0.821	1.065	1.037	-950.	1236.	15.3	10.569
0.10	0.07	0.1608	0.0767	0.7626	222.3	1.578	1.898	1.202	0.820	1.063	1.038	-958.	1226.	15.3	10.523
0.10	0.10	0.1549	0.1088	0.7364	222.2	1.582	1.893	1.197	0.819	1.059	1.040	-970.	1211.	15.3	10.454
0.10	0.20	0.1358	0.2129	0.6513	221.8	1.595	1.877	1.177	0.817	1.048	1.046	-1008.	1164.	15.2	10.229
0.10	0.40	0.1000	0.4117	0.4883	221.3	1.618	1.842	1.138	0.813	1.029	1.063	-1082.	1076.	15.0	9.789
0.10	0.60	0.0661	0.6043	0.3296	221.0	1.641	1.805	1.100	0.812	1.014	1.084	-1152.	993.	14.9	9.347
0.10	0.80	0.0331	0.7979	0.1689	221.0	1.661	1.765	1.063	0.814	1.005	1.112	-1217.	911.	14.7	8.888
0.10	0.90	0.0167	0.8974	0.0859	221.1	1.670	1.744	1.044	0.816	1.001	1.128	-1249.	870.	14.7	8.646
0.20	0.	0.3237	0.	0.6763	219.0	1.581	1.915	1.211	0.842	1.096	1.067	-898.	1233.	15.6	10.826
0.20	0.01	0.3202	0.0102	0.6695	219.0	1.582	1.913	1.209	0.841	1.094	1.067	-902.	1229.	15.6	10.803
0.20	0.02	0.3167	0.0204	0.6628	219.0	1.583	1.911	1.207	0.841	1.093	1.067	-906.	1225.	15.6	10.780
0.20	0.03	0.3133	0.0306	0.6562	219.0	1.585	1.910	1.205	0.840	1.091	1.068	-911.	1220.	15.6	10.757
0.20	0.04	0.3098	0.0407	0.6495	219.0	1.586	1.908	1.203	0.840	1.090	1.068	-915.	1216.	15.5	10.735
0.20	0.05	0.3064	0.0508	0.6428	219.0	1.587	1.906	1.201	0.839	1.088	1.068	-919.	1212.	15.5	10.712
0.20	0.07	0.2995	0.0709	0.6296	219.0	1.589	1.903	1.197	0.838	1.085	1.069	-927.	1203.	15.5	10.667
0.20	0.10	0.2893	0.1009	0.6098	219.0	1.593	1.898	1.191	0.836	1.081	1.070	-940.	1191.	15.5	10.600
0.20	0.20	0.2560	0.1994	0.5446	219.0	1.605	1.880	1.172	0.832	1.067	1.073	-981.	1149.	15.4	10.373
0.20	0.40	0.1916	0.3927	0.4157	219.2	1.627	1.844	1.134	0.825	1.043	1.085	-1060.	1070.	15.1	9.914
0.20	0.60	0.1287	0.5862	0.2851	219.7	1.646	1.805	1.096	0.820	1.024	1.100	-1136.	992.	14.9	9.441
0.20	0.80	0.0654	0.7863	0.1483	220.4	1.664	1.765	1.061	0.819	1.010	1.120	-1210.	912.	14.8	8.938
0.20	0.90	0.0331	0.8910	0.0759	220.8	1.672	1.744	1.043	0.819	1.004	1.132	-1245.	871.	14.7	8.672
0.40	0.	0.5612	0.	0.4388	212.4	1.602	1.919	1.198	0.878	1.146	1.139	-830.	1180.	16.1	11.192
0.40	0.01	0.5561	0.0088	0.4352	212.5	1.603	1.917	1.196	0.877	1.144	1.139	-835.	1177.	16.1	11.168
0.40	0.02	0.5509	0.0175	0.4315	212.6	1.604	1.915	1.194	0.876	1.142	1.138	-839.	1174.	16.1	11.144
0.40	0.03	0.5458	0.0263	0.4279	212.6	1.605	1.913	1.192	0.875	1.140	1.138	-844.	1171.	16.1	11.120
0.40	0.04	0.5407	0.0351	0.4243	212.7	1.607	1.911	1.190	0.874	1.137	1.137	-849.	1168.	16.1	11.095
0.40	0.05	0.5355	0.0438	0.4206	212.8	1.608	1.910	1.188	0.873	1.135	1.137	-853.	1165.	16.0	11.071
0.40	0.07	0.5253	0.0614	0.4134	212.9	1.610	1.906	1.184	0.872	1.131	1.136	-863.	1159.	16.0	11.022
0.40	0.10	0.5098	0.0878	0.4024	213.1	1.613	1.901	1.178	0.869	1.125	1.135	-877.	1150.	15.9	10.948
0.40	0.20	0.4583	0.1764	0.3652	213.8	1.624	1.882	1.159	0.862	1.106	1.133	-923.	1119.	15.8	10.699
0.40	0.40	0.3537	0.3588	0.2876	215.3	1.643	1.845	1.123	0.848	1.072	1.131	-1015.	1056.	15.4	10.184
0.40	0.60	0.2444	0.5526	0.2030	217.1	1.658	1.805	1.089	0.837	1.044	1.133	-1106.	988.	15.1	9.633
0.40	0.80	0.1276	0.7639	0.1085	219.0	1.670	1.765	1.056	0.828	1.020	1.138	-1194.	913.	14.8	9.041
0.40	0.90	0.0654	0.8784	0.0563	220.1	1.675	1.744	1.041	0.823	1.009	1.141	-1237.	872.	14.7	8.725
0.60	0.	0.7410	0.	0.2590	206.7	1.617	1.907	1.179	0.914	1.203	1.225	-758.	1130.	16.7	11.670
0.60	0.01	0.7352	0.0076	0.2572	206.9	1.618	1.906	1.178	0.913	1.200	1.223	-763.	1128.	16.7	11.641
0.60	0.02	0.7293	0.0153	0.2553	207.0	1.620	1.904	1.176	0.911	1.197	1.222	-768.	1126.	16.6	11.612
0.60	0.03	0.7235	0.0230	0.2535	207.1	1.621	1.903	1.174	0.910	1.194	1.221	-774.	1124.	16.6	11.583
0.60	0.04	0.7176	0.0307	0.2516	207.2	1.622	1.901	1.172	0.909	1.191	1.220	-779.	1122.	16.6	11.554
0.60	0.05	0.7117	0.0385	0.2498	207.3	1.623	1.900	1.170	0.908	1.189	1.218	-784.	1120.	16.6	11.525
0.60	0.07	0.6999	0.0540	0.2460	207.6	1.625	1.896	1.167	0.906	1.183	1.216	-795.	1116.	16.5	11.466
0.60	0.10	0.6821	0.0776	0.2404	207.9	1.629	1.892	1.161	0.902	1.175	1.212	-811.	1109.	16.4	11.379
0.60	0.20	0.6212	0.1579	0.2208	209.1	1.639	1.875	1.144	0.892	1.149	1.201	-864.	1088.	16.2	11.083
0.60	0.40	0.4919	0.3300	0.1782	211.7	1.656	1.841	1.111	0.872	1.104	1.183	-970.	1040.	15.7	10.476
0.60	0.60	0.3468	0.5224	0.1289	214.6	1.669	1.804	1.081	0.855	1.069	1.169	-1074.	984.	15.3	9.834
0.60	0.80	0.1868	0.7427	0.0706	217.8	1.677	1.764	1.052	0.837	1.030	1.156	-1178.	914.	14.9	9.145
0.60	0.90	0.0969	0.8660	0.0371	219.5	1.678	1.744	1.039	0.828	1.014	1.151	-1229.	873.	14.8	8.778
0.80	0.	0.8826	0.	0.1173	201.7	1.625	1.881	1.157	0.953	1.271	1.330	-683.	1082.	17.1	12.272
0.80	0.01	0.8767	0.0068	0.1166	201.8	1.627	1.880	1.156	0.952	1.267	1.328	-689.	1081.	17.1	12.235
0.80	0.02	0.8706	0.0136	0.1158	202.0	1.628	1.879	1.154	0.950	1.263	1.325	-695.	1080.	17.1	12.198
0.80	0.03	0.8645	0.0205	0.1151	202.2	1.630	1.878	1.153	0.949	1.260	1.322	-701.	1078.	17.1	12.160
0.80	0.04	0.8583	0.0274	0.1143	202.3	1.631	1.877	1.151	0.947	1.256	1.320	-707.	1077.	17.0	12.123
0.80	0.05	0.8522	0.0343	0.1135	202.5	1.632	1.876	1.150	0.946	1.252	1.317	-713.	1076.	17.0	12.086
0.80	0.07	0.8397	0.0483	0.1120	202.8	1.635	1.874	1.147	0.943	1.245	1.312	-725.	1074.	16.9	12.012
0.80	0.10	0.8208	0.0696	0.1097	203.3	1.639	1.871	1.142	0.938	1.234	1.305	-743.	1070.	16.9	11.901
0.80	0.20	0.7554	0.1431	0.1016	204.9	1.650	1.860	1.127	0.924	1.200	1.282	-803.	1056.	16.6	11.531
0.80	0.40	0.6113	0.3054	0.0834	208.4	1.668	1.833	1.098	0.897	1.139	1.242	-923.	1023.	16.0	10.796
0.80	0.60	0.4434	0.4951	0.0616	212.2	1.679	1.800	1.072	0.872	1.087	1.207	-1043.	977.	15.5	10.042
0.80	0.80	0.2431	0.7224	0.0345	216.5	1.683	1.763	1.048	0.846	1.041	1.175	-1162.	915.	15.0	9.250
0.80	0.90	0.1277	0.8540	0.0183	218.8	1.682	1.743	1.037	0.833	1.020	1.160	-1221.	875.	14.8	8.832
0.90	0.	0.9437	0.	0.0563	199.3	1.627	1.864	1.145	0.975	1.312	1.393	-644.	1058.	17.3	12.628
0.90	0.01	0.9376	0.0065	0.0559	199.5	1.628	1.863	1.144	0.974	1.307	1.389	-651.	1058.	17.3	12.585
0.90	0.02	0.9315	0.0130	0.0556	199.7	1.630	1.862	1.143	0.972	1.302	1.386	-657.	1057.	17.3	12.542
0.90	0.03	0.9253	0.0195	0.0552	199.9	1.631	1.862	1.141	0.970	1.298	1.382	-664.	1056.	17.2	12.499
0.90	0.04	0.9191	0.0261	0.0549	200.0	1.633	1.861	1.140	0.968	1.294	1.379	-670.	1055.	17.2	12.456
0.90	0.05	0.9128	0.0327	0.0545	200.2	1.634	1.861	1.138	0.966	1.289	1.375	-676.	1054.	17.2	12.413
0.90	0.07	0.9002	0.0460	0.0538	200.5	1.637	1.859	1.136	0.963	1.280	1.369	-689.	1053.	17.1	12.327
0.90	0.10	0.8810	0.0663	0.0527	201.1	1.641	1.857	1.131	0.958	1.263	1.359	-708.	1050.	17.0	12.200
0.90	0.20	0.8143	0.1368	0.0489	202.9	1.654	1.849	1.118	0.941	1.228	1.328	-772.	1040.	16.7	11.783
0.90	0.40	0.6652	0.2944	0.0405	206.8	1.673	1.827	1.092	0.910	1.158	1.274	-900.	1014.	16.1	10.968
0.90	0.60	0.4875	0.4825	0.0301	211.1	1.684	1.798	1.065	0.881	1.098	1.227	-1027.	974.	15.6	10.150
0.90	0.80	0.2704	0.7127	0.0170	215.9	1.686	1.763	1.045	0.851	1.046	1.185	-1154.	915.	15.0	9.304
0.90	0.90	0.1428	0.8482	0.0091	218.5	1.683	1.743	1.035	0.835	1.022	1.165	-1217.	875.	14.8	8.858
0.97	0.	0.9836	0.	0.0164	197.8	1.627	1.850	1.137	0.992	1.343	1.441	-617.	1042.	17.4	12.905
0.97	0.01	0.9774	0.0062	0.0163	197.9	1.629	1.849	1.135	0.990	1.338	1.437	-624.	1041.	17.4	12.857
0.97	0.02	0.9712	0.0125	0.0162	198.1	1.630	1.849	1.134	0.988	1.333	1.433	-631.	1041.	17.4	12.808
0.97	0.03	0.9650	0.0189	0.0161	198.3	1.632	1.849	1.133	0.986	1.328	1.428	-637.	1040.	17.4	12.760
0.97	0.04	0.9587	0.0252	0.0160	198.5	1.633	1.848	1.131	0.984	1.323	1.424	-644.	1040.	17.3	12.712
0.97	0.05	0.9525	0.0316	0.0159	198.7	1.635	1.848	1.130	0.982	1.318	1.420	-651.	1039.	17.3	12.665
0.97	0.07	0.9398	0.0445	0.0157	199.0	1.638	1.847	1.128	0.978	1.308	1.412	-664.	1038.	17.2	12.570
0.97	0.10	0.9204	0.0642	0.0154	199.6	1.643	1.846	1.124	0.973	1.294	1.400	-684.	1036.	17.2	12.429
0.97	0.20	0.8529	0.1327	0.0143	201.5	1.656	1.840	1.111	0.954	1.249	1.362	-750.	1029.	16.9	11.972
0.97	0.40	0.7009	0.2873	0.0119	205.7	1.677	1.822	1.087	0.920	1.172	1.297	-884.	1007.	16.2	11.095
0.97	0.60	0.5171	0.4740	0.0080	210.3	1.687	1.796	1.065	0.887	1.107	1.241	-1016.	971.	15.6	10.226
0.97	0.80	0.2890	0.7080	0.0051	215.5	1.688	1.762	1.044	0.855	1.050	1.192	-1148.	914.	15.1	9.34[illegible]
0.97	0.90	0.1532	0.8441	0.0027	218.3	1.684	1.743	1.035	0.837	1.024	1.168	-1214.	875.	14.8	8.877
1.00	0.	1.0000	0.	0.	197.1	1.627	1.843	1.133	1.000	1.357	1.463	-606.	1035.	17.5	13.032
1.00	0.01	0.9938	0.0062	0.0000	197.3	1.628	1.843	1.132	0.998	1.352	1.459	-613.	1035.	17.5	12.981
1.00	0.02	0.9876	0.0124	0.0000	197.5	1.630	1.843	1.130	0.996	1.346	1.454	-619.	1034.	17.4	12.930
1.00	0.03	0.9814	0.0186	0.0000	197.7	1.632	1.843	1.129	0.994	1.341	1.449	-626.	1034.	17.4	12.879
1.00	0.04	0.9752	0.0249	0.0000	197.8	1.633	1.842	1.128	0.991	1.336	1.445	-633.	1033.	17.4	12.830
1.00	0.05	0.9688	0.0312	0.0000	198.0	1.635	1.842	1.127	0.989	1.331	1.440	-640.	1033.	17.3	12.779
1.00	0.07	0.9561	0.0439	0.0000	198.4	1.638	1.841	1.124	0.985	1.320	1.431	-653.	1032.	17.3	12.680
1.00	0.10	0.9367	0.0633	0.0000	199.0	1.643	1.841	1.120	0.979	1.306	1.418	-673.	1031.	17.2	12.533
1.00	0.20	0.8689	0.1311	0.0000	201.0	1.657	1.836	1.108	0.960	1.259	1.370	-741.	1024.	16.9	12.056
1.00	0.40	0.7157	0.2844	0.0000	205.2	1.678	1.820	1.085	0.924	1.178	1.308	-877.	1004.	16.3	11.149
1.00	0.60	0.5296	0.4705	0.	210.0	1.689	1.795	1.063	0.890	1.111	1.248	-1012.	970.	15.7	10.261
1.00	0.80	0.2969	0.7032	0.	215.3	1.689	1.742	1.043	0.856	1.052	1.195	-1146.	914.	15.1	9.358
1.00	0.90	0.1577	0.8423	0.	218.2	1.685	1.743	1.034	0.838	1.025	1.170	-1213.	876.	14.8	8.885

PRESSURE = 16. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	231.3	1.530	1.840	1.203	0.785	1.037	1.002	-887.	1286.	15.8	11.138
0.	0.01	0.	0.0120	0.9880	231.2	1.531	1.839	1.201	0.785	1.037	1.003	-891.	1280.	15.8	11.104
0.	0.02	0.	0.0239	0.9761	231.1	1.532	1.837	1.199	0.785	1.036	1.004	-895.	1274.	15.7	11.140
0.	0.03	0.	0.0357	0.9643	231.0	1.533	1.836	1.197	0.785	1.035	1.005	-899.	1268.	15.7	11.115
0.	0.04	0.	0.0475	0.9525	230.9	1.534	1.834	1.196	0.785	1.034	1.005	-903.	1263.	15.7	11.091
0.	0.05	0.	0.0591	0.9409	230.8	1.535	1.833	1.194	0.785	1.034	1.006	-907.	1257.	15.7	11.068
0.	0.07	0.	0.0822	0.9178	230.6	1.537	1.830	1.190	0.784	1.032	1.008	-915.	1245.	15.7	11.020
0.	0.10	0.	0.1163	0.8837	230.3	1.541	1.826	1.185	0.784	1.030	1.011	-926.	1228.	15.6	10.951
0.	0.20	0.	0.2255	0.7745	229.5	1.552	1.811	1.167	0.784	1.023	1.020	-963.	1174.	15.5	10.725
0.	0.40	0.	0.4298	0.5703	228.1	1.573	1.778	1.131	0.784	1.013	1.042	-1033.	1076.	15.4	10.298
0.	0.60	0.	0.6214	0.3787	227.1	1.593	1.743	1.094	0.786	1.002	1.069	-1096.	986.	15.3	9.881
0.	0.80	0.	0.8088	0.1912	226.4	1.613	1.705	1.057	0.792	0.997	1.102	-1155.	900.	15.2	9.453
0.	0.90	0.	0.9034	0.0966	226.2	1.622	1.686	1.039	0.796	0.997	1.121	-1183.	858.	15.1	9.229
0.10	0.	0.1699	0.	0.8302	227.3	1.535	1.841	1.199	0.805	1.065	1.036	-857.	1257.	15.8	11.334
0.10	0.01	0.1679	0.0110	0.8211	227.2	1.537	1.840	1.197	0.805	1.064	1.037	-862.	1252.	15.8	11.310
0.10	0.02	0.1659	0.0220	0.8121	227.2	1.538	1.839	1.196	0.805	1.062	1.037	-866.	1247.	15.8	11.287
0.10	0.03	0.1639	0.0329	0.8032	227.1	1.539	1.837	1.194	0.805	1.061	1.038	-870.	1242.	15.8	11.244
0.10	0.04	0.1620	0.0438	0.7942	227.1	1.540	1.836	1.192	0.804	1.060	1.038	-874.	1237.	15.8	11.240
0.10	0.05	0.1600	0.0547	0.7853	227.0	1.541	1.834	1.190	0.804	1.059	1.039	-878.	1232.	15.8	11.217
0.10	0.07	0.1562	0.0762	0.7677	227.0	1.543	1.831	1.186	0.803	1.057	1.040	-886.	1222.	15.7	11.1[illegible]
0.10	0.10	0.1505	0.1081	0.7414	226.8	1.547	1.826	1.181	0.802	1.053	1.042	-896.	1207.	15.7	11.10[illegible]
0.10	0.20	0.1320	0.2119	0.6561	226.5	1.557	1.811	1.163	0.800	1.043	1.048	-937.	1159.	15.6	10.87[illegible]
0.10	0.40	0.0972	0.4106	0.4922	225.9	1.578	1.777	1.126	0.796	1.026	1.064	-1011.	1069.	15.5	10.43[illegible]
0.10	0.60	0.0643	0.6036	0.3321	225.7	1.597	1.749	1.090	0.795	1.012	1.085	-1081.	984.	15.3	9.98[illegible]
0.10	0.80	0.0322	0.7977	0.1701	225.7	1.618	1.704	1.055	0.796	1.003	1.111	-1147.	901.	15.2	9.50[illegible]
0.10	0.90	0.0162	0.8973	0.0865	225.8	1.624	1.685	1.038	0.798	0.999	1.126	-1179.	859.	15.2	9.256
0.20	0.	0.3154	0.	0.6846	223.6	1.542	1.843	1.195	0.826	1.092	1.071	-825.	1229.	16.0	11.509
0.20	0.01	0.3120	0.0102	0.6778	223.6	1.543	1.841	1.193	0.825	1.090	1.071	-829.	1224.	16.0	11.486
0.20	0.02	0.3086	0.0204	0.6710	223.6	1.544	1.839	1.191	0.824	1.089	1.071	-833.	1220.	15.9	11.463
0.20	0.03	0.3052	0.0305	0.6642	223.6	1.546	1.838	1.189	0.824	1.087	1.072	-838.	1216.	15.9	11.440
0.20	0.04	0.3018	0.0407	0.6575	223.6	1.547	1.836	1.187	0.823	1.086	1.072	-842.	1211.	15.9	11.417
0.20	0.05	0.2985	0.0508	0.6507	223.6	1.548	1.835	1.185	0.823	1.084	1.072	-846.	1207.	15.9	11.394
0.20	0.07	0.2918	0.0709	0.6373	223.6	1.550	1.832	1.182	0.822	1.081	1.073	-855.	1198.	15.9	11.348
0.20	0.10	0.2819	0.1008	0.6173	223.6	1.553	1.827	1.176	0.820	1.077	1.074	-867.	1185.	15.9	11.279
0.20	0.20	0.2495	0.1994	0.5511	223.6	1.564	1.811	1.150	0.816	1.064	1.077	-909.	1143.	15.7	11.048
0.20	0.40	0.1867	0.3929	0.4204	223.9	1.584	1.776	1.122	0.808	1.041	1.087	-989.	1062.	15.6	10.577
0.20	0.60	0.1253	0.5868	0.2879	224.3	1.601	1.741	1.087	0.804	1.022	1.102	-1066.	983.	15.4	10.086
0.20	0.80	0.0636	0.7869	0.1494	225.0	1.618	1.704	1.053	0.801	1.008	1.120	-1139.	902.	15.2	9.563
0.20	0.90	0.0322	0.8914	0.0764	225.5	1.625	1.685	1.037	0.800	1.002	1.130	-1175.	865.	15.2	9.286
0.40	0.	0.5507	0.	0.4493	217.1	1.556	1.838	1.181	0.863	1.148	1.147	-754.	1175.	16.5	11.965
0.40	0.01	0.5456	0.0088	0.4456	217.1	1.557	1.837	1.179	0.862	1.144	1.146	-759.	1171.	16.5	11.939
0.40	0.02	0.5405	0.0177	0.4418	217.2	1.558	1.835	1.178	0.861	1.142	1.146	-764.	1168.	16.4	11.914
0.40	0.03	0.5354	0.0265	0.4380	217.3	1.559	1.834	1.176	0.860	1.139	1.145	-769.	1165.	16.4	11.888
0.40	0.04	0.5303	0.0354	0.4343	217.3	1.560	1.832	1.174	0.859	1.137	1.145	-773.	1162.	16.4	11.862
0.40	0.05	0.5253	0.0443	0.4304	217.4	1.561	1.830	1.172	0.858	1.135	1.145	-778.	1159.	16.4	11.836
0.40	0.07	0.5151	0.0620	0.4229	217.5	1.564	1.827	1.169	0.857	1.131	1.144	-788.	1153.	16.4	11.784
0.40	0.10	0.4999	0.0886	0.4115	217.7	1.567	1.822	1.163	0.854	1.125	1.143	-802.	1143.	16.3	11.705
0.40	0.20	0.4490	0.1780	0.3730	218.4	1.577	1.806	1.145	0.846	1.106	1.140	-849.	1112.	16.1	11.440
0.40	0.40	0.3456	0.3615	0.2927	220.0	1.594	1.772	1.111	0.833	1.073	1.138	-943.	1047.	15.8	10.890
0.40	0.60	0.2385	0.5556	0.2059	221.7	1.610	1.737	1.078	0.821	1.044	1.136	-1034.	978.	15.5	10.304
0.40	0.80	0.1243	0.7662	0.1096	223.7	1.622	1.702	1.049	0.811	1.019	1.139	-1123.	902.	15.3	9.677
0.40	0.90	0.0636	0.8797	0.0567	224.8	1.627	1.683	1.035	0.805	1.008	1.140	-1167.	861.	15.2	9.343
0.60	0.	0.7324	0.	0.2676	211.3	1.566	1.824	1.164	0.902	1.207	1.236	-681.	1122.	17.0	12.577
0.60	0.01	0.7265	0.0078	0.2657	211.4	1.568	1.823	1.162	0.900	1.204	1.235	-686.	1120.	17.0	12.545
0.60	0.02	0.7206	0.0156	0.2637	211.5	1.569	1.822	1.161	0.899	1.201	1.234	-691.	1118.	17.0	12.512
0.60	0.03	0.7148	0.0235	0.2618	211.7	1.571	1.820	1.159	0.898	1.199	1.232	-697.	1116.	17.0	12.479
0.60	0.04	0.7089	0.0313	0.2598	211.8	1.572	1.819	1.157	0.897	1.196	1.231	-702.	1114.	17.0	12.446
0.60	0.05	0.7029	0.0392	0.2579	211.9	1.573	1.817	1.156	0.896	1.193	1.230	-708.	1112.	16.9	12.413
0.60	0.07	0.6911	0.0550	0.2539	212.1	1.575	1.815	1.152	0.893	1.187	1.227	-718.	1107.	16.9	12.347
0.60	0.10	0.6731	0.0790	0.2479	212.5	1.578	1.810	1.147	0.890	1.179	1.223	-735.	1101.	16.8	12.247
0.60	0.20	0.6121	0.1606	0.2272	213.7	1.588	1.798	1.131	0.879	1.153	1.211	-789.	1079.	16.6	11.914
0.60	0.40	0.4831	0.3345	0.1824	216.4	1.605	1.766	1.100	0.858	1.107	1.190	-896.	1030.	16.1	11.236
0.60	0.60	0.3413	0.5275	0.1313	219.3	1.618	1.733	1.071	0.838	1.066	1.173	-1002.	972.	15.7	10.533
0.60	0.80	0.1821	0.7465	0.0714	222.5	1.627	1.700	1.045	0.820	1.030	1.157	-1107.	902.	15.4	9.791
0.60	0.90	0.0944	0.8683	0.0374	224.2	1.630	1.682	1.032	0.810	1.013	1.150	-1158.	862.	15.2	9.427
0.80	0.	0.8780	0.	0.1220	206.1	1.574	1.800	1.144	0.946	1.282	1.347	-605.	1070.	17.6	13.390
0.80	0.01	0.8718	0.0070	0.1212	206.3	1.575	1.799	1.142	0.944	1.277	1.344	-612.	1069.	17.5	13.344
0.80	0.02	0.8656	0.0140	0.1204	206.4	1.576	1.798	1.141	0.942	1.273	1.341	-618.	1068.	17.5	13.298
0.80	0.03	0.8594	0.0211	0.1196	206.5	1.577	1.797	1.139	0.940	1.270	1.339	-624.	1067.	17.5	13.252
0.80	0.04	0.8531	0.0281	0.1188	206.6	1.579	1.796	1.138	0.939	1.266	1.336	-630.	1066.	17.5	13.206
0.80	0.05	0.8468	0.0353	0.1179	206.9	1.580	1.795	1.136	0.937	1.262	1.333	-636.	1065.	17.4	13.160
0.80	0.07	0.8341	0.0496	0.1163	207.2	1.582	1.793	1.133	0.934	1.254	1.328	-646.	1062.	17.4	13.069
0.80	0.10	0.8145	0.0714	0.1138	207.7	1.586	1.790	1.129	0.929	1.243	1.320	-666.	1059.	17.3	12.934
0.80	0.20	0.7484	0.1465	0.1051	209.4	1.597	1.780	1.115	0.913	1.207	1.295	-727.	1045.	17.0	12.490
0.80	0.40	0.6028	0.3113	0.0858	213.0	1.614	1.756	1.088	0.884	1.144	1.251	-849.	1011.	16.4	11.626
0.80	0.60	0.4351	0.5020	0.0629	216.9	1.625	1.728	1.063	0.857	1.090	1.212	-970.	965.	15.9	10.774
0.80	0.80	0.2374	0.7277	0.0350	221.2	1.631	1.697	1.041	0.829	1.041	1.177	-1091.	902.	15.5	9.908
0.80	0.90	0.1244	0.8572	0.0185	223.5	1.632	1.681	1.030	0.815	1.019	1.160	-1150.	862.	15.3	9.460
0.90	0.	0.9414	0.	0.0587	203.7	1.575	1.783	1.132	0.970	1.325	1.413	-568.	1045.	17.8	13.899
0.90	0.01	0.9351	0.0067	0.0583	203.9	1.576	1.783	1.131	0.968	1.321	1.409	-574.	1044.	17.8	13.843
0.90	0.02	0.9288	0.0133	0.0579	204.1	1.578	1.782	1.130	0.966	1.316	1.405	-581.	1043.	17.7	13.787
0.90	0.03	0.9225	0.0201	0.0575	204.2	1.579	1.781	1.128	0.964	1.311	1.401	-587.	1043.	17.7	13.731
0.90	0.04	0.9161	0.0268	0.0572	204.4	1.580	1.781	1.127	0.962	1.306	1.398	-593.	1042.	17.7	13.675
0.90	0.05	0.9097	0.0336	0.0568	204.6	1.582	1.780	1.126	0.960	1.302	1.394	-600.	1041.	17.6	13.620
0.90	0.07	0.8967	0.0473	0.0560	205.0	1.584	1.779	1.123	0.956	1.293	1.387	-613.	1040.	17.6	13.511
0.90	0.10	0.8771	0.0682	0.0548	205.5	1.588	1.777	1.119	0.951	1.280	1.376	-632.	1037.	17.5	13.340
0.90	0.20	0.8088	0.1405	0.0508	207.4	1.600	1.769	1.106	0.932	1.238	1.343	-696.	1028.	17.2	12.828
0.90	0.40	0.6573	0.3010	0.0417	211.4	1.618	1.750	1.082	0.898	1.165	1.284	-825.	1001.	16.6	11.841
0.90	0.60	0.4790	0.4901	0.0309	215.7	1.629	1.729	1.059	0.866	1.102	1.233	-954.	961.	16.0	10.902
0.90	0.80	0.2641	0.7187	0.0173	220.6	1.633	1.696	1.038	0.834	1.047	1.187	-1082.	902.	15.5	9.968
0.90	0.90	0.1391	0.8517	0.0092	223.2	1.633	1.681	1.029	0.818	1.022	1.165	-1146.	863.	15.3	9.489
0.97	0.	0.9828	0.	0.0172	202.1	1.576	1.771	1.124	0.989	1.359	1.463	-542.	1026.	17.9	14.303
0.97	0.01	0.9765	0.0064	0.0171	202.2	1.577	1.771	1.123	0.987	1.353	1.458	-548.	1026.	17.9	14.237
0.97	0.02	0.9701	0.0129	0.0169	202.4	1.579	1.770	1.121	0.984	1.348	1.454	-555.	1026.	17.9	14.172
0.97	0.03	0.9637	0.0194	0.0168	202.6	1.580	1.770	1.120	0.982	1.343	1.449	-561.	1025.	17.8	14.108
0.97	0.04	0.9573	0.0260	0.0167	202.8	1.582	1.770	1.119	0.980	1.337	1.445	-568.	1025.	17.8	14.044
0.97	0.05	0.9508	0.0326	0.0166	203.0	1.583	1.769	1.118	0.978	1.332	1.440	-575.	1024.	17.8	13.980
0.97	0.07	0.9377	0.0459	0.0164	203.4	1.584	1.768	1.115	0.973	1.322	1.432	-588.	1023.	17.7	13.855
0.97	0.10	0.9178	0.0662	0.0161	204.0	1.589	1.767	1.112	0.967	1.308	1.419	-608.	1022.	17.6	13.677
0.97	0.20	0.8486	0.1366	0.0149	206.0	1.601	1.761	1.100	0.946	1.261	1.379	-675.	1015.	17.3	13.085
0.97	0.40	0.6935	0.2942	0.0123	210.2	1.620	1.745	1.077	0.908	1.180	1.308	-809.	994.	16.7	12.001
0.97	0.60	0.5087	0.4822	0.0091	214.9	1.631	1.723	1.056	0.873	1.111	1.248	-943.	958.	16.1	10.993
0.97	0.80	0.2824	0.7125	0.0052	220.2	1.635	1.695	1.037	0.837	1.051	1.194	-1077.	902.	15.5	10.010
0.97	0.90	0.1493	0.8480	0.0027	223.0	1.634	1.680	1.028	0.819	1.024	1.168	-1143.	863.	15.3	9.510
1.00	0.	1.0000	0.	0.	201.4	1.576	1.766	1.120	0.998	1.374	1.486	-530.	1019.	18.0	14.492
1.00	0.01	0.9936	0.0064	0.0000	201.6	1.577	1.765	1.119	0.995	1.368	1.481	-537.	1018.	17.9	14.422
1.00	0.02	0.9872	0.0128	0.0000	201.7	1.579	1.765	1.118	0.993	1.363	1.476	-544.	1018.	17.9	14.353
1.00	0.03	0.9805	0.0195	0.0000	201.9	1.580	1.765	1.117	0.990	1.357	1.471	-550.	1018.	17.9	14.284
1.00	0.04	0.9743	0.0257	0.0000	202.1	1.582	1.764	1.116	0.988	1.352	1.466	-557.	1018.	17.9	14.216
1.00	0.05	0.9678	0.0322	0.0000	202.3	1.583	1.764	1.114	0.986	1.346	1.462	-564.	1017.	17.8	14.148
1.00	0.07	0.9547	0.0453	0.0000	202.7	1.584	1.763	1.112	0.981	1.336	1.452	-577.	1017.	17.8	14.015
1.00	0.10	0.9347	0.0653	0.0000	203.3	1.590	1.762	1.108	0.974	1.320	1.438	-598.	1015.	17.7	13.819
1.00	0.20	0.8651	0.1349	0.0000	205.4	1.607	1.757	1.097	0.953	1.271	1.395	-665.	1010.	17.4	13.201
1.00	0.40	0.7086	0.2914	0.0000	209.8	1.621	1.743	1.075	0.913	1.187	1.319	-801.	991.	16.7	12.071
1.00	0.60	0.5211	0.4789	0.	214.6	1.632	1.722	1.055	0.876	1.115	1.255	-938.	957.	16.1	11.033
1.00	0.80	0.2902	0.7098	0.	220.0	1.635	1.695	1.036	0.839	1.053	1.197	-1074.	901.	15.5	10.026
1.00	0.90	0.1536	0.8464	0.	222.9	1.634	1.680	1.028	0.820	1.025	1.169	-1142.	863.	15.3	9.518

Table 25. (cont.)

PRESSURE = 14. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	235.5	1.513	1.799	1.189	0.772	1.030	1.002	-819.	1280.	16.3	11.878
0.	0.01	0.	0.0118	0.9882	235.4	1.514	1.798	1.187	0.772	1.029	1.003	-823.	1274.	16.3	11.855
0.	0.02	0.	0.0236	0.9764	235.3	1.515	1.796	1.185	0.772	1.028	1.003	-827.	1268.	16.3	11.831
0.	0.03	0.	0.0353	0.9647	235.2	1.516	1.795	1.184	0.772	1.028	1.004	-831.	1262.	16.3	11.807
0.	0.04	0.	0.0469	0.9531	235.1	1.517	1.793	1.182	0.772	1.027	1.005	-835.	1256.	16.3	11.784
0.	0.05	0.	0.0585	0.9415	235.0	1.518	1.792	1.180	0.772	1.026	1.006	-839.	1250.	16.2	11.761
0.	0.07	0.	0.0814	0.9186	234.9	1.519	1.788	1.177	0.772	1.025	1.008	-847.	1238.	16.2	11.715
0.	0.10	0.	0.1152	0.8848	234.6	1.522	1.784	1.172	0.772	1.023	1.011	-858.	1221.	16.2	11.646
0.	0.20	0.	0.2241	0.7760	233.7	1.530	1.767	1.155	0.771	1.017	1.020	-896.	1167.	16.1	11.425
0.	0.40	0.	0.4276	0.5725	232.4	1.548	1.734	1.121	0.771	1.007	1.042	-966.	1067.	15.9	11.001
0.	0.60	0.	0.6196	0.3804	231.4	1.565	1.699	1.088	0.774	0.999	1.069	-1030.	975.	15.7	10.581
0.	0.80	0.	0.8078	0.1922	230.7	1.581	1.662	1.051	0.778	0.995	1.101	-1089.	888.	15.7	10.143
0.	0.90	0.	0.9029	0.0971	230.5	1.589	1.643	1.034	0.782	0.995	1.119	-1117.	845.	15.6	9.912
0.10	0.	0.1661	0.	0.8339	231.5	1.513	1.793	1.185	0.793	1.059	1.038	-790.	1250.	16.2	12.067
0.10	0.01	0.1642	0.0110	0.8249	231.4	1.514	1.791	1.183	0.793	1.058	1.039	-794.	1244.	16.2	12.044
0.10	0.02	0.1623	0.0219	0.8159	231.4	1.515	1.790	1.182	0.792	1.057	1.039	-798.	1239.	16.2	12.021
0.10	0.03	0.1604	0.0327	0.8070	231.3	1.516	1.788	1.180	0.792	1.056	1.040	-802.	1234.	16.2	11.998
0.10	0.04	0.1585	0.0435	0.7981	231.3	1.517	1.787	1.178	0.792	1.055	1.040	-807.	1229.	16.2	11.975
0.10	0.05	0.1566	0.0543	0.7892	231.2	1.518	1.785	1.176	0.791	1.054	1.041	-811.	1224.	16.2	11.952
0.10	0.07	0.1528	0.0757	0.7715	231.2	1.520	1.782	1.173	0.791	1.052	1.042	-819.	1214.	16.2	11.906
0.10	0.10	0.1472	0.1075	0.7453	231.0	1.522	1.778	1.168	0.790	1.049	1.044	-831.	1199.	16.1	11.838
0.10	0.20	0.1292	0.2109	0.6599	230.7	1.532	1.762	1.150	0.787	1.040	1.050	-870.	1150.	16.1	11.612
0.10	0.40	0.0952	0.4095	0.4953	230.2	1.550	1.730	1.116	0.784	1.023	1.066	-945.	1059.	15.9	11.162
0.10	0.60	0.0630	0.6028	0.3342	229.9	1.567	1.699	1.082	0.782	1.010	1.086	-1015.	973.	15.8	10.698
0.10	0.80	0.0315	0.7974	0.1711	230.0	1.583	1.660	1.049	0.783	1.001	1.110	-1081.	889.	15.7	10.205
0.10	0.90	0.0159	0.8972	0.0869	230.1	1.590	1.642	1.032	0.784	0.998	1.124	-1113.	846.	15.6	9.944
0.20	0.	0.3089	0.	0.6911	227.8	1.515	1.787	1.180	0.812	1.088	1.075	-757.	1221.	16.3	12.288
0.20	0.01	0.3055	0.0102	0.6843	227.8	1.516	1.786	1.178	0.812	1.087	1.075	-762.	1216.	16.3	12.265
0.20	0.02	0.3022	0.0203	0.6774	227.8	1.517	1.785	1.177	0.811	1.085	1.076	-766.	1212.	16.3	12.242
0.20	0.03	0.2989	0.0305	0.6706	227.8	1.518	1.783	1.175	0.811	1.084	1.076	-770.	1207.	16.3	12.219
0.20	0.04	0.2956	0.0406	0.6638	227.8	1.519	1.782	1.173	0.810	1.082	1.076	-774.	1203.	16.3	12.195
0.20	0.05	0.2924	0.0506	0.6570	227.8	1.520	1.780	1.171	0.810	1.081	1.076	-779.	1198.	16.3	12.172
0.20	0.07	0.2859	0.0707	0.6434	227.8	1.522	1.777	1.168	0.809	1.078	1.077	-787.	1190.	16.3	12.125
0.20	0.10	0.2762	0.1006	0.6232	227.8	1.525	1.772	1.163	0.807	1.074	1.078	-800.	1177.	16.2	12.055
0.20	0.20	0.2444	0.1992	0.5565	227.8	1.534	1.757	1.145	0.803	1.062	1.081	-842.	1134.	16.1	11.820
0.20	0.40	0.1829	0.3929	0.4242	228.1	1.552	1.725	1.112	0.796	1.040	1.090	-922.	1052.	16.0	11.332
0.20	0.60	0.1228	0.5870	0.2902	228.6	1.569	1.692	1.079	0.791	1.021	1.103	-1000.	971.	15.8	10.818
0.20	0.80	0.0623	0.7873	0.1504	229.3	1.584	1.658	1.047	0.788	1.007	1.120	-1073.	889.	15.7	10.288
0.20	0.90	0.0315	0.8916	0.0769	229.6	1.591	1.641	1.031	0.787	1.001	1.129	-1109.	846.	15.6	9.976
0.40	0.	0.5420	0.	0.4580	221.2	1.521	1.775	1.167	0.851	1.147	1.155	-685.	1165.	16.8	12.862
0.40	0.01	0.5369	0.0089	0.4541	221.3	1.522	1.773	1.166	0.850	1.144	1.154	-690.	1162.	16.8	12.834
0.40	0.02	0.5319	0.0178	0.4503	221.4	1.523	1.772	1.164	0.849	1.142	1.154	-695.	1158.	16.8	12.807
0.40	0.03	0.5269	0.0267	0.4464	221.4	1.524	1.771	1.162	0.848	1.140	1.153	-700.	1155.	16.7	12.779
0.40	0.04	0.5219	0.0357	0.4425	221.5	1.525	1.769	1.160	0.848	1.138	1.153	-704.	1152.	16.7	12.751
0.40	0.05	0.5169	0.0446	0.4386	221.6	1.526	1.768	1.159	0.847	1.136	1.152	-709.	1149.	16.7	12.723
0.40	0.07	0.5068	0.0624	0.4308	221.7	1.528	1.765	1.155	0.845	1.132	1.152	-719.	1142.	16.7	12.668
0.40	0.10	0.4918	0.0892	0.4190	221.9	1.531	1.761	1.150	0.843	1.126	1.150	-733.	1133.	16.6	12.583
0.40	0.20	0.4415	0.1792	0.3793	222.6	1.540	1.746	1.134	0.835	1.107	1.147	-781.	1101.	16.5	12.297
0.40	0.40	0.3397	0.3634	0.2969	224.2	1.558	1.716	1.102	0.821	1.074	1.142	-876.	1035.	16.2	11.702
0.40	0.60	0.2340	0.5578	0.2083	226.0	1.573	1.685	1.071	0.808	1.044	1.139	-966.	965.	15.9	11.070
0.40	0.80	0.1218	0.7678	0.1104	228.0	1.586	1.654	1.043	0.797	1.018	1.139	-1057.	889.	15.7	10.396
0.40	0.90	0.0623	0.8807	0.0570	229.1	1.592	1.639	1.029	0.791	1.007	1.139	-1100.	847.	15.7	10.040
0.60	0.	0.7249	0.	0.2751	215.4	1.527	1.757	1.151	0.892	1.213	1.249	-610.	1110.	17.4	13.651
0.60	0.01	0.7190	0.0079	0.2731	215.6	1.528	1.755	1.149	0.891	1.210	1.247	-615.	1108.	17.3	13.613
0.60	0.02	0.7131	0.0159	0.2710	215.7	1.529	1.754	1.147	0.890	1.207	1.246	-621.	1106.	17.3	13.575
0.60	0.03	0.7072	0.0238	0.2690	215.8	1.530	1.753	1.146	0.888	1.204	1.244	-626.	1104.	17.3	13.537
0.60	0.04	0.7013	0.0318	0.2669	215.9	1.531	1.752	1.144	0.887	1.201	1.243	-632.	1102.	17.3	13.499
0.60	0.05	0.6954	0.0398	0.2648	216.0	1.532	1.750	1.143	0.886	1.198	1.241	-637.	1099.	17.3	13.461
0.60	0.07	0.6834	0.0559	0.2607	216.3	1.534	1.748	1.140	0.883	1.192	1.239	-648.	1095.	17.2	13.385
0.60	0.10	0.6655	0.0802	0.2543	216.6	1.537	1.744	1.135	0.880	1.184	1.234	-665.	1089.	17.1	13.271
0.60	0.20	0.6045	0.1628	0.2327	217.9	1.547	1.732	1.120	0.868	1.158	1.221	-719.	1066.	16.9	12.889
0.60	0.40	0.4759	0.3381	0.1860	220.5	1.564	1.706	1.091	0.846	1.110	1.198	-828.	1016.	16.5	12.121
0.60	0.60	0.3354	0.5313	0.1333	223.5	1.578	1.678	1.063	0.826	1.068	1.177	-935.	958.	16.1	11.338
0.60	0.80	0.1786	0.7493	0.0721	226.7	1.589	1.650	1.039	0.808	1.030	1.158	-1041.	888.	15.8	10.526
0.60	0.90	0.0924	0.8700	0.0376	228.5	1.593	1.637	1.027	0.798	1.013	1.149	-1092.	848.	15.7	10.105
0.80	0.	0.8738	0.	0.1262	210.2	1.531	1.731	1.131	0.938	1.292	1.364	-534.	1055.	17.9	14.752
0.80	0.01	0.8675	0.0072	0.1253	210.3	1.532	1.730	1.130	0.937	1.288	1.361	-540.	1054.	17.9	14.693
0.80	0.02	0.8612	0.0143	0.1245	210.5	1.533	1.730	1.128	0.935	1.283	1.358	-546.	1053.	17.9	14.634
0.80	0.03	0.8548	0.0215	0.1236	210.6	1.534	1.729	1.127	0.934	1.279	1.355	-552.	1052.	17.8	14.576
0.80	0.04	0.8485	0.0288	0.1228	210.8	1.535	1.728	1.125	0.932	1.275	1.352	-559.	1050.	17.8	14.519
0.80	0.05	0.8420	0.0361	0.1219	211.0	1.536	1.727	1.124	0.930	1.272	1.349	-565.	1049.	17.8	14.462
0.80	0.07	0.8292	0.0507	0.1201	211.3	1.539	1.725	1.121	0.927	1.264	1.343	-577.	1047.	17.7	14.348
0.80	0.10	0.8096	0.0729	0.1175	211.8	1.542	1.723	1.117	0.921	1.252	1.335	-595.	1043.	17.6	14.179
0.80	0.20	0.7423	0.1494	0.1083	213.5	1.552	1.714	1.104	0.905	1.215	1.308	-657.	1030.	17.4	13.634
0.80	0.40	0.5958	0.3163	0.0880	217.1	1.570	1.693	1.079	0.874	1.150	1.260	-780.	996.	16.8	12.605
0.80	0.60	0.4284	0.5075	0.0641	221.1	1.583	1.671	1.059	0.844	1.093	1.218	-903.	950.	16.3	11.625
0.80	0.80	0.2329	0.7318	0.0354	225.5	1.592	1.647	1.035	0.816	1.042	1.178	-1024.	887.	15.9	10.660
0.80	0.90	0.1218	0.8595	0.0186	227.8	1.595	1.635	1.025	0.801	1.019	1.159	-1084.	848.	15.7	10.170
0.90	0.	0.9392	0.	0.0608	207.7	1.531	1.716	1.120	0.966	1.339	1.433	-497.	1027.	18.2	15.479
0.90	0.01	0.9328	0.0068	0.0604	207.8	1.533	1.715	1.119	0.964	1.334	1.429	-503.	1026.	18.2	15.403
0.90	0.02	0.9263	0.0137	0.0600	208.0	1.534	1.715	1.118	0.962	1.329	1.425	-510.	1025.	18.1	15.329
0.90	0.03	0.9198	0.0206	0.0596	208.2	1.535	1.714	1.116	0.959	1.324	1.421	-516.	1025.	18.1	15.254
0.90	0.04	0.9133	0.0275	0.0592	208.4	1.536	1.713	1.115	0.957	1.319	1.417	-522.	1024.	18.1	15.181
0.90	0.05	0.9068	0.0345	0.0588	208.6	1.538	1.713	1.114	0.955	1.314	1.413	-529.	1024.	18.0	15.108
0.90	0.07	0.8936	0.0485	0.0580	208.9	1.540	1.712	1.111	0.951	1.305	1.405	-542.	1022.	18.0	14.965
0.90	0.10	0.8735	0.0699	0.0568	209.5	1.544	1.710	1.108	0.945	1.291	1.393	-561.	1020.	17.9	14.754
0.90	0.20	0.8039	0.1436	0.0524	211.4	1.555	1.703	1.096	0.925	1.248	1.358	-626.	1011.	17.6	14.084
0.90	0.40	0.6506	0.3069	0.0425	215.5	1.572	1.686	1.073	0.888	1.172	1.295	-756.	985.	17.0	12.878
0.90	0.60	0.4721	0.4964	0.0315	219.9	1.585	1.667	1.051	0.854	1.106	1.239	-886.	945.	16.4	11.778
0.90	0.80	0.2593	0.7233	0.0175	224.8	1.593	1.645	1.032	0.820	1.049	1.189	-1016.	887.	15.9	10.728
0.90	0.90	0.1363	0.8544	0.0093	227.5	1.595	1.634	1.024	0.803	1.022	1.164	-1080.	848.	15.7	10.203
0.97	0.	0.9822	0.	0.0178	205.9	1.531	1.704	1.113	0.987	1.375	1.486	-471.	1006.	18.3	16.082
0.97	0.01	0.9757	0.0066	0.0177	206.1	1.533	1.703	1.111	0.984	1.369	1.481	-478.	1006.	18.3	15.990
0.97	0.02	0.9691	0.0133	0.0176	206.3	1.534	1.703	1.110	0.982	1.364	1.476	-484.	1006.	18.3	15.900
0.97	0.03	0.9626	0.0200	0.0175	206.5	1.535	1.703	1.109	0.979	1.358	1.471	-491.	1006.	18.3	15.811
0.97	0.04	0.9559	0.0267	0.0174	206.7	1.537	1.702	1.108	0.977	1.353	1.466	-497.	1005.	18.2	15.722
0.97	0.05	0.9493	0.0335	0.0172	206.9	1.538	1.702	1.107	0.974	1.347	1.462	-504.	1005.	18.2	15.635
0.97	0.07	0.9359	0.0471	0.0170	207.3	1.541	1.701	1.104	0.969	1.337	1.452	-517.	1004.	18.1	15.464
0.97	0.10	0.9155	0.0679	0.0167	207.9	1.544	1.700	1.101	0.962	1.321	1.438	-537.	1003.	18.0	15.215
0.97	0.20	0.8447	0.1399	0.0154	210.0	1.556	1.695	1.090	0.940	1.273	1.395	-604.	997.	17.7	14.441
0.97	0.40	0.6873	0.3001	0.0126	214.4	1.574	1.681	1.068	0.899	1.188	1.320	-739.	977.	17.1	13.082
0.97	0.60	0.5017	0.4890	0.0093	219.1	1.587	1.664	1.048	0.861	1.116	1.255	-875.	942.	16.5	11.888
0.97	0.80	0.2774	0.7174	0.0052	224.4	1.594	1.643	1.031	0.824	1.053	1.196	-1010.	886.	15.9	10.775
0.97	0.90	0.1464	0.8509	0.0028	227.3	1.596	1.633	1.023	0.805	1.024	1.168	-1077.	848.	15.7	10.226
1.00	0.	1.0000	0.	0.	205.2	1.531	1.698	1.109	0.996	1.392	1.510	-460.	997.	18.4	16.372
1.00	0.01	0.9935	0.0065	0.0000	205.4	1.533	1.698	1.108	0.993	1.386	1.505	-467.	997.	18.4	16.272
1.00	0.02	0.9869	0.0131	0.0000	205.6	1.534	1.698	1.107	0.991	1.380	1.500	-473.	997.	18.3	16.173
1.00	0.03	0.9803	0.0197	0.0000	205.8	1.535	1.698	1.106	0.988	1.374	1.494	-480.	997.	18.3	16.076
1.00	0.04	0.9736	0.0264	0.0000	206.0	1.537	1.697	1.105	0.985	1.368	1.489	-487.	997.	18.3	15.980
1.00	0.05	0.9669	0.0331	0.0000	206.2	1.538	1.697	1.103	0.983	1.363	1.484	-493.	997.	18.3	15.885
1.00	0.07	0.9534	0.0466	0.0000	206.7	1.541	1.697	1.101	0.978	1.351	1.474	-507.	997.	18.2	15.700
1.00	0.10	0.9329	0.0671	0.0000	207.3	1.545	1.696	1.098	0.970	1.335	1.459	-527.	996.	18.1	15.431
1.00	0.20	0.8616	0.1384	0.0000	209.4	1.556	1.691	1.087	0.947	1.284	1.412	-595.	992.	17.8	14.603
1.00	0.40	0.7026	0.2974	0.0000	213.9	1.575	1.679	1.066	0.903	1.199	1.331	-732.	974.	17.1	13.173
1.00	0.60	0.5142	0.4858	0.	218.8	1.587	1.662	1.047	0.864	1.120	1.262	-870.	940.	16.5	11.937
1.00	0.80	0.2850	0.7150	0.	224.2	1.595	1.643	1.030	0.825	1.055	1.200	-1007.	886.	16.0	10.795
1.00	0.90	0.1506	0.8494	0.	227.2	1.596	1.633	1.023	0.806	1.025	1.169	-1076.	848.	15.8	10.236

Table 25. (cont.)

PRESSURE = 20. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	239.5	1.507	1.774	1.178	0.764	1.023	1.001	-753.	1271.	16.9	12.659
0.	0.01	0.	0.0117	0.9883	239.4	1.507	1.773	1.176	0.764	1.023	1.002	-757.	1265.	16.9	12.636
0.	0.02	0.	0.0234	0.9766	239.3	1.508	1.771	1.174	0.764	1.022	1.003	-762.	1258.	16.9	12.613
0.	0.03	0.	0.0350	0.9650	239.2	1.509	1.769	1.173	0.764	1.022	1.004	-766.	1252.	16.9	12.591
0.	0.04	0.	0.0465	0.9535	239.1	1.509	1.767	1.171	0.764	1.021	1.005	-770.	1246.	16.8	12.568
0.	0.05	0.	0.0580	0.9420	239.0	1.510	1.766	1.170	0.764	1.020	1.006	-774.	1241.	16.8	12.546
0.	0.07	0.	0.0807	0.9193	238.8	1.511	1.762	1.166	0.764	1.019	1.008	-782.	1229.	16.8	12.501
0.	0.10	0.	0.1143	0.8857	238.5	1.513	1.757	1.161	0.763	1.018	1.011	-794.	1211.	16.7	12.435
0.	0.20	0.	0.2226	0.7775	237.7	1.519	1.739	1.145	0.763	1.013	1.021	-832.	1156.	16.6	12.220
0.	0.40	0.	0.4258	0.5743	236.3	1.532	1.704	1.112	0.762	1.004	1.043	-903.	1055.	16.4	11.802
0.	0.60	0.	0.6181	0.3819	235.3	1.546	1.668	1.079	0.764	0.997	1.069	-967.	962.	16.2	11.378
0.	0.80	0.	0.8071	0.1929	234.6	1.560	1.631	1.046	0.769	0.994	1.100	-1026.	874.	16.1	10.930
0.	0.90	0.	0.9026	0.0974	234.4	1.567	1.613	1.029	0.772	0.994	1.118	-1054.	830.	16.1	10.691
0.10	0.	0.1635	0.	0.8366	235.3	1.499	1.759	1.173	0.784	1.055	1.041	-727.	1239.	16.7	12.913
0.10	0.01	0.1616	0.0109	0.8276	235.3	1.500	1.757	1.171	0.784	1.054	1.041	-731.	1233.	16.7	12.890
0.10	0.02	0.1597	0.0217	0.8186	235.2	1.501	1.756	1.170	0.784	1.053	1.042	-735.	1228.	16.7	12.867
0.10	0.03	0.1578	0.0325	0.8097	235.2	1.502	1.754	1.168	0.783	1.052	1.042	-739.	1223.	16.7	12.844
0.10	0.04	0.1560	0.0432	0.8008	235.1	1.503	1.753	1.166	0.783	1.051	1.043	-744.	1218.	16.7	12.821
0.10	0.05	0.1541	0.0539	0.7920	235.1	1.503	1.751	1.165	0.783	1.050	1.043	-748.	1213.	16.6	12.798
0.10	0.07	0.1504	0.0752	0.7744	235.0	1.505	1.748	1.161	0.782	1.048	1.045	-756.	1202.	16.6	12.753
0.10	0.10	0.1449	0.1068	0.7482	234.9	1.507	1.743	1.157	0.781	1.046	1.046	-768.	1187.	16.6	12.684
0.10	0.20	0.1272	0.2099	0.6628	234.5	1.515	1.726	1.140	0.779	1.037	1.053	-807.	1139.	16.5	12.458
0.10	0.40	0.0938	0.4084	0.4978	234.1	1.531	1.695	1.108	0.775	1.021	1.066	-882.	1047.	16.3	11.999
0.10	0.60	0.0620	0.6021	0.3359	233.9	1.546	1.662	1.075	0.773	1.009	1.087	-953.	959.	16.2	11.519
0.10	0.80	0.0311	0.7971	0.1718	233.9	1.560	1.628	1.044	0.773	1.000	1.110	-1019.	874.	16.1	11.003
0.10	0.90	0.0156	0.8971	0.0873	234.1	1.567	1.611	1.028	0.774	0.997	1.123	-1050.	830.	16.1	10.728
0.20	0.	0.3040	0.	0.6960	231.6	1.496	1.747	1.168	0.804	1.086	1.080	-695.	1209.	16.7	13.200
0.20	0.01	0.3007	0.0101	0.6891	231.6	1.497	1.745	1.166	0.803	1.085	1.080	-699.	1204.	16.7	13.176
0.20	0.02	0.2975	0.0203	0.6823	231.6	1.498	1.744	1.165	0.803	1.083	1.080	-703.	1200.	16.7	13.153
0.20	0.03	0.2942	0.0304	0.6754	231.6	1.499	1.743	1.163	0.802	1.082	1.081	-708.	1195.	16.7	13.129
0.20	0.04	0.2910	0.0404	0.6686	231.6	1.499	1.741	1.161	0.802	1.081	1.081	-712.	1191.	16.7	13.105
0.20	0.05	0.2878	0.0505	0.6617	231.6	1.500	1.740	1.160	0.801	1.079	1.081	-716.	1186.	16.7	13.081
0.20	0.07	0.2814	0.0705	0.6481	231.6	1.502	1.737	1.156	0.800	1.077	1.082	-725.	1177.	16.6	13.033
0.20	0.10	0.2719	0.1004	0.6277	231.6	1.505	1.732	1.151	0.799	1.073	1.082	-738.	1164.	16.6	12.961
0.20	0.20	0.2407	0.1988	0.5605	231.6	1.514	1.718	1.135	0.794	1.061	1.085	-779.	1121.	16.5	12.718
0.20	0.40	0.1802	0.3926	0.4272	231.9	1.530	1.688	1.103	0.787	1.039	1.094	-860.	1038.	16.4	12.207
0.20	0.60	0.1210	0.5870	0.2921	232.5	1.546	1.657	1.072	0.782	1.021	1.106	-938.	956.	16.2	11.664
0.20	0.80	0.0614	0.7874	0.1512	233.2	1.560	1.625	1.042	0.778	1.008	1.120	-1011.	873.	16.1	11.077
0.20	0.90	0.0310	0.8918	0.0772	233.7	1.567	1.610	1.027	0.776	1.000	1.128	-1046.	831.	16.1	10.765
0.40	0.	0.5349	0.	0.4651	225.0	1.494	1.725	1.155	0.843	1.149	1.164	-621.	1151.	17.1	13.932
0.40	0.01	0.5299	0.0090	0.4611	225.1	1.495	1.724	1.153	0.842	1.148	1.163	-626.	1148.	17.1	13.902
0.40	0.02	0.5249	0.0179	0.4571	225.1	1.496	1.722	1.152	0.841	1.146	1.163	-631.	1144.	17.1	13.872
0.40	0.03	0.5200	0.0269	0.4532	225.2	1.497	1.721	1.150	0.840	1.142	1.162	-636.	1141.	17.0	13.842
0.40	0.04	0.5150	0.0358	0.4492	225.3	1.498	1.720	1.148	0.839	1.140	1.162	-641.	1138.	17.0	13.811
0.40	0.05	0.5100	0.0448	0.4452	225.3	1.499	1.719	1.147	0.839	1.138	1.161	-646.	1135.	17.0	13.781
0.40	0.07	0.5001	0.0627	0.4372	225.5	1.501	1.716	1.143	0.837	1.134	1.160	-656.	1128.	17.0	13.720
0.40	0.10	0.4853	0.0896	0.4251	225.7	1.504	1.712	1.139	0.834	1.128	1.159	-670.	1118.	16.9	13.628
0.40	0.20	0.4356	0.1799	0.3845	226.4	1.513	1.699	1.123	0.826	1.110	1.154	-719.	1086.	16.8	13.315
0.40	0.40	0.3350	0.3647	0.3003	228.0	1.531	1.673	1.093	0.812	1.075	1.148	-814.	1019.	16.5	12.660
0.40	0.60	0.2307	0.5592	0.2101	229.8	1.547	1.646	1.064	0.799	1.045	1.143	-908.	949.	16.3	11.967
0.40	0.80	0.1200	0.7689	0.1111	231.9	1.561	1.620	1.038	0.787	1.019	1.140	-995.	873.	16.2	11.227
0.40	0.90	0.0614	0.8813	0.0573	233.0	1.568	1.607	1.025	0.781	1.008	1.138	-1036.	831.	16.1	10.839
0.60	0.	0.7185	0.	0.2815	219.2	1.494	1.701	1.139	0.885	1.219	1.262	-545.	1094.	17.7	14.962
0.60	0.01	0.7126	0.0080	0.2794	219.3	1.495	1.700	1.137	0.884	1.216	1.260	-550.	1092.	17.6	14.917
0.60	0.02	0.7067	0.0161	0.2773	219.4	1.496	1.699	1.136	0.883	1.212	1.259	-556.	1089.	17.6	14.872
0.60	0.03	0.7008	0.0241	0.2751	219.5	1.497	1.698	1.134	0.881	1.210	1.257	-561.	1087.	17.6	14.827
0.60	0.04	0.6948	0.0322	0.2730	219.6	1.498	1.697	1.133	0.880	1.207	1.256	-567.	1085.	17.6	14.782
0.60	0.05	0.6889	0.0403	0.2708	219.8	1.499	1.696	1.131	0.879	1.204	1.254	-572.	1082.	17.5	14.738
0.60	0.07	0.6770	0.0566	0.2664	220.0	1.502	1.694	1.128	0.876	1.199	1.251	-583.	1079.	17.5	14.648
0.60	0.10	0.6590	0.0811	0.2599	220.4	1.505	1.691	1.124	0.872	1.190	1.246	-600.	1072.	17.4	14.514
0.60	0.20	0.5981	0.1646	0.2373	221.6	1.515	1.680	1.109	0.860	1.163	1.232	-655.	1049.	17.2	14.068
0.60	0.40	0.4710	0.3409	0.1880	224.3	1.533	1.658	1.082	0.838	1.114	1.206	-765.	999.	16.8	13.181
0.60	0.60	0.3309	0.5343	0.1348	227.3	1.548	1.636	1.057	0.817	1.071	1.182	-873.	941.	16.5	12.288
0.60	0.80	0.1760	0.7513	0.0727	230.6	1.562	1.614	1.034	0.796	1.031	1.160	-978.	871.	16.2	11.381
0.60	0.90	0.0911	0.8711	0.0379	232.4	1.568	1.604	1.023	0.786	1.012	1.149	-1030.	831.	16.1	10.915
0.80	0.	0.8700	0.	0.1300	213.8	1.494	1.673	1.120	0.935	1.304	1.383	-468.	1035.	18.3	16.482
0.80	0.01	0.8636	0.0073	0.1291	214.0	1.496	1.673	1.118	0.933	1.299	1.380	-474.	1034.	18.2	16.405
0.80	0.02	0.8572	0.0146	0.1282	214.1	1.497	1.672	1.117	0.931	1.295	1.376	-481.	1033.	18.2	16.328
0.80	0.03	0.8508	0.0220	0.1273	214.3	1.498	1.671	1.116	0.929	1.291	1.373	-487.	1031.	18.2	16.253
0.80	0.04	0.8443	0.0293	0.1263	214.5	1.499	1.671	1.115	0.927	1.287	1.370	-493.	1030.	18.1	16.178
0.80	0.05	0.8378	0.0367	0.1254	214.6	1.500	1.670	1.113	0.925	1.283	1.367	-499.	1029.	18.1	16.103
0.80	0.07	0.8248	0.0517	0.1236	215.0	1.502	1.669	1.111	0.922	1.274	1.361	-511.	1027.	18.0	15.956
0.80	0.10	0.8050	0.0743	0.1208	215.5	1.506	1.666	1.107	0.916	1.262	1.352	-530.	1023.	18.0	15.740
0.80	0.20	0.7370	0.1519	0.1111	217.2	1.516	1.659	1.094	0.898	1.224	1.323	-592.	1010.	17.7	15.050
0.80	0.40	0.5899	0.3203	0.0898	220.9	1.535	1.643	1.071	0.866	1.157	1.271	-716.	977.	17.1	13.792
0.80	0.60	0.4231	0.5118	0.0651	224.9	1.550	1.626	1.049	0.836	1.097	1.225	-840.	931.	16.6	12.640
0.80	0.80	0.2296	0.7348	0.0357	229.3	1.563	1.609	1.029	0.806	1.044	1.181	-962.	870.	16.3	11.539
0.80	0.90	0.1201	0.8612	0.0188	231.7	1.568	1.601	1.021	0.791	1.019	1.159	-1022.	831.	16.1	10.991
0.90	0.	0.9372	0.	0.0628	211.2	1.494	1.658	1.110	0.964	1.354	1.455	-431.	1003.	18.5	17.551
0.90	0.01	0.9307	0.0070	0.0624	211.4	1.495	1.657	1.109	0.961	1.348	1.450	-437.	1003.	18.5	17.445
0.90	0.02	0.9241	0.0140	0.0620	211.6	1.496	1.657	1.107	0.959	1.343	1.446	-444.	1003.	18.5	17.341
0.90	0.03	0.9175	0.0211	0.0615	211.8	1.498	1.656	1.106	0.957	1.338	1.441	-450.	1002.	18.4	17.238
0.90	0.04	0.9108	0.0281	0.0611	212.0	1.499	1.656	1.105	0.954	1.333	1.437	-457.	1002.	18.4	17.136
0.90	0.05	0.9042	0.0352	0.0607	212.2	1.500	1.655	1.104	0.952	1.328	1.433	-463.	1001.	18.4	17.036
0.90	0.07	0.8906	0.0496	0.0598	212.6	1.502	1.655	1.101	0.948	1.319	1.425	-476.	1000.	18.3	16.834
0.90	0.10	0.8702	0.0713	0.0585	213.1	1.506	1.653	1.098	0.941	1.304	1.413	-495.	998.	18.2	16.548
0.90	0.20	0.7996	0.1464	0.0539	215.1	1.517	1.648	1.086	0.920	1.259	1.374	-560.	990.	17.9	15.666
0.90	0.40	0.6451	0.3111	0.0438	219.2	1.536	1.635	1.065	0.881	1.180	1.306	-692.	965.	17.3	14.143
0.90	0.60	0.4666	0.5014	0.0320	223.7	1.551	1.621	1.045	0.845	1.111	1.247	-823.	926.	16.7	12.827
0.90	0.80	0.2556	0.7267	0.0177	228.7	1.563	1.606	1.027	0.811	1.051	1.191	-954.	869.	16.3	11.616
0.90	0.90	0.1343	0.8564	0.0093	231.4	1.569	1.599	1.020	0.793	1.022	1.164	-1017.	831.	16.2	11.029
0.97	0.	0.9816	0.	0.0184	209.5	1.493	1.648	1.102	0.984	1.393	1.511	-405.	981.	18.7	18.482
0.97	0.01	0.9749	0.0068	0.0183	209.7	1.495	1.646	1.101	0.983	1.387	1.505	-412.	981.	18.7	18.346
0.97	0.02	0.9682	0.0136	0.0182	209.9	1.495	1.645	1.100	0.980	1.381	1.500	-418.	981.	18.6	18.216
0.97	0.03	0.9615	0.0205	0.0181	210.1	1.498	1.646	1.099	0.978	1.375	1.494	-425.	980.	18.6	18.080
0.97	0.04	0.9547	0.0274	0.0179	210.3	1.499	1.645	1.098	0.975	1.369	1.489	-432.	980.	18.6	17.953
0.97	0.05	0.9479	0.0343	0.0178	210.5	1.500	1.645	1.097	0.972	1.364	1.485	-438.	980.	18.5	17.829
0.97	0.07	0.9342	0.0483	0.0176	210.9	1.502	1.644	1.094	0.967	1.353	1.474	-452.	980.	18.5	17.583
0.97	0.10	0.9134	0.0695	0.0172	211.5	1.506	1.643	1.091	0.960	1.336	1.460	-472.	979.	18.4	17.230
0.97	0.20	0.8412	0.1429	0.0159	213.7	1.517	1.639	1.080	0.936	1.285	1.413	-539.	975.	18.1	16.163
0.97	0.40	0.6820	0.3050	0.0129	218.1	1.537	1.629	1.060	0.892	1.197	1.332	-674.	957.	17.4	14.410
0.97	0.60	0.4961	0.4944	0.0095	222.9	1.552	1.617	1.042	0.852	1.121	1.263	-811.	922.	16.8	12.963
0.97	0.80	0.2735	0.7213	0.0053	228.3	1.564	1.604	1.026	0.814	1.055	1.199	-948.	868.	16.3	11.673
0.97	0.90	0.1442	0.8530	0.0028	231.2	1.569	1.598	1.019	0.795	1.024	1.168	-1015.	831.	16.2	11.056
1.00	0.	1.0000	0.	0.	208.7	1.493	1.641	1.099	0.996	1.416	1.536	-394.	970.	18.8	18.947
1.00	0.01	0.9933	0.0067	0.0000	209.0	1.494	1.641	1.098	0.993	1.404	1.530	-401.	971.	18.7	18.794
1.00	0.02	0.9865	0.0135	0.0000	209.2	1.496	1.640	1.097	0.990	1.398	1.525	-408.	971.	18.7	18.645
1.00	0.03	0.9798	0.0202	0.0000	209.4	1.497	1.640	1.096	0.987	1.392	1.519	-415.	971.	18.7	18.499
1.00	0.04	0.9730	0.0271	0.0000	209.6	1.498	1.640	1.095	0.984	1.386	1.513	-421.	971.	18.6	18.356
1.00	0.05	0.9661	0.0339	0.0000	209.8	1.500	1.640	1.094	0.982	1.380	1.508	-428.	971.	18.6	18.216
1.00	0.07	0.9523	0.0477	0.0000	210.2	1.502	1.640	1.091	0.976	1.368	1.497	-441.	971.	18.5	17.943
1.00	0.10	0.9313	0.0687	0.0000	210.9	1.506	1.639	1.088	0.968	1.350	1.480	-462.	971.	18.5	17.552
1.00	0.20	0.8585	0.1415	0.0000	213.0	1.517	1.636	1.078	0.943	1.297	1.431	-530.	968.	18.1	16.396
1.00	0.40	0.6975	0.3025	0.0000	217.6	1.537	1.627	1.058	0.897	1.204	1.344	-667.	953.	17.5	14.531
1.00	0.60	0.5085	0.4914	0.	222.6	1.552	1.615	1.041	0.855	1.126	1.270	-806.	921.	16.8	13.024
1.00	0.80	0.2811	0.7189	0.	228.1	1.564	1.603	1.025	0.815	1.057	1.202	-945.	868.	16.3	11.698
1.00	0.90	0.1484	0.8516	0.	231.1	1.569	1.598	1.018	0.799	1.025	1.170	-1013.	831.	16.2	11.068

Table 25. (cont.)

PRESSURE = 23. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.	0.	0.	0.	1.0000	244.9	1.512	1.760	1.164	0.758	1.016	1.000	-659.	1252.	17.8	14.058
0.	0.01	0.	0.0116	0.9884	244.8	1.513	1.758	1.162	0.758	1.015	1.001	-664.	1246.	17.8	14.037
0.	0.02	0.	0.0231	0.9769	244.7	1.513	1.756	1.161	0.758	1.015	1.002	-668.	1240.	17.8	14.016
0.	0.03	0.	0.0346	0.9654	244.6	1.513	1.754	1.159	0.758	1.014	1.003	-672.	1233.	17.8	13.996
0.	0.04	0.	0.0460	0.9540	244.5	1.513	1.752	1.158	0.758	1.014	1.004	-676.	1227.	17.7	13.975
0.	0.05	0.	0.0574	0.9426	244.4	1.513	1.750	1.156	0.758	1.014	1.005	-680.	1221.	17.7	13.955
0.	0.07	0.	0.0799	0.9201	244.2	1.514	1.746	1.153	0.758	1.013	1.008	-689.	1209.	17.7	13.914
0.	0.10	0.	0.1132	0.8868	243.9	1.515	1.740	1.149	0.757	1.012	1.011	-701.	1192.	17.6	13.853
0.	0.20	0.	0.2208	0.7793	243.1	1.518	1.720	1.133	0.757	1.008	1.021	-745.	1136.	17.4	13.653
0.	0.40	0.	0.4236	0.5764	241.7	1.525	1.681	1.102	0.756	1.001	1.044	-813.	1032.	17.2	13.252
0.	0.60	0.	0.6164	0.3836	240.7	1.535	1.644	1.071	0.757	0.998	1.070	-878.	937.	17.0	12.830
0.	0.80	0.	0.8062	0.1938	240.2	1.545	1.607	1.040	0.761	0.994	1.100	-938.	847.	16.8	12.364
0.	0.90	0.	0.9022	0.0978	239.8	1.551	1.589	1.029	0.763	0.993	1.117	-965.	802.	16.8	12.169
0.10	0.	0.1612	0.	0.8388	240.5	1.493	1.730	1.159	0.779	1.052	1.046	-639.	1216.	17.4	14.482
0.10	0.01	0.1594	0.0108	0.8298	240.4	1.494	1.728	1.157	0.778	1.052	1.046	-644.	1210.	17.4	14.459
0.10	0.02	0.1575	0.0215	0.8210	240.4	1.495	1.727	1.155	0.778	1.051	1.047	-648.	1205.	17.4	14.441
0.10	0.03	0.1557	0.0322	0.8122	240.3	1.495	1.725	1.154	0.778	1.050	1.047	-652.	1200.	17.4	14.418
0.10	0.04	0.1539	0.0429	0.8034	240.3	1.496	1.724	1.152	0.777	1.049	1.048	-656.	1195.	17.3	14.395
0.10	0.05	0.1520	0.0535	0.7946	240.2	1.496	1.722	1.151	0.777	1.048	1.048	-660.	1190.	17.3	14.372
0.10	0.07	0.1484	0.0746	0.7771	240.2	1.498	1.719	1.148	0.776	1.046	1.050	-668.	1179.	17.3	14.326
0.10	0.10	0.1430	0.1060	0.7510	240.1	1.499	1.714	1.143	0.775	1.044	1.051	-680.	1164.	17.3	14.257
0.10	0.20	0.1256	0.2086	0.6658	239.7	1.505	1.698	1.128	0.773	1.036	1.058	-720.	1115.	17.2	14.027
0.10	0.40	0.0926	0.4069	0.5005	239.3	1.518	1.666	1.097	0.768	1.021	1.072	-795.	1022.	17.0	13.549
0.10	0.60	0.0613	0.6009	0.3378	239.1	1.531	1.634	1.067	0.766	1.010	1.090	-865.	933.	16.9	13.034
0.10	0.80	0.0307	0.7966	0.1727	239.3	1.543	1.602	1.038	0.765	1.001	1.111	-931.	846.	16.8	12.467
0.10	0.90	0.0154	0.8969	0.0876	239.4	1.550	1.586	1.023	0.766	0.997	1.122	-962.	802.	16.8	12.169
0.20	0.	0.2991	0.	0.7009	236.6	1.481	1.707	1.153	0.798	1.087	1.089	-610.	1183.	17.3	14.935
0.20	0.01	0.2959	0.0101	0.6940	236.6	1.482	1.706	1.151	0.797	1.085	1.090	-614.	1178.	17.2	14.910
0.20	0.02	0.2928	0.0201	0.6871	236.6	1.483	1.704	1.150	0.797	1.084	1.090	-618.	1174.	17.2	14.885
0.20	0.03	0.2896	0.0302	0.6802	236.6	1.483	1.703	1.148	0.796	1.083	1.090	-622.	1169.	17.2	14.860
0.20	0.04	0.2864	0.0402	0.6733	236.6	1.484	1.702	1.146	0.796	1.082	1.090	-627.	1165.	17.2	14.835
0.20	0.05	0.2833	0.0502	0.6665	236.6	1.485	1.700	1.145	0.795	1.080	1.090	-631.	1160.	17.2	14.809
0.20	0.07	0.2770	0.0701	0.6528	236.6	1.487	1.698	1.142	0.794	1.078	1.091	-640.	1151.	17.2	14.758
0.20	0.10	0.2677	0.0999	0.6324	236.6	1.489	1.693	1.137	0.793	1.074	1.091	-652.	1138.	17.2	14.681
0.20	0.20	0.2372	0.1981	0.5648	236.7	1.497	1.680	1.122	0.788	1.062	1.094	-694.	1095.	17.1	14.421
0.20	0.40	0.1770	0.3918	0.4304	237.1	1.512	1.652	1.092	0.781	1.041	1.103	-775.	1011.	17.0	13.855
0.20	0.60	0.1194	0.5865	0.2941	237.7	1.527	1.624	1.064	0.775	1.023	1.110	-851.	929.	16.8	13.241
0.20	0.80	0.0607	0.7873	0.1520	238.5	1.542	1.597	1.036	0.770	1.007	1.121	-924.	845.	16.8	12.570
0.20	0.90	0.0307	0.8918	0.0775	239.1	1.549	1.584	1.022	0.768	1.000	1.128	-958.	802.	16.7	12.212
0.40	0.	0.5268	0.	0.4732	229.9	1.466	1.670	1.139	0.837	1.155	1.180	-536.	1121.	17.5	16.052
0.40	0.01	0.5219	0.0090	0.4691	230.0	1.467	1.669	1.137	0.836	1.153	1.180	-541.	1118.	17.5	16.016
0.40	0.02	0.5171	0.0180	0.4650	230.0	1.468	1.668	1.136	0.835	1.151	1.179	-546.	1114.	17.5	15.980
0.40	0.03	0.5122	0.0270	0.4609	230.1	1.469	1.667	1.135	0.835	1.149	1.178	-551.	1111.	17.4	15.944
0.40	0.04	0.5073	0.0359	0.4568	230.2	1.470	1.666	1.133	0.834	1.147	1.178	-556.	1108.	17.4	15.908
0.40	0.05	0.5024	0.0449	0.4527	230.3	1.471	1.665	1.132	0.833	1.145	1.177	-561.	1105.	17.4	15.872
0.40	0.07	0.4926	0.0629	0.4444	230.4	1.473	1.663	1.129	0.831	1.141	1.176	-571.	1098.	17.4	15.799
0.40	0.10	0.4780	0.0899	0.4320	230.6	1.476	1.660	1.124	0.829	1.135	1.174	-586.	1088.	17.3	15.688
0.40	0.20	0.4291	0.1805	0.3904	231.4	1.486	1.649	1.110	0.820	1.116	1.168	-634.	1056.	17.2	15.309
0.40	0.40	0.3301	0.3657	0.3042	233.0	1.504	1.628	1.082	0.805	1.081	1.158	-729.	989.	17.0	14.512
0.40	0.60	0.2274	0.5604	0.2122	234.9	1.527	1.607	1.056	0.792	1.050	1.150	-821.	919.	16.9	13.668
0.40	0.80	0.1184	0.7697	0.1119	237.1	1.539	1.588	1.037	0.779	1.021	1.142	-908.	843.	16.8	12.776
0.40	0.90	0.0607	0.8817	0.0576	238.4	1.548	1.579	1.020	0.773	1.007	1.139	-951.	802.	16.7	12.314
0.60	0.	0.7106	0.	0.2894	224.0	1.457	1.637	1.123	0.881	1.232	1.285	-458.	1059.	18.0	17.682
0.60	0.01	0.7047	0.0081	0.2872	224.1	1.458	1.636	1.122	0.880	1.229	1.284	-463.	1057.	18.0	17.620
0.60	0.02	0.6988	0.0163	0.2849	224.3	1.459	1.635	1.120	0.878	1.226	1.282	-469.	1055.	18.0	17.559
0.60	0.03	0.6929	0.0245	0.2826	224.4	1.461	1.634	1.119	0.877	1.223	1.280	-474.	1053.	17.9	17.497
0.60	0.04	0.6870	0.0326	0.2803	224.5	1.462	1.634	1.118	0.876	1.220	1.278	-480.	1051.	17.9	17.435
0.60	0.05	0.6811	0.0408	0.2781	224.6	1.463	1.633	1.116	0.874	1.217	1.277	-486.	1048.	17.9	17.374
0.60	0.07	0.6692	0.0573	0.2735	224.9	1.465	1.631	1.114	0.872	1.211	1.273	-497.	1044.	17.9	17.251
0.60	0.10	0.6513	0.0821	0.2665	225.3	1.468	1.628	1.109	0.868	1.202	1.268	-514.	1038.	17.8	17.063
0.60	0.20	0.5907	0.1664	0.2429	226.6	1.479	1.622	1.096	0.855	1.174	1.251	-570.	1015.	17.6	16.458
0.60	0.40	0.4638	0.3437	0.1925	229.3	1.499	1.606	1.071	0.832	1.123	1.221	-680.	966.	17.2	15.277
0.60	0.60	0.3264	0.5372	0.1364	232.4	1.518	1.592	1.049	0.810	1.077	1.192	-780.	909.	16.9	14.126
0.60	0.80	0.1736	0.7532	0.0733	235.8	1.538	1.579	1.028	0.788	1.035	1.164	-893.	841.	16.8	12.989
0.60	0.90	0.0899	0.8721	0.0381	237.7	1.548	1.574	1.018	0.777	1.014	1.149	-943.	801.	16.7	12.416
0.80	0.	0.8651	0.	0.1349	218.6	1.451	1.603	1.105	0.933	1.325	1.415	-380.	993.	18.6	20.344
0.80	0.01	0.8586	0.0075	0.1339	218.8	1.452	1.602	1.104	0.931	1.321	1.412	-386.	992.	18.6	20.215
0.80	0.02	0.8521	0.0150	0.1330	218.9	1.453	1.602	1.103	0.929	1.316	1.408	-392.	991.	18.6	20.087
0.80	0.03	0.8455	0.0225	0.1320	219.1	1.454	1.602	1.101	0.927	1.312	1.404	-398.	990.	18.6	19.961
0.80	0.04	0.8390	0.0300	0.1310	219.3	1.455	1.601	1.100	0.925	1.307	1.401	-404.	989.	18.5	19.837
0.80	0.05	0.8324	0.0376	0.1300	219.5	1.457	1.601	1.099	0.923	1.303	1.397	-411.	988.	18.5	19.714
0.80	0.07	0.8192	0.0528	0.1280	219.8	1.459	1.600	1.097	0.919	1.294	1.390	-423.	986.	18.4	19.474
0.80	0.10	0.7992	0.0759	0.1250	220.3	1.463	1.599	1.093	0.913	1.282	1.380	-442.	983.	18.3	19.125
0.80	0.20	0.7306	0.1549	0.1145	222.1	1.474	1.595	1.082	0.899	1.241	1.348	-504.	971.	18.1	18.051
0.80	0.40	0.5841	0.3240	0.0919	225.9	1.496	1.586	1.060	0.860	1.169	1.289	-630.	940.	17.5	16.205
0.80	0.60	0.4174	0.5164	0.0662	229.8	1.519	1.577	1.041	0.828	1.106	1.237	-755.	897.	17.1	14.629
0.80	0.80	0.2264	0.7376	0.0360	234.5	1.535	1.571	1.024	0.797	1.049	1.186	-876.	838.	16.8	13.208
0.80	0.90	0.1184	0.8627	0.0189	237.0	1.545	1.569	1.016	0.782	1.021	1.161	-935.	801.	16.7	12.520
0.90	0.	0.9345	0.	0.0655	216.0	1.447	1.585	1.095	0.965	1.382	1.494	-342.	955.	18.9	22.476
0.90	0.01	0.9278	0.0072	0.0651	216.2	1.448	1.585	1.094	0.962	1.376	1.489	-349.	955.	18.9	22.271
0.90	0.02	0.9210	0.0144	0.0646	216.4	1.449	1.584	1.093	0.960	1.371	1.484	-355.	955.	18.9	22.071
0.90	0.03	0.9142	0.0217	0.0641	216.6	1.451	1.585	1.092	0.957	1.365	1.479	-361.	955.	18.8	21.872
0.90	0.04	0.9074	0.0289	0.0636	216.8	1.452	1.584	1.091	0.954	1.359	1.474	-368.	955.	18.8	21.681
0.90	0.05	0.9006	0.0362	0.0632	217.0	1.454	1.584	1.090	0.952	1.354	1.469	-374.	955.	18.8	21.495
0.90	0.07	0.8869	0.0509	0.0622	217.4	1.456	1.584	1.088	0.947	1.343	1.460	-387.	954.	18.7	21.134
0.90	0.10	0.8660	0.0732	0.0608	217.9	1.460	1.583	1.084	0.940	1.328	1.446	-407.	953.	18.6	20.621
0.90	0.20	0.7943	0.1499	0.0558	220.0	1.472	1.581	1.074	0.917	1.280	1.403	-473.	948.	18.3	19.117
0.90	0.40	0.6384	0.3165	0.0450	224.2	1.494	1.575	1.054	0.876	1.195	1.327	-605.	927.	17.7	16.759
0.90	0.60	0.4605	0.5067	0.0328	228.8	1.514	1.570	1.037	0.838	1.121	1.260	-738.	891.	17.2	14.902
0.90	0.80	0.2529	0.7301	0.0170	233.9	1.534	1.567	1.021	0.802	1.056	1.197	-868.	837.	16.8	13.315
0.90	0.90	0.1325	0.8581	0.0094	236.7	1.544	1.567	1.015	0.784	1.025	1.166	-931.	801.	16.7	12.577
0.97	0.	0.9807	0.	0.0193	214.2	1.444	1.572	1.088	0.989	1.425	1.555	-317.	927.	19.1	24.589
0.97	0.01	0.9739	0.0070	0.0192	214.4	1.446	1.572	1.087	0.986	1.419	1.549	-323.	928.	19.1	24.290
0.97	0.02	0.9670	0.0141	0.0190	214.6	1.447	1.572	1.086	0.983	1.413	1.543	-330.	928.	19.1	24.001
0.97	0.03	0.9600	0.0211	0.0189	214.8	1.448	1.572	1.085	0.980	1.406	1.537	-337.	929.	19.0	23.727
0.97	0.04	0.9531	0.0282	0.0188	215.0	1.450	1.572	1.084	0.977	1.400	1.531	-343.	929.	19.0	23.452
0.97	0.05	0.9461	0.0354	0.0186	215.2	1.451	1.572	1.083	0.974	1.394	1.525	-350.	930.	19.0	23.191
0.97	0.07	0.9320	0.0498	0.0183	215.7	1.454	1.572	1.081	0.968	1.382	1.514	-363.	930.	18.9	22.894
0.97	0.10	0.9105	0.0716	0.0179	216.3	1.458	1.577	1.078	0.960	1.364	1.497	-383.	931.	18.8	21.986
0.97	0.20	0.8369	0.1467	0.0165	218.5	1.470	1.571	1.069	0.934	1.308	1.445	-451.	930.	18.5	20.828
0.97	0.40	0.6757	0.3110	0.0133	223.[illegible]	1.493	1.568	1.050	0.887	1.213	1.355	-588.	917.	17.8	17.188
0.97	0.60	0.4899	0.5005	0.0097	[illegible]	1.514	1.565	1.034	0.845	1.132	1.277	-726.	886.	17.2	15.103
0.97	0.80	0.2696	0.7251	0.0053	233.4	1.533	1.564	1.020	0.806	1.061	1.205	-862.	835.	16.8	13.393
0.97	0.90	0.1423	0.8550	0.0027	236.4	1.544	1.566	1.014	0.786	1.027	1.170	-928.	800.	16.7	12.889
1.00	0.	1.0000	0.	0.	213.4	1.443	1.566	1.085	1.000	1.446	1.583	-306.	914.	19.2	25.740
1.00	0.01	0.9931	0.0069	0.0000	213.6	1.445	1.566	1.084	0.997	1.439	1.577	-313.	915.	19.2	25.370
1.00	0.02	0.9861	0.0139	0.0000	213.8	1.446	1.566	1.083	0.994	1.432	1.570	-319.	916.	19.2	25.032
1.00	0.03	0.9791	0.0209	0.0000	214.1	1.447	1.566	1.082	0.991	1.425	1.564	-326.	917.	19.1	24.700
1.00	0.04	0.9721	0.0280	0.0000	214.3	1.449	1.567	1.081	0.987	1.419	1.557	-333.	917.	19.1	24.380
1.00	0.05	0.9650	0.0350	0.0000	214.5	1.450	1.567	1.080	0.984	1.412	1.551	-339.	918.	19.1	24.073
1.00	0.07	0.9508	0.0493	0.0000	214.9	1.453	1.567	1.078	0.978	1.399	1.538	-353.	919.	19.0	23.491
1.00	0.10	0.9292	0.0709	0.0000	215.6	1.457	1.567	1.076	0.969	1.380	1.520	-373.	921.	18.9	22.691
1.00	0.20	0.8546	0.1454	0.0000	217.9	1.470	1.567	1.066	0.941	1.321	1.464	-441.	923.	18.5	20.472
1.00	0.40	0.6913	0.3087	0.0000	222.6	1.493	1.565	1.049	0.892	1.221	1.367	-580.	913.	17.9	17.385
1.00	0.60	0.5022	0.4978	0.	227.6	1.513	1.563	1.033	0.848	1.137	1.284	-721.	884.	17.3	15.192
1.00	0.80	0.2771	0.7229	0.	233.2	1.533	1.563	1.019	0.807	1.063	1.209	-860.	835.	16.8	13.427
1.00	0.90	0.1464	0.8536	0.	236.3	1.544	1.565	1.014	0.787	1.028	1.172	-927.	800.	16.7	12.624

PRESSURE = 26. ATM

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			TEMP	RELATIVE VOL			PRESSURE ACT COEF			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2/N2+O2	AR	N2	AR	O2	R	N2/AR	N2/O2	AR/O2	N2	AR	O2	LIQ	VAP	LIQ	VAP
0.10	0.	0.1606	0.	0.8395	245.0	1.501	1.722	1.147	0.780	1.053	1.053	-559.	1184.	18.1	16.636
0.10	0.01	0.1587	0.0107	0.8307	244.9	1.501	1.720	1.146	0.780	1.052	1.053	-563.	1179.	18.1	16.614
0.10	0.02	0.1569	0.0213	0.8218	244.9	1.502	1.718	1.144	0.780	1.052	1.054	-568.	1174.	18.1	16.591
0.10	0.03	0.1551	0.0319	0.8131	244.9	1.502	1.717	1.143	0.779	1.051	1.054	-572.	1168.	18.0	16.568
0.10	0.04	0.1532	0.0425	0.8043	244.8	1.502	1.715	1.141	0.779	1.050	1.055	-576.	1163.	18.0	16.545
0.10	0.05	0.1514	0.0530	0.7956	244.8	1.503	1.713	1.140	0.779	1.049	1.055	-580.	1158.	18.0	16.522
0.10	0.07	0.1478	0.0740	0.7782	244.7	1.504	1.710	1.137	0.778	1.048	1.057	-588.	1148.	18.0	16.476
0.10	0.10	0.1425	0.1052	0.7523	244.6	1.505	1.705	1.133	0.777	1.045	1.058	-600.	1132.	18.0	16.406
0.10	0.20	0.1252	0.2073	0.6674	244.3	1.510	1.688	1.118	0.774	1.038	1.064	-640.	1083.	17.8	16.169
0.10	0.40	0.0924	0.4054	0.5022	243.9	1.520	1.656	1.090	0.769	1.024	1.078	-715.	989.	17.7	15.860
0.10	0.60	0.0612	0.5999	0.3389	243.8	1.530	1.625	1.062	0.766	1.013	1.095	-785.	899.	17.5	15.087
0.10	0.80	0.0307	0.7961	0.1732	244.0	1.542	1.595	1.034	0.765	1.004	1.113	-850.	812.	17.4	14.437
0.10	0.90	0.0154	0.8967	0.0878	244.2	1.548	1.581	1.021	0.765	1.000	1.123	-880.	767.	17.4	14.081
0.20	0.	0.2965	0.	0.7035	240.9	1.478	1.686	1.140	0.800	1.092	1.102	-534.	1147.	17.8	17.421
0.20	0.01	0.2934	0.0100	0.6966	240.9	1.479	1.685	1.139	0.799	1.091	1.102	-538.	1142.	17.8	17.393
0.20	0.02	0.2903	0.0200	0.6897	240.9	1.480	1.683	1.138	0.799	1.089	1.102	-542.	1138.	17.8	17.365
0.20	0.03	0.2872	0.0300	0.6828	240.9	1.481	1.682	1.136	0.798	1.088	1.102	-547.	1133.	17.7	17.338
0.20	0.04	0.2841	0.0399	0.6760	240.9	1.481	1.681	1.135	0.798	1.087	1.102	-551.	1129.	17.7	17.309
0.20	0.05	0.2810	0.0499	0.6691	240.9	1.482	1.680	1.133	0.797	1.086	1.102	-555.	1124.	17.7	17.281
0.20	0.07	0.2748	0.0697	0.6555	241.0	1.484	1.677	1.130	0.796	1.083	1.103	-564.	1115.	17.7	17.224
0.20	0.10	0.2656	0.0993	0.6350	241.	1.486	1.673	1.126	0.795	1.080	1.103	-576.	1102.	17.7	17.137
0.20	0.20	0.2355	0.1972	0.5674	241.1	1.493	1.660	1.112	0.790	1.068	1.105	-618.	1059.	17.6	16.836
0.20	0.40	0.1768	0.3908	0.4324	241.6	1.508	1.635	1.085	0.782	1.047	1.110	-697.	975.	17.5	16.165
0.20	0.60	0.1189	0.5857	0.2953	242.3	1.523	1.611	1.058	0.775	1.028	1.117	-773.	893.	17.4	15.421
0.20	0.80	0.0605	0.7870	0.1525	243.2	1.539	1.588	1.032	0.769	1.011	1.125	-844.	810.	17.4	14.599
0.20	0.90	0.0306	0.8916	0.0777	243.8	1.547	1.577	1.020	0.767	1.003	1.129	-877.	767.	17.4	14.160
0.40	0.	0.5211	0.	0.4789	234.1	1.450	1.632	1.126	0.839	1.168	1.201	-463.	1078.	17.8	19.333
0.40	0.01	0.5163	0.0090	0.4747	234.2	1.451	1.632	1.124	0.838	1.166	1.201	-468.	1075.	17.8	19.285
0.40	0.02	0.5115	0.0180	0.4705	234.2	1.452	1.631	1.123	0.837	1.163	1.200	-473.	1071.	17.8	19.237
0.40	0.03	0.5067	0.0270	0.4663	234.3	1.453	1.630	1.122	0.836	1.161	1.199	-478.	1068.	17.8	19.189
0.40	0.04	0.5019	0.0360	0.4621	234.4	1.454	1.629	1.120	0.835	1.159	1.198	-482.	1065.	17.8	19.140
0.40	0.05	0.4971	0.0449	0.4579	234.4	1.455	1.628	1.119	0.835	1.157	1.197	-487.	1062.	17.8	19.091
0.40	0.07	0.4875	0.0630	0.4495	234.6	1.457	1.627	1.116	0.833	1.153	1.196	-497.	1055.	17.7	18.993
0.40	0.10	0.4731	0.0900	0.4369	234.8	1.460	1.624	1.112	0.830	1.147	1.194	-512.	1046.	17.7	18.843
0.40	0.20	0.4250	0.1806	0.3944	235.6	1.470	1.616	1.099	0.822	1.127	1.186	-560.	1014.	17.6	18.330
0.40	0.40	0.3273	0.3660	0.3067	237.4	1.491	1.601	1.074	0.806	1.091	1.173	-654.	948.	17.4	17.249
0.40	0.60	0.2259	0.5606	0.2134	239.4	1.511	1.587	1.050	0.792	1.058	1.161	-745.	880.	17.3	16.111
0.40	0.80	0.1179	0.7698	0.1123	241.7	1.532	1.575	1.028	0.779	1.020	1.148	-830.	806.	17.3	14.926
0.40	0.90	0.0605	0.8818	0.0576	243.1	1.543	1.570	1.017	0.772	1.011	1.141	-871.	766.	17.3	14.320
0.60	0.	0.7043	0.	0.2957	228.1	1.431	1.588	1.110	0.884	1.252	1.316	-383.	1008.	18.3	22.304
0.60	0.01	0.6985	0.0082	0.2933	228.3	1.432	1.588	1.108	0.882	1.249	1.313	-388.	1006.	18.3	22.201
0.60	0.02	0.6926	0.0164	0.2909	228.4	1.433	1.587	1.107	0.881	1.246	1.311	-394.	1004.	18.3	22.099
0.60	0.03	0.6868	0.0247	0.2886	228.5	1.435	1.587	1.106	0.880	1.243	1.309	-400.	1002.	18.2	21.997
0.60	0.04	0.6809	0.0329	0.2862	228.6	1.436	1.586	1.105	0.878	1.239	1.307	-405.	1000.	18.2	21.896
0.60	0.05	0.6750	0.0412	0.2838	228.8	1.437	1.586	1.104	0.877	1.236	1.305	-411.	998.	18.2	21.795
0.60	0.07	0.6632	0.0578	0.2790	229.0	1.439	1.585	1.101	0.874	1.230	1.301	-422.	994.	18.2	21.595
0.60	0.10	0.6454	0.0828	0.2717	229.4	1.443	1.584	1.097	0.870	1.221	1.295	-439.	988.	18.1	21.297
0.60	0.20	0.5853	0.1676	0.2471	230.7	1.455	1.579	1.085	0.857	1.192	1.276	-495.	967.	17.9	20.333
0.60	0.40	0.4595	0.3455	0.1950	233.6	1.478	1.571	1.063	0.833	1.137	1.240	-606.	921.	17.6	18.521
0.60	0.60	0.3235	0.5387	0.1378	236.7	1.501	1.565	1.042	0.810	1.088	1.206	-713.	867.	17.4	16.846
0.60	0.80	0.1726	0.7538	0.0736	240.3	1.526	1.562	1.024	0.788	1.042	1.171	-816.	802.	17.3	15.259
0.60	0.90	0.0896	0.8723	0.0382	242.3	1.540	1.563	1.015	0.777	1.019	1.153	-864.	765.	17.3	14.479
0.80	0.	0.8607	0.	0.1393	222.6	1.415	1.545	1.092	0.939	1.357	1.458	-304.	929.	18.9	28.171
0.80	0.01	0.8542	0.0076	0.1382	222.8	1.416	1.545	1.091	0.937	1.352	1.454	-310.	928.	18.9	27.874
0.80	0.02	0.8476	0.0153	0.1371	223.0	1.418	1.545	1.090	0.935	1.347	1.450	-316.	928.	18.9	27.586
0.80	0.03	0.8410	0.0229	0.1361	223.2	1.419	1.545	1.089	0.933	1.342	1.446	-322.	927.	18.8	27.304
0.80	0.04	0.8344	0.0306	0.1350	223.3	1.420	1.545	1.088	0.931	1.337	1.441	-329.	927.	18.8	27.030
0.80	0.05	0.8278	0.0383	0.1339	223.5	1.422	1.545	1.087	0.929	1.332	1.437	-335.	926.	18.8	26.763
0.80	0.07	0.8144	0.0538	0.1318	223.9	1.425	1.545	1.085	0.924	1.323	1.429	-347.	925.	18.7	26.240
0.80	0.10	0.7943	0.0772	0.1285	224.4	1.429	1.545	1.081	0.918	1.309	1.418	-366.	924.	18.6	25.519
0.80	0.20	0.7254	0.1572	0.1174	226.2	1.442	1.545	1.071	0.898	1.265	1.380	-429.	916.	18.4	23.390
0.80	0.40	0.5782	0.3282	0.0936	230.1	1.468	1.544	1.052	0.862	1.188	1.314	-555.	891.	17.9	20.142
0.80	0.60	0.4137	0.5193	0.0669	234.3	1.494	1.545	1.034	0.829	1.119	1.253	-680.	852.	17.5	17.061
0.80	0.80	0.2248	0.7389	0.0362	239.0	1.521	1.551	1.019	0.797	1.057	1.195	-800.	798.	17.3	15.593
0.80	0.90	0.1179	0.8632	0.0189	241.6	1.537	1.557	1.013	0.781	1.027	1.165	-857.	763.	17.3	14.640
0.90	0.	0.9321	0.	0.0680	220.0	1.407	1.523	1.082	0.973	1.421	1.546	-266.	879.	19.3	34.426
0.90	0.01	0.9252	0.0074	0.0675	220.2	1.408	1.523	1.081	0.970	1.414	1.540	-272.	880.	19.2	33.787
0.90	0.02	0.9183	0.0148	0.0670	220.4	1.410	1.523	1.081	0.967	1.408	1.534	-279.	881.	19.2	33.146
0.90	0.03	0.9114	0.0222	0.0665	220.6	1.411	1.524	1.080	0.965	1.402	1.528	-285.	882.	19.2	32.567
0.90	0.04	0.9044	0.0296	0.0659	220.8	1.413	1.524	1.079	0.962	1.396	1.523	-292.	883.	19.1	32.016
0.90	0.05	0.8975	0.0371	0.0654	221.0	1.414	1.524	1.078	0.959	1.390	1.517	-298.	884.	19.1	31.491
0.90	0.07	0.8835	0.0521	0.0644	221.4	1.418	1.525	1.076	0.954	1.378	1.506	-311.	885.	19.0	30.510
0.90	0.10	0.8623	0.0749	0.0628	222.0	1.422	1.526	1.073	0.946	1.361	1.490	-331.	886.	18.9	29.188
0.90	0.20	0.7896	0.1527	0.0574	224.1	1.436	1.528	1.064	0.922	1.308	1.441	-397.	887.	18.6	25.718
0.90	0.40	0.6335	0.3206	0.0460	228.4	1.464	1.531	1.046	0.878	1.215	1.354	-530.	874.	18.0	21.153
0.90	0.60	0.4565	0.5105	0.0330	233.1	1.490	1.536	1.030	0.838	1.130	1.278	-663.	844.	17.8	18.114
0.90	0.80	0.2501	0.7319	0.0180	238.3	1.519	1.545	1.017	0.802	1.065	1.207	-792.	796.	17.3	15.765
0.90	0.90	0.1319	0.8588	0.0094	241.3	1.536	1.554	1.012	0.784	1.030	1.171	-853.	763.	17.3	14.721
0.97	0.	0.9799	0.	0.0201	218.1	1.400	1.505	1.075	1.000	1.473	1.617	-241.	837.	19.5	43.166
0.97	0.01	0.9728	0.0072	0.0200	218.3	1.402	1.506	1.075	0.997	1.466	1.610	-248.	839.	19.4	41.758
0.97	0.02	0.9657	0.0145	0.0198	218.5	1.403	1.507	1.074	0.993	1.458	1.602	-254.	842.	19.4	40.475
0.97	0.03	0.9586	0.0218	0.0197	218.8	1.405	1.508	1.073	0.990	1.451	1.595	-261.	844.	19.4	39.306
0.97	0.04	0.9514	0.0290	0.0195	219.0	1.407	1.508	1.072	0.987	1.443	1.588	-267.	846.	19.3	38.232
0.97	0.05	0.9443	0.0364	0.0194	219.2	1.409	1.509	1.071	0.984	1.436	1.581	-274.	848.	19.3	37.254
0.97	0.07	0.9299	0.0511	0.0190	219.6	1.412	1.510	1.069	0.977	1.422	1.567	-287.	851.	19.2	35.469
0.97	0.10	0.9081	0.0734	0.0186	220.3	1.417	1.512	1.067	0.968	1.402	1.547	-307.	856.	19.1	33.225
0.97	0.20	0.8331	0.1499	0.0170	222.6	1.432	1.516	1.058	0.939	1.340	1.487	-375.	864.	18.8	27.911
0.97	0.40	0.6710	0.3156	0.0134	227.2	1.461	1.522	1.042	0.888	1.235	1.384	-512.	862.	18.1	21.974
0.97	0.60	0.4856	0.5046	0.0098	232.3	1.489	1.529	1.028	0.845	1.148	1.296	-651.	839.	17.6	18.451
0.97	0.80	0.2676	0.7271	0.0054	237.9	1.517	1.541	1.016	0.805	1.070	1.216	-787.	794.	17.3	15.888
0.97	0.90	0.1415	0.8557	0.0028	241.0	1.535	1.552	1.011	0.789	1.033	1.176	-850.	762.	17.2	14.777
1.00	0.	1.0000	0.	0.	217.3	1.396	1.497	1.072	1.013	1.499	1.652	-231.	815.	19.6	50.005
1.00	0.01	0.9928	0.0072	0.0000	217.5	1.398	1.498	1.071	1.009	1.490	1.643	-237.	818.	19.5	47.745
1.00	0.02	0.9856	0.0144	0.0000	217.7	1.400	1.499	1.071	1.005	1.482	1.635	-244.	822.	19.5	45.704
1.00	0.03	0.9784	0.0216	0.0000	218.0	1.402	1.500	1.070	1.002	1.474	1.627	-251.	825.	19.5	44.009
1.00	0.04	0.9712	0.0288	0.0000	218.2	1.404	1.501	1.069	0.998	1.466	1.619	-257.	828.	19.4	42.440
1.00	0.05	0.9639	0.0361	0.0000	218.4	1.406	1.502	1.068	0.995	1.458	1.611	-264.	830.	19.4	41.027
1.00	0.07	0.9493	0.0507	0.0000	218.9	1.409	1.503	1.067	0.988	1.443	1.596	-277.	835.	19.3	38.575
1.00	0.10	0.9272	0.0728	0.0000	219.6	1.415	1.505	1.064	0.978	1.421	1.574	-297.	841.	19.2	35.604
1.00	0.20	0.8512	0.1488	0.0000	221.9	1.431	1.511	1.056	0.944	1.355	1.508	-365.	854.	18.9	29.071
1.00	0.40	0.6865	0.3135	0.0000	226.7	1.460	1.519	1.040	0.894	1.244	1.397	-505.	857.	18.2	22.362
1.00	0.60	0.4979	0.5021	0.	231.9	1.487	1.527	1.027	0.849	1.153	1.304	-646.	836.	17.6	18.602
1.00	0.80	0.2749	0.7251	0.	237.7	1.517	1.540	1.015	0.807	1.072	1.219	-784.	793.	17.3	15.941
1.00	0.90	0.1456	0.8544	0.	240.9	1.534	1.551	1.011	0.786	1.034	1.177	-849.	762.	17.2	14.802

B. Isothermal Table

The table to follow presents values calculated at even temperature intervals of five degrees from 140°R to 245°R. They are arranged in order of increasing liquid mole fraction ratio

$$\frac{N_2}{N_2 + O_2}$$

and sub-ordered according to increasing mole fraction of argon. The quantities calculated are vapor composition, pressure, equilibrium constant (K-Values), relative volatility, enthalpy, and heat capacity.

Table 26. Isothermal Calculated Values

TEMPERATURE = 140. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.975	0.	0.9930	0.	0.0071	1.02	1.019	0.421	0.282	2.419	3.611	1.493	-1481.	934.	14.4	7.549
.975	0.1	0.9927	0.0011	0.0063	1.02	1.018	0.421	0.282	2.421	3.609	1.491	-1481.	933.	14.4	7.547
.975	0.2	0.9924	0.0021	0.0056	1.02	1.018	0.420	0.282	2.422	3.607	1.490	-1481.	933.	14.4	7.545
.975	0.3	0.9920	0.0031	0.0049	1.02	1.017	0.420	0.282	2.423	3.605	1.488	-1482.	933.	14.4	7.543
.975	0.4	0.9917	0.0042	0.0042	1.02	1.017	0.420	0.282	2.424	3.603	1.486	-1482.	933.	14.4	7.541
.975	0.5	0.9913	0.0052	0.0035	1.02	1.017	0.419	0.282	2.425	3.601	1.485	-1482.	932.	14.4	7.539
.975	0.6	0.9910	0.0063	0.0028	1.02	1.016	0.419	0.282	2.426	3.599	1.483	-1482.	932.	14.4	7.537
.975	0.7	0.9907	0.0073	0.0021	1.02	1.016	0.419	0.283	2.427	3.597	1.482	-1482.	932.	14.4	7.535
.975	0.8	0.9903	0.0084	0.0014	1.02	1.016	0.418	0.283	2.428	3.594	1.480	-1483.	931.	14.3	7.533
.975	0.9	0.9900	0.0094	0.0007	1.02	1.015	0.418	0.283	2.429	3.592	1.479	-1483.	931.	14.3	7.531
.975	1.0	0.9897	0.0104	0.	1.02	1.015	0.418	0.283	2.430	3.590	1.477	-1483.	931.	14.3	7.529

TEMPERATURE = 145. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.600	0.	0.8568	0.	0.1432	1.00	1.428	0.555	0.358	2.572	3.987	1.550	-1662.	971.	13.6	7.486
.600	0.1	0.8492	0.0214	0.1294	1.01	1.415	0.547	0.358	2.588	3.951	1.526	-1666.	964.	13.4	7.443
.600	0.2	0.8423	0.0431	0.1147	1.02	1.404	0.539	0.359	2.606	3.915	1.502	-1671.	958.	13.3	7.401
.600	0.3	0.8358	0.0637	0.1005	1.02	1.393	0.531	0.359	2.624	3.880	1.479	-1675.	952.	13.2	7.360
.600	0.4	0.8299	0.0838	0.0863	1.03	1.383	0.524	0.360	2.641	3.845	1.456	-1679.	946.	13.1	7.321
.600	0.5	0.8246	0.1034	0.0721	1.03	1.374	0.517	0.361	2.659	3.810	1.432	-1683.	941.	13.0	7.282
.600	0.6	0.8197	0.1225	0.0579	1.04	1.366	0.510	0.362	2.677	3.776	1.411	-1687.	935.	12.8	7.245
.600	0.7	0.8154	0.1412	0.0436	1.05	1.359	0.504	0.363	2.694	3.742	1.389	-1691.	929.	12.7	7.208
.600	0.8	0.8114	0.1595	0.0292	1.05	1.352	0.498	0.363	2.712	3.708	1.367	-1695.	924.	12.6	7.172
.600	0.9	0.8082	0.1770	0.0148	1.07	1.347	0.492	0.364	2.740	3.701	1.351	-1699.	920.	12.5	7.118
.600	1.0	0.8057	0.1943	0.	1.07	1.343	0.487	0.366	2.758	3.666	1.330	-1703.	916.	12.3	7.101
.700	0.	0.8987	0.	0.1013	1.10	1.284	0.512	0.338	2.508	3.807	1.515	-1595.	967.	13.7	7.535
.700	0.1	0.8936	0.0152	0.0913	1.11	1.277	0.506	0.338	2.521	3.776	1.498	-1598.	963.	13.6	7.506
.700	0.2	0.8886	0.0301	0.0813	1.11	1.270	0.501	0.339	2.534	3.750	1.480	-1601.	959.	13.5	7.476
.700	0.3	0.8842	0.0446	0.0712	1.12	1.263	0.496	0.339	2.547	3.725	1.463	-1604.	954.	13.4	7.448
.700	0.4	0.8800	0.0588	0.0612	1.12	1.257	0.491	0.340	2.559	3.700	1.445	-1607.	950.	13.3	7.420
.700	0.5	0.8760	0.0730	0.0511	1.13	1.251	0.487	0.341	2.572	3.675	1.429	-1610.	946.	13.2	7.393
.700	0.6	0.8724	0.0866	0.0410	1.13	1.246	0.482	0.341	2.585	3.650	1.412	-1613.	942.	13.2	7.366
.700	0.7	0.8689	0.1003	0.0308	1.14	1.241	0.478	0.342	2.598	3.625	1.395	-1616.	938.	13.1	7.339
.700	0.8	0.8656	0.1137	0.0206	1.14	1.237	0.474	0.343	2.611	3.600	1.379	-1619.	934.	13.0	7.313
.700	0.9	0.8629	0.1268	0.0103	1.15	1.233	0.470	0.345	2.624	3.576	1.363	-1623.	930.	12.9	7.288
.700	1.0	0.8603	0.1398	0.	1.15	1.229	0.466	0.346	2.637	3.552	1.347	-1626.	927.	12.8	7.263
.800	0.	0.9355	0.	0.0645	1.20	1.169	0.478	0.323	2.447	3.625	1.481	-1528.	964.	13.8	7.586
.800	0.1	0.9325	0.0099	0.0576	1.21	1.166	0.474	0.323	2.456	3.608	1.469	-1530.	962.	13.8	7.568
.800	0.2	0.9295	0.0189	0.0516	1.21	1.162	0.470	0.323	2.464	3.592	1.458	-1532.	959.	13.7	7.549
.800	0.3	0.9267	0.0281	0.0452	1.21	1.158	0.469	0.324	2.472	3.576	1.446	-1534.	956.	13.7	7.531
.800	0.4	0.9239	0.0373	0.0389	1.22	1.155	0.466	0.324	2.480	3.560	1.435	-1536.	953.	13.6	7.514
.800	0.5	0.9213	0.0463	0.0325	1.22	1.152	0.463	0.325	2.489	3.543	1.424	-1538.	951.	13.5	7.496
.800	0.6	0.9189	0.0552	0.0260	1.22	1.149	0.460	0.326	2.497	3.527	1.413	-1540.	948.	13.5	7.479
.800	0.7	0.9165	0.0640	0.0196	1.23	1.146	0.457	0.326	2.505	3.512	1.402	-1542.	946.	13.4	7.462
.800	0.8	0.9143	0.0727	0.0131	1.23	1.143	0.455	0.327	2.514	3.496	1.391	-1544.	943.	13.4	7.445
.800	0.9	0.9122	0.0814	0.0065	1.23	1.140	0.452	0.328	2.522	3.480	1.380	-1546.	940.	13.3	7.428
.800	1.0	0.9102	0.0899	0.	1.24	1.138	0.450	0.328	2.531	3.464	1.369	-1548.	938.	13.2	7.412
.900	0.	0.9689	0.	0.0311	1.30	1.077	0.451	0.312	2.388	3.456	1.447	-1460.	961.	14.0	7.638
.900	0.1	0.9676	0.0045	0.0279	1.31	1.075	0.450	0.312	2.392	3.448	1.442	-1461.	960.	14.0	7.630
.900	0.2	0.9662	0.0090	0.0248	1.31	1.074	0.448	0.312	2.396	3.440	1.436	-1462.	957.	13.9	7.621
.900	0.3	0.9649	0.0134	0.0217	1.31	1.072	0.447	0.312	2.400	3.433	1.430	-1463.	957.	13.9	7.612
.900	0.4	0.9636	0.0178	0.0186	1.31	1.071	0.445	0.313	2.404	3.425	1.425	-1464.	956.	13.9	7.604
.900	0.5	0.9623	0.0222	0.0155	1.31	1.069	0.444	0.313	2.408	3.417	1.419	-1465.	955.	13.8	7.596
.900	0.6	0.9611	0.0266	0.0124	1.31	1.068	0.443	0.313	2.412	3.409	1.414	-1466.	953.	13.8	7.587
.900	0.7	0.9599	0.0309	0.0094	1.32	1.067	0.441	0.314	2.416	3.402	1.408	-1467.	952.	13.8	7.579
.900	0.8	0.9587	0.0352	0.0063	1.32	1.065	0.440	0.314	2.420	3.394	1.403	-1468.	951.	13.7	7.571
.900	0.9	0.9575	0.0395	0.0031	1.32	1.064	0.439	0.314	2.424	3.386	1.397	-1469.	950.	13.7	7.562
.900	1.0	0.9564	0.0436	0.	1.32	1.063	0.438	0.315	2.428	3.379	1.392	-1470.	948.	13.7	7.554
.975	0.	0.9926	0.	0.0074	1.30	1.018	0.434	0.305	2.344	3.335	1.423	-1410.	959.	14.1	7.679
.975	0.1	0.9922	0.0011	0.0067	1.30	1.018	0.434	0.305	2.345	3.333	1.421	-1410.	958.	14.1	7.677
.975	0.2	0.9919	0.0022	0.0060	1.30	1.017	0.434	0.305	2.346	3.331	1.420	-1410.	958.	14.1	7.675
.975	0.3	0.9916	0.0033	0.0053	1.30	1.017	0.433	0.305	2.347	3.329	1.419	-1411.	958.	14.1	7.673
.975	0.4	0.9913	0.0043	0.0046	1.30	1.017	0.433	0.306	2.348	3.327	1.417	-1411.	957.	14.1	7.671
.975	0.5	0.9910	0.0054	0.0036	1.30	1.016	0.433	0.306	2.349	3.325	1.416	-1411.	957.	14.1	7.669
.975	0.6	0.9906	0.0065	0.0031	1.30	1.016	0.432	0.306	2.350	3.323	1.414	-1411.	957.	14.1	7.667
.975	0.7	0.9903	0.0076	0.0023	1.30	1.016	0.432	0.306	2.351	3.322	1.413	-1412.	956.	14.0	7.665
.975	0.8	0.9900	0.0086	0.0015	1.30	1.015	0.432	0.306	2.352	3.320	1.412	-1412.	956.	14.0	7.663
.975	0.9	0.9897	0.0097	0.0008	1.30	1.015	0.431	0.306	2.353	3.318	1.410	-1412.	956.	14.0	7.660
.975	1.0	0.9894	0.0108	0.	1.30	1.015	0.431	0.306	2.354	3.316	1.409	-1412.	956.	14.0	7.658

TEMPERATURE = 15[illegible] R

Table 26.(cont.)

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.300	0.5	0.5839	0.2423	0.1738	1.01	1.946	0.692	0.497	2.812	3.919	1.394	-1040.	936.	12.1	6.930
.300	0.6	0.5760	0.2846	0.1395	1.02	1.922	0.676	0.498	2.842	3.859	1.358	-1048.	923.	11.9	6.854
.300	0.7	0.5706	0.3243	0.1051	1.03	1.902	0.662	0.500	2.874	3.801	1.323	-1056.	911.	11.7	6.774
.300	0.8	0.5659	0.3636	0.0705	1.04	1.886	0.649	0.504	2.905	3.741	1.288	-1064.	899.	11.5	6.695
.300	0.9	0.5624	0.4021	0.0356	1.06	1.875	0.638	0.509	2.937	3.686	1.255	-1072.	888.	11.3	6.618
.300	1.0	0.5599	0.4401	0.	1.07	1.867	0.629	0.514	2.969	3.630	1.223	-1081.	876.	11.1	6.542
.400	0.	0.7294	0.	0.2707	1.08	1.823	0.701	0.451	2.601	4.042	1.554	-1731.	1004.	13.3	7.470
.400	0.1	0.7106	0.0469	0.2425	1.09	1.792	0.682	0.449	2.625	3.989	1.520	-1738.	992.	13.1	7.397
.400	0.2	0.7012	0.0798	0.2190	1.10	1.763	0.665	0.448	2.650	3.937	1.486	-1745.	980.	13.0	7.321
.400	0.3	0.6952	0.1176	0.1870	1.11	1.738	0.650	0.447	2.675	3.886	1.453	-1752.	969.	12.8	7.247
.400	0.4	0.6864	0.1526	0.1611	1.13	1.716	0.636	0.447	2.700	3.835	1.420	-1759.	958.	12.6	7.177
.400	0.5	0.6780	0.1868	0.1345	1.14	1.697	0.623	0.448	2.725	3.785	1.389	-1766.	948.	12.4	7.109
.400	0.6	0.6722	0.2199	0.1090	1.15	1.680	0.611	0.450	2.751	3.735	1.358	-1773.	938.	12.2	7.043
.400	0.7	0.6666	0.2521	0.0814	1.16	1.667	0.600	0.452	2.776	3.687	1.328	-1780.	929.	12.0	6.980
.400	0.8	0.6620	0.2835	0.0546	1.17	1.655	0.591	0.455	2.802	3.639	1.298	-1787.	919.	11.8	6.917
.400	0.9	0.6584	0.3142	0.0275	1.18	1.646	0.582	0.458	2.829	3.591	1.270	-1794.	910.	11.7	6.856
.400	1.0	0.6556	0.3445	0.	1.19	1.639	0.574	0.462	2.855	3.544	1.241	-1801.	901.	11.5	6.796
.500	0.	0.7943	0.	0.2057	1.22	1.589	0.625	0.411	2.540	3.861	1.520	-1663.	1000.	13.4	7.530
.500	0.1	0.7846	0.0306	0.1849	1.23	1.569	0.613	0.411	2.560	3.819	1.492	-1668.	991.	13.3	7.470
.500	0.2	0.7757	0.0601	0.1643	1.23	1.551	0.601	0.411	2.580	3.778	1.464	-1674.	982.	13.1	7.420
.500	0.3	0.7677	0.0886	0.1438	1.24	1.535	0.590	0.411	2.600	3.736	1.437	-1680.	974.	13.0	7.364
.500	0.4	0.7620	0.1141	0.1239	1.25	1.521	0.580	0.412	2.621	3.696	1.410	-1686.	965.	12.8	7.310
.500	0.5	0.7542	0.1426	0.1032	1.26	1.508	0.571	0.413	2.641	3.656	1.384	-1692.	957.	12.7	7.257
.500	0.6	0.7480	0.1687	0.0828	1.27	1.497	0.562	0.414	2.662	3.616	1.358	-1698.	950.	12.5	7.206
.500	0.7	0.7437	0.1941	0.0624	1.28	1.487	0.554	0.416	2.682	3.576	1.333	-1704.	942.	12.4	7.156
.500	0.8	0.7395	0.2188	0.0418	1.29	1.479	0.547	0.418	2.703	3.537	1.309	-1710.	934.	12.2	7.108
.500	0.9	0.7360	0.2431	0.0210	1.30	1.472	0.540	0.421	2.724	3.499	1.284	-1715.	927.	12.0	7.060
.500	1.0	0.7331	0.2670	0.	1.31	1.466	0.534	0.424	2.746	3.461	1.260	-1721.	920.	11.9	7.013
.600	0.	0.8470	0.	0.1531	1.35	1.412	0.569	0.383	2.481	3.689	1.487	-1595.	996.	13.5	7.598
.600	0.1	0.8399	0.0274	0.1328	1.36	1.400	0.561	0.383	2.497	3.657	1.464	-1599.	990.	13.4	7.554
.600	0.2	0.8333	0.0442	0.1226	1.36	1.389	0.553	0.383	2.512	3.625	1.443	-1604.	983.	13.3	7.512
.600	0.3	0.8273	0.0654	0.1074	1.37	1.379	0.545	0.384	2.528	3.593	1.421	-1609.	977.	13.2	7.470
.600	0.4	0.8217	0.0861	0.0923	1.38	1.370	0.538	0.385	2.544	3.562	1.400	-1613.	970.	13.0	7.430
.600	0.5	0.8167	0.1064	0.0771	1.39	1.361	0.532	0.386	2.560	3.531	1.379	-1618.	964.	12.9	7.390
.600	0.6	0.8121	0.1261	0.0619	1.39	1.354	0.526	0.387	2.576	3.500	1.359	-1623.	958.	12.8	7.351
.600	0.7	0.8081	0.1455	0.0466	1.40	1.347	0.520	0.388	2.592	3.469	1.339	-1627.	952.	12.7	7.314
.600	0.8	0.8043	0.1645	0.0312	1.41	1.341	0.514	0.390	2.608	3.439	1.319	-1632.	947.	12.6	7.277
.600	0.9	0.8011	0.1832	0.0157	1.42	1.335	0.509	0.392	2.624	3.409	1.299	-1637.	941.	12.4	7.240
.600	1.0	0.7985	0.2016	0.	1.43	1.331	0.504	0.394	2.641	3.379	1.280	-1642.	935.	12.3	7.204
.700	0.	0.8917	0.	0.1085	1.48	1.274	0.526	0.362	2.424	3.524	1.454	-1527.	993.	13.7	7.659
.700	0.1	0.8869	0.0156	0.0977	1.48	1.267	0.520	0.362	2.435	3.501	1.438	-1530.	988.	13.6	7.629
.700	0.2	0.8823	0.0309	0.0870	1.49	1.260	0.515	0.362	2.446	3.478	1.422	-1534.	983.	13.5	7.599
.700	0.3	0.8780	0.0459	0.0762	1.50	1.254	0.510	0.363	2.458	3.455	1.406	-1537.	979.	13.4	7.570
.700	0.4	0.8740	0.0607	0.0655	1.50	1.249	0.506	0.364	2.469	3.433	1.390	-1541.	974.	13.3	7.541
.700	0.5	0.8703	0.0752	0.0547	1.51	1.243	0.501	0.365	2.481	3.410	1.375	-1544.	970.	13.2	7.513
.700	0.6	0.8669	0.0894	0.0439	1.51	1.238	0.497	0.366	2.492	3.388	1.359	-1548.	965.	13.1	7.485
.700	0.7	0.8637	0.1035	0.0330	1.52	1.234	0.493	0.367	2.504	3.366	1.344	-1551.	961.	13.0	7.458
.700	0.8	0.8606	0.1173	0.0221	1.53	1.230	0.489	0.368	2.516	3.344	1.329	-1555.	957.	12.9	7.432
.700	0.9	0.8582	0.1310	0.0111	1.53	1.226	0.485	0.369	2.528	3.322	1.314	-1558.	953.	12.8	7.405
.700	1.0	0.8556	0.1444	0.	1.54	1.223	0.481	0.370	2.539	3.300	1.300	-1562.	949.	12.7	7.379
.800	0.	0.9311	0.	0.0691	1.61	1.164	0.492	0.346	2.367	3.366	1.422	-1459.	989.	13.8	7.722
.800	0.1	0.9282	0.0098	0.0623	1.61	1.160	0.489	0.346	2.375	3.352	1.411	-1461.	986.	13.7	7.703
.800	0.2	0.9254	0.0194	0.0555	1.62	1.157	0.486	0.347	2.382	3.337	1.401	-1463.	983.	13.6	7.684
.800	0.3	0.9227	0.0290	0.0486	1.62	1.153	0.483	0.347	2.389	3.323	1.390	-1466.	980.	13.6	7.666
.800	0.4	0.9201	0.0384	0.0417	1.62	1.150	0.480	0.348	2.397	3.308	1.380	-1468.	977.	13.5	7.648
.800	0.5	0.9177	0.0477	0.0348	1.63	1.147	0.477	0.348	2.404	3.294	1.370	-1470.	974.	13.5	7.630
.800	0.6	0.9154	0.0569	0.0279	1.63	1.144	0.474	0.349	2.412	3.279	1.360	-1473.	971.	13.4	7.612
.800	0.7	0.9132	0.0661	0.0219	1.64	1.142	0.472	0.350	2.419	3.265	1.349	-1475.	969.	13.3	7.595
.800	0.8	0.9111	0.0751	0.0140	1.64	1.139	0.469	0.350	2.427	3.251	1.339	-1477.	966.	13.3	7.577
.800	0.9	0.9092	0.0840	0.0070	1.65	1.136	0.467	0.351	2.434	3.236	1.329	-1480.	963.	13.2	7.560
.800	1.0	0.9074	0.0929	0.	1.65	1.134	0.464	0.352	2.442	3.222	1.320	-1482.	960.	13.1	7.543
.900	0.	0.9669	0.	0.0334	1.74	1.074	0.465	0.334	2.312	3.216	1.391	-1391.	985.	13.9	7.787
.900	0.1	0.9656	0.0046	0.0301	1.74	1.073	0.463	0.334	2.316	3.209	1.386	-1392.	983.	13.8	7.778
.900	0.2	0.9643	0.0092	0.0268	1.74	1.071	0.462	0.335	2.319	3.202	1.381	-1393.	982.	13.8	7.769
.900	0.3	0.9630	0.0138	0.0234	1.75	1.070	0.461	0.335	2.323	3.195	1.375	-1394.	980.	13.8	7.760
.900	0.4	0.9618	0.0184	0.0201	1.75	1.069	0.459	0.335	2.327	3.188	1.370	-1395.	979.	13.7	7.752
.900	0.5	0.9606	0.0229	0.0168	1.75	1.067	0.458	0.336	2.330	3.181	1.365	-1397.	978.	13.7	7.743
.900	0.6	0.9594	0.0274	0.0134	1.75	1.066	0.457	0.336	2.334	3.174	1.360	-1398.	976.	13.7	7.734
.900	0.7	0.9583	0.0319	0.0101	1.76	1.065	0.456	0.336	2.338	3.167	1.355	-1399.	975.	13.7	7.726
.900	0.8	0.9572	0.0363	0.0067	1.76	1.064	0.454	0.337	2.341	3.160	1.350	-1400.	974.	13.6	7.718
.900	0.9	0.9561	0.0408	0.0034	1.76	1.062	0.453	0.337	2.345	3.153	1.345	-1401.	972.	13.6	7.709
.900	1.0	0.9551	0.0452	0.	1.76	1.061	0.452	0.337	2.348	3.146	1.340	-1402.	971.	13.6	7.701
.975	0.	0.9921	0.	0.0082	1.84	1.018	0.448	0.327	2.272	3.108	1.368	-1340.	982.	14.0	7.037
.975	0.1	0.9918	0.0011	0.0074	1.84	1.017	0.448	0.328	2.273	3.106	1.367	-1340.	981.	13.9	7.035
.975	0.2	0.9915	0.0022	0.0066	1.84	1.017	0.447	0.328	2.274	3.104	1.365	-1340.	981.	13.9	7.033
.975	0.3	0.9912	0.0034	0.0057	1.84	1.017	0.447	0.328	2.274	3.103	1.364	-1341.	981.	13.9	7.031
.975	0.4	0.9910	0.0045	0.0049	1.84	1.016	0.447	0.328	2.275	3.101	1.363	-1341.	980.	13.9	7.029
.975	0.5	0.9907	0.0056	0.0041	1.84	1.016	0.446	0.328	2.276	3.099	1.362	-1341.	980.	13.9	7.027
.975	0.6	0.9904	0.0067	0.0033	1.84	1.016	0.446	0.328	2.277	3.097	1.360	-1341.	980.	13.9	7.025
.975	0.7	0.9901	0.0078	0.0025	1.84	1.015	0.446	0.328	2.278	3.096	1.359	-1342.	979.	13.9	7.023
.975	0.8	0.9898	0.0089	0.0016	1.85	1.015	0.445	0.328	2.279	3.094	1.358	-1342.	979.	13.9	7.021
.975	0.9	0.9895	0.0100	0.0008	1.85	1.015	0.445	0.328	2.280	3.092	1.356	-1342.	979.	13.9	7.019
.975	1.0	0.9892	0.0111	0.	1.85	1.015	0.445	0.328	2.281	3.091	1.355	-1343.	978.	13.9	7.016

TEMPERATURE = 144. K

Table 26. (cont.)

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.100	0.6	0.2627	0.4897	0.2476	1.00	2.627	0.907	0.688	2.897	3.819	1.318	-1941.	894.	11.9	6.393
.100	0.7	0.2586	0.5551	0.1863	1.02	2.586	0.881	0.690	2.935	3.747	1.277	-1953.	874.	11.7	6.258
.100	0.8	0.2557	0.6192	0.1252	1.04	2.557	0.860	0.696	2.973	3.676	1.236	-1965.	854.	10.9	6.138
.100	0.9	0.2539	0.6828	0.0634	1.05	2.539	0.843	0.704	3.013	3.607	1.197	-1977.	835.	10.7	6.000
.100	1.0	0.2533	0.7468	0.	1.07	2.533	0.830	0.718	3.052	3.530	1.160	-1989.	815.	10.4	5.868
.200	0.	0.5060	0.	0.4940	1.08	2.530	0.968	0.617	2.620	4.098	1.564	-1801.	1049.	13.7	7.449
.200	0.1	0.4892	0.0738	0.4371	1.09	2.446	0.923	0.607	2.650	4.029	1.520	-1811.	1017.	13.0	7.295
.200	0.2	0.4748	0.1417	0.3836	1.11	2.374	0.886	0.599	2.681	3.961	1.478	-1822.	998.	12.7	7.161
.200	0.3	0.4627	0.2047	0.3327	1.13	2.313	0.853	0.594	2.712	3.895	1.436	-1833.	977.	12.5	7.036
.200	0.4	0.4525	0.2630	0.2845	1.15	2.263	0.825	0.591	2.744	3.829	1.396	-1843.	958.	12.2	6.919
.200	0.5	0.4441	0.3200	0.2359	1.17	2.221	0.800	0.590	2.776	3.765	1.356	-1854.	941.	12.0	6.807
.200	0.6	0.4373	0.3737	0.1890	1.18	2.187	0.779	0.591	2.808	3.702	1.318	-1864.	924.	11.8	6.708
.200	0.7	0.4319	0.4257	0.1424	1.20	2.160	0.760	0.593	2.841	3.640	1.281	-1875.	908.	11.5	6.595
.200	0.8	0.4279	0.4765	0.0957	1.22	2.140	0.744	0.598	2.874	3.578	1.245	-1886.	893.	11.3	6.493
.200	0.9	0.4252	0.5265	0.0483	1.23	2.126	0.731	0.604	2.908	3.518	1.210	-1896.	877.	11.0	6.392
.200	1.0	0.4238	0.5763	0.	1.25	2.119	0.720	0.613	2.941	3.459	1.176	-1907.	862.	10.8	6.298
.300	0.	0.6270	0.	0.3731	1.26	2.090	0.816	0.533	2.561	3.922	1.531	-1732.	1035.	13.3	7.513
.300	0.1	0.6122	0.0552	0.3327	1.27	2.041	0.789	0.528	2.588	3.864	1.492	-1742.	1018.	13.1	7.405
.300	0.2	0.5993	0.1070	0.2938	1.29	1.998	0.764	0.525	2.614	3.807	1.456	-1751.	1002.	12.9	7.303
.300	0.3	0.5881	0.1559	0.2561	1.31	1.960	0.742	0.523	2.641	3.751	1.420	-1760.	987.	12.7	7.206
.300	0.4	0.5785	0.2024	0.2192	1.32	1.928	0.723	0.522	2.667	3.696	1.385	-1769.	972.	12.5	7.115
.300	0.5	0.5704	0.2470	0.1828	1.34	1.901	0.706	0.522	2.695	3.641	1.351	-1779.	958.	12.2	7.026
.300	0.6	0.5636	0.2899	0.1466	1.35	1.879	0.690	0.524	2.722	3.588	1.318	-1788.	945.	12.0	6.941
.300	0.7	0.5581	0.3315	0.1105	1.37	1.860	0.677	0.526	2.750	3.535	1.286	-1797.	932.	11.8	6.858
.300	0.8	0.5536	0.3721	0.0742	1.38	1.845	0.665	0.530	2.778	3.483	1.254	-1807.	920.	11.6	6.777
.300	0.9	0.5506	0.4121	0.0374	1.40	1.835	0.654	0.535	2.806	3.432	1.223	-1816.	907.	11.4	6.697
.300	1.0	0.5486	0.4515	0.	1.41	1.829	0.645	0.541	2.835	3.381	1.193	-1825.	895.	11.2	6.618
.400	0.	0.7145	0.	0.2856	1.43	1.786	0.713	0.476	2.505	3.751	1.498	-1664.	1030.	13.4	7.584
.400	0.1	0.7025	0.0417	0.2559	1.45	1.756	0.695	0.474	2.527	3.706	1.467	-1672.	1017.	13.2	7.504
.400	0.2	0.6918	0.0814	0.2269	1.46	1.730	0.679	0.473	2.549	3.659	1.436	-1680.	1005.	13.0	7.426
.400	0.3	0.6824	0.1194	0.1983	1.48	1.706	0.664	0.472	2.571	3.613	1.405	-1688.	993.	12.9	7.351
.400	0.4	0.6741	0.1560	0.1701	1.49	1.685	0.650	0.472	2.593	3.567	1.375	-1696.	982.	12.7	7.280
.400	0.5	0.6669	0.1912	0.1420	1.51	1.667	0.637	0.473	2.616	3.522	1.346	-1704.	971.	12.5	7.210
.400	0.6	0.6608	0.2254	0.1140	1.52	1.652	0.626	0.475	2.639	3.478	1.318	-1712.	960.	12.3	7.143
.400	0.7	0.6556	0.2586	0.0859	1.53	1.639	0.616	0.477	2.662	3.434	1.290	-1719.	950.	12.1	7.077
.400	0.8	0.6514	0.2911	0.0576	1.55	1.628	0.607	0.480	2.685	3.391	1.263	-1727.	940.	11.9	7.013
.400	0.9	0.6481	0.3230	0.0290	1.56	1.620	0.598	0.484	2.708	3.348	1.236	-1735.	930.	11.8	6.950
.400	1.0	0.6455	0.3545	0.	1.57	1.614	0.591	0.488	2.732	3.305	1.210	-1743.	920.	11.6	6.888
.500	0.	0.7824	0.	0.2176	1.61	1.565	0.639	0.436	2.449	3.592	1.466	-1595.	1025.	13.5	7.658
.500	0.1	0.7731	0.0313	0.1956	1.62	1.546	0.627	0.435	2.467	3.554	1.441	-1602.	1016.	13.3	7.597
.500	0.2	0.7647	0.0615	0.1740	1.63	1.529	0.615	0.435	2.485	3.516	1.415	-1609.	1006.	13.2	7.538
.500	0.3	0.7571	0.0907	0.1523	1.64	1.514	0.605	0.435	2.503	3.479	1.390	-1615.	997.	13.0	7.481
.500	0.4	0.7504	0.1191	0.1305	1.66	1.501	0.595	0.436	2.521	3.443	1.366	-1622.	988.	12.9	7.426
.500	0.5	0.7444	0.1466	0.1090	1.67	1.489	0.586	0.437	2.540	3.407	1.341	-1628.	980.	12.7	7.372
.500	0.6	0.7391	0.1734	0.0877	1.68	1.478	0.578	0.439	2.558	3.371	1.318	-1635.	971.	12.6	7.320
.500	0.7	0.7346	0.1996	0.0661	1.69	1.469	0.570	0.440	2.577	3.335	1.294	-1642.	963.	12.4	7.269
.500	0.8	0.7307	0.2252	0.0443	1.70	1.461	0.563	0.443	2.595	3.300	1.272	-1648.	955.	12.3	7.218
.500	0.9	0.7275	0.2505	0.0223	1.72	1.455	0.557	0.446	2.614	3.265	1.249	-1655.	947.	12.1	7.169
.500	1.0	0.7249	0.2753	0.	1.73	1.450	0.551	0.449	2.633	3.231	1.227	-1662.	939.	12.0	7.120
.600	0.	0.8375	0.	0.1625	1.78	1.396	0.583	0.406	2.395	3.437	1.435	-1527.	1021.	13.6	7.732
.600	0.1	0.8310	0.0230	0.1463	1.79	1.385	0.575	0.406	2.409	3.408	1.415	-1532.	1013.	13.5	7.687
.600	0.2	0.8247	0.0454	0.1301	1.80	1.375	0.567	0.407	2.423	3.380	1.395	-1537.	1006.	13.3	7.644
.600	0.3	0.8190	0.0672	0.1140	1.81	1.365	0.560	0.407	2.437	3.351	1.375	-1543.	1000.	13.2	7.602
.600	0.4	0.8138	0.0885	0.0980	1.82	1.356	0.553	0.408	2.451	3.323	1.356	-1548.	993.	13.1	7.560
.600	0.5	0.8090	0.1094	0.0818	1.83	1.348	0.547	0.409	2.465	3.295	1.337	-1553.	986.	13.0	7.520
.600	0.6	0.8048	0.1298	0.0657	1.84	1.341	0.541	0.411	2.480	3.267	1.318	-1559.	980.	12.9	7.480
.600	0.7	0.8010	0.1499	0.0494	1.85	1.335	0.535	0.412	2.494	3.240	1.299	-1564.	974.	12.7	7.441
.600	0.8	0.7976	0.1696	0.0331	1.86	1.329	0.530	0.414	2.509	3.212	1.281	-1569.	967.	12.6	7.403
.600	0.9	0.7947	0.1890	0.0166	1.87	1.324	0.525	0.416	2.523	3.185	1.262	-1575.	961.	12.5	7.366
.600	1.0	0.7922	0.2081	0.	1.88	1.320	0.520	0.418	2.538	3.158	1.245	-1580.	955.	12.4	7.329
.700	0.	0.8850	0.	0.1153	1.95	1.264	0.540	0.384	2.342	3.290	1.405	-1458.	1016.	13.7	7.807
.700	0.1	0.8804	0.0160	0.1039	1.95	1.258	0.535	0.385	2.352	3.269	1.390	-1462.	1011.	13.6	7.776
.700	0.2	0.8761	0.0316	0.0925	1.96	1.252	0.530	0.385	2.362	3.248	1.375	-1466.	1006.	13.5	7.746
.700	0.3	0.8720	0.0473	0.0811	1.97	1.246	0.525	0.386	2.373	3.228	1.360	-1470.	1001.	13.4	7.716
.700	0.4	0.8683	0.0625	0.0696	1.98	1.240	0.521	0.387	2.383	3.207	1.346	-1474.	996.	13.3	7.687
.700	0.5	0.8648	0.0774	0.0581	1.98	1.235	0.516	0.388	2.393	3.187	1.332	-1478.	991.	13.2	7.658
.700	0.6	0.8615	0.0922	0.0466	1.99	1.231	0.512	0.389	2.404	3.167	1.317	-1482.	987.	13.1	7.630
.700	0.7	0.8586	0.1067	0.0351	2.00	1.227	0.508	0.390	2.414	3.147	1.303	-1486.	982.	13.0	7.602
.700	0.8	0.8559	0.1210	0.0235	2.01	1.223	0.504	0.391	2.424	3.127	1.290	-1490.	978.	13.0	7.575
.700	0.9	0.8534	0.1352	0.0118	2.02	1.219	0.501	0.392	2.435	3.107	1.276	-1494.	973.	12.9	7.548
.700	1.0	0.8512	0.1492	0.	2.02	1.216	0.497	0.394	2.446	3.087	1.262	-1498.	969.	12.8	7.521
.800	0.	0.9268	0.	0.0736	2.11	1.159	0.506	0.368	2.290	3.148	1.375	-1390.	1011.	13.8	7.885
.800	0.1	0.9240	0.0101	0.0663	2.12	1.155	0.503	0.368	2.297	3.135	1.365	-1393.	1008.	13.7	7.866
.800	0.2	0.9214	0.0200	0.0590	2.12	1.152	0.500	0.369	2.303	3.122	1.355	-1395.	1005.	13.7	7.847
.800	0.3	0.9188	0.0298	0.0517	2.13	1.149	0.497	0.369	2.310	3.109	1.346	-1398.	1002.	13.6	7.828
.800	0.4	0.9164	0.0396	0.0444	2.14	1.146	0.494	0.370	2.317	3.096	1.336	-1400.	998.	13.5	7.810
.800	0.5	0.9142	0.0492	0.0371	2.14	1.143	0.492	0.371	2.323	3.083	1.327	-1403.	995.	13.5	7.791
.800	0.6	0.9120	0.0587	0.0297	2.15	1.140	0.489	0.371	2.330	3.070	1.317	-1406.	992.	13.4	7.773
.800	0.7	0.9099	0.0681	0.0223	2.15	1.137	0.487	0.372	2.337	3.057	1.308	-1408.	989.	13.4	7.756
.800	0.8	0.9080	0.0775	0.0149	2.16	1.135	0.484	0.373	2.344	3.044	1.299	-1411.	986.	13.3	7.738
.800	0.9	0.9062	0.0868	0.0075	2.16	1.133	0.482	0.374	2.350	3.031	1.290	-1414.	984.	13.2	7.720
.800	1.0	0.9045	0.0959	0.	2.17	1.131	0.480	0.375	2.357	3.018	1.281	-1416.	981.	13.2	7.703
.900	0.	0.9649	0.	0.0356	2.28	1.072	0.479	0.356	2.239	3.011	1.346	-1321.	1006.	13.9	7.966
.900	0.1	0.9637	0.0048	0.0320	2.29	1.071	0.478	0.355	2.242	3.007	1.341	-1323.	1005.	13.8	7.957
.900	0.2	0.9625	0.0095	0.0285	2.29	1.069	0.476	0.356	2.246	3.000	1.336	-1324.	1003.	13.8	7.948
.900	0.3	0.9610	0.0142	0.0250	2.29	1.068	0.475	0.357	2.249	2.994	1.331	-1325.	1001.	13.8	7.936
.900	0.4	0.9597	0.0189	0.0214	2.30	1.066	0.473	0.357	2.252	2.988	1.327	-1327.	1000.	13.8	7.927
.900	0.5	0.9586	0.0236	0.0179	2.30	1.065	0.472	0.357	2.255	2.981	1.322	-1328.	998.	13.7	7.918
.900	0.6	0.9575	0.0283	0.0143	2.30	1.064	0.471	0.358	2.259	2.974	1.317	-1329.	997.	13.7	7.910
.900	0.7	0.9564	0.0329	0.0107	2.31	1.063	0.470	0.358	2.262	2.968	1.313	-1331.	995.	13.7	7.901
.900	0.8	0.9554	0.0375	0.0072	2.31	1.062	0.469	0.358	2.265	2.961	1.308	-1332.	994.	13.6	7.892
.900	0.9	0.9544	0.0421	0.0036	2.31	1.060	0.467	0.359	2.268	2.956	1.303	-1333.	992.	13.6	7.884
.900	1.0	0.9534	0.0466	0.	2.31	1.059	0.466	0.359	2.272	2.950	1.299	-1335.	991.	13.6	7.875
.975	0.	0.9913	0.	0.0087	2.42	1.017	0.462	0.349	2.202	2.916	1.324	-1270.	1002.	13.9	8.026
.975	0.1	0.9911	0.0012	0.0078	2.42	1.016	0.462	0.349	2.203	2.914	1.323	-1270.	1001.	13.9	8.024
.975	0.2	0.9908	0.0023	0.0070	2.42	1.016	0.461	0.349	2.203	2.912	1.322	-1271.	1001.	13.9	8.022
.975	0.3	0.9905	0.0035	0.0061	2.42	1.016	0.461	0.349	2.204	2.911	1.321	-1271.	1001.	13.9	8.020
.975	0.4	0.9902	0.0046	0.0052	2.42	1.016	0.461	0.349	2.205	2.909	1.319	-1271.	1000.	13.9	8.017
.975	0.5	0.9899	0.0058	0.0044	2.42	1.015	0.460	0.349	2.206	2.908	1.318	-1272.	1000.	13.9	8.015
.975	0.6	0.9897	0.0069	0.0035	2.42	1.015	0.460	0.349	2.206	2.906	1.317	-1272.	1000.	13.9	8.013
.975	0.7	0.9894	0.0080	0.0026	2.42	1.015	0.460	0.349	2.207	2.905	1.316	-1272.	999.	13.9	8.011
.975	0.8	0.9891	0.0092	0.0017	2.42	1.014	0.459	0.349	2.208	2.903	1.315	-1273.	999.	13.9	8.009
.975	0.9	0.9888	0.0103	0.0009	2.42	1.014	0.459	0.350	2.209	2.902	1.314	-1273.	998.	13.9	8.007
.975	1.0	0.9886	0.0115	0.	2.42	1.014	0.459	0.350	2.210	2.900	1.312	-1273.	998.	13.9	8.005

TEMPERATURE = 160. R

Table 26. (cont.)

LIQUID MOLE FRACTION N2	AR/AR+O2	VAPOR MOLE FRACTION N2	AR	O2	PRESSURE ATM	EQUIL CONST N2	AR	O2	RELATIVE VOL N2/AR	N2/O2	AR/O2	ENTHALPY BTU/LB MOLE LIQ	VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	VAP
.	0.3	0.	0.3704	0.6207	1.00	3.459	1.265	0.887	2.736	3.902	1.426	-1917.	950.	12.2	6.616
.	0.4	0.	0.4760	0.5211	1.03	3.320	1.197	0.869	2.773	3.822	1.379	-1931.	927.	11.9	6.417
.	0.5	0.	0.5713	0.4287	1.07	3.211	1.143	0.857	2.810	3.745	1.333	-1946.	897.	11.7	6.231
.	0.6	0.	0.6590	0.3411	1.09	3.129	1.098	0.853	2.849	3.669	1.288	-1961.	869.	11.4	6.054
.	0.7	0.	0.7440	0.2561	1.12	3.069	1.063	0.854	2.887	3.595	1.245	-1976.	842.	11.1	5.881
.	0.8	0.	0.8280	0.1720	1.14	3.029	1.035	0.860	2.927	3.522	1.203	-1990.	816.	10.8	5.709
.	0.9	0.	0.9120	0.0872	1.16	3.009	1.014	0.872	2.966	3.451	1.163	-2005.	789.	10.5	5.534
.	1.0	0.	1.0000	0.	1.17	3.007	1.000	0.889	3.007	3.38	1.124	-2020.	762.	10.2	5.352
.025	0.2	0.0946	0.2461	0.6594	1.03	3.365	1.262	0.850	2.683	3.945	1.470	-1884.	999.	12.6	6.902
.025	0.3	0.0809	0.3481	0.5710	1.06	3.235	1.190	0.837	2.718	3.867	1.422	-1898.	967.	12.3	6.700
.025	0.4	0.0779	0.4412	0.4809	1.10	3.116	1.131	0.822	2.754	3.790	1.376	-1913.	937.	12.0	6.514
.025	0.5	0.0756	0.5278	0.3966	1.13	3.022	1.083	0.813	2.791	3.715	1.331	-1927.	909.	11.7	6.340
.025	0.6	0.0738	0.6103	0.3160	1.15	2.950	1.043	0.810	2.828	3.642	1.288	-1941.	883.	11.4	6.174
.025	0.7	0.0727	0.6903	0.2369	1.18	2.907	1.011	0.809	2.874	3.572	1.250	-1956.	859.	11.1	5.991
.025	0.8	0.0719	0.7690	0.1595	1.20	2.862	0.986	0.818	2.903	3.499	1.205	-1970.	833.	10.9	5.850
.025	0.9	0.0711	0.8482	0.0808	1.22	2.843	0.967	0.829	2.942	3.430	1.166	-1985.	808.	10.6	5.687
.025	1.0	0.0719	0.9281	0.	1.23	2.840	0.953	0.845	2.981	3.362	1.128	-1999.	782.	10.3	5.519
.100	0.	0.3063	0.	0.6935	1.14	3.065	1.192	0.771	2.572	3.978	1.547	-1803.	1073.	13.2	7.452
.100	0.1	0.2924	0.1031	0.6046	1.18	2.924	1.123	0.749	2.603	3.905	1.500	-1817.	1041.	13.0	7.253
.100	0.2	0.2808	0.1918	0.5274	1.22	2.808	1.066	0.733	2.635	3.833	1.455	-1830.	1012.	12.7	7.075
.100	0.3	0.2713	0.2740	0.4547	1.25	2.713	1.017	0.721	2.667	3.763	1.411	-1843.	985.	12.4	6.911
.100	0.4	0.2635	0.3514	0.3852	1.28	2.635	0.976	0.713	2.699	3.694	1.369	-1857.	961.	12.2	6.759
.100	0.5	0.2572	0.4237	0.3192	1.30	2.572	0.941	0.709	2.732	3.627	1.327	-1870.	937.	11.9	6.614
.100	0.6	0.2523	0.4926	0.2551	1.33	2.523	0.912	0.709	2.766	3.561	1.287	-1883.	915.	11.6	6.476
.100	0.7	0.2480	0.5595	0.1920	1.35	2.486	0.888	0.711	2.800	3.496	1.249	-1896.	894.	11.4	6.341
.100	0.8	0.2460	0.6250	0.1290	1.37	2.460	0.868	0.717	2.834	3.432	1.211	-1910.	873.	11.1	6.208
.100	0.9	0.2445	0.6903	0.0653	1.39	2.445	0.852	0.726	2.869	3.369	1.175	-1923.	853.	10.8	6.074
.100	1.0	0.2441	0.7561	0.	1.41	2.440	0.840	0.737	2.904	3.306	1.139	-1936.	832.	10.6	5.939
.200	0.	0.4881	0.	0.5120	1.40	2.440	0.970	0.640	2.517	3.813	1.515	-1734.	1067.	13.3	7.530
.200	0.1	0.4724	0.0743	0.4534	1.43	2.362	0.920	0.630	2.544	3.751	1.474	-1746.	1043.	13.1	7.393
.200	0.2	0.4591	0.1428	0.3982	1.46	2.296	0.893	0.622	2.572	3.690	1.435	-1758.	1021.	12.8	7.258
.200	0.3	0.4470	0.2087	0.3455	1.48	2.239	0.861	0.617	2.600	3.630	1.396	-1770.	1000.	12.6	7.133
.200	0.4	0.4385	0.2660	0.2947	1.51	2.192	0.834	0.614	2.628	3.571	1.359	-1782.	981.	12.4	7.014
.200	0.5	0.4317	0.3242	0.2452	1.53	2.153	0.811	0.613	2.657	3.513	1.322	-1793.	963.	12.1	6.900
.200	0.6	0.4244	0.3793	0.1965	1.55	2.122	0.790	0.614	2.685	3.455	1.287	-1805.	945.	11.9	6.791
.200	0.7	0.4194	0.4326	0.1481	1.57	2.097	0.773	0.617	2.715	3.398	1.252	-1817.	928.	11.7	6.684
.200	0.8	0.4156	0.4849	0.0995	1.59	2.079	0.758	0.622	2.744	3.344	1.218	-1829.	911.	11.4	6.579
.200	0.9	0.4134	0.5365	0.0503	1.61	2.067	0.745	0.628	2.774	3.290	1.186	-1841.	895.	11.2	6.475
.200	1.0	0.4122	0.5880	0.	1.63	2.061	0.735	0.637	2.804	3.236	1.154	-1853.	878.	11.0	6.370
.300	0.	0.6195	0.	0.3807	1.64	2.035	0.826	0.557	2.464	3.655	1.483	-1665.	1061.	13.4	7.624
.300	0.1	0.5965	0.0560	0.3477	1.66	1.980	0.799	0.552	2.487	3.603	1.449	-1676.	1043.	13.2	7.516
.300	0.2	0.5844	0.1086	0.3072	1.69	1.948	0.776	0.548	2.511	3.552	1.414	-1686.	1026.	13.0	7.413
.300	0.3	0.5739	0.1585	0.2676	1.71	1.913	0.755	0.546	2.535	3.501	1.381	-1696.	1010.	12.8	7.319
.300	0.4	0.5649	0.2061	0.2292	1.73	1.883	0.736	0.546	2.559	3.451	1.349	-1707.	994.	12.6	7.222
.300	0.5	0.5573	0.2517	0.1911	1.75	1.858	0.719	0.546	2.583	3.402	1.317	-1717.	980.	12.4	7.132
.300	0.6	0.5510	0.2950	0.1534	1.77	1.837	0.704	0.548	2.607	3.353	1.286	-1727.	965.	12.2	7.045
.300	0.7	0.5459	0.3387	0.1156	1.79	1.820	0.691	0.550	2.632	3.304	1.256	-1738.	952.	12.0	6.960
.300	0.8	0.5419	0.3807	0.0776	1.81	1.806	0.680	0.554	2.657	3.258	1.226	-1748.	938.	11.8	6.877
.300	0.9	0.5391	0.4220	0.0392	1.83	1.797	0.670	0.559	2.682	3.212	1.198	-1758.	925.	11.6	6.794
.300	1.0	0.5373	0.4630	0.	1.84	1.791	0.661	0.566	2.708	3.167	1.169	-1769.	912.	11.4	6.712
.400	0.	0.7004	0.	0.2996	1.87	1.751	0.726	0.500	2.412	3.504	1.453	-1597.	1055.	13.5	7.712
.400	0.1	0.6890	0.0425	0.2688	1.89	1.722	0.708	0.498	2.431	3.461	1.423	-1605.	1041.	13.3	7.629
.400	0.2	0.6789	0.0831	0.2383	1.91	1.697	0.692	0.496	2.451	3.419	1.395	-1614.	1028.	13.2	7.551
.400	0.3	0.6699	0.1228	0.2083	1.92	1.675	0.678	0.496	2.471	3.377	1.367	-1623.	1015.	13.0	7.475
.400	0.4	0.6621	0.1595	0.1787	1.94	1.655	0.664	0.496	2.491	3.336	1.339	-1632.	1003.	12.8	7.402
.400	0.5	0.6554	0.1957	0.1492	1.96	1.638	0.652	0.497	2.511	3.295	1.312	-1641.	991.	12.6	7.331
.400	0.6	0.6490	0.2308	0.1198	1.98	1.624	0.641	0.499	2.532	3.255	1.286	-1650.	980.	12.5	7.262
.400	0.7	0.6440	0.2653	0.0903	1.99	1.612	0.632	0.501	2.552	3.215	1.260	-1659.	969.	12.3	7.195
.400	0.8	0.6419	0.2989	0.0605	2.01	1.602	0.623	0.505	2.573	3.176	1.234	-1667.	958.	12.1	7.129
.400	0.9	0.6378	0.3320	0.0305	2.03	1.595	0.615	0.508	2.594	3.137	1.209	-1676.	947.	11.9	7.064
.400	1.0	0.6357	0.3646	0.	2.05	1.589	0.608	0.513	2.615	3.099	1.185	-1685.	937.	11.7	6.999
.500	0.	0.7716	0.	0.2285	2.09	1.542	0.653	0.459	2.361	3.359	1.423	-1528.	1047.	13.6	7.800
.500	0.1	0.7620	0.0321	0.2063	2.11	1.524	0.641	0.458	2.377	3.325	1.399	-1535.	1038.	13.5	7.738
.500	0.2	0.7540	0.0630	0.1833	2.12	1.508	0.630	0.458	2.393	3.291	1.375	-1542.	1028.	13.3	7.679
.500	0.3	0.7460	0.0930	0.1605	2.14	1.494	0.620	0.459	2.409	3.257	1.352	-1550.	1019.	13.2	7.621
.500	0.4	0.7404	0.1221	0.1376	2.15	1.481	0.611	0.459	2.425	3.224	1.329	-1557.	1009.	13.0	7.564
.500	0.5	0.7344	0.1509	0.1151	2.17	1.470	0.602	0.461	2.442	3.191	1.307	-1564.	1000.	12.9	7.510
.500	0.6	0.7296	0.1781	0.0924	2.18	1.460	0.594	0.462	2.458	3.159	1.285	-1572.	991.	12.7	7.456
.500	0.7	0.7255	0.2052	0.0696	2.20	1.451	0.586	0.464	2.475	3.126	1.263	-1579.	982.	12.6	7.403
.500	0.8	0.7219	0.2318	0.0467	2.21	1.444	0.579	0.467	2.492	3.095	1.242	-1587.	974.	12.4	7.352
.500	0.9	0.7190	0.2580	0.0235	2.23	1.438	0.573	0.469	2.508	3.063	1.221	-1594.	965.	12.3	7.301
.500	1.0	0.7166	0.2830	0.	2.24	1.433	0.568	0.473	2.525	3.032	1.201	-1601.	957.	12.1	7.251
.600	0.	0.8284	0.	0.1716	2.31	1.381	0.598	0.429	2.311	3.220	1.393	-1459.	1043.	13.7	7.881
.600	0.1	0.8223	0.0236	0.1545	2.32	1.371	0.590	0.429	2.323	3.194	1.375	-1465.	1035.	13.6	7.845
.600	0.2	0.8164	0.0466	0.1375	2.33	1.361	0.582	0.430	2.336	3.168	1.356	-1470.	1028.	13.5	7.801
.600	0.3	0.8119	0.0691	0.1205	2.34	1.352	0.575	0.430	2.348	3.142	1.338	-1476.	1020.	13.4	7.758
.600	0.4	0.8060	0.0910	0.1035	2.36	1.343	0.569	0.431	2.361	3.116	1.320	-1482.	1013.	13.2	7.716
.600	0.5	0.8015	0.1125	0.0866	2.37	1.336	0.563	0.432	2.374	3.091	1.302	-1488.	1006.	13.1	7.675
.600	0.6	0.7974	0.1336	0.0694	2.38	1.329	0.557	0.434	2.387	3.065	1.284	-1494.	999.	13.0	7.635
.600	0.7	0.7939	0.1544	0.0522	2.39	1.323	0.551	0.435	2.400	3.040	1.267	-1500.	993.	12.9	7.595
.600	0.8	0.7907	0.1748	0.0350	2.41	1.318	0.546	0.437	2.413	3.016	1.250	-1506.	986.	12.8	7.556
.600	0.9	0.7880	0.1949	0.0176	2.42	1.313	0.541	0.439	2.426	2.991	1.233	-1512.	980.	12.6	7.517
.600	1.0	0.7857	0.2148	0.	2.43	1.310	0.537	0.441	2.439	2.967	1.216	-1518.	973.	12.5	7.479
.700	0.	0.8781	0.	0.1219	2.52	1.254	0.555	0.406	2.262	3.087	1.365	-1390.	1037.	13.8	7.980
.700	0.1	0.8737	0.0165	0.1098	2.53	1.248	0.550	0.407	2.271	3.064	1.351	-1394.	1031.	13.7	7.948
.700	0.2	0.8696	0.0327	0.0978	2.54	1.242	0.545	0.407	2.280	3.040	1.337	-1399.	1026.	13.6	7.918
.700	0.3	0.8657	0.0486	0.0857	2.55	1.237	0.540	0.408	2.290	3.030	1.324	-1403.	1021.	13.5	7.887
.700	0.4	0.8621	0.0643	0.0736	2.56	1.232	0.536	0.409	2.299	3.012	1.310	-1407.	1016.	13.5	7.858
.700	0.5	0.8588	0.0797	0.0615	2.57	1.227	0.532	0.410	2.308	2.993	1.297	-1412.	1011.	13.4	7.828
.700	0.6	0.8558	0.0950	0.0493	2.58	1.223	0.528	0.411	2.317	2.975	1.284	-1416.	1006.	13.3	7.800
.700	0.7	0.8530	0.1100	0.0371	2.59	1.219	0.524	0.412	2.327	2.957	1.271	-1421.	1001.	13.2	7.771
.700	0.8	0.8504	0.1248	0.0248	2.60	1.215	0.520	0.413	2.336	2.939	1.258	-1425.	996.	13.1	7.743
.700	0.9	0.8481	0.1395	0.0124	2.61	1.212	0.517	0.415	2.346	2.921	1.245	-1429.	991.	13.0	7.716
.700	1.0	0.8461	0.1540	0.	2.62	1.209	0.513	0.416	2.355	2.903	1.233	-1434.	986.	12.9	7.688
.800	0.	0.9222	0.	0.0778	2.74	1.153	0.521	0.390	2.214	2.959	1.337	-1321.	1030.	13.9	8.076
.800	0.1	0.9195	0.0104	0.0702	2.74	1.149	0.518	0.390	2.220	2.947	1.327	-1324.	1027.	13.8	8.056
.800	0.2	0.9170	0.0206	0.0625	2.75	1.146	0.515	0.391	2.226	2.935	1.319	-1327.	1024.	13.8	8.037
.800	0.3	0.9146	0.0307	0.0548	2.76	1.143	0.512	0.391	2.232	2.923	1.310	-1330.	1020.	13.7	8.018
.800	0.4	0.9123	0.0408	0.0470	2.76	1.140	0.510	0.392	2.238	2.911	1.301	-1332.	1017.	13.7	8.000
.800	0.5	0.9101	0.0507	0.0392	2.77	1.138	0.507	0.392	2.244	2.899	1.292	-1335.	1014.	13.6	7.981
.800	0.6	0.9081	0.0605	0.0315	2.78	1.135	0.504	0.393	2.250	2.887	1.283	-1338.	1011.	13.5	7.963
.800	0.7	0.9061	0.0703	0.0236	2.78	1.133	0.502	0.394	2.256	2.875	1.275	-1341.	1007.	13.5	7.944
.800	0.8	0.9043	0.0800	0.0158	2.79	1.130	0.500	0.395	2.262	2.864	1.266	-1344.	1004.	13.4	7.926
.800	0.9	0.9026	0.0895	0.0079	2.80	1.128	0.497	0.396	2.268	2.852	1.257	-1347.	1001.	13.4	7.909
.800	1.0	0.9010	0.0990	0.	2.80	1.126	0.495	0.397	2.274	2.840	1.249	-1350.	998.	13.3	7.891
.900	0.	0.9623	0.	0.0377	2.96	1.069	0.493	0.377	2.167	2.837	1.309	-1252.	1024.	14.0	8.177
.900	0.1	0.9612	0.0049	0.0340	2.96	1.068	0.492	0.377	2.170	2.831	1.305	-1253.	1023.	14.0	8.168
.900	0.2	0.9601	0.0098	0.0302	2.96	1.067	0.491	0.378	2.173	2.825	1.300	-1255.	1021.	13.9	8.159
.900	0.3	0.9589	0.0147	0.0265	2.97	1.065	0.490	0.378	2.176	2.819	1.296	-1256.	1019.	13.9	8.150
.900	0.4	0.9579	0.0195	0.0227	2.97	1.064	0.488	0.378	2.179	2.814	1.291	-1258.	1018.	13.9	8.141
.900	0.5	0.9568	0.0244	0.0189	2.97	1.063	0.487	0.379	2.182	2.808	1.287	-1259.	1016.	13.9	8.132
.900	0.6	0.9558	0.0292	0.0152	2.98	1.062	0.486	0.379	2.185	2.802	1.283	-1261.	1015.	13.8	8.123
.900	0.7	0.9548	0.0339	0.0114	2.98	1.061	0.485	0.379	2.188	2.796	1.278	-1262.	1013.	13.8	8.115
.900	0.8	0.9538	0.0387	0.0076	2.98	1.060	0.484	0.380	2.191	2.791	1.274	-1264.	1012.	13.8	8.106
.900	0.9	0.9529	0.0434	0.0038	2.99	1.059	0.483	0.380	2.193	2.785	1.270	-1265.	1010.	13.7	8.097
.900	1.0	0.9519	0.0482	0.	2.99	1.058	[illegible]	0.381	2.196	2.779	1.265	-1266.	1008.	13.7	8.089
.975	0.	0.9908	0.	0.0092	3.12	1.016	0.477	0.370	2.132	2.749	1.289	-1200.	1020.	14.1	8.257
.975	0.1	0.9906	0.0012	0.0083	3.12	1.016	0.476	0.370	2.133	2.747	1.288	-1200.	1019.	14.1	8.255
.975	0.2	0.9903	0.0024	0.0074	3.12	1.016	0.476	0.370	2.134	2.745	1.287	-1201.	1019.	14.1	8.253
.975	0.3	0.9901	0.0036	0.0065	3.13	1.015	0.476	0.370	2.135	2.744	1.285	-1201.	1018.	14.0	8.251
.975	0.4	0.9898	0.0048	0.0056	3.13	1.015	0.475	0.370	2.135	2.743	1.284	-1201.	1018.	14.0	8.249
.975	0.5	0.9895	0.0059	0.0046	3.13	1.015	0.475	0.370	2.136	2.741	1.283	-1202.	1018.	14.0	8.247
.975	0.6	0.9893	0.0071	0.0037	3.13	1.015	0.475	0.370	2.137	2.740	1.282	-1202.	1017.	14.0	8.244
.975	0.7	0.9890	0.0083	0.0028	3.13	1.014	0.475	0.370	2.137	2.738	1.281	-1203.	1017.	14.0	8.242
.975	0.8	0.9888	0.0095	0.0019	3.13	1.014	0.474	0.371	2.138	2.737	1.280	-1203.	1016.	14.0	8.240
.975	0.9	0.9885	0.0107	0.0009	3.13	1.014	0.474	0.371	2.139	2.735	1.279	-1203.	1016.	14.0	8.238
.975	1.0	0.9883	0.0118	0.	3.13	1.014	0.474	0.371	2.140	2.734	1.278	-1204.	1016.	14.0	8.236

TEMPERATURE = 165. R

Table 26. (cont.)

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0001	1.16	3.865	1.535	1.001	2.519	3.865	1.534	-1807.	1107.	13.2	7.452
.	0.1	0.	0.1417	0.8584	1.22	3.613	1.417	0.954	2.551	3.789	1.485	-1823.	1080.	12.9	7.173
.	0.2	0.	0.2645	0.7356	1.28	3.415	1.322	0.920	2.583	3.714	1.438	-1839.	1020.	12.6	6.931
.	0.3	0.	0.3737	0.6264	1.33	3.256	1.246	0.895	2.615	3.641	1.392	-1855.	983.	12.4	6.719
.	0.4	0.	0.4733	0.5268	1.37	3.134	1.183	0.878	2.648	3.569	1.348	-1871.	951.	12.1	6.517
.	0.5	0.	0.5662	0.4339	1.41	3.037	1.132	0.868	2.682	3.499	1.305	-1888.	920.	11.8	6.331
.	0.6	0.	0.6546	0.3455	1.44	2.963	1.091	0.864	2.716	3.430	1.263	-1904.	891.	11.5	6.153
.	0.7	0.	0.7406	0.2595	1.47	2.909	1.058	0.865	2.750	3.363	1.223	-1920.	863.	11.2	5.979
.	0.8	0.	0.8257	0.1744	1.50	2.874	1.032	0.872	2.785	3.297	1.184	-1936.	835.	11.0	5.809
.	0.9	0.	0.9117	0.0884	1.52	2.857	1.013	0.884	2.820	3.232	1.146	-1952.	807.	10.7	5.627
.	1.0	0.	1.0001	0.	1.54	2.856	1.000	0.901	2.856	3.169	1.110	-1968.	778.	10.4	5.443
.025	0.	0.0893	0.	0.9107	1.26	3.574	1.426	0.934	2.506	3.826	1.527	-1789.	1115.	13.2	7.475
.025	0.1	0.0841	0.1293	0.7867	1.31	3.364	1.326	0.897	2.537	3.752	1.479	-1805.	1062.	13.0	7.222
.025	0.2	0.0799	0.2427	0.6775	1.35	3.196	1.245	0.869	2.568	3.680	1.433	-1821.	1025.	12.7	6.999
.025	0.3	0.0770	0.3451	0.5776	1.39	3.078	1.180	0.846	2.609	3.627	1.394	-1837.	992.	12.4	6.768
.025	0.4	0.0739	0.4379	0.4883	1.44	2.955	1.123	0.835	2.632	3.540	1.345	-1852.	960.	12.1	6.613
.025	0.5	0.0718	0.5253	0.4030	1.48	2.871	1.078	0.827	2.664	3.472	1.303	-1868.	931.	11.9	6.439
.025	0.6	0.0701	0.6086	0.3213	1.51	2.808	1.040	0.824	2.697	3.406	1.263	-1884.	904.	11.6	6.271
.025	0.7	0.0690	0.6896	0.2415	1.54	2.758	1.010	0.826	2.730	3.340	1.224	-1900.	877.	11.3	6.107
.025	0.8	0.0682	0.7696	0.1623	1.57	2.727	0.987	0.832	2.764	3.276	1.186	-1915.	851.	11.0	5.944
.025	0.9	0.0678	0.8501	0.0822	1.59	2.711	0.969	0.842	2.798	3.214	1.149	-1931.	825.	10.8	5.779
.025	1.0	0.0677	0.9324	0.	1.61	2.709	0.956	0.859	2.832	3.153	1.113	-1947.	798.	10.5	5.617
.100	0.	0.2920	0.	0.7082	1.50	2.920	1.183	0.787	2.468	3.710	1.504	-1737.	1099.	13.3	7.640
.100	0.1	0.2701	0.1097	0.6203	1.55	2.701	1.118	0.766	2.496	3.645	1.459	-1752.	1066.	13.1	7.393
.100	0.2	0.2685	0.1915	0.5401	1.59	2.685	1.064	0.750	2.524	3.580	1.418	-1766.	1036.	12.8	7.176
.100	0.3	0.2611	0.2749	0.4637	1.63	2.611	1.019	0.738	2.554	3.517	1.377	-1781.	1010.	12.6	6.976
.100	0.4	0.2527	0.3524	0.3951	1.67	2.527	0.979	0.732	2.582	3.454	1.338	-1795.	982.	12.3	6.840
.100	0.5	0.2470	0.4256	0.3276	1.70	2.470	0.946	0.728	2.611	3.393	1.299	-1810.	958.	12.1	6.714
.100	0.6	0.2425	0.4958	0.2619	1.73	2.425	0.919	0.728	2.641	3.333	1.262	-1825.	935.	11.8	6.574
.100	0.7	0.2391	0.5639	0.1972	1.76	2.391	0.899	0.730	2.671	3.274	1.226	-1839.	913.	11.6	6.437
.100	0.8	0.2367	0.6310	0.1325	1.78	2.367	0.876	0.736	2.701	3.216	1.191	-1854.	891.	11.3	6.301
.100	0.9	0.2353	0.6978	0.0670	1.81	2.353	0.861	0.745	2.732	3.159	1.156	-1868.	869.	11.1	6.169
.100	1.0	0.2349	0.7652	0.	1.83	2.349	0.850	0.757	2.763	3.104	1.123	-1883.	847.	10.8	6.036
.200	0.	0.4711	0.	0.5290	1.81	2.356	0.974	0.661	2.418	3.562	1.473	-1668.	1092.	13.4	7.651
.200	0.1	0.4566	0.0748	0.4686	1.85	2.283	0.935	0.651	2.442	3.506	1.436	-1681.	1067.	13.2	7.508
.200	0.2	0.4442	0.1441	0.4119	1.88	2.221	0.900	0.644	2.467	3.451	1.399	-1694.	1044.	13.0	7.372
.200	0.3	0.4337	0.2089	0.3576	1.92	2.169	0.870	0.639	2.492	3.396	1.363	-1706.	1022.	12.8	7.249
.200	0.4	0.4250	0.2701	0.3051	1.95	2.125	0.844	0.636	2.517	3.343	1.328	-1719.	1002.	12.5	7.129
.200	0.5	0.4177	0.3286	0.2539	1.98	2.089	0.821	0.635	2.542	3.290	1.294	-1732.	983.	12.3	7.010
.200	0.6	0.4118	0.3849	0.2035	2.01	2.059	0.802	0.636	2.568	3.238	1.261	-1745.	964.	12.1	6.899
.200	0.7	0.4073	0.4396	0.1533	2.03	2.036	0.785	0.639	2.594	3.187	1.229	-1758.	946.	11.9	6.790
.200	0.8	0.4039	0.4933	0.1030	2.06	2.020	0.771	0.644	2.620	3.137	1.197	-1771.	928.	11.6	6.683
.200	0.9	0.4017	0.5465	0.0520	2.08	2.009	0.759	0.651	2.647	3.088	1.167	-1784.	910.	11.4	6.576
.200	1.0	0.4007	0.5996	0.	2.10	2.004	0.749	0.659	2.673	3.039	1.137	-1797.	893.	11.2	6.468
.300	0.	0.5946	0.	0.4057	2.11	1.982	0.837	0.587	2.368	3.420	1.444	-1598.	1087.	13.5	7.754
.300	0.1	0.5815	0.0560	0.3620	2.14	1.938	0.811	0.579	2.390	3.373	1.411	-1609.	1066.	13.3	7.645
.300	0.2	0.5701	0.1103	0.3199	2.17	1.900	0.788	0.571	2.411	3.326	1.380	-1621.	1048.	13.1	7.541
.300	0.3	0.5602	0.1612	0.2789	2.20	1.867	0.768	0.569	2.432	3.280	1.349	-1632.	1031.	13.0	7.443
.300	0.4	0.5517	0.2099	0.2380	2.23	1.839	0.749	0.568	2.454	3.235	1.318	-1643.	1015.	12.8	7.348
.300	0.5	0.5445	0.2566	0.1991	2.25	1.815	0.733	0.569	2.475	3.190	1.289	-1655.	999.	12.6	7.257
.300	0.6	0.5386	0.3020	0.1598	2.27	1.795	0.719	0.571	2.497	3.146	1.259	-1666.	984.	12.4	7.168
.300	0.7	0.5338	0.3461	0.1204	2.30	1.779	0.706	0.573	2.519	3.103	1.232	-1677.	969.	12.2	7.082
.300	0.8	0.5301	0.3894	0.0808	2.32	1.767	0.695	0.577	2.542	3.061	1.204	-1689.	955.	12.0	6.996
.300	0.9	0.5275	0.4321	0.0408	2.34	1.758	0.686	0.583	2.564	3.019	1.177	-1700.	941.	11.8	6.911
.300	1.0	0.5259	0.4744	0.	2.36	1.753	0.678	0.589	2.587	2.977	1.151	-1711.	927.	11.6	6.827
.400	0.	0.6867	0.	0.3137	2.40	1.717	0.740	0.523	2.321	3.284	1.415	-1528.	1077.	13.7	7.860
.400	0.1	0.6759	0.0433	0.2812	2.42	1.690	0.722	0.521	2.339	3.245	1.387	-1538.	1063.	13.5	7.776
.400	0.2	0.6662	0.0848	0.2493	2.45	1.666	0.707	0.519	2.356	3.206	1.361	-1548.	1049.	13.3	7.697
.400	0.3	0.6578	0.1247	0.2180	2.47	1.644	0.693	0.519	2.374	3.168	1.335	-1558.	1036.	13.1	7.620
.400	0.4	0.6504	0.1631	0.1869	2.49	1.626	0.680	0.519	2.392	3.131	1.309	-1567.	1023.	13.0	7.546
.400	0.5	0.6440	0.2004	0.1561	2.51	1.610	0.668	0.520	2.410	3.094	1.284	-1577.	1010.	12.8	7.474
.400	0.6	0.6385	0.2366	0.1253	2.53	1.596	0.657	0.522	2.428	3.057	1.259	-1587.	998.	12.6	7.404
.400	0.7	0.6340	0.2721	0.0944	2.56	1.585	0.648	0.525	2.447	3.021	1.235	-1597.	986.	12.5	7.335
.400	0.8	0.6303	0.3068	0.0633	2.58	1.576	0.639	0.528	2.465	2.985	1.211	-1606.	975.	12.3	7.267
.400	0.9	0.6275	0.3411	0.0319	2.60	1.569	0.632	0.532	2.484	2.950	1.188	-1616.	963.	12.1	7.200
.400	1.0	0.6256	0.3749	0.	2.62	1.564	0.625	0.536	2.503	2.915	1.165	-1626.	952.	12.0	7.134
.500	0.	0.7592	0.	0.2408	2.68	1.518	0.666	0.482	2.274	3.153	1.386	-1458.	1070.	13.8	7.963
.500	0.1	0.7508	0.0328	0.2165	2.70	1.502	0.656	0.481	2.289	3.122	1.364	-1467.	1059.	13.6	7.900
.500	0.2	0.7432	0.0645	0.1924	2.72	1.486	0.645	0.481	2.303	3.091	1.342	-1475.	1048.	13.5	7.840
.500	0.3	0.7363	0.0953	0.1684	2.73	1.473	0.635	0.481	2.317	3.060	1.321	-1483.	1038.	13.3	7.781
.500	0.4	0.7302	0.1253	0.1446	2.75	1.460	0.626	0.482	2.332	3.030	1.299	-1492.	1028.	13.2	7.724
.500	0.5	0.7248	0.1544	0.1208	2.77	1.450	0.618	0.483	2.347	3.000	1.279	-1500.	1018.	13.1	7.668
.500	0.6	0.7201	0.1830	0.0970	2.79	1.440	0.610	0.485	2.361	2.971	1.258	-1508.	1008.	12.9	7.614
.500	0.7	0.7161	0.2109	0.0730	2.81	1.432	0.603	0.487	2.376	2.941	1.238	-1516.	999.	12.8	7.560
.500	0.8	0.7127	0.2384	0.0489	2.83	1.425	0.596	0.489	2.391	2.912	1.218	-1524.	990.	12.6	7.507
.500	0.9	0.7099	0.2655	0.0246	2.84	1.420	0.590	0.492	2.406	2.884	1.198	-1532.	981.	12.5	7.455
.500	1.0	0.7078	0.2923	0.	2.86	1.416	0.585	0.496	2.421	2.855	1.179	-1540.	972.	12.4	7.403
.600	0.	0.8196	0.	0.1805	2.95	1.366	0.613	0.451	2.228	3.027	1.359	-1390.	1062.	13.9	8.073
.600	0.1	0.8134	0.0242	0.1625	2.96	1.356	0.605	0.451	2.239	3.003	1.341	-1396.	1054.	13.8	8.027
.600	0.2	0.8077	0.0478	0.1446	2.98	1.346	0.598	0.452	2.251	2.979	1.324	-1403.	1046.	13.7	7.982
.600	0.3	0.8024	0.0709	0.1267	2.99	1.337	0.591	0.452	2.262	2.956	1.307	-1409.	1039.	13.5	7.938
.600	0.4	0.7977	0.0936	0.1088	3.01	1.329	0.585	0.453	2.273	2.933	1.290	-1416.	1031.	13.4	7.896
.600	0.5	0.7934	0.1158	0.0909	3.03	1.322	0.579	0.455	2.285	2.909	1.273	-1422.	1024.	13.3	7.854
.600	0.6	0.7896	0.1375	0.0729	3.04	1.316	0.573	0.456	2.296	2.886	1.257	-1429.	1016.	13.2	7.812
.600	0.7	0.7862	0.1590	0.0549	3.06	1.310	0.568	0.458	2.308	2.864	1.241	-1435.	1009.	13.1	7.773
.600	0.8	0.7832	0.1801	0.0368	3.07	1.305	0.563	0.459	2.319	2.841	1.225	-1441.	1002.	13.0	7.733
.600	0.9	0.7807	0.2009	0.0185	3.09	1.301	0.558	0.462	2.331	2.819	1.209	-1448.	995.	12.9	7.693
.600	1.0	0.7785	0.2215	0.	3.10	1.298	0.554	0.464	2.343	2.796	1.194	-1454.	988.	12.8	7.654
.700	0.	0.8716	0.	0.1285	3.22	1.245	0.574	0.428	2.183	2.906	1.331	-1320.	1055.	14.0	8.187
.700	0.1	0.8673	0.0170	0.1158	3.23	1.239	0.569	0.429	2.191	2.889	1.318	-1325.	1050.	13.9	8.155
.700	0.2	0.8634	0.0336	0.1031	3.24	1.233	0.565	0.429	2.200	2.872	1.306	-1330.	1044.	13.8	8.124
.700	0.3	0.8597	0.0501	0.0903	3.25	1.228	0.561	0.430	2.208	2.855	1.293	-1335.	1038.	13.7	8.094
.700	0.4	0.8563	0.0662	0.0776	3.27	1.223	0.556	0.431	2.216	2.838	1.281	-1340.	1033.	13.7	8.064
.700	0.5	0.8531	0.0822	0.0648	3.28	1.219	0.552	0.432	2.225	2.821	1.268	-1344.	1028.	13.6	8.034
.700	0.6	0.8501	0.0979	0.0520	3.29	1.215	0.548	0.433	2.233	2.805	1.256	-1349.	1022.	13.5	8.005
.700	0.7	0.8476	0.1134	0.0391	3.30	1.211	0.544	0.434	2.241	2.788	1.244	-1354.	1017.	13.4	7.976
.700	0.8	0.8452	0.1288	0.0261	3.31	1.207	0.540	0.436	2.250	2.771	1.232	-1359.	1012.	13.3	7.947
.700	0.9	0.8430	0.1440	0.0131	3.33	1.204	0.537	0.437	2.258	2.755	1.220	-1364.	1007.	13.2	7.919
.700	1.0	0.8411	0.1590	0.	3.34	1.202	0.533	0.439	2.267	2.739	1.208	-1369.	1001.	13.2	7.891
.800	0.	0.9179	0.	0.0822	3.48	1.147	0.536	0.411	2.139	2.791	1.305	-1251.	1048.	14.1	8.307
.800	0.1	0.9154	0.0107	0.0741	3.50	1.144	0.534	0.412	2.144	2.779	1.296	-1254.	1044.	14.1	8.288
.800	0.2	0.9129	0.0212	0.0660	3.51	1.141	0.531	0.412	2.150	2.768	1.288	-1257.	1041.	14.0	8.268
.800	0.3	0.9106	0.0317	0.0578	3.51	1.138	0.528	0.413	2.155	2.758	1.280	-1260.	1037.	13.9	8.249
.800	0.4	0.9085	0.0421	0.0496	3.52	1.136	0.526	0.413	2.160	2.747	1.271	-1264.	1034.	13.9	8.230
.800	0.5	0.9064	0.0523	0.0414	3.53	1.133	0.523	0.414	2.166	2.736	1.263	-1267.	1030.	13.8	8.211
.800	0.6	0.9045	0.0625	0.0332	3.54	1.131	0.521	0.415	2.171	2.725	1.255	-1270.	1027.	13.8	8.193
.800	0.7	0.9026	0.0726	0.0249	3.55	1.128	0.518	0.416	2.177	2.714	1.247	-1273.	1023.	13.7	8.175
.800	0.8	0.9009	0.0826	0.0167	3.56	1.126	0.516	0.417	2.182	2.703	1.239	-1277.	1020.	13.7	8.156
.800	0.9	0.8993	0.0925	0.0083	3.56	1.124	0.514	0.417	2.188	2.693	1.231	-1280.	1016.	13.6	8.138
.800	1.0	0.8978	0.1023	0.	3.57	1.122	0.512	0.418	2.193	2.682	1.223	-1283.	1013.	13.5	8.120
.900	0.	0.9603	0.	0.0398	3.76	1.067	0.509	0.398	2.095	2.679	1.279	-1181.	1040.	14.2	8.435
.900	0.1	0.9592	0.0051	0.0359	3.77	1.066	0.508	0.399	2.098	2.674	1.274	-1183.	1039.	14.2	8.426
.900	0.2	0.9581	0.0101	0.0319	3.77	1.065	0.507	0.399	2.101	2.669	1.270	-1184.	1037.	14.2	8.417
.900	0.3	0.9571	0.0152	0.0279	3.78	1.063	0.506	0.399	2.103	2.663	1.266	-1186.	1035.	14.1	8.408
.900	0.4	0.9560	0.0202	0.0240	3.78	1.062	0.504	0.400	2.106	2.658	1.262	-1188.	1033.	14.1	8.399
.900	0.5	0.9550	0.0252	0.0200	3.79	1.061	0.503	0.400	2.109	2.653	1.258	-1189.	1032.	14.1	8.390
.900	0.6	0.9540	0.0301	0.0160	3.79	1.060	0.502	0.400	2.111	2.647	1.254	-1191.	1030.	14.1	8.381
.900	0.7	0.9531	0.0351	0.0120	3.79	1.059	0.501	0.401	2.114	2.642	1.250	-1193.	1028.	14.0	8.373
.900	0.8	0.9522	0.0400	0.0080	3.80	1.058	0.500	0.401	2.117	2.637	1.246	-1194.	1027.	14.0	8.364
.900	0.9	0.9513	0.0449	0.0040	3.80	1.057	0.499	0.402	2.119	2.632	1.242	-1196.	1025.	14.0	8.355
.900	1.0	0.9504	0.0498	0.	3.81	1.056	0.498	0.402	2.122	2.627	1.238	-1197.	1023.	13.9	8.346
.975	0.	0.9904	0.	0.0098	3.97	1.016	0.492	0.391	2.063	2.599	1.259	-1129.	1034.	14.3	8.538
.975	0.1	0.9902	0.0012	0.0088	3.98	1.016	0.492	0.391	2.064	2.597	1.258	-1130.	1034.	14.3	8.535
.975	0.2	0.9899	0.0025	0.0078	3.98	1.015	0.492	0.391	2.065	2.596	1.257	-1130.	1034.	14.3	8.533
.975	0.3	0.9897	0.0037	0.0068	3.98	1.015	0.491	0.391	2.065	2.595	1.256	-1130.	1033.	14.3	8.531
.975	0.4	0.9894	0.0049	0.0059	3.98	1.015	0.491	0.391	2.066	2.593	1.255	-1131.	1033.	14.3	8.529
.975	0.5	0.9892	0.0061	0.0049	3.98	1.015	0.491	0.391	2.067	2.592	1.254	-1131.	1032.	14.3	8.527
.975	0.6	0.9889	0.0074	0.0039	3.98	1.014	0.491	0.391	2.067	2.591	1.253	-1132.	1032.	14.3	8.525
.975	0.7	0.9887	0.0086	0.0029	3.98	1.014	0.490	0.392	2.068	2.590	1.252	-1132.	1032.	14.3	8.523
.975	0.8	0.9885	0.0098	0.0020	3.98	1.014	0.490	0.392	2.069	2.588	1.251	-1132.	1031.	14.3	8.520
.975	0.9	0.9882	0.0110	0.0010	3.99	1.014	0.490	0.392	2.069	2.587	1.250	-1133.	1031.	14.2	8.518
.975	1.0	0.9880	0.0122	0.	3.99	1.013	0.490	0.392	2.070	2.586	1.249	-1133.	1030.	14.2	8.516

Table 26. (cont.)

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0001	1.53	3.611	1.496	1.000	2.414	3.611	1.496	-1740.	1133.	13.2	7.546
.	0.1	0.	0.1388	0.8613	1.60	3.389	1.388	0.957	2.442	3.541	1.450	-1758.	1088.	13.0	7.277
.	0.2	0.	0.2601	0.7400	1.67	3.213	1.301	0.929	2.471	3.474	1.405	-1776.	1044.	12.7	7.040
.	0.3	0.	0.3688	0.6313	1.73	3.073	1.229	0.902	2.500	3.407	1.363	-1793.	1007.	12.5	6.827
.	0.4	0.	0.4684	0.5317	1.78	2.962	1.171	0.886	2.529	3.342	1.322	-1811.	973.	12.2	6.631
.	0.5	0.	0.5617	0.4384	1.83	2.875	1.123	0.877	2.559	3.279	1.281	-1828.	941.	11.9	6.449
.	0.6	0.	0.6509	0.3493	1.87	2.808	1.085	0.873	2.589	3.216	1.242	-1846.	911.	11.7	6.267
.	0.7	0.	0.7377	0.2625	1.90	2.760	1.054	0.875	2.619	3.155	1.205	-1863.	881.	11.4	6.091
.	0.8	0.	0.8238	0.1763	1.94	2.729	1.030	0.882	2.650	3.095	1.168	-1881.	852.	11.2	5.915
.	0.9	0.	0.9108	0.0894	1.96	2.713	1.012	0.894	2.681	3.036	1.132	-1898.	823.	10.9	5.736
.	1.0	0.	1.0002	0.	1.98	2.713	1.000	0.911	2.713	2.979	1.098	-1916.	793.	10.7	5.556
.025	0.	0.0840	0.	0.9161	1.63	3.359	1.388	0.940	2.402	3.575	1.488	-1723.	1131.	13.3	7.548
.025	0.1	0.0793	0.1273	0.7935	1.70	3.173	1.306	0.904	2.430	3.509	1.444	-1740.	1087.	13.0	7.328
.025	0.2	0.0756	0.2399	0.6847	1.76	3.023	1.230	0.878	2.457	3.443	1.401	-1757.	1049.	12.8	7.109
.025	0.3	0.0725	0.3415	0.5861	1.82	2.902	1.168	0.859	2.485	3.379	1.360	-1774.	1014.	12.5	6.910
.025	0.4	0.0701	0.4352	0.4948	1.87	2.805	1.116	0.845	2.514	3.316	1.319	-1791.	982.	12.3	6.726
.025	0.5	0.0682	0.5232	0.4088	1.92	2.729	1.073	0.836	2.543	3.254	1.280	-1808.	952.	12.0	6.552
.025	0.6	0.0668	0.6074	0.3260	1.96	2.670	1.038	0.834	2.572	3.194	1.242	-1826.	923.	11.8	6.384
.025	0.7	0.0657	0.6894	0.2452	1.99	2.627	1.011	0.838	2.601	3.135	1.205	-1843.	895.	11.5	6.219
.025	0.8	0.0650	0.7705	0.1647	2.02	2.599	0.988	0.845	2.631	3.077	1.169	-1860.	868.	11.3	6.053
.025	0.9	0.0646	0.8522	0.0834	2.05	2.584	0.971	0.858	2.661	3.020	1.135	-1877.	840.	11.0	5.885
.025	1.0	0.0646	0.9356	0.	2.07	2.583	0.960	0.872	2.692	2.964	1.101	-1894.	813.	10.8	5.712
.100	0.	0.2784	0.	0.7216	1.93	2.784	1.176	0.802	2.367	3.471	1.466	-1670.	1124.	13.4	7.662
.100	0.1	0.2667	0.1003	0.6330	1.99	2.667	1.115	0.782	2.392	3.412	1.426	-1686.	1090.	13.2	7.469
.100	0.2	0.2570	0.1914	0.5519	2.05	2.570	1.063	0.766	2.417	3.353	1.387	-1702.	1056.	12.9	7.293
.100	0.3	0.2490	0.2752	0.4760	2.10	2.490	1.019	0.756	2.443	3.296	1.349	-1718.	1036.	12.7	7.130
.100	0.4	0.2424	0.3536	0.4042	2.14	2.424	0.982	0.749	2.469	3.239	1.312	-1733.	1003.	12.5	6.977
.100	0.5	0.2372	0.4278	0.3353	2.18	2.372	0.951	0.745	2.495	3.183	1.276	-1749.	977.	12.2	6.831
.100	0.6	0.2330	0.4991	0.2681	2.22	2.330	0.924	0.745	2.521	3.128	1.241	-1765.	953.	12.0	6.690
.100	0.7	0.2299	0.5685	0.2019	2.25	2.299	0.902	0.748	2.548	3.075	1.207	-1781.	929.	11.8	6.551
.100	0.8	0.2277	0.6369	0.1356	2.28	2.277	0.885	0.754	2.575	3.022	1.174	-1797.	906.	11.5	6.413
.100	0.9	0.2265	0.7052	0.0684	2.31	2.265	0.871	0.763	2.602	2.970	1.142	-1812.	883.	11.3	6.274
.100	1.0	0.2262	0.7741	0.	2.34	2.262	0.860	0.775	2.629	2.921	1.111	-1828.	860.	11.1	6.132
.200	0.	0.4550	0.	0.5453	2.32	2.275	0.980	0.682	2.321	3.334	1.438	-1600.	1115.	13.5	7.781
.200	0.1	0.4414	0.0784	0.4802	2.36	2.207	0.942	0.672	2.343	3.287	1.403	-1614.	1085.	13.3	7.637
.200	0.2	0.4299	0.1454	0.4251	2.41	2.149	0.909	0.664	2.365	3.236	1.368	-1628.	1065.	13.1	7.503
.200	0.3	0.4201	0.2112	0.3691	2.45	2.100	0.880	0.659	2.387	3.187	1.335	-1642.	1043.	12.9	7.377
.200	0.4	0.4119	0.2735	0.3150	2.49	2.059	0.855	0.656	2.410	3.138	1.302	-1656.	1021.	12.7	7.256
.200	0.5	0.4051	0.3331	0.2622	2.52	2.025	0.833	0.655	2.432	3.091	1.271	-1670.	1001.	12.5	7.140
.200	0.6	0.3996	0.3907	0.2101	2.56	1.998	0.814	0.657	2.455	3.043	1.239	-1684.	981.	12.3	7.027
.200	0.7	0.3954	0.4467	0.1583	2.59	1.977	0.798	0.660	2.478	2.997	1.209	-1698.	962.	12.1	6.916
.200	0.8	0.3923	0.5018	0.1063	2.62	1.961	0.784	0.665	2.501	2.951	1.180	-1712.	943.	11.9	6.808
.200	0.9	0.3903	0.5564	0.0537	2.65	1.951	0.773	0.671	2.525	2.906	1.151	-1726.	924.	11.7	6.697
.200	1.0	0.3893	0.6111	0.	2.67	1.947	0.764	0.680	2.549	2.862	1.123	-1741.	906.	11.5	6.586
.300	0.	0.5763	0.	0.4212	2.68	1.931	0.848	0.602	2.277	3.209	1.410	-1530.	1107.	13.7	7.904
.300	0.1	0.5669	0.0576	0.3760	2.72	1.890	0.823	0.597	2.295	3.166	1.380	-1542.	1087.	13.5	7.795
.300	0.2	0.5581	0.1121	0.3323	2.76	1.854	0.801	0.593	2.314	3.124	1.350	-1555.	1068.	13.3	7.691
.300	0.3	0.5467	0.1640	0.2897	2.79	1.822	0.781	0.591	2.333	3.082	1.321	-1567.	1050.	13.1	7.592
.300	0.4	0.5385	0.2137	0.2479	2.82	1.795	0.763	0.590	2.352	3.041	1.293	-1579.	1032.	12.9	7.493
.300	0.5	0.5317	0.2616	0.2068	2.85	1.772	0.747	0.591	2.371	3.000	1.265	-1591.	1016.	12.8	7.401
.300	0.6	0.5261	0.3081	0.1659	2.88	1.754	0.734	0.592	2.391	2.960	1.238	-1604.	1000.	12.6	7.311
.300	0.7	0.5216	0.3534	0.1250	2.91	1.739	0.721	0.595	2.410	2.920	1.212	-1616.	984.	12.4	7.222
.300	0.8	0.5181	0.3980	0.0839	2.94	1.727	0.711	0.599	2.430	2.881	1.186	-1628.	969.	12.2	7.135
.300	0.9	0.5157	0.4420	0.0423	2.97	1.719	0.702	0.605	2.450	2.843	1.160	-1641.	954.	12.0	7.049
.300	1.0	0.5143	0.4858	0.	2.99	1.714	0.694	0.611	2.470	2.805	1.136	-1653.	939.	11.9	6.961
.400	0.	0.6729	0.	0.3271	3.03	1.682	0.754	0.545	2.232	3.086	1.382	-1460.	1098.	13.8	8.026
.400	0.1	0.6626	0.0442	0.2933	3.06	1.656	0.737	0.543	2.248	3.050	1.357	-1471.	1082.	13.7	7.943
.400	0.2	0.6534	0.0866	0.2601	3.09	1.634	0.722	0.542	2.264	3.015	1.332	-1481.	1068.	13.5	7.862
.400	0.3	0.6453	0.1274	0.2273	3.12	1.613	0.708	0.541	2.280	2.980	1.307	-1492.	1054.	13.3	7.785
.400	0.4	0.6383	0.1668	0.1950	3.15	1.596	0.695	0.542	2.296	2.946	1.283	-1502.	1040.	13.2	7.710
.400	0.5	0.6322	0.2051	0.1628	3.18	1.580	0.684	0.543	2.312	2.913	1.260	-1513.	1027.	13.0	7.637
.400	0.6	0.6270	0.2424	0.1307	3.20	1.568	0.673	0.544	2.328	2.879	1.237	-1523.	1014.	12.9	7.566
.400	0.7	0.6227	0.2788	0.0985	3.23	1.557	0.664	0.547	2.344	2.846	1.214	-1534.	1001.	12.7	7.496
.400	0.8	0.6193	0.3148	0.0660	3.25	1.548	0.656	0.550	2.361	2.814	1.192	-1544.	989.	12.6	7.427
.400	0.9	0.6167	0.3502	0.0333	3.28	1.542	0.648	0.554	2.378	2.781	1.170	-1555.	976.	12.4	7.358
.400	1.0	0.6149	0.3852	0.	3.30	1.537	0.642	0.559	2.394	2.750	1.148	-1565.	964.	12.3	7.290
.500	0.	0.7480	0.	0.2521	3.38	1.495	0.683	0.504	2.189	2.967	1.355	-1390.	1089.	14.0	8.155
.500	0.1	0.7399	0.0336	0.2266	3.40	1.480	0.672	0.504	2.202	2.939	1.334	-1399.	1077.	13.8	8.092
.500	0.2	0.7326	0.0661	0.2014	3.42	1.465	0.661	0.503	2.215	2.910	1.314	-1407.	1066.	13.7	8.031
.500	0.3	0.7260	0.0978	0.1763	3.45	1.452	0.652	0.504	2.228	2.883	1.294	-1416.	1055.	13.6	7.972
.500	0.4	0.7202	0.1286	0.1514	3.47	1.440	0.643	0.505	2.241	2.855	1.274	-1425.	1044.	13.4	7.914
.500	0.5	0.7150	0.1586	0.1264	3.49	1.430	0.634	0.506	2.254	2.828	1.255	-1434.	1034.	13.3	7.858
.500	0.6	0.7106	0.1881	0.1015	3.52	1.421	0.627	0.507	2.267	2.801	1.235	-1442.	1024.	13.2	7.802
.500	0.7	0.7067	0.2169	0.0764	3.54	1.413	0.620	0.510	2.280	2.774	1.216	-1451.	1014.	13.1	7.748
.500	0.8	0.7035	0.2454	0.0512	3.56	1.407	0.613	0.512	2.294	2.747	1.198	-1460.	1004.	12.9	7.694
.500	0.9	0.7009	0.2734	0.0258	3.58	1.402	0.608	0.515	2.307	2.721	1.179	-1469.	994.	12.8	7.641
.500	1.0	0.6989	0.3012	0.	3.60	1.398	0.602	0.519	2.321	2.695	1.161	-1478.	984.	12.7	7.588
.600	0.	0.8107	0.	0.1894	3.71	1.351	0.629	0.474	2.147	2.853	1.329	-1320.	1080.	14.1	8.290
.600	0.1	0.8047	0.0249	0.1706	3.73	1.341	0.622	0.474	2.157	2.831	1.313	-1327.	1072.	14.0	8.244
.600	0.2	0.7992	0.0492	0.1517	3.75	1.332	0.615	0.474	2.167	2.809	1.296	-1334.	1063.	13.9	8.199
.600	0.3	0.7942	0.0730	0.1330	3.77	1.324	0.608	0.475	2.177	2.788	1.281	-1341.	1055.	13.8	8.155
.600	0.4	0.7897	0.0963	0.1142	3.79	1.316	0.602	0.476	2.187	2.766	1.265	-1348.	1047.	13.7	8.112
.600	0.5	0.7856	0.1192	0.0954	3.81	1.309	0.596	0.477	2.197	2.745	1.249	-1355.	1039.	13.6	8.070
.600	0.6	0.7819	0.1417	0.0765	3.83	1.303	0.590	0.478	2.208	2.724	1.234	-1362.	1031.	13.5	8.028
.600	0.7	0.7787	0.1638	0.0576	3.84	1.298	0.585	0.480	2.218	2.703	1.219	-1369.	1023.	13.4	7.987
.600	0.8	0.7759	0.1857	0.0386	3.86	1.293	0.580	0.482	2.228	2.683	1.204	-1376.	1016.	13.3	7.946
.600	0.9	0.7735	0.2073	0.0194	3.88	1.289	0.576	0.484	2.239	2.662	1.189	-1383.	1008.	13.2	7.906
.600	1.0	0.7715	0.2287	0.	3.90	1.286	0.572	0.487	2.249	2.642	1.175	-1390.	1001.	13.1	7.867
.700	0.	0.8650	0.	0.1352	4.03	1.236	0.587	0.451	2.105	2.743	1.303	-1250.	1072.	14.2	8.431
.700	0.1	0.8609	0.0175	0.1218	4.06	1.230	0.582	0.451	2.113	2.727	1.291	-1255.	1066.	14.2	8.400
.700	0.2	0.8571	0.0347	0.1084	4.08	1.224	0.578	0.452	2.120	2.712	1.279	-1260.	1060.	14.1	8.369
.700	0.3	0.8536	0.0516	0.0950	4.09	1.219	0.573	0.452	2.127	2.696	1.267	-1265.	1054.	14.0	8.338
.700	0.4	0.8503	0.0683	0.0816	4.11	1.215	0.569	0.453	2.135	2.680	1.256	-1271.	1048.	13.9	8.308
.700	0.5	0.8473	0.0848	0.0681	4.12	1.210	0.565	0.454	2.142	2.665	1.244	-1276.	1042.	13.9	8.278
.700	0.6	0.8445	0.1010	0.0546	4.13	1.206	0.561	0.455	2.150	2.650	1.233	-1281.	1036.	13.8	8.248
.700	0.7	0.8420	0.1171	0.0411	4.15	1.203	0.558	0.457	2.157	2.635	1.221	-1286.	1031.	13.7	8.219
.700	0.8	0.8397	0.1330	0.0275	4.16	1.200	0.554	0.458	2.165	2.619	1.210	-1292.	1025.	13.6	8.191
.700	0.9	0.8377	0.1487	0.0138	4.18	1.197	0.551	0.459	2.172	2.604	1.199	-1297.	1020.	13.5	8.162
.700	1.0	0.8359	0.1643	0.	4.19	1.194	0.548	0.461	2.180	2.589	1.188	-1302.	1014.	13.5	8.134
.800	0.	0.9136	0.	0.0866	4.38	1.142	0.553	0.433	2.064	2.637	1.278	-1179.	1063.	14.4	8.583
.800	0.1	0.9112	0.0110	0.0780	4.39	1.139	0.550	0.434	2.069	2.627	1.270	-1183.	1059.	14.3	8.563
.800	0.2	0.9089	0.0219	0.0695	4.40	1.136	0.548	0.434	2.074	2.617	1.262	-1187.	1055.	14.3	8.544
.800	0.3	0.9067	0.0327	0.0609	4.41	1.133	0.545	0.435	2.079	2.607	1.254	-1190.	1051.	14.2	8.525
.800	0.4	0.9046	0.0434	0.0522	4.42	1.131	0.543	0.435	2.084	2.597	1.246	-1194.	1048.	14.2	8.506
.800	0.5	0.9026	0.0540	0.0436	4.43	1.128	0.540	0.436	2.088	2.587	1.239	-1197.	1044.	14.1	8.487
.800	0.6	0.9008	0.0645	0.0349	4.44	1.126	0.538	0.437	2.093	2.577	1.231	-1201.	1040.	14.1	8.468
.800	0.7	0.8990	0.0750	0.0263	4.45	1.124	0.536	0.438	2.098	2.567	1.224	-1204.	1036.	14.0	8.450
.800	0.8	0.8974	0.0853	0.0175	4.46	1.122	0.533	0.439	2.103	2.558	1.216	-1208.	1033.	14.0	8.432
.800	0.9	0.8958	0.0956	0.0088	4.47	1.120	0.531	0.440	2.108	2.548	1.209	-1211.	1029.	13.9	8.414
.800	1.0	0.8944	0.1058	0.	4.48	1.118	0.529	0.441	2.113	2.538	1.201	-1215.	1025.	13.9	8.396
.900	0.	0.9583	0.	0.0420	4.72	1.065	0.526	0.420	2.024	2.536	1.253	-1109.	1054.	14.5	8.746
.900	0.1	0.9572	0.0052	0.0378	4.73	1.064	0.525	0.420	2.026	2.531	1.249	-1111.	1052.	14.5	8.737
.900	0.2	0.9562	0.0105	0.0336	4.74	1.062	0.524	0.421	2.029	2.526	1.245	-1113.	1050.	14.5	8.728
.900	0.3	0.9552	0.0157	0.0295	4.74	1.061	0.523	0.421	2.031	2.521	1.241	-1115.	1048.	14.5	8.719
.900	0.4	0.9542	0.0209	0.0253	4.75	1.060	0.521	0.421	2.034	2.516	1.237	-1116.	1046.	14.4	8.710
.900	0.5	0.9532	0.0260	0.0211	4.75	1.059	0.520	0.422	2.036	2.511	1.234	-1118.	1044.	14.4	8.701
.900	0.6	0.9523	0.0311	0.0169	4.76	1.058	0.519	0.422	2.038	2.507	1.230	-1120.	1043.	14.4	8.692
.900	0.7	0.9514	0.0363	0.0127	4.76	1.057	0.518	0.423	2.041	2.502	1.226	-1122.	1041.	14.3	8.684
.900	0.8	0.9505	0.0414	0.0085	4.77	1.056	0.517	0.423	2.043	2.497	1.222	-1123.	1039.	14.3	8.675
.900	0.9	0.9497	0.0464	0.0042	4.77	1.055	0.516	0.423	2.045	2.492	1.219	-1125.	1037.	14.3	8.666
.900	1.0	0.9488	0.0515	0.	4.78	1.054	0.515	0.424	2.048	2.487	1.215	-1127.	1035.	14.3	8.658
.975	0.	0.9901	0.	0.0103	4.99	1.015	0.509	0.412	1.994	2.462	1.234	-1057.	1046.	14.6	8.878
.975	0.1	0.9898	0.0013	0.0093	4.99	1.015	0.509	0.413	1.995	2.461	1.234	-1057.	1046.	14.6	8.876
.975	0.2	0.9896	0.0025	0.0083	4.99	1.015	0.509	0.413	1.996	2.460	1.233	-1058.	1046.	14.6	8.874
.975	0.3	0.9894	0.0038	0.0072	4.99	1.015	0.508	0.413	1.996	2.458	1.232	-1058.	1045.	14.6	8.871
.975	0.4	0.9891	0.0051	0.0062	4.99	1.014	0.508	0.413	1.997	2.457	1.231	-1059.	1045.	14.6	8.869
.975	0.5	0.9889	0.0063	0.0052	4.99	1.014	0.508	0.413	1.997	2.456	1.230	-1059.	1044.	14.6	8.867
.975	0.6	0.9886	0.0076	0.0041	5.00	1.014	0.508	0.413	1.998	2.455	1.229	-1059.	1044.	14.6	8.865
.975	0.7	0.9884	0.0089	0.0031	5.00	1.014	0.507	0.413	1.998	2.454	1.228	-1060.	1043.	14.6	8.863
.975	0.8	0.9882	0.0101	0.0021	5.00	1.014	0.507	0.413	1.999	2.453	1.227	-1060.	1043.	14.6	8.861
.975	0.9	0.9880	0.0114	0.0010	5.00	1.013	0.507	0.413	2.000	2.451	1.226	-1061.	1042.	14.6	8.859
.975	1.0	0.9877	0.0127	0.	5.00	1.013	0.506	0.413	2.000	2.450	1.225	-1061.	1042.	14.6	8.857

TEMPERATURE = 175. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0000	1.97	3.381	1.462	1.000	2.312	3.380	1.462	-1674.	1158.	13.3	7.659
.	0.1	0.	0.1362	0.8640	2.06	3.185	1.362	0.960	2.337	3.317	1.419	-1693.	1110.	13.0	7.396
.	0.2	0.	0.2563	0.7439	2.14	3.036	1.281	0.930	2.363	3.256	1.378	-1712.	1067.	12.8	7.164
.	0.3	0.	0.3645	0.6357	2.22	2.902	1.215	0.905	2.389	3.195	1.338	-1730.	1029.	12.5	6.957
.	0.4	0.	0.4642	0.5361	2.28	2.802	1.160	0.893	2.415	3.136	1.299	-1749.	994.	12.3	6.760
.	0.5	0.	0.5579	0.4424	2.34	2.723	1.116	0.885	2.441	3.078	1.261	-1768.	961.	12.1	6.575
.	0.6	0.	0.6477	0.3526	2.39	2.663	1.079	0.882	2.467	3.021	1.224	-1787.	929.	11.9	6.397
.	0.7	0.	0.7353	0.2650	2.43	2.620	1.050	0.883	2.494	2.966	1.189	-1806.	898.	11.6	6.221
.	0.8	0.	0.8222	0.1781	2.47	2.592	1.028	0.890	2.522	2.911	1.154	-1824.	868.	11.4	6.044
.	0.9	0.	0.9101	0.0902	2.50	2.578	1.011	0.902	2.549	2.857	1.121	-1843.	838.	11.2	5.863
.	1.0	0.	1.0003	0.	2.53	2.578	1.000	0.919	2.577	2.805	1.088	-1862.	807.	10.9	5.675
.025	0.	0.0791	0.	0.9211	2.09	3.163	1.374	0.945	2.302	3.348	1.455	-1656.	1155.	13.3	7.691
.025	0.1	0.0749	0.1256	0.7997	2.18	2.996	1.288	0.911	2.326	3.288	1.413	-1675.	1111.	13.1	7.450
.025	0.2	0.0715	0.2374	0.6914	2.26	2.861	1.217	0.886	2.351	3.228	1.373	-1693.	1071.	12.9	7.235
.025	0.3	0.0698	0.3379	0.5926	2.33	2.792	1.159	0.868	2.375	3.170	1.334	-1711.	1035.	12.6	7.039
.025	0.4	0.0666	0.4329	0.5008	2.39	2.665	1.110	0.856	2.401	3.113	1.297	-1730.	1002.	12.4	6.856
.025	0.5	0.0649	0.5215	0.4139	2.44	2.595	1.070	0.849	2.426	3.056	1.260	-1748.	971.	12.2	6.682
.025	0.6	0.0635	0.6065	0.3303	2.49	2.542	1.037	0.847	2.452	3.001	1.224	-1766.	941.	11.9	6.513
.025	0.7	0.0626	0.6894	0.2484	2.54	2.503	1.010	0.849	2.478	2.947	1.189	-1785.	912.	11.7	6.347
.025	0.8	0.0619	0.7715	0.1669	2.58	2.477	0.989	0.856	2.504	2.894	1.156	-1803.	883.	11.5	6.181
.025	0.9	0.0616	0.8542	0.0845	2.61	2.464	0.973	0.867	2.531	2.842	1.123	-1821.	854.	11.3	6.011
.025	1.0	0.0616	0.9388	0.	2.63	2.463	0.963	0.882	2.558	2.792	1.091	-1839.	825.	11.0	5.835
.100	0.	0.2657	0.	0.7347	2.46	2.657	1.171	0.816	2.270	3.254	1.434	-1603.	1148.	13.5	[illegible]
.100	0.1	0.2549	0.1001	0.6493	2.53	2.549	1.112	0.787	2.292	3.200	1.396	-1620.	1112.	13.2	[illegible]
.100	0.2	0.2460	0.1914	0.5630	2.60	2.460	1.063	0.782	2.314	3.147	1.360	-1637.	1080.	13.0	[illegible]
.100	0.3	0.2387	0.2758	0.4860	2.66	2.387	1.021	0.771	2.337	3.094	1.324	-1654.	1050.	12.8	[illegible]
.100	0.4	0.2326	0.3549	0.4120	2.71	2.326	0.986	0.765	2.360	3.042	1.289	-1671.	1021.	12.6	7.112
.100	0.5	0.2277	0.4301	0.3426	2.76	2.277	0.956	0.761	2.383	2.992	1.256	-1688.	995.	12.4	6.967
.100	0.6	0.2239	0.5025	0.2740	2.81	2.239	0.931	0.761	2.406	2.942	1.223	-1705.	969.	12.2	6.824
.100	0.7	0.2210	0.5731	0.2063	2.85	2.210	0.910	0.764	2.430	2.893	1.191	-1722.	944.	12.0	6.684
.100	0.8	0.2190	0.6428	0.1386	2.88	2.190	0.893	0.770	2.454	2.845	1.160	-1738.	920.	11.8	6.544
.100	0.9	0.2179	0.7124	0.0701	2.92	2.179	0.880	0.779	2.478	2.798	1.129	-1755.	896.	11.6	6.403
.100	1.0	0.2176	0.7820	0.	2.95	2.176	0.870	0.791	2.502	2.752	1.100	-1772.	871.	11.3	6.258
.200	0.	0.4395	0.	0.5610	2.92	2.197	0.984	0.701	2.228	3.133	1.407	-1532.	1137.	13.6	7.932
.200	0.1	0.4266	0.0759	0.4975	2.98	2.133	0.949	0.691	2.247	3.087	1.374	-1547.	1110.	13.5	7.785
.200	0.2	0.4158	0.1468	0.4375	3.03	2.079	0.917	0.684	2.266	3.041	1.342	-1562.	1084.	13.3	7.652
.200	0.3	0.4066	0.2134	0.3800	3.08	2.033	0.889	0.679	2.286	2.996	1.311	-1577.	1061.	13.1	7.525
.200	0.4	0.3989	0.2768	0.3244	3.13	1.994	0.865	0.676	2.306	2.951	1.280	-1592.	1038.	12.9	7.404
.200	0.5	0.3925	0.3375	0.2700	3.17	1.963	0.844	0.675	2.326	2.908	1.250	-1607.	1017.	12.7	7.287
.200	0.6	0.3874	0.3963	0.2164	3.21	1.937	0.826	0.676	2.346	2.865	1.221	-1622.	996.	12.5	7.173
.200	0.7	0.3834	0.4536	0.1630	3.25	1.917	0.810	0.679	2.367	2.822	1.193	-1637.	975.	12.3	7.061
.200	0.8	0.3805	0.5101	0.1095	3.29	1.903	0.797	0.684	2.387	2.781	1.165	-1652.	956.	12.1	6.949
.200	0.9	0.3787	0.5661	0.0553	3.32	1.893	0.786	0.691	2.408	2.740	1.138	-1667.	936.	11.9	6.837
.200	1.0	0.3779	0.6222	0.	3.35	1.889	0.778	0.700	2.429	2.699	1.111	-1682.	916.	11.6	6.724
.300	0.	0.5639	0.	0.4361	3.36	1.880	0.863	0.623	2.186	3.017	1.380	-1461.	1127.	13.8	8.072
.300	0.1	0.5522	0.0585	0.3894	3.41	1.841	0.834	0.618	2.203	2.978	1.352	-1475.	1106.	13.7	7.963
.300	0.2	0.5419	0.1139	0.3442	3.45	1.806	0.814	0.615	2.220	2.936	1.324	-1488.	1086.	13.5	7.860
.300	0.3	0.5331	0.1669	0.3002	3.49	1.777	0.795	0.613	2.236	2.901	1.297	-1501.	1067.	13.3	7.760
.300	0.4	0.5255	0.2177	0.2569	3.53	1.752	0.777	0.612	2.253	2.863	1.271	-1514.	1049.	13.2	7.664
.300	0.5	0.5191	0.2667	0.2143	3.57	1.730	0.762	0.612	2.271	2.826	1.245	-1527.	1031.	13.0	7.571
.300	0.6	0.5138	0.3144	0.1719	3.61	1.713	0.749	0.614	2.288	2.789	1.219	-1540.	1014.	12.8	7.480
.300	0.7	0.5095	0.3610	0.1295	3.64	1.698	0.737	0.617	2.305	2.753	1.194	-1553.	998.	12.7	7.390
.300	0.8	0.5063	0.4069	0.0869	3.67	1.688	0.727	0.621	2.323	2.718	1.170	-1567.	981.	12.5	7.301
.300	0.9	0.5040	0.4522	0.0438	3.71	1.680	0.718	0.626	2.340	2.683	1.146	-1580.	965.	12.3	7.212
.300	1.0	0.5027	0.4974	0.	3.74	1.676	0.711	0.633	2.358	2.648	1.123	-1593.	949.	12.2	7.122
.400	0.	0.6595	0.	0.3406	3.78	1.649	0.768	0.568	2.146	2.905	1.354	-1390.	1117.	14.0	8.222
.400	0.1	0.6497	0.0451	0.3053	3.82	1.624	0.752	0.565	2.160	2.872	1.330	-1402.	1100.	13.9	8.139
.400	0.2	0.6409	0.0885	0.2708	3.86	1.602	0.737	0.564	2.174	2.840	1.307	-1413.	1085.	13.7	8.059
.400	0.3	0.6332	0.1302	0.2367	3.89	1.583	0.724	0.564	2.188	2.809	1.284	-1424.	1070.	13.6	7.981
.400	0.4	0.6264	0.1707	0.2030	3.93	1.566	0.711	0.564	2.202	2.778	1.261	-1436.	1055.	13.4	7.906
.400	0.5	0.6206	0.2100	0.1695	3.96	1.552	0.700	0.565	2.216	2.747	1.239	-1447.	1041.	13.3	7.832
.400	0.6	0.6157	0.2484	0.1360	3.99	1.539	0.690	0.567	2.231	2.716	1.218	-1458.	1027.	13.2	7.760
.400	0.7	0.6116	0.2860	0.1025	4.02	1.529	0.681	0.569	2.245	2.686	1.196	-1469.	1014.	13.0	7.689
.400	0.8	0.6084	0.3230	0.0687	4.05	1.521	0.673	0.573	2.260	2.656	1.175	-1481.	1001.	12.9	7.618
.400	0.9	0.6059	0.3596	0.0346	4.08	1.515	0.666	0.577	2.275	2.627	1.155	-1492.	988.	12.7	7.548
.400	1.0	0.6043	0.3959	0.	4.11	1.511	0.660	0.582	2.290	2.598	1.135	-1503.	975.	12.6	7.478
.500	0.	0.7367	0.	0.2634	4.20	1.473	0.700	0.527	2.106	2.797	1.328	-1320.	1105.	14.2	8.378
.500	0.1	0.7290	0.0344	0.2368	4.23	1.458	0.689	0.526	2.117	2.771	1.309	-1329.	1094.	14.1	8.316
.500	0.2	0.7219	0.0678	0.2104	4.26	1.444	0.678	0.526	2.129	2.745	1.290	-1338.	1082.	13.9	8.255
.500	0.3	0.7157	0.1003	0.1842	4.29	1.431	0.669	0.526	2.140	2.720	1.271	-1348.	1070.	13.8	8.195
.500	0.4	0.7101	0.1320	0.1581	4.32	1.420	0.660	0.527	2.152	2.694	1.252	-1357.	1059.	13.7	8.137
.500	0.5	0.7051	0.1630	0.1321	4.34	1.410	0.652	0.528	2.164	2.669	1.234	-1366.	1048.	13.6	8.081
.500	0.6	0.7009	0.1933	0.1060	4.37	1.402	0.644	0.530	2.175	2.645	1.216	-1376.	1037.	13.5	8.025
.500	0.7	0.6972	0.2232	0.0798	4.40	1.394	0.638	0.532	2.187	2.620	1.198	-1385.	1026.	13.4	7.969
.500	0.8	0.6942	0.2525	0.0535	4.43	1.388	0.631	0.535	2.199	2.596	1.181	-1395.	1015.	13.2	7.915
.500	0.9	0.6917	0.2816	0.0269	4.45	1.383	0.626	0.538	2.211	2.572	1.163	-1404.	1005.	13.1	7.861
.500	1.0	0.6896	0.3104	0.	4.48	1.380	0.621	0.541	2.223	2.548	1.146	-1413.	995.	13.0	7.807
.600	0.	0.8017	0.	0.1985	4.61	1.336	0.647	0.496	2.067	2.693	1.303	-1249.	1096.	14.4	8.544
.600	0.1	0.7960	0.0256	0.1787	4.63	1.327	0.639	0.496	2.076	2.673	1.288	-1256.	1087.	14.3	8.498
.600	0.2	0.7907	0.0506	0.1590	4.66	1.318	0.632	0.497	2.085	2.653	1.273	-1264.	1078.	14.2	8.453
.600	0.3	0.7859	0.0751	0.1393	4.68	1.310	0.626	0.497	2.094	2.633	1.258	-1271.	1069.	14.1	8.409
.600	0.4	0.7815	0.0991	0.1196	4.70	1.303	0.619	0.498	2.103	2.614	1.243	-1279.	1060.	14.0	8.366
.600	0.5	0.7776	0.1227	0.0999	4.73	1.296	0.614	0.500	2.112	2.594	1.228	-1286.	1052.	13.9	8.324
.600	0.6	0.7741	0.1460	0.0802	4.75	1.290	0.608	0.501	2.121	2.575	1.214	-1294.	1043.	13.8	8.282
.600	0.7	0.7710	0.1689	0.0603	4.77	1.285	0.603	0.503	2.130	2.556	1.200	-1301.	1035.	13.7	8.241
.600	0.8	0.7683	0.1915	0.0404	4.79	1.281	0.599	0.505	2.139	2.537	1.186	-1309.	1027.	13.6	8.200
.600	0.9	0.7661	0.2139	0.0203	4.82	1.277	0.594	0.507	2.149	2.518	1.172	-1316.	1019.	13.5	8.159
.600	1.0	0.7642	0.2361	0.	4.84	1.274	0.590	0.510	2.158	2.500	1.158	-1324.	1011.	13.4	8.119
.700	0.	0.8584	0.	0.1419	5.02	1.226	0.605	0.473	2.028	2.593	1.278	-1178.	1086.	14.5	8.720
.700	0.1	0.8545	0.0180	0.1278	5.04	1.221	0.600	0.473	2.035	2.578	1.267	-1183.	1079.	14.5	8.689
.700	0.2	0.8508	0.0357	0.1138	5.05	1.215	0.595	0.474	2.041	2.564	1.256	-1189.	1073.	14.4	8.658
.700	0.3	0.8474	0.0532	0.0997	5.07	1.211	0.591	0.475	2.048	2.550	1.245	-1195.	1066.	14.3	8.627
.700	0.4	0.8443	0.0704	0.0856	5.09	1.206	0.587	0.476	2.055	2.535	1.234	-1200.	1060.	14.3	8.597
.700	0.5	0.8414	0.0875	0.0715	5.11	1.202	0.583	0.477	2.061	2.521	1.223	-1206.	1054.	14.2	8.567
.700	0.6	0.8387	0.1043	0.0573	5.12	1.198	0.579	0.478	2.068	2.507	1.212	-1211.	1048.	14.1	8.538
.700	0.7	0.8363	0.1209	0.0431	5.14	1.195	0.576	0.479	2.075	2.493	1.202	-1217.	1042.	14.1	8.509
.700	0.8	0.8341	0.1374	0.0288	5.16	1.192	0.572	0.481	2.081	2.479	1.191	-1223.	1036.	14.0	8.480
.700	0.9	0.8322	0.1537	0.0145	5.18	1.189	0.569	0.482	2.088	2.466	1.181	-1228.	1030.	13.9	8.452
.700	1.0	0.8305	0.1699	0.	5.20	1.186	0.566	0.484	2.095	2.452	1.170	-1234.	1024.	13.8	8.423
.800	0.	0.9093	0.	0.0911	5.43	1.137	0.571	0.455	1.990	2.496	1.254	-1107.	1075.	14.7	8.911
.800	0.1	0.9070	0.0114	0.0821	5.44	1.134	0.568	0.456	1.995	2.487	1.247	-1110.	1071.	14.7	8.892
.800	0.2	0.9048	0.0226	0.0730	5.45	1.131	0.566	0.456	1.999	2.478	1.239	-1114.	1067.	14.6	8.873
.800	0.3	0.9026	0.0338	0.0640	5.47	1.128	0.563	0.457	2.003	2.468	1.232	-1118.	1063.	14.6	8.854
.800	0.4	0.9006	0.0449	0.0549	5.48	1.125	0.561	0.458	2.008	2.459	1.225	-1122.	1059.	14.5	8.836
.800	0.5	0.8987	0.0558	0.0459	5.49	1.123	0.558	0.459	2.012	2.450	1.218	-1126.	1055.	14.5	8.817
.800	0.6	0.8970	0.0667	0.0367	5.50	1.121	0.556	0.459	2.016	2.441	1.211	-1129.	1051.	14.4	8.799
.800	0.7	0.8953	0.0775	0.0276	5.52	1.119	0.554	0.460	2.021	2.432	1.204	-1133.	1047.	14.4	8.780
.800	0.8	0.8937	0.0883	0.0184	5.53	1.117	0.552	0.461	2.025	2.423	1.196	-1137.	1043.	14.4	8.762
.800	0.9	0.8923	0.0989	0.0092	5.54	1.115	0.550	0.462	2.029	2.414	1.189	-1141.	1039.	14.3	8.745
.800	1.0	0.8909	0.1095	0.	5.55	1.114	0.548	0.463	2.034	2.405	1.183	-1144.	1035.	14.3	8.727
.900	0.	0.9559	0.	0.0442	5.85	1.062	0.544	0.442	1.953	2.403	1.230	-1036.	1063.	14.9	9.116
.900	0.1	0.9549	0.0054	0.0398	5.86	1.061	0.543	0.442	1.955	2.398	1.227	-1038.	1061.	14.9	9.107
.900	0.2	0.9539	0.0108	0.0354	5.86	1.060	0.541	0.443	1.957	2.394	1.223	-1040.	1059.	14.9	9.099
.900	0.3	0.9529	0.0162	0.0310	5.87	1.059	0.540	0.443	1.959	2.390	1.220	-1041.	1057.	14.8	9.090
.900	0.4	0.9519	0.0216	0.0266	5.88	1.058	0.539	0.443	1.961	2.385	1.216	-1043.	1055.	14.8	9.081
.900	0.5	0.9510	0.0269	0.0222	5.88	1.057	0.538	0.444	1.964	2.381	1.212	-1045.	1053.	14.8	9.073
.900	0.6	0.9501	0.0322	0.0178	5.89	1.056	0.537	0.444	1.966	2.376	1.209	-1047.	1051.	14.8	9.064
.900	0.7	0.9492	0.0375	0.0133	5.90	1.055	0.536	0.445	1.968	2.372	1.205	-1049.	1049.	14.7	9.056
.900	0.8	0.9484	0.0428	0.0089	5.90	1.054	0.535	0.445	1.970	2.367	1.202	-1051.	1048.	14.7	9.047
.900	0.9	0.9476	0.0481	0.0045	5.91	1.053	0.534	0.446	1.972	2.363	1.198	-1053.	1046.	14.7	9.039
.900	1.0	0.9468	0.0533	0.	5.92	1.052	0.533	0.446	1.974	2.358	1.195	-1055.	1044.	14.7	9.030
.975	0.	0.9893	0.	0.0109	6.17	1.015	0.527	0.434	1.925	2.335	1.213	-983.	1054.	15.0	9.287
.975	0.1	0.9890	0.0013	0.0098	6.18	1.014	0.527	0.435	1.926	2.334	1.212	-983.	1054.	15.0	9.285
.975	0.2	0.9888	0.0026	0.0087	6.18	1.014	0.526	0.435	1.926	2.333	1.211	-984.	1054.	15.0	9.283
.975	0.3	0.9886	0.0039	0.0076	6.18	1.014	0.526	0.435	1.927	2.332	1.210	-984.	1053.	15.0	9.281
.975	0.4	0.9883	0.0053	0.0065	6.18	1.014	0.526	0.435	1.927	2.331	1.209	-984.	1053.	15.0	9.279
.975	0.5	0.9881	0.0066	0.0054	6.18	1.013	0.526	0.435	1.928	2.330	1.208	-985.	1052.	15.0	9.277
.975	0.6	0.9879	0.0079	0.0044	6.18	1.013	0.525	0.435	1.929	2.329	1.208	-985.	1052.	15.0	9.275
.975	0.7	0.9877	0.0092	0.0033	6.19	1.013	0.525	0.435	1.929	2.328	1.207	-986.	1051.	15.0	9.273
.975	0.8	0.9875	0.0105	0.0022	6.19	1.013	0.525	0.435	1.930	2.327	1.206	-986.	1051.	15.0	9.271
.975	0.9	0.9872	0.0118	0.0011	6.19	1.013	0.525	0.435	1.930	2.326	1.205	-987.	1050.	15.0	9.269
.975	1.0	0.9870	0.0131	0.	6.19	1.012	0.524	0.436	1.931	2.324	1.204	-987.	1050.	15.0	9.267

Table 26. (cont.)

TEMPERATURE = 180. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0003	2.51	3.170	1.432	1.003	2.214	3.169	1.431	-1608.	1181.	13.3	7.787
.	0.1	0.	0.1340	0.8664	2.62	2.996	1.340	0.963	2.236	3.112	1.392	-1628.	1132.	13.1	7.533
.	0.2	0.	0.2528	0.7475	2.72	2.856	1.264	0.934	2.259	3.056	1.353	-1647.	1088.	12.9	7.308
.	0.3	0.	0.3606	0.6398	2.80	2.743	1.202	0.914	2.282	3.001	1.315	-1667.	1049.	12.7	7.100
.	0.4	0.	0.4604	0.5400	2.88	2.653	1.151	0.900	2.305	2.947	1.279	-1687.	1013.	12.5	6.908
.	0.5	0.	0.5545	0.4460	2.95	2.581	1.109	0.892	2.328	2.894	1.243	-1707.	978.	12.3	6.724
.	0.6	0.	0.6448	0.3576	3.01	2.527	1.075	0.889	2.351	2.842	1.209	-1727.	946.	12.1	6.546
.	0.7	0.	0.7331	0.2673	3.06	2.488	1.047	0.891	2.375	2.791	1.175	-1747.	914.	11.8	6.370
.	0.8	0.	0.8209	0.1796	3.11	2.462	1.026	0.898	2.399	2.742	1.143	-1767.	882.	11.6	6.192
.	0.9	0.	0.9099	0.0910	3.15	2.449	1.011	0.910	2.424	2.693	1.111	-1787.	851.	11.4	6.010
.	1.0	0.	1.0005	0.	3.18	2.449	1.000	0.926	2.448	2.645	1.080	-1807.	818.	11.2	5.821
.025	0.	0.0746	0.	0.9256	2.65	2.982	1.383	0.950	2.204	3.141	1.425	-1590.	1178.	13.4	7.825
.025	0.1	0.0708	0.1241	0.8055	2.76	2.832	1.273	0.918	2.225	3.085	1.386	-1609.	1133.	13.2	7.590
.025	0.2	0.0678	0.2351	0.6975	2.85	2.710	1.206	0.894	2.248	3.031	1.348	-1628.	1092.	13.0	7.380
.025	0.3	0.0653	0.3346	0.5986	2.93	2.612	1.151	0.877	2.270	2.978	1.312	-1648.	1055.	12.8	7.188
.025	0.4	0.0632	0.4308	0.5063	3.01	2.532	1.105	0.865	2.292	2.926	1.276	-1667.	1020.	12.6	7.005
.025	0.5	0.0617	0.5200	0.4187	3.08	2.469	1.067	0.859	2.315	2.874	1.242	-1687.	988.	12.3	6.832
.025	0.6	0.0605	0.6058	0.3342	3.14	2.420	1.035	0.857	2.337	2.824	1.208	-1706.	957.	12.1	6.664
.025	0.7	0.0596	0.6892	0.2513	3.19	2.384	1.010	0.859	2.360	2.775	1.176	-1725.	926.	11.9	6.494
.025	0.8	0.0590	0.7723	0.1686	3.23	2.360	0.990	0.866	2.384	2.727	1.144	-1745.	896.	11.7	6.328
.025	0.9	0.0587	0.8559	0.0855	3.27	2.348	0.975	0.876	2.407	2.679	1.112	-1764.	866.	11.5	6.155
.025	1.0	0.0587	0.9414	0.	3.30	2.347	0.966	0.892	2.431	2.633	1.083	-1784.	836.	11.3	5.977
.100	0.	0.2536	0.	0.7468	3.08	2.536	1.166	0.830	2.175	3.056	1.405	-1536.	1169.	13.5	7.942
.100	0.1	0.2436	0.0999	0.6565	3.17	2.436	1.110	0.811	2.195	3.006	1.370	-1554.	1132.	13.4	7.791
.100	0.2	0.2354	0.1914	0.5732	3.25	2.354	1.063	0.796	2.214	2.957	1.335	-1572.	1098.	13.2	7.593
.100	0.3	0.2286	0.2763	0.4951	3.32	2.286	1.023	0.786	2.235	2.909	1.302	-1589.	1067.	13.0	7.419
.100	0.4	0.2231	0.3561	0.4208	3.38	2.231	0.989	0.779	2.255	2.862	1.268	-1607.	1038.	12.8	7.267
.100	0.5	0.2185	0.4323	0.3493	3.45	2.185	0.961	0.776	2.275	2.816	1.238	-1625.	1010.	12.6	7.121
.100	0.6	0.2150	0.5057	0.2794	3.51	2.150	0.936	0.776	2.296	2.770	1.207	-1643.	983.	12.4	6.978
.100	0.7	0.2123	0.5774	0.2103	3.55	2.123	0.917	0.779	2.317	2.724	1.177	-1661.	957.	12.2	6.836
.100	0.8	0.2105	0.6483	0.1413	3.60	2.105	0.900	0.785	2.338	2.682	1.147	-1679.	932.	12.0	6.695
.100	0.9	0.2095	0.7192	0.0714	3.64	2.095	0.888	0.794	2.359	2.639	1.119	-1697.	908.	11.8	6.551
.100	1.0	0.2092	0.7909	0.	3.67	2.092	0.879	0.806	2.381	2.596	1.091	-1715.	884.	11.7	6.404
.200	0.	0.4241	0.	0.5759	3.62	2.121	0.993	0.720	2.136	2.946	1.379	-1464.	1157.	13.8	8.100
.200	0.1	0.4123	0.0766	0.5112	3.70	2.061	0.957	0.710	2.154	2.903	1.348	-1480.	1129.	13.6	7.959
.200	0.2	0.4021	0.1482	0.4497	3.76	2.011	0.926	0.703	2.171	2.861	1.318	-1496.	1102.	13.4	7.826
.200	0.3	0.3935	0.2158	0.3907	3.81	1.968	0.899	0.698	2.188	2.820	1.289	-1512.	1077.	13.3	7.700
.200	0.4	0.3862	0.2802	0.3336	3.86	1.932	0.876	0.695	2.206	2.780	1.260	-1527.	1053.	13.1	7.579
.200	0.5	0.3803	0.3421	0.2777	3.92	1.902	0.855	0.694	2.224	2.740	1.232	-1543.	1031.	12.9	7.462
.200	0.6	0.3755	0.4021	0.2225	3.98	1.878	0.838	0.695	2.242	2.700	1.205	-1559.	1009.	12.8	7.347
.200	0.7	0.3718	0.4607	0.1676	4.03	1.859	0.823	0.698	2.260	2.667	1.178	-1575.	987.	12.6	7.233
.200	0.8	0.3691	0.5185	0.11[illegible]	4.07	1.845	0.810	0.703	2.278	2.622	1.152	-1591.	966.	12.4	7.120
.200	0.9	0.3674	0.5759	0.0568	4.11	1.837	0.800	0.710	2.296	2.586	1.126	-1607.	946.	12.3	7.006
.200	1.0	0.3666	0.6335	0.	4.15	1.833	0.792	0.719	2.315	2.549	1.101	-1623.	925.	12.1	6.893
.300	0.	0.5492	0.	0.4511	4.19	1.830	0.875	0.644	2.098	2.841	1.353	-1392.	1145.	14.0	8.247
.300	0.1	0.5379	0.0594	0.4028	4.21	1.793	0.849	0.639	2.113	2.804	1.327	-1406.	1123.	13.8	8.161
.300	0.2	0.5282	0.1158	0.3561	4.26	1.761	0.827	0.636	2.128	2.769	1.301	-1420.	1102.	13.7	8.058
.300	0.3	0.5198	0.1698	0.3106	4.31	1.733	0.809	0.634	2.143	2.734	1.276	-1434.	1082.	13.6	7.959
.300	0.4	0.5126	0.2217	0.2659	4.36	1.709	0.792	0.633	2.158	2.699	1.251	-1448.	1063.	13.4	7.863
.300	0.5	0.5065	0.2719	0.2217	4.41	1.688	0.777	0.633	2.173	2.665	1.226	-1461.	1044.	13.3	7.770
.300	0.6	0.5013	0.3208	0.1779	4.45	1.672	0.764	0.635	2.189	2.632	1.203	-1475.	1026.	13.1	7.678
.300	0.7	0.4975	0.3687	0.1340	4.49	1.658	0.752	0.638	2.204	2.599	1.179	-1489.	1009.	13.0	7.587
.300	0.8	0.4944	0.4158	0.0899	4.53	1.648	0.743	0.642	2.219	2.566	1.156	-1503.	992.	12.8	7.496
.300	0.9	0.4923	0.4625	0.0453	4.57	1.641	0.734	0.648	2.235	2.534	1.134	-1517.	975.	12.7	7.405
.300	1.0	0.4911	0.5091	0.	4.61	1.637	0.727	0.654	2.251	2.502	1.112	-1531.	958.	12.5	7.314
.400	0.	0.6460	0.	0.3540	4.66	1.615	0.784	0.590	2.061	2.738	1.328	-1320.	1133.	14.2	8.448
.400	0.1	0.6367	0.0461	0.3174	4.70	1.592	0.768	0.588	2.073	2.708	1.306	-1332.	1116.	14.1	8.366
.400	0.2	0.6284	0.0904	0.2819	4.75	1.571	0.753	0.586	2.086	2.679	1.284	-1344.	1100.	14.0	8.288
.400	0.3	0.6210	0.1332	0.2461	4.79	1.552	0.740	0.586	2.098	2.650	1.263	-1356.	1084.	13.8	8.209
.400	0.4	0.6146	0.1747	0.2110	4.83	1.536	0.728	0.586	2.111	2.621	1.242	-1368.	1068.	13.7	8.133
.400	0.5	0.6090	0.2151	0.1761	4.87	1.523	0.717	0.587	2.124	2.593	1.221	-1380.	1053.	13.6	8.060
.400	0.6	0.6043	0.2546	0.1414	4.91	1.511	0.707	0.589	2.137	2.565	1.201	-1391.	1039.	13.5	7.987
.400	0.7	0.6004	0.2933	0.1065	4.95	1.501	0.698	0.592	2.150	2.538	1.181	-1403.	1024.	13.3	7.915
.400	0.8	0.5974	0.3315	0.0714	4.98	1.493	0.691	0.595	2.162	2.510	1.161	-1415.	1010.	13.2	7.844
.400	0.9	0.5950	0.3692	0.0359	5.02	1.488	0.684	0.599	2.176	2.483	1.141	-1427.	996.	13.1	7.772
.400	1.0	0.5935	0.4068	0.	5.05	1.484	0.678	0.604	2.189	2.457	1.122	-1439.	982.	13.0	7.701
.500	0.	0.7254	0.	0.2748	5.15	1.451	0.717	0.550	2.024	2.639	1.304	-1248.	1121.	14.4	8.638
.500	0.1	0.7180	0.0353	0.2470	5.19	1.436	0.706	0.549	2.034	2.616	1.286	-1258.	1108.	14.3	8.576
.500	0.2	0.7114	0.0696	0.2195	5.23	1.422	0.696	0.549	2.045	2.592	1.268	-1268.	1095.	14.2	8.515
.500	0.3	0.7052	0.1030	0.1922	5.26	1.410	0.686	0.549	2.055	2.569	1.250	-1278.	1083.	14.1	8.456
.500	0.4	0.6998	0.1355	0.1649	5.30	1.400	0.678	0.550	2.065	2.546	1.233	-1288.	1071.	14.0	8.399
.500	0.5	0.6951	0.1674	0.1378	5.33	1.390	0.670	0.551	2.076	2.523	1.215	-1298.	1059.	13.9	8.342
.500	0.6	0.6910	0.1988	0.1105	5.36	1.382	0.663	0.553	2.086	2.500	1.199	-1308.	1047.	13.8	8.285
.500	0.7	0.6875	0.2296	0.0832	5.40	1.375	0.656	0.555	2.096	2.478	1.182	-1318.	1036.	13.7	8.230
.500	0.8	0.6846	0.2599	0.0558	5.43	1.369	0.650	0.558	2.107	2.455	1.165	-1328.	1024.	13.6	8.175
.500	0.9	0.6823	0.2900	0.0280	5.46	1.365	0.644	0.561	2.117	2.433	1.149	-1337.	1013.	13.5	8.120
.500	1.0	0.6806	0.3198	0.	5.49	1.361	0.640	0.564	2.128	2.411	1.133	-1347.	1002.	13.4	8.065
.600	0.	0.7927	0.	0.2077	5.65	1.321	0.669	0.519	1.988	2.544	1.280	-1176.	1109.	14.7	8.841
.600	0.1	0.7871	0.0263	0.1870	5.68	1.312	0.657	0.519	1.996	2.526	1.266	-1184.	1100.	14.6	8.796
.600	0.2	0.7821	0.0520	0.1663	5.70	1.303	0.650	0.520	2.004	2.508	1.251	-1192.	1090.	14.5	8.752
.600	0.3	0.7774	0.0773	0.1457	5.73	1.296	0.644	0.520	2.012	2.490	1.237	-1200.	1080.	14.4	8.709
.600	0.4	0.7732	0.1021	0.1251	5.76	1.289	0.638	0.521	2.020	2.472	1.224	-1208.	1071.	14.3	8.666
.600	0.5	0.7695	0.1265	0.1045	5.79	1.282	0.632	0.523	2.028	2.454	1.210	-1216.	1062.	14.3	8.624
.600	0.6	0.7661	0.1505	0.0838	5.82	1.277	0.627	0.524	2.036	2.436	1.196	-1224.	1053.	14.2	8.582
.600	0.7	0.7631	0.1742	0.0631	5.84	1.272	0.622	0.526	2.045	2.419	1.183	-1232.	1044.	14.1	8.541
.600	0.8	0.7606	0.1976	0.0422	5.87	1.268	0.618	0.528	2.053	2.402	1.170	-1240.	1035.	14.0	8.500
.600	0.9	0.7584	0.2208	0.0212	5.90	1.264	0.613	0.530	2.061	2.384	1.157	-1248.	1027.	13.9	8.459
.600	1.0	0.7567	0.2438	0.	5.92	1.261	0.609	0.533	2.069	2.367	1.144	-1256.	1018.	13.8	8.419
.700	0.	0.8513	0.	0.1488	6.14	1.216	0.623	0.496	1.952	2.453	1.256	-1104.	1097.	14.9	9.058
.700	0.1	0.8479	0.0185	0.1340	6.16	1.211	0.619	0.496	1.958	2.440	1.246	-1110.	1090.	14.9	9.027
.700	0.2	0.8440	0.0368	0.1193	6.19	1.206	0.614	0.497	1.964	2.426	1.235	-1116.	1083.	14.8	8.997
.700	0.3	0.8407	0.0549	0.1045	6.21	1.201	0.610	0.498	1.970	2.413	1.225	-1122.	1076.	14.7	8.967
.700	0.4	0.8377	0.0727	0.0897	6.23	1.197	0.606	0.499	1.976	2.400	1.215	-1128.	1069.	14.6	8.937
.700	0.5	0.8349	0.0903	0.0749	6.25	1.193	0.602	0.500	1.982	2.387	1.204	-1134.	1062.	14.6	8.908
.700	0.6	0.8323	0.1077	0.0601	6.27	1.189	0.598	0.501	1.988	2.374	1.194	-1140.	1056.	14.5	8.879
.700	0.7	0.8300	0.1249	0.0452	6.29	1.186	0.595	0.502	1.994	2.361	1.184	-1146.	1049.	14.5	8.850
.700	0.8	0.8279	0.1419	0.0302	6.32	1.183	0.591	0.504	2.000	2.349	1.175	-1152.	1043.	14.4	8.821
.700	0.9	0.8261	0.1589	0.0152	6.34	1.180	0.588	0.505	2.006	2.336	1.165	-1158.	1037.	14.3	8.793
.700	1.0	0.8245	0.1756	0.	6.36	1.178	0.585	0.507	2.012	2.323	1.155	-1164.	1030.	14.3	8.765
.800	0.	0.9045	0.	0.0956	6.64	1.131	0.590	0.478	1.917	2.364	1.233	-1032.	1084.	15.1	9.299
.800	0.1	0.9022	0.0117	0.0862	6.66	1.128	0.587	0.479	1.921	2.356	1.226	-1036.	1079.	15.1	9.280
.800	0.2	0.9001	0.0234	0.0767	6.67	1.125	0.584	0.479	1.925	2.347	1.219	-1040.	1075.	15.0	9.262
.800	0.3	0.8980	0.0349	0.0672	6.69	1.123	0.582	0.480	1.929	2.339	1.213	-1044.	1070.	15.0	9.244
.800	0.4	0.8961	0.0464	0.0577	6.70	1.120	0.580	0.481	1.933	2.330	1.206	-1048.	1066.	15.0	9.226
.800	0.5	0.8943	0.0577	0.0481	6.72	1.118	0.577	0.481	1.937	2.322	1.199	-1052.	1062.	14.9	9.208
.800	0.6	0.8926	0.0690	0.0386	6.73	1.116	0.575	0.482	1.940	2.314	1.192	-1056.	1057.	14.9	9.190
.800	0.7	0.8910	0.0802	0.0290	6.75	1.114	0.573	0.483	1.944	2.305	1.186	-1060.	1053.	14.8	9.172
.800	0.8	0.8895	0.0913	0.0194	6.76	1.112	0.571	0.484	1.948	2.297	1.179	-1064.	1049.	14.8	9.155
.800	0.9	0.8881	0.1024	0.0097	6.78	1.110	0.569	0.485	1.952	2.289	1.172	-1068.	1045.	14.7	9.137
.800	1.0	0.8869	0.1133	0.	6.79	1.108	0.567	0.486	1.956	2.280	1.166	-1072.	1040.	14.7	9.120
.900	0.	0.9537	0.	0.0465	7.15	1.060	0.563	0.465	1.883	2.279	1.210	-960.	1070.	15.3	9.569
.900	0.1	0.9527	0.0056	0.0419	7.16	1.059	0.562	0.465	1.885	2.275	1.207	-962.	1068.	15.3	9.560
.900	0.2	0.9517	0.0112	0.0373	7.17	1.057	0.561	0.466	1.886	2.271	1.204	-964.	1066.	15.3	9.552
.900	0.3	0.9508	0.0168	0.0326	7.17	1.056	0.559	0.466	1.888	2.266	1.200	-966.	1064.	15.3	9.544
.900	0.4	0.9499	0.0223	0.0280	7.18	1.055	0.558	0.467	1.890	2.262	1.197	-968.	1061.	15.3	9.536
.900	0.5	0.9490	0.0279	0.0233	7.19	1.054	0.557	0.467	1.892	2.258	1.194	-970.	1059.	15.2	9.527
.900	0.6	0.9481	0.0334	0.0187	7.20	1.053	0.556	0.467	1.894	2.254	1.190	-972.	1057.	15.2	9.519
.900	0.7	0.9473	0.0389	0.0140	7.21	1.053	0.555	0.468	1.896	2.250	1.187	-974.	1055.	15.2	9.511
.900	0.8	0.9465	0.0443	0.0094	7.21	1.052	0.554	0.468	1.898	2.246	1.184	-976.	1053.	15.2	9.503
.900	0.9	0.9457	0.0498	0.0047	7.22	1.051	0.553	0.469	1.900	2.242	1.180	-978.	1051.	15.2	9.495
.900	1.0	0.9450	0.0552	0.	7.23	1.050	0.552	0.469	1.901	2.238	1.177	-980.	1049.	15.1	9.487
.975	0.	0.9888	0.	0.0114	7.54	1.014	0.546	0.458	1.857	2.217	1.194	-906.	1059.	15.5	9.794
.975	0.1	0.9886	0.0014	0.0103	7.54	1.014	0.546	0.458	1.857	2.216	1.193	-907.	1059.	15.5	9.792
.975	0.2	0.9884	0.0027	0.0092	7.55	1.014	0.546	0.458	1.858	2.215	1.192	-907.	1058.	15.5	9.790
.975	0.3	0.9881	0.0041	0.0080	7.55	1.013	0.545	0.458	1.858	2.214	1.191	-908.	1058.	15.5	9.789
.975	0.4	0.9879	0.0055	0.0069	7.55	1.013	0.545	0.458	1.859	2.213	1.190	-908.	1057.	15.5	9.787
.975	0.5	0.9877	0.0068	0.0057	7.55	1.013	0.545	0.458	1.859	2.212	1.190	-909.	1057.	15.5	9.785
.975	0.6	0.9875	0.0082	0.0046	7.55	1.013	0.545	0.458	1.860	2.211	1.189	-909.	1056.	15.5	9.783
.975	0.7	0.9873	0.0095	0.0034	7.56	1.013	0.544	0.458	1.860	2.210	1.188	-910.	1056.	15.5	9.781
.975	0.8	0.9871	0.0109	0.0023	7.56	1.012	0.544	0.458	1.861	2.209	1.187	-910.	1055.	15.5	9.779
.975	0.9	0.9869	0.0122	0.0011	7.56	1.012	0.544	0.459	1.861	2.208	1.186	-911.	1055.	15.5	9.777
.975	1.0	0.9867	0.0136	0.	7.56	1.012	0.544	0.459	1.862	2.207	1.185	-911.	1054.	15.5	9.776

TEMPERATURE = 185. R

Table 26. (cont.)

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0005	3.15	2.977	1.404	1.000	2.120	2.975	1.404	-1541.	1203.	13.4	7.936
.	0.1	0.	0.1310	0.8682	3.28	2.820	1.316	0.965	2.140	2.923	1.366	-1562.	1152.	13.2	7.686
.	0.2	0.	0.2495	0.7505	3.40	2.694	1.248	0.938	2.159	2.872	1.330	-1583.	1107.	13.0	7.465
.	0.3	0.	0.3569	0.6432	3.50	2.593	1.190	0.919	2.179	2.822	1.295	-1604.	1067.	12.8	7.263
.	0.4	0.	0.4566	0.5434	3.60	2.511	1.142	0.906	2.200	2.772	1.260	-1624.	1029.	12.6	7.073
.	0.5	0.	0.5510	0.4491	3.68	2.447	1.102	0.898	2.220	2.724	1.227	-1645.	994.	12.4	6.892
.	0.6	0.	0.6418	0.3582	3.75	2.397	1.070	0.896	2.241	2.677	1.194	-1666.	960.	12.3	6.714
.	0.7	0.	0.7307	0.2693	3.81	2.361	1.044	0.898	2.262	2.630	1.163	-1687.	927.	12.1	6.538
.	0.8	0.	0.8192	0.1809	3.87	2.338	1.024	0.905	2.283	2.585	1.132	-1708.	894.	11.9	6.360
.	0.9	0.	0.9085	0.0916	3.91	2.326	1.009	0.916	2.305	2.540	1.102	-1729.	861.	11.7	6.177
.	1.0	0.	1.0001	0.	3.95	2.326	1.000	0.932	2.326	2.496	1.073	-1750.	828.	11.5	5.986
.025	0.	0.0703	0.	0.9297	3.32	2.812	1.332	0.954	2.111	2.949	1.397	-1523.	1199.	13.4	7.975
.025	0.1	0.0669	0.1226	0.8105	3.44	2.676	1.257	0.924	2.130	2.899	1.361	-1543.	1152.	13.2	7.747
.025	0.2	0.0642	0.2330	0.7028	3.55	2.568	1.195	0.901	2.149	2.849	1.326	-1563.	1110.	13.1	7.541
.025	0.3	0.0620	0.3342	0.6039	3.65	2.478	1.143	0.885	2.169	2.801	1.291	-1584.	1072.	12.9	7.351
.025	0.4	0.0601	0.4287	0.5112	3.74	2.405	1.099	0.874	2.188	2.753	1.258	-1604.	1036.	12.7	7.172
.025	0.5	0.0587	0.5184	0.4230	3.82	2.348	1.063	0.868	2.208	2.706	1.225	-1624.	1002.	12.5	7.000
.025	0.6	0.0576	0.6048	0.3377	3.89	2.304	1.034	0.866	2.228	2.660	1.194	-1645.	970.	12.4	6.833
.025	0.7	0.0568	0.6893	0.2540	3.96	2.271	1.010	0.868	2.249	2.615	1.163	-1665.	939.	12.2	6.666
.025	0.8	0.0562	0.7732	0.1706	4.01	2.249	0.991	0.875	2.269	2.571	1.133	-1685.	907.	12.0	6.497
.025	0.9	0.0560	0.8578	0.0863	4.06	2.236	0.978	0.886	2.290	2.528	1.104	-1706.	876.	11.8	6.325
.025	1.0	0.0559	0.9441	0.	4.09	2.238	0.968	0.900	2.311	2.485	1.075	-1726.	845.	11.7	6.145
.100	0.	0.2419	0.	0.7581	3.81	2.419	1.161	0.842	2.084	2.872	1.378	-1468.	1189.	13.6	8.108
.100	0.1	0.2329	0.0998	0.6674	3.92	2.329	1.108	0.824	2.101	2.827	1.345	-1487.	1151.	13.5	7.926
.100	0.2	0.2254	0.1915	0.5833	4.02	2.254	1.064	0.810	2.119	2.782	1.313	-1505.	1116.	13.3	7.757
.100	0.3	0.2191	0.2769	0.5041	4.11	2.191	1.026	0.800	2.136	2.738	1.282	-1524.	1083.	13.1	7.599
.100	0.4	0.2139	0.3575	0.4286	4.19	2.139	0.993	0.794	2.154	2.695	1.251	-1543.	1053.	13.0	7.448
.100	0.5	0.2098	0.4345	0.3558	4.26	2.098	0.966	0.791	2.172	2.653	1.221	-1562.	1023.	12.8	7.302
.100	0.6	0.2065	0.5090	0.2846	4.32	2.065	0.943	0.791	2.191	2.611	1.193	-1580.	995.	12.6	7.159
.100	0.7	0.2040	0.5818	0.2143	4.38	2.040	0.924	0.794	2.209	2.571	1.164	-1599.	968.	12.5	7.017
.100	0.8	0.2023	0.6539	0.1439	4.43	2.023	0.908	0.800	2.228	2.530	1.136	-1618.	941.	12.3	6.875
.100	0.9	0.2014	0.7260	0.0727	4.48	2.014	0.896	0.808	2.248	2.491	1.109	-1637.	915.	12.2	6.729
.100	1.0	0.2011	0.7990	0.	4.52	2.011	0.888	0.820	2.265	2.452	1.083	-1656.	888.	12.0	6.580
.200	0.	0.4094	0.	0.5907	4.45	2.047	0.999	0.738	2.048	2.772	1.353	-1395.	1175.	13.9	8.296
.200	0.1	0.3983	0.0772	0.5246	4.54	1.992	0.965	0.729	2.064	2.733	1.325	-1411.	1145.	13.7	8.158
.200	0.2	0.3888	0.1496	0.4617	4.62	1.944	0.935	0.721	2.079	2.695	1.296	-1428.	1118.	13.6	8.027
.200	0.3	0.3808	0.2182	0.4012	4.69	1.904	0.909	0.716	2.094	2.657	1.269	-1445.	1092.	13.5	7.902
.200	0.4	0.3740	0.2836	0.3426	4.75	1.870	0.886	0.714	2.110	2.620	1.242	-1461.	1067.	13.3	7.782
.200	0.5	0.3684	0.3466	0.2852	4.82	1.842	0.867	0.713	2.126	2.584	1.216	-1478.	1043.	13.2	7.665
.200	0.6	0.3639	0.4078	0.2289	4.88	1.819	0.850	0.714	2.141	2.548	1.190	-1495.	1020.	13.0	7.549
.200	0.7	0.3604	0.4677	0.1721	4.94	1.802	0.835	0.717	2.157	2.512	1.165	-1511.	997.	12.9	7.435
.200	0.8	0.3578	0.5268	0.1159	4.99	1.789	0.823	0.722	2.173	2.477	1.140	-1528.	975.	12.7	7.320
.200	0.9	0.3562	0.5857	0.0583	5.03	1.781	0.813	0.729	2.190	2.443	1.116	-1545.	953.	12.6	7.204
.200	1.0	0.3555	0.6447	0.	5.07	1.778	0.806	0.738	2.206	2.409	1.092	-1562.	931.	12.5	7.086
.300	0.	0.5343	0.	0.4659	5.08	1.781	0.883	0.666	2.013	2.676	1.329	-1321.	1162.	14.2	8.496
.300	0.1	0.5238	0.0603	0.4161	5.13	1.746	0.862	0.661	2.026	2.643	1.304	-1336.	1138.	14.1	8.390
.300	0.2	0.5146	0.1177	0.3679	5.20	1.715	0.841	0.657	2.040	2.611	1.280	-1351.	1116.	13.9	8.288
.300	0.3	0.5066	0.1728	0.3209	5.26	1.689	0.823	0.655	2.053	2.579	1.256	-1365.	1095.	13.8	8.190
.300	0.4	0.4998	0.2258	0.2747	5.32	1.666	0.806	0.654	2.066	2.547	1.233	-1380.	1075.	13.7	8.094
.300	0.5	0.4940	0.2772	0.2291	5.38	1.647	0.792	0.654	2.080	2.516	1.210	-1394.	1055.	13.5	8.001
.300	0.6	0.4893	0.3273	0.1837	5.43	1.631	0.779	0.656	2.093	2.485	1.187	-1409.	1036.	13.4	7.909
.300	0.7	0.4855	0.3764	0.1384	5.48	1.618	0.768	0.659	2.107	2.455	1.165	-1424.	1018.	13.3	7.817
.300	0.8	0.4826	0.4248	0.0929	5.52	1.609	0.759	0.663	2.120	2.425	1.144	-1438.	999.	13.2	7.726
.300	0.9	0.4806	0.4729	0.0466	5.57	1.602	0.751	0.669	2.134	2.396	1.123	-1453.	981.	13.0	7.634
.300	1.0	0.4795	0.5208	0.	5.61	1.599	0.744	0.675	2.148	2.367	1.102	-1467.	963.	12.9	7.540
.400	0.	0.6328	0.	0.3675	5.66	1.582	0.799	0.613	1.979	2.583	1.305	-1248.	1148.	14.5	8.710
.400	0.1	0.6238	0.0470	0.3295	5.72	1.559	0.784	0.610	1.990	2.556	1.284	-1261.	1130.	14.3	8.629
.400	0.2	0.6158	0.0923	0.2922	5.77	1.540	0.769	0.609	2.001	2.529	1.264	-1273.	1112.	14.2	8.550
.400	0.3	0.6088	0.1361	0.2554	5.82	1.522	0.756	0.608	2.012	2.502	1.244	-1286.	1095.	14.1	8.474
.400	0.4	0.6026	0.1787	0.2190	5.87	1.507	0.745	0.608	2.023	2.476	1.224	-1298.	1079.	14.0	8.399
.400	0.5	0.5973	0.2202	0.1828	5.92	1.493	0.734	0.609	2.035	2.450	1.204	-1311.	1063.	13.9	8.325
.400	0.6	0.5929	0.2608	0.1467	5.97	1.482	0.724	0.611	2.046	2.425	1.185	-1323.	1048.	13.8	8.253
.400	0.7	0.5892	0.3007	0.1105	6.01	1.473	0.715	0.614	2.057	2.399	1.166	-1336.	1032.	13.7	8.181
.400	0.8	0.5863	0.3401	0.0741	6.05	1.466	0.708	0.617	2.069	2.374	1.148	-1348.	1017.	13.6	8.109
.400	0.9	0.5841	0.3790	0.0373	6.09	1.460	0.702	0.622	2.080	2.349	1.129	-1361.	1003.	13.5	8.036
.400	1.0	0.5826	0.4176	0.	6.13	1.457	0.696	0.626	2.092	2.325	1.111	-1373.	988.	13.4	7.964
.500	0.	0.7140	0.	0.2864	6.25	1.428	0.734	0.573	1.945	2.493	1.282	-1175.	1134.	14.7	8.940
.500	0.1	0.7069	0.0362	0.2574	6.30	1.414	0.723	0.572	1.954	2.471	1.265	-1185.	1120.	14.6	8.879
.500	0.2	0.7004	0.0714	0.2287	6.34	1.401	0.714	0.572	1.963	2.450	1.248	-1196.	1107.	14.6	8.820
.500	0.3	0.6946	0.1057	0.2002	6.38	1.389	0.704	0.572	1.972	2.428	1.231	-1206.	1093.	14.5	8.762
.500	0.4	0.6894	0.1392	0.1719	6.42	1.379	0.696	0.573	1.981	2.407	1.215	-1217.	1080.	14.4	8.705
.500	0.5	0.6846	0.1720	0.1435	6.47	1.369	0.688	0.574	1.990	2.386	1.199	-1227.	1067.	14.3	8.644
.500	0.6	0.6807	0.2043	0.1151	6.51	1.361	0.681	0.576	2.000	2.365	1.183	-1238.	1055.	14.2	8.589
.500	0.7	0.6774	0.2360	0.0867	6.55	1.355	0.674	0.578	2.009	2.344	1.167	-1248.	1043.	14.1	8.533
.500	0.8	0.6746	0.2674	0.0581	6.58	1.349	0.669	0.581	2.018	2.324	1.152	-1258.	1031.	14.0	8.478
.500	0.9	0.6724	0.2985	0.0292	6.62	1.345	0.663	0.584	2.028	2.304	1.136	-1269.	1019.	13.9	8.423
.500	1.0	0.6708	0.3293	0.	6.66	1.342	0.659	0.587	2.037	2.284	1.121	-1279.	1007.	13.8	8.368
.600	0.	0.7831	0.	0.2170	6.84	1.305	0.683	0.542	1.912	2.406	1.258	-1102.	1120.	15.0	9.185
.600	0.1	0.7778	0.0270	0.1953	6.87	1.296	0.676	0.543	1.919	2.389	1.245	-1110.	1109.	14.9	9.142
.600	0.2	0.7729	0.0535	0.1737	6.91	1.288	0.669	0.543	1.926	2.372	1.232	-1119.	1099.	14.9	9.099
.600	0.3	0.7684	0.0795	0.1522	6.94	1.281	0.663	0.544	1.933	2.356	1.219	-1127.	1089.	14.8	9.056
.600	0.4	0.7644	0.1051	0.1307	6.98	1.274	0.657	0.545	1.940	2.339	1.206	-1135.	1079.	14.7	9.014
.600	0.5	0.7607	0.1302	0.1092	7.01	1.268	0.651	0.546	1.947	2.323	1.193	-1144.	1069.	14.6	8.973
.600	0.6	0.7575	0.1550	0.0876	7.04	1.263	0.646	0.547	1.954	2.307	1.180	-1152.	1059.	14.6	8.932
.600	0.7	0.7547	0.1796	0.0659	7.08	1.258	0.641	0.549	1.961	2.291	1.168	-1160.	1050.	14.5	8.891
.600	0.8	0.7523	0.2038	0.0441	7.11	1.254	0.637	0.551	1.969	2.275	1.155	-1169.	1040.	14.4	8.851
.600	0.9	0.7502	0.2278	0.0221	7.14	1.250	0.633	0.554	1.976	2.259	1.143	-1177.	1031.	14.4	8.810
.600	1.0	0.7485	0.2516	0.	7.17	1.248	0.629	0.556	1.983	2.243	1.131	-1185.	1022.	14.3	8.770
.700	0.	0.8443	0.	0.1558	7.43	1.206	0.642	0.519	1.878	2.322	1.236	-1029.	1105.	15.3	9.460
.700	0.1	0.8407	0.0191	0.1404	7.45	1.201	0.638	0.520	1.884	2.310	1.226	-1035.	1097.	15.2	9.431
.700	0.2	0.8373	0.0380	0.1249	7.48	1.196	0.633	0.521	1.889	2.298	1.216	-1041.	1090.	15.2	9.402
.700	0.3	0.8341	0.0566	0.1095	7.51	1.192	0.629	0.521	1.894	2.286	1.207	-1047.	1083.	15.1	9.373
.700	0.4	0.8312	0.0750	0.0940	7.53	1.187	0.625	0.522	1.899	2.274	1.197	-1054.	1075.	15.1	9.345
.700	0.5	0.8285	0.0932	0.0785	7.56	1.184	0.621	0.523	1.905	2.262	1.188	-1060.	1068.	15.0	9.316
.700	0.6	0.8260	0.1112	0.0629	7.58	1.180	0.618	0.524	1.910	2.250	1.178	-1066.	1061.	15.0	9.288
.700	0.7	0.8238	0.1291	0.0473	7.61	1.177	0.615	0.526	1.915	2.238	1.169	-1072.	1054.	14.9	9.260
.700	0.8	0.8218	0.1467	0.0316	7.63	1.174	0.611	0.527	1.920	2.226	1.159	-1079.	1047.	14.8	9.233
.700	0.9	0.8201	0.1643	0.0159	7.66	1.172	0.608	0.529	1.926	2.215	1.150	-1085.	1041.	14.8	9.205
.700	1.0	0.8185	0.1817	0.	7.68	1.169	0.606	0.531	1.931	2.203	1.141	-1091.	1034.	14.7	9.177
.800	0.	0.8999	0.	0.1004	8.02	1.125	0.609	0.502	1.846	2.241	1.214	-955.	1090.	15.6	9.769
.800	0.1	0.8977	0.0121	0.0905	8.04	1.122	0.607	0.502	1.849	2.231	1.207	-960.	1085.	15.5	9.752
.800	0.2	0.8956	0.0242	0.0805	8.06	1.119	0.604	0.503	1.853	2.225	1.201	-964.	1080.	15.5	9.735
.800	0.3	0.8936	0.0361	0.0705	8.08	1.117	0.602	0.504	1.856	2.217	1.195	-968.	1075.	15.4	9.717
.800	0.4	0.8918	0.0480	0.0605	8.09	1.115	0.599	0.504	1.859	2.210	1.188	-972.	1071.	15.4	9.700
.800	0.5	0.8900	0.0597	0.0505	8.11	1.113	0.597	0.505	1.863	2.202	1.182	-976.	1066.	15.4	9.684
.800	0.6	0.8884	0.0714	0.0405	8.13	1.110	0.595	0.506	1.866	2.194	1.176	-980.	1061.	15.3	9.667
.800	0.7	0.8868	0.0830	0.0304	8.15	1.108	0.593	0.507	1.870	2.186	1.169	-985.	1057.	15.3	9.650
.800	0.8	0.8854	0.0945	0.0203	8.17	1.107	0.591	0.508	1.873	2.179	1.163	-989.	1052.	15.3	9.633
.800	0.9	0.8841	0.1060	0.0102	8.18	1.105	0.589	0.509	1.877	2.171	1.157	-993.	1048.	15.2	9.617
.800	1.0	0.8829	0.1174	0.	8.20	1.104	0.587	0.510	1.880	2.164	1.151	-997.	1043.	15.2	9.600
.900	0.	0.9515	0.	0.0489	8.63	1.057	0.583	0.489	1.813	2.162	1.192	-882.	1073.	15.8	10.122
.900	0.1	0.9505	0.0058	0.0440	8.64	1.056	0.582	0.489	1.815	2.158	1.189	-884.	1071.	15.8	10.114
.900	0.2	0.9496	0.0116	0.0392	8.65	1.055	0.581	0.490	1.817	2.154	1.186	-886.	1069.	15.8	10.107
.900	0.3	0.9487	0.0174	0.0343	8.66	1.054	0.580	0.490	1.818	2.151	1.183	-888.	1066.	15.8	10.100
.900	0.4	0.9478	0.0231	0.0294	8.67	1.053	0.579	0.491	1.820	2.147	1.180	-891.	1064.	15.8	10.092
.900	0.5	0.9469	0.0289	0.0245	8.68	1.052	0.578	0.491	1.822	2.143	1.176	-893.	1062.	15.7	10.085
.900	0.6	0.9461	0.0346	0.0197	8.69	1.051	0.577	0.491	1.823	2.139	1.173	-895.	1059.	15.7	10.078
.900	0.7	0.9453	0.0403	0.0148	8.70	1.050	0.576	0.492	1.825	2.136	1.170	-897.	1057.	15.7	10.070
.900	0.8	0.9446	0.0460	0.0098	8.71	1.050	0.575	0.492	1.827	2.132	1.167	-899.	1055.	15.7	10.063
.900	0.9	0.9438	0.0516	0.0049	8.72	1.049	0.574	0.493	1.828	2.128	1.164	-901.	1053.	15.7	10.056
.900	1.0	0.9431	0.0573	0.	8.73	1.048	0.573	0.493	1.830	2.124	1.161	-903.	1050.	15.7	10.049
.975	0.	0.9884	0.	0.0120	9.10	1.014	0.567	0.482	1.789	2.105	1.176	-827.	1060.	16.0	10.424
.975	0.1	0.9882	0.0014	0.0108	9.10	1.014	0.566	0.482	1.790	2.104	1.175	-828.	1060.	16.0	10.423
.975	0.2	0.9880	0.0028	0.0096	9.11	1.013	0.566	0.482	1.790	2.103	1.175	-828.	1059.	16.0	10.421
.975	0.3	0.9878	0.0042	0.0084	9.11	1.013	0.566	0.482	1.791	2.102	1.174	-829.	1059.	16.0	10.420
.975	0.4	0.9876	0.0057	0.0072	9.11	1.013	0.566	0.482	1.791	2.101	1.173	-829.	1058.	16.0	10.418
.975	0.5	0.9874	0.0071	0.0060	9.11	1.013	0.565	0.482	1.791	2.100	1.172	-830.	1057.	16.0	10.416
.975	0.6	0.9872	0.0085	0.0048	9.12	1.012	0.565	0.482	1.792	2.099	1.171	-830.	1057.	16.0	10.415
.975	0.7	0.9870	0.0099	0.0036	9.12	1.012	0.565	0.482	1.792	2.098	1.171	-831.	1056.	16.0	10.413
.975	0.8	0.9868	0.0113	0.0024	9.12	1.012	0.565	0.483	1.793	2.097	1.170	-832.	1056.	16.0	10.412
.975	0.9	0.9866	0.0127	0.0012	9.12	1.012	0.564	0.483	1.793	2.096	1.169	-832.	1055.	16.0	10.410
.975	1.0	0.9864	0.0141	0.	9.13	1.012	0.564	0.483	1.793	2.095	1.168	-833.	1055.	16.0	10.408

TEMPERATURE = 193. R

Table 26. (cont.)

LIQUID MOLE FRACTION N2	AR/AR+O2	VAPOR MOLE FRACTION N2	AR	O2	PRESSURE ATM	EQUIL CONST N2	AR	O2	RELATIVE VOL N2/AR	N2/O2	AR/O2	ENTHALPY BTU/LB MOLE LIQ	VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	VAP
0.	0.	0.	0.	1.0001	3.90	2.796	1.378	1.000	2.030	2.796	1.378	-1474.	1222.	13.4	8.102
0.	0.1	0.	0.1298	0.8703	4.06	2.658	1.298	0.967	2.047	2.748	1.343	-1496.	1171.	13.3	7.864
0.	0.2	0.	0.2465	0.7536	4.20	2.545	1.233	0.942	2.065	2.702	1.309	-1517.	1125.	13.1	7.659
0.	0.3	0.	0.3535	0.6466	4.32	2.453	1.178	0.924	2.082	2.656	1.275	-1539.	1083.	13.0	7.493
0.	0.4	0.	0.4532	0.5469	4.43	2.380	1.133	0.911	2.100	2.611	1.243	-1561.	1044.	12.8	7.288
0.	0.5	0.	0.5479	0.4522	4.53	2.321	1.096	0.904	2.118	2.566	1.212	-1583.	1008.	12.6	7.087
0.	0.6	0.	0.6393	0.3609	4.61	2.276	1.065	0.902	2.136	2.523	1.181	-1604.	972.	12.5	6.911
0.	0.7	0.	0.7288	0.2713	4.69	2.244	1.041	0.904	2.155	2.481	1.151	-1626.	938.	12.3	6.735
0.	0.8	0.	0.8179	0.1822	4.75	2.222	1.022	0.911	2.173	2.439	1.122	-1648.	904.	12.2	6.557
0.	0.9	0.	0.9079	0.0922	4.80	2.212	1.009	0.922	2.192	2.398	1.094	-1669.	870.	12.0	6.373
0.	1.0	0.	1.0001	0.	4.84	2.212	1.000	0.938	2.211	2.358	1.066	-1691.	835.	11.9	6.181
.025	0.	0.0684	0.	0.9317	4.12	2.655	1.313	0.958	2.021	2.772	1.372	-1455.	1218.	13.5	8.151
.025	0.1	0.0633	0.1212	0.8155	4.25	2.534	1.243	0.929	2.038	2.726	1.338	-1477.	1170.	13.3	7.931
.025	0.2	0.0609	0.2310	0.7083	4.38	2.434	1.185	0.908	2.055	2.681	1.305	-1498.	1127.	13.2	7.730
.025	0.3	0.0580	0.3321	0.6091	4.50	2.353	1.136	0.893	2.072	2.637	1.272	-1519.	1088.	13.0	7.544
.025	0.4	0.0572	0.4269	0.5160	4.60	2.287	1.095	0.882	2.090	2.593	1.241	-1540.	1051.	12.9	7.368
.025	0.5	0.0559	0.5170	0.4272	4.70	2.235	1.061	0.876	2.107	2.550	1.210	-1561.	1016.	12.7	7.198
.025	0.6	0.0549	0.6041	0.3412	4.78	2.194	1.033	0.875	2.125	2.508	1.180	-1582.	982.	12.6	7.031
.025	0.7	0.0541	0.6894	0.2566	4.85	2.164	1.010	0.877	2.143	2.467	1.151	-1604.	949.	12.4	6.865
.025	0.8	0.0536	0.7742	0.1724	4.92	2.145	0.993	0.884	2.161	2.427	1.123	-1625.	917.	12.3	6.698
.025	0.9	0.0534	0.8596	0.0872	4.97	2.135	0.980	0.894	2.179	2.387	1.095	-1646.	884.	12.1	6.522
.025	1.0	0.0533	0.9468	0.	5.01	2.134	0.971	0.908	2.197	2.348	1.069	-1667.	852.	12.0	6.341
.100	0.	0.2309	0.	0.7692	4.67	2.309	1.197	0.855	1.997	2.702	1.353	-1399.	1205.	13.7	8.304
.100	0.1	0.2227	0.0996	0.6779	4.79	2.227	1.107	0.837	2.012	2.661	1.322	-1419.	1167.	13.6	8.127
.100	0.2	0.2157	0.1915	0.5929	4.91	2.157	1.064	0.823	2.027	2.620	1.292	-1438.	1131.	13.5	7.962
.100	0.3	0.2100	0.2775	0.5127	5.01	2.100	1.028	0.814	2.043	2.580	1.263	-1458.	1097.	13.3	7.808
.100	0.4	0.2052	0.3588	0.4362	5.11	2.052	0.997	0.808	2.059	2.541	1.234	-1478.	1065.	13.2	7.658
.100	0.5	0.2013	0.4367	0.3621	5.19	2.013	0.970	0.805	2.075	2.502	1.206	-1497.	1035.	13.0	7.513
.100	0.6	0.1983	0.5122	0.2897	5.27	1.983	0.948	0.805	2.091	2.464	1.178	-1517.	1006.	12.9	7.370
.100	0.7	0.1960	0.5861	0.2181	5.34	1.960	0.930	0.808	2.107	2.426	1.152	-1536.	977.	12.8	7.228
.100	0.8	0.1944	0.6593	0.1469	5.40	1.944	0.916	0.814	2.123	2.390	1.125	-1556.	949.	12.6	7.085
.100	0.9	0.1936	0.7327	0.0740	5.45	1.936	0.905	0.822	2.140	2.354	1.100	-1575.	921.	12.5	6.938
.100	1.0	0.1933	0.8069	0.	5.50	1.933	0.897	0.834	2.157	2.318	1.075	-1595.	893.	12.4	6.786
.200	0.	0.3951	0.	0.6051	5.40	1.975	1.006	0.756	1.964	2.611	1.330	-1325.	1191.	14.1	8.522
.200	0.1	0.3847	0.0778	0.5377	5.50	1.924	0.973	0.747	1.977	2.576	1.303	-1342.	1160.	13.9	8.387
.200	0.2	0.3759	0.1510	0.4734	5.60	1.879	0.944	0.740	1.991	2.541	1.276	-1359.	1131.	13.8	8.259
.200	0.3	0.3683	0.2205	0.4115	5.69	1.842	0.919	0.735	2.005	2.506	1.250	-1377.	1104.	13.7	8.136
.200	0.4	0.3620	0.2869	0.3514	5.77	1.810	0.897	0.732	2.018	2.472	1.225	-1394.	1078.	13.6	8.017
.200	0.5	0.3567	0.3511	0.2925	5.84	1.784	0.878	0.731	2.032	2.439	1.200	-1412.	1053.	13.5	7.901
.200	0.6	0.3525	0.4134	0.2344	5.91	1.762	0.861	0.733	2.046	2.406	1.176	-1429.	1029.	13.3	7.786
.200	0.7	0.3492	0.4746	0.1765	5.98	1.746	0.847	0.736	2.060	2.373	1.152	-1446.	1005.	13.2	7.671
.200	0.8	0.3468	0.5350	0.1185	6.04	1.734	0.836	0.741	2.074	2.341	1.129	-1464.	981.	13.1	7.556
.200	0.9	0.3453	0.5952	0.0598	6.09	1.727	0.827	0.747	2.089	2.310	1.106	-1481.	958.	13.0	7.438
.200	1.0	0.3447	0.6556	0.	6.13	1.723	0.820	0.756	2.103	2.279	1.084	-1498.	935.	12.9	7.318
.300	0.	0.5198	0.	0.4805	6.11	1.733	0.887	0.687	1.932	2.524	1.306	-1250.	1176.	14.4	8.758
.300	0.1	0.5098	0.0612	0.4293	6.20	1.699	0.874	0.681	1.943	2.494	1.283	-1265.	1152.	14.3	8.654
.300	0.2	0.5011	0.1196	0.3796	6.27	1.670	0.854	0.678	1.955	2.464	1.260	-1280.	1128.	14.2	8.555
.300	0.3	0.4936	0.1757	0.3311	6.35	1.645	0.837	0.676	1.967	2.435	1.238	-1296.	1106.	14.1	8.458
.300	0.4	0.4871	0.2298	0.2835	6.42	1.624	0.821	0.675	1.978	2.406	1.216	-1311.	1085.	14.0	8.364
.300	0.5	0.4817	0.2824	0.2364	6.48	1.606	0.807	0.675	1.990	2.377	1.194	-1326.	1064.	13.9	8.271
.300	0.6	0.4772	0.3337	0.1896	6.55	1.591	0.794	0.677	2.002	2.349	1.173	-1341.	1044.	13.7	8.179
.300	0.7	0.4736	0.3840	0.1428	6.60	1.579	0.784	0.680	2.014	2.321	1.152	-1356.	1024.	13.6	8.088
.300	0.8	0.4709	0.4335	0.0958	6.66	1.570	0.775	0.684	2.026	2.294	1.132	-1372.	1005.	13.5	7.999
.300	0.9	0.4690	0.4832	0.0483	6.71	1.563	0.767	0.690	2.038	2.267	1.112	-1387.	986.	13.4	7.912
.300	1.0	0.4680	0.5325	0.	6.76	1.560	0.761	0.696	2.051	2.241	1.092	-1402.	967.	13.3	7.828
.400	0.	0.6192	0.	0.3809	6.81	1.548	0.815	0.635	1.900	2.438	1.283	-1175.	1160.	14.7	9.007
.400	0.1	0.6106	0.0480	0.3415	6.88	1.527	0.799	0.632	1.910	2.414	1.264	-1188.	1141.	14.6	8.930
.400	0.2	0.6030	0.0942	0.3029	6.94	1.507	0.785	0.631	1.919	2.389	1.245	-1201.	1122.	14.5	8.854
.400	0.3	0.5963	0.1391	0.2648	7.01	1.491	0.773	0.630	1.929	2.365	1.226	-1214.	1104.	14.4	8.779
.400	0.4	0.5904	0.1827	0.2270	7.07	1.476	0.761	0.631	1.939	2.341	1.207	-1227.	1087.	14.3	8.705
.400	0.5	0.5854	0.2252	0.1895	7.12	1.463	0.751	0.632	1.949	2.317	1.189	-1240.	1070.	14.3	8.633
.400	0.6	0.5811	0.2670	0.1520	7.18	1.453	0.742	0.633	1.959	2.293	1.171	-1253.	1054.	14.2	8.560
.400	0.7	0.5776	0.3080	0.1149	7.23	1.444	0.733	0.636	1.969	2.270	1.153	-1266.	1038.	14.1	8.489
.400	0.8	0.5748	0.3485	0.0767	7.28	1.437	0.726	0.640	1.979	2.247	1.135	-1279.	1022.	14.0	8.416
.400	0.9	0.5728	0.3887	0.0386	7.33	1.432	0.720	0.644	1.989	2.224	1.118	-1293.	1006.	13.9	8.344
.400	1.0	0.5715	0.4287	0.	7.37	1.429	0.714	0.649	2.000	2.202	1.101	-1306.	991.	13.8	8.272
.500	0.	0.7022	0.	0.2980	7.50	1.404	0.752	0.596	1.869	2.356	1.261	-1101.	1144.	15.0	9.288
.500	0.1	0.6953	0.0370	0.2678	7.55	1.391	0.741	0.595	1.877	2.336	1.245	-1111.	1129.	15.0	9.228
.500	0.2	0.6891	0.0731	0.2380	7.61	1.378	0.731	0.595	1.885	2.316	1.229	-1122.	1115.	14.9	9.171
.500	0.3	0.6835	0.1083	0.2083	7.66	1.367	0.722	0.595	1.893	2.297	1.214	-1133.	1100.	14.8	9.114
.500	0.4	0.6786	0.1428	0.1788	7.71	1.357	0.714	0.596	1.901	2.277	1.198	-1144.	1087.	14.7	9.059
.500	0.5	0.6742	0.1766	0.1493	7.76	1.348	0.706	0.597	1.909	2.258	1.183	-1155.	1073.	14.7	9.004
.500	0.6	0.6705	0.2099	0.1198	7.80	1.341	0.700	0.599	1.917	2.239	1.168	-1166.	1060.	14.6	8.949
.500	0.7	0.6673	0.2427	0.0902	7.85	1.335	0.693	0.601	1.925	2.220	1.153	-1177.	1047.	14.5	8.894
.500	0.8	0.6647	0.2751	0.0604	7.89	1.329	0.688	0.604	1.933	2.201	1.139	-1187.	1034.	14.4	8.839
.500	0.9	0.6626	0.3072	0.0304	7.93	1.325	0.683	0.607	1.941	2.183	1.124	-1198.	1021.	14.4	8.784
.500	1.0	0.6611	0.3391	0.	7.98	1.322	0.678	0.611	1.950	2.164	1.110	-1209.	1009.	14.3	8.729
.600	0.	0.7737	0.	0.2265	8.19	1.289	0.702	0.566	1.838	2.277	1.239	-1026.	1127.	15.4	9.594
.600	0.1	0.7685	0.0278	0.2039	8.23	1.281	0.695	0.566	1.844	2.261	1.226	-1035.	1116.	15.3	9.553
.600	0.2	0.7638	0.0550	0.1814	8.27	1.273	0.688	0.567	1.850	2.246	1.214	-1043.	1105.	15.2	9.512
.600	0.3	0.7595	0.0818	0.1589	8.31	1.266	0.682	0.567	1.856	2.231	1.202	-1052.	1094.	15.2	9.472
.600	0.4	0.7556	0.1082	0.1364	8.35	1.259	0.676	0.568	1.863	2.215	1.189	-1061.	1084.	15.1	9.431
.600	0.5	0.7521	0.1341	0.1139	8.39	1.254	0.671	0.570	1.869	2.200	1.177	-1069.	1073.	15.1	9.392
.600	0.6	0.7491	0.1598	0.0914	8.43	1.248	0.666	0.571	1.875	2.186	1.165	-1078.	1063.	15.0	9.352
.600	0.7	0.7464	0.1851	0.0688	8.47	1.244	0.661	0.573	1.882	2.171	1.154	-1087.	1053.	14.9	9.312
.600	0.8	0.7441	0.2102	0.0460	8.51	1.240	0.657	0.575	1.888	2.156	1.142	-1095.	1043.	14.9	9.273
.600	0.9	0.7421	0.2350	0.0231	8.54	1.237	0.653	0.578	1.895	2.142	1.130	-1104.	1033.	14.8	9.233
.600	1.0	0.7405	0.2597	0.	8.58	1.234	0.649	0.580	1.901	2.127	1.119	-1113.	1023.	14.8	9.194
.700	0.	0.8372	0.	0.1631	8.88	1.196	0.662	0.544	1.807	2.200	1.217	-951.	1110.	15.7	9.941
.700	0.1	0.8336	0.0197	0.1469	8.91	1.191	0.657	0.544	1.811	2.188	1.208	-958.	1102.	15.6	9.914
.700	0.2	0.8304	0.0392	0.1308	8.94	1.186	0.653	0.545	1.816	2.177	1.199	-964.	1094.	15.6	9.887
.700	0.3	0.8273	0.0584	0.1146	8.97	1.182	0.649	0.546	1.821	2.166	1.190	-971.	1087.	15.6	9.860
.700	0.4	0.8245	0.0774	0.0984	9.00	1.178	0.645	0.547	1.825	2.155	1.181	-977.	1079.	15.5	9.834
.700	0.5	0.8219	0.0963	0.0821	9.03	1.174	0.642	0.548	1.830	2.144	1.172	-984.	1071.	15.5	9.807
.700	0.6	0.8196	0.1149	0.0659	9.06	1.171	0.638	0.549	1.835	2.133	1.163	-990.	1064.	15.4	9.781
.700	0.7	0.8175	0.1333	0.0495	9.09	1.168	0.635	0.550	1.839	2.122	1.154	-997.	1056.	15.4	9.755
.700	0.8	0.8156	0.1517	0.0331	9.12	1.165	0.632	0.552	1.844	2.112	1.145	-1003.	1049.	15.3	9.729
.700	0.9	0.8139	0.1698	0.0166	9.15	1.163	0.629	0.553	1.848	2.101	1.137	-1010.	1041.	15.3	9.702
.700	1.0	0.8125	0.1879	0.	9.18	1.161	0.626	0.555	1.853	2.090	1.128	-1016.	1034.	15.2	9.676
.800	0.	0.8951	0.	0.1053	9.58	1.119	0.630	0.527	1.776	2.125	1.196	-876.	1092.	16.0	10.340
.800	0.1	0.8930	0.0125	0.0949	9.60	1.116	0.627	0.527	1.779	2.117	1.190	-881.	1087.	16.0	10.325
.800	0.2	0.8910	0.0250	0.0844	9.62	1.114	0.625	0.528	1.782	2.110	1.184	-885.	1082.	16.0	10.310
.800	0.3	0.8891	0.0374	0.0740	9.65	1.111	0.623	0.528	1.785	2.103	1.178	-890.	1077.	15.9	10.294
.800	0.4	0.8873	0.0496	0.0635	9.67	1.109	0.620	0.529	1.788	2.096	1.172	-894.	1072.	15.9	10.279
.800	0.5	0.8857	0.0618	0.0530	9.69	1.107	0.618	0.530	1.791	2.089	1.166	-898.	1067.	15.9	10.264
.800	0.6	0.8841	0.0739	0.0425	9.71	1.105	0.616	0.531	1.794	2.082	1.160	-903.	1062.	15.8	10.249
.800	0.7	0.8826	0.0859	0.0319	9.73	1.103	0.614	0.532	1.797	2.075	1.154	-907.	1057.	15.8	10.234
.800	0.8	0.8813	0.0979	0.0213	9.75	1.102	0.612	0.533	1.800	2.068	1.148	-911.	1052.	15.8	10.219
.800	0.9	0.8800	0.1098	0.0107	9.77	1.100	0.610	0.534	1.803	2.061	1.143	-916.	1047.	15.7	10.204
.800	1.0	0.8789	0.1216	0.	9.79	1.099	0.608	0.535	1.807	2.054	1.137	-920.	1042.	15.7	10.190
.900	0.	0.9488	0.	0.0514	10.31	1.054	0.604	0.514	1.746	2.052	1.175	-802.	1072.	16.3	10.803
.900	0.1	0.9479	0.0060	0.0463	10.32	1.053	0.603	0.514	1.748	2.048	1.172	-804.	1070.	16.3	10.797
.900	0.2	0.9470	0.0120	0.0412	10.33	1.052	0.602	0.515	1.749	2.045	1.169	-806.	1067.	16.3	10.791
.900	0.3	0.9461	0.0180	0.0360	10.34	1.051	0.601	0.515	1.750	2.041	1.166	-808.	1065.	16.3	10.785
.900	0.4	0.9453	0.0240	0.0309	10.35	1.050	0.600	0.515	1.752	2.038	1.163	-810.	1062.	16.3	10.779
.900	0.5	0.9445	0.0299	0.0258	10.37	1.049	0.599	0.516	1.753	2.035	1.160	-813.	1060.	16.3	10.773
.900	0.6	0.9437	0.0359	0.0206	10.38	1.049	0.598	0.516	1.755	2.031	1.157	-815.	1057.	16.3	10.767
.900	0.7	0.9429	0.0418	0.0155	10.39	1.048	0.597	0.517	1.756	2.028	1.155	-817.	1055.	16.3	10.761
.900	0.8	0.9422	0.0476	0.0103	10.40	1.047	0.596	0.517	1.758	2.024	1.152	-819.	1052.	16.2	10.755
.900	0.9	0.9415	0.0535	0.0052	10.41	1.046	0.595	0.518	1.759	2.021	1.149	-821.	1050.	16.2	10.749
.900	1.0	0.9408	0.0594	0.	10.42	1.045	0.594	0.518	1.761	2.017	1.146	-824.	1048.	16.2	10.743
.975	0.	0.9876	0.	0.0127	10.87	1.013	0.588	0.507	1.723	1.998	1.160	-746.	1057.	16.6	11.215
.975	0.1	0.9874	0.0015	0.0114	10.87	1.013	0.587	0.507	1.724	1.998	1.159	-746.	1056.	16.6	11.214
.975	0.2	0.9872	0.0029	0.0101	10.88	1.012	0.587	0.507	1.724	1.997	1.158	-747.	1055.	16.6	11.213
.975	0.3	0.9870	0.0044	0.0089	10.88	1.012	0.587	0.507	1.724	1.996	1.158	-747.	1055.	16.6	11.212
.975	0.4	0.9868	0.0059	0.0076	10.88	1.012	0.587	0.507	1.725	1.995	1.157	-748.	1054.	16.6	11.210
.975	0.5	0.9866	0.0073	0.0063	10.89	1.012	0.587	0.507	1.725	1.995	1.156	-748.	1053.	16.6	11.209
.975	0.6	0.9864	0.0088	0.0051	10.89	1.012	0.586	0.507	1.725	1.994	1.155	-749.	1053.	16.6	11.208
.975	0.7	0.9862	0.0103	0.0038	10.89	1.011	0.586	0.508	1.726	1.993	1.155	-750.	1052.	16.6	11.207
.975	0.8	0.9860	0.0117	0.0025	10.89	1.011	0.586	0.508	1.726	1.992	1.154	-750.	1052.	16.6	11.206
.975	0.9	0.9858	0.0132	0.0013	10.90	1.011	0.586	0.508	1.727	1.991	1.153	-751.	1051.	16.6	11.205
.975	1.0	0.9856	0.0146	0.	10.90	1.011	0.585	0.508	1.727	1.990	1.152	-751.	1050.	16.6	11.204

TEMPERATURE = 195. R

Table [illegible] (cont.)

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0001	4.78	2.631	1.353	1.000	1.944	2.631	1.353	-1407.	1239.	13.5	8.297
.	0.1	0.	0.1279	0.8722	4.97	2.507	1.279	0.969	1.966	2.587	1.320	-1429.	1187.	13.4	8.089
.	0.2	0.	0.2437	0.7565	5.13	2.406	1.218	0.946	1.975	2.544	1.288	-1452.	1140.	13.2	7.863
.	0.3	0.	0.3502	0.6500	5.27	2.324	1.167	0.929	1.990	2.502	1.257	-1474.	1097.	13.1	7.671
.	0.4	0.	0.4502	0.5502	5.40	2.257	1.125	0.917	2.006	2.461	1.227	-1496.	1057.	13.0	7.488
.	0.5	0.	0.5450	0.4552	5.51	2.204	1.090	0.910	2.022	2.421	1.197	-1519.	1019.	12.9	7.312
.	0.6	0.	0.6368	0.3634	5.61	2.163	1.061	0.909	2.038	2.381	1.168	-1541.	983.	12.7	7.138
.	0.7	0.	0.7260	0.2733	5.70	2.133	1.038	0.911	2.054	2.342	1.140	-1564.	947.	12.6	6.963
.	0.8	0.	0.8167	0.1838	5.77	2.114	1.021	0.918	2.071	2.304	1.113	-1586.	912.	12.5	6.785
.	0.9	0.	0.9074	0.0928	5.83	2.104	1.008	0.928	2.087	2.266	1.086	-1608.	877.	12.4	6.600
.	1.0	0.	1.0002	0.	5.88	2.104	1.000	0.944	2.104	2.230	1.060	-1631.	841.	12.2	6.407
.025	0.	0.0627	0.	0.9374	5.09	2.509	1.299	0.961	1.937	2.609	1.347	-1388.	1235.	13.6	8.354
.025	0.1	0.0600	0.1199	0.8203	5.18	2.400	1.230	0.939	1.951	2.567	1.315	-1410.	1186.	13.5	8.142
.025	0.2	0.0577	0.2291	0.7134	5.33	2.310	1.175	0.915	1.966	2.526	1.284	-1431.	1142.	13.3	7.948
.025	0.3	0.0559	0.3301	0.6142	5.47	2.236	1.129	0.900	1.982	2.485	1.254	-1453.	1101.	13.2	7.767
.025	0.4	0.0544	0.4251	0.5207	5.59	2.176	1.090	0.890	1.997	2.445	1.224	-1475.	1063.	13.1	7.595
.025	0.5	0.0532	0.5157	0.4313	5.70	2.129	1.058	0.885	2.012	2.406	1.196	-1497.	1027.	13.0	7.427
.025	0.6	0.0522	0.6034	0.3445	5.80	2.091	1.031	0.883	2.028	2.367	1.168	-1519.	992.	12.9	7.262
.025	0.7	0.0516	0.6895	0.2592	5.89	2.064	1.010	0.886	2.043	[illegible]	1.140	-1541.	958.	12.7	7.096
.025	0.8	0.0512	0.7751	0.1740	5.96	2.046	0.994	0.893	2.059	2.293	1.113	-1562.	924.	12.6	6.927
.025	0.9	0.0509	0.8613	0.0880	6.02	2.037	0.982	0.903	2.075	2.256	1.087	-1584.	890.	12.5	6.752
.025	1.0	0.0507	0.9494	0.	6.07	2.036	0.974	0.917	2.091	2.221	1.062	-1606.	856.	12.4	6.570
.100	0.	0.2215	0.	0.7787	5.65	2.215	1.192	0.866	1.914	2.545	1.330	-1330.	1222.	13.9	8.530
.100	0.1	0.2127	0.0994	0.6879	5.80	2.129	1.105	0.849	1.927	2.507	1.301	-1351.	1182.	13.8	8.359
.100	0.2	0.2066	0.1916	0.6021	5.93	2.066	1.064	0.836	1.941	2.470	1.273	-1371.	1144.	13.6	8.199
.100	0.3	0.2013	0.2780	0.5210	6.06	2.013	1.030	0.827	1.955	2.433	1.245	-1391.	1109.	13.5	8.047
.100	0.4	0.1969	0.3600	0.4434	6.17	1.969	1.000	0.821	1.969	2.397	1.218	-1411.	1076.	13.4	7.901
.100	0.5	0.1933	0.4387	0.3683	6.27	1.933	0.975	0.818	1.983	2.362	1.191	-1431.	1044.	13.3	7.758
.100	0.6	0.1905	0.5151	0.2947	6.36	1.905	0.954	0.819	1.997	2.327	1.165	-1451.	1014.	13.2	7.617
.100	0.7	0.1884	0.5901	0.2218	6.44	1.884	0.937	0.822	2.011	2.293	1.140	-1471.	984.	13.1	7.475
.100	0.8	0.1869	0.6645	0.1489	6.51	1.869	0.923	0.827	2.025	2.259	1.115	-1492.	955.	13.0	7.331
.100	0.9	0.1861	0.7390	0.0752	6.57	1.861	0.912	0.836	2.040	2.226	1.091	-1512.	925.	12.9	7.183
.100	1.0	0.1859	0.8144	0.	6.62	1.859	0.905	0.848	2.054	2.193	1.068	-1532.	896.	12.7	7.029
.200	0.	0.3812	0.	0.6192	6.49	1.906	1.012	0.774	1.884	2.463	1.307	-1254.	1205.	14.3	8.763
.200	0.1	0.3715	0.0784	0.5504	6.61	1.858	0.980	0.764	1.896	2.430	1.282	-1272.	1173.	14.1	8.653
.200	0.2	0.3633	0.1523	0.4848	6.72	1.816	0.952	0.757	1.908	2.398	1.257	-1290.	1143.	14.0	8.529
.200	0.3	0.3562	0.2227	0.4215	6.83	1.781	0.928	0.753	1.920	2.366	1.233	-1308.	1114.	13.9	8.409
.200	0.4	0.3503	0.2901	0.3600	6.92	1.751	0.907	0.750	1.932	2.335	1.209	-1326.	1087.	13.8	8.292
.200	0.5	0.3454	0.3553	0.2998	7.01	1.727	0.888	0.749	1.944	2.304	1.185	-1344.	1060.	13.7	8.177
.200	0.6	0.3414	0.4189	0.2402	7.09	1.707	0.873	0.751	1.956	2.274	1.163	-1361.	1035.	[illegible]	8.063
.200	0.7	0.3380	0.4817	0.1809	7.16	1.692	0.859	0.754	1.968	2.244	1.140	-1379.	1010.	13.5	7.949
.200	0.8	0.3360	[illegible]	0.1213	7.24	1.680	0.848	0.758	1.981	2.215	1.118	-1397.	983.	13.4	7.829
.200	0.9	0.3346	[illegible]	0.0612	7.30	1.673	0.839	0.765	1.993	2.186	1.097	-1415.	961.	13.3	7.710
.200	1.0	[illegible]	0.6662	0.	7.36	1.670	0.833	0.774	2.006	2.158	1.076	-1433.	[illegible]	13.2	7.588
.300	0.	0.5052	0.	0.4948	7.31	1.684	0.908	0.707	1.854	2.382	1.285	-1177.	1187.	14.6	9.056
.300	0.1	0.4959	0.0621	0.4422	7.41	1.653	0.887	0.702	1.864	2.355	1.263	-1193.	1162.	14.5	8.957
.300	0.2	0.4876	0.1214	0.3911	7.50	1.625	0.867	0.698	1.875	2.328	1.242	-1209.	1138.	14.4	8.860
.300	0.3	0.4805	0.1785	0.3411	7.59	1.602	0.850	0.696	1.885	2.301	1.221	-1224.	1114.	14.4	8.766
.300	0.4	0.4744	0.2336	0.2921	7.67	1.581	0.834	0.695	1.895	2.274	1.200	-1240.	1092.	14.3	8.674
.300	0.5	0.4693	0.2873	0.2438	7.75	1.564	0.821	0.696	1.906	2.248	1.180	-1256.	1070.	14.2	8.583
.300	0.6	0.4650	0.3398	0.1953	7.82	1.550	0.809	0.698	1.916	2.222	1.160	-1272.	1048.	14.1	8.492
.300	0.7	0.4617	0.3914	0.1471	7.89	1.539	0.799	0.701	1.927	2.197	1.140	-1287.	1028.	14.0	8.401
.300	0.8	0.4591	0.4424	0.0987	7.95	1.530	0.790	0.705	1.937	2.172	1.121	-1303.	1007.	13.9	8.309
.300	0.9	0.4574	0.4931	0.0497	8.01	1.525	0.783	0.710	1.948	2.147	1.102	-1319.	987.	13.8	8.215
.300	1.0	0.4564	0.5437	0.	8.06	1.521	0.777	0.717	1.959	2.122	1.083	-1334.	967.	13.7	8.118
.400	0.	0.6058	0.	0.3943	8.11	1.515	0.838	0.657	1.825	2.305	1.263	-1101.	1170.	15.0	9.360
.400	0.1	0.5977	[illegible]	[illegible]	8.19	1.494	0.815	0.655	1.833	2.282	1.245	-1114.	1150.	14.9	9.285
.400	0.2	0.5914	0.0962	0.3136	8.27	1.476	0.801	0.653	1.842	2.259	1.227	-1128.	1130.	14.8	9.211
.400	0.3	0.5846	0.1420	0.2741	8.34	1.460	0.789	0.653	1.851	2.237	1.209	-1141.	1111.	14.8	9.139
.400	0.4	0.5785	0.1867	0.2351	8.41	1.446	0.778	0.653	1.859	2.215	1.191	-1155.	1093.	14.7	9.068
.400	0.5	0.5737	0.2303	0.1962	8.48	1.434	0.768	0.654	1.868	2.193	1.174	-1168.	1075.	14.6	8.997
.400	0.6	0.5696	0.2732	0.1574	8.54	1.424	0.759	0.656	1.877	2.171	1.157	-1182.	1057.	14.5	8.927
.400	0.7	0.5663	0.3153	0.1185	8.60	1.416	0.751	0.659	1.886	2.150	1.140	-1195.	1040.	14.5	8.856
.400	0.8	0.5637	0.3570	0.0794	8.66	1.409	0.744	0.662	1.895	2.129	1.124	-1209.	1023.	14.4	8.784
.400	0.9	0.5618	0.3984	0.0400	8.71	1.405	0.738	0.666	1.904	2.108	1.107	-1222.	1007.	14.3	8.711
.400	1.0	0.5606	0.4397	0.	8.76	1.401	0.733	0.671	1.913	2.087	1.091	-1235.	990.	14.2	8.637
.500	0.	0.6905	0.	0.3097	8.90	1.381	0.769	0.619	1.796	2.229	1.241	-1025.	1152.	15.4	9.698
.500	0.1	0.6839	0.0379	0.2784	8.97	1.368	0.759	0.619	1.803	2.211	1.226	-1036.	1136.	15.3	9.643
.500	0.2	0.6780	0.0749	0.2474	9.03	1.356	0.749	0.618	1.810	2.193	1.212	-1047.	1120.	15.2	9.589
.500	0.3	0.6727	0.1111	0.2164	9.09	1.345	0.740	0.619	1.817	2.175	1.197	-1058.	1105.	15.2	9.536
.500	0.4	0.6680	0.1469	0.1858	9.15	1.336	0.732	0.619	1.824	2.157	1.182	-1069.	1091.	15.1	9.483
.500	0.5	0.6638	0.1813	0.1552	9.21	1.328	0.725	0.621	1.831	2.139	1.168	-1081.	1076.	15.1	9.430
.500	0.6	0.6603	0.2155	0.1245	9.26	1.321	0.718	0.622	1.838	2.121	1.154	-1092.	1062.	15.0	9.377
.500	0.7	0.6573	0.2493	0.0937	9.31	1.315	0.712	0.625	1.845	2.104	1.140	-1103.	1048.	14.9	9.324
.500	0.8	0.6548	0.2828	0.0628	9.36	1.310	0.707	0.628	1.853	2.087	1.126	-1114.	1035.	14.9	9.270
.500	0.9	0.6528	0.3159	0.0315	9.41	1.306	0.702	0.631	1.860	2.070	1.113	-1125.	1021.	14.8	9.216
.500	1.0	0.6514	0.3489	0.	9.46	1.303	0.698	0.635	1.867	2.053	1.099	-1137.	1008.	14.7	9.161
.600	0.	0.7641	0.	0.2363	9.70	1.274	0.721	0.591	1.767	2.156	1.220	-948.	1133.	15.8	10.068
.600	0.1	0.7592	0.0286	0.2127	9.75	1.265	0.714	0.591	1.772	2.142	1.208	-957.	1121.	15.7	10.043
.600	0.2	0.7546	0.0566	0.1892	9.80	1.258	0.707	0.591	1.778	2.128	1.197	-966.	1109.	15.7	10.007
.600	0.3	0.7505	0.0842	0.1657	9.85	1.251	0.701	0.592	1.783	2.114	1.185	-975.	1097.	15.6	9.968
.600	0.4	0.7468	0.1113	0.1423	9.90	1.245	0.696	0.593	1.789	2.100	1.174	-984.	1086.	15.5	9.931
.600	0.5	0.7435	0.1381	0.1188	9.94	1.239	0.691	0.594	1.795	2.086	1.162	-993.	1075.	15.5	9.894
.600	0.6	0.7406	0.1646	0.0953	9.99	1.234	0.686	0.596	1.800	2.072	1.151	-1002.	1064.	15.4	9.856
.600	0.7	0.7380	0.1907	0.0717	10.03	1.230	0.681	0.597	1.806	2.059	1.140	-1011.	1053.	15.4	9.819
.600	0.8	0.7358	0.2166	0.0480	10.08	1.226	0.677	0.600	1.811	2.045	1.129	-1020.	1042.	15.3	9.782
.600	0.9	0.7341	0.2424	0.0241	10.12	1.223	0.673	0.602	1.817	2.032	1.118	-1029.	1032.	15.3	9.744
.600	1.0	0.7325	0.2679	0.	10.16	1.221	0.670	0.605	1.823	2.019	1.107	-1038.	1021.	15.2	9.705
.700	0.	0.8296	0.	0.1709	10.51	1.185	0.682	0.568	1.738	2.085	1.199	-872.	1112.	16.1	10.518
.700	0.1	0.8262	0.0203	0.1536	10.55	1.180	0.677	0.569	1.742	2.075	1.191	-878.	1104.	16.1	10.494
.700	0.2	0.8231	0.0404	0.1367	10.59	1.176	0.673	0.570	1.746	2.064	1.182	-885.	1095.	16.1	10.470
.700	0.3	0.8201	0.0602	0.1198	10.62	1.172	0.669	0.570	1.750	2.054	1.174	-892.	1087.	16.0	10.447
.700	0.4	0.8174	0.0799	0.1029	10.66	1.168	0.666	0.571	1.754	2.044	1.165	-899.	1078.	16.0	10.423
.700	0.5	0.8150	0.0993	0.0859	10.70	1.164	0.662	0.572	1.758	2.034	1.157	-905.	1070.	15.9	10.400
.700	0.6	0.8127	0.1186	0.0688	10.73	1.161	0.659	0.574	1.763	2.024	1.148	-912.	1062.	15.9	10.376
.700	0.7	0.8107	0.1377	0.0518	10.77	1.158	0.656	0.575	1.767	2.014	1.140	-919.	1054.	15.9	10.353
.700	0.8	0.8089	0.1566	0.0346	10.80	1.156	0.653	0.577	1.771	2.004	1.132	-925.	1046.	15.8	10.329
.700	0.9	0.8074	0.1755	0.0174	10.84	1.153	0.650	0.578	1.775	1.994	1.124	-932.	1038.	15.8	10.305
.700	1.0	0.8060	0.1942	0.	10.87	1.151	0.647	0.580	1.779	1.984	1.115	-939.	1030.	15.7	10.281
.800	0.	0.8897	0.	0.1104	11.33	1.112	0.651	0.552	1.710	2.016	1.179	-795.	1091.	16.5	11.038
.800	0.1	0.8876	0.0130	0.0994	11.36	1.110	0.648	0.552	1.712	2.009	1.173	-800.	1085.	16.5	11.025
.800	0.2	0.8859	0.0258	0.0885	11.39	1.107	0.646	0.553	1.715	2.003	1.168	-804.	1080.	16.5	11.013
.800	0.3	0.8841	0.0386	0.0775	11.41	1.105	0.643	0.554	1.718	1.996	1.162	-809.	1074.	16.4	11.001
.800	0.4	0.8824	0.0513	0.0665	11.44	1.103	0.641	0.554	1.720	1.989	1.156	-813.	1069.	16.4	10.989
.800	0.5	0.8808	0.0639	0.0555	11.46	1.101	0.639	0.555	1.723	1.983	1.151	-818.	1063.	16.4	10.977
.800	0.6	0.8793	0.0764	0.0445	11.49	1.099	0.637	0.556	1.726	1.976	1.145	-822.	1058.	16.4	10.965
.800	0.7	0.8779	0.0889	0.0334	11.51	1.097	0.635	0.557	1.728	1.970	1.140	-827.	1053.	[illegible]	10.953
.800	0.8	0.8766	0.1013	0.0223	11.54	1.096	0.633	0.558	1.731	1.963	1.134	-831.	1047.	[illegible]	10.941
.800	0.9	0.8754	0.1136	0.0112	11.56	1.094	0.631	0.559	1.733	1.957	1.129	-836.	1042.	[illegible]	10.929
.800	1.0	0.8743	0.1259	0.	11.59	1.093	0.630	0.560	1.736	1.950	1.123	-840.	1037.	[illegible]	10.916
.900	0.	0.9464	0.	0.0540	12.18	1.052	0.625	0.540	1.681	1.948	1.159	-719.	1067.	16.9	11.670
.900	0.1	0.9455	0.0062	0.0486	12.20	1.051	0.624	0.540	1.682	1.945	1.156	-721.	1065.	16.9	11.666
.900	0.2	0.9446	0.0125	0.0432	12.21	1.050	0.623	0.540	1.684	1.942	1.153	-723.	1062.	16.9	11.663
.900	0.3	0.9438	0.0187	0.0379	12.23	1.049	0.622	0.541	1.685	1.939	1.151	-725.	1059.	16.8	11.659
.900	0.4	0.9431	0.0249	0.0325	12.24	1.048	0.621	0.541	1.686	1.936	1.148	-728.	1056.	16.8	11.655
.900	0.5	0.9422	0.0310	0.0271	12.25	1.047	0.620	0.542	1.688	1.932	1.145	-730.	1054.	16.8	11.652
.900	0.6	0.9415	0.0372	0.0217	12.27	1.046	0.619	0.542	1.689	1.929	1.142	-732.	1051.	16.8	11.648
.900	0.7	0.9408	0.0433	0.0163	12.28	1.045	0.618	0.543	1.690	1.926	1.140	-734.	1048.	16.8	11.644
.900	0.8	0.9401	0.0494	0.0109	12.29	1.045	0.618	0.543	1.691	1.923	1.137	-737.	1046.	16.8	11.641
.900	0.9	0.9394	0.0555	0.0054	12.31	1.044	0.617	0.544	1.693	1.920	1.134	-739.	1043.	16.8	11.637
.900	1.0	0.9388	0.0616	0.	12.32	1.043	0.616	0.544	1.694	1.917	1.131	-741.	1041.	16.8	11.633
.975	0.	0.9871	0.	0.0133	12.85	1.012	0.610	0.533	1.660	1.898	1.144	-661.	1048.	17.2	12.249
.975	0.1	0.9869	0.0015	0.0120	12.85	1.012	0.610	0.533	1.660	1.898	1.144	-662.	1047.	17.2	12.249
.975	0.2	0.9867	0.0030	0.0107	12.85	1.012	0.610	0.533	1.660	1.897	1.143	-663.	1047.	17.2	12.249
.975	0.3	0.9865	0.0046	0.0093	12.86	1.012	0.609	0.533	1.661	1.897	1.142	-663.	1046.	17.1	12.248
.975	0.4	0.9864	0.0061	0.0080	12.86	1.012	0.609	0.534	1.661	1.896	1.141	-664.	1045.	17.1	12.248
.975	0.5	0.9862	0.0076	0.0067	12.86	1.011	0.609	0.534	1.661	1.895	1.141	-664.	1045.	17.1	12.248
.975	0.6	0.9860	0.0091	0.0053	12.87	1.011	0.609	0.534	1.662	1.894	1.140	-665.	1044.	17.1	12.247
.975	0.7	0.9858	0.0106	0.0040	12.87	1.011	0.608	0.534	1.662	1.894	1.139	-665.	1043.	17.1	12.247
.975	0.8	0.9856	0.0122	0.0027	12.88	1.011	0.608	0.534	1.662	1.893	1.138	-666.	1043.	17.1	12.247
.975	0.9	0.9854	0.0137	0.0013	12.88	1.011	0.608	0.534	1.663	1.892	1.138	-666.	1042.	17.1	12.246
.975	1.0	0.9853	0.0152	0.	12.88	1.011	0.608	0.534	1.663	1.891	1.137	-667.	1041.	17.1	12.246

TEMPERATURE = 230. R

Table 26. (cont.)

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0002	5.80	2.479	1.330	1.000	1.864	2.479	1.330	-1339.	1254.	13.6	8.524
.	0.1	0.	0.1261	0.8741	6.01	2.369	1.261	0.971	1.878	2.439	1.299	-1362.	1201.	13.5	8.307
.	0.2	0.	0.2409	0.7594	6.20	2.278	1.204	0.949	1.891	2.400	1.269	-1385.	1154.	13.4	8.108
.	0.3	0.	0.3470	0.6533	6.37	2.203	1.157	0.933	1.905	2.361	1.240	-1408.	1109.	13.3	7.922
.	0.4	0.	0.4468	0.5535	6.52	2.143	1.117	0.922	1.919	2.323	1.211	-1431.	1068.	13.2	7.745
.	0.5	0.	0.5421	0.4582	6.65	2.095	1.084	0.916	1.933	2.286	1.183	-1454.	1029.	13.1	7.572
.	0.6	0.	0.6344	0.3659	6.76	2.058	1.057	0.915	1.947	2.250	1.156	-1477.	991.	13.0	7.401
.	0.7	0.	0.7251	0.2752	6.86	2.031	1.036	0.917	1.961	2.214	1.129	-1500.	954.	12.9	7.227
.	0.8	0.	0.8156	0.1848	6.94	2.014	1.019	0.924	1.975	2.179	1.103	-1523.	918.	12.8	7.049
.	0.9	0.	0.9069	0.0935	7.01	2.005	1.008	0.935	1.990	2.145	1.078	-1546.	881.	12.7	6.864
.	1.0	0.	1.0004	0.	7.08	2.002	1.000	0.950	2.004	2.111	1.053	-1569.	844.	12.6	6.669
.025	0.	0.0593	0.	0.9409	6.05	2.373	1.276	0.965	1.857	2.459	1.324	-1319.	1250.	13.7	8.588
.025	0.1	0.0569	0.1186	0.8248	6.25	2.275	1.218	0.940	1.870	2.420	1.294	-1342.	1202.	13.6	8.386
.025	0.2	0.0548	0.2272	0.7183	6.43	2.194	1.169	0.921	1.883	2.382	1.265	-1364.	1155.	13.5	8.200
.025	0.3	0.0532	0.3281	0.6191	6.59	2.127	1.122	0.907	1.897	2.345	1.237	-1387.	1112.	13.4	8.025
.025	0.4	0.0518	0.4233	0.5253	6.73	2.073	1.085	0.898	1.910	2.309	1.209	-1409.	1073.	13.3	7.857
.025	0.5	0.0507	0.5143	0.4353	6.86	2.029	1.055	0.893	1.924	2.273	1.182	-1431.	1035.	13.2	7.693
.025	0.6	0.0499	0.6026	0.3478	6.97	1.996	1.030	0.892	1.937	2.237	1.155	-1454.	999.	13.2	7.530
.025	0.7	0.0493	0.6894	0.2617	7.07	1.971	1.011	0.895	1.951	2.203	1.129	-1476.	964.	13.1	7.365
.025	0.8	0.0489	0.7758	0.1757	7.15	1.954	0.995	0.901	1.965	2.169	1.104	-1499.	929.	13.0	7.196
.025	0.9	0.0486	0.8629	0.0888	7.22	1.946	0.983	0.911	1.979	2.136	1.079	-1521.	894.	12.9	7.021
.025	1.0	0.0486	0.9518	0.	7.27	1.946	0.976	0.925	1.993	2.103	1.055	-1543.	859.	12.8	6.836
.100	0.	0.2107	0.	0.7897	6.78	2.107	1.147	0.877	1.836	2.401	1.307	-1261.	1236.	14.0	8.791
.100	0.1	0.2037	0.0992	0.6974	6.95	2.037	1.102	0.861	1.848	2.366	1.280	-1281.	1194.	14.0	8.627
.100	0.2	0.1979	0.1915	0.6110	7.11	1.979	1.064	0.848	1.860	2.332	1.254	-1302.	1155.	13.9	8.474
.100	0.3	0.1930	0.2784	0.5291	7.25	1.930	1.031	0.840	1.872	2.298	1.228	-1323.	1119.	13.8	8.327
.100	0.4	0.1890	0.3610	0.4505	7.38	1.890	1.003	0.834	1.884	2.265	1.202	-1343.	1084.	13.7	8.185
.100	0.5	0.1857	0.4406	0.3743	7.49	1.857	0.979	0.832	1.897	2.233	1.177	-1364.	1051.	13.6	8.049
.100	0.6	0.1830	0.5177	0.2994	7.60	1.830	0.959	0.832	1.909	2.201	1.153	-1385.	1019.	13.5	7.901
.100	0.7	0.1811	0.5937	0.2254	7.69	1.811	0.942	0.835	1.922	2.169	1.129	-1405.	988.	13.4	7.760
.100	0.8	0.1797	0.6691	0.1513	7.77	1.797	0.929	0.841	1.934	2.138	1.105	-1426.	957.	13.3	7.616
.100	0.9	0.1790	0.7447	0.0764	7.84	1.790	0.919	0.849	1.947	2.108	1.083	-1447.	927.	13.2	7.467
.100	1.0	0.1788	0.8213	0.	7.90	1.788	0.913	0.861	1.960	2.078	1.060	-1467.	896.	13.2	7.311
.200	0.	0.3677	0.	0.6324	7.75	1.838	1.015	0.791	1.810	2.325	1.284	-1182.	1214.	14.5	[illegible]
.200	0.1	0.3587	0.0789	0.5625	7.87	1.793	0.986	0.781	1.819	2.296	1.262	-1201.	1183.	14.4	8.957
.200	0.2	0.3510	0.1535	0.4957	8.00	1.755	0.959	0.774	1.830	2.266	1.239	-1219.	1151.	14.3	8.838
.200	0.3	0.3444	0.2246	0.4311	8.12	1.722	0.936	0.770	1.840	2.237	1.216	-1237.	1121.	14.2	8.722
.200	0.4	0.3389	0.2930	0.3683	8.23	1.694	0.916	0.767	1.851	2.208	1.193	-1256.	1093.	14.1	8.609
.200	0.5	0.3343	0.3592	0.3067	8.33	1.671	0.898	0.767	1.861	2.180	1.171	-1274.	1065.	14.1	8.497
.200	0.6	0.3306	0.4238	0.2457	8.43	1.653	0.883	0.768	1.872	2.152	1.150	-1292.	1038.	14.0	8.384
.200	0.7	0.3277	0.4873	0.1851	8.51	1.639	0.870	0.771	1.883	2.125	1.129	-1311.	1012.	13.9	8.270
.200	0.8	0.3257	0.5503	0.1242	8.59	1.628	0.861	0.776	1.894	2.098	1.108	-1329.	986.	13.8	8.154
.200	0.9	0.3244	0.6131	0.0626	8.66	1.622	0.852	0.783	1.905	2.072	1.088	-1347.	961.	13.8	8.039
.200	1.0	0.3239	0.6762	0.	8.72	1.620	0.845	0.792	1.916	2.046	1.068	-1366.	935.	13.7	7.919
.300	0.	0.4912	0.	0.5089	8.66	1.637	0.919	0.727	1.781	2.252	1.264	-1104.	1197.	14.9	9.407
.300	0.1	0.4824	0.0629	0.4549	8.77	1.608	0.898	0.722	1.790	2.227	1.244	-1120.	1170.	14.8	9.313
.300	0.2	0.4747	0.1231	0.4024	8.88	1.582	0.879	0.719	1.799	2.202	1.224	-1136.	1145.	14.7	9.221
.300	0.3	0.4680	0.1812	0.3511	8.98	1.560	0.863	0.718	1.808	2.177	1.204	-1152.	1120.	14.7	9.132
.300	0.4	0.4622	0.2374	0.3006	9.08	1.541	0.848	0.718	1.817	2.153	1.185	-1168.	1096.	14.6	9.043
.300	0.5	0.4574	0.2922	0.2507	9.17	1.525	0.835	0.718	1.827	2.129	1.166	-1184.	1073.	14.5	8.954
.300	0.6	0.4534	0.3458	0.2010	9.25	1.511	0.823	0.718	1.836	2.105	1.147	-1200.	1051.	14.5	8.866
.300	0.7	0.4502	0.3986	0.1514	9.33	1.501	0.813	0.721	1.845	2.082	1.128	-1216.	1029.	14.4	8.778
.300	0.8	0.4479	0.4508	0.1019	9.40	1.493	0.805	0.725	1.854	2.058	1.110	-1232.	1007.	14.3	8.684
.300	0.9	0.4463	0.5028	0.0512	9.46	1.488	0.798	0.731	1.864	2.036	1.092	-1248.	986.	14.3	8.590
.300	1.0	0.4454	0.5548	0.	9.52	1.485	0.793	0.737	1.873	2.013	1.075	-1264.	965.	14.2	8.494
.400	0.	0.5927	0.	0.4076	9.57	1.482	0.848	0.679	1.754	2.181	1.243	-1026.	1177.	15.3	9.772
.400	0.1	0.5849	0.0490	0.3696	9.66	1.462	0.830	0.677	1.762	2.160	1.226	-1039.	1156.	15.2	9.702
.400	0.2	0.5780	0.0980	0.3243	9.75	1.445	0.817	0.676	1.769	2.139	1.209	-1053.	1135.	15.2	9.634
.400	0.3	0.5720	0.1449	0.2835	9.84	1.430	0.805	0.675	1.777	2.119	1.192	-1067.	1115.	15.1	9.566
.400	0.4	0.5667	0.1905	0.2431	9.92	1.417	0.794	0.675	1.784	2.098	1.176	-1080.	1096.	15.1	9.498
.400	0.5	0.5622	0.2393	0.2029	10.00	1.405	0.784	0.676	1.792	2.078	1.160	-1094.	1077.	15.0	9.431
.400	0.6	0.5584	0.2792	0.1620	10.07	1.396	0.776	0.678	1.800	2.058	1.144	-1108.	1058.	15.0	9.363
.400	0.7	0.5552	0.3225	0.1226	10.14	1.388	0.768	0.681	1.808	2.039	1.128	-1122.	1040.	14.9	9.294
.400	0.8	0.5528	0.3654	0.0821	10.20	1.382	0.761	0.684	1.815	2.019	1.112	-1135.	1022.	14.8	9.223
.400	0.9	0.5510	0.4080	0.0413	10.26	1.378	0.756	0.689	1.823	2.000	1.097	-1149.	1004.	14.8	9.151
.400	1.0	0.5499	0.4505	0.	10.32	1.375	0.751	0.694	1.831	1.981	1.082	-1163.	987.	14.7	9.077
.500	0.	0.6789	0.	0.3215	10.47	1.358	0.786	0.643	1.727	2.112	1.223	-947.	1156.	15.7	10.186
.500	0.1	0.6726	0.0388	0.2890	10.55	1.345	0.776	0.642	1.733	2.095	1.208	-958.	1140.	15.7	10.137
.500	0.2	0.6670	0.0767	0.2568	10.63	1.334	0.767	0.642	1.739	2.078	1.195	-970.	1123.	15.6	10.088
.500	0.3	0.6619	0.1138	0.2248	10.70	1.324	0.759	0.642	1.746	2.061	1.181	-981.	1107.	15.6	10.039
.500	0.4	0.6574	0.1501	0.1929	10.76	1.315	0.751	0.643	1.752	2.045	1.167	-993.	1092.	15.5	9.990
.500	0.5	0.6535	0.1859	0.1611	10.83	1.307	0.743	0.644	1.758	2.029	1.154	-1004.	1076.	15.5	9.941
.500	0.6	0.6502	0.2211	0.1292	10.89	1.300	0.737	0.646	1.764	2.012	1.141	-1016.	1061.	15.4	9.892
.500	0.7	0.6473	0.2559	0.0973	10.95	1.295	0.731	0.648	1.771	1.996	1.127	-1027.	1047.	15.4	9.841
.500	0.8	0.6448	0.2903	0.0651	11.02	1.290	0.726	0.651	1.777	1.980	1.115	-1039.	1032.	15.3	9.786
.500	0.9	0.6429	0.3245	0.0327	11.07	1.286	0.721	0.654	1.783	1.965	1.102	-1050.	1017.	15.3	9.733
.500	1.0	0.6416	0.3585	0.	11.13	1.283	0.717	0.658	1.790	1.949	1.089	-1062.	1003.	15.2	9.679
.600	0.	0.7542	0.	0.2460	11.40	1.257	0.739	0.615	1.700	2.044	1.202	-868.	1134.	16.1	10.661
.600	0.1	0.7495	0.0293	0.2214	11.46	1.249	0.733	0.615	1.705	2.031	1.191	-878.	1121.	16.1	10.629
.600	0.2	0.7451	0.0581	0.1969	11.52	1.242	0.726	0.615	1.710	2.018	1.180	-887.	1109.	16.1	10.596
.600	0.3	0.7412	0.0865	0.1724	11.57	1.235	0.720	0.616	1.715	2.005	1.169	-896.	1096.	16.0	10.564
.600	0.4	0.7377	0.1144	0.1481	11.63	1.229	0.715	0.617	1.720	1.992	1.159	-905.	1084.	16.0	10.532
.600	0.5	0.7345	0.1420	0.1237	11.68	1.224	0.710	0.618	1.724	1.980	1.148	-914.	1072.	15.9	10.499
.600	0.6	0.7317	0.1692	0.0992	11.74	1.220	0.705	0.620	1.729	1.967	1.137	-923.	1061.	15.9	10.465
.600	0.7	0.7293	0.1962	0.0746	11.79	1.216	0.701	0.622	1.734	1.955	1.127	-933.	1049.	15.9	10.432
.600	0.8	0.7273	0.2230	0.0498	11.84	1.212	0.697	0.624	1.739	1.942	1.117	-942.	1038.	15.8	10.397
.600	0.9	0.7255	0.2496	0.0251	11.88	1.209	0.693	0.627	1.744	1.930	1.106	-951.	1026.	15.8	10.362
.600	1.0	0.7242	0.2760	0.	11.93	1.207	0.690	0.629	1.749	1.918	1.096	-960.	1015.	15.8	10.326
.700	0.	0.8222	0.	0.1781	12.33	1.175	0.702	0.594	1.673	1.978	1.182	-790.	1111.	16.6	11.229
.700	0.1	0.8189	0.0209	0.1604	12.37	1.170	0.698	0.594	1.677	1.969	1.174	-797.	1101.	16.5	11.211
.700	0.2	0.8159	0.0416	0.1428	12.42	1.166	0.694	0.595	1.681	1.960	1.166	-804.	1092.	16.5	11.193
.700	0.3	0.8131	0.0621	0.1251	12.46	1.162	0.690	0.596	1.684	1.950	1.158	-811.	1083.	16.5	11.174
.700	0.4	0.8105	0.0823	0.1074	12.50	1.158	0.686	0.597	1.688	1.941	1.150	-817.	1074.	16.4	11.156
.700	0.5	0.8082	0.1024	0.0897	12.55	1.155	0.683	0.598	1.691	1.932	1.142	-824.	1066.	16.4	11.137
.700	0.6	0.8061	0.1223	0.0719	12.59	1.152	0.679	0.599	1.695	1.923	1.134	-831.	1057.	16.4	11.118
.700	0.7	0.8042	0.1421	0.0540	12.63	1.149	0.676	0.601	1.698	1.913	1.126	-838.	1048.	16.4	11.099
.700	0.8	0.8025	0.1617	0.0361	12.67	1.146	0.674	0.602	1.702	1.904	1.119	-845.	1040.	16.3	11.080
.700	0.9	0.8010	0.1812	0.0181	12.71	1.144	0.671	0.604	1.705	1.895	1.111	-852.	1031.	16.3	11.060
.700	1.0	0.7998	0.2005	0.	12.75	1.143	0.668	0.606	1.709	1.886	1.103	-859.	1023.	16.3	11.039
.800	0.	0.8848	0.	0.1155	13.26	1.106	0.672	0.578	1.647	1.914	1.163	-711.	1085.	17.0	11.923
.800	0.1	0.8829	0.0134	0.1041	13.31	1.104	0.669	0.578	1.649	1.908	1.160	-716.	1079.	17.0	11.916
.800	0.2	0.8811	0.0267	0.0926	13.34	1.101	0.667	0.579	1.651	1.902	1.157	-721.	1073.	16.9	11.910
.800	0.3	0.8794	0.0399	0.0812	13.38	1.099	0.665	0.580	1.653	1.896	1.152	-725.	1067.	16.9	11.903
.800	0.4	0.8777	0.0530	0.0697	13.40	1.097	0.663	0.581	1.656	1.890	1.147	-730.	1062.	16.9	11.896
.800	0.5	0.8762	0.0661	0.0581	13.43	1.095	0.661	0.581	1.658	1.884	1.142	-734.	1056.	16.9	11.889
.800	0.6	0.8748	0.0790	0.0466	13.46	1.094	0.659	0.582	1.660	1.878	1.136	-739.	1050.	16.9	11.881
.800	0.7	0.8735	0.0919	0.0350	13.49	1.092	0.657	0.583	1.663	1.872	1.131	-744.	1044.	16.8	11.874
.800	0.8	0.8723	0.1048	0.0234	13.52	1.090	0.655	0.584	1.665	1.866	1.126	-748.	1039.	16.8	11.866
.800	0.9	0.8712	0.1176	0.0117	13.55	1.089	0.653	0.585	1.667	1.860	1.121	-753.	1033.	16.8	11.859
.800	1.0	0.8702	0.1303	0.	13.58	1.088	0.651	0.587	1.670	1.854	1.116	-757.	1027.	16.8	11.851
.900	0.	0.9436	0.	0.0566	14.28	1.048	0.647	0.566	1.619	1.852	1.143	-633.	1057.	17.4	12.800
.900	0.1	0.9427	0.0065	0.0510	14.30	1.047	0.646	0.567	1.621	1.849	1.141	-635.	1054.	17.4	12.800
.900	0.2	0.9419	0.0129	0.0454	14.32	1.047	0.645	0.567	1.622	1.846	1.138	-638.	1051.	17.4	12.800
.900	0.3	0.9412	0.0193	0.0397	14.33	1.046	0.644	0.567	1.623	1.843	1.136	-640.	1048.	17.4	12.801
.900	0.4	0.9404	0.0257	0.0341	14.35	1.045	0.643	0.568	1.624	1.840	1.133	-642.	1045.	17.4	12.801
.900	0.5	0.9397	0.0321	0.0284	14.36	1.044	0.643	0.568	1.625	1.837	1.130	-645.	1042.	17.4	12.801
.900	0.6	0.9390	0.0385	0.0228	14.38	1.043	0.642	0.569	1.626	1.834	1.128	-647.	1039.	17.3	12.801
.900	0.7	0.9383	0.0448	0.0171	14.40	1.043	0.641	0.569	1.627	1.831	1.125	-649.	1036.	17.3	12.802
.900	0.8	0.9376	0.0512	0.0114	14.41	1.042	0.640	0.570	1.628	1.828	1.123	-651.	1033.	17.3	12.802
.900	0.9	0.9370	0.0575	0.0057	14.43	1.041	0.639	0.570	1.629	1.825	1.120	-654.	1031.	17.3	12.802
.900	1.0	0.9364	0.0638	0.	14.44	1.040	0.638	0.571	1.631	1.822	1.118	-656.	1028.	17.3	12.802
.975	0.	0.9863	0.	0.0140	15.07	1.012	0.633	0.560	1.599	1.805	1.129	-574.	1033.	17.7	13.648
.975	0.1	0.9861	0.0016	0.0126	15.07	1.011	0.632	0.560	1.599	1.805	1.128	-575.	1032.	17.7	13.649
.975	0.2	0.9859	0.0032	0.0112	15.07	1.011	0.632	0.561	1.599	1.804	1.128	-575.	1032.	17.7	13.650
.975	0.3	0.9858	0.0047	0.0098	15.08	1.011	0.632	0.561	1.600	1.803	1.127	-576.	1031.	17.7	13.651
.975	0.4	0.9856	0.0063	0.0084	15.08	1.011	0.632	0.561	1.600	1.802	1.127	-577.	1030.	17.7	13.652
.975	0.5	0.9854	0.0079	0.0070	15.09	1.011	0.632	0.561	1.600	1.802	1.126	-577.	1030.	17.7	13.653
.975	0.6	0.9852	0.0095	0.0056	15.09	1.010	0.631	0.561	1.600	1.801	1.125	-578.	1029.	17.7	13.654
.975	0.7	0.9851	0.0110	0.0042	15.09	1.010	0.631	0.561	1.601	1.800	1.125	-578.	1028.	17.7	13.655
.975	0.8	0.9849	0.0126	0.0028	15.10	1.010	0.631	0.561	1.601	1.799	1.124	-578.	1027.	17.7	13.657
.975	0.9	0.9847	0.0142	0.0014	15.10	1.010	0.631	0.561	1.601	1.799	1.124	-579.	1027.	17.7	13.658
.975	1.0	0.9845	0.0158	0.	15.11	1.010	0.631	0.562	1.602	1.798	1.123	-580.	1026.	17.7	13.659

TEMPERATURE = 205. R

Table 26. (cont.

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0003	6.97	2.341	1.304	1.000	1.790	2.340	1.307	-1271.	1267.	13.8	8.787
.	0.1	0.	0.1244	0.8760	7.21	2.242	1.241	0.973	1.802	2.303	1.276	-1294.	1214.	13.7	8.582
.	0.2	0.	0.2382	0.7622	7.42	2.160	1.191	0.953	1.814	2.267	1.250	-1317.	1164.	13.6	8.393
.	0.3	0.	0.3440	0.6565	7.61	2.093	1.147	0.938	1.826	2.232	1.222	-1341.	1119.	13.6	8.215
.	0.4	0.	0.4437	0.5567	7.79	2.039	1.108	0.928	1.838	2.197	1.196	-1364.	1076.	13.5	8.043
.	0.5	0.	0.5391	0.4610	7.94	1.995	1.077	0.922	1.850	2.163	1.169	-1387.	1035.	13.4	7.871
.	0.6	0.	0.6318	0.3683	8.07	1.961	1.053	0.921	1.862	2.130	1.144	-1411.	996.	13.4	7.703
.	0.7	0.	0.7231	0.2770	8.18	1.937	1.033	0.923	1.875	2.097	1.119	-1434.	958.	13.3	7.531
.	0.8	0.	0.8141	0.1860	8.28	1.921	1.018	0.930	1.887	2.065	1.094	-1458.	920.	13.2	7.354
.	0.9	0.	0.9060	0.0941	8.35	1.913	1.007	0.941	1.900	2.033	1.070	-1481.	883.	13.1	7.168
.	1.0	0.	1.0001	0.	8.41	1.913	1.000	0.955	1.913	2.002	1.047	-1504.	845.	13.1	6.972
.025	0.	0.0562	0.	0.9442	7.24	2.249	1.261	0.968	1.784	2.322	1.302	-1250.	1262.	13.9	8.861
.025	0.1	0.0540	0.1173	0.8291	7.47	2.160	1.203	0.949	1.795	2.287	1.274	-1273.	1211.	13.8	8.670
.025	0.2	0.0522	0.2253	0.7230	7.68	2.087	1.155	0.927	1.807	2.252	1.246	-1296.	1165.	13.8	8.493
.025	0.3	0.0506	0.3259	0.6235	7.87	2.026	1.114	0.914	1.818	2.218	1.220	-1319.	1121.	13.7	8.321
.025	0.4	0.0494	0.4212	0.5295	8.03	1.977	1.080	0.905	1.830	2.184	1.193	-1342.	1080.	13.6	8.159
.025	0.5	0.0484	0.5127	0.4390	8.18	1.937	1.052	0.901	1.842	2.151	1.168	-1364.	1041.	13.5	7.999
.025	0.6	0.0477	0.6015	0.3509	8.31	1.905	1.028	0.900	1.854	2.119	1.143	-1387.	1004.	13.5	7.839
.025	0.7	0.0471	0.6890	0.2640	8.42	1.884	1.010	0.903	1.865	2.087	1.118	-1410.	967.	13.4	7.679
.025	0.8	0.0467	0.7761	0.1773	8.51	1.869	0.995	0.909	1.878	2.056	1.095	-1433.	931.	13.3	7.507
.025	0.9	0.0465	0.8640	0.0896	8.58	1.861	0.985	0.919	1.890	2.025	1.071	-1456.	895.	13.3	7.331
.025	1.0	0.0465	0.9536	0.	8.64	1.861	0.978	0.933	1.903	1.995	1.048	-1478.	859.	13.2	7.144
.100	0.	0.2014	0.	0.7987	8.08	2.014	1.141	0.887	1.765	2.269	1.286	-1190.	1246.	14.3	9.091
.100	0.1	0.1950	0.0989	0.7062	8.26	1.950	1.099	0.872	1.775	2.237	1.260	-1211.	1203.	14.2	8.936
.100	0.2	0.1897	0.1912	0.6192	8.44	1.897	1.062	0.860	1.786	2.206	1.235	-1232.	1163.	14.1	8.790
.100	0.3	0.1852	0.2784	0.5365	8.60	1.852	1.031	0.852	1.796	2.175	1.211	-1253.	1126.	14.1	8.649
.100	0.4	0.1815	0.3616	0.4570	8.75	1.815	1.004	0.846	1.807	2.144	1.187	-1274.	1090.	14.0	8.512
.100	0.5	0.1785	0.4419	0.3796	8.88	1.785	0.982	0.844	1.818	2.114	1.163	-1295.	1055.	13.9	8.376
.100	0.6	0.1761	0.5201	0.3040	9.00	1.761	0.963	0.845	1.828	2.085	1.140	-1316.	1022.	13.9	8.239
.100	0.7	0.1743	0.5970	0.2288	9.11	1.743	0.948	0.848	1.839	2.056	1.118	-1337.	990.	13.8	8.099
.100	0.8	0.1731	0.6735	0.1536	9.20	1.731	0.935	0.854	1.850	2.028	1.096	-1358.	958.	13.7	7.955
.100	0.9	0.1724	0.7502	0.0776	9.27	1.724	0.926	0.862	1.861	2.000	1.074	-1379.	926.	13.7	7.805
.100	1.0	0.1723	0.8279	0.	9.34	1.723	0.920	0.873	1.873	1.972	1.053	-1400.	895.	13.6	7.646
.200	0.	0.3570	0.	0.6430	9.12	1.774	1.020	0.807	1.739	2.200	1.265	-1107.	1225.	14.7	9.434
.200	0.1	0.3464	0.0793	0.5743	9.28	1.733	0.991	0.798	1.748	2.172	1.244	-1128.	1191.	14.6	9.317
.200	0.2	0.3394	0.1545	0.5063	9.44	1.697	0.966	0.791	1.757	2.145	1.221	-1147.	1158.	14.6	9.203
.200	0.3	0.3333	0.2264	0.4403	9.58	1.667	0.943	0.787	1.767	2.119	1.199	-1165.	1126.	14.5	9.095
.200	0.4	0.3282	0.2956	0.3762	9.70	1.641	0.924	0.784	1.776	2.092	1.178	-1184.	1097.	14.5	8.987
.200	0.5	0.3239	0.3631	0.3130	9.82	1.619	0.907	0.784	1.785	2.066	1.157	-1203.	1068.	14.4	8.878
.200	0.6	0.3205	0.4283	0.2512	9.93	1.602	0.893	0.785	1.794	2.041	1.137	-1221.	1040.	14.4	8.768
.200	0.7	0.3172	0.4935	0.1893	10.02	1.589	0.881	0.788	1.804	2.016	1.117	-1240.	1012.	14.3	8.656
.200	0.8	0.3159	0.5574	0.1269	10.11	1.580	0.871	0.793	1.813	1.991	1.098	-1259.	985.	14.2	8.541
.200	0.9	0.3148	0.6215	0.0640	10.19	1.574	0.863	0.800	1.823	1.967	1.079	-1278.	958.	14.2	8.420
.200	1.0	0.3144	0.6859	0.	10.25	1.572	0.857	0.809	1.833	1.943	1.060	-1296.	932.	14.1	8.294
.300	0.	0.4777	0.	0.5228	10.16	1.592	0.929	0.747	1.714	2.133	1.244	-1029.	1204.	15.2	9.821
.300	0.1	0.4694	0.0636	0.4673	10.30	1.565	0.909	0.742	1.722	2.110	1.225	-1045.	1176.	15.1	9.734
.300	0.2	0.4622	0.1247	0.4135	10.42	1.541	0.891	0.738	1.730	2.086	1.206	-1061.	1149.	15.1	9.649
.300	0.3	0.4559	0.1837	0.3608	10.54	1.520	0.875	0.736	1.737	2.064	1.188	-1078.	1123.	15.0	9.566
.300	0.4	0.4505	0.2409	0.3090	10.65	1.502	0.860	0.736	1.745	2.041	1.170	-1094.	1098.	15.0	9.482
.300	0.5	0.4460	0.2967	0.2577	10.76	1.487	0.848	0.736	1.753	2.019	1.152	-1110.	1074.	14.9	9.398
.300	0.6	0.4422	0.3515	0.2066	10.85	1.474	0.837	0.738	1.762	1.997	1.134	-1127.	1050.	14.9	9.312
.300	0.7	0.4394	0.4055	0.1556	10.94	1.464	0.827	0.741	1.770	1.976	1.117	-1143.	1027.	14.8	9.224
.300	0.8	0.4371	0.4589	0.1044	11.02	1.457	0.820	0.745	1.778	1.955	1.099	-1160.	1005.	14.8	9.134
.300	0.9	0.4356	0.5122	0.0528	11.09	1.452	0.813	0.751	1.786	1.934	1.083	-1176.	982.	14.7	9.040
.300	1.0	0.4349	0.5655	0.	11.16	1.450	0.808	0.758	1.794	1.913	1.066	-1192.	960.	14.7	8.941
.400	0.	0.5798	0.	0.4207	11.20	1.449	0.856	0.701	1.689	2.067	1.224	-948.	1181.	15.6	10.262
.400	0.1	0.5725	0.0507	0.3773	11.31	1.431	0.844	0.699	1.695	2.048	1.208	-962.	1159.	15.6	10.200
.400	0.2	0.5660	0.0998	0.3347	11.41	1.415	0.831	0.697	1.702	2.029	1.192	-976.	1137.	15.5	10.139
.400	0.3	0.5603	0.1476	0.2927	11.51	1.401	0.820	0.697	1.709	2.010	1.176	-990.	1116.	15.5	10.078
.400	0.4	0.5551	0.1942	0.2508	11.61	1.388	0.809	0.697	1.715	1.991	1.161	-1004.	1095.	15.5	10.011
.400	0.5	0.5508	0.2399	0.2094	11.70	1.377	0.800	0.698	1.722	1.973	1.146	-1018.	1075.	15.4	9.949
.400	0.6	0.5472	0.2849	0.1680	11.78	1.368	0.791	0.700	1.729	1.954	1.131	-1032.	1056.	15.4	9.884
.400	0.7	0.5443	0.3293	0.1265	11.86	1.361	0.784	0.703	1.735	1.936	1.116	-1046.	1036.	15.3	9.819
.400	0.8	0.5421	0.3733	0.0848	11.94	1.355	0.778	0.706	1.742	1.919	1.101	-1060.	1017.	15.3	9.750
.400	0.9	0.5404	0.4171	0.0426	12.00	1.351	0.772	0.711	1.749	1.901	1.087	-1074.	999.	15.2	9.680
.400	1.0	0.5394	0.4608	0.	12.07	1.349	0.768	0.716	1.756	1.884	1.073	-1088.	980.	15.2	9.608
.500	0.	0.6672	0.	0.3330	12.24	1.334	0.802	0.666	1.664	2.004	1.204	-867.	1157.	16.1	10.770
.500	0.1	0.6612	0.0396	0.2993	12.33	1.322	0.792	0.665	1.669	1.988	1.191	-879.	1140.	16.0	10.729
.500	0.2	0.6559	0.0783	0.2660	12.41	1.312	0.783	0.665	1.674	1.973	1.178	-891.	1122.	16.0	10.687
.500	0.3	0.6511	0.1163	0.2329	12.49	1.302	0.775	0.665	1.680	1.957	1.165	-902.	1105.	16.0	10.646
.500	0.4	0.6468	0.1535	0.1998	12.57	1.294	0.768	0.666	1.685	1.942	1.152	-914.	1089.	15.9	10.603
.500	0.5	0.6431	0.1902	0.1669	12.65	1.286	0.761	0.668	1.691	1.927	1.140	-926.	1073.	15.9	10.560
.500	0.6	0.6400	0.2264	0.1339	12.72	1.280	0.755	0.669	1.696	1.912	1.127	-937.	1057.	15.9	10.515
.500	0.7	0.6373	0.2622	0.1008	12.79	1.275	0.749	0.672	1.702	1.897	1.115	-949.	1041.	15.8	10.469
.500	0.8	0.6351	0.2976	0.0675	12.86	1.270	0.744	0.675	1.707	1.883	1.103	-961.	1026.	15.8	10.421
.500	0.9	0.6335	0.3329	0.0339	12.92	1.267	0.740	0.678	1.713	1.868	1.091	-973.	1010.	15.8	10.372
.500	1.0	0.6323	0.3680	0.	12.98	1.265	0.736	0.682	1.718	1.854	1.079	-984.	995.	15.7	10.322
.600	0.	0.7445	0.	0.2557	13.28	1.241	0.757	0.639	1.638	1.941	1.185	-787.	1132.	16.5	11.380
.600	0.1	0.7401	0.0300	0.2302	13.35	1.233	0.751	0.639	1.643	1.929	1.174	-796.	1118.	16.5	11.356
.600	0.2	0.7360	0.0596	0.2047	13.42	1.227	0.745	0.640	1.647	1.917	1.164	-805.	1105.	16.5	11.332
.600	0.3	0.7323	0.0887	0.1794	13.49	1.220	0.739	0.641	1.651	1.905	1.154	-815.	1092.	16.5	11.307
.600	0.4	0.7289	0.1174	0.1540	13.55	1.215	0.734	0.642	1.655	1.893	1.144	-824.	1079.	16.4	11.282
.600	0.5	0.7259	0.1458	0.1286	13.61	1.210	0.729	0.643	1.660	1.881	1.134	-833.	1066.	16.4	11.256
.600	0.6	0.7233	0.1739	0.1031	13.68	1.206	0.725	0.645	1.664	1.870	1.124	-843.	1054.	16.4	11.229
.600	0.7	0.7210	0.2017	0.0776	13.73	1.202	0.720	0.647	1.668	1.859	1.114	-852.	1042.	16.3	11.201
.600	0.8	0.7191	0.2293	0.0519	13.79	1.199	0.717	0.649	1.672	1.847	1.105	-861.	1029.	16.3	11.172
.600	0.9	0.7175	0.2568	0.0261	13.84	1.196	0.713	0.651	1.677	1.836	1.095	-871.	1017.	16.3	11.141
.600	1.0	0.7163	0.2841	0.	13.90	1.194	0.710	0.654	1.681	1.825	1.085	-880.	1005.	16.3	11.110
.700	0.	0.8148	0.	0.1857	14.35	1.164	0.722	0.619	1.613	1.880	1.166	-705.	1105.	17.0	12.128
.700	0.1	0.8117	0.0215	0.1673	14.40	1.160	0.717	0.620	1.616	1.872	1.158	-712.	1095.	17.0	12.119
.700	0.2	0.8090	0.0428	0.1488	14.46	1.155	0.714	0.620	1.619	1.863	1.150	-720.	1085.	17.0	12.110
.700	0.3	0.8062	0.0639	0.1304	14.51	1.152	0.710	0.621	1.622	1.854	1.143	-727.	1076.	16.9	12.100
.700	0.4	0.8037	0.0848	0.1120	14.56	1.148	0.706	0.622	1.625	1.846	1.135	-734.	1066.	16.9	12.090
.700	0.5	0.8013	0.1054	0.0935	14.61	1.145	0.703	0.623	1.629	1.837	1.128	-741.	1056.	16.9	12.074
.700	0.6	0.7993	0.1260	0.0749	14.66	1.142	0.700	0.624	1.632	1.829	1.121	-748.	1047.	16.9	12.063
.700	0.7	0.7975	0.1464	0.0563	14.71	1.139	0.697	0.626	1.635	1.821	1.113	-755.	1038.	16.9	12.051
.700	0.8	0.7959	0.1666	0.0377	14.75	1.137	0.694	0.628	1.638	1.812	1.106	-762.	1029.	16.8	12.038
.700	0.9	0.7945	0.1866	0.0189	14.80	1.135	0.692	0.629	1.641	1.803	1.099	-769.	1020.	16.8	12.024
.700	1.0	0.7934	0.2066	0.	14.84	1.133	0.689	0.631	1.644	1.795	1.092	-776.	1011.	16.8	12.009
.800	0.	0.8795	0.	0.1208	15.47	1.099	0.692	0.604	1.588	1.821	1.147	-625.	1074.	17.5	13.078
.800	0.1	0.8776	0.0138	0.1088	15.50	1.097	0.690	0.604	1.590	1.815	1.142	-630.	1068.	17.4	13.080
.800	0.2	0.8759	0.0275	0.0968	15.54	1.095	0.688	0.605	1.592	1.809	1.137	-635.	1061.	17.4	13.082
.800	0.3	0.8743	0.0411	0.0848	15.57	1.093	0.686	0.606	1.594	1.804	1.132	-639.	1055.	17.4	13.084
.800	0.4	0.8728	0.0547	0.0728	15.61	1.091	0.684	0.607	1.596	1.798	1.127	-644.	1049.	17.4	13.085
.800	0.5	0.8713	0.0682	0.0608	15.64	1.089	0.682	0.608	1.598	1.792	1.122	-648.	1042.	17.4	13.087
.800	0.6	0.8700	0.0816	0.0487	15.68	1.088	0.680	0.609	1.600	1.787	1.117	-653.	1036.	17.4	13.087
.800	0.7	0.8688	0.0949	0.0366	15.71	1.086	0.678	0.610	1.602	1.781	1.112	-658.	1030.	17.4	13.088
.800	0.8	0.8676	0.1082	0.0244	15.75	1.085	0.676	0.611	1.604	1.776	1.107	-663.	1024.	17.3	13.088
.800	0.9	0.8666	0.1214	0.0122	15.78	1.083	0.675	0.612	1.606	1.770	1.103	-667.	1018.	17.3	13.088
.800	1.0	0.8657	0.1346	0.	15.81	1.082	0.673	0.613	1.608	1.765	1.098	-672.	1012.	17.3	13.087
.900	0.	0.9411	0.	0.0594	16.63	1.046	0.670	0.594	1.561	1.762	1.128	-545.	1040.	17.9	14.366
.900	0.1	0.9403	0.0067	0.0535	16.64	1.045	0.669	0.594	1.562	1.759	1.126	-547.	1037.	17.9	14.374
.900	0.2	0.9395	0.0134	0.0476	16.66	1.044	0.668	0.594	1.563	1.756	1.123	-549.	1034.	17.9	14.382
.900	0.3	0.9388	0.0200	0.0416	16.68	1.043	0.667	0.595	1.564	1.753	1.121	-552.	1030.	17.9	14.389
.900	0.4	0.9381	0.0266	0.0357	16.70	1.042	0.666	0.595	1.565	1.751	1.118	-554.	1027.	17.9	14.397
.900	0.5	0.9374	0.0332	0.0298	16.72	1.042	0.665	0.596	1.566	1.748	1.116	-556.	1024.	17.9	14.404
.900	0.6	0.9367	0.0398	0.0239	16.74	1.041	0.664	0.596	1.567	1.745	1.114	-559.	1021.	17.9	14.412
.900	0.7	0.9361	0.0464	0.0179	16.75	1.040	0.663	0.597	1.568	1.742	1.111	-561.	1018.	17.9	14.419
.900	0.8	0.9355	0.0530	0.0119	16.77	1.039	0.662	0.597	1.569	1.740	1.109	-563.	1015.	17.9	14.426
.900	0.9	0.9349	0.0595	0.0060	16.79	1.039	0.662	0.598	1.570	1.737	1.106	-566.	1012.	17.9	14.434
.900	1.0	0.9344	0.0661	0.	16.81	1.038	0.661	0.598	1.571	1.734	1.104	-568.	1008.	17.9	14.441
.975	0.	0.9855	0.	0.0147	17.55	1.011	0.656	0.589	1.541	1.718	1.114	-484.	1010.	18.3	15.694
.975	0.1	0.9854	0.0016	0.0132	17.56	1.011	0.656	0.589	1.541	1.717	1.114	-485.	1009.	18.3	15.698
.975	0.2	0.9852	0.0033	0.0118	17.56	1.010	0.655	0.589	1.542	1.716	1.113	-485.	1008.	18.3	15.702
.975	0.3	0.9850	0.0049	0.0103	17.57	1.010	0.655	0.589	1.542	1.716	1.113	-486.	1008.	18.3	15.706
.975	0.4	0.9849	0.0066	0.0088	17.57	1.010	0.655	0.589	1.542	1.715	1.112	-487.	1007.	18.3	15.710
.975	0.5	0.9847	0.0082	0.0074	17.58	1.010	0.655	0.589	1.542	1.714	1.111	-487.	1006.	18.3	15.714
.975	0.6	0.9846	0.0098	0.0059	17.58	1.010	0.655	0.589	1.543	1.714	1.111	-488.	1005.	18.3	15.718
.975	0.7	0.9844	0.0115	0.0044	17.59	1.010	0.654	0.589	1.543	1.713	1.110	-488.	1004.	18.3	15.722
.975	0.8	0.9842	0.0131	0.0029	17.59	1.009	0.654	0.589	1.543	1.712	1.110	-489.	1004.	18.3	15.726
.975	0.9	0.9841	0.0147	0.0015	17.59	1.009	0.654	0.590	1.543	1.711	1.109	-489.	1003.	18.3	15.730
.975	1.0	0.9839	0.0163	0.	17.60	1.009	0.654	0.590	1.544	1.711	1.108	-490.	1002.	18.3	15.734

Table 26. (cont.)

TEMPERATURE = 210. R

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0001	8.30	2.215	1.285	1.000	1.723	2.214	1.285	-1201.	1277.	14.0	9.090
.	0.1	0.	0.1227	0.8774	8.57	2.126	1.227	0.975	1.733	2.181	1.256	-1225.	1222.	14.0	8.898
.	0.2	0.	0.2355	0.7647	8.81	2.053	1.177	0.956	1.744	2.148	1.232	-1248.	1172.	13.9	8.720
.	0.3	0.	0.3408	0.6594	9.03	1.992	1.136	0.942	1.754	2.115	1.206	-1272.	1126.	13.9	8.551
.	0.4	0.	0.4405	0.5597	9.23	1.943	1.101	0.933	1.765	2.083	1.181	-1296.	1082.	13.8	8.387
.	0.5	0.	0.5362	0.4639	9.40	1.904	1.072	0.928	1.775	2.052	1.156	-1320.	1040.	13.8	8.224
.	0.6	0.	0.6294	0.3708	9.55	1.874	1.049	0.927	1.786	2.021	1.132	-1343.	999.	13.7	8.059
.	0.7	0.	0.7212	0.2790	9.67	1.851	1.030	0.930	1.797	1.991	1.108	-1367.	960.	13.7	7.890
.	0.8	0.	0.8129	0.1873	9.78	1.837	1.018	0.937	1.808	1.962	1.085	-1391.	921.	13.6	7.714
.	0.9	0.	0.9055	0.0947	9.86	1.830	1.006	0.947	1.819	1.933	1.062	-1414.	882.	13.6	7.527
.	1.0	0.	1.0002	0.	9.92	1.831	1.000	0.961	1.830	1.904	1.040	-1438.	843.	13.5	7.328
.025	0.	0.0534	0.	0.9468	8.59	2.134	1.243	0.971	1.717	2.196	1.283	-1180.	1272.	14.1	9.175
.025	0.1	0.0514	0.1160	0.8327	8.86	2.059	1.190	0.949	1.727	2.165	1.254	-1203.	1220.	14.1	8.997
.025	0.2	0.0497	0.2233	0.7272	9.10	1.989	1.145	0.932	1.737	2.133	1.228	-1227.	1172.	14.0	8.830
.025	0.3	0.0484	0.3238	0.6280	9.31	1.934	1.107	0.920	1.747	2.102	1.203	-1250.	1127.	14.0	8.671
.025	0.4	0.0472	0.4193	0.5337	9.49	1.889	1.075	0.912	1.758	2.071	1.178	-1273.	1085.	13.9	8.515
.025	0.5	0.0463	0.5111	0.4428	9.66	1.853	1.048	0.908	1.768	2.041	1.154	-1296.	1045.	13.9	8.361
.025	0.6	0.0456	0.6005	0.3540	9.80	1.826	1.027	0.908	1.778	2.011	1.131	-1319.	1006.	13.8	8.204
.025	0.7	0.0451	0.6887	0.2664	9.93	1.805	1.009	0.911	1.789	1.982	1.108	-1342.	968.	13.8	8.044
.025	0.8	0.0448	0.7765	0.1789	10.03	1.792	0.996	0.917	1.800	1.953	1.085	-1365.	931.	13.7	7.875
.025	0.9	0.0446	0.8652	0.0904	10.11	1.785	0.986	0.927	1.810	1.925	1.063	-1388.	893.	13.7	7.699
.025	1.0	0.0446	0.9556	0.	10.18	1.785	0.980	0.941	1.821	1.897	1.042	-1411.	855.	13.6	7.510
.100	0.	0.1920	0.	0.8073	9.50	1.920	1.137	0.897	1.699	2.150	1.268	-1118.	1255.	14.5	9.447
.100	0.1	0.1871	0.0985	0.7146	9.73	1.871	1.099	0.882	1.709	2.120	1.241	-1139.	1210.	14.5	9.303
.100	0.2	0.1822	0.1909	0.6272	9.94	1.822	1.060	0.871	1.718	2.091	1.217	-1161.	1169.	14.4	9.166
.100	0.3	0.1781	0.2784	0.5434	10.12	1.781	1.031	0.863	1.727	2.063	1.194	-1182.	1130.	14.4	9.034
.100	0.4	0.1747	0.3621	0.4635	10.29	1.747	1.006	0.858	1.736	2.035	1.172	-1203.	1093.	14.3	8.902
.100	0.5	0.1719	0.4431	0.3853	10.44	1.719	0.985	0.855	1.746	2.007	1.151	-1225.	1057.	14.3	8.772
.100	0.6	0.1697	0.5221	0.3085	10.58	1.697	0.967	0.857	1.755	1.980	1.128	-1246.	1023.	14.2	8.639
.100	0.7	0.1681	0.6000	0.2323	10.69	1.681	0.952	0.860	1.765	1.954	1.107	-1267.	989.	14.2	8.501
.100	0.8	0.1670	0.6774	0.1559	10.80	1.670	0.941	0.866	1.774	1.928	1.086	-1289.	956.	14.1	8.356
.100	0.9	0.1663	0.7552	0.0787	10.88	1.663	0.932	0.875	1.784	1.902	1.066	-1310.	923.	14.1	8.207
.100	1.0	0.1662	0.8341	0.	10.95	1.662	0.927	0.886	1.794	1.877	1.046	-1331.	891.	14.1	8.046
.200	0.	0.3427	0.	0.6574	10.69	1.713	1.023	0.822	1.676	2.084	1.245	-1035.	1232.	15.0	9.851
.200	0.1	0.3352	0.0796	0.5855	10.88	1.676	0.995	0.813	1.684	2.061	1.224	-1054.	1196.	14.9	9.745
.200	0.2	0.3286	0.1554	0.5164	11.05	1.643	0.971	0.807	1.692	2.036	1.203	-1073.	1161.	14.9	9.642
.200	0.3	0.3229	0.2279	0.4495	11.21	1.615	0.950	0.803	1.700	2.012	1.182	-1092.	1129.	14.9	9.540
.200	0.4	0.3182	0.2980	0.3842	11.35	1.591	0.931	0.800	1.708	1.987	1.163	-1111.	1097.	14.8	9.438
.200	0.5	0.3142	0.3661	0.3201	11.49	1.571	0.919	0.800	1.716	1.963	1.144	-1130.	1067.	14.8	9.335
.200	0.6	0.3110	0.4328	0.2565	11.61	1.555	0.902	0.802	1.725	1.940	1.125	-1149.	1038.	14.7	9.230
.200	0.7	0.3086	0.4986	0.1932	11.71	1.543	0.890	0.805	1.733	1.917	1.106	-1168.	1009.	14.7	9.120
.200	0.8	0.3069	0.5639	0.1296	11.81	1.534	0.881	0.810	1.741	1.894	1.088	-1187.	981.	14.7	9.006
.200	0.9	0.3058	0.6293	0.0654	11.89	1.529	0.874	0.817	1.750	1.872	1.070	-1206.	953.	14.6	8.885
.200	1.0	0.3055	0.6950	0.	11.96	1.527	0.869	0.826	1.758	1.850	1.052	-1225.	925.	14.6	8.757
.300	0.	0.4648	0.	0.5356	11.85	1.549	0.938	0.765	1.653	2.025	1.225	-952.	1208.	15.5	10.316
.300	0.1	0.4571	0.0643	0.4791	12.01	1.524	0.918	0.761	1.659	2.003	1.207	-969.	1178.	15.4	10.240
.300	0.2	0.4501	0.1261	0.4239	12.16	1.500	0.900	0.757	1.666	1.982	1.189	-985.	1150.	15.4	10.160
.300	0.3	0.4443	0.1858	0.3700	12.30	1.481	0.885	0.755	1.673	1.961	1.172	-1002.	1123.	15.4	10.085
.300	0.4	0.4392	0.2440	0.3169	12.42	1.464	0.871	0.755	1.680	1.940	1.155	-1018.	1096.	15.3	10.008
.300	0.5	0.4350	0.3008	0.2643	12.54	1.450	0.859	0.755	1.687	1.920	1.138	-1035.	1071.	15.3	9.930
.300	0.6	0.4316	0.3566	0.2120	12.65	1.439	0.849	0.757	1.694	1.900	1.121	-1051.	1046.	15.3	9.849
.300	0.7	0.4288	0.4117	0.1597	12.74	1.429	0.840	0.760	1.701	1.880	1.105	-1068.	1022.	15.2	9.765
.300	0.8	0.4266	0.4663	0.1071	12.83	1.423	0.833	0.765	1.708	1.861	1.089	-1085.	998.	15.2	9.677
.300	0.9	0.4255	0.5208	0.0539	12.91	1.418	0.827	0.770	1.715	1.841	1.073	-1101.	975.	15.2	9.584
.300	1.0	0.4244	0.5754	0.	12.98	1.416	0.822	0.777	1.723	1.822	1.058	-1118.	951.	15.1	9.485
.400	0.	0.5672	0.	0.4330	13.02	1.418	0.870	0.722	1.629	1.965	1.206	-869.	1182.	16.0	10.852
.400	0.1	0.5613	0.0514	0.3869	13.15	1.401	0.857	0.720	1.635	1.947	1.191	-883.	1158.	15.9	10.802
.400	0.2	0.5542	0.1013	0.3447	13.27	1.385	0.844	0.718	1.641	1.929	1.176	-897.	1135.	15.9	10.750
.400	0.3	0.5488	0.1500	0.3019	13.39	1.372	0.833	0.718	1.647	1.912	1.161	-912.	1113.	15.9	10.698
.400	0.4	0.5441	0.1976	0.2585	13.49	1.360	0.823	0.718	1.652	1.894	1.146	-926.	1091.	15.8	10.644
.400	0.5	0.5401	0.2443	0.2158	13.59	1.350	0.814	0.719	1.658	1.877	1.132	-940.	1070.	15.8	10.589
.400	0.6	0.5368	0.2903	0.1731	13.69	1.342	0.806	0.721	1.664	1.860	1.118	-954.	1050.	15.8	10.531
.400	0.7	0.5341	0.3358	0.1304	13.78	1.335	0.800	0.724	1.670	1.844	1.104	-968.	1029.	15.8	10.470
.400	0.8	0.5320	0.3809	0.0875	13.86	1.330	0.794	0.728	1.676	1.827	1.090	-983.	1009.	15.8	10.406
.400	0.9	0.5305	0.4258	0.0439	13.94	1.326	0.789	0.732	1.682	1.811	1.077	-997.	990.	15.7	10.338
.400	1.0	0.5296	0.4707	0.	14.00	1.324	0.784	0.738	1.688	1.795	1.063	-1011.	970.	15.7	10.265
.500	0.	0.6560	0.	0.3443	14.20	1.312	0.817	0.689	1.606	1.906	1.187	-786.	1155.	16.5	11.499
.500	0.1	0.6504	0.0404	0.3096	14.30	1.301	0.808	0.688	1.610	1.891	1.174	-798.	1136.	16.4	11.470
.500	0.2	0.6454	0.0799	0.2751	14.40	1.291	0.799	0.688	1.615	1.877	1.162	-810.	1118.	16.4	11.440
.500	0.3	0.6410	0.1187	0.2409	14.49	1.282	0.791	0.688	1.620	1.863	1.150	-821.	1100.	16.4	11.408
.500	0.4	0.6369	0.1568	0.2067	14.58	1.274	0.784	0.689	1.625	1.849	1.138	-833.	1082.	16.4	11.376
.500	0.5	0.6334	0.1944	0.1728	14.67	1.267	0.778	0.690	1.629	1.835	1.126	-845.	1065.	16.3	11.341
.500	0.6	0.6304	0.2315	0.1381	14.75	1.261	0.772	0.692	1.634	1.821	1.114	-857.	1048.	16.3	11.305
.500	0.7	0.6280	0.2682	0.1042	14.83	1.256	0.766	0.695	1.639	1.807	1.103	-869.	1032.	16.3	11.266
.500	0.8	0.6260	0.3047	0.0698	14.90	1.252	0.762	0.698	1.644	1.794	1.092	-881.	1015.	16.3	11.224
.500	0.9	0.6244	0.3409	0.0351	14.97	1.249	0.758	0.701	1.649	1.781	1.081	-893.	999.	16.2	11.179
.500	1.0	0.6234	0.3770	0.	15.04	1.247	0.754	0.705	1.653	1.768	1.070	-904.	983.	16.2	11.131
.600	0.	0.7350	0.	0.2652	15.40	1.225	0.774	0.663	1.582	1.848	1.168	-703.	1125.	16.9	12.291
.600	0.1	0.7307	0.0307	0.2387	15.48	1.218	0.768	0.663	1.586	1.837	1.158	-712.	1111.	16.9	12.280
.600	0.2	0.7268	0.0610	0.2124	15.56	1.211	0.762	0.664	1.589	1.825	1.149	-722.	1096.	16.9	12.269
.600	0.3	0.7233	0.0908	0.1860	15.63	1.206	0.757	0.664	1.593	1.814	1.139	-731.	1083.	16.9	12.257
.600	0.4	0.7202	0.1203	0.1597	15.71	1.200	0.752	0.666	1.597	1.804	1.130	-741.	1069.	16.9	12.243
.600	0.5	0.7174	0.1494	0.1334	15.78	1.196	0.747	0.667	1.600	1.793	1.120	-750.	1055.	16.8	12.228
.600	0.6	0.7149	0.1783	0.1070	15.85	1.192	0.743	0.669	1.604	1.782	1.111	-760.	1042.	16.8	12.211
.600	0.7	0.7128	0.2069	0.0805	15.91	1.188	0.739	0.671	1.608	1.771	1.102	-769.	1029.	16.8	12.192
.600	0.8	0.7110	0.2353	0.0538	15.98	1.185	0.735	0.673	1.611	1.761	1.093	-779.	1016.	16.8	12.171
.600	0.9	0.7096	0.2636	0.0270	16.04	1.183	0.732	0.676	1.615	1.750	1.084	-788.	1003.	16.8	12.148
.600	1.0	0.7085	0.2917	0.	16.09	1.181	0.729	0.679	1.619	1.740	1.075	-798.	990.	16.7	12.123
.700	0.	0.8071	0.	0.1932	16.62	1.153	0.740	0.644	1.558	1.791	1.149	-620.	1093.	17.4	13.311
.700	0.1	0.8046	0.0221	0.1740	16.69	1.149	0.736	0.644	1.561	1.783	1.142	-627.	1082.	17.4	13.317
.700	0.2	0.8015	0.0439	0.1546	16.75	1.145	0.732	0.645	1.563	1.775	1.135	-634.	1072.	17.4	13.322
.700	0.3	0.7990	0.0656	0.1357	16.80	1.141	0.729	0.646	1.566	1.767	1.128	-641.	1062.	17.4	13.327
.700	0.4	0.7968	0.0871	0.1165	16.86	1.138	0.726	0.647	1.569	1.759	1.121	-648.	1051.	17.4	13.330
.700	0.5	0.7947	0.1084	0.0973	16.92	1.135	0.722	0.648	1.571	1.751	1.114	-655.	1041.	17.4	13.332
.700	0.6	0.7928	0.1295	0.0780	16.97	1.133	0.720	0.650	1.574	1.743	1.107	-663.	1031.	17.4	13.334
.700	0.7	0.7912	0.1505	0.0586	17.02	1.130	0.717	0.651	1.577	1.735	1.100	-670.	1021.	17.3	13.333
.700	0.8	0.7897	0.1714	0.0392	17.08	1.128	0.714	0.653	1.579	1.727	1.094	-677.	1012.	17.3	13.332
.700	0.9	0.7885	0.1922	0.0197	17.13	1.126	0.712	0.655	1.582	1.719	1.087	-684.	1002.	17.3	13.329
.700	1.0	0.7874	0.2129	0.	17.18	1.125	0.710	0.657	1.585	1.712	1.080	-691.	992.	17.3	13.325
.800	0.	0.8745	0.	0.1260	17.90	1.093	0.713	0.630	1.533	1.734	1.131	-537.	1056.	17.9	14.697
.800	0.1	0.8725	0.0142	0.1135	17.95	1.091	0.710	0.631	1.535	1.729	1.126	-542.	1049.	17.9	14.710
.800	0.2	0.8708	0.0283	0.1010	18.00	1.089	0.708	0.631	1.537	1.724	1.122	-546.	1042.	17.9	14.728
.800	0.3	0.8693	0.0424	0.0885	18.04	1.087	0.706	0.632	1.538	1.719	1.117	-551.	1035.	17.9	14.746
.800	0.4	0.8679	0.0564	0.0760	18.08	1.085	0.704	0.633	1.540	1.714	1.113	-556.	1028.	17.9	14.763
.800	0.5	0.8666	0.0703	0.0634	18.12	1.083	0.703	0.634	1.542	1.708	1.108	-561.	1022.	17.9	14.780
.800	0.6	0.8653	0.0841	0.0508	18.16	1.082	0.701	0.635	1.544	1.703	1.103	-565.	1015.	17.9	14.796
.800	0.7	0.8642	0.0979	0.0382	18.19	1.080	0.699	0.636	1.545	1.698	1.099	-570.	1008.	17.9	14.811
.800	0.8	0.8631	0.1116	0.0255	18.23	1.079	0.697	0.637	1.547	1.693	1.094	-575.	1002.	17.8	14.826
.800	0.9	0.8622	0.1253	0.0128	18.27	1.078	0.696	0.638	1.549	1.688	1.090	-580.	995.	17.8	14.840
.800	1.0	0.8613	0.1389	0.	18.31	1.077	0.694	0.640	1.550	1.683	1.085	-584.	989.	17.8	14.853
.900	0.	0.9383	0.	0.0621	19.27	1.043	0.691	0.621	1.508	1.678	1.113	-454.	1013.	18.4	16.739
.900	0.1	0.9375	0.0069	0.0558	19.29	1.042	0.691	0.622	1.508	1.676	1.111	-456.	1009.	18.4	16.762
.900	0.2	0.9368	0.0138	0.0498	19.32	1.041	0.690	0.622	1.509	1.673	1.109	-459.	1005.	18.4	16.785
.900	0.3	0.9361	0.0207	0.0436	19.34	1.040	0.689	0.623	1.510	1.671	1.106	-461.	1002.	18.4	16.808
.900	0.4	0.9355	0.0275	0.0374	19.36	1.039	0.688	0.623	1.511	1.668	1.104	-463.	999.	18.4	16.831
.900	0.5	0.9348	0.0344	0.0312	19.38	1.039	0.687	0.624	1.512	1.666	1.102	-466.	995.	18.4	16.854
.900	0.6	0.9342	0.0412	0.0250	19.40	1.038	0.686	0.624	1.512	1.663	1.100	-468.	992.	18.4	16.876
.900	0.7	0.9337	0.0480	0.0187	19.42	1.037	0.686	0.625	1.513	1.660	1.097	-470.	989.	18.4	16.899
.900	0.8	0.9331	0.0548	0.0125	19.44	1.037	0.685	0.625	1.514	1.658	1.095	-473.	985.	18.4	16.921
.900	0.9	0.9326	0.0616	0.0063	19.46	1.036	0.684	0.626	1.515	1.655	1.093	-475.	982.	18.4	16.943
.900	1.0	0.9321	0.0683	0.	19.48	1.036	0.683	0.627	1.516	1.653	1.091	-478.	978.	18.4	16.965
.975	0.	0.9848	0.	0.0154	20.37	1.010	0.679	0.618	1.487	1.635	1.100	-392.	974.	18.8	19.133
.975	0.1	0.9847	0.0017	0.0139	20.38	1.010	0.679	0.618	1.487	1.635	1.099	-392.	973.	18.8	19.144
.975	0.2	0.9845	0.0034	0.0124	20.38	1.010	0.679	0.618	1.487	1.634	1.099	-393.	972.	18.8	19.156
.975	0.3	0.9844	0.0051	0.0108	20.39	1.010	0.679	0.618	1.488	1.634	1.098	-393.	971.	18.8	19.167
.975	0.4	0.9842	0.0068	0.0093	20.39	1.009	0.678	0.618	1.488	1.633	1.097	-394.	970.	18.8	19.178
.975	0.5	0.9841	0.0085	0.0077	20.40	1.009	0.678	0.618	1.488	1.632	1.097	-395.	969.	18.8	19.189
.975	0.6	0.9839	0.0102	0.0062	20.41	1.009	0.678	0.619	1.488	1.632	1.096	-395.	968.	18.8	19.201
.975	0.7	0.9838	0.0119	0.0046	20.41	1.009	0.678	0.619	1.488	1.631	1.096	-396.	967.	18.8	19.212
.975	0.8	0.9836	0.0136	0.0031	20.42	1.009	0.678	0.619	1.489	1.630	1.095	-396.	966.	18.8	19.223
.975	0.9	0.9835	0.0152	0.0015	20.42	1.009	0.678	0.619	1.489	1.630	1.095	-397.	965.	18.8	19.234
.975	1.0	0.9834	0.0169	0.	20.43	1.009	0.677	0.619	1.489	1.629	1.094	-398.	965.	18.8	19.245

Table 26. (con.)

TEMPERATURE = 215. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0000	9.80	2.103	1.269	1.000	1.663	2.103	1.264	-1130.	1285.	14.3	9.450
.	0.1	0.	0.1210	0.8790	10.10	2.024	1.210	0.977	1.672	2.072	1.239	-1154.	1229.	14.3	9.274
.	0.2	0.	0.2329	0.7673	10.38	1.958	1.164	0.959	1.681	2.041	1.214	-1178.	1176.	14.2	9.109
.	0.3	0.	0.3378	0.6624	10.62	1.903	1.126	0.946	1.690	2.011	1.190	-1202.	1130.	14.2	8.951
.	0.4	0.	0.4375	0.5628	10.84	1.859	1.094	0.938	1.700	1.982	1.166	-1226.	1084.	14.2	8.796
.	0.5	0.	0.5335	0.4668	11.03	1.823	1.067	0.934	1.709	1.953	1.143	-1250.	1041.	14.1	8.640
.	0.6	0.	0.6270	0.3732	11.20	1.796	1.045	0.933	1.718	1.925	1.120	-1274.	999.	14.1	8.480
.	0.7	0.	0.7194	0.2809	11.34	1.776	1.028	0.936	1.728	1.897	1.098	-1298.	959.	14.1	8.314
.	0.8	0.	0.8117	0.1886	11.45	1.763	1.015	0.943	1.737	1.870	1.076	-1321.	919.	14.0	8.139
.	0.9	0.	0.9050	0.0953	11.54	1.757	1.006	0.953	1.747	1.843	1.055	-1345.	879.	14.0	7.951
.	1.0	0.	1.0000	0.	11.60	1.757	1.000	0.967	1.757	1.817	1.034	-1369.	838.	14.0	7.749
.025	0.	0.0510	0.	0.9490	10.13	2.033	1.226	0.974	1.658	2.088	1.259	-1109.	1279.	14.4	9.550
.025	0.1	0.0490	0.1148	0.8364	10.43	1.961	1.177	0.953	1.666	2.059	1.235	-1132.	1226.	14.4	9.386
.025	0.2	0.0475	0.2213	0.7314	10.68	1.902	1.139	0.938	1.675	2.028	1.211	-1156.	1177.	14.4	9.232
.025	0.3	0.0463	0.3217	0.6323	10.93	1.852	1.106	0.926	1.684	1.999	1.187	-1179.	1131.	14.3	9.084
.025	0.4	0.0453	0.4170	0.5377	11.14	1.811	1.070	0.919	1.693	1.971	1.164	-1202.	1087.	14.3	8.937
.025	0.5	0.0445	0.5094	0.4464	11.32	1.779	1.045	0.916	1.702	1.943	1.141	-1225.	1046.	14.3	8.790
.025	0.6	0.0438	0.5994	0.3571	11.48	1.753	1.025	0.916	1.711	1.915	1.119	-1249.	1005.	14.2	8.638
.025	0.7	0.0434	0.6882	0.2688	11.62	1.735	1.008	0.919	1.721	1.888	1.097	-1272.	966.	14.2	8.481
.025	0.8	0.0431	0.7768	0.1804	11.73	1.723	0.996	0.925	1.730	1.862	1.076	-1295.	928.	14.2	8.314
.025	0.9	0.0429	0.8662	0.0912	11.82	1.717	0.987	0.935	1.739	1.836	1.056	-1319.	889.	14.1	8.136
.025	1.0	0.0429	0.9574	0.	11.88	1.717	0.982	0.949	1.749	1.810	1.035	-1342.	851.	14.1	7.944
.100	0.	0.1851	0.	0.8152	11.13	1.851	1.127	0.906	1.642	2.043	1.245	-1045.	1260.	14.8	9.869
.100	0.1	0.1798	0.0981	0.7224	11.39	1.798	1.090	0.892	1.650	2.016	1.222	-1066.	1215.	14.8	9.739
.100	0.2	0.1753	0.1904	0.6344	11.62	1.753	1.058	0.881	1.658	1.990	1.200	-1088.	1172.	14.7	9.615
.100	0.3	0.1716	0.2782	0.5504	11.83	1.716	1.030	0.874	1.666	1.963	1.179	-1109.	1132.	14.7	9.493
.100	0.4	0.1685	0.3624	0.4695	12.02	1.685	1.007	0.870	1.674	1.937	1.158	-1131.	1093.	14.7	9.372
.100	0.5	0.1659	0.4439	0.3905	12.19	1.659	0.987	0.868	1.682	1.912	1.137	-1152.	1056.	14.7	9.248
.100	0.6	0.1639	0.5237	0.3127	12.34	1.639	0.970	0.869	1.690	1.887	1.116	-1174.	1020.	14.7	9.120
.100	0.7	0.1625	0.6025	0.2350	12.47	1.625	0.956	0.872	1.699	1.863	1.097	-1195.	985.	14.6	[illegible]
.100	0.8	0.1615	0.6810	0.1581	12.58	1.615	0.946	0.878	1.707	1.838	1.077	-1217.	951.	14.6	8.843
.100	0.9	0.1610	0.7598	0.0798	12.67	1.609	0.938	0.887	1.716	1.815	1.058	-1238.	917.	14.6	8.691
.100	1.0	0.1609	0.8394	0.	12.74	1.609	0.933	0.898	1.724	1.792	1.039	-1260.	882.	14.5	8.528
.200	0.	0.3319	0.	0.6686	12.44	1.659	1.024	0.836	1.620	1.985	1.225	-959.	1235.	15.3	10.353
.200	0.1	0.3246	0.0798	0.5957	12.66	1.623	0.998	0.827	1.627	1.962	1.206	-978.	1197.	15.3	10.257
.200	0.2	0.3185	0.1558	0.5257	12.86	1.593	0.975	0.821	1.634	1.939	1.187	-998.	1161.	15.3	10.166
.200	0.3	0.3133	0.2291	0.4576	13.04	1.566	0.955	0.817	1.641	1.916	1.168	-1017.	1127.	15.2	10.075
.200	0.4	0.3089	0.2999	0.3914	13.20	1.544	0.937	0.815	1.648	1.894	1.149	-1036.	1095.	15.2	9.983
.200	0.5	0.3052	0.3688	0.3261	13.36	1.526	0.922	0.815	1.655	1.872	1.131	-1055.	1063.	15.2	9.887
.200	0.6	0.3023	0.4364	0.2615	13.49	1.511	0.909	0.817	1.662	1.850	1.113	-1074.	1033.	15.2	9.788
.200	0.7	0.3001	0.5032	0.1969	13.61	1.500	0.899	0.820	1.670	1.829	1.095	-1093.	1003.	15.1	9.682
.200	0.8	0.2985	0.5696	0.1321	13.71	1.492	0.890	0.826	1.677	1.808	1.078	-1112.	973.	15.1	9.570
.200	0.9	0.2976	0.6360	0.0664	13.80	1.488	0.883	0.833	1.684	1.787	1.061	-1131.	944.	15.1	9.449
.200	1.0	0.2973	0.7029	0.	13.88	1.486	0.879	0.841	1.692	1.767	1.044	-1150.	915.	15.1	9.319
.300	0.	0.4526	0.	0.5474	13.78	1.509	0.944	0.782	1.598	1.928	1.207	-874.	1207.	15.8	10.915
.300	0.1	0.4454	0.0648	0.4901	13.93	1.485	0.929	0.778	1.604	1.909	1.190	-891.	1176.	15.8	10.854
.300	0.2	0.4391	0.1273	0.4339	14.10	1.464	0.909	0.775	1.610	1.889	1.173	-907.	1147.	15.8	10.792
.300	0.3	0.4336	0.1878	0.3788	14.25	1.445	0.894	0.773	1.616	1.870	1.157	-924.	1119.	15.8	10.729
.300	0.4	0.4290	0.2466	0.3245	14.39	1.430	0.881	0.772	1.622	1.851	1.141	-941.	1091.	15.7	10.664
.300	0.5	0.4250	0.3045	0.2707	14.52	1.417	0.870	0.773	1.628	1.832	1.125	-957.	1065.	15.7	10.595
.300	0.6	0.4218	0.3613	0.2171	14.64	1.406	0.860	0.776	1.635	1.813	1.109	-974.	1039.	15.7	10.521
.300	0.7	0.4192	0.4174	0.1635	14.75	1.398	0.852	0.779	1.641	1.795	1.094	-991.	1013.	15.7	10.443
.300	0.8	0.4175	0.4732	0.1097	14.85	1.392	0.845	0.783	1.647	1.777	1.079	-1008.	988.	15.6	10.359
.300	0.9	0.4163	0.5288	0.0552	14.94	1.388	0.839	0.789	1.653	1.759	1.064	-1024.	964.	15.6	10.267
.300	1.0	0.4158	0.5846	0.	15.01	1.386	0.835	0.796	1.660	1.741	1.049	-1041.	939.	15.6	10.168
.400	0.	0.5553	0.	0.4449	15.08	1.389	0.881	0.741	1.577	1.873	1.188	-788.	1178.	16.3	11.598
.400	0.1	0.5490	0.0521	0.3993	15.21	1.373	0.868	0.739	1.582	1.856	1.174	-803.	1153.	16.3	11.562
.400	0.2	0.5433	0.1027	0.3544	15.35	1.358	0.856	0.738	1.586	1.840	1.160	-817.	1129.	16.3	11.526
.400	0.3	0.5383	0.1522	0.3099	15.48	1.346	0.846	0.738	1.592	1.824	1.146	-831.	1106.	16.3	11.488
.400	0.4	0.5339	0.2007	0.2656	15.60	1.335	0.836	0.738	1.597	1.808	1.132	-846.	1083.	16.2	11.447
.400	0.5	0.5302	0.2483	0.2219	15.71	1.326	0.828	0.740	1.602	1.792	1.119	-860.	1061.	16.2	11.403
.400	0.6	0.5271	0.2953	0.1780	15.82	1.318	0.820	0.742	1.607	1.776	1.106	-874.	1039.	16.2	11.355
.400	0.7	0.5248	0.3418	0.1341	15.92	1.312	0.814	0.745	1.612	1.761	1.093	-889.	1018.	16.2	11.302
.400	0.8	0.5227	0.3879	0.0898	16.01	1.307	0.808	0.749	1.617	1.746	1.080	-903.	997.	16.2	11.244
.400	0.9	0.5214	0.4336	0.0452	16.09	1.304	0.804	0.753	1.622	1.731	1.067	-917.	976.	16.2	11.181
.400	1.0	0.5205	0.4797	0.	16.17	1.301	0.799	0.758	1.628	1.716	1.054	-932.	956.	16.1	11.108
.500	0.	0.6453	0.	0.3549	16.40	1.291	0.830	0.710	1.554	1.818	1.169	-703.	1147.	16.8	12.434
.500	0.1	0.6400	0.0411	0.3192	16.52	1.280	0.821	0.709	1.558	1.805	1.158	-715.	1127.	16.8	12.421
.500	0.2	0.6352	0.0813	0.2837	16.63	1.270	0.813	0.709	1.563	1.791	1.146	-727.	1107.	16.8	12.411
.500	0.3	0.6310	0.1208	0.2484	16.74	1.262	0.806	0.710	1.567	1.778	1.135	-739.	1089.	16.8	12.397
.500	0.4	0.6273	0.1597	0.2132	16.84	1.255	0.799	0.711	1.571	1.765	1.124	-751.	1070.	16.8	12.380
.500	0.5	0.6240	0.1981	0.1781	16.94	1.248	0.793	0.712	1.575	1.752	1.113	-762.	1052.	16.8	12.360
.500	0.6	0.6213	0.2361	0.1429	17.03	1.243	0.787	0.714	1.579	1.740	1.102	-774.	1034.	16.8	12.336
.500	0.7	0.6190	0.2737	0.1075	17.12	1.238	0.782	0.717	1.583	1.727	1.091	-786.	1017.	16.7	12.308
.500	0.8	0.6172	0.3111	0.0720	17.20	1.234	0.778	0.720	1.587	1.715	1.080	-798.	999.	16.7	12.276
.500	0.9	0.6158	0.3479	0.0362	17.27	1.232	0.774	0.723	1.591	1.702	1.070	-810.	982.	16.7	12.239
.500	1.0	0.6149	0.385	0.	17.35	1.230	0.771	0.728	1.596	1.690	1.059	-822.	965.	16.7	12.197
.600	0.	0.7240	0.	0.2744	17.76	1.210	0.790	0.686	1.532	1.764	1.151	-617.	1112.	17.3	13.520
.600	0.1	0.7220	0.0314	0.2470	17.86	1.203	0.784	0.686	1.535	1.753	1.142	-627.	1097.	17.3	13.532
.600	0.2	0.7183	0.0623	0.2198	17.95	1.197	0.778	0.687	1.538	1.743	1.133	-636.	1082.	17.3	13.542
.600	0.3	0.7150	0.0928	0.1926	18.03	1.192	0.773	0.688	1.541	1.733	1.124	-646.	1067.	17.3	13.551
.600	0.4	0.7121	0.1230	0.1653	18.12	1.187	0.768	0.689	1.544	1.723	1.116	-655.	1052.	17.3	13.557
.600	0.5	0.7095	0.1528	0.1381	18.20	1.183	0.764	0.690	1.548	1.713	1.107	-665.	1038.	17.3	13.561
.600	0.6	0.7072	0.1824	0.1108	18.28	1.179	0.760	0.692	1.551	1.703	1.098	-675.	1024.	17.3	13.561
.600	0.7	0.7053	0.2118	0.0833	18.35	1.175	0.756	0.694	1.554	1.693	1.089	-684.	1010.	17.3	13.559
.600	0.8	0.7037	0.2410	0.0557	18.42	1.173	0.753	0.697	1.557	1.683	1.081	-694.	996.	17.3	13.553
.600	0.9	0.7024	0.2751	0.0280	18.49	1.171	0.750	0.699	1.560	1.674	1.073	-703.	982.	17.2	13.543
.600	1.0	0.7014	0.2990	0.	18.55	1.169	0.748	0.703	1.564	1.664	1.064	-713.	969.	17.2	13.529
.700	0.	0.7996	0.	0.2004	19.19	1.143	0.757	0.668	1.509	1.710	1.133	-532.	1073.	17.8	15.000
.700	0.1	0.7971	0.0226	0.1804	19.26	1.139	0.754	0.669	1.511	1.703	1.127	-539.	1062.	17.8	15.033
.700	0.2	0.7945	0.0450	0.1607	19.33	1.135	0.750	0.670	1.513	1.695	1.120	-546.	1050.	17.8	15.066
.700	0.3	0.7922	0.0672	0.1408	19.40	1.132	0.747	0.671	1.515	1.688	1.114	-553.	1039.	17.8	15.097
.700	0.4	0.7901	0.0892	0.1209	19.46	1.129	0.744	0.672	1.518	1.680	1.107	-560.	1028.	17.8	15.126
.700	0.5	0.7882	0.1111	0.1010	19.53	1.126	0.741	0.673	1.520	1.673	1.101	-568.	1017.	17.8	15.153
.700	0.6	0.7865	0.1329	0.0810	19.59	1.124	0.738	0.675	1.522	1.666	1.094	-575.	1007.	17.8	15.178
.700	0.7	0.7850	0.1545	0.0609	19.65	1.121	0.736	0.676	1.524	1.658	1.088	-582.	996.	17.8	15.201
.700	0.8	0.7836	0.1760	0.0407	19.71	1.119	0.733	0.678	1.527	1.651	1.081	-589.	986.	17.8	15.222
.700	0.9	0.7825	0.1974	0.0204	19.76	1.118	0.731	0.680	1.529	1.644	1.075	-596.	975.	17.8	15.239
.700	1.0	0.7816	0.2187	0.	19.82	1.117	0.729	0.682	1.531	1.637	1.069	-603.	965.	17.8	15.254
.800	0.	0.8692	0.	0.1312	20.69	1.087	0.732	0.656	1.484	1.656	1.116	-446.	1027.	18.4	17.220
.800	0.1	0.8676	0.0146	0.1182	20.74	1.085	0.730	0.657	1.486	1.651	1.111	-451.	1019.	18.4	17.274
.800	0.2	0.8661	0.0291	0.1052	20.78	1.083	0.728	0.658	1.487	1.646	1.107	-456.	1012.	18.3	17.327
.800	0.3	0.8647	0.0436	0.0922	20.83	1.081	0.726	0.658	1.489	1.642	1.103	-460.	1004.	18.3	17.380
.800	0.4	0.8634	0.0579	0.0791	20.88	1.079	0.724	0.659	1.490	1.637	1.099	-465.	997.	18.3	17.431
.800	0.5	0.8622	0.0723	0.0660	20.92	1.078	0.723	0.660	1.491	1.632	1.094	-470.	989.	18.3	17.482
.800	0.6	0.8611	0.0865	0.0529	20.97	1.076	0.721	0.661	1.493	1.627	1.090	-475.	982.	18.3	17.531
.800	0.7	0.8598	0.1007	0.0397	21.02	1.075	0.719	0.662	1.494	1.622	1.085	-480.	975.	18.3	17.574
.800	0.8	0.8588	0.1149	0.0265	21.07	1.074	0.718	0.664	1.496	1.618	1.082	-484.	967.	18.3	17.621
.800	0.9	0.8580	0.1290	0.0133	21.11	1.072	0.716	0.665	1.497	1.613	1.077	-489.	960.	18.3	17.666
.800	1.0	0.8572	0.1430	0.	21.15	1.072	0.715	0.666	1.498	1.608	1.073	-494.	953.	18.3	17.710
.900	0.	0.9355	0.	0.0649	22.32	1.039	0.713	0.649	1.458	1.601	1.098	-361.	968.	18.9	21.092
.900	0.1	0.9348	0.0071	0.0585	22.34	1.039	0.712	0.650	1.458	1.598	1.096	-363.	964.	18.9	21.159
.900	0.2	0.9342	0.0142	0.0520	22.37	1.038	0.712	0.650	1.458	1.596	1.094	-365.	961.	18.9	21.225
.900	0.3	0.9336	0.0213	0.0456	22.39	1.037	0.711	0.651	1.459	1.593	1.092	-368.	957.	18.9	21.292
.900	0.4	0.9330	0.0284	0.0391	22.42	1.037	0.710	0.652	1.459	1.591	1.090	-370.	953.	18.9	21.359
.900	0.5	0.9324	0.0355	0.0326	22.44	1.036	0.709	0.652	1.460	1.589	1.088	-373.	949.	18.9	21.425
.900	0.6	0.9318	0.0425	0.0261	22.47	1.035	0.709	0.653	1.461	1.586	1.086	-375.	945.	18.9	21.491
.900	0.7	0.9312	0.0495	0.0196	22.49	1.035	0.708	0.653	1.461	1.584	1.083	-377.	941.	18.8	21.558
.900	0.8	0.9308	0.0566	0.0131	22.52	1.034	0.707	0.654	1.462	1.582	1.081	-380.	937.	18.8	21.623
.900	0.9	0.9303	0.0636	0.0065	22.54	1.034	0.706	0.655	1.463	1.579	1.079	-382.	933.	18.8	21.689
.900	1.0	0.9299	0.0706	0.	22.57	1.033	0.705	0.655	1.464	1.577	1.077	-384.	930.	18.8	21.755
.975	0.	0.9842	0.	0.0162	23.66	1.009	0.704	0.649	1.434	1.556	1.085	-296.	909.	19.2	27.107
.975	0.1	0.9841	0.0018	0.0146	23.67	1.009	0.704	0.649	1.435	1.555	1.084	-297.	908.	19.2	27.149
.975	0.2	0.9839	0.0035	0.0130	23.68	1.009	0.703	0.649	1.435	1.555	1.084	-298.	907.	19.2	27.191
.975	0.3	0.9838	0.0053	0.0114	23.68	1.009	0.703	0.649	1.435	1.554	1.083	-298.	906.	19.2	27.232
.975	0.4	0.9837	0.0070	0.0097	23.69	1.009	0.703	0.649	1.435	1.554	1.083	-299.	905.	19.2	27.274
.975	0.5	0.9835	0.0088	0.0081	23.70	1.009	0.703	0.650	1.435	1.553	1.082	-299.	904.	19.2	27.317
.975	0.6	0.9834	0.0105	0.0065	23.70	1.009	0.703	0.650	1.435	1.552	1.082	-300.	903.	19.2	27.359
.975	0.7	0.9833	0.0123	0.0049	23.71	1.009	0.703	0.650	1.435	1.552	1.082	-301.	902.	19.2	27.401
.975	0.8	0.9831	0.0140	0.0033	23.72	1.008	0.702	0.650	1.435	1.551	1.081	-301.	901.	19.2	27.443
.975	0.9	0.9830	0.0158	0.0016	23.73	1.008	0.702	0.650	1.436	1.551	1.081	-302.	900.	19.2	27.486
.975	1.0	0.9829	0.0176	0.	23.73	1.008	0.702	0.650	1.436	1.550	1.080	-302.	899.	19.2	27.528

TEMPERATURE = 220. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0000	11.48	2.005	1.245	1.000	1.611	2.005	1.244	-1058.	1289.	14.6	9.870
.	0.1	0.	0.1104	0.8896	11.82	1.934	1.194	0.979	1.619	1.974	1.220	-1087.	1233.	14.6	9.720
.	0.2	0.	0.2304	0.7699	12.13	1.875	1.152	0.962	1.627	1.946	1.197	-1108.	1180.	14.6	9.572
.	0.3	0.	0.3349	0.6659	12.40	1.826	1.118	0.951	1.635	1.920	1.174	-1130.	1131.	14.6	9.427
.	0.4	0.	0.4346	0.5658	12.64	1.786	1.086	0.943	1.644	1.893	1.152	-1154.	1084.	14.6	9.284
.	0.5	0.	0.5308	0.4697	12.85	1.753	1.062	0.939	1.652	1.867	1.130	-1178.	1040.	14.6	9.137
.	0.6	0.	0.6248	0.3757	13.04	1.728	1.041	0.939	1.660	1.840	1.109	-1202.	997.	14.6	8.984
.	0.7	0.	0.7177	0.2828	13.19	1.710	1.025	0.943	1.668	1.815	1.088	-1226.	955.	14.5	8.822
.	0.8	0.	0.8100	0.1899	13.31	1.699	1.013	0.949	1.677	1.789	1.067	-1250.	913.	14.5	8.647
.	0.9	0.	0.9042	0.0959	13.42	1.693	1.005	0.95	1.685	1.765	1.047	-1274.	872.	14.5	8.455
.	1.0	0.	1.0000	0.	13.48	1.694	1.000	0.973	1.693	1.740	1.028	-1298.	830.	14.5	8.249
.025	0.	0.0484	0.	0.9517	11.85	1.944	1.210	0.976	1.607	1.991	1.239	-1036.	1283.	14.8	9.995
.025	0.1	0.0470	0.1135	0.8399	12.17	1.879	1.164	0.957	1.614	1.963	1.216	-1059.	1229.	14.8	9.851
.025	0.2	0.0456	0.2194	0.7353	12.47	1.825	1.125	0.943	1.622	1.936	1.194	-1083.	1178.	14.7	9.713
.025	0.3	0.0445	0.3195	0.6364	12.73	1.780	1.092	0.932	1.630	1.909	1.172	-1106.	1131.	14.7	9.578
.025	0.4	0.0436	0.4152	0.5417	12.97	1.744	1.065	0.926	1.638	1.883	1.150	-1130.	1086.	14.7	9.444
.025	0.5	0.0428	0.5078	0.4499	13.17	1.714	1.042	0.923	1.646	1.857	1.129	-1153.	1043.	14.7	9.305
.025	0.6	0.0423	0.5980	0.3599	13.36	1.690	1.022	0.923	1.654	1.832	1.108	-1176.	1002.	14.7	9.156
.025	0.7	0.0418	0.6874	0.2709	13.51	1.673	1.007	0.926	1.662	1.807	1.087	-1200.	961.	14.7	9.003
.025	0.8	0.0416	0.7767	0.1819	13.63	1.663	0.996	0.933	1.670	1.782	1.067	-1223.	921.	14.7	8.837
.025	0.9	0.0414	0.8668	0.0919	13.73	1.657	0.988	0.943	1.678	1.758	1.048	-1247.	881.	14.6	8.658
.025	1.0	0.0414	0.9587	0.	13.79	1.658	0.983	0.956	1.686	1.735	1.029	-1270.	842.	14.6	8.462
.100	0.	0.1782	0.	0.8223	12.95	1.782	1.120	0.914	1.592	1.950	1.225	-970.	1262.	15.2	10.378
.100	0.1	0.1730	0.0976	0.7292	13.24	1.733	1.084	0.900	1.599	1.925	1.204	-992.	1215.	15.1	10.263
.100	0.2	0.1693	0.1887	0.6412	13.50	1.693	1.054	0.890	1.606	1.901	1.184	-1013.	1171.	15.1	10.155
.100	0.3	0.1658	0.2776	0.5567	13.74	1.658	1.026	0.884	1.613	1.876	1.163	-1035.	1129.	15.1	10.047
.100	0.4	0.1630	0.3622	0.4750	13.95	1.630	1.006	0.880	1.620	1.853	1.144	-1056.	1089.	15.1	9.938
.100	0.5	0.1606	0.4443	0.3952	14.14	1.606	0.987	0.878	1.627	1.829	1.124	-1078.	1051.	15.1	9.823
.100	0.6	0.1588	0.5248	0.3166	14.31	1.588	0.972	0.879	1.634	1.806	1.105	-1100.	1014.	15.1	9.702
.100	0.7	0.1575	0.6043	0.2384	14.45	1.575	0.959	0.883	1.642	1.783	1.086	-1121.	978.	15.1	9.573
.100	0.8	0.1566	0.6836	0.1600	14.57	1.566	0.947	0.889	1.649	1.761	1.068	-1143.	942.	15.0	9.433
.100	0.9	0.1561	0.7633	0.0808	14.66	1.561	0.942	0.898	1.656	1.739	1.050	-1164.	907.	15.0	9.280
.100	1.0	0.1561	0.8442	0.	14.74	1.561	0.938	0.909	1.664	1.718	1.032	-1186.	871.	15.0	9.112
.200	0.	0.3218	0.	[illegible]	14.42	1.609	1.024	0.848	1.572	1.897	1.207	-882.	1233.	15.7	10.965
.200	0.1	0.3152	0.0799	0.6051	14.66	1.576	0.999	0.840	1.576	1.874	1.188	-901.	1194.	15.7	10.892
.200	0.2	0.3096	0.1564	0.5343	14.88	1.548	0.977	0.835	1.584	1.854	1.170	-920.	1157.	15.6	10.819
.200	0.3	0.3048	0.2300	0.4655	15.08	1.524	0.958	0.831	1.590	1.833	1.153	-939.	1122.	15.6	10.744
.200	0.4	0.3007	0.3014	0.3982	15.27	1.503	0.942	0.830	1.596	1.812	1.135	-959.	1088.	15.6	10.666
.200	0.5	0.2973	0.3711	0.3319	15.42	1.487	0.928	0.830	1.603	1.792	1.117	-978.	1055.	15.6	10.582
.200	0.6	0.2947	0.4396	0.2661	15.58	1.473	0.916	0.832	1.609	1.772	1.101	-997.	1024.	15.6	10.491
.200	0.7	0.2926	0.5073	0.2004	15.71	1.463	0.906	0.835	1.615	1.752	1.085	-1016.	992.	15.6	10.392
.200	0.8	0.2912	0.5747	0.1345	15.83	1.456	0.898	0.840	1.621	1.732	1.068	-1035.	962.	15.6	10.283
.200	0.9	0.2904	0.6422	0.0678	15.92	1.452	0.892	0.847	1.628	1.713	1.052	-1055.	932.	15.6	10.163
.200	1.0	0.2902	0.7102	0.	16.00	1.451	0.888	0.856	1.634	1.695	1.037	-1074.	902.	15.5	10.031
.300	0.	0.4417	0.	0.5587	15.88	1.472	0.949	0.798	1.552	1.844	1.189	-794.	1202.	16.2	11.679
.300	0.1	0.4350	0.0652	0.5002	16.08	1.450	0.931	0.794	1.557	1.826	1.173	-811.	1170.	16.2	11.640
.300	0.2	0.4291	0.1282	0.4431	16.27	1.430	0.914	0.791	1.562	1.808	1.157	-827.	1140.	16.2	11.599
.300	0.3	0.4241	0.1894	0.3870	16.44	1.414	0.902	0.790	1.567	1.790	1.142	-844.	1110.	16.2	11.554
.300	0.4	0.4197	0.2491	0.3316	16.60	1.399	0.890	0.790	1.573	1.772	1.127	-861.	1081.	16.1	11.505
.300	0.5	0.4161	0.3077	0.2767	16.75	1.387	0.879	0.791	1.578	1.754	1.112	-878.	1054.	16.1	11.451
.300	0.6	0.4130	0.3653	0.2219	16.88	1.377	0.870	0.792	1.583	1.737	1.097	-895.	1026.	16.1	11.384
.300	0.7	0.4107	0.4223	0.1671	17.01	1.369	0.862	0.796	1.589	1.720	1.083	-911.	1000.	16.1	11.319
.300	0.8	0.4091	0.4791	0.1120	17.11	1.364	0.855	0.800	1.594	1.704	1.069	-928.	973.	16.1	11.237
.300	0.9	0.4080	0.5357	0.0564	17.21	1.360	0.850	0.806	1.599	1.687	1.055	-945.	948.	16.1	11.148
.300	1.0	0.4076	0.5926	0.	17.28	1.359	0.847	0.813	1.605	1.671	1.041	-962.	922.	16.1	11.049
.400	0.	0.5443	0.	0.4557	17.37	1.361	0.889	0.760	1.531	1.793	1.171	-708.	1169.	16.7	12.585
.400	0.1	0.5385	0.0536	0.4091	17.54	1.346	0.877	0.758	1.536	1.777	1.157	-720.	1143.	16.7	12.557
.400	0.2	0.5332	0.1030	0.3631	17.69	1.333	0.866	0.757	1.540	1.762	1.144	-735.	1117.	16.7	12.549
.400	0.3	0.5286	0.1540	0.3177	17.84	1.321	0.856	0.756	1.544	1.747	1.131	-749.	1093.	16.7	12.530
.400	0.4	0.5245	0.2032	0.2729	17.98	1.311	0.847	0.757	1.549	1.732	1.119	-763.	1069.	16.7	12.510
.400	0.5	0.5211	0.2517	0.2279	18.10	1.303	0.839	0.758	1.553	1.718	1.106	-778.	1045.	16.6	12.484
.400	0.6	0.5182	0.2995	0.1826	18.22	1.296	0.832	0.761	1.557	1.703	1.094	-792.	1023.	16.6	12.452
.400	0.7	0.5160	0.3469	0.1379	18.33	1.290	0.826	0.764	1.562	1.688	1.081	-807.	1000.	16.6	12.413
.400	0.8	0.5142	0.3940	0.0921	18.43	1.286	0.821	0.768	1.566	1.675	1.069	-821.	978.	16.6	12.365
.400	0.9	0.5131	0.4409	0.0463	18.52	1.283	0.817	0.772	1.571	1.661	1.057	-835.	957.	16.6	12.309
.400	1.0	0.5124	0.4879	0.	18.59	1.281	0.813	0.778	1.575	1.647	1.046	-850.	935.	16.6	12.243
.500	0.	0.6354	0.	0.3649	18.89	1.271	0.841	0.730	1.510	1.741	1.153	-619.	1132.	17.2	13.724
.500	0.1	0.6305	0.0417	0.3282	19.02	1.261	0.833	0.729	1.514	1.729	1.142	-630.	1111.	17.2	13.746
.500	0.2	0.6261	0.0825	0.2918	19.15	1.252	0.825	0.730	1.517	1.716	1.131	-642.	1090.	17.2	13.765
.500	0.3	0.6222	0.1227	0.2556	19.27	1.244	0.818	0.730	1.521	1.704	1.121	-654.	1070.	17.2	13.780
.500	0.4	0.6187	0.1624	0.2194	19.39	1.237	0.812	0.731	1.524	1.692	1.110	-666.	1051.	17.2	13.790
.500	0.5	0.6157	0.2015	0.1832	19.50	1.231	0.806	0.733	1.528	1.680	1.100	-678.	1032.	17.2	13.796
.500	0.6	0.6132	0.2403	0.1470	19.60	1.226	0.801	0.735	1.531	1.669	1.090	-690.	1013.	17.2	13.795
.500	0.7	0.6111	0.2787	0.1107	19.69	1.222	0.796	0.738	1.535	1.657	1.080	-702.	994.	17.2	13.788
.500	0.8	0.6093	0.3168	0.0741	19.79	1.219	0.792	0.741	1.538	1.645	1.070	-714.	976.	17.1	13.768
.500	0.9	0.6081	0.3549	0.0372	19.88	1.216	0.789	0.744	1.542	1.634	1.060	-726.	958.	17.1	13.746
.500	1.0	0.6073	0.3929	0.	19.95	1.215	0.786	0.748	1.546	1.623	1.050	-738.	940.	17.1	13.719
.600	0.	0.7173	0.	0.2830	20.47	1.196	0.803	0.707	1.489	1.690	1.135	-530.	1090.	17.7	15.322
.600	0.1	0.7136	0.0319	0.2548	20.58	1.189	0.798	0.708	1.491	1.680	1.127	-539.	1073.	17.7	15.377
.600	0.2	0.7102	0.0634	0.2267	20.68	1.184	0.792	0.709	1.494	1.671	1.118	-549.	1057.	17.7	15.430
.600	0.3	0.7071	0.0945	0.1987	20.78	1.179	0.788	0.710	1.496	1.661	1.110	-558.	1041.	17.7	15.479
.600	0.4	0.7044	0.1253	0.1706	20.88	1.174	0.783	0.711	1.499	1.652	1.102	-568.	1025.	17.7	15.524
.600	0.5	0.7020	0.1558	0.1425	20.97	1.170	0.779	0.712	1.502	1.642	1.094	-578.	1010.	17.7	15.565
.600	0.6	0.7000	0.1861	0.1143	21.06	1.167	0.775	0.714	1.504	1.633	1.086	-587.	995.	17.7	15.600
.600	0.7	0.6982	0.2162	0.0860	21.14	1.164	0.772	0.717	1.507	1.624	1.078	-597.	980.	17.7	15.630
.600	0.8	0.6967	0.2461	0.0575	21.22	1.161	0.769	0.719	1.510	1.615	1.070	-606.	965.	17.7	15.654
.600	0.9	0.6956	0.2759	0.0289	21.29	1.159	0.766	0.722	1.513	1.606	1.062	-616.	951.	17.7	15.670
.600	1.0	0.6947	0.3058	0.	21.36	1.158	0.764	0.725	1.515	1.597	1.054	-626.	937.	17.7	15.680
.700	0.	0.7928	0.	0.2074	22.14	1.133	0.773	0.691	1.465	1.638	1.118	-441.	1040.	18.2	17.761
.700	0.1	0.7903	0.0231	0.1869	22.23	1.129	0.769	0.692	1.467	1.631	1.112	-449.	1027.	18.2	17.858
.700	0.2	0.7879	0.0460	0.1664	22.31	1.126	0.766	0.693	1.469	1.624	1.105	-456.	1015.	18.2	17.953
.700	0.3	0.7858	0.0687	0.1458	22.39	1.123	0.763	0.694	1.471	1.617	1.099	-463.	1003.	18.2	18.046
.700	0.4	0.7838	0.0912	0.1252	22.46	1.120	0.760	0.696	[illegible]	1.610	1.093	-470.	991.	18.2	18.136
.700	0.5	0.7821	0.1137	0.1045	22.53	1.117	0.758	0.697	[illegible]	1.603	1.087	-477.	979.	18.2	18.222
.700	0.6	0.7805	0.1359	0.0838	22.60	1.115	0.755	0.699	[illegible]	1.596	1.081	-485.	968.	18.2	18.305
.700	0.7	0.7792	0.1581	0.0630	22.67	1.113	0.753	0.700	1.478	1.590	1.075	-492.	956.	18.2	18.383
.700	0.8	0.7780	0.1802	0.0421	22.74	1.111	0.751	0.702	1.480	1.583	1.069	-499.	945.	18.2	18.457
.700	0.9	0.7770	0.2022	0.0211	22.80	1.110	0.749	0.704	1.482	1.576	1.064	-506.	934.	18.2	18.525
.700	1.0	0.7764	0.2242	0.	22.86	1.109	0.747	0.706	1.484	1.570	1.058	-513.	923.	18.2	18.588
.800	0.	0.8639	0.	0.1364	23.96	1.080	0.750	0.682	1.439	1.584	1.100	-353.	976.	18.7	22.186
.800	0.1	0.8624	0.0150	0.1229	24.02	1.078	0.748	0.683	1.441	1.579	1.096	-358.	967.	18.7	22.351
.800	0.2	0.8611	0.0299	0.1094	24.07	1.076	0.747	0.684	1.442	1.575	1.092	-363.	958.	18.7	22.516
.800	0.3	0.8598	0.0447	0.0958	24.13	1.075	0.745	0.685	1.443	1.570	1.088	-368.	950.	18.7	22.680
.800	0.4	0.8586	0.0595	0.0823	24.18	1.073	0.743	0.686	1.444	1.565	1.084	-373.	942.	18.7	22.844
.800	0.5	0.8575	0.0742	0.0687	24.24	1.072	0.742	0.687	1.445	1.561	1.080	-377.	933.	18.7	23.005
.800	0.6	0.8564	0.0889	0.0550	24.29	1.071	0.740	0.688	1.446	1.556	1.076	-382.	925.	18.7	23.167
.800	0.7	0.8555	0.1035	0.0413	24.34	1.069	0.739	0.689	1.447	1.552	1.073	-387.	917.	18.7	23.326
.800	0.8	0.8547	0.1180	0.0276	24.39	1.068	0.738	0.690	1.448	1.547	1.069	-392.	909.	18.7	23.483
.800	0.9	0.8539	0.1326	0.0138	24.44	1.067	0.737	0.692	1.449	1.543	1.065	-397.	901.	18.7	23.637
.800	1.0	0.8533	0.1471	0.	24.49	1.067	0.735	0.693	1.450	1.539	1.061	-401.	893.	18.7	23.789

Table 26. (con.

TEMPERATURE = 225. R

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0005	13.35	1.923	1.226	1.000	1.569	1.922	1.225	-984.	1291.	15.1	10.391
.	0.1	0.	0.1179	0.8822	13.74	1.858	1.179	0.980	1.576	1.895	1.203	-1008.	1232.	15.1	10.253
.	0.2	0.	0.2280	0.7722	14.08	1.807	1.140	0.965	1.583	1.869	1.181	-1032.	1179.	15.1	10.125
.	0.3	0.	0.3320	0.6681	14.38	1.760	1.107	0.954	1.590	1.844	1.160	-1056.	1128.	15.1	9.998
.	0.4	0.	0.4316	0.5686	14.65	1.723	1.079	0.948	1.597	1.818	1.139	-1080.	1080.	15.1	9.870
.	0.5	0.	0.5280	0.4722	14.88	1.694	1.056	0.944	1.604	1.794	1.118	-1104.	1034.	15.1	9.735
.	0.6	0.	0.6223	0.3779	15.08	1.671	1.037	0.945	1.611	1.769	1.098	-1128.	990.	15.1	9.590
.	0.7	0.	0.7158	0.2845	15.25	1.655	1.023	0.948	1.619	1.745	1.078	-1152.	946.	15.0	9.433
.	0.8	0.	0.8092	0.1910	15.39	1.645	1.012	0.955	1.626	1.722	1.059	-1176.	904.	15.0	9.281
.	0.9	0.	0.9037	0.0965	15.49	1.640	1.004	0.965	1.633	1.699	1.040	-1200.	862.	15.0	9.070
.	1.0	0.	1.0002	0.	15.55	1.641	1.000	0.979	1.641	1.676	1.022	-1224.	819.	15.0	8.859
.025	0.	0.0467	0.	0.9535	13.77	1.867	1.194	0.978	1.564	1.909	1.221	-961.	1283.	15.2	10.539
.025	0.1	0.0452	0.1123	0.8427	14.13	1.809	1.151	0.960	1.571	1.884	1.199	-985.	1228.	15.2	10.408
.025	0.2	0.0440	0.2175	0.7387	14.46	1.760	1.115	0.947	1.578	1.858	1.178	-1008.	1176.	15.2	10.291
.025	0.3	0.0430	0.3173	0.6399	14.75	1.719	1.085	0.938	1.585	1.833	1.157	-1031.	1127.	15.2	10.175
.025	0.4	0.0421	0.4130	0.5451	15.01	1.686	1.059	0.932	1.592	1.809	1.137	-1055.	1081.	15.2	10.056
.025	0.5	0.0417	0.5058	0.4530	15.24	1.659	1.038	0.929	1.599	1.785	1.117	-1078.	1037.	15.2	9.929
.025	0.6	0.0419	0.5967	0.3626	15.43	1.638	1.020	0.930	1.606	1.761	1.097	-1102.	994.	15.2	9.794
.025	0.7	0.0416	0.6867	0.2730	15.60	1.622	1.006	0.933	1.613	1.738	1.078	-1125.	952.	15.2	9.646
.025	0.8	0.0413	0.7766	0.1833	15.73	1.613	0.996	0.940	1.620	1.715	1.059	-1149.	911.	15.2	9.482
.025	0.9	0.0402	0.8678	0.0926	15.83	1.608	0.989	0.950	1.627	1.693	1.041	-1172.	870.	15.2	9.301
.025	1.0	0.0402	0.9580	0.	15.90	1.609	0.985	0.963	1.634	1.671	1.023	-1196.	830.	15.1	9.100
.100	0.	0.1722	0.	0.8280	14.98	1.722	1.115	0.920	1.551	1.872	1.207	-893.	1263.	15.6	11.003
.100	0.1	0.1678	0.0970	0.7354	15.31	1.678	1.078	0.906	1.557	1.849	1.187	-915.	1212.	15.6	10.914
.100	0.2	0.1641	0.1890	0.6472	15.60	1.641	1.050	0.899	1.563	1.826	1.168	-936.	1166.	15.6	10.828
.100	0.3	0.1610	0.2769	0.5624	15.87	1.610	1.026	0.893	1.569	1.803	1.149	-958.	1123.	15.6	10.741
.100	0.4	0.1583	0.3618	0.4801	16.10	1.583	1.005	0.889	1.576	1.781	1.130	-980.	1082.	15.6	10.648
.100	0.5	0.1562	0.4444	0.3997	16.31	1.562	0.988	0.888	1.582	1.759	1.112	-1001.	1042.	15.6	10.548
.100	0.6	0.1546	0.5256	0.3202	16.49	1.546	0.973	0.890	1.588	1.738	1.094	-1023.	1004.	15.6	10.438
.100	0.7	0.1533	0.6058	0.2412	16.65	1.533	0.962	0.893	1.594	1.717	1.077	-1045.	966.	15.5	10.316
.100	0.8	0.1525	0.6860	0.1619	16.77	1.525	0.953	0.899	1.601	1.696	1.059	-1066.	929.	15.5	10.179
.100	0.9	0.1521	0.7666	0.0817	16.87	1.521	0.946	0.908	1.607	1.675	1.042	-1088.	893.	15.5	10.025
.100	1.0	0.1521	0.8483	0.	16.95	1.521	0.943	0.919	1.614	1.656	1.026	-1110.	857.	15.5	9.852
.200	0.	0.3131	0.	0.6873	16.63	1.566	1.022	0.859	1.533	1.822	1.189	-803.	1227.	16.1	11.749
.200	0.1	0.3071	0.0799	0.6134	16.90	1.539	0.998	0.852	1.538	1.802	1.172	-822.	1187.	16.1	11.705
.200	0.2	0.3019	0.1565	0.5420	17.15	1.510	0.978	0.847	1.543	1.782	1.155	-841.	1149.	16.1	11.658
.200	0.3	0.2975	0.2305	0.4725	17.37	1.487	0.961	0.844	1.548	1.763	1.138	-860.	1112.	16.1	11.608
.200	0.4	0.2936	0.3024	0.4042	17.58	1.468	0.945	0.842	1.554	1.743	1.122	-879.	1076.	16.1	11.545
.200	0.5	0.2905	0.3727	0.3370	17.77	1.453	0.932	0.842	1.559	1.724	1.106	-899.	1042.	16.1	11.479
.200	0.6	0.2881	0.4419	0.2702	17.93	1.440	0.921	0.844	1.565	1.706	1.090	-918.	1009.	16.1	11.403
.200	0.7	0.2862	0.5104	0.2035	18.08	1.431	0.911	0.848	1.570	1.687	1.075	-937.	977.	16.1	11.314
.200	0.8	0.2850	0.5787	0.1366	18.20	1.425	0.904	0.853	1.576	1.669	1.059	-956.	945.	16.0	11.211
.200	0.9	0.2842	0.6471	0.0688	18.30	1.421	0.899	0.861	1.581	1.652	1.044	-976.	914.	16.0	11.093
.200	1.0	0.2841	0.7161	0.	18.38	1.421	0.895	0.869	1.587	1.634	1.030	-995.	883.	16.0	10.957
.300	0.	0.4319	0.	0.5683	18.29	1.440	0.951	0.812	1.514	1.773	1.171	-712.	1191.	16.6	12.688
.300	0.1	0.4257	0.0644	0.5091	18.52	1.419	0.935	0.808	1.518	1.756	1.157	-729.	1158.	16.6	12.683
.300	0.2	0.4203	0.1288	0.4511	18.73	1.401	0.920	0.806	1.523	1.739	1.142	-746.	1126.	16.6	12.675
.300	0.3	0.4156	0.1905	0.3941	18.92	1.385	0.907	0.804	1.527	1.722	1.128	-762.	1095.	16.6	12.660
.300	0.4	0.4117	0.2506	0.3378	19.10	1.372	0.896	0.804	1.532	1.706	1.114	-779.	1065.	16.6	12.638
.300	0.5	0.4083	0.3101	0.2819	19.26	1.361	0.886	0.805	1.536	1.690	1.100	-796.	1036.	16.6	12.608
.300	0.6	0.4056	0.3685	0.2262	19.41	1.352	0.877	0.808	1.541	1.674	1.086	-813.	1007.	16.6	12.566
.300	0.7	0.4035	0.4264	0.1704	19.54	1.345	0.870	0.811	1.546	1.658	1.073	-830.	980.	16.6	12.513
.300	0.8	0.4020	0.4841	0.1142	19.66	1.340	0.864	0.816	1.550	1.642	1.060	-847.	952.	16.5	12.446
.300	0.9	0.4011	0.5417	0.0575	19.75	1.337	0.860	0.822	1.555	1.627	1.046	-863.	926.	16.5	12.364
.300	1.0	0.4008	0.5996	0.	19.84	1.336	0.857	0.829	1.561	1.612	1.034	-880.	899.	16.5	12.265
.400	0.	0.5351	0.	0.4654	19.98	1.338	0.895	0.776	1.494	1.725	1.154	-621.	1152.	17.1	13.933
.400	0.1	0.5295	0.0530	0.4180	20.17	1.324	0.884	0.774	1.498	1.710	1.142	-636.	1124.	17.1	13.971
.400	0.2	0.5246	0.1048	0.3711	20.35	1.311	0.873	0.773	1.502	1.696	1.129	-650.	1097.	17.1	14.003
.400	0.3	0.5201	0.1555	0.3247	20.53	1.300	0.864	0.773	1.505	1.682	1.117	-665.	1071.	17.1	14.024
.400	0.4	0.5163	0.2053	0.2786	20.68	1.291	0.855	0.774	1.509	1.668	1.105	-679.	1046.	17.1	14.041
.400	0.5	0.5132	0.2544	0.2326	20.82	1.283	0.848	0.775	1.513	1.655	1.094	-693.	1021.	17.1	14.050
.400	0.6	0.5106	0.3030	0.1867	20.95	1.276	0.842	0.778	1.517	1.641	1.082	-708.	997.	17.1	14.048
.400	0.7	0.5085	0.3512	0.1406	21.07	1.271	0.836	0.781	1.520	1.628	1.071	-722.	974.	17.1	14.034
.400	0.8	0.5070	0.3991	0.0942	21.18	1.267	0.831	0.785	1.524	1.615	1.059	-737.	951.	17.1	14.007
.400	0.9	0.5059	0.4469	0.0474	21.28	1.265	0.828	0.790	1.528	1.602	1.048	-751.	928.	17.1	13.966
.400	1.0	0.5054	0.4948	0.	21.36	1.264	0.825	0.795	1.532	1.589	1.037	-766.	906.	17.0	13.908
.500	0.	0.6265	0.	0.3739	21.76	1.253	0.850	0.748	1.474	1.676	1.137	-531.	1106.	17.6	15.686
.500	0.1	0.6219	0.0421	0.3364	21.91	1.244	0.842	0.747	1.477	1.664	1.127	-543.	1083.	17.6	15.774
.500	0.2	0.6178	0.0835	0.2991	22.06	1.235	0.835	0.748	1.480	1.652	1.117	-555.	1061.	17.6	15.856
.500	0.3	0.6141	0.1243	0.2620	22.20	1.228	0.828	0.749	1.483	1.641	1.107	-567.	1040.	17.6	15.932
.500	0.4	0.6110	0.1645	0.2249	22.33	1.222	0.823	0.750	1.486	1.630	1.097	-579.	1019.	17.6	16.001
.500	0.5	0.6084	0.2043	0.1879	22.45	1.216	0.817	0.752	1.489	1.619	1.087	-591.	999.	17.6	16.060
.500	0.6	0.6059	0.2437	0.1508	22.57	1.212	0.812	0.754	1.491	1.608	1.078	-603.	979.	17.6	16.110
.500	0.7	0.6040	0.2829	0.1135	22.68	1.208	0.808	0.757	1.495	1.597	1.068	-615.	959.	17.6	16.147
.500	0.8	0.6026	0.3219	0.0760	22.77	1.205	0.805	0.760	1.498	1.586	1.059	-627.	940.	17.6	16.172
.500	0.9	0.6015	0.3608	0.0382	22.86	1.203	0.802	0.764	1.501	1.576	1.050	-639.	921.	17.6	16.181
.500	1.0	0.6009	0.3996	0.	22.95	1.202	0.799	0.768	1.504	1.565	1.041	-651.	902.	17.6	16.175
.600	0.	0.7094	0.	0.2909	23.64	1.182	0.814	0.727	1.452	1.625	1.119	-440.	1051.	18.1	18.451
.600	0.1	0.7059	0.0324	0.2620	23.76	1.177	0.809	0.728	1.454	1.616	1.112	-450.	1033.	18.1	18.615
.600	0.2	0.7028	0.0644	0.2332	23.88	1.171	0.804	0.729	1.456	1.607	1.104	-459.	1015.	18.1	18.775
.600	0.3	0.7000	0.0960	0.2044	24.00	1.167	0.800	0.730	1.458	1.598	1.096	-469.	998.	18.1	18.929
.600	0.4	0.6975	0.1274	0.1755	24.11	1.162	0.796	0.731	1.460	1.589	1.088	-478.	981.	18.1	19.077
.600	0.5	0.6953	0.1585	0.1466	24.21	1.159	0.792	0.733	1.463	1.581	1.081	-488.	964.	18.1	19.217
.600	0.6	0.6934	0.1894	0.1176	24.31	1.156	0.789	0.735	1.465	1.572	1.073	-498.	948.	18.1	19.347
.600	0.7	0.6918	0.2201	0.0885	24.41	1.153	0.786	0.737	1.467	1.563	1.066	-507.	932.	18.1	19.466
.600	0.8	0.6905	0.2507	0.0592	24.50	1.151	0.783	0.740	1.469	1.555	1.058	-517.	916.	18.1	19.573
.600	0.9	0.6895	0.2812	0.0297	24.58	1.149	0.781	0.743	1.471	1.547	1.051	-527.	900.	18.1	19.665
.600	1.0	0.6888	0.3116	0.	24.65	1.148	0.779	0.746	1.474	1.538	1.044	-536.	885.	18.1	19.741
.700	0.	0.7861	0.	0.2143	25.68	1.123	0.787	0.714	1.427	1.572	1.102	-349.	978.	18.6	23.825
.700	0.1	0.7838	0.0235	0.1931	25.78	1.120	0.784	0.715	1.428	1.565	1.096	-357.	964.	18.6	24.160
.700	0.2	0.7816	0.0469	0.1719	25.88	1.117	0.781	0.716	1.429	1.558	1.091	-364.	950.	18.6	24.498
.700	0.3	0.7796	0.0701	0.1507	25.97	1.114	0.779	0.718	1.430	1.552	1.085	-371.	936.	18.6	24.836

Table 26. (cont.)

TEMPERATURE = 230. R

LIQUID MOLE FRACTION		VAPOR MOLE FRACTION			PRESSURE	EQUIL CONST			RELATIVE VOL			ENTHALPY BTU/LB MOLE		HEAT CAPACITY BTU/LB MOLE-R	
N2	AR/AR+O2	N2	AR	O2	ATM	N2	AR	O2	N2/AR	N2/O2	AR/O2	LIQ	VAP	LIQ	VAP
.	0.	0.	0.	1.0002	15.44	1.855	1.207	1.000	1.536	1.855	1.207	-907.	1288.	19.6	11.012
.	0.1	0.	0.1105	0.8837	15.86	1.797	1.165	0.982	1.543	1.830	1.186	-931.	1229.	19.6	10.908
.	0.2	0.	0.2257	0.7745	16.23	1.748	1.129	0.968	1.549	1.806	1.166	-955.	1174.	19.6	10.808
.	0.3	0.	0.3294	0.6708	16.57	1.708	1.098	0.958	1.555	1.782	1.146	-979.	1122.	19.6	10.706
.	0.4	0.	0.4290	0.5713	16.86	1.674	1.072	0.952	1.561	1.758	1.126	-1003.	1072.	19.6	10.598
.	0.5	0.	0.5256	0.4748	17.12	1.648	1.051	0.950	1.567	1.735	1.107	-1027.	1025.	19.6	10.480
.	0.6	0.	0.6203	0.3800	17.34	1.627	1.034	0.950	1.574	1.712	1.088	-1052.	979.	19.6	10.349
.	0.7	0.	0.7142	0.2862	17.52	1.612	1.020	0.954	1.580	1.690	1.070	-1076.	935.	19.6	10.200
.	0.8	0.	0.8082	0.1921	17.67	1.603	1.010	0.961	1.586	1.668	1.052	-1100.	891.	19.6	10.030
.	0.9	0.	0.9033	0.0971	17.77	1.599	1.004	0.971	1.593	1.647	1.034	-1124.	847.	19.6	9.830
.	1.0	0.	1.0004	0.	17.83	1.600	1.000	0.984	1.599	1.626	1.017	-1148.	804.	19.6	9.619
.025	0.	0.0451	0.	0.9551	15.89	1.805	1.178	0.980	1.532	1.843	1.203	-884.	1280.	19.7	11.191
.025	0.1	0.0438	0.1111	0.8454	16.30	1.753	1.139	0.963	1.538	1.819	1.183	-907.	1223.	19.7	11.101
.025	0.2	0.0427	0.2157	0.7419	16.66	1.708	1.106	0.951	1.544	1.796	1.163	-931.	1170.	19.7	11.013
.025	0.3	0.0418	0.3152	0.6433	16.98	1.671	1.078	0.943	1.550	1.772	1.143	-954.	1120.	19.7	10.923
.025	0.4	0.0410	0.4110	0.5484	17.27	1.640	1.054	0.937	1.556	1.750	1.124	-978.	1072.	19.7	10.825
.025	0.5	0.0404	0.5040	0.4560	17.52	1.615	1.034	0.935	1.562	1.727	1.105	-1001.	1027.	19.7	10.717
.025	0.6	0.0399	0.5954	0.3651	17.73	1.596	1.018	0.936	1.568	1.705	1.087	-1025.	982.	19.7	10.599
.025	0.7	0.0396	0.6859	0.2749	17.91	1.583	1.005	0.940	1.575	1.684	1.069	-1048.	939.	19.7	10.456
.025	0.8	0.0393	0.7765	0.1846	18.05	1.574	0.996	0.947	1.581	1.662	1.052	-1072.	897.	19.7	10.296
.025	0.9	0.0392	0.8680	0.0932	18.16	1.570	0.989	0.956	1.587	1.641	1.034	-1095.	855.	19.7	10.113
.025	1.0	0.0393	0.9612	0.	18.22	1.571	0.986	0.969	1.593	1.621	1.017	-1119.	813.	19.7	9.904
.100	0.	0.1674	0.	0.8330	17.27	1.674	1.101	0.926	1.520	1.808	1.190	-814.	1253.	18.1	11.794
.100	0.1	0.1634	0.0964	0.7407	17.62	1.634	1.071	0.914	1.525	1.787	1.171	-836.	1204.	18.1	11.744
.100	0.2	0.1600	0.1881	0.6524	17.95	1.600	1.045	0.906	1.531	1.765	1.153	-857.	1157.	18.1	11.692
.100	0.3	0.1570	0.2760	0.5672	18.25	1.570	1.022	0.900	1.536	1.744	1.135	-879.	1112.	18.1	11.630
.100	0.4	0.1546	0.3611	0.4845	18.51	1.546	1.003	0.897	1.542	1.723	1.118	-901.	1069.	18.1	11.564
.100	0.5	0.1527	0.4441	0.4034	18.74	1.527	0.987	0.896	1.547	1.703	1.101	-922.	1028.	18.1	11.485
.100	0.6	0.1512	0.5257	0.3233	18.94	1.512	0.974	0.898	1.553	1.683	1.084	-944.	988.	18.1	11.392
.100	0.7	0.1500	0.6067	0.2435	19.11	1.500	0.963	0.902	1.558	1.663	1.068	-966.	949.	18.1	11.281
.100	0.8	0.1493	0.6875	0.1635	19.24	1.493	0.955	0.908	1.564	1.644	1.051	-987.	911.	18.1	11.150
.100	0.9	0.1489	0.7688	0.0829	19.35	1.489	0.949	0.917	1.569	1.625	1.036	-1009.	874.	18.1	10.996
.100	1.0	0.1490	0.8513	0.	19.42	1.490	0.946	0.927	1.575	1.606	1.020	-1031.	837.	18.1	10.817
.200	0.	0.3059	0.	0.6944	19.13	1.529	1.018	0.868	1.503	1.762	1.172	-721.	1215.	18.5	12.790
.200	0.1	0.3003	0.0787	0.6208	19.43	1.502	0.996	0.861	1.508	1.743	1.156	-740.	1173.	18.5	12.792
.200	0.2	0.2956	0.1564	0.5484	19.71	1.478	0.977	0.857	1.512	1.725	1.141	-759.	1133.	18.5	12.788
.200	0.3	0.2915	0.2306	0.4783	19.97	1.457	0.961	0.854	1.517	1.706	1.125	-779.	1095.	18.5	12.777
.200	0.4	0.2880	0.3029	0.4094	20.19	1.440	0.947	0.853	1.521	1.688	1.110	-798.	1058.	18.5	12.759
.200	0.5	0.2852	0.3737	0.3414	20.40	1.426	0.934	0.854	1.526	1.671	1.095	-817.	1023.	18.5	12.719
.200	0.6	0.2829	0.4436	0.2738	20.58	1.415	0.924	0.856	1.531	1.653	1.080	-837.	988.	18.5	12.668
.200	0.7	0.2813	0.5128	0.2063	20.73	1.406	0.916	0.860	1.536	1.636	1.065	-856.	955.	18.5	12.598
.200	0.8	0.2801	0.5819	0.1384	20.86	1.401	0.909	0.865	1.540	1.619	1.051	-875.	922.	18.5	12.507
.200	0.9	0.2795	0.6512	0.0698	20.97	1.397	0.904	0.872	1.545	1.603	1.037	-894.	889.	18.5	12.393
.200	1.0	0.2794	0.7210	0.	21.05	1.397	0.901	0.881	1.550	1.586	1.023	-914.	857.	18.5	12.253
.300	0.	0.4240	0.	0.5765	21.03	1.413	0.951	0.824	1.485	1.716	1.155	-628.	1172.	17.0	14.138
.300	0.1	0.4181	0.0655	0.5166	21.30	1.394	0.936	0.820	1.489	1.700	1.141	-645.	1136.	17.0	14.192
.300	0.2	0.4131	0.1291	0.4580	21.54	1.377	0.922	0.818	1.493	1.684	1.128	-662.	1103.	17.0	14.244
.300	0.3	0.4088	0.1912	0.4003	21.76	1.363	0.910	0.817	1.497	1.668	1.115	-678.	1070.	17.0	14.287
.300	0.4	0.4051	0.2520	0.3432	21.96	1.350	0.900	0.817	1.501	1.653	1.101	-695.	1039.	17.0	14.317
.300	0.5	0.4021	0.3118	0.2864	22.14	1.340	0.891	0.818	1.505	1.638	1.088	-712.	1008.	17.0	14.333
.300	0.6	0.3996	0.3709	0.2298	22.31	1.332	0.883	0.821	1.508	1.623	1.076	-729.	978.	17.0	14.331
.300	0.7	0.3977	0.4295	0.1731	22.45	1.326	0.876	0.824	1.512	1.608	1.063	-746.	949.	17.0	14.310
.300	0.8	0.3963	0.4879	0.1161	22.57	1.321	0.871	0.829	1.516	1.593	1.051	-763.	921.	17.0	14.266
.300	0.9	0.3956	0.5463	0.0584	22.68	1.319	0.867	0.835	1.521	1.579	1.039	-780.	893.	17.0	14.198
.300	1.0	0.3953	0.6050	0.	22.76	1.318	0.864	0.842	1.525	1.565	1.027	-796.	866.	17.0	14.104
.400	0.	0.5269	0.	0.4735	23.03	1.317	0.898	0.789	1.467	1.669	1.138	-535.	1121.	17.5	16.095
.400	0.1	0.5217	0.0533	0.4254	23.25	1.304	0.888	0.788	1.470	1.656	1.127	-549.	1092.	17.5	16.231
.400	0.2	0.5172	0.1054	0.3779	23.45	1.293	0.878	0.787	1.473	1.642	1.115	-564.	1064.	17.5	16.359
.400	0.3	0.5132	0.1565	0.3308	23.64	1.283	0.869	0.788	1.476	1.629	1.104	-578.	1036.	17.5	16.477
.400	0.4	0.5098	0.2068	0.2839	23.82	1.274	0.862	0.789	1.479	1.616	1.093	-593.	1009.	17.5	16.582
.400	0.5	0.5067	0.2565	0.2371	23.99	1.267	0.855	0.790	1.482	1.603	1.082	-607.	983.	17.5	16.668
.400	0.6	0.5043	0.3057	0.1902	24.14	1.261	0.849	0.793	1.485	1.591	1.071	-622.	957.	17.5	16.737
.400	0.7	0.5025	0.3545	0.1433	24.27	1.256	0.844	0.796	1.488	1.578	1.061	-636.	932.	17.5	16.785
.400	0.8	0.5011	0.4032	0.0960	24.38	1.253	0.840	0.800	1.491	1.566	1.050	-650.	908.	17.5	16.809
.400	0.9	0.5002	0.4518	0.0483	24.49	1.250	0.837	0.805	1.495	1.554	1.040	-665.	884.	17.5	16.805
.400	1.0	0.4998	0.5005	0.	24.56	1.250	0.834	0.810	1.498	1.542	1.030	-679.	861.	17.5	16.771
.500	0.	0.6186	0.	0.3818	25.17	1.237	0.856	0.764	1.446	1.620	1.121	-442.	1059.	18.0	19.349
.500	0.1	0.6144	0.0424	0.3436	25.35	1.229	0.849	0.764	1.448	1.609	1.112	-454.	1034.	18.0	19.623
.500	0.2	0.6106	0.0842	0.3056	25.53	1.221	0.842	0.764	1.450	1.598	1.102	-466.	1011.	18.0	19.891
.500	0.3	0.6073	0.1255	0.2678	25.69	1.215	0.836	0.765	1.452	1.587	1.093	-478.	987.	18.0	20.151
.500	0.4	0.6043	0.1662	0.2300	25.84	1.209	0.831	0.767	1.454	1.577	1.084	-490.	964.	17.9	20.398
.500	0.5	0.6017	0.2065	0.1921	26.00	1.203	0.826	0.768	1.457	1.566	1.075	-502.	942.	17.9	20.626

TEMPERATURE = 235. R

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0004	17.73	1.805	1.191	1.000	1.515	1.804	1.191	-827.	1281.	16.2	11.790
.	0.1	0.	0.1192	0.8852	18.20	1.762	1.152	0.984	1.521	1.781	1.171	-852.	1221.	16.2	11.729
.	0.2	0.	0.2237	0.7767	18.61	1.707	1.119	0.971	1.526	1.758	1.152	-876.	1164.	16.2	11.669
.	0.3	0.	0.3271	0.6734	18.98	1.670	1.090	0.962	1.532	1.736	1.133	-900.	1111.	16.2	11.603
.	0.4	0.	0.4265	0.5737	19.32	1.639	1.066	0.956	1.537	1.714	1.115	-924.	1059.	16.2	11.532
.	0.5	0.	0.5232	0.4770	19.65	1.614	1.046	0.954	1.543	1.692	1.097	-948.	1010.	16.2	11.430
.	0.6	0.	0.6183	0.3819	19.84	1.595	1.030	0.955	1.548	1.671	1.079	-972.	963.	16.2	11.319
.	0.7	0.	0.7126	0.2876	20.04	1.582	1.018	0.959	1.554	1.650	1.062	-996.	917.	16.2	11.183
.	0.8	0.	0.8071	0.1931	20.19	1.573	1.009	0.965	1.559	1.629	1.045	-1020.	872.	16.2	11.020
.	0.9	0.	0.9027	0.0975	20.30	1.570	1.003	0.975	1.565	1.609	1.028	-1044.	828.	16.2	10.829
.	1.0	0.	1.0002	0.	20.36	1.571	1.000	0.988	1.570	1.590	1.012	-1068.	783.	16.2	10.596
.025	0.	0.0440	0.	0.9564	18.25	1.759	1.164	0.981	1.511	1.793	1.187	-804.	1272.	16.3	12.026
.025	0.1	0.0428	0.1100	0.8477	18.70	1.711	1.128	0.966	1.517	1.771	1.168	-827.	1214.	16.3	11.982
.025	0.2	0.0417	0.2139	0.7444	19.11	1.669	1.097	0.955	1.522	1.749	1.149	-851.	1159.	16.3	11.932
.025	0.3	0.0409	0.3131	0.6462	19.47	1.635	1.071	0.947	1.527	1.727	1.131	-874.	1107.	16.3	11.885
.025	0.4	0.0402	0.4089	0.5511	19.78	1.607	1.048	0.942	1.533	1.706	1.113	-898.	1058.	16.3	11.817
.025	0.5	0.0396	0.5022	0.4584	20.06	1.584	1.030	0.940	1.538	1.685	1.095	-921.	1010.	16.3	11.737
.025	0.6	0.0392	0.5939	0.3672	20.29	1.567	1.015	0.942	1.543	1.664	1.078	-945.	965.	16.3	11.637
.025	0.7	0.0389	0.6849	0.2765	20.48	1.554	1.003	0.945	1.549	1.644	1.061	-968.	920.	16.3	11.513
.025	0.8	0.0387	0.7760	0.1857	20.64	1.546	0.995	0.952	1.554	1.624	1.045	-992.	877.	16.3	11.360
.025	0.9	0.0386	0.8680	0.0937	20.79	1.543	0.989	0.961	1.559	1.604	1.029	-1015.	834.	16.3	11.176
.025	1.0	0.0386	0.9617	0.	20.81	1.544	0.986	0.974	1.565	1.585	1.013	-1039.	791.	16.3	10.957
.100	0.	0.1637	0.	0.8366	19.82	1.637	1.081	0.930	1.500	1.761	1.174	-732.	1240.	16.7	12.830
.100	0.1	0.1600	0.0997	0.7446	20.22	1.600	1.063	0.919	1.505	1.741	1.157	-754.	1189.	16.7	12.846
.100	0.2	0.1569	0.1870	0.6564	20.59	1.569	1.039	0.912	1.510	1.721	1.140	-776.	1140.	16.6	12.848
.100	0.3	0.1542	0.2749	0.5712	20.91	1.542	1.018	0.907	1.514	1.701	1.123	-797.	1094.	16.6	12.841
.100	0.4	0.1520	0.3602	0.4882	21.20	1.520	1.001	0.904	1.519	1.681	1.107	-819.	1050.	16.6	12.819
.100	0.5	0.1502	0.4435	0.4066	21.46	1.502	0.986	0.904	1.524	1.662	1.091	-841.	1007.	16.6	12.780
.100	0.6	0.1488	0.5256	0.3260	21.67	1.488	0.973	0.905	1.529	1.643	1.075	-862.	966.	16.6	12.717
.100	0.7	0.1476	0.6071	0.2455	21.86	1.476	0.964	0.909	1.533	1.625	1.060	-884.	926.	16.6	12.629
.100	0.8	0.1471	0.6885	0.1648	22.01	1.471	0.956	0.916	1.538	1.607	1.045	-906.	886.	16.6	12.510
.100	0.9	0.1468	0.7705	0.0831	22.12	1.468	0.951	0.924	1.543	1.589	1.030	-927.	848.	16.6	12.358
.100	1.0	0.1468	0.8536	0.	22.19	1.468	0.948	0.934	1.548	1.572	1.015	-949.	810.	16.6	12.170
.200	0.	0.3005	0.	0.6989	21.97	1.503	1.012	0.875	1.485	1.717	1.157	-637.	1193.	17.1	14.287
.200	0.1	0.2953	0.0794	0.6255	22.33	1.477	0.992	0.869	1.488	1.700	1.142	-656.	1149.	17.1	14.378
.200	0.2	0.2909	0.1559	0.5534	22.64	1.455	0.975	0.865	1.492	1.682	1.127	-675.	1108.	17.1	14.455
.200	0.3	0.2871	0.2303	0.4829	22.93	1.436	0.959	0.862	1.496	1.665	1.113	-695.	1068.	17.1	14.521
.200	0.4	0.2839	0.3028	0.4135	23.19	1.420	0.946	0.862	1.500	1.648	1.098	-714.	1029.	17.0	14.570
.200	0.5	0.2813	0.3740	0.3449	23.42	1.407	0.935	0.862	1.504	1.631	1.084	-733.	992.	17.0	14.597
.200	0.6	0.2793	0.4444	0.2767	23.62	1.396	0.926	0.865	1.508	1.615	1.071	-753.	956.	17.0	14.598
.200	0.7	0.2777	0.5142	0.2085	23.79	1.389	0.918	0.869	1.512	1.599	1.057	-772.	921.	17.0	14.569
.200	0.8	0.2767	0.5838	0.1398	23.93	1.383	0.912	0.874	1.516	1.583	1.044	-791.	887.	17.0	14.500
.200	0.9	0.2761	0.6537	0.0705	24.04	1.381	0.908	0.881	1.521	1.567	1.031	-811.	854.	17.0	14.404
.200	1.0	0.2761	0.7243	0.	24.12	1.381	0.905	0.889	1.525	1.552	1.018	-831.	821.	17.0	14.262
.300	0.	0.4177	0.	0.5827	24.29	1.392	0.949	0.832	1.467	1.673	1.140	-542.	1137.	17.5	16.500
.300	0.1	0.4124	0.0694	0.5226	24.55	1.375	0.935	0.829	1.471	1.657	1.127	-559.	1100.	17.5	16.704
.300	0.2	0.4077	0.1291	0.4634	24.83	1.359	0.922	0.828	1.474	1.642	1.114	-575.	1064.	17.5	16.884
.300	0.3	0.4037	0.1914	0.4052	25.08	1.346	0.911	0.827	1.477	1.627	1.102	-592.	1029.	17.5	17.079
.300	0.4	0.4003	0.2525	0.3475	25.31	1.334	0.902	0.827	1.480	1.613	1.090	-609.	996.	17.5	17.238
.300	0.5	0.3975	0.3127	0.2901	25.52	1.325	0.893	0.829	1.483	1.598	1.078	-626.	963.	17.5	17.372
.300	0.6	0.3952	0.3723	0.2328	25.71	1.317	0.886	0.832	1.486	1.584	1.066	-643.	932.	17.5	17.477
.300	0.7	0.3935	0.4315	0.1754	25.87	1.312	0.881	0.835	1.490	1.570	1.054	-660.	901.	17.4	17.545

TEMPERATURE = 240. R

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0002	20.27	1.772	1.176	1.000	1.507	1.772	1.176	-744.	1269.	17.0	12.779
.	0.1	0.	0.1140	0.8862	20.79	1.723	1.140	0.985	1.512	1.750	1.158	-769.	1207.	17.0	12.783
.	0.2	0.	0.2219	0.7784	21.25	1.682	1.109	0.973	1.517	1.729	1.140	-793.	1149.	16.9	12.785
.	0.3	0.	0.3249	0.6754	21.66	1.648	1.083	0.965	1.521	1.708	1.122	-817.	1093.	16.9	12.778
.	0.4	0.	0.4244	0.5760	22.03	1.619	1.061	0.960	1.526	1.687	1.105	-841.	1040.	16.9	12.754
.	0.5	0.	0.5214	0.4790	22.34	1.596	1.043	0.958	1.531	1.666	1.088	-865.	990.	16.9	12.708
.	0.6	0.	0.6168	0.3836	22.61	1.579	1.028	0.959	1.536	1.646	1.072	-889.	941.	16.9	12.633
.	0.7	0.	0.7115	0.2888	22.82	1.566	1.016	0.963	1.541	1.627	1.056	-914.	893.	16.8	12.524
.	0.8	0.	0.8065	0.1938	22.99	1.558	1.008	0.970	1.546	1.607	1.040	-938.	847.	16.8	12.374
.	0.9	0.	0.9025	0.0978	23.10	1.555	1.003	0.979	1.550	1.588	1.024	-962.	801.	16.8	12.181
.	1.0	0.	1.0004	0.	23.16	1.556	1.000	0.991	1.555	1.569	1.009	-986.	756.	16.8	11.940
.025	0.	0.0432	0.	0.9570	20.87	1.729	1.150	0.981	1.503	1.762	1.172	-720.	1256.	17.1	13.111
.025	0.1	0.0421	0.1089	0.8492	21.37	1.685	1.117	0.968	1.508	1.741	1.154	-744.	1198.	17.1	13.139
.025	0.2	0.0412	0.2123	0.7469	21.82	1.647	1.089	0.958	1.513	1.720	1.137	-767.	1141.	17.0	13.163
.025	0.3	0.0404	0.3113	0.6487	22.22	1.615	1.064	0.950	1.518	1.700	1.120	-791.	1088.	17.0	13.177
.025	0.4	0.0397	0.4071	0.5536	22.57	1.589	1.044	0.946	1.522	1.679	1.103	-814.	1037.	17.0	13.173
.025	0.5	0.0392	0.5006	0.4606	22.88	1.568	1.027	0.945	1.527	1.659	1.087	-838.	988.	17.0	13.140
.025	0.6	0.0388	0.5927	0.3690	23.14	1.552	1.013	0.946	1.532	1.640	1.071	-862.	940.	16.9	13.080
.025	0.7	0.0385	0.6841	0.2779	23.35	1.540	1.002	0.950	1.536	1.621	1.055	-885.	894.	16.9	12.994
.025	0.8	0.0383	0.7754	0.1869	23.52	1.532	0.994	0.956	1.541	1.602	1.040	-909.	849.	16.9	12.854
.025	0.9	0.0382	0.8679	0.0941	23.64	1.529	0.989	0.965	1.546	1.583	1.025	-932.	805.	16.9	12.672
.025	1.0	0.0382	0.9620	0.	23.71	1.530	0.987	0.977	1.550	1.565	1.010	-956.	761.	16.9	12.442
.100	0.	0.1614	0.	0.8390	22.70	1.614	1.081	0.932	1.493	1.731	1.160	-647.	1219.	17.3	14.322
.100	0.1	0.1580	0.0949	0.7473	23.16	1.580	1.055	0.923	1.497	1.712	1.143	-669.	1165.	17.3	14.420
.100	0.2	0.1551	0.1856	0.6593	23.57	1.550	1.033	0.916	1.502	1.693	1.128	-691.	1114.	17.3	14.532
.100	0.3	0.1526	0.2736	0.5741	23.94	1.526	1.013	0.911	1.506	1.674	1.112	-713.	1066.	17.3	14.622
.100	0.4	0.1505	0.3589	0.4908	24.27	1.505	0.997	0.909	1.510	1.656	1.097	-734.	1020.	17.2	14.691
.100	0.5	0.1489	0.4425	0.4090	24.55	1.489	0.983	0.909	1.514	1.638	1.082	-756.	975.	17.2	14.731
.100	0.6	0.1475	0.5249	0.3276	24.80	1.475	0.972	0.911	1.518	1.620	1.067	-778.	932.	17.2	14.737
.100	0.7	0.1466	0.6068	0.2470	25.00	1.466	0.963	0.915	1.522	1.603	1.053	-800.	890.	17.2	14.700
.100	0.8	0.1460	0.6887	0.1657	25.17	1.460	0.956	0.921	1.526	1.585	1.039	-821.	850.	17.2	14.614
.100	0.9	0.1457	0.7711	0.0836	25.28	1.457	0.952	0.929	1.530	1.569	1.025	-843.	810.	17.2	14.474
.100	1.0	0.1457	0.8547	0.	25.36	1.457	0.950	0.939	1.535	1.552	1.012	-865.	771.	17.1	14.277
.200	0.	0.2970	0.	0.7034	25.30	1.485	1.009	0.879	1.478	1.689	1.143	-550.	1157.	17.7	16.766
.200	0.1	0.2922	0.0789	0.6291	25.71	1.461	0.986	0.874	1.482	1.672	1.129	-569.	1110.	17.6	17.046

TEMPERATURE = 245. R

LIQUID MOLE FRACTION N2	LIQUID MOLE FRACTION AR/AR+O2	VAPOR MOLE FRACTION N2	VAPOR MOLE FRACTION AR	VAPOR MOLE FRACTION O2	PRESSURE ATM	EQUIL CONST N2	EQUIL CONST AR	EQUIL CONST O2	RELATIVE VOL N2/AR	RELATIVE VOL N2/O2	RELATIVE VOL AR/O2	ENTHALPY BTU/LB MOLE LIQ	ENTHALPY BTU/LB MOLE VAP	HEAT CAPACITY BTU/LB MOLE-R LIQ	HEAT CAPACITY BTU/LB MOLE-R VAP
.	0.	0.	0.	1.0004	23.05	1.761	1.164	1.000	1.513	1.760	1.164	-657.	1252.	17.9	14.098
.	0.1	0.	0.1131	0.8874	23.63	1.715	1.131	0.986	1.517	1.740	1.147	-682.	1187.	17.8	14.213
.	0.2	0.	0.2204	0.7801	24.15	1.677	1.102	0.975	1.522	1.719	1.130	-706.	1126.	17.8	14.326
.	0.3	0.	0.3231	0.6771	24.63	1.644	1.077	0.967	1.526	1.699	1.113	-730.	1068.	17.7	14.420
.	0.4	0.	0.4226	0.5777	25.04	1.617	1.057	0.963	1.530	1.679	1.097	-755.	1013.	17.7	14.498
.	0.5	0.	0.5198	0.4805	25.39	1.595	1.040	0.961	1.535	1.660	1.082	-779.	960.	17.6	14.544
.	0.6	0.	0.6155	0.3848	25.68	1.579	1.026	0.962	1.539	1.641	1.066	-803.	909.	17.6	14.548
.	0.7	0.	0.7106	0.2897	25.94	1.566	1.015	0.966	1.543	1.622	1.051	-828.	860.	17.6	14.500
.025	0.	0.0430	0.	0.9575	23.76	1.719	1.135	0.982	1.510	1.751	1.160	-633.	1237.	17.9	14.610
.025	0.1	0.0419	0.1080	0.8503	24.33	1.677	1.108	0.969	1.514	1.731	1.143	-656.	1174.	17.9	14.763
.025	0.2	0.0410	0.2108	0.7484	24.84	1.642	1.081	0.959	1.519	1.711	1.127	-680.	1115.	17.8	14.918
.025	0.3	0.0403	0.3096	0.6504	25.38	1.612	1.059	0.953	1.523	1.691	1.111	-704.	1059.	17.8	15.061
.025	0.4	0.0397	0.4054	0.5552	25.78	1.587	1.040	0.949	1.527	1.672	1.095	-728.	1005.	17.7	15.180

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APPENDIX III

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APPENDIX IV

NOMENCLATURE TABLE

A_i = Area of Chromatograph Peak, Section IV-B

A_{ij} = Binary interaction coefficient, Section VI-E

Ar = Argon

a_{ij} = Constant in binary interaction coefficient, Section VI-E and Section VIII

B = Second virial coefficient, Section VI-D and Section VIII-D

B_{ij} = Mixture second virial coefficient, Section VI-D

b_{ij} = Constant in binary interaction coefficient, Section VI-E and Section VII

C = Third virial coefficient, Section VI-D and Section VIII-D

C_{ijk} = Mixture third virial coefficient, Section VI-D

C_p = Heat capacity at constant pressure

C_s = Heat capacity of saturated fluid

c = Number of components, Section VI-A

F = Degrees of freedom of system, Section VI-A

^oF = Degrees, Fahrenheit scale

f_i = Fugacity of component i

f_i^* = Fugacity of pure liquid component at the pressure and temperature of mixing

G^E = Excess free energy

G_i = Free energy of component i

H = Enthalpy

H_{gi} = Enthalpy of the real gas, pure component

H^o_{gi} = Enthalpy of the real liquid, pure component

NOMENCLATURE TABLE (continued)

H_i^*	=	Ideal gas (zero pressure) enthalpy
$H_{liq.}$	=	Liquid phase enthalpy
H_m	=	Heat of mixing
$H_{vap.}$	=	Vapor phase enthalpy
K	=	Equilibrium constant, Appendix I-A
N_2	=	Nitrogen
O_2	=	Oxygen
P	=	Number of phases, Section VI-A
p	=	Total pressure of the vapor
p_i^o	=	Vapor pressure of pure component i
p_m	=	Pressure of mixing
q_i	=	Relative response factor, Section IV-B
R	=	Gas constant
^oR	=	Degrees, Rankine scale
S	=	Van Laar Volume, Section VI-E and Section VII
T	=	Temperature, degrees Rankine
V	=	Molar volume of vapor, Section VI-D
V	=	Liquid volume in cc/gm-mole, Section VI-B
V_i^o	=	Molal volume of pure component i
$\overline{V}_i$	=	Partial molal volume of component i
x	=	Temperature ^oR divided by 100, Section VI-B
x_i	=	Mole fraction of component i in the liquid
y_i	=	Mole fraction of component i in the vapor
Z	=	Compressibility factor

NOMENCLATURE TABLE (continued)

α = Relative volatility, Appendix I, Sections B, C, and D

γ_i = Activity coefficient of component i in the liquid

γ_π = Pressure activity coefficient, Appendix I-E

ΔG = Change in free energy

$\overline{\Delta I}_{mi}$ = Partial molal heat of mixing

ΔI^o_{vi} = Latent heat

ϕ_i = Fugacity coefficient of component i

ϕ_i^o = Fugacity coefficient of pure component i