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AUTHORITY

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OF  
LINCOLN LABORATORY

15 SEPTEMBER 1966

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
LINCOLN LABORATORY      LEXINGTON, MASSACHUSETTS

20100812 163

Unclassified Publications of Lincoln Laboratory, 15 September 1966, is a new cumulative listing of unclassified reports published since the Laboratory was established in 1951. The 15 March 1964 edition of Unclassified Publications, as well as Supplements 1 and 2, may now be destroyed.

All reports listed herein are deposited with DDC. Since January 1965, Journal Articles and Meeting Speeches (when reprints are available) have also been deposited with DDC.

Out-of-print unclassified (released) Lincoln Laboratory reports are available, as microfilm or photoprint copies, from the Microreproduction Laboratory, Hayden Memorial Library, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139. Requests should cite the appropriate serial numbers and prices.

Accepted for the Air Force  
Franklin C. Hudson  
Chief, Lincoln Laboratory Office

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## KEY TO SYMBOLS

*	Joint report
†	Out of print
‡	Partial support under other contract
§	Consultant or non-Lincoln author
R	Reprints available
H	Hayden Library serial number
M	Microfilm
P	Photoprint

## QUARTERLY TECHNICAL SUMMARIES

### GENERAL RESEARCH

	<u>DDC No.</u>		<u>DDC No.</u>
15 May 1965	619676	15 February 1966	630918
15 August 1965	623651	15 May 1966	634819
15 November 1965	627520	15 August 1966	639570

## QUARTERLY PROGRESS REPORTS

### DIVISION 2

#### AIRCRAFT CONTROL AND WARNING

	<u>DDC No.</u>		<u>DDC No.</u>
† 1 June 1952		† 15 July 1953	21141
† 1 September 1952	4642	† 15 October 1953	25817
† 15 January 1953	6743	† 15 February 1954	30167
† 15 April 1953	19356	† 15 May 1954	37149

#### SYSTEMS

	<u>DDC No.</u>		<u>DDC No.</u>
15 November 1961	269861	15 August 1962	283494
15 February 1962	272957	15 November 1962	289815
15 May 1962	275471	† 15 February 1963	606252

#### DATA SYSTEMS

	<u>DDC No.</u>		<u>DDC No.</u>
15 May 1963	406287	15 May 1964	600838
15 August 1963	417672	15 August 1964	604590
15 November 1963	425576	15 November 1964	609005
15 February 1964	432493	15 February 1965	612541

## Quarterly Progress Reports

### DIVISION 3

#### COMMUNICATIONS AND COMPONENTS

	<u>DDC No.</u>		<u>DDC No.</u>
† 1 July 1952	173011	† 15 October 1953	22246
† 30 September 1952	170188	† 15 January 1954	28577
† 1 October 1952	2229	† 15 April 1954	35321
† 15 January 1953	4907	† 15 July 1954	42929
† 15 April 1953	112270		

#### RADIO PHYSICS

	<u>DDC No.</u>		<u>DDC No.</u>
15 January 1962	271953	15 November 1963	425670
15 April 1962	415729	15 May 1964	441192
15 July 1962	283035	15 August 1964	446691
15 October 1962	289814	15 November 1964	609014
† 15 January 1963	296492	15 February 1965	612773
15 April 1963	414694		
15 August 1963	417499		

### DIVISION 4

#### WEAPONS

	<u>DDC No.</u>		<u>DDC No.</u>
† 1 July 1952	173011	† 15 August 1953	19321
† 31 October 1952	4550	† 15 November 1953	52054
† 15 February 1953	6742	† 15 February 1954	28576
† 15 May 1953	16457	† 15 May 1954	34616

#### RADAR

	<u>DDC No.</u>		<u>DDC No.</u>
15 February 1962	273507	15 December 1963	429499
15 May 1962	276045	15 March 1964	435689
† 15 November 1962	291103	15 June 1964	442680
15 February 1963	298907	15 September 1964	607160
15 May 1963	408676	15 December 1964	610021
15 September 1963	422233		

Quarterly Progress Reports

DIVISION 5  
INFORMATION PROCESSING

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		
† 15 September 1959	231801	H-223	M \$1.50	P \$25.30
† 15 December 1959	233920	H-139	1.50	24.10
† 15 March 1960	237551	H-126	1.50	24.40
15 June 1960	242284			
15 September 1960	247050			
15 December 1960	252199			
† 15 March 1961	256371	H-443	1.50	12.65
† 15 June 1961	260633	H-442	1.50	13.90
† 15 September 1961	263607	H-441	1.50	4.90
† 15 December 1961	268698	H-450	1.50	3.90
† 15 March 1962	273508	H-440	1.50	4.65
† 15 June 1962	277562	H-439	1.50	5.15
† 15 September 1962	285165	H-438	1.50	7.40
† 15 December 1962	294454			
15 March 1963	401494			

DIVISION 6  
SPACE COMMUNICATIONS

	<u>DDC No.</u>		<u>DDC No.</u>
15 September 1963	424909	15 June 1964	602973
15 December 1963	431198	15 September 1964	450448
15 March 1964	434292		



## Quarterly Progress Reports

### DIVISION 7 ENGINEERING DESIGN AND TECHNICAL SERVICES

	<u>DDC No.</u>		<u>DDC No.</u>
† 15 November 1952	6517	† 15 January 1956	95753
† 15 February 1953	11806	† 15 April, 15 July, 15 October 1956	13605
† 15 May 1953	17084	† 15 January 1957	13606
† 15 August 1953	20379	† 15 April 1957	147497
† 15 November 1953	25815	† 15 July 1957	151240
† 15 April 1954	33860	† 15 October 1957	110031
† 15 July 1954	39058	† 15 January 1958	110048
† 15 October 1954	50617	† 15 April 1958	133859
† 15 January 1955	64031	† 15 July 1958	303131
† 15 April 1955	68882	† 15 October 1958	304361
† 15 July 1955	72814	† 15 January 1959	305154
† 15 October 1955	83347		

### ENGINEERING

	<u>DDC No.</u>		<u>DDC No.</u>
† 15 April 1959	222823	15 April 1962	280714
† 15 July 1959	222824	15 July 1962	282388
15 October 1959	315534	15 October 1962	287558
15 January 1960	315680	15 January 1963	294972
15 April 1960	317928	15 April 1963	404456
15 July 1960	319819	15 July 1963	413873
15 October 1960	249920	15 September 1963	425923
15 January 1961	253840	15 December 1963	429957
15 April 1961	258076	15 March 1964	435524
15 July,		15 June 1964	602621
15 October 1961	274523	15 September 1964	450183
15 January 1962	270736	15 December 1964	609872

Quarterly Progress Reports

DIVISION 8  
SOLID STATE

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		
15 January 1962	270511			
15 April 1962	281678	H-399	M\$1.50	P\$3.15
15 July 1962	282145	H-416	1.50	2.15
15 October 1962	287199	H-435	1.50	4.40
15 January 1963	295737	H-470	1.50	2.40
15 April 1963	404496	H-502	1.50	2.20
15 July 1963	412949	H-541	1.50	2.20
15 October 1963	422429	H-547	1.50	2.20
15 January 1964	429866	H-574	1.50	3.00
15 April 1964	439365	H-578	1.50	2.20
15 July 1964	603514	H-597	1.50	2.40
15 October 1964	608569	H-619	1.50	2.40
15 January 1965	456768	H-631	1.50	2.40

Quarterly Progress Reports

TRANSISTORS AND SOLID STATE

Group 35

DDC No.

Hayden Serial and Prices

† 1 October 1952  
† 15 January 1953  
† 15 April 1953  
† 15 July 1953  
† 15 October 1953  
† 1 February 1954

28579

SOLID STATE RESEARCH

Group 35 – Transistors  
Group 37 – Ferrites

† 1 May 1954  
† 1 August 1954  
† 1 November 1954  
† 1 February 1955  
† 1 May 1955  
† 1 August 1955

41457  
41456  
53355  
62359  
70113  
79337

SOLID STATE RESEARCH

Group 35

† 1 November 1955  
† 1 February 1956  
† 1 May 1956  
† 1 August 1956  
† 1 November 1956  
† 1 February 1957  
† 1 May 1957

82483  
92623  
102207  
98859  
110008  
137607  
151262

SOLID STATE RESEARCH

Groups 35, 37, 310

† 1 August 1957

151261

SOLID STATE RESEARCH

Groups 35, 37, 310, 63, 24

† 1 November 1957

110024

H-5

M \$1.50

P \$34.50

Quarterly Progress Reports

SOLID STATE RESEARCH

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		
† 1 February 1958	110037	II-14	1.50	29.70
† 1 May 1958	133853	H-13	1.60	33.70
† 1 August 1958	133866	H-601		
† 1 November 1958	204401	H-7	1.80	38.50
† 15 January 1959	215804	H-20	1.60	39.40
† 15 April 1959	214567	II-45	1.95	31.00
† 15 July 1959	226851	H-22	1.60	34.60
† 15 October 1959	231991	H-44	2.05	38.20
† 15 January 1960	234915	H-64	1.50	29.50
† 15 April 1960	239537	II-119	1.50	16.90
† 15 July 1960	243927	II-168	1.50	18.40
† 15 October 1960	249058	II-360	1.50	10.65
† 15 January 1961	254036	II-279	1.50	16.90
† 15 April 1961	257442	II-305	1.50	12.15
† 15 July 1961	262282	H-331	1.50	13.65
15 October 1961	266878	H-360	1.50	10.65

SOLID STATE RESEARCH  
LINCOLN LABORATORY

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		
1961:4	274072	II-391	M\$1.50	P\$22.40
1962:1	277393	II-406	1.50	13.40
1962:2	285456	H-428	1.50	12.15
1962:3	291546	H-457	1.50	19.65
1962:4	400709	H-491	1.50	12.65
1963:1	413089	II-517	1.50	11.80
1963:2	417686	II-539	1.50	7.20
1963:3	427340	II-554	1.50	7.80
1963:4	435023	II-573	1.50	8.80
1964:1	601830	H-587	1.50	8.00
1964:2	606126	II-606	1.50	10.60
1964:3	609828	H-627	1.50	9.20
1964:4	613961	H-639	1.50	8.40

Quarterly Progress Reports

SOLID STATE RESEARCH  
LINCOLN LABORATORY  
(Continued)

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		
1965:1	622446	H-678	M \$1.50	P \$11.40
1965:2	624611	H-686	1.50	9.20
1965:3	629048	H-705	1.50	15.60
1966:1	632998	H-721	1.50	15.80
1966:2	639064	H-740		

SEMIANNUAL TECHNICAL SUMMARY REPORTS  
TO ADVANCED RESEARCH PROJECTS AGENCY

REENTRY PHYSICS PROGRAM			REENTRY PHYSICS & PROJECT PRESS PROGRAMS		
	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 1 Oct. 1958 to 30 June 1959	228431	H-125 M\$1.50 P\$38.80	† 30 June 1961	262543	H-361 M\$2.65 P\$35.90
† 31 Dec. 1959	234627	H-127 M\$1.50 P\$22.00	† 31 Dec. 1961	273072	H-453 M\$2.05 P\$48.15
† 30 June 1960	241226	H-269 M\$1.50 P\$10.30	† 30 June 1962	283478	H-454 M\$1.80 P\$37.90
† 31 Dec. 1960	252669	H-276 M\$1.50 P\$11.80			

RADAR TECHNIQUES STUDY

HIGH-POWER TUBE PROGRAM

	<u>DDC No.</u>	<u>Hayden Serial and Prices</u>		<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
31 Dec. 1959	234063		31 Dec. 1959	234064	
30 June 1960	241910		30 June 1960	241412	
† 31 Dec. 1960	251040		† 31 Dec. 1960	250687	
			30 June 1961	260544	
			† 31 Dec. 1961	270734	H-549 M\$1.50 P\$7.20
			† 30 June 1962	278675	
			31 Dec. 1962	294963	
			30 June 1963	411458	
			30 Nov. 1963	425185	

## Quarterly Progress Reports

### SEISMIC DISCRIMINATION

	<u>DDC No.</u>
30 June 1964	443444
31 December 1964	455743
30 June 1965	467395
31 December 1965	630559
30 June 1966	637308

### GRAPHICS

	<u>DDC No.</u>
30 November 1965	625567
31 May 1966	634251

## TECHNICAL REPORTS

TR No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
* † 1	Ionospheric Scattering and Reflection	R. M. Whitmer	5 Dec. 1951	3311	
† 2	Some Mathematical Remarks on the Boolean Machine	I. S. Reed	19 Dec. 1951	165903	
† 3	Use of a Delay-Line Memory to Reduce Radar Pulse-Type Interference (Wildcatting)	T. F. Rogers L. A. Ames J. A. Dumanian	21 Feb. 1952	165380	
† 4	A Moving-Coordinate Radar Display: Operator Limitations	F. R. Naka B. B. Welles	20 Mar. 1952	165374	
* † 5	Multiplexing a Radio Teletype System Using a Random Car- rier and Correlation Detection	B. J. Pankowski	16 May 1952	168857	
* † 6	Echo-Box Pulse Doppler Radar	L. D. Smullin R. H. Fox	6 May 1952	172738	
* † 7	Noise-Like Signals and Their Detection by Correlation	B. L. Basore	26 May 1952	4641	
† 8	Results of Ground-Clutter- Elimination Experiments	R. H. Baker H. M. Elliott	30 June 1952	969	
† 9	A New Method of Teletype Modulation	D. J. Gray	22 Sept. 1952	928	
* † 10	A Unified Approach to MTI and Doppler Radar	R. M. Fano	22 July 1952	4905	
† 11	Wide-Deviation Frequency- Modulated Oscillator	D. J. Gray V. P. Gurske W. E. Morrow, Jr.	6 Aug. 1952	958	
† 12	Boolean Functions of a Real Variable and Its Applications to a Model of the Digital Com- puter and Discrete Probability	I. S. Reed	14 Aug. 1952	968	
† 13	An Analysis of the Detection of Repeated Signals in Noise by Binary Integration	J. V. Harrington	14 Aug. 1952	949	H-645 M \$1.50 P \$5.00
† 14	An Application of Matrix Theory to the Tracking and Smoothing Equations	I. S. Reed G. P. Dinneen	3 June 1953	19276	H-31 M \$1.50 P \$6.40



## Technical Reports

TR No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 15	Symbolic Synthesis of Digital Computers	I. S. Reed	17 Oct. 1952	2230	
† 16	The Measurement of Frequency Modulation in Pulse Magnetrons with a Microwave Interferometer	J. J. G. McCue	16 Oct. 1952	11811	
† 17	The Applicability of Generating Electrostatic Voltmeters to the Detection of Exhaust Trails of Aircraft	F. A. Rodgers R. N. Dexter	12 Nov. 1952	4906	
† 18	An Analytic Study of the Symmetric P-N Junction in Semiconductors	L. Bess	14 Nov. 1952	17010	
† 19	Use of H Field Coupling in Directional Couplers	C. W. Jones	5 Mar. 1953	17081	
† 20	An Analysis of Signal Detection by the Sequential Observer	I. S. Reed	12 Mar. 1953	17082	H-16 M \$1.50 P \$9.70
† 21	Correlation Analysis of VHF Signals	A. J. Lephakis	18 May 1953	11808	
† 22	Signal-to-Noise Improvement through Integration in a Delay-Line Filter System	J. Freedman J. Margolin	13 May 1953	19279	H-291 M \$1.50 P \$3.65
† 23	PPI Light-Spot-Brightness Probability Distributions	G. C. Sponsler F. L. Shader	17 June 1953	20232	
† † 24	Automatic-Alarm Radar for PROJECT COUNTER CHANGE (Final Technical Report)	H. G. Weiss F. R. Naka J. Freedman W. P. Harris J. W. Meyer J. F. Bennett	4 Aug. 1953	20233	
* † 25	Some Notes on Transistor Circuits	R. B. Adler M. Boisvert C. R. Hurtig S. J. Mason	6 Jan. 1953	17007	
† 26	The Lower Modes of a Concentric Line Having a Helical Inner Conductor	L. Stark	2 July 1953	19277	
† 27	The Transient Response of Transistor Switching Circuits	I. L. Lebow R. H. Baker R. E. McMahan	7 July 1953	21107	H-25 M \$1.50 P \$7.60
† 28	A Waveguide-Coax Hybrid Junction	C. W. Jones	14 July 1953	20234	

Technical Reports

TR No.				DDC No.	Hayden Serial and Prices
† 29	Land System TPI Signal-Detection Capability	G. C. Sponsler	25 Aug. 1953	25813	
† 30	Tracking Targets on the Land Target Position Indicator	B. F. Green, Jr. H. M. Jenkins	22 July 1953	21108	
† 31	Matching Filtered and Unfiltered Displays	B. F. Green, Jr.	27 July 1953	25812	
† 32	Transistor Shift Registers	R. H. Baker I. L. Lebow R. E. McMahan	30 July 1953	19278	
† 33	Correlation Detection Using Stored Signals	P. E. Green, Jr.	4 Aug. 1953	20524	
* † 34	Statistical Theory Applied to Communication through Multipath Disturbances	R. Price	3 Sept. 1953	28497	H-374 M \$1.50 P \$10.65
† 35	The Statistical Theory of Detection. I: Optimum Detection of Signals in Noise	D. Middleton	2 Nov. 1953	30080	H-17 M \$1.50 P \$23.20
† 36	The Time Required to Search for Numbers on Large Visual Displays	B. F. Green, Jr. W. J. McGill H. M. Jenkins	18 Aug. 1953	21109	
† 37	Theory of Radio Transmission by Tropospheric Scattering Using Very Narrow Beams	H. G. Booker § J. T. deBettencourt	16 June 1954	37146	
† 38	Normal Tropospheric Propagation of Short Radio Waves Well Beyond the Horizon	T. J. Carroll R. M. Ring	12 Feb. 1954	33890	
† 39	Coding for Constant-Data-Rate Systems. Part I. A New Error-Correcting Code	R. A. Silverman M. Balsler	23 Oct. 1953	28496	
† 40	A Theory of Magnetic-Domain Creation and Flux Reversal in Polycrystalline, Ferromagnetic Materials	J. B. Goodenough N. Menyuk	6 Nov. 1953	28494	
† 41	Jamming Tests on NOMAC Systems	B. M. Eisenstadt P. L. Fleck, Jr. O. G. Selfridge C. A. Wagner	25 Sept. 1953	20419	
† 42	An Ultrasonic Continuously Variable Delay Line	W. P. Schneider	22 Sept. 1953	21110	

## Technical Reports

TR No.				DDC No.	Hayden Serial and Prices
† 43	Isolation of Trace Quantities of Arsenic from Germanium Samples by Solvent Extraction	M. Green J. A. Kafalas J. Lowen	2 Mar. 1954	30161	
† 44	A Class of Multiple-Error-Correcting Codes and the Decoding Scheme	I. S. Reed	9 Oct. 1953	25814	H-15 M \$1.50 P \$5.50
† 45	A Study of the Holding Time for a Family of Transmitters	I. S. Reed W. A. Clark, Jr. G. P. Dinneen	13 Oct. 1953	25816	
† 46	Signal Detector for a Short-Pulse-Doppler Radar System	H. C. Friend	27 Oct. 1953	28493	
† 47	Performance on a Visual Monitoring Task as a Function of the Rate at Which Signals Occur	H. M. Jenkins	29 Oct. 1953	28492	
† 48	Coding for Constant-Data-Rate Systems. Part II. Multiple-Error-Correcting Codes	M. Balser R. A. Silverman	23 Feb. 1954	30162	
† 49	Speed and Accuracy of Reading Polar Coordinates on a Horizontal Plotting Table	B. F. Green, Jr. L. K. Anderson	11 Dec. 1953	28491	
† 50	A Practical Method of Designing RC Active Filters	R. P. Sallen E. L. Key	6 May 1954	40828	H-9 M \$1.50 P \$7.75
† 51	Folded Unipole Antennas	J. Leonhard R. D. Mattuck A. J. Poté	2 July 1954	39059	
† 54	Magnetostriction Filters	H. M. Elliott	4 Aug. 1954	47800	
† 55	Bandwidth of Microwave Ferrite Devices	R. H. Fox	11 Aug. 1954	40830	
† 56	Comparative Performance of 10-cm and 70-cm Radar Over the Sea	J. Freedman M. M. Kessler V. L. Lynn D. A. McKee W. W. Ward	25 Aug. 1954	42667	
† 57	Probability of Error in NOMAC Systems	G. L. Turin	18 Jan. 1954	30163	
† 58	Electrostatic Potential Distribution for the Helically Wound Postdeflection Accelerator of a Conical Cathode-Ray Tube	G. C. Sponsler	20 Jan. 1954	30164	

## Technical Reports

TR No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 59	A Helical-Line Phase Shifter for Ultra-High Frequencies	L. Stark	4 Feb. 1954	30165	
† 60	Tables of $n \log_2 n$ and $n \log_{10} n$ for $n$ from 1 to 1000	G. A. Miller P. M. Ross	10 Feb. 1954	33889	
† 61	Storage-Tube Slowed-Down Video System	E. W. Bivans S. P. Detwiler J. V. Harrington	15 Mar. 1954	30166	
† 62	A Preliminary Design for a Multi-Transmitter Automatic Ground-to-Air Communication System Using the G. E. Data Link	J. V. Harrington W. A. Clark G. P. Dinneen	15 Mar. 1954	33854	
† 63	Modifications to the AN/CPS-18 Radar	R. R. Fidler R. T. McCoy F. L. Niemann	15 Apr. 1954	34615	
† 64	An Automatic Electron-Trajectory Tracer Study of Helix- and Band-Type Postdeflection Acceleration	G. C. Sponsler	26 May 1954	40827	
† 65	Extension of Nonreciprocal Ferrite Devices to the 500- to 3000-Mcps Frequency Range	R. H. Fox B. Lax	3 Sept. 1954	47921	
† 67	A Common Co-ordinate System for the Utilization of Data from Several Radars	D. Goldenberg § E. W. Wolf	13 Sept. 1954	50611	H-18 M \$1.50 P \$16.60
† 68	A Nonreciprocal Four-Pole Ring Circuit	R. H. Fox	17 Sept. 1954	47799	
† 69	Ferrite Devices and Applications at Microwave Frequencies	R. H. Fox	27 Sept. 1954	64026	
† 70	Microwave Susceptibility Measurements in Ferrites	J. O. Artman P. E. Tannenwald	27 Oct. 1954	56356	H-1 M \$1.50 P \$7.25
† 71	Ferromagnetic Resonance in Manganese Ferrite Single Crystal	P. E. Tannenwald	30 Sept. 1954	50604	
† 72	Characteristics and Capabilities of Automatic Alerting Radar X-3	H. G. Weiss F. R. Naka	15 Oct. 1954	55745	
† 73	Some Queue Processes Associated with Buffer-Storage Systems	L. S. Reed	2 Dec. 1954	56355	H-396 M \$1.50 P \$6.40

## Technical Reports

TR No.				DDC No.	Hayden Serial and Prices
† 74	A Punch-Card Abstract File on Solid State and Transistor Literature	L. D. Patterson	12 Jan. 1955	64029	
† 75	Some Results in the Study of Narrow-Band Gaussian Noise	R. Price	26 Jan. 1955	64030	H-527 M \$1.50 P \$3.40
† 76	Final Report on the Phoenix Facsimile System	R. M. Whitehorn	13 June 1955	72815	
† 77	Report of Flight-Size-Assessment Tests	A. G. Favret J. J. Cahill C. C. Grandy D. R. Israel	9 Mar. 1955	64025	
* † 80	1/f Noise and Related Surface Effects in Germanium	A. L. McWhorter	20 May 1955	64023	
* † 81	Investigations of Scattering and Multipath Properties of Ionospheric Propagation at Radio Frequencies Exceeding the MUF	W. G. Abel J. T. deBettencourt J. F. Roche J. H. Chisholm	3 June 1955	76494	
† 82	A Bistatic CW Radar	E. A. Sloane E. S. Candidus J. Salerno M. Skolnik	6 June 1955	76454	
† 83	18-Mcps Field-Strength Measurements Over Sea Water	S. J. Fricker R. P. Ingalls W. T. Quinn M. L. Stone C. A. Stutt	14 June 1955	76455	
† 84	Investigations of Angular Scattering and Multipath Properties of Tropospheric Propagation of Short Radio Waves Beyond the Horizon	J. H. Chisholm P. A. Portmann J. T. deBettencourt J. F. Roche	26 Sept. 1955	85995	
† 85	Effects of Dislocations in Germanium and Silicon	A. D. Kurtz	13 July 1955	76495	
† 86	Project Caterpillar Antenna Measurements	S. J. Fricker R. P. Ingalls W. T. Quinn M. L. Stone C. A. Stutt	22 Dec. 1955	92635	
† 89	Theory of Ferrites in Rectangular Waveguides	K. J. Button B. Lax	1 Aug. 1955	70106	

Technical Reports

TR No.				DDC No.	Hayden Serial and Prices
† 91	UHF Long-Range Communi- cations Systems	G. L. Mellen W. E. Morrow, Jr. A. J. Poté W. H. Radford J. B. Wiesner	5 Aug. 1955	80774	
† 92	Some Remarks on Statistical Detection	W. L. Root T. S. Pitcher	10 Aug. 1955	85993	
† 93	Phase and Amplitude Varia- bility in Medium-Frequency Ionospheric Transmission	D. G. Brennan M. L. Phillips §	16 Sept. 1957	110016	
† 95	Several Binary Sequence Generators	N. Zierler	12 Sept. 1955	89135	H-230 M \$1.50 P \$4.30
† 98	Transistorized Communication Receiver	S. Schwartz	4 Nov. 1955	80773	
† 99	Comparison of Signal and Noise in Full-Wave and Half-Wave Rectifiers	M. D. Rubin J. M. Stacey	30 Nov. 1955	85994	
† 100	Transistor Slowed-Down Video System	R. H. Baker R. E. McMahon A. J. Yakutis	22 Dec. 1955	92634	
† 101	An Investigation of a 2-Mcps Ground-Wave Radar for Ship Detection	J. T. deBettencourt D. J. Gray	13 Dec. 1955	90351	
† 102	Designing for Reliability	N. H. Taylor	9 Dec. 1955	93756	
† 103	Some Notes on Jamming, 1	W. L. Root	3 Jan. 1956	90352	
104	Random-Access PPI	E. W. Bivans B. Cohen R. W. Hofheimer K. E. Perry J. Terzian R. V. Wood, Jr.	24 Feb. 1956	92633	
† 106	Transistor Regulated Power Supplies	F. G. Popp	19 Jan. 1956	92621	
107	Some Fundamental Principles of Coherent MTI and AMTI	W. W. Ward W. B. Renhult	3 May 1956	100288	
110	Maximum Efficiency Transistor Switching Circuits	R. H. Baker	22 Mar. 1956	96497	
111	Characteristics of Simple Manual Control Systems	J. I. Elkind	6 Apr. 1956	94646	

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112	Analysis of Freezing Precipitation Along the Eastern North American Coastline	J. M. Austin § S. L. Hensel	23 Mar. 1956	96755	
113	Broad-Band Balanced Duplexers	C. W. Jones	5 Apr. 1956	100287	
† 114	Markov-Process Representation of Radar Detection-Trial Binary-Data Sequences	G. C. Sponsler	16 Apr. 1956	100289	H-216 M \$1.50 P \$17.50
115	Galvanomagnetic Effects in n-Type Germanium	W. M. Bullis	14 May 1956	96499	
116	Communication Through Noisy, Random-Multipath Channels	G. Turin	14 May 1956	96500	
117	The Design of Characters for the Charactron	W. P. Harris B. F. Green, Jr. E. A. Wilson L. H. Liudansky	8 May 1956	101142	
119	Some Experiments with Three-Pulse Cancellation and with Sweep Integration	J. J. G. McCue	8 June 1956	103579	
120	Symmetrical Back-Clamped Transistor Switching Circuits	R. H. Baker R. E. McMahon F. L. McNamara A. C. Parker V. J. Sferrino H. A. Ullman	5 May 1956	101141	
123	A Mathematical Model for the Radar Echo from a Random Collection of Scatterers	E. J. Kelly E. C. Lerner	15 June 1956	104260	
124	The Suggested Role of Stratified Elevated Layers in Trans-Horizon Short-Wave Radio Propagation	J. R. Bauer	24 Sept. 1956	110003	
† 129	The Prediction of Ballistic Missile Trajectories from Radar Observations	I. I. Shapiro	27 Feb. 1957	110025	
130	High-Speed Graded-Base-Transistor Switching Circuits	R. H. Baker E. J. Chatterton A. C. Parker	10 Dec. 1957	110030	
132	On Meteor Echoes from Underdense Trails at Very High Frequencies	M. Loewenthal	13 Dec. 1956	137608	

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† 133	Transistor Core Memory	R. E. McMahon F. L. McNamara	13 Nov. 1956	110010	H-485 M \$1.50 P \$6.15
134	Preliminary Report on Ground-Wave-Radar Sea Clutter	C. A. Stutt S. J. Fricker R. P. Ingalls M. L. Stone	21 Sept. 1956	110004	
135	Topics in the Design of Antennas for Scatter	J. Granlund	23 Nov. 1956	110001	
136	Classical Boltzmann Theory of Cyclotron Resonance	H. J. Zeiger B. Lax R. N. Dexter	4 Oct. 1956	110005	
137	Punch-Thru Diode (Operation as a Narrow-Base Diode)	R. H. Rediker D. E. Sawyer	27 Nov. 1956	110011	
138	Circular Polarization for the AN/CPS-18 Antenna	F. L. Niemann J. P. Curtis	7 Jan. 1957	137609	
† 139	Logical Design of CG 24 (A General-Purpose Computer)	G. P. Dinneen J. A. Dumanian I. L. Lebow I. S. Reed P. B. Sebring	15 Apr. 1957	147496	H-19 M \$1.50 P \$15.40
141	Symbolic Design Techniques Applied to a Generalized Computer	I. S. Reed	3 Jan. 1957	110009	
142	High-Power RF Switch	L. J. Ricardi	10 Dec. 1956	110006	
143	Electromagnetic Propagation Effects in Ferromagnetic Resonance	M. H. Seavey P. E. Tannenwald	16 Jan. 1957	137610	
144	Analysis of Wet-Snow Precipitation Along the Eastern North American Coastline	J. M. Austin § S. L. Hensel	25 Jan. 1957	137711	
146	High-Power TR Switch Development at UHF	R. E. Slattery	25 Jan. 1957	137712	
150	Some Studies on Group III-V Intermetallic Compounds	C. R. Kolm	20 Feb. 1957	137716	
151	Proposal for Improving Tropospheric Propagation	L. J. Eyges	1 Mar. 1957	137717	
152	Hahn Decompositions and Hypothesis Tests	I. S. Reed E. J. Kelly D. H. Lyons	4 Mar. 1957	137718	



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153	Optical Memory Panels	W. L. Gardner D. B. Barker M. D. Zimmerman	7 Mar. 1957	137719	
† 154	Some Pulse-Doppler Radar- Design Considerations	R. E. Richardson	12 Aug. 1957	150863	H-482 M \$1.50 P \$5.40
155	A Fixed-Gap UHF TR Tube	C. W. Jones C. E. Muehe S. J. Miller	29 Mar. 1957	147407	
156	Transistorized Matched Filter for Pulsed Sinusoids	P. L. Fleck, Jr.	12 Apr. 1957	147492	
† 157	Some Properties of Stationary Gaussian Processes	E. J. Kelly I. S. Reed	5 June 1957	150864	H-468 M \$1.50 P \$3.40
† 158	The Detection of Radar Echoes in Noise. Part I: Statistical Preliminaries and Detector Design	I. S. Reed E. J. Kelly W. L. Root	20 June 1957	150865	H-238 M \$1.50 P \$7.90
† 159	The Detection of Radar Echoes in Noise. Part II: The Accuracy of Radar Measurements	I. S. Reed E. J. Kelly W. L. Root	19 July 1957	150866	H-215 M \$1.50 P \$8.80
160	Ultrasonic-Delay-Line Ter- minating Circuits and Passband Measurements	M. Axelbank	12 July 1957	150867	
† 161	A Search for Means to Detect Distant Low-Flying Aircraft	E. W. Pike	18 July 1957	150868	H-28 M \$1.95 P \$33.60
162	Digital-Analog Function Generators	R. W. Hofheimer K. E. Perry	23 Aug. 1957	150869	
164	The Chemical Analysis of Manganese-Magnesium Ferrite (Memory-Core Material)	D. G. Wickham	23 Aug. 1957	150870	
* † 165	Computer Techniques for the Study of Patterns in the Electroencephalogram	B. G. Farley L. S. Frischkopf W. A. Clark, Jr. J. T. Gilmore, Jr.	6 Nov. 1957	110027	H-2 M \$1.50 P \$5.75
* 166	On the Statics and Dynamics of Magnetic Domain Boundaries	J. V. Harrington	13 Jan. 1958	110028	
167	Parabolic-Cylinder Reflector Patterns	R. L. Pease	13 Nov. 1957	110029	

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168	On the Reciprocity of Rays Propagated Through a Horizontally Stratified Ionosphere	D. H. Archer	18 Dec. 1957	110032	
169	A Broad-Band UHF Amplifier and Mixer	J. H. Phillips E. Maxwell	27 Dec. 1957	110033	
170	A 64-Pole RF Coaxial Switch	L. J. Ricardi B. F. LaPage	3 Jan. 1958	110035	
171	An FM MTI Cancellation System	D. A. McKee	8 Jan. 1958	110036	
172	Analysis of Some Detection Criteria for Pulse Radar	E. J. Kelly D. H. Lyons H. M. Jones I. S. Reed	24 Jan. 1958	110039	
174	Straight Tapers in Rectangular Waveguides	T. J. Rey	10 Feb. 1958	110041	
176	Theory of Nonreciprocal Ferrite Phase Shifters in Dielectric-Loaded Coaxial Line	K. J. Button	7 Mar. 1958	110044	
177	One-Megacycle Silicon Transistor Circuits Applicable to Airborne Digital Systems	V. J. Sferrino W. G. Schmidt	10 Mar. 1958	110045	
178	Elimination of a Type of Natural Clutter in L-Band Radars	R. E. Richardson J. M. Stacey H. M. Kohler F. R. Naka	15 Apr. 1958	133851	
179	Semiconductor Delay Lines	J. J. G. McCue	15 Apr. 1958	110050	
181	Effects of the Filter in Oscillator Synchronization	T. J. Rey	14 May 1958	133854	
182	The Local Behavior of Solutions of the Two-Body Problem and Related Problems	J. J. Levin	16 June 1958	133855	
183	The Stewart Air Force Base to North Truro Tropospheric-Scatter Communication System	G. L. Mellen D. R. Hamilton, Jr. J. P. Kelly W. E. Morrow, Jr.	18 July 1958	133863	
184	Paraboloidal Reflector Patterns	R. L. Pease	5 Aug. 1958	133862	
185	Final Engineering Report on Parabolic Torus Antenna System	L. J. Ricardi M. E. Devane	7 Aug. 1958	222288	
† 186	Radio Refraction in a Cool Exponential Atmosphere	J. R. Bauer W. C. Mason F. A. Wilson	27 Aug. 1958	202331	H-344 M \$1.50 P \$6.15

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† 187	Characteristics of Moon-Reflected UHF Signals	S. J. Fricker R. P. Ingalls W. C. Mason M. L. Stone D. W. Swift	22 Dec. 1958	204519	H-3 M \$1.50 P \$16.00
188	Digital Rate Synthesis for Frequency Measurement and Control	T. J. Rey	30 Oct. 1958	205596	
189	Doppler Phase-Difference Integrator	G. M. Hyde K. E. Perry	12 Nov. 1958	206258	
190	Twilight Region Propagation of Short Radio Waves by Modes Contained in the Normal Air	T. J. Carroll R. M. Ring	31 Oct. 1958	210005	
† 191	The Automatic Design of Logical Networks	T. C. Bartee	3 Dec. 1958	207170	H-27 M \$1.50 P \$8.50
192	The Conductance of a Slot in a Array Antenna	S. J. Rabinowitz	31 Dec. 1958	209908	
193	Final Technical Report – Antenna and RF Circuit Design – Millstone Hill Radar	P. C. Fritsch	7 Jan. 1959	221688	
194	Curved-Earth Computations for Airborne Early Warning and Control	N. Durlach A. Carpenter M. A. Herlin	13 Jan. 1959	210006	
195	On $\sin x/x$ Sampling in the Case of Non-Band-Limited Functions	K. R. Johnson	16 Feb. 1959	211215	
† 197	The Magnetic Properties of Thin Films	J. B. Goodenough D. O. Smith	27 Jan. 1959	210730	H-26 M \$1.50 P \$13.00
198	Pressure Distribution, Stability, and Restoring Torque of an Externally Pressurized Bearing	R. A. Greenberg	2 Feb. 1959	212979	
199	Transistor Life Experience: 1954 – 1958	D. J. Eckl P. A. Fergus R. L. Burke	26 Mar. 1959	214565	
200	Preparation and Performance of Sintered CdS Photoconductors	R. R. Billups W. L. Gardner, Jr. M. D. Zimmerman	12 Mar. 1959	212580	
202	A Simple Null-Indicating Saturable-Core Magnetometer for the Detection of Static Magnetic Fields	E. P. McCurley C. Blake	15 Apr. 1959	215625	

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TR No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
203	The AN/FRC-47 (XD-1) Mock-Up System Performance Results	B. E. Nichols	23 Apr. 1959	216370	
204	A Probability Model for Coherent Phase-Only MTI Systems	J. W. McGinn, Jr.	4 June 1959	220812	
205	Paraboloidal Reflector Patterns for Off-Axis Feed	S. S. Sandler	14 July 1959	226245	
206	The ACM-52 Automatic Clutter Mapper and Preliminary Experimental Results	J. N. Harris E. J. Madle	30 July 1959	230025	
† 207	A Method of Pulse Compression Employing Nonlinear Frequency Modulation	E. L. Key E. N. Fowle R. D. Haggarty	13 Aug. 1959	312903	H-654 M \$1.50 P \$3.60
208	On the Band Structure of Transition Metals and Their Alloys	J. B. Goodenough	1 Sept. 1959	231241	
209	A Method of Side-Lobe Suppression in Phase-Coded Pulse Compression Systems	E. L. Key E. N. Fowle R. D. Haggarty	28 Aug. 1959	229403	
210	Studies in Partial Switching of Ferrite Cores	R. H. Tancrrell R. E. McMahan	21 Sept. 1959	227928	
212	The Calliscope - A Versatile Alphanumeric Display	K. E. Perry E. J. Aho	13 Nov. 1959	232164	
217	Applications of Boolean Matrices to the Analysis of Flow Diagrams	R. T. Prosser	22 Jan. 1960	234081	
219	Stochastic Approximation and "Minimax" Problems	L. A. Gardner, Jr.	11 Apr. 1960	238226	
221	Transistor Life in the TX-O Computer After 10,000 Hours of Operation	D. J. Eekl R. L. Burke	14 Apr. 1960	239227	
223	Solid State Display Panels with Photoconductive Control	R. R. Billups J. Rotstein W. L. Gardner, Jr.	26 May 1960	243854	
224	Effects of Feed Displacement on Patterns of Paraboloidal Cylinder Reflectors	R. L. Pease J. Pease	2 June 1960	245618	
226	Current-Operated Diode Logic Gates	H. Reinecke, Jr.	21 July 1960	245166	

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TR No.				DDC No.	Hayden Serial and Prices
227	Effect of Higher Spatial Modes on Predicted Multicavity Klystron Performance	R. L. Pease	25 July 1960	245619	
† 228	Phased Array Radar Studies, 1 July 1959 to 1 July 1960	J. L. Allen W. W. Camp L. Cartledge W. P. Delaney J. DiBartolo M. Siegel S. Sporri J. H. Teele D. H. Temme	12 Aug. 1960	249470	H-335 M \$3.00 P \$61.65
* † 231	Sequential Encoding and Decoding for the Discrete Memoryless Channel	B. Reiffen	12 Aug. 1960	247663	H-146 M \$1.50 P \$31.60
† 234	Signal Processing in Radar Astronomy – Communication via Fluctuating Multipath Media	R. Price P. E. Green, Jr.	6 Oct. 1960	246782	H-520 M \$1.95 P \$30.00
† 236	Phased Array Radar Studies, 1 July 1960 to 1 July 1961	J. L. Allen L. Cartledge W. P. Delaney E. A. Davidson J. DiBartolo A. J. Fallo W. J. Ince M. Siegel J. R. Sklar S. Spocri J. H. Teele D. H. Temme	13 Nov. 1961	271724	H-474 M \$1.80 P \$42.90
237	Remote Display Console for Computer Processed Data	H. E. Zieman D. I. Underwood	13 Jan. 1961	255086	
239	Electromagnetic Theory of Spin Wave Resonance	M. H. Seavey, Jr.	15 Feb. 1961	255342	
241	GENDARE (A Generalized Data Reduction System)	M. M. Marill J. B. Williams, Jr.	22 Jan. 1962	284041	
246	A Threshold Theory for Phase-Locked Loops	H. L. VanTrees	22 Aug. 1961	266951	
247	A Solid State Memory System Utilizing Impulse Switching of Ferrite Cores	V. J. Sferrino	22 Sept. 1961	264998	
248	Application of the Resonant Cavity Method to the Measurement of Electron Densities and Collision Frequencies in the Wakes of Hypervelocity Pellets	M. Labitt M. A. Herlin	17 Oct. 1961	265867	

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TR No.				DDC No.	Hayden Serial and Prices
249	Cyclotron Resonance and Magneto-Optical Effects in Semiconductors	B. Lax J. Halpern	30 Apr. 1962	278081	
251	The DICON System	R. S. Berg D. B. Eshleman J. N. Harris R. M. Horowitz I. L. Lebow W. H. Long N. J. Morrisson, Jr. F. Nagy, Jr. N. L. Daggett, Editor	31 Oct. 1961	267536	
252	Elementary Lattice Theories and Their Application to Gas Adsorption Phenomena	J. M. Honig	11 Dec. 1961	269570	
253	Precision Frequency Control of a High-Power Millimeter Klystron	C. M. Steinmetz	3 Jan. 1962	273509	
254	Ferro- and Antiferromagnetism in a Cubic Cluster of Spins	G. F. Dresselhaus	11 Jan. 1962	273950	
255	A Diplexer Using Hybrid Junctions	L. J. Ricardi	7 Feb. 1962	274524	
† 256	Radio-Echo Observations of the Moon at 3.6-cm Wavelength	J. V. Evans	19 Feb. 1962	274669	H-692 M \$1.50 P \$2.30
257	Secondary Emission Characteristics of High-Power Microwave-Tube Surfaces	A. Vierstra R. C. Butman	20 Feb. 1962	282311	
258	Error Probabilities for Adaptive Multichannel Reception of Binary Signals	R. Price	23 July 1962	284651	
259	The West Ford Antenna Feed System	L. Niro	5 Mar. 1962	282311	
261	Statistical Mechanical Theory of Magnetic Resonance	P. L. Kelley	1 May 1962	274740	
263	The COBI Data Transmission Modem	K. H. Morey	23 May 1962	277501	
264	A More Precise Analysis of Multicavity Klystrons. I. Solutions of the Boundary-Value Problem	R. L. Pease	28 Mar. 1962	275469	
265	Mass Spectrographic Lines of the Elements	E. B. Owens A. M. Sherman	3 Apr. 1962	275468	

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† 266	Electromagnetic Studies of Ionized Wakes	E. L. Murphy S. Edelberg G. F. Pippert	20 Apr. 1962	282309	
267	Magnetism and Crystal Structure in Nonmetals	J. B. Goodenough	24 Apr. 1962	284300	
268	Calculation of the Surface Temperature of a Solid under Electron Bombardment	G. E. Vibrans	16 Nov. 1962	294645	
269	The Preparation and Properties of Some Vanadium Spinels	D. B. Rogers	25 May 1962	282542	
270	State Assignment Algorithm for Clocked Sequential Machines	M. I. Schneider	25 May 1962	286784	
271	Echolocation with Wide-Band Waveforms: Bat Sonar Signals	D. A. Cahlander	6 May 1964	605322	
272	Radio-Echo Observations of the Moon at 68-cm Wavelength	J. V. Evans	22 June 1962	291102	
273	Scattering of Electromagnetic Waves by an Eaton Lens	J. Rheinstein	28 June 1962	289380	
274	Studies of the F-Region by the Incoherent Backscatter Method	J. V. Evans	24 July 1962	292730	
275	RF Component Development for the DICON System	R. S. Berg B. Howland	3 Aug. 1962	291780	
276	The El Campo Solar Radar Antenna	M. E. Devane A. R. Dion	17 Aug. 1962	292173	
277	A Luneburg Lens as a Passive Reflector for Satellite Commu- nication	R. N. Assaly	21 Aug. 1962	291781	
278	The FX-1 Magnetic Film Memory	J. I. Raffel A. H. Anderson H. Blatt T. S. Crowther T. O. Herndon	27 Aug. 1962	292172	
279	Studies in Search for a Conscious Evader	R. C. Norris	14 Sept. 1962	294832	
280	Magnetic Properties of a Single Crystal of Manganese Phosphide	E. E. Huber, Jr.	18 Dec. 1962	296788	
281	A Quantitative Examination of the Radar Resolution Problem	J. L. Allen	17 Sept. 1962	295573	

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282	Radar Astronomy Measure- ment Techniques	P. E. Green, Jr.	12 Dec. 1962	400563	
283	A Data Processing Formalism	A. W. Armenti B. J. Schafer J. M. Winett	6 Nov. 1962	293995	
284	Scattering from Density Fluctuations in a Plasma (Scattering and Absorption Cross Section)	M. S. Macrakis	22 Oct. 1962	291779	
* 285	The Resistance of Bats to Jamming	D. R. Griffin § J. J. G. McCue A. D. Grinnell §	23 Oct. 1962	296493	
286	The Measurement of Small- Signal Parameters of Tran- sistors at VHF	B. L. Diamond	14 Nov. 1962	292731	
287	Incoherent Scattering from a Plasma: I. The Electronic Spectrum; II. The Ion-Carried Electronic Spectrum	M. S. Macrakis	14 Nov. 1962	295092	
288	Radio-Echo Studies of the Moon at 7.84-Meter Wavelength	J. V. Evans R. P. Ingalls	20 Nov. 1962	294008	
289	Optimum Incorporation of External Observations with a Marine Inertial Navigation System	D. J. Sakrison	30 Nov. 1962	296787	
290	The Spectra of the Radiation from the Trail of Hypervelocity Spheres in Argon	B. W. Bryant	11 Dec. 1962	296124	
292	Orbital Scatter Channel Propa- gation Experiment	P. R. Drouilhet J. W. Craig P. L. Fleck W. B. Smith C. A. Wagner	21 Dec. 1962	401311	
† 293	Chemical Behavior of Semi- conductors: Etching Characteristics	H. C. Gatos M. C. Lavine	2 Jan. 1963	401398	H-682 M \$1.50 P \$6.40
295	Energy-Band Calculations	F. W. Quelle, Jr.	17 Jan. 1963	405145	



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TR No.				DDC No.	Hayden Serial and Prices
296	Sketchpad: A Man-Machine Graphical Communication System	I. E. Sutherland	30 Jan. 1963	404549	H-629 M \$1.50 P \$11.00
298	Some Tests of Ionization Gauges	F. T. Worrell	18 Feb. 1963	402407	
† 299	Phased Array Radar Studies, 1 July 1961 to 1 January 1963	J. L. Allen D. M. Bernella W. W. Carpenter W. P. Delaney J. DiBartolo A. J. Fallo H. J. Greenberger W. J. Ince M. Siegel S. Spoerri D. H. Temme L. Cartledge, Editor	20 Feb. 1963	417572	H-558 M \$1.50 P \$22.60
300	The Diamond Circuit	R. H. Baker R. E. McMahon R. G. Burgess	30 Jan. 1963	400955	
301	Optimum Power Division in Coherent Communication Systems	H. L. VanTrees	19 Feb. 1963	406882	
302	Antiferromagnetic Resonance Linewidth in MnF <sub>2</sub> Near the Transition Temperature	J. C. Burgiel	18 June 1963	420809	
303	Specimen Preparation by Spark-Erosion Cutting	H. H. Ehlers D. F. Kolesar	14 Mar. 1963	402938	
304	Mode Theory of the Active Magneto-hydrodynamic Waveguide	J. R. Cogdell	2 July 1963	423408	
305	Improvement of the Measurement Capability of the UHF Radar at Wallops Island	J. Freedman, Editor	10 Apr. 1963	417559	
306	The Baseball Program: An Automatic Question-Answerer, Vols. I, II	A. K. Wolf C. S. Chomsky B. F. Green, Jr.	11 Apr. 1963	432038 446579	
307	The Measurement of Electron Density in the Wake of a Hypervelocity Pellet Over a Six-Magnitude Range	M. Labitt	15 Apr. 1963	421762	
308	Computation of the Spreading of an Electron Beam Under Acceleration and Space-Charge Repulsion	G. E. Vibrans	18 Apr. 1963	409705	

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TR No.				DDC No.	Hayden Serial and Prices
310	A Fourier Theorem and Its Application to the Measurement of Electromagnetic Fields and Quantum Mechanical States	H. E. Moses J. S. Lomont	30 Apr. 1963	407604	
312	Magnetic Scattering of Neutrons by Hexagonal Cobalt	R. M. Moon, Jr.	9 May 1963	413566	
313	The Guide Wavelength of Cylindrical Waveguide of Arbitrary Cross Section and a Computer Program for Calculating Values	R. N. Assaly	20 May 1963	412518	
315	Machine Perception of Three-Dimensional Solids	L. G. Roberts	22 May 1963	413529	
316	Calculation of Potential Depression in Klystron Gaps	R. L. Pease	23 May 1963	417589	
317	Membrane and Bending Stresses in Shallow, Spherical Shells	F. Y. M. Wan	11 Aug. 1964	607457	
318	Coding for Tracking Radar Ranging	T. C. Bartee P. E. Wood, Jr.	11 June 1963	416649	
319	Radar Range Equations for Narrow-Band Optical Sources	B. S. Goldstein	14 June 1963	633634	
320	Growing Helical Density Waves in Semiconductor Plasmas	C. E. Hurwitz	17 Oct. 1963	432393	
321	A Linear-FM Radar Pulse Compression System Employing Thickness-Tapered Dispersive Delay Lines	R. C. Yost	11 July 1963	417528	
322	Properties of Dielectrics from Reflection Coefficients in One Dimension	H. E. Moses C. M. deRidder	11 July 1963	422444	
323	The Theory of Array Antennas (with Emphasis on Radar Applications)	J. L. Allen	25 July 1963	422945	H-563 M \$1.50 P \$11.20
324	Investigation of Effects of Surface Deviations on Haystack Antenna Radiation Patterns	A. R. Dion	29 July 1963	418740	
325	Detection of the Energy Peak of an Arbitrary Signal	L. Kleinrock	23 Aug. 1963	425894	
326	Translationally Covariant Hamiltonians	H. E. Moses J. S. Lomont	26 Aug. 1963	422500	
328	Haystack Antenna System Status Report	A. O. Kuhnel	13 Sept. 1963	600930	

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TR No.				DDC No.	Hayden Serial and Prices
329	The Reduction of Electro-magnetic Backscatter from a Plasma-Clad Conduction Body	E. L. Murphy	23 Sept. 1963	430589	
330	Radiometric Measurements at 8.5-mm Wavelength with a 28-Foot Antenna During December 1962	V. L. Lynn M. D. Sohigian M. L. Meeks	8 Oct. 1963	430926	
331	Radar Observations of the Moon at 8.6-mm Wavelength	V. L. Lynn M. D. Sohigian E. A. Crocker	8 Oct. 1963	426207	
332	Radio-Echo Studies of Meteors at 68-cm Wavelength. Part I: Sporadic Meteors	J. V. Evans R. A. Brockelman	29 Oct. 1963	439354	
335	Millstone Hill Radar Station Results of Long-Baseline Radar Interferometer Studies	E. Gehrels	7 Nov. 1963	438425	
337	Mariner A Plasma Probe	H. S. Bridge § B. Rossi § F. Scherb § R. H. Baker R. S. Cuikay E. F. Lyon, III	5 Dec. 1963		
338	The West Ford Antenna System	B. F. LaPage	6 Dec. 1963	438879	
† 339	Signal Parameter Estimation for Seismometer Arrays	E. J. Kelly M. J. Levin	8 Jan. 1964	435489	H-643 M \$1.50 P \$6.80
341	Radio-Echo Studies of Meteors at 68-cm Wavelength. Part II: Shower Meteors	J. V. Evans R. A. Brockelman	15 Jan. 1964	601518	
342	Measurement of the Diameter of the Electronic Wake of the Hypersonic Pellets	M. Labitt	20 Jan. 1964	438816	
343	Project West Ford Payload Telemetry System	W. T. Higgins L. A. Jacobson J. B. Rankin	20 Jan. 1964	602928	
344	Information Capacity and Quantum Effects in Propagation Circuits	T. Hagfors	24 Jan. 1964	436639	
345	Interpretation of the Magnetic and Crystallographic Properties of Compounds with the B31 Structure	J. B. Goodenough	28 Jan. 1964	435758	

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TR No.				DDC No.	Hayden Serial and Prices
346	The Orthomatch Data Transmission System	B. G. Kuhn	18 Feb. 1964	602130	
347	Probability Distribution of Antenna Gain for Satellite with Switched Antenna System	R. N. Assaly	4 Feb. 1964	602484	
348	A More Precise Analysis of Multicavity Klystrons. II. Prediction of Electronic Conductance and Over-All Gain	R. L. Pease	14 Feb. 1964	441855	
349	Radar Scattering from a Conducting Cone-Sphere	J. H. Pannell J. Rheinstejn A. F. Smith	2 Mar. 1964	600411	
350	The Variable-Drift Klystron - A High Efficiency Amplifier	I. Hefni M. A. Nader	8 Apr. 1964	441439	
351	Beam Pulse Heating	E. Silverman	13 Apr. 1964	443715	
† 352	Characterization and Measurement of Time- and Frequency-Spread Channels	R. G. Gallager	30 Apr. 1964	443715	H-657 M \$1.50 P \$4.40
353	Field Emission in Vacuum Voltage Breakdown	G. E. Vibrans	8 May 1964	602844	
355	Nondestructive Readout Scheme for Thin Film Memories	M. S. Maltz	21 May 1964	603755	
356	Limitations of Oxide-Cathode High Current Density Operation	H. A. Pike	22 May 1964	604890	
† 357	Introduction to the TRADEX Radar System	G. R. Curry	15 July 1964	448350	H-693 M \$1.50 P \$3.20
* 360	Sequential Measurement of Multidimensional Transducers	J. R. Sklar	29 Oct. 1964	615515	
361	Numerical Methods in the Chemical Kinetics of High Temperature Air	L. B. Raisty	29 July 1964	449857	
364	Spin-Wave Effects in the Magnetization Reversal of a Thin Ferromagnetic Film	K. J. Harte	27 Aug. 1964	610068	
† 365	The Haystack Experimental Facility	H. G. Weiss	15 Sept. 1964	608272	H-661 M \$1.50 P \$7.20

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TR No.				DDC No.	Hayden Serial and Prices
* 366	Digital Communication over Fixed Time-Continuous Channels with Memory – with Special Application to Telephone Channels	J. L. Holsinger	20 Oct. 1964	614110	
367	Haystack Calibration Antenna	A. Sotiropoulos J. Ruze	15 Dec. 1964	611436	
368	Effects of General Relativity on Interplanetary Time-Delay Measurements	I. I. Shapiro	18 Dec. 1964	614232	
369	Study of an Orbiting Dipole Belt Communication System	F. Belvin T. J. Gobliek, Jr.	22 Dec. 1964	613583	
370	Decay of Electron Density in the Wakes of Hypervelocity Spheres	W. M. Kornegay	23 Dec. 1964	612152	
* 371	The Computation Problem with Sequential Decoding	J. E. Savage	16 Feb. 1965	621713	
372	Measurement of Properties of Spread Channels by the Two-Frequency Method with Application to Radar Astronomy	T. Hagfors	11 Jan. 1965	614233	
373	Influence of the Earth's Surface on Radar	N. I. Durlach	18 Jan. 1965	627635	
374	Ionospheric Backscatter Observations at Millstone Hill	J. V. Evans	22 Jan. 1965	616607	
375	Production and Propagation of Spherical Shock Waves at Low Ambient Pressures	W. M. Kornegay	26 Jan. 1965	463164	
377	An Experimental On-Line Data Storage and Retrieval System	J. F. Nolan A. W. Armenti	3 Feb. 1965 Revised 24 Sept. 1965	623796	
379	Calibration of a Pressure Sensor for Measurements in Continuum and Rarefied Gas Flows	W. M. Kornegay J. D. Fridman	8 Feb. 1965	614424	
380	AC Breakdown in Gases	C. E. Muehe	26 Feb. 1965	618503	

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TR No.			DDC No.	Hayden Serial and Prices
381	Phased Array Radar Studies, 1 January 1963 to 1 July 1964	J. L. Allen D. M. Bernella F. Betts L. Cartledge W. P. Delaney B. L. Diamond J. DiBartolo S. D. Ewing W. J. Ince T. B. Lewis H. J. Pratt, Jr. M. Siegel E. Stern D. H. Temme	31 Mar. 1965	629363
384	Magnetic Studies of the Anti-ferromagnet $RbMnF_3$	W. J. Ince	14 Oct. 1965	629429
385	Gunn Effect in Compound Semiconductors	A. G. Foyt	7 July 1965	630194
387	On-Line Documentation of the Compatible Time-Sharing System	J. M. Winett	12 May 1965	624110
388	Output Signal-to-Noise Ratio as a Criterion in Spread-Channel Signaling	R. Price	13 May 1965	476982
389	Millimeter Wave Research: Past, Present and Future	J. W. Meyer	17 May 1965	620727
390	Elements of the Hijmans-deBoer Approximation to Order-Disorder Theory	J. M. Honig	26 May 1965	623806
391	Generation of Planetary Ephemerides on an Electronic Computer	M. E. Ash	2 June 1965	629130
392	Optical Communications Employing Semiconductor Lasers	E. J. Chatterton	9 June 1965	630243
393	12-Horn Monopulse Antenna System for Millstone Hill Radar	C. A. Lindberg	15 June 1965	627008
394	Telemetry Antenna for Lincoln Experimental Satellites LES-1 and LES-2	M. E. Devane M. L. Rosenthal	22 June 1965	624936
* 396	An Experimental Facility for Sequential Decoding	C. W. Niessen	13 Sept. 1965	631240

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TR No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
398	Analog Generator for Real-Time Display of Curves	T. E. Johnson	28 July 1965	623945	
399	Radar Ground-Clutter Shields	J. Ruze F. I. Sheftman D. A. Cahlander	19 Aug. 1965	627465	
400	Generation of the Lunar Ephemeris on an Electronic Computer	M. E. Ash	24 Aug. 1965	629047	
404	Lincoln Experimental Terminal Antenna System	B. F. LaPage	4 Oct. 1965	630702	
405	On-Line Graphical Specification of Computer Procedures	W. R. Sutherland	23 May 1966		
406	The Haystack Computer Control System	F. E. Heart A. A. Mathiasen P. D. Smith	27 Oct. 1965	631559	
407	GaAs Laser Radar Components and Techniques – Final Report on Optical Radar, NASA Contract NAS9-105	M. E. Austin G. F. Dalrymple A. A. Galvin B. S. Goldstein R. M. Weigand J. D. Welch	29 Oct. 1965		
421	Large Aperture Seismic Array Capabilities	P. E. Green, Jr. R. V. Wood, Jr.	12 July 1966	631559	

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
21G-0001	Flexowriter and Ampex Tape Terminal Input Equipment for IBM-709 Computer	J. R. Brown	26 Aug. 1959	235248	H-63 M \$1.50 P \$8.20
21G-0003 (Rev. 1)	Wallops Island Preliminary Processing Computer Programs	S. M. Ornstein	25 July 1960	243045	H-158 M \$1.50 P \$8.20
21G-0003 (Rev. 2)	Wallops Island Preliminary Processing Computer Programs	S. M. Ornstein R. J. Saliga	23 Jan. 1961	250959	H-253 M \$1.50 P \$8.20
21G-0004	Oscilloscope Cameras for Video Recording - Reentry Physics Program	E. E. Schowengerdt	13 Mar. 1961		H-471 M \$1.50 P \$5.40
21G-0005	Automatic Range Tracking System for the Reentry Physics Program	J. E. Gillis	17 Feb. 1960	242887	H-159 M \$1.50 P \$12.70
21G-0006	Primary Recording Instrumentation for Re-entry Physics Program	E. J. Peters	20 Feb. 1961	263517	H-342 M \$1.50 P \$18.90
21G-0007	Backup Recording Instrumentation for Reentry Physics Program	K. H. Morey	18 May 1960	241800	H-145 M \$1.50 P \$10.60
21G-0008	Scanback Antenna Control for Reentry Physics Program	A. H. Flink	5 July 1961		H-472 M \$1.70 P \$24.90
21G-0009	Real Time Clock and Teletype Data Transmitter for Reentry Physics Program	R. M. Martinson	5 July 1960	242888	H-156 M \$1.50 P \$21.70
21G-0011	UHF Radar for Reentry Physics Program	B. G. Kuhn	19 Sept. 1960	244586	H-182 M \$1.50 P \$24.70
21G-0013	X-Band Radar for Reentry Physics Program	J. Sobolewski F. J. Dominick E. E. Schowengerdt L. C. Wilber	7 Dec. 1960	252043	H-262 M \$1.50 P \$25.90
21G-0015	Amplitude Calibration for Reentry Physics Program Arbutle Neck Radars	B. G. Kuhn	19 Sept. 1960	245324	H-192 M \$1.50 P \$13.90



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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 21G-0016	Procedures for Operating Parametric Amplifier in Reentry Physics Program	F. R. Hutchinson F. J. Dominick R. H. Kingston L. C. Wilber E. E. Schowengerdt	28 July 1960	243636	H-165 M \$1.50 P \$6.40
21G-0017	Anelex Printout System for Reentry Physics Program	E. J. Peters	21 Aug. 1961	263249	H-336 M \$1.50 P \$8.65
21G-0018	Specifications for Needles Filter Program Package	F. E. Heart	7 Apr. 1960	244493	H-180 M \$1.50 P \$4.90
† 21G-0019	Specification for Needles Statistical Orbit Prediction Program	W. R. Crowther	20 Apr. 1960	244494	H-181 M \$1.50 P \$1.60
21G-0021	An Introduction to Digital Techniques	R. M. Martinson	20 May 1960		H-473 M \$1.50 P \$13.90
21G-0022	Specifications for Teletype Tape Checking Procedure	S. M. Ornstein	16 June 1960	240171	H-130 M \$1.50 P \$4.00
21G-0022 (Suppl. 1)	Revision of West Ford TTY Checking Program	J. D. Drinan	2 Aug. 1962	283778	
21G-0024	West Ford Primary Print Program	J. D. Drinan	24 Jan. 1961	250958	H-250 M \$1.50 P \$4.00
21G-0024 (Suppl. 1)	West Ford Primary Print Program	J. D. Drinan	2 Aug. 1962	286367	
21G-0026	West Ford Coordinate Conversion Program	W. R. Crowther	1 Nov. 1960	246188	H-210 M \$1.50 P \$3.10
21G-0027	West Ford Statistical Orbit Prediction Program	W. R. Crowther	2 Nov. 1960	246778	H-221 M \$1.50 P \$2.80
21G-0028	West Ford Orbit Determination	A. A. Mathiasen	2 Nov. 1960	246777	H-222 M \$1.50 P \$6.70
21G-0029	Reliability of Redundant Computers	R. Teoste	22 Mar. 1961	260494	H-321 M \$1.50 P \$21.15
21G-0031	Specification for West Ford Pointing Program	F. E. Heart	20 July 1961	261181	H-326 M \$1.50 P \$6.40

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
21G-8001	Some Reliable Redundant Circuits	R. Teoste	7 June 1962	284793	H-423 M \$1.50 P \$7.65
21G-1	Programmed Satellite Pass Calculations	A. A. Mathiasen	28 June 1962	282041	H-414 M \$1.50 P \$14.90
21G-2	Project 861 Computer Programming System; Mathematical Analysis for Computation of Radar Pointing Data	Group 21	14 Sept. 1962	286547	H-434 M \$1.50 P \$13.15
21G-3	Project 861 Computer Program System; Auxiliary Programs and Techniques	J. D. Drinan A. A. Mathiasen	6 Sept. 1962	285046	H-426 M \$1.50 P \$6.90
21G-4	Project 861 Orbit Programs	A. A. Mathiasen W. R. Crowther	31 Aug. 1962	285045	H-425 M \$1.50 P \$14.40
21G-6	Project 861 Computer Program System; Pointing Program Notes	D. M. Hafford	21 Nov. 1962	290802	H-455 M \$1.50 P \$4.65
21G-7	Project 861 Computer Program System; Venus Pointing Data	J. D. Drinan	19 Nov. 1962	291230	H-459 M \$1.50 P \$6.90
21G-8	SICOSAS, an IBM 7090 Computer Assembly Program for the CDC 460-A Computer	J. D. Drinan	17 Jan. 1963	295693	H-469 M \$1.70 P \$24.65
† 22G-0002	An Algorithm for Assembling a Simple Tabular Report	P. R. Bagley	14 July 1959	230435	H-33 M \$1.50 P \$6.70
† 22G-0004	Approximations to Model Atmospheres	A. P. Ogg	10 Nov. 1959	230436	H-34 M \$1.50 P \$7.60
† 22G-0005	A Catalog of Tangent Rays	F. H. Ditto	12 Aug. 1959	230433	H-35 M \$1.50 P \$15.70
† 22G-0006	Sub-Program Storage Within a Digital Computer: A Cargo-Loading Problem	A. A. Grometstein	18 Aug. 1959	230437	H-36 M \$1.50 P \$5.50
† 22G-0009	A Facility for Automatic Construction of Large Program Systems	C. W. Uskavitch	29 Sept. 1959	234248	H-56 M \$1.50 P \$14.20

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No.				DDC No.	Hayden Serial and Prices
† 22G-0011	An Efficient Iterative Procedure for Locating the Optimum Operating Point of a Noisy System	H. J. Kushner	7 Dec. 1959	233269	H-47 M \$2.35 P \$20.80
† 22G-0012	Program Description and Operating Manual for PAVEG (Position and Velocity Error Generator)	D. L. Lovenvirth	14 Dec. 1959	244403	H-178 M \$1.50 P \$7.60
† 22G-0014	Applications of Boolean Matrices to the Analysis of Flow Diagrams	R. T. Prosser	21 Dec. 1959	230434	H-37 M \$1.50 P \$4.30
22G-0017	Macro Library for Easier Coding	J. S. Heart	15 Jan. 1960	233267	H-48 M \$1.50 P \$7.30
22G-0018	Introduction to an Investigation of a Technique for Smoothing Radar Returns from an Artificial Earth Satellite	F. Levine	15 Jan. 1960	233268	H-49 M \$1.50 P \$8.80
22G-0019	Preliminary Description of GENDARE	J. B. Williams, Jr.	15 Jan. 1960	233270	H-50 M \$1.50 P \$4.90
22G-0020	The GENDARE Identification Function	M. M. Daley	15 Jan. 1960	233265	H-51 M \$2.35 P \$19.90
22G-0021	On the Linear Smoothing of Redundant Radar Data from Satellites	F. C. Schweppe	25 Aug. 1960	243042	H-154 M \$1.50 P \$18.40
† 22G-0024	Analysis and Design of Simple Nonlinear Noise Filters	R. W. Sittler	5 Feb. 1960		H-46 M \$1.70 P \$29.80
22G-0025	The Design of a Language for Simplex System Users	D. Reiner	10 Mar. 1960	236233	H-83 M \$1.50 P \$7.90
22G-0027	Specifications and Operating Instructions for the OPERA	H. D. Fridman	4 Apr. 1960	236231	H-80 M \$1.50 P \$7.90
† 22G-0029	Decoding of Group Codes for Binary Symmetric Channels	W. I. Wells	21 Mar. 1960		H-70 M \$1.80 P \$31.30
22G-0034	On the Consistency of the Photon-Electron System - II	R. T. Prosser	6 June 1960	238064	H-112 M \$1.50 P \$10.60

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
22G-0035	A Method for Locating the Maximum of a Function of a Single Variable in the Presence of Noise	R. C. Norris	20 Oct. 1960	245804	H-207 M\$1.50 P\$12.10
22G-0036	Classification of Binary Sequences	W. I. Wells	10 May 1960	236796	H-95 M\$1.50 P\$3.40
22G-0038	A Method for Computing Keplerian Orbit Parameters from Two Positions with Times	A. P. Ogg	9 June 1960	238062	H-113 M\$1.50 P\$4.60
22G-0039	Some Results of Estimating Satellite Elements from Millstone Hill Averaged Data	H. D. Fridman	2 Nov. 1960	246781	H-217 M\$1.50 P\$10.60
22G-0041	Routing Procedures in Communications Networks. Part I: Random Procedures	R. T. Prosser	12 July 1960	241408	H-135 M\$1.50 P\$12.70
22G-0042	GENDARE System - Fundamental Concepts of Logic and Structure	J. B. Williams, Jr.	17 Oct. 1960	245234	H-195 M\$1.50 P\$6.70
22G-0043	Efficient Iterative Methods for Optimizing the Performance of Multi-Parameter Noisy Systems	H. J. Kushner	20 Oct. 1960	245802	H-205 M\$1.50 P\$23.50
22G-0046	An Empirical Investigation of Procedures for Locating the Maximum Peak of a Multiple-Peak Regression Function	E. J. Magee	20 Oct. 1960	245672	H-206 M\$1.50 P\$10.60
22G-0051	On the Behavior of the Geometric Genus Under Ground Field Extension	P. L. Falb	20 Oct. 1960	245548	H-202 M\$1.50 P\$4.00
22G-0052	On Determining the Ratio Between the Area of an Elliptical Sector and Its Triangle Approximation	R. Crittendon E. Dubinsky H. D. Fridman	18 May 1961	257640	H-308 M\$1.50 P\$6.65
22G-0053	Concepts of Automatic Data Storage and Retrieval in the Simplex System	C. W. Uskavitch	17 Oct. 1960	245472	H-201 M\$1.50 P\$21.10
22G-0054	A Survey of the Simplification of Truth Functions	W. Draisin	20 Oct. 1960	245231	H-193 M\$1.50 P\$6.10

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
22G-0055	A Sequential Procedure for Sampling the Population with the Maximum Mean	H. J. Kushner	23 Feb. 1961	252047	H-263 M \$1.50 P \$5.20
22G-0061	A Number of Results from Studies of Digital Filtering and the Convergence of Iterative Techniques	R. Crittendon E. Dubinsky D. Lubell F. C. Schweppe	1 June 1961	257461	H-306 M \$1.50 P \$13.15
22G-0071	Movement of Military Operations-Centers or Other Military Installations as Safeguard Against Nuclear Attack	J. H. Halberstein	14 May 1961	259667	H-317 M \$1.50 P \$8.15
† 22G-1	Movement of Military Centers as Safeguard Against Nuclear Attack, Part II	J. H. Halberstein	12 June 1962	285044	H-427 M \$1.50 P \$15.15
22G-2	Methods for the Adaptive Optimization of Binary Detection Systems	H. J. Kushner	9 Nov. 1962	290741	H-448 M \$1.50 P \$14.90
22G-3	Partial Differential Equations: First-Order Theory in One Dependent Variable – Deterministic Case	P. L. Falb	27 Nov. 1961	268122	H-368 M \$1.50 P \$6.90
22G-4	On Optimal Linear Control Systems Which Minimize the Time Integral of the Absolute Value of the Control Function (Minimum-Fuel Control Systems)	M. Athanassiades	10 May 1962	276881	H-404 M \$1.50 P \$23.65
† 22G-5	Newtonian Drag Coefficients and Weights for Blunted Cone-Spheres at Small Angles of Attack	A. Freed	30 Mar. 1962	275055	H-398 M \$1.50 P \$6.90
22G-6	The Local Behavior of Circular Orbits	F. C. Schweppe	23 Feb. 1962	272869	H-380 M \$1.50 P \$4.90
22G-7	A Model for the Study of Communications Degradation	K. M. Sayre	29 Mar. 1962	274739	H-397 M \$1.50 P \$17.65
22G-8	Time-Optimal Velocity Control of a Spinning Space Body	M. Athanassiades P. L. Falb	6 Sept. 1962	284207	H-422 M \$1.50 P \$11.40
22G-9	Time- and Fuel-Optimal Attitude Control	M. Athans	23 May 1963	407437	H-518 M \$1.50 P \$6.60

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
22G-10	Reduction of Computational and Data Transmission Requirements for Trajectory Estimation Using Multiple Sites	F. C. Schewpe	23 Aug. 1963	416742	H-533 M \$1.50 P \$4.20
22G-13	Newtonian Drag of Coated Cylinders	A. Freed	7 Jan. 1963	296790	H-480 M \$1.50 P \$6.15
22G-15	An Introduction to Estimation Theory for Dynamical Systems	F. C. Schewpe	28 Aug. 1963	417777	H-538 M \$1.50 P \$10.60
22G-16	Tables of the Amplitude and Phase of the Backscatter from a Conducting Sphere	J. Rheinstein	19 June 1963	409820	H-522 M \$1.50 P \$9.60
†24-54	Phone Line Data Transmission Systems	K. E. Perry	Sept. 1955		H-106 M \$1.50 P \$5.20
†2G-24-83	Magnetic Core SDV	F. L. McNamara	23 Dec. 1957	246780	H-218 M \$1.50 P \$13.90
2G-25-4	Error Statistics on Dual A-1 Digital Data Transmission Circuits from Kingston, New York to Cape Canaveral, Florida	E. J. Hofmann G. E. Masters §	6 June 1958	244772	H-185 M \$2.05 P \$37.30
†2G-25-12	Error Statistics on Dual A-1 Digital Data Transmission Circuits from Lexington, Massachusetts to So. Truro, Massachusetts	E. J. Hofmann	Feb. 1959		H-169 M \$1.50 P \$25.60
25G-0001	Design and Analysis of Circuitry for a Matched Filter System	W. A. Petersen	5 Aug. 1960	244771	H-183 M \$1.50 P \$10.30
25G-0002	Reflections from Spheroids	D. Parker	19 Feb. 1960	236594	H-88 M \$1.50 P \$4.60
†25G-0003	Measurement of Time Varying Telephone Line Characteristics	R. G. Gallager	Sept. 1959	230432	H-38 M \$1.50 P \$4.00
25G-0004	The Characterization of Channels with Rapid Multiplicative Perturbations	H. Sherman	26 Aug. 1960	243044	H-155 M \$1.50 P \$15.70

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No.				DDC No.	Hayden Serial and Prices
25G-0005	Error Statistics on Dual Data Circuits from Kingston, New York to Cape Canaveral, Florida	E. J. Hofmann	20 Oct. 1960	245991	H-208 M \$1.50 P \$12.40
25G-0006	Error Statistics on the Hawaiian Cable	E. J. Hofmann	19 Feb. 1960	236595	H-89 M \$1.50 P \$6.40
25G-0007	A Converter for AN/GSC-4 Connection to the Automatic Digital Data Error Recorder	W. G. Schmidt	29 Jan. 1960	236596	H-90 M \$1.50 P \$5.20
25G-0008	RANDWORD Circuitry and Circuit Characteristics	W. G. Schmidt	20 July 1960	240417	H-132 M \$1.50 P \$12.70
25G-0010	Error Statistics on a Long-Haul Looped Telephone Circuit Utilizing the Milgo Data System	E. J. Hofmann P. L. Grant	17 June 1960	240820	H-134 M \$1.50 P \$15.10
25G-0012	Impulse Noise on an H-44 Telephone Circuit Looped from Lexington, Massachusetts via West Haven, Connecticut	R. Pfeiffer H. Yudkin	Apr. 1960	236232	H-79 M \$1.50 P \$13.00
25G-0013	A Proposal for Long Range Communications Between Ground and Low-Orbiting Satellites	M. S. Macrakis	19 Feb. 1960	237120	H-104 M \$1.50 P \$8.20
25G-0014	Bermuda to New York Radio Teletype Reliability Tests	R. E. Greim	10 Mar. 1960	237123	H-99 M \$1.50 P \$9.40
25G-0015	Study of Torsional Waves in a Laminated Elastic Rod	M. S. Macrakis	27 May 1960	237853	H-111 M \$1.50 P \$16.00
25G-0017	Reliability Modifications to the ADDER and Kineplex Converter	E. J. Hofmann P. L. Grant W. A. Petersen W. G. Schmidt	25 Aug. 1960	242596	H-149 M \$1.50 P \$4.90
† 25G-0019	TRANSWORD - A Portable Word Generator for Use in Measurement of Bit Error Distribution	W. G. Schmidt	19 Oct. 1960	245232	H-194 M \$1.50 P \$3.70
25G-0021	Determination of $R_{cutoff}$ for the Asymmetric Channel	B. Reiffen	24 Oct. 1960	246372	H-214 M \$1.50 P \$6.40
25G-0021 (Rev. 1)	Determination of $R_{cutoff}$ for the Asymmetric Channel	B. Reiffen	3 Mar. 1961	252498	H-267 M \$1.50 P \$5.50

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
25G-0022	The Design of Data Trans- mission Systems	R. G. Enticknap R. M. Lerner	4 Oct. 1960	243926	H-167 M\$1.50 P\$7.60
25G-0024	Error Statistics on the Collins Kineplex Over Various Media	E. J. Hofmann P. L. Grant E. H. Harvey	12 Jan. 1961	251447	H-257 M\$1.50 P\$19.30
25G-0025	Error Statistics Utilizing the Milgo Data System Over Various Media	E. J. Hofmann P. L. Grant	23 Jan. 1961	251510	H-258 M\$1.50 P\$21.10
25G-0026	Error Statistics Utilizing the Code Translation Data System Over Various Media	E. J. Hofmann	28 Mar. 1961	254037	H-278 M\$1.50 P\$38.20
25G-0028	Collected Error Statistics Utilizing Four Modems Over Various Telephone Circuits	E. J. Hofmann	23 Jan. 1961	251571	H-259 M\$1.50 P\$7.30
25G-0032	The Design of Band Separation Filters	A. I. Grayzel	4 Jan. 1961	631199	H-235 M\$1.50 P\$18.10
25G-0033	Cerenkov Radiation and Milli- meter Wave Applications (Part A)	M. S. Macrakis	3 May 1961	256271	H-297 M\$1.50 P\$11.65
25G-0035	Specifications for a COBI Data Transmission Modern	E. J. Hofmann	18 July 1961	261546	H-327 M\$1.50 P\$13.15
25G-0037	Error Statistics of A-1 Digital Data Signaling Equipment over Various Media	P. L. Grant	15 Sept. 1961	264332	H-348 M\$1.50 P\$31.40
† 25G-1	A Lower Bound for the Sum of Independently Distributed Continuous Random Variables	B. Reiffen	27 Oct. 1961	266826	H-357 M\$1.50 P\$2.90
† 25G-2	Sequential Decoding for Binary Channels with Noise and Syn- chronization Errors	R. G. Gallager	27 Oct. 1961	266879	H-356 M\$1.50 P\$8.65
25G-3	Applicability of Coding to Radio Teletype Channels	A. B. Fontaine	27 Oct. 1961	266827	H-355 M\$1.50 P\$4.40
25G-4	Experiments in the Improve- ment of the Impulse Response of Telephone Circuits	H. L. Yudkin	27 Nov. 1961	269557	H-373 M\$1.50 P\$7.90



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No.				DDC No.	Hayden Serial and Prices
25G-5	Automatic Error-Detection System for Toll-Grade Telephone Circuit Data Transmission	W. G. Schmidt	27 Nov. 1961	268128	H-367 M \$1.50 P \$7.90
25G-6	Matching and Error Counter	L. Staaf E. J. Hofmann	5 Dec. 1961	268704	H-369 M \$1.50 P \$5.65
25G-7	Semi-Automatic RANDWORD Printed Circuit Tester	C. A. Hoover	27 Nov. 1961	268703	H-370 M \$1.50 P \$8.40
25G-8	COBI Data Transmission Testing in the United Kingdom	P. L. Grant	27 Mar. 1962	275152	H-400 M \$1.50 P \$6.90
25G-9	Transmission Testing on Alaskan Forward-Propagation Tropospheric Scatter Circuits	P. L. Grant	29 May 1962	282040	H-413 M \$1.50 P \$14.40
25G-10	Revised RANDWORD Circuitry and Circuit Characteristics	W. G. Schmidt	21 Aug. 1962	289379	H-447 M \$1.50 P \$21.90
25G-11	Data Transmission Testing from Donnelly Flats, Alaska to Sunnyvale, California over a Network of Carrier Equipment	P. L. Grant	21 Feb. 1963	402067	H-490 M \$1.50 P \$8.65
25G-12	Data Transmission Testing from Donnelly Flats, Alaska to Sunnyvale, California over a TD-2 Microwave Circuit	P. L. Grant	29 Nov. 1962	294849	H-465 M \$1.50 P \$7.15
25G-13	Non-linear Effects in a Plasma	M. S. Macrakis	8 Jan. 1963	295690	H-467 M \$1.50 P \$5.40
25G-14	Error Statistics and Coding for Digital Data Transmission over Telephone and Teletype Circuits	A. B. Fontaine	21 Jan. 1963	298114	H-481 M \$1.50 P \$5.40
25G-15	Blocks in Error and Pareto's Law	B. J. Moriarty	28 Jan. 1963	296490	H-475 M \$1.50 P \$2.15
† 25G-16	An Optimum Demodulator for Poisson Processes: Photon Source Detectors	B. Reiffen H. Sherman	20 Feb. 1963	401752	H-500 M \$1.50 P \$4.20

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No.				DDC No.	Hayden Serial and Prices
25G-17	Some Experimental Results for a Sequential Decoding Algorithm Applied to an Asymmetric Channel	B. Reiffen D. Wiggert	12 Feb. 1963	400616	H-488 M\$1.50 P\$12.15
25G-19	Delay in Data Transmission Through Simple Networks; Steady State Characteristics with Infinite Nodal Storage	B. J. Moriarty	6 June 1963	408250	H-510 M\$1.50 P\$9.80
25G-20	Thresholds for Several Analog Modulation Systems	B. Reiffen	6 May 1963	404621	H-516 M\$1.50 P\$5.80
26G-1	Uniform Oscillations from Infrared Masers (12 September 1961)	J. R. O'Connor H. A. Bostick D. B. Barker	8 Jan. 1962	270662	H-376 M\$1.50 P\$3.15
28G-1	A Note on the Multiple Zeros of Random Polynomials	J. C. Fogarty J. Max	31 Aug. 1962	283777	H-420 M\$1.50 P\$4.90
28G-3	A Random Acceleration Model for Filtering Polynomial-Like Signals	L. E. Jones F. C. Scheweppe	25 Oct. 1963	423431	H-548 M\$1.50 P\$8.40
3G-0002	The Distribution of Electrons in the Upper Ionosphere from Backscatter Observations	J. V. Evans	23 Nov. 1960	247860	H-255 M\$1.50 P\$7.00
3G-0002 (Suppl. 1)	The Distribution of Electrons in the Upper Ionosphere from Backscatter Observations	J. V. Evans	3 Apr. 1961	254143	H-280 M\$1.50 P\$3.70
3G-0003	Radio Communication Using Moon Reflected Signals	J. V. Evans	19 Dec. 1960	249355	H-237 M\$1.50 P\$10.60
3G-0004	The Scattering Properties of the Lunar Surface at Radio Wavelengths	J. V. Evans	10 Jan. 1961	250684	H-248 M\$1.50 P\$15.70
30-0001	Millstone Observations on NASA Shotput II Balloon, 16 January 1960, and Preliminary Conclusions	Group 314	29 Jan. 1960	235667	H-65 M\$1.50 P\$4.60
30-0002	Millstone Observations During the NASA Shotput III Experiment, 27 February 1960	P. B. Sebring	2 Mar. 1960	235668	H-66 M\$1.50 P\$6.10
30-0003	A Preliminary Investigation of Meteor Echoes at UHF	G. H. Pettengill V. C. Pineo	16 Mar. 1960	235669	H-67 M\$1.50 P\$3.70

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No.				DDC No.	Hayden Serial and Prices
30G-0004	Millstone Observations During the NASA Shotput IV Experiment	D. P. Hynek	29 Apr. 1960	236129	H-85 M \$1.50 P \$5.20
† 30G-0005	Millstone Hill Radar Station – A Summary of Millstone Hill Results for the TIROS I Satellite Launching	G. H. Pettengill	16 May 1960	237124	H-100 M \$1.50 P \$9.70
30G-0007	Millstone Operations Related to the Pioneer V Space Probe	R. R. Silva	23 June 1960	239345	H-117 M \$1.50 P \$5.80
30G-0009	Coding Instructions for Floating Point Trigonometric, Inverse Trigonometric, Hyperbolic and Exponential Functions	B. A. Jensen	1 Nov. 1960	246189	H-212 M \$1.50 P \$3.10
30G-0010	Digital Tracking Loop for High-Powered, Experimental Radar	E. C. Fraser	12 Sept. 1960		H-171 M \$1.50 P \$25.90
30G-0011	Lunar Communication Test Summary – 1959	P. B. Sebring	28 Sept. 1960	244207	H-170 M \$1.50 P \$3.70
30G-0014	Distribution of Electrons in the F Region	J. V. Evans	15 Sept. 1961	263902	H-345 M \$1.50 P \$9.90
30G-2	Radar Cross-Section Observations of the Echo I Communications Satellite	D. P. Hynek	19 Feb. 1962	274065	H-393 M \$1.50 P \$24.15
† 31-148	Communication System for a Mars Reconnaissance Vehicle	M. I. Skolnik L. Cartledge L. J. Ricardi	14 May 1959	239073	H-166 M \$1.50 P \$17.50
† 31-150	The Autocovariance Filter	J. L. Allen	10 Aug. 1959	236168	H-72 M \$1.50 P \$18.70
32-24	An Analysis of Angular Accuracies from Radar Measurements	R. Manasse	6 Dec. 1955	236166	H-75 M \$1.50 P \$4.30
† 32-25	The Application of the Theory of Signal Detectability to Signals with Unknown Polarization and Phase	R. Manasse	20 Aug. 1956	236167	H-10 M \$1.50 P \$8.50
32-26	The Performance of Post-Detection Integrators for the Detection of a Sine Wave in Noise at Low Input Signal-to-Noise Ratio	R. Manasse	28 Nov. 1956	236234	H-76 M \$1.50 P \$7.90

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No.				DDC No.	Hayden Serial and Prices
† 32-105	A New Phone Line Data System for Use in SAGE	K. E. Perry	1 May 1958	230115	H-30 M \$1.50 P \$13.90
32G-2	Preliminary Study of the Effect of Ozone on Atmospheric Transmission in the Range 0.25 Micron to 0.60 Micron	J. H. Meyer R. E. Newell §	19 Feb. 1963	402842	H-506 M \$1.50 P \$5.80
33-9	Observations at Round Hill on Shot Put II	L. P. Rainville	1 Mar. 1960	235246	H-62 M \$1.50 P \$9.10
33G-0014	Convection and Diffusion of Ionization in the E-Layer	H. Feshbach F. Villars	1 Dec. 1960	248362	H-229 M \$1.50 P \$15.40
† 33G-0015	Precision Tropospheric Radio Refraction Corrections for Ranges from 10 - 500 Nautical Miles	J. R. Bauer F. A. Wilson	20 Feb. 1961	252572	H-270 M \$1.50 P \$14.80
33G-1	Programming for the Group 33 Analog-to-Digital Conversion System	R. P. Ingalls W. C. Mason	9 July 1963	282042	H-415 M \$1.50 P \$13.65
† 34-43	Pattern Recognition and Learning	O. G. Selfridge	20 July 1955		H-21 M \$1.50 P \$7.30
† 34-55	Heuristic Aspects of the Artificial Intelligence Problem	M. L. Minsky	17 Dec. 1956	236885	H-58 M \$1.50 P \$26.80
† 34-57	"MAUDE" (Morse Automatic Decoder)	B. N. Eisenstadt B. Gold D. M. Nelson T. S. Pitcher O. G. Selfridge	30 Apr. 1957	230943	H-4 M \$1.50 P \$13.10
† 34-71	Legendre Sequences	N. Zierler	2 May 1958	268167	H-359 M \$1.50 P \$1.90
† 34-72	Some Results of the "MAUDE" Program	B. Byrnes B. Gold C. Kemball	June 1958	236398	H-39 M \$1.50 P \$9.40
† 34-75	A Preliminary Study of Human Pattern Recognition	U. Neisser	12 Sept. 1958	236395	H-59 M \$1.50 P \$6.40

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No.				DDC No.	Hayden Serial and Prices
† 34-76	A Survey of Soviet Communication Electronics	P. E. Green, Jr., Editor	Sept. 1958		H-8 M \$2.65 P \$59.75
† 34-84	A Summary of Detection Theory Notions in Radar Astronomy Terms	P. E. Green, Jr.	18 Jan. 1960	245698	H-189 M \$1.50 P \$8.80
34-85	A Transistorized Frequency Standard	P. L. Fleck	26 Jan. 1960	251107	H-255 M \$1.50 P \$4.60
34G-0002	Data Recording Equipment for Propagation Experiments	R. E. Gay W. B. Smith C. A. Wagner	12 Apr. 1960	239660	H-124 M \$1.50 P \$9.70
† 34G-0003	Radiometer Techniques in Radar	R. Price	10 June 1960	238759	H-121 M \$1.50 P \$17.20
34G-0005	A Computer Program for Processing Signals Received in Radar Astronomy Experiments	P. L. Fleck T. J. Goblick	14 Oct. 1960	245549	H-200 M \$1.50 P \$7.00
34G-0006	Sequential Transmission of Digital Information with Feedback	M. Horstein	8 Aug. 1960		H-136 M \$1.80 P \$34.00
34G-0008	On the Detection of Stochastic Signals in Additive Normal Noise: Part II	D. Middleton §	28 Dec. 1960	250287	H-247 M \$1.50 P \$16.30
34G-1	A Critique of Wilcox's Method of Ambiguity Function Synthesis	W. S. Widnall	28 Nov. 1961	267537	H-366 M \$1.50 P \$3.15
† 34G-2	The Detection and Identification of Underground Nuclear Explosions: A Study	G. L. Turin	2 Mar. 1962	273825	H-389 M \$1.50 P \$9.40
† 34G-3	The Effect of Approximation Errors in a General Class of Matched Filter Detectors	M. J. Levin	13 Feb. 1962	272757	H-379 M \$1.50 P \$4.40
† 34G-4	Maximum-Likelihood Estimation of the Correlation Function of a Threshold Signal, and Its Application to the Measurement of the Target Scattering Function in Radar Astronomy	R. Price	25 May 1962	276903	H-403 M \$1.50 P \$8.90
† 34G-5	Instantaneous Spectra and Ambiguity Function	M. J. Levin	2 Mar. 1962	273239	H-386 M \$1.50 P \$3.15

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No.				DDC No.	Hayden Serial and Prices
34G-6	Estimation of Doppler Shift and Spectral Width of a Random Process	M. J. Levin	12 June 1962	278686	H-409 M \$1.50 P \$4.40
34G-7	Estimation of the Second-Order Statistics of Randomly Time-Varying Linear Systems	M. J. Levin	2 Nov. 1962	289607	H-445 M \$1.50 P \$11.40
34G-8	The Estimation of a Pulse Transfer Function in the Presence of Noise	M. J. Levin	9 July 1962	282043	H-412 M \$1.50 P \$5.65
34G-9	Confidence Intervals and Sample Sizes in the Measurement of Signal and Noise Powers, Signal-to-Noise Ratios and Probability of Error	J. L. Holsinger	3 Jan. 1963	295133	H-466 M \$1.50 P \$11.40
34G-10	Upper Bound to the Capacity of a Linear Time-Varying Channel with Additive Gaussian Noise	G. D. Forney, Jr.	26 Sept. 1962	287453	H-437 M \$1.50 P \$5.40
34G-12	Radar Observations of the Planet Venus in the Soviet Union in April 1961		27 Feb. 1963	401137	H-489 M \$1.50 P \$15.90
35G-0002	Electron Density Measurements in the Wakes of Hypervelocity Pellets	M. Labitt M. A. Herlin	25 May 1961	272629	H-584 M \$1.50 P \$3.60
35G-2	Kinetic Theory Description of the Initial Expansion of a Gas Cloud	G. Bienkowski §	2 Nov. 1962	290491	H-446 M \$1.50 P \$13.40
36-18	Band-Pass Filters with Linear Phase	R. M. Lerner	July 1957	236399	H-55 M \$1.50 P \$7.30
36-25	A History of the Effort of MIT Lincoln Laboratory in the UHF/SHF Tropospheric-Scatter Communication Field Utilizing Frequency Modulation	W. E. Morrow, Jr. W. T. Burke	1 Jan. 1958	237119	H-102 M \$1.50 P \$12.70
† 36-36	On the Pathological Character of Independent Random Variables	D. G. Brennan	5 May 1959	245237	H-196 M \$1.50 P \$7.60
† 36-41	A Method of Speech Compression	R. M. Lerner	24 Aug. 1959	244920	H-164 M \$3.15 P \$67.00

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
36-42	Design of Signals	R. M. Lerner	11 Feb. 1960	236230	H-81 M \$1.50 P \$16.30
36-44	Additional Tests on the AN/FRC-47 (XD-1) Mock-up System	B. E. Nichols	11 Mar. 1960	243578	H-163 M \$1.50 P \$4.00
† 36G-0045	The Capture of the Weaker of Two Co-Channel Frequency-Modulated Signals	J. M. Gutwein	21 May 1960		H-109 M \$2.30 P \$68.20
36G-0047	A Tabulation of Quadratic Residues or Legendre Sequences with Respect to Primes up to 1021	R. M. Lerner A. Sherman	27 July 1960	241464	H-137 M \$1.50 P \$13.30
36G-1	The Influence of Terrain Shielding on Radio Wave Propagation at 8000 Mcps	W. E. Morrow, Jr. D. Karp R. V. Locke, Jr. W. C. Provencher	20 Nov. 1962	290511	H-452 M \$1.50 P \$2.40
36G-2	Microwave Cross Section of Thin Dipoles	C. L. Mack, Jr.	15 Nov. 1962	291231	H-458 M \$1.50 P \$8.40
36G-3	Optimum Satellite Dispensing Velocities for an Equatorial High Altitude Nonsynchronized Satellite Communication System	W. E. Morrow, Jr.	5 Dec. 1962	292995	H-461 M \$1.50 P \$3.90
36G-4	A Real-Time Fourier Transformer	W. E. Morrow, Jr. J. Max J. Petriceks D. Karp	16 July 1963	413786	H-526 M \$1.50 P \$5.60
36G-5	The Selection of Varactor Diodes for a 2X Multiplier	D. E. Crook	18 Mar. 1963	402827	H-507 M \$1.50 P \$10.80
36G-7	Statistics of Visibility in Satellite Communication Systems	C. L. Mack, Jr.	12 Sept. 1963	422340	H-546 M \$1.50 P \$7.00
37G-1	A Theorem on Fourier Integrals and an Application to the Theory of Measurement in Quantum Mechanics	H. E. Moses	5 Feb. 1963	296789	H-479 M \$1.50 P \$2.40
312-12 (Rev. 1)	The Use of Pulse Coding to Discriminate Against Clutter	R. Manasse	7 June 1961	260230	H-320 M \$1.50 P \$4.65

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
312-17	Radar Coverage on ICBM Trajectories	P. A. Willmann	7 July 1958	236400	H-54 M\$1.50 P\$4.60
312-23	The Use of Radar Interferometer Measurements to Study Planets	R. Manasse	18 Mar. 1959	236235	H-77 M\$1.50 P\$5.50
† 312-26	Range and Velocity Accuracy from Radar Measurements	R. Manasse	3 Feb. 1955	236236	H-78 M\$1.50 P\$6.40
312G-0001	Radar and Optical Observations on Reentry of the Trailblazer I (D-58) Test Vehicle of June 4, 1959	H. L. Kasnitz	May 1960	249718	H-244 M\$1.50 P\$6.10
312G-0001-1	Radar and Optical Observations on Reentry of the Trailblazer I (D-58) Test Vehicle of March 29, 1960	H. L. Kasnitz	June 1960	255950	H-292 M\$1.50 P\$12.15
312G-0002	An S-Band System for Measurement of Scattering from Hypervelocity Models	H. G. Pascalar D. E. Crook	Oct. 1960	250799	H-249 M\$1.50 P\$11.80
312G-0004	200 MC Beacon Tracking System for Reentry Physics	E. F. Tarbox	14 Sept. 1961	264325	H-347 M\$1.50 P\$6.65
312G-0006	AC and Impulse Switching Techniques for Use with Magnetic Memories	R. E. McMahon	26 June 1961	259503	H-319 M\$1.50 P\$7.65
312G-1	Flashing Light Encoders	L. A. Jacobson	27 Nov. 1961	269588	H-372 M\$1.50 P\$6.15
† 312G-3	On the Turbulent Far-Wake in Incompressible Axisymmetric Flow	A. W. K. Metzner	15 Nov. 1961	266943	H-362 M\$1.50 P\$6.40
312G-4	Scattering from a Homogeneous Plasma Cylinder of Infinite Length	C. M. deRidder L. G. Peterson	15 Jan. 1962	274067	H-392 M\$1.50 P\$25.40
312G-5	Three-Degrees-of-Freedom Trajectory Analysis Program	K. Kresa P. A. Willmann	30 Jan. 1962	273134	H-384 M\$1.50 P\$7.90
312G-7	Optical Observations of Lincoln Laboratory Hypersonic Re-entry Vehicles Trailblazers 1c and 1d	F. A. Wilson J. R. Bauer	16 May 1962	283416	H-418 M\$1.50 P\$12.15



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No.				DDC No.	Hayden Serial and Prices
312G-8	Scattering from a Radially Varying Plasma Cylinder of Infinite Length	C. M. deRidder L. G. Peterson	4 Dec. 1962	294647	H-464 M\$1.50 P\$22.90
312G-9	Linearized Theory of Homogeneous Turbulence in a Compressible Fluid	A. W. K. Metzner	7 June 1962	278439	H-407 M\$1.50 P\$10.40
312G-10	Sources of Error in Microwave Transmission Measurement of Ionized Trails	C. Bressel G. H. Price	3 July 1962	283563	H-419 M\$1.50 P\$19.90
312G-12	Radar Data Recording System, Ar buckle Neck Site, Wallops Island, Virginia	A. C. Dyer D. Keren R. W. MacComb H. W. Rudolph, Jr.	23 Aug. 1962	401486	H-497 M\$1.50 P\$11.20
312G-13	Programs for Calculating a Predicted Radar Trajectory	K. Kresa M. R. Tausner	8 Aug. 1962	296540	H-478 M\$1.50 P\$10.15
315-3	108 Mcps Tracking Antenna for Millstone Hill Radar	M. E. Devane	1 Dec. 1959	244405	H-177 M\$1.50 P\$4.30
315G-0001	The Study of Waveguide Shorting Plungers	R. N. Assaly	25 Jan. 1961	251041	H-254 M\$1.50 P\$8.20
315G-1	Near-Field Characteristics of Array Antennas	L. J. Ricardi W. C. Danforth, Jr. M. H. Malone	17 Oct. 1961	266428	H-354 M\$1.50 P\$14.90
315G-2	A Mechanically Fixed Radar Antenna with Scanning Capability	L. J. Ricardi R. N. Assaly W. C. Danforth, Jr.	16 Oct. 1961	266048	H-353 M\$1.50 P\$7.15
315G-3	A Mechanical Duplexer for High-Powered X-Band Radars	B. F. LaPage	8 Dec. 1961	271400	H-377 M\$1.50 P\$11.65
† 315G-4	Millstone Hill Zenith-Pointing Paraboloid	M. E. Devane	7 Jan. 1963	401907	H-501 M\$1.50 P\$4.40
315G-5	A Discussion of the Use of a System of Passive Satellites in Stationary Orbits for Radio Communication	R. N. Assaly	28 Feb. 1963	402841	H-504 M\$1.50 P\$6.20
† 4G-0002	An Experimental Communication Center for Scientific and Technical Information	M. M. Kessler	31 Mar. 1960	254656	H-283 M\$1.50 P\$6.70

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No.				DDC No.	Hayden Serial and Prices
† 4G-0007	A Millimeter Wave Anti-Missile Miss Distance Indicator	J. W. Meyer	16 Jan. 1961	249717	H-245 M \$1.50 P \$2.80
4G-0010	System Applications of Millimeter Waves	J. W. Meyer	17 Feb. 1961	251663	H-261 M \$1.50 P \$11.50
41G-0002	Practical Realization of Video and IF Matched Filters	D. R. Bromaghim	14 July 1960	241802	H-144 M \$1.50 P \$4.30
41G-0004	Doppler Analyzer Display	D. R. Bromaghim W. H. Drury W. F. Kelley	7 Mar. 1961	253514	H-274 M \$1.50 P \$10.30
41G-0008	A General Method for Controlling the Time and Frequency Envelopes of FM Signals	E. N. Fowle	5 June 1961	258055	H-309 M \$1.50 P \$4.40
41G-0009	A Method of Signal Design Employing Saddle Point Integration	R. D. Haggarty	19 May 1961	258617	H-312 M \$1.50 P \$5.90
41G-0011	On Entire Functions and a Fourier Integral Problem	J. A. Sheehan	5 July 1961	259568	H-314 M \$1.50 P \$4.90
41G-0012	An RF Multiple Beam Forming Technique	W. P. Delaney	9 Aug. 1961	262017	H-334 M \$1.50 P \$23.15
41G-0014	Some Recent Strip Transmission Line Measurements, Formulae, Techniques and Components for Phased Array Radar	D. H. Temme	19 Sept. 1961	264324	H-346 M \$1.50 P \$8.40
† 41G-1	Operational Characteristics of 16 Electron-Beam Parametric Amplifiers in a 900 Mcps Phased Array	J. H. Teele	6 Aug. 1962	288223	H-444 M \$1.50 P \$27.90
41G-3	Echolocation Systems of the Bat: Progress Report on Experimental Studies Conducted at F. A. Webster's Laboratory (1 Nov. 1961 - 1 Sept. 1962)	N. I. Durlach F. A. Webster §	14 Aug. 1963	417565	H-534 M \$1.50 P \$19.40
41G-5	Asymptotic Behavior of the Spectra of RF Pulses with Linear Frequency Modulation	S. L. Borison D. F. DeLong	9 Oct. 1963		H-545 M \$1.50 P \$6.40

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No.				DDC No.	Hayden Serial and Prices
41G-6	Response Functions of Linear Time-Varying Systems	J. C. Lindenlaub	9 Sept. 1963	422263	H-544 M \$1.50 P \$9.60
42G-0001	Testing of Spun-Cast Parabolic Antennas	V. L. Lynn K. J. Keeping	14 July 1960	240111	H-128 M \$1.50 P \$10.00
42G-1	Commentary on a Paper by Kuklev Concerning the Influence of Noise on a Decoding Unit Using a Pulse Code Group	D. Middleton	28 Dec. 1961	287162	H-436 M \$1.50 P \$14.40
42G-2	Phase Shifting to Avoid Interference Regions Between Antenna Elements	B. H. Labitt	23 May 1962	277561	H-395 M \$1.50 P \$3.60
43-2	Range Ambiguity Resolution in High-PRF Radars Through the Use of Multiple Values of PRF	R. C. Labonte	24 Feb. 1958	238227	H-114 M \$1.50 P \$10.90
43G-1	A Multicavity Klystron Computer Program Including Potential Depression Correction	S. F. Catalano C. Guay G. L. Guernsey R. L. Pease M. E. Schwarz, Jr.	29 Aug. 1963	420687	H-542 M \$1.50 P \$7.20
45-34	Notes on MTI Simulation Techniques	J. W. McGinn, Jr.	7 Oct. 1958	256978	H-322 M \$1.50 P \$4.40
45-34-1	Notes on MTI Simulation Techniques - Part II	J. W. McGinn, Jr.	29 Mar. 1959	256979	H-323 M \$1.50 P \$5.40
† 45-42	Radar Returns from Birds and Their Elimination from Radar Outputs	R. E. Richardson J. M. Stacey H. M. Kohler F. R. Naka	22 Dec. 1959	241994	H-147 M \$1.50 P \$7.90
† 46-37	Some Properties of Folded Cylinder TR Tubes at Intermediate UHF Powers	R. E. Slattery	30 Dec. 1958	245323	H-199 M \$1.50 P \$14.20
† 46-38	Analysis of Noise in Parametric Amplifiers of the Negative Conductance Type	C. Blake	22 Jan. 1959	245235	H-197 M \$1.50 P \$4.00
*† 46-39	A Frequency Domain Theory of Parametric Amplification	B. J. Leon	6 Apr. 1959	245236	H-198 M \$1.50 P \$25.60

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No.				DDC No.	Hayden Serial and Prices
46-42	Resonant-Cavity Stabilization of Reflex-Klystron Oscillators	W. A. Andrews C. E. Chase H. Feldman	Jan. 1958	236884	H-96 M\$1.50 P\$12.10
† 46-43	Design Considerations for Cassegrainian and Gregorian Reflector Type Microwave System	K. J. Keeping	25 Jan. 1960	244400	H-174 M\$1.50 P\$17.20
46-45	Folded Cylinder TR for $3\frac{1}{8}$ - Inch Line	C. E. Muehe R. J. Carbone	1 Dec. 1959	240455	H-133 M\$1.50 P\$5.20
46-46	Tables of Some Properties of Liquid Helium	J. Fineman C. E. Chase	10 Aug. 1959	244404	H-175 M\$1.50 P\$8.50
46-47	A Simple Clean Pressure Gauge for the Millimeter Range	C. E. Muehe	18 Nov. 1959	244402	H-176 M\$1.50 P\$3.10
† 46-48	The Traveling Wave Resonator and High Power Microwave Testing	S. J. Miller	8 Jan. 1960	243855	H-166 M\$1.50 P\$16.00
46-50	Folded Cylinder UHF Duplexer for $6\frac{1}{8}$ -Inch Coaxial Line	C. E. Muehe	10 Mar. 1960	237003	H-98 M\$1.50 P\$4.00
46G-0001	A Horizontally-Polarized Omnidirectional Linear Array with a Cosecant-Squared Vertical Beam	F. I. Sheftman	31 Mar. 1960	236677	H-91 M\$1.50 P\$10.90
46G-0002	A Broadband Impedance Transition for Coaxial Line	C. B. Nelson	15 Apr. 1960	236273	H-84 M\$1.50 P\$5.50
46G-0003	Some Aspects of High Power Window Design	C. E. Muehe	3 Oct. 1960	244326	H-172 M\$1.50 P\$8.80
46G-0005	Primary Feed for Damp Ship Antenna	K. J. Keeping	15 July 1960	240172	H-131 M\$1.50 P\$15.40
46G-0006	The High Frequency Low Pressure Discharge	H. S. Bennett	24 Aug. 1961	262240	H-339 M\$1.50 P\$9.40
46G-0007	An Additional Consideration in the Design of Traveling Wave Resonators	S. J. Miller	26 Oct. 1960	246186	H-213 M\$1.50 P\$2.50

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
46G-0008	A Wide Band Antenna Having Axially Symmetrical Patterns, High Gain and Low Side Lobes for All Polarizations	K. J. Keeping	30 Nov. 1960	248360	H-227 M \$1.50 P \$10.60
46G-0009	A Simple Approximate Expression for Converting Directly from Noise Figures in DB to Noise Temperatures	E. P. McCurley C. Blake	8 Dec. 1960	248912	H-231 M \$1.50 P \$2.20
46G-0010	A Family of Hybrids in Large Size Coaxial Line	W. A. Both	17 Jan. 1961	251245	H-256 M \$1.50 P \$4.30
46G-0012	Evaluation of Three Microwave Densitometers	S. J. Miller F. I. Sheftman	21 July 1961	260947	H-325 M \$1.50 P \$2.40
46G-0013	Some Equilibrium Properties of Elemental Superconductors	J. Fineman	31 July 1961	261866	H-329 M \$1.50 P \$14.40
46G-1	Amplitude and Phase Deviation in Waveguides with Shunt Devices	A. H. Kessler	8 June 1962	285628	H-430 M \$1.50 P \$17.15
46G-2	The Surface Resistance of High-Current Microwave Discharges in Argon	C. E. Muehe T. J. Fessenden	20 Mar. 1963	403653	H-503 M \$1.50 P \$13.40
46G-3	A Simple Method for Designing an Elliptical Polarizer in Square Waveguide	A. H. Kessler W. J. Getsinger	28 May 1963	407624	H-514 M \$1.50 P \$4.80
46G-4	Experimental Evaluation of a 1000-Wavelength Antenna	W. D. Fitzgerald V. L. Lynn K. J. Keeping	13 May 1963	406109	H-512 M \$1.50 P \$8.40
† 47-16	The Theory of the Radiometer	E. J. Kelly D. H. Lyons W. L. Root	2 May 1958		H-304 M \$1.50 P \$9.65
47-19	Computer Simulation of the Pure-Phase Periodogram and the Doppler Phase Difference Integrator	S. F. Catalano E. J. Jones	12 Sept. 1958	261365	H-332 M \$1.50 P \$2.65
† 47-24	A Decoding Procedure for Polynomial Codes	I. S. Reed G. Solomon	6 Mar. 1959	241701	H-143 M \$1.50 P \$2.50
† 47-25	Note on Mixed Pre- and Post-Detection Integration of Doppler Echoes	D. H. Lyons	12 May 1959		H-184 M \$1.50 P \$4.00

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 47-26	An IF Power Comparator with Large Dynamic Range	G. R. Curry M. Axelbank	12 May 1959	233571	H-43 M \$1.50 P \$8.80
† 47-28	Three-Phase Codes	D. F. DeLong	24 July 1959	241519	H-142 M \$1.50 P \$6.10
† 47-29	False Alarm Rate for the Doppler Phase Difference Integrator	I. S. Reed E. J. Jones H. M. Jones J. J. Mikulski	9 Oct. 1959	232331	H-42 M \$1.50 P \$7.90
† 47-30	On the Sensitivity of a Simple Continuously Calibrated Radiometer	E. J. Kelly J. W. McGinn	18 Dec. 1959	244836	H-188 M \$1.50 P \$4.30
† 47-32	Computer Applications of Boolean Functions of Time	I. S. Reed R. C. Jeffrey	15 Sept. 1959	244401	H-179 M \$1.50 P \$7.60
47-33	False Alarm Rate of the Doppler Phase Difference Integrator	J. J. Mikulski	30 Sept. 1959	244837	H-187 M \$1.50 P \$4.00
47-34	Some Counting and Inversion Formulas Involving Groups	G. Solomon	1 Dec. 1959	233869	H-52 M \$1.50 P \$5.20
† 47-35	Statistical Error Control of a Realizable Binary Symmetric Channel	I. S. Reed	1 Nov. 1959	241453	H-141 M \$1.50 P \$4.60
† 47-36	Detection of Signals in Non-Gaussian Noise	D. L. Clark	15 Dec. 1959	232332	H-41 M \$1.50 P \$5.50
† 47-37	Linear Recursive Sequences as Finite Difference Equations	G. Solomon	15 Mar. 1960	243047	H-157 M \$1.50 P \$5.20
† 47-38	The Scattering Matrix: Polarization, Power and Periodic Bodies from the Viewpoint of Matrix Theory	J. J. Mikulski	1 Mar. 1960	235249	H-69 M \$1.50 P \$9.40
47G-0001	The Characteristics of a Series of Fixed Coils at VHF	M. Axelbank G. R. McCully G. R. Curry	21 Apr. 1960	237852	H-110 M \$1.50 P \$5.50
47G-0003	A Direct-Coupled Multiplier for Acoustic Sonar	D. A. Cahlander	20 May 1960		H-103 M \$1.50 P \$17.20

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No.				DDC No.	Hayden Serial and Prices
47G-0004	The Characteristics of a Series of Tunable Coils at VHF	M. Axelbank G. R. McCully G. R. Curry	3 June 1960	239661	H-122 M \$1.50 P \$6.10
47G-0006	Experimental Autocorrelation of Binary Codes	D. F. Delong	24 Oct. 1960	245803	H-204 M \$1.50 P \$4.30
47G-0007	Detection of Signals in Non-Gaussian Noise – Computation Results for the Linear and Limiting Detector Systems	J. W. McGinn, Jr.	7 Oct. 1960	246779	H-220 M \$1.50 P \$8.80
47G-0010	An Ultrasonic Receiver for Detecting Signals of Bats	A. Bertolini	1 Dec. 1960	248361	H-228 M \$1.50 P \$12.10
47G-0010 (Rev. 1)	An Ultrasonic Receiver for Detecting Signals of Bats	A. Bertolini	5 Dec. 1961	268702	H-371 M \$1.50 P \$9.90
47G-0011	Traveling-Wave Tubes in Radiometers	D. Keren	28 Dec. 1960	249572	H-239 M \$1.50 P \$8.80
† 47G-0012	Idler Circuits in Varactor Frequency Multipliers	B. L. Diamond	13 Dec. 1960		H-236 M \$1.95 P \$36.10
47G-0013	The Radar Measurement of Range, Velocity and Acceleration	E. J. Kelly	6 Jan. 1961	249468	H-243 M \$1.50 P \$11.20
47G-0014	An Amplifier for Driving Electrostatic Transducers	G. R. Curry	11 Apr. 1961	254953	H-284 M \$1.50 P \$2.75
47G-0015	Detection of Signals in Non-Gaussian Noise-Computation Results for the Ratio Detector System	J. W. McGinn, Jr.	3 Apr. 1961	254035	H-277 M \$1.50 P \$8.80
47G-0016	A Non-Gaussian Noise Generator	D. F. Mayer	28 Feb. 1961	252497	H-268 M \$1.50 P \$9.70
47G-0018	An S-Band Sweep-Frequency Receiver	D. Keren	17 Mar. 1961	253619	H-273 M \$1.50 P \$7.00
47G-0019	APC with Pulse Reference	T. J. Rey	9 Nov. 1960	255695	H-290 M \$1.50 P \$29.90

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 47G-0020	A New Class of Codes	G. Solomon	28 Apr. 1961	255696	H-287 M \$1.50 P \$3.15
47G-0022	Quaternary Cyclic Codes	G. Solomon	13 Sept. 1961	263608	H-341 M \$1.50 P \$4.90
47G-0023	AFC for Discrete Frequencies	T. J. Rey	19 May 1961	259479	H-316 M \$1.50 P \$7.40
47G-0025	The Phase Periodogram Detector	E. J. Kelly	17 May 1961	256710	H-300 M \$1.50 P \$4.40
47G-0026	A Method for Finding Output Probability Densities	R. P. Wishner	20 June 1961	258918	H-311 M \$1.50 P \$4.40
47G-0027	Distribution of the Normalized Periodogram Detector	R. P. Wishner	26 June 1961	259478	H-315 M \$1.50 P \$7.90
47G-1	A Weight Formula for Group Codes	G. Solomon	9 Oct. 1961	264999	H-349 M \$1.50 P \$3.15
† 47G-2	Application of Statistical Estimation Procedures to the Identification Problem	R. P. Wishner J. C. Lindenlaub	3 Nov. 1961	266877	H-358 M \$1.50 P \$6.40
47G-3	The Design of Semiconductor- Diode Detector Circuits	G. R. Curry M. Axelbank	28 Feb. 1962	273510	H-388 M \$2.20 P \$43.65
† 47G-4	The Covariance Functions of Sine and Cosine Processes	J. W. McGinn, Jr.	26 Feb. 1962	273243	H-382 M \$1.50 P \$6.65
47G-5	Some Results for Higher- Order Varactor Frequency Multipliers	B. L. Diamond	21 Mar. 1963	404819	H-508 M \$2.05 P \$27.80
† 47G-6	Determination of Weight- to-Drift Ratio from Ratio Measurements	S. F. Catalano H. Schneider	8 Mar. 1963	401488	H-492 M \$1.50 P \$5.65
47G-7	Random Noise in Amplitude Comparison Monopulse Systems	J. W. McGinn, Jr.	7 Feb. 1963	400113	H-487 M \$1.50 P \$7.40
† 48-6	A Microwave Single Sideband Modulator	H. G. Pascalar	22 Apr. 1958	236271	H-68 M \$1.50 P \$8.80



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No.				DDC No.	Hayden Serial and Prices
† 48-7	An Investigation of Frequency Stabilization Techniques for Backward Wave Oscillators	H. G. Pascalar	3 Aug. 1959	235356	H-71 M \$1.50 P \$12.40
48-8	Measurements on Type HA-34 Traveling Wave Tube Frequency Multiplier	D. E. Crook H. G. Pascalar	19 Aug. 1959	236252	H-74 M \$1.50 P \$2.80
† 48-9	Broadbanding of a Klystron Output Cavity	A. Saharian	4 Jan. 1960	244917	H-186 M \$2.65 P \$53.20
48G-1	Measurement of Field Strength on Resonator Boundaries by the Perturbation of Radiation Field	I. Hefni	8 Feb. 1962	274066	H-394 M \$1.50 P \$8.65
5G-0001	A Heuristic Program that Solves Symbolic Integration Problems in Freshman Calculus, Symbolic Automatic Integrator (SAINT)	J. R. Slagle	10 May 1961	612937	H-295 M \$1.50 P \$27.90
† 50-1	A Computer Memory Using Magnetic Films	J. I. Raffel D. O. Smith	3 June 1959	230471	H-32 M \$1.50 P \$11.20
51-2	Techniques for Measuring the Angular Dispersion of the Easy Axis of Magnetic Films	T. S. Crowther	30 Mar. 1960	255697	H-289 M \$1.50 P \$4.15
51-8	The Lincoln Writer	J. T. Gilmore, Jr. R. E. Savell	6 Oct. 1959	235247	H-61 M \$1.50 P \$8.80
51-10	An Audio-Frequency Hysteresigraph for Thin Magnetic Films	D. D. Strassberg	16 Oct. 1959	252046	H-264 M \$1.50 P \$5.50
51-11	Techniques for Pulse Testing Magnetic Film Memory Elements	A. H. Anderson T. S. Crowther	29 Jan. 1960	255698	H-288 M \$1.50 P \$7.40
† 51G-0012	A Functional Description of the L-1 Computer	W. A. Clark, Jr.	28 Mar. 1960	236678	H-92 M \$1.50 P \$3.40
51G-0016	The TX-2 Electrostatic Display System	R. E. Savell	22 Aug. 1960	244325	H-173 M \$1.50 P \$7.60
51G-0017	Graphical Manipulation Techniques Using the Lincoln TX-2 Computer	H. H. Loomis	10 Nov. 1960	247861	H-226 M \$1.50 P \$9.10

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
51G-0018	A Program for Testing Sequences of Random Numbers	L. Kleinrock	25 Oct. 1960	246044	H-209 M \$1.50 P \$8.80
51G-0019	Magnetic Film Memory Design	J. I. Raffel T. S. Crowther A. H. Anderson T. O. Herndon	8 Nov. 1960	459062	H-642 M \$1.50 P \$8.40
51G-0021	PCM Television Bandwidth Reduction Using Pseudo-Random Noise	L. G. Roberts	30 Dec. 1960		H-233 M \$1.50 P \$13.00
51G-1	Improved TX-2 Gated Pulse Amplifier	J. H. Reaves	13 Feb. 1963	401489	H-495 M \$1.50 P \$15.40
51G-2	Automatic Memory Array Production System	C. G. Ryan	28 Feb. 1962	273238	H-385 M \$1.50 P \$7.15
51G-3	Deposited Connections and Wiring	E. A. Guditz	7 Sept. 1962	286545	H-431 M \$1.50 P \$14.40
51G-5	Storage-Time Delay Calculation for a Transistor Pulse Amplifier	J. H. Reaves	13 Feb. 1963	298065	H-483 M \$1.50 P \$9.40
51G-6	Preparation of Actual-Size Printed Wiring Layouts	E. A. Guditz	4 Dec. 1963	291893	H-460 M \$1.50 P \$4.40
51G-8	Programming Specifications for the FX-1 Computer	S. M. Ornstein J. E. Laynor	13 Mar. 1963	404508	H-505 M \$1.50 P \$10.20
† 52-4	New Averaging Program for the Millstone Hill Radar Site	F. Nagy	1 Apr. 1959	246776	H-219 M \$1.50 P \$3.10
52-7	Di-Pulse Logic	K. E. Perry	25 June 1959	255344	H-293 M \$1.50 P \$2.90
† 52G-0011	Some Remarks on Cyclic and Pseudo-Cyclic Codes	S. S. Shatz	9 Aug. 1960	241518	H-140 M \$1.50 P \$3.10
52G-0013	Galois Cohomology of Certain Modules Over Formal Power Series Fields	S. S. Shatz	8 Sept. 1960	243180	H-161 M \$1.50 P \$10.60
52G-0014	Inertial Selection for Magnetic Core Logic	R. H. Tancrell	11 Oct. 1960	244919	H-191 M \$1.50 P \$9.10

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
52G-0017	MIT Solar Plasma Experiment Instrumentation	E. F. Lyon	14 Apr. 1961	254954	H-285 M \$1.50 P \$10.50
52G-0018	A Tunnel Diode Reflex Memory	K. E. Perry	17 Apr. 1961	254955	H-286 M \$1.50 P \$3.00
52G-0019	Interference Suppression Performance of Several FM Receivers Using Feedforward	B. H. Hutchinson	26 July 1961		H-351 M \$1.50 P \$38.40
52G-0020	A Cohomological Lemma and Its Application	S. S. Shatz	13 June 1961	258056	H-310 M \$1.50 P \$3.65
† 52G-1	A Solid State Buffer-Memory System to Handle Randomly Transmitted Information	R. M. Horowitz	13 Feb. 1962	273785	H-390 M \$1.50 P \$6.40
52G-2	Statistical Properties of the Dicon Receiver	J. A. Dumanian	2 Mar. 1962	275278	H-401 M \$1.50 P \$8.65
52G-3	Instructions for the Use of Mutual Moon Visibility Charts	F. Nagy	7 June 1962	276879	H-405 M \$1.50 P \$2.90
52G-4-I	Foundations of a Theory of Algebraic Codes. Part I: Local Theory	S. S. Shatz	20 Sept. 1962	286548	H-432 M \$1.50 P \$5.90
52G-4-II	Foundations of a Theory of Algebraic Codes. Part II: Global Theory	S. S. Shatz	20 Sept. 1962	286546	H-433 M \$1.50 P \$6.40
52G-5	The Descendent Theorem in Abelian Groups	S. S. Shatz	16 Nov. 1962	290801	H-456 M \$1.50 P \$2.90
52G-6	Assembly of Precision Ferrite Pot Core Inductors	R. S. Berg B. Howland	17 Dec. 1962	294646	H-463 M \$1.50 P \$3.40
53G-0039	Considerations in the Design of a Random-Access Cryosar Memory	R. C. Johnston	5 July 1960	240224	H-129 M \$1.50 P \$9.70
53G-0044	Cryosar Memory Design	R. C. Johnston	19 May 1961	257183	H-302 M \$1.50 P \$8.15
53G-0051	Device Requirements for a Large Cryosar Memory	R. C. Johnston	27 Dec. 1960	249057	H-234 M \$1.50 P \$2.80

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
53G-0052	A Magneto-Optic Apparatus for the Dynamic Study of Ferromagnetic Surface Domains	F. W. Sarles, Jr.	23 Dec. 1960		H-242 M \$3.00 P \$63.70
† 53G-0059	Proposal for Magnetic Domain-Wall Storage and Logic	D. O. Smith	31 May 1961	257771	H-307 M \$1.50 P \$4.65
53G-0063	Surface Anisotropy Energy Density of a Ferromagnet	R. F. Soohoo	18 Aug. 1961	261588	H-333 M \$1.50 P \$2.90
53G-0064	A Microwave Magnetic Microscope	R. F. Soohoo	23 Aug. 1961	262542	H-324 M \$1.50 P \$2.90
53G-0065	Ferromagnetic Resonance in Yttrium Iron Garnet Film	R. F. Soohoo	28 Aug. 1961	262945	H-338 M \$1.50 P \$1.65
† 54-4	Physical Machines and Their Abstract Counterparts	M. Minsky	23 Mar. 1959		H-272 M \$1.50 P \$37.90
† 54-5	Theory of Formal Systems	R. M. Smullyan	15 Apr. 1959		H-60 M \$2.40 P \$70.60
† 54-9	Hierarchies in Pattern Recognition	U. Neisser	9 Oct. 1959		H-421 M \$1.50 P \$4.90
54-10	Human Recognition of Hand-Printed Characters	U. Neisser P. Weene	13 Oct. 1959		H-424 M \$1.50 P \$2.40
† 54-19	A Theory of Cognitive Processes	U. Neisser	23 Feb. 1960	243178	H-160 M \$1.50 P \$7.30
† 54G-0020	Topics in Dynamic Programming. II: Truncated Policies	M. L. Freimer	18 Apr. 1960		H-82 M \$1.60 P \$39.10
54G-0021	Linear Statistical Classification	A. Laemmel	16 May 1960	237125	H-101 M \$1.50 P \$3.40
54G-0022	Machine Correction of Garbled English Text	M. B. Evens C. K. McElwain F. VanHoosen §	1 June 1960	237700	H-107 M \$1.50 P \$7.30
54G-0025	The Independence of Attributes in Memory	U. Neisser A. Warmoth §	28 June 1960	239344	H-118 M \$1.50 P \$3.10

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No.				DDC No.	Hayden Serial and Prices
54G-0027	A 6-Symbol 7-State Universal Turing Machine	M. L. Minsky	19 Aug. 1960	242594	H-151 M \$1.50 P \$3.10
54G-0028	Machine Processing of Line Drawings	L. Hodes	7 Mar. 1961	252850	H-271 M \$1.50 P \$5.20
54G-0029	A 6-Symbol 6-State Universal Turing Machine	M. Minsky	12 Apr. 1961	259727	H-318 M \$1.50 P \$4.40
55-22	Some Connections Between Linear Recursive Sequences and Error-Correcting Codes: Informal Lectures	E. Weiss	22 Jan. 1960	239172	H-123 M \$1.50 P \$38.80
55G-0024	Residue Class Rings and Linear Recursive Sequences	E. Weiss	4 May 1960	236397	H-86 M \$1.50 P \$3.10
55G-0027	Coset Leaders	E. C. Dade	24 Aug. 1960	242595	H-152 M \$1.50 P \$3.70
55G-0028	Compression and Coding	E. Weiss	11 Oct. 1960	244918	H-190 M \$1.50 P \$1.60
55G-0030	The Shortest Path Through Many Points of a Set of Dimension $\alpha$	J. R. Kinney	1 Dec. 1960	247667	H-224 M \$1.50 P \$2.80
55G-0031	A Limit Theorem for a Position Dependent Branching Process	H. E. Conner	23 Mar. 1961		H-275 M \$1.50 P \$13.00
55G-0033	Mathematical Foundations of Scattering Theory	R. T. Prosser	5 Apr. 1961	254142	H-281 M \$1.50 P \$6.40
55G-0035	Generalized Reed-Muller Codes	E. Weiss	11 May 1961	256547	H-299 M \$1.50 P \$3.90
55G-0037	Tangential Limits of Functions from the Class $S_\alpha$	J. R. Kinney	9 May 1961	256370	H-298 M \$1.50 P \$1.65
†55G-1	A Survey of Functional Integration with Applications of the Wiener Integral	T. I. Seidman	16 Oct. 1961	265200	H-350 M \$1.50 P \$15.15
55G-2	An Acquirable Code	E. Weiss D. Gorenstein §	9 July 1962	281751	H-411 M \$1.50 P \$2.90

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No.				DDC No.	Hayden Serial and Prices
55G-3	Computing Good Coefficients for a Linear Evaluation Function	J. R. Slagle	11 Mar. 1963	401774	H-496 M\$1.50 P\$3.60
† 58-2	Remembering the Present States of a Number of Variables	D. B. Yntema G. E. Mueser	16 Mar. 1959	243179	H-162 M\$1.50 P\$4.90
58-6	The Reliability of Empirical Waiting-Time Distributions	J. E. K. Smith L. Klem	19 Aug. 1959	234563	H-57 M\$1.50 P\$5.20
58G-0011	An Introduction to Digital Computing	B. F. Green, Jr.	18 Aug. 1960	242597	H-153 M\$1.50 P\$14.50
58G-0013	Remembering the Present States of a Number of Variables. III: Why It Is Difficult to Keep Track of Several Variables with the Same Set of States	D. B. Yntema G. E. Mueser	17 Aug. 1960	242283	H-148 M\$1.50 P\$4.60
58G-0018	Visual Acuity Under Blue Illumination	R. T. Mitchell R. R. Mitchell	10 Feb. 1961	251570	H-260 M\$1.50 P\$4.60
58G-0024	Information Processing Language V (IPL-V) Special Procedures for the Lincoln 709/7090 Version	B. F. Green, Jr. A. Wolf	14 Aug. 1961	261867	H-330 M\$1.50 P\$11.40
61G-1	Design Curves for a Circular Polarizer	W. C. Danforth, Jr. L. J. Ricardi	19 Aug. 1963	417184	H-536 M\$1.50 P\$2.40
61G-2	A Reflection-Type Polarizer for the West Ford Antennas	B. F. LaPage	30 Dec. 1963	440430	H-565 M\$1.50 P\$7.60
61G-3	The Aperture Efficiency of Some Horn-Fed Paraboloidal Reflectors	A. R. Dion	30 Dec. 1963	431779	H-566 M\$1.50 P\$4.60
62G-1	Vocoded Speech	B. Gold	7 May 1963	407512	H-515 M\$1.50 P\$5.60
62G-2	Characteristics and Applications of Solid-State Operational Amplifiers	J. N. Harris K. E. Perry	23 July 1963	413473	H-528 M\$1.50 P\$14.20
62G-3	Pointing the Lincoln Laboratory Building B Roof Antenna in Real Time Using the CDC 160-A Computer	J. D. Drinan	26 June 1962	410546	H-524 M\$1.50 P\$9.80

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
62G-4	A Qualitative Description of Sequential Decoding	I. L. Lebow	12 July 1963	413949	H-529 M\$1.50 P\$6.20
62G-5	An Investigation of the Fano Sequential Decoding Algorithm by Computer Simulation	G. Blustein K. L. Jordan, Jr.	12 July 1963	412632	H-525 M\$1.50 P\$4.80
62G-6	Strategy for a Two-Way Feedback Communication System	F. G. Popp	5 Dec. 1963	426203	H-552 M\$1.50 P\$9.40
62G-8	The Volume Common to Two Intersecting Radar Beams	W. R. Crowther	31 Oct. 1963	425547	H-551 M\$1.50 P\$3.00
64G-1	Performance of Coherent Detection Systems Using Decision Directed Channel Measurement	J. G. Proakis P. R. Drouilhet	27 June 1963	409819	H-521 M\$1.50 P\$5.40
64G-3	Optimum Pulse Transmissions for Multipath Channels	J. G. Proakis	16 Aug. 1963	416639	H-532 M\$1.50 P\$8.20
64G-4	Computer Programs for Processing Signals Received in Radar Astronomy Experiments	P. L. Fleck, Jr. T. J. Goblick, Jr.	16 Aug. 1963	419091	H-540 M\$1.50 P\$5.80
64G-5	The Doubly Non-Central F-Distribution Expressed in Finite Terms	R. Price	13 Sept. 1963	420434	H-543 M\$1.50 P\$10.60
64G-6	Further Considerations in the Use of Large Seismometer Arrays	N. M. Abramson	14 Nov. 1963	424594	H-550 M\$1.50 P\$3.20
65G-1	A Note on Power Requirements for Digitalized Voice Transmission	B. Reiffen	6 May 1963	405622	H-513 M\$1.50 P\$3.20
65G-2	Optimum Jamming of Incoherently Received FSK Signals	L. I. Bluestein	26 June 1963	413482	H-537 M\$1.50 P\$5.80
65G-3	An Efficient Demodulator for an Analog Pseudo-Noise Multiplex System	H. L. VanTrees	2 July 1963	410705	H-523 M\$1.50 P\$5.80
65G-4	A New Method for Delay-Modulating a Pulse Train	L. I. Bluestein	28 May 1963	406108	H-511 M\$1.50 P\$3.80

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No.				DDC No.	Hayden Serial and Prices
65G-5	An Introduction to Feedback Demodulation	H. L. VanTrees	16 Aug. 1963	416589	H-531 M \$1.50 P \$12.20
65G-6	A Note on Sequential Decoding Applied to Large Alphabet Incoherent Channels - $R_{comp}$ Determination	M. H. Check B. Reiffen	31 May 1963	410883	H-519 M \$1.50 P \$2.80
65G-7	Delay in Data Transmission Through General Networks	B. J. Moriarty	18 Dec. 1963	427258	H-553 M \$1.50 P \$12.20
65G-8	Average Scattering Cross Section of Randomly-Oriented Dipoles	M. H. Check B. Reiffen	30 Dec. 1963	427756	H-555 M \$1.50 P \$4.00
66G-1	Cyclotomic Fields and Their Real Subfields	E. Weiss	9 Aug. 1963	416409	H-530 M \$1.50 P \$2.20
† 71G-1-I	Distortions and Stresses of Paraboloidal Surface Structures	J. W. Mar § F. Y. M. Wan	9 Jan. 1962	296298	H-476 M \$1.50 P \$24.40
† 71G-1-II	Distortions and Stresses of Paraboloidal Surface Structures. Part II. The Membrane Behavior	J. W. Mar § F. Y. M. Wan	4 Jan. 1963	296491	H-477 M \$1.80 P \$41.90
71G-1-III	Distortions and Stresses of Paraboloidal Surface Structures. Part III.	J. W. Mar § F. Y. M. Wan	15 Aug. 1963	417081	H-535 M \$1.70 P \$20.00
*† 71G-2	A Theoretical Analysis and Experimental Study of the Behavior of Panels of Isotropic and Orthotropic Material Under Static and Dynamic Loads	H. A. Balmer § E. A. Witmer § W. A. Loden §	Feb. 1962	273137	H-383 M \$2.05 P \$33.65
71G-3	Dynamic Buckling of Space Frame Radome Models	R. A. Muldoon	15 Feb. 1962	273237	H-387 M \$1.50 P \$18.90
71G-4	Preliminary Investigations on the Mechanical Design of Hardened Foam Radomes	R. A. Muldoon	3 May 1963	275713	H-402 M \$1.50 P \$10.65
71G-5	Air Loads and Pressure Distribution on a Parabolic Antenna Model	J. Bicknell § R. Yeghiayan §	30 Oct. 1962	290512	H-451 M \$1.50 P \$23.15



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No.				DDC No.	Hayden Serial and Prices
† 75-4	Experimental Investigation of Wind-Induced Vibrations in Antenna Members	W. Weaver, Jr.	26 Aug. 1959	231946	H-40 M \$1.70 P \$30.40
75G-0005	Antenna Range Area Construction, Antenna Test Facility, Bedford, Massachusetts	T. J. Lambie	19 Mar. 1960	237349	H-105 M \$1.50 P \$16.30
76-5	Maximum Temperatures in 55-Ft. Rigid Radomes for Temperate and Extreme Desert Environments	S. L. Hensel, Jr.	Nov. 1958		H-498 M \$1.50 P \$18.20
76G-0002	Some Considerations on Shell Theory	K. Washizu §	Oct. 1960	252204	H-265 M \$1.95 P \$53.20
† 76G-0003	The Electrical Evaluation of 110 Foot Diameter Metal Space-Frame Model Radomes and the CW-413 Radome	A. Cohen A. W. Maltese	25 Apr. 1961	256858	H-294 M \$1.50 P \$10.15
8G-0012	Semi-Metals – A New Horizon	B. Lax	24 Apr. 1961	256267	H-296 M \$1.50 P \$9.65
† 81G-0022	Ground State Properties of Nuclear Matter	R. D. Puff	22 July 1960	241463	H-138 M \$1.50 P \$18.70
81G-0026	Symmetry Property of Configurational Entropy	W. H. Kleiner	11 Jan. 1961	249989	H-246 M \$1.50 P \$10.60
81G-0028	The Generation of Microwave Phonons and Their Use in Studying the Spin Phonon Interaction	P. H. Carr	7 Mar. 1961		H-266 M \$1.50 P \$30.00
81G-0030	Symmetry of Configurational Entropy in Lattice Statistics	W. H. Kleiner	22 Mar. 1961	263341	H-340 M \$1.50 P \$8.65
81G-0031	Simple Theory of Tunneling and Its Dependence on a Magnetic Field	P. N. Argyres B. Lax	24 May 1961	257184	H-303 M \$1.50 P \$9.65
81G-1	Broadening in the Master Equation	P. L. Kelley	25 Oct. 1961	266360	H-352 M \$1.50 P \$6.40
† 82-8	Circulators at 70 and 140 kMeps	J. B. Thaxter G. S. Heller	10 July 1959	227946	H-23 M \$1.50 P \$3.40

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
† 82-9	Millimeter Instrumentation for Solid State Research	G. S. Heller	20 July 1959	230102	H-29 M \$1.50 P \$8.10
† 82G-0017	Areas for Research and Applications in the Millimeter Range of the Electromagnetic Spectrum	G. S. Heller P. E. Tannenwald	6 May 1960	237002	H-97 M \$1.50 P \$10.90
82G-0021	Atmospheric Absorption of 10-400 kMcps Radiation: Summary and Bibliography to 1960	E. S. Rosenblum	15 Aug. 1960	242598	H-150 M \$1.50 P \$7.90
82G-0029	Determination of Magneto-elastic Coupling by Spin Wave Resonance	M. H. Seavey, Jr.	31 July 1961	261601	H-328 M \$1.50 P \$6.40
82G-1	100 Kcps Modulation Paramagnetic Resonance Spectrometers for Centimeter and Millimeter Wavelengths	W. H. From E. D. Mills	26 Apr. 1962	282039	H-410 M \$1.50 P \$9.90
83G-0031	Concerning the Identity of the Predominant Acceptors in GaSb	A. J. Strauss E. B. Owens	24 Apr. 1961	256889	H-301 M \$1.50 P \$2.15
84-4	Tabulated Energy Values of Optical Transitions Observed in Experiments on the Zeeman Effect of Impurity Levels in Silicon	S. Zwerdling K. J. Button B. Lax	11 Feb. 1960	233266	H-24 M \$1.50 P \$6.10
85G-0004	An Infrared Image Tube for the Spectral Region of 1 to 40 Microns	R. J. Keyes	5 July 1960	258795	H-313 M \$1.50 P \$2.40
† 85G-0008	Photo and Thermal Effects in Compensated Zinc Doped Germanium	R. J. Keyes	21 Oct. 1960	245671	H-203 M \$1.50 P \$5.20
85G-0011	Free Carrier Faraday and Voight Effects for a Cubic Crystal with a Pb-Te Like Band Structure	J. Halpern	25 Aug. 1961	262923	H-337 M \$1.50 P \$9.40

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No.				DDC No.	Hayden Serial and Prices
1964-1	An Approximate Method for the Calculation of Scalar Scattering by Two-Dimensional Bodies	A. D. MacGillivray A. F. Smith	9 Jan. 1964	431781	H-564 M \$1.50 P \$3.40
1964-2	The Angular Resolution of Multiple Targets	J. R. Sklar F. C. Schweppe	14 Jan. 1964	430185	H-560 M \$1.50 P \$18.80
1964-3	Radar Backscatter from Some Low Cross-Section Shapes	A. F. Smith	16 Jan. 1964	431780	H-567 M \$1.50 P \$7.80
1964-4	Optimization of Signals	F. C. Schweppe	16 Jan. 1964	430345	H-557 M \$1.50 P \$10.20
1964-5	Sequential Decoding on a Channel with Simple Memory	J. E. Savage	2 Apr. 1964	437163	H-575 M \$1.50 P \$3.00
1964-6	Random Noise Considerations in the Design of Magnetic Film Sense Amplifiers	H. Blatt	17 Aug. 1964	605323	H-602 M \$1.50 P \$7.20
1964-9	Diplexer Using Side-Wall Couplers in One-Half Height Large X-Guide	J. A. Kostriza	17 Jan. 1964	429200	H-557 M \$1.50 P \$3.60
1964-10	A High-Performance He <sup>3</sup> Refrigerator	C. J. Rauch	29 Jan. 1964	433544	H-570 M \$1.50 P \$6.60
1964-11	Error Analysis of a Digital Monopulse Radar	M. Schneider N. T. Gaarder	30 Jan. 1964	430297	H-561 M \$1.50 P \$3.60
1964-12	Fuel-Optimal Singular Control of a Nonlinear Second Order System	M. Athans M. D. Canon	30 Jan. 1964	430272	H-559 M \$1.50 P \$10.80
1964-14	Electromagnetic Back-scattering Cross Section of a Circular Cylindrical Section	S. L. Borison	18 Feb. 1964	433714	H-568 M \$1.50 P \$7.80
1964-15	The Representation of Seismic Waves in Frequency-Wave Number Space	E. J. Kelly	6 Mar. 1964	433611	H-569 M \$1.50 P \$9.20
1964-16	Cross-Section Measurements of the Echo 11 Satellite by the Millstone L-Band Radar	R. F. Julian D. P. Hynek	7 Apr. 1964	602751	H-593 M \$1.50 P \$2.60

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No.				DDC No.	Hayden Serial and Prices
1964-17	Spectra of Vocoder Channel Signals	C. M. Rader	4 May 1964	600185	H-580 M \$1.50 P \$5.00
1964-19	Analog Orbit Computer	N. P. Smith S. H. Wright	16 Apr. 1964	600956	H-583 M \$1.50 P \$4.20
1964-20	Scattering Matrix of a Modified (Five-Port) Turnstile	J. A. Kostriza	24 Apr. 1964	439484	H-577 M \$1.50 P \$3.60
1964-22	Proposal for 7.75 - 8.35 kMeps Diplexer Using Side-Wall Couplers and Cut-Off Guide	J. A. Kostriza	24 Apr. 1964	600332	H-581 M \$1.50 P \$2.40
1964-23	On the Accuracy and Resolution of Radar Signals	F. C. Schweppe	25 June 1964	601986	H-589 M \$1.50 P \$9.20
1964-24	A Short Description of the TRADEX Data Recovery System	O. V. Fortier P. J. Harris	5 May 1964	439260	H-576 M \$1.50 P \$4.40
1964-25	Haystack-West Ford Intersite Coupling Link	J. E. Gillis	14 May 1964	601143	H-585 M \$1.50 P \$8.60
1964-26	A Remark on Orthonormal Bases of Continuous Functions in a Hilbert Space	T. S. Pitcher	12 May 1964	600534	H-582 M \$1.50 P \$2.20
1964-28	Phase Shift by Periodic Loading of Waveguide	J. A. Kostriza	25 June 1964	603060	H-595 M \$1.50 P \$7.00
1964-29	A Study of Radar Clutter in TRADEX	G. R. Curry	25 May 1964	441070	H-586 M \$1.50 P \$6.80
1964-31	Input Current Compensation for Transistor Operational Amplifiers	J. N. Harris R. S. Orr	28 Oct. 1964 Revised 12 May 1965	608819	H-261 M \$1.50 P \$14.00
1964-32	The Periodic Analysis of Sampled Data	E. Korngold	15 June 1964	601942	H-588 M \$1.50 P \$10.60
1964-33	Probability Density for the Radar Cross Section of One or More Randomly-Oriented Dipoles	S. L. Borison	22 June 1964	442679	H-591 M \$1.50 P \$4.60
1964-34	Multisegment Depressed-Collector for High-Power Klystrons	A. Saharian	16 June 1964	442958	H-592 M \$1.50 P \$17.40

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No.				DDC No.	Hayden Serial and Prices
1964-35	Automatic Doppler Control for the West Ford Antenna Pointing System	J. E. Gillis	25 June 1964	602080	H-590 M \$1.50 P \$4.80
1964-36	Exploratory Preparation of Foils Strongly Colored in the 1-6 $\mu$ Region of the Infrared	E. W. Pike	30 July 1964	604009	H-599 M \$1.50 P \$16.60
1964-37	Partial Fractions and Error- Correcting Codes	E. Weiss	6 July 1964	602982	H-594 M \$1.50 P \$4.20
1964-38	Computer Programs for Haystack Servo Testing	L. D. Massey	21 July 1964	603794	H-598 M \$1.50 P \$16.80
1964-40	Haystack Pointing System: Sun	H. E. Frachtman	29 July 1964	603318	H-596 M \$1.50 P \$7.60
1964-41	Haystack Pointing System: Ephemeric Tapc Program	D. M. Hafford	25 Sept. 1964	450196	H-612 M \$1.50 P \$9.20
1964-43	A Method for Evaluating a Generalized Fresnel Integral Related to the Spectra of Amplitude and Frequency Modulated Pulses	E. B. Temple	5 Aug. 1964	604480	H-600 M \$1.50 P \$5.40
1964-44	Processing of Limited Network Seismic Signals	E. J. Kelly, Jr.	4 Sept. 1964	447220	H-604 M \$1.50 P \$5.20
1964-45	Haystack Pointing System: Moon	H. E. Frachtman	10 Sept. 1964	606154	H-607 M \$1.50 P \$4.60
1964-46	Haystack Pointing System: Planet	H. E. Frachtman	10 Sept. 1964	606501	H-608 M \$1.50 P \$5.00
1964-47	Haystack Pointing System: Stars	H. E. Frachtman	25 Sept. 1964	449739	H-611 M \$1.50 P \$6.80
1964-48	Efficient Approximation of Orthogonal Waveforms	L. I. Bluestein R. L. Greenspan §	3 Nov. 1964	451755	H-616 M \$1.50 P \$5.20
1964-49	Multidimensional Parameter Estimation of Point Mass Re-entry Trajectories	H. O. Schneider	27 Aug. 1964	446744	H-603 M \$1.50 P \$7.20

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
1964-51	The Software Problem	D. B. Yntema	4 Sept. 1964	605824	H-605 M \$1.50 P \$3.60
1964-54	The Lincoln Experimental Terminal Signal Processing System	P. R. Drouilhet, Jr. I. L. Lebow	16 Oct. 1964	450689	H-613 M \$1.50 P \$4.00
† 1964-55	The Lincoln Experimental Satellite	H. Sherman P. Waldron D. C. MacLellan	14 Oct. 1964	449485	H-610 M \$1.50 P \$5.00
1964-57	Haystack Pointing System: Interpolation	R. Teoste	28 Oct. 1964	608289	H-615 M \$1.50 P \$6.00
1964-59	Dynamic-Range Reduction of Video Signals by Amplitude Compression	R. D. Behn	16 Nov. 1964	609361	H-623 M \$1.50 P \$7.60
1964-60	The Application of Analysis of Variance to the Seismic Discrimination Problem	J. S. Richters	3 Nov. 1964	451871	H-618 M \$1.50 P \$4.40
1964-61	Random Scatter Channels	E. J. Kelly, Jr.	4 Nov. 1964	451756	H-617 M \$1.50 P \$10.60
1964-63	An Inequality for Certain Correlation Functions	R. T. Prosser	29 Oct. 1964	608288	H-614 M \$1.50 P \$2.20
1964-64	Algorithms for Estimating a Re-entry Body's Position, Velocity and Ballistic Coefficient in Real Time or for Post Flight Analysis	F. C. Scheweppe	3 Dec. 1964	609524	H-626 M \$1.50 P \$10.40
1964-65	Draft Program Description for Radar and Radiometric Lunar Surface Studies	P. B. Sebring, Editor	20 Nov. 1964	609384	H-624 M \$1.50 P \$9.20
1964-67	Bounds on the Inverse of a Positive Definite Symmetric Matrix	M. J. Levin	20 Nov. 1964	452772	H-622 M \$1.50 P \$2.20
1964-70	An Approach to Giant-Stepping	E. Weiss	23 Nov. 1964	608758	H-620 M \$1.50 P \$5.20
1964-71	Coordinate Conversion for the Haystack Pointing System	P. Stylos	10 Dec. 1964	609433	H-625 M \$1.90 P \$32.60

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No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
1965-1	A Large Aperture Seismic Array	P. E. Green, Jr.	6 Jan. 1965	609851	H-628 M \$1.50 P \$6.40
1965-3	Experimental Observation of the Creeping Wave Phenomenon in Backscatter Using a Short Pulse Radar System	D. F. Sedivec D. E. Foreman §	14 Jan. 1965	612537	H-630 M \$1.50 P \$6.40
1965-6	Design Aspects of Minimal-Power Digital Circuitry	W. G. Schmidt D. E. Chace	9 Feb. 1965	612669	H-637 M \$1.50 P \$4.60
1965-7	Smoothing and Processing of Simulated AMRAD Trajectory Data	A. Bertolini S. F. Catalano	21 Jan. 1965	612151	H-635 M \$1.50 P \$4.00
1965-8	A Method for Power Spectrum Parameter Estimation	M. J. Levin	10 Feb. 1965	612796	H-633 M \$1.50 P \$4.20
1965-10	Statistics of the Radar Cross Section of a Volume of Chaff	S. L. Borison	10 Feb. 1965	612887	H-634 M \$1.50 P \$3.20
1965-12	El Campo Solar Radar Antenna Modification	M. E. Devane	8 Feb. 1965	612150	H-636 M \$1.50 P \$4.80
1965-11	Space Radiation Effects on High Gain Low Current Silicon Planar Transistors	A. G. Stanley	9 Feb. 1965 Revised 25 Oct. 1965	627605	H-699 M \$1.50 P \$9.60
1965-13	An Estimate of the Absorption Mean Free Path for a Photon in a Gas	H. E. Moses	4 Feb. 1965	611576	H-632 M \$1.50 P \$4.00

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TN No.				<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
1965-1	Programmable Film Reader	A. W. Armenti D. F. Clapp A. I. Schulman R. A. Wiesen	10 Mar. 1965	615106	H-647 M \$1.60 P \$40.00
1965-3	Failure Erasure Circuitry: A Duplicate Technique for Failure-Masking Systems	J. B. Connolly W. G. Schmidt	14 Oct. 1965	477218	H-697 M \$1.50 P \$5.40
1965-4	Computationally Feasible Frequency Estimates in the Presence of Unknown Phase and Amplitude	L. A. Gardner, Jr.	11 Mar. 1965	613341	H-638 M \$1.50 P \$15.40
1965-5	Proposed Electronic Systems for the LES Radiation Ex- periment (September 1964)	J. H. Binsack	20 July 1965	619977	H-668 M \$1.50 P \$10.00
1965-6	On the Measurement of Atmos- pheric Multipath and Doppler Spread by Passive Means	B. Reiffen	5 Mar. 1965	614787	H-646 M \$1.50 P \$4.60
1965-7	Measurements on an L-Band Power Amplifier for Phased Arrays	L. Cartledge	17 Mar. 1965	614426	H-641 M \$1.50 P \$3.00
1965-8	Procedures and Computer Programs for the Reduction of Ballistic Plates from the Trailblazer I and II Programs	F. A. Wilson	10 Mar. 1965	620691	H-670 M \$1.50 P \$14.60
1965-9	The Two-Frequency Measure- ment of Line-of-Sight Spread Channels	M. L. Burrows	17 May 1965	616528	H-651 M \$1.50 P \$3.60
1965-11	Signals Distortion in a Fre- quency Divider	J. Max	12 Mar. 1965	614425	H-640 M \$1.50 P \$12.00
1965-12	Array Beam-Forming Networks	L. J. Ricardi	13 Apr. 1965	615522	H-648 M \$1.50 P \$4.00
1965-13	Aspects of Associative Processing	J. A. Feldman	21 Apr. 1965	614634	H-644 M \$1.50 P \$10.20
1965-14	Radiometer Data Processing in the Haystack Antenna Point- ing System	P. Stylos	29 July 1965	620872	H-672 M \$1.50 P \$13.00



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TN No.				DDC No.	Hayden Serial and Prices
1965-15	A Shaped Reflector as a Primary Feed for Haystack	A. Sotiropoulos	30 Sept. 1965	625375	H-687 M\$1.50 P\$5.40
1965-16	A Program for Estimation of Power Spectra	C. R. Arnold E. Korngold	21 May 1965	616677	H-652 M\$1.50 P\$6.20
1965-17	Haystack Univac 490 Remote Teletype Console Connection	P. D. Smith	5 May 1965	615523	H-649 M\$1.50 P\$4.00
1965-18	Some Iterative Methods Using Partial Order for Solution of Nonlinear Boundary Value Problems	H. S. Witsenhausen <sup>§</sup>	14 May 1965	616301	H-650 M\$1.50 P\$3.00
1965-19	Commutating Feed for Circular Array Antenna and Its Application to the LES	J. B. Rankin	24 May 1965	616986	H-653 M\$1.50 P\$3.60
1965-20	Analysis of Radiation Effects in Telemetry Circuits	A. G. Stanley	21 July 1965	619389	H-665 M\$1.50 P\$3.80
1965-21	A Comparison of Seismic Array Processing Schemes	E. J. Kelly, Jr.	14 June 1965	618017	H-656 M\$1.50 P\$4.40
1965-22	Statistical Synthesis of a pP-Wave Enhancer	R. Price	14 June 1965	617951	H-655 M\$1.50 P\$2.00
1965-23	Radiometric Feed for Haystack	A. Sotiropoulos	15 June 1965	618393	H-658 M\$1.50 P\$6.20
1965-24	An Approach to Estimation in Seismic Equalization	R. Price	28 June 1965	619020	H-663 M\$1.50 P\$5.40
1965-26	Solution of the Matrix Equation $(d/dt) X(t) = A(t) X(t) + X(t) B(t) + U(t)$	M. Athans	29 June 1965	618392	H-659 M\$1.50 P\$2.80
1965-27	Atmospheric Dispersion of a Wide Bandwidth Radar Signal Designed for Pulse Compression	S. L. Borison	9 July 1965	619151	H-664 M\$1.50 P\$4.60
1965-28	Some Properties of a Scanned Circular Array	B. F. LaPage	7 July 1965	620460	H-671 M\$1.50 P\$4.60

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TN No.				DDC No.	Hayden Serial and Prices
1965-30	A Noise Rejection Filter for Waveguide Carrying High Power	W. J. Getsinger	3 Aug. 1965	619580	H-666 M \$1.50 P \$5.00
1965-31	Bottom of the Spin-Wave Spectrum in a Magnetic Film	K. J. Harte	28 July 1965	619985	H-669 M \$1.50 P \$4.20
1965-33	Fringing Capacitances for Offset Coupled Strips in Shielded Strip Line	W. J. Getsinger	1 July 1965	618927	H-660 M \$1.50 P \$2.20
1965-35	Program Description - Radar Observations of the Planets	J. W. Meyer	9 July 1965	619708	H-667 M \$1.50 P \$9.80
1965-36	Haystack Pointing System: Satellite	A. A. Mathiasen J. D. Drinan Editors	9 Sept. 1965	472589	H-676 M \$2.00 P \$30.20
1965-37	Haystack Pointing System: Belt	A. A. Mathiasen J. D. Drinan Editors	9 Sept. 1965	472590	H-677 M \$1.70 P \$34.60
1965-38	Haystack Pointing System: Printer Package	A. A. Mathiasen J. D. Drinan Editors	4 Oct. 1965	622784	H-680 M \$1.50 P \$13.40
1965-39	Haystack Pointing System: Intercom	A. A. Mathiasen J. D. Drinan Editors	9 Sept. 1965	622666	H-679 M \$1.70 P \$19.80
1965-42	The Data Recovery Center Target Simulator	J. H. Halberstein	17 Sept. 1965	624362	H-684 M \$1.50 P \$7.00
1965-43	Conceptual Description of a Family of Frequency Synthesizers	B. E. White	8 Scept. 1965	621510	H-673 M \$1.50 P \$6.00
1965-45	Design of Electromagnetic Torque Rods	W. L. Black	21 Dec. 1965	627600	H-698 M \$1.50 P \$5.20
1965-46	Radar Echo Variations of a Large Rough Sphere	M. L. Burrows	14 Sept. 1965	621568	H-674 M \$1.50 P \$3.20
1965-47	Distribution of Look Angles to a Near Synchronous Satellite	M. H. Simon	8 Sept. 1965	621746	H-675 M \$1.50 P \$4.00
1965-48	LES-4 Spin Axis Orientation System	E. A. Vrablick W. L. Black L. J. Travis	1 Oct. 1965	624358	H-683 M \$1.50 P \$4.40

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TN No.				DDC No.	Hayden Serial and Prices
1965-49	Haystack Pointing System: Mathematical Development for Satellites and Bclts	A. A. Mathiasen Editor	23 Sept. 1965	623017	H-681 M \$1.50 P \$4.40
1965-52	Noise and Low-Frequency Amplifiers	M. Adler	21 Dec. 1965	476983	H-695 M \$1.50 P \$6.60
1965-53	Gradient Matrices and Matrix Calculus	M. Athans F. C. Scheweppe	17 Nov. 1965	624426	H-685 M \$1.50 P \$5.00
1965-56	The Effect of Pseudorandom Frequency Hopping on the Probability of Simultaneous Usage of a Communication Satellite	J. U. Beusch	22 Dec. 1965	627357	H-696 M \$1.50 P \$7.20
1965-57	Asymptotically Optimum Multidimensional Filter- ing for Sampled-Data Proc- essing of Seismic Arrays	J. Capon R. J. Greenfield	17 Dec. 1965	626180	H-690 M \$1.50 P \$5.20
1965-58	A Stereoscopic Display for On-Line Monitoring of Simulated Terminal Engagements	W. P. Harris R. T. Mitchell M. A. Morfield A. I. Schulman R. A. Wiesen	3 Dec. 1965	626467	H-691 M \$1.50 P \$5.60
1965-62	A Review of Long-Range Earth Strain Measurement Techniques for Providing Earthquake Warning	E. Gehrels	13 Dec. 1965	625817	H-689 M \$1.50 P \$4.80
1965-63	Digital Filter Design Techniques	C. M. Rader B. Gold	23 Dec. 1965	627146	H-694 M \$1.50 P \$9.20
1965-64	Geometry and Patterns of Large Aperture Seismic Arrays	R. T. Lacoss	31 Dec. 1965	628148	H-701 M \$1.50 P \$9.80
1966-1	Amplitude Analysis Program	F. A. Wilson	29 Apr. 1966	632997	H-749 M \$1.50 P \$12.20
1966-3	A Computer for Vocoder Pitch Extraction	N. L. Daggett	18 Feb. 1966	629361	H-707 M \$1.50 P \$4.00
1966-4	BASELINE: A Man-Machine Program for Data Analysis	G. M. Shannon H. L. Kasnitz J. A. Drumheller <sup>§</sup>	20 Jan. 1966	628494	H-703 M \$1.50 P \$14.40

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TN No.				DDC No.	Hayden Serial and Prices
1966-5	Statistical Methods for the Analysis of Re-entry Vehicle Radar Data, Part I	L. A. Gardner, Jr.	13 Jan. 1966	629359	H-706 M \$1.50 P \$11.40
1966-6	Haystack Pointing System: Auxiliary Real-Time Programs	J. D. Drinan Editor	31 Jan. 1966	629936	H-709 M \$1.50 P \$16.00
1966-7	A Summary, by Illustrations, of Least Squares Filters with Constraints	J. F. Claerbout	31 Jan. 1966	629968	H-708 M \$1.50 P \$2.60
1966-8	Haystack Pointing System: Satellite Acquisition	R. Teoste	30 Mar. 1966	632489	H-715 M \$1.50 P \$14.80
1966-9	A Method for Estimating the Parameters of a Stable Difference Equation Driven by Sinusoids and Observed in the Presence of Nonwhite Noise	L. A. Gardner, Jr.	11 Feb. 1966	629934	H-710 M \$1.50 P \$4.60
1966-10	Haystack Pointing System: Control Structure	J. D. Drinan A. A. Mathiasen	9 Mar. 1966	631106	H-713 M \$1.50 P \$16.80
1966-11	Haystack Pointing System: Print Program	J. D. Drinan	9 Mar. 1966	632339	H-717 M \$1.50 P \$21.20
1966-13	Haystack Pointing System: Peripheral Programs	J. D. Drinan Editor	17 Feb. 1966	630193	H-712 M \$1.50 P \$38.00
1966-14	Resonance Scattering of Lyman- $\alpha$ Radiation by Hydrogen in the Ground State	H. E. Moses	4 Feb. 1966	628493	H-702 M \$1.50 P \$4.40
†1966-16	Interim Report on Capabilities of the Experimental Large Aperture Seismic Array	H. W. Briscoe J. Capon P. L. Fleck, Jr. P. E. Green, Jr. R. J. Greenfield E. J. Kelly, Jr.	24 Feb. 1966	631285	H-714 M \$1.50 P \$4.40
1966-19	Thermal Cracking of Waveguide Windows	C. E. Muehe	9 Feb. 1966	628907	H-704 M \$1.50 P \$2.20
1966-21	Position Error in Station-Keeping Satellite	B. J. Moriarty	1 Apr. 1966	633034	H-720 M \$1.50 P \$3.40
1966-22	Error Probabilities for the Detection of Radar Targets by Mismatched Receivers Using Half-Wave $\nu = th$ -Law Rectifiers	D. Middleton	14 July 1966	636829	H-728 M \$1.50 P \$8.00

## Technical Notes

TN No.				DDC No.	Hayden Serial and Prices
1966-27	Cooled and Uncooled Var-actors for Paramp Applications	F. J. Dominick	5 Apr. 1966	632232	H-716 M \$1.50 P \$3.60
1966-28	Laguerre Functions and the Laguerre Network - Their Properties and Digital Simulation	C. R. Arnold	4 May 1966	633609	H-723 M \$1.50 P \$6.40
1966-29	A Frequency-Domain Synthesis Procedure for Multidimensional Maximum-Likelihood Processing of Seismic Arrays	J. Capon R. J. Greenfield R. J. Kolker	6 May 1966	634233	H-724 M \$1.50 P \$9.80
1966-30	Lincoln Experimental Terminal	P. Rosen R. V. Wood, Jr. B. E. Nichols	11 May 1966	636280	H-726 M \$1.50 P \$2.20
1966-31	An Efficient Technique for the Calculation of Velocity-Acceleration Periodograms	E. M. Hofstetter	18 May 1966	633215	H-722 M \$1.50 P \$2.60
1966-36	LASA - On-Line Detection, Location and Signal-to-Noise Enhancement	E. J. Kelly	1 July 1966	636144	H-727 M \$1.50 P \$4.40
1966-37	Off-Line Signal Processing Results for the Large Aperture Seismic Array	J. Capon R. J. Greenfield R. T. Lacoss	11 July 1966	637016	H-730 M \$1.50 P \$7.20
1966-38	A Study of the Capability of a LASA to Aid the Identification of a Seismic Source	H. W. Briscoe R. M. Sheppard	11 July 1966	437440	H-729 M \$1.50 P \$2.60
1966-39	Diamond Circuit Considerations	J. D. McCarron	21 July 1966	637166	H-731 M \$1.50 P \$4.80

## JOURNAL ARTICLES

JA No.

- |    |  |   |   |
|----|--|---|---|
| 1  | Change of Electron Temperature in an Electron Beam   | H. M. Mott-Smith  | J. Appl. Phys. <u>24</u> , 249 (1953)     |
| 2  | The Solution of the Boltzmann Equation for a Shock Wave  | H. M. Mott-Smith  | Phys. Rev. <u>82</u> , 885 (1951)         |
| 3  | A Model of the Auditory Threshold and Its Application to the Problem of the Multiple Observer                                | M. H. Smith, Jr.<br>E. A. Wilson                          | Psychol. Monographs <u>67</u> , 9 (1953)  |
| 6  | Mixing of States and Antiferromagnetism  | H. P. Hanson  | Phys. Rev. <u>89</u> , 1154 (1953)        |
| 7  | The Phase-Bistable Transistor Circuit  | R. H. Baker<br>I. L. Lebow<br>R. H. Rediker<br>I. S. Reed | Proc. IRE <u>41</u> , 1119 (1953)         |
| 9  | Relativistic Dynamics of a Charged Particle in Crossed Magnetic and Electric Fields with Application to the Planar Magnetron | L. Gold   | J. Appl. Phys. <u>25</u> , 683 (1954)     |
| 10 | Method of Time-Free Solutions for Radioactive Decay and Radionuclide Production  | L. Gold   | J. Appl. Phys. <u>24</u> , 88 (1953)      |
| 11 | Wide-Band Data Transmitter   | D. J. Gray<br>V. P. Gurske<br>W. E. Morrow, Jr.           | Electronics <u>26</u> , No. 9, 168 (1953) |
| 13 | On the Diffusion of Decaying Particles in a Radial Electric Field  | J. Keilson  | J. Appl. Phys. <u>24</u> , 1397 (1953)    |
| 14 | The Transient Response of Transistor Switching Circuits  | I. L. Lebow<br>R. H. Baker                                | Proc. IRE <u>42</u> , 938 (1954)          |
| 15 | On the Nature of the Transcendental Curves Associated with the Relativistic Trajectories of Charged Particles                | L. Gold   | J. Appl. Phys. <u>25</u> , 691 (1954)     |
| 16 | Potential Distribution and Prevention of a Space-Charge-Induced Minimum . . .  | G. C. Sponsler  | J. Appl. Phys. <u>25</u> , 282 (1954)     |
| 18 | Orbital Effect in Neutron-Electron Magnetic Scattering   | W. H. Kleiner   | Phys. Rev. <u>90</u> , 168 (1953)         |

## Journal Articles

JA No.

- |    |   |   |   |
|----|---|---|---|
| 21 | A Two-Electron Example of Ferromagnetism  | J. C. Slater<br>H. Statz<br>G. F. Koster        | Phys. Rev. <u>91</u> , 1323 (1953)  |
| 22 | Exact Interpolation of Band-Limited Functions   | A. Kohlenberg                                   | J. Appl. Phys. <u>24</u> , 1432 (1953)  |
| 23 | Direct Viewing of an Ultrasonic Beam in a Transparent Solid   | F. L. McNamara<br>T. F. Rogers                  | J. Acoust. Soc. Am. <u>25</u> , 338 (1953)  |
| 32 | Magnetic and Dielectric Amplifiers  | D. A. Buck                                      | Sec. III-C-3, <u>Dielectric Materials and Applications</u> , A. R. von Hippel, Ed. (Wiley/Technology Press, New York, 1954) |
| 33 | Eigenfunctions of $S^2$ by a Spin-Operator Method   | G. W. Pratt, Jr.                                | Phys. Rev. <u>92</u> , 278 (1953)   |
| 35 | The Refractive Index of Germane   | M. Green<br>P. H. Robinson                      | J. Phys. Chem. <u>57</u> , 938 (1953)   |
| 36 | A More Exact Treatment of the Equations Describing Dielectric Relaxation and Carrier Motion in Semiconductors | J. Keilson                                      | J. Appl. Phys. <u>24</u> , 1198 (1953)  |
| 37 | On Diffusion in an External Field and the Adjoint Source Problem  | J. Keilson                                      | Quart. Appl. Math. <u>12</u> , 435 (1955)   |
| 42 | A Suggested Modification of Noise Theory  | J. Keilson                                      | Quart. Appl. Math. <u>12</u> , 71 (1954)  |
| 43 | An Historical Note on the Autocorrelation Function  | P. E. Green, Jr.                                | Proc. IRE (Correspondence) <u>41</u> , 1519 (1953)  |
| 46 | Fused-Quartz Ultrasonic Delay-Line Memory   | D. A. Spaeth<br>T. F. Rogers<br>S. J. Johnson § | Electronics <u>16</u> , No. 12, 151 (1953)  |
| 47 | Rapid Interferometric Analysis of Germane-Hydrogen Mixtures   | M. Green<br>P. H. Robinson                      | Anal. Chem. <u>25</u> , 1913 (1953)   |
| 48 | Measurement of Permeability Tensor in Ferrites  | J. O. Artman<br>P. E. Tannenwald                | Phys. Rev. <u>91</u> , 1014 (1953)  |
| 49 | Transistor Shift Registers  | R. H. Baker<br>I. L. Lebow<br>R. E. McMahon     | Proc. IRE <u>42</u> , 1152 (1954)   |
| 53 | Staircase Generator Counts Pulses   | N. O. Sokal<br>I. L. Resnick                    | Electronics <u>27</u> , No. 3, 187 (1954)   |
| 54 | A Possible Mechanism for $1/f$ Noise Generation in Semiconductor Filaments                                    | L. Bess   | Phys. Rev. <u>91</u> , 1569 (1953)  |

JA No.			
58	Thyratron-Vacuum Tube Counter	R. W. Hofheimer	Electronics <u>26</u> , No. 11, 198 (1953)
61	Switching Time in Junction Diodes and Junction Transistors	R. H. Kingston	Proc. IRE <u>42</u> , 829 (1954)
64	Lower Modes of a Concentric Line Having a Helical Inner Conductor	L. Stark	J. Appl. Phys. <u>25</u> , 1155 (1954)
66	Information Loss Attending the Decision Operation in Detection	D. Middleton	J. Appl. Phys. <u>25</u> , 127 (1954)
67	Pedestal-Removing Slicer Circuit	N. O. Sokal G. M. Nonnemaker	Electronics <u>27</u> , No. 3, 220 (1954)
68	PPI Light-Spot-Brightness Probability Distributions	G. C. Sponsler F. L. Shader	J. Appl. Phys. <u>25</u> , 1271 (1954)
72	An Analysis of the Detection of Repeated Signals in Noise by Binary Integration	J. V. Harrington	Trans. IRE <u>IT-1</u> , 1 (1955)
86	Coding for Constant-Data-Rate Systems. Part I - A New Error-Correcting Code	R. A. Silverman M. Balser	Proc. IRE <u>42</u> , 1428 (1954)
87	Water Vapor and the "Channel" Effect in n-p-n Junction Transistors	R. H. Kingston	Phys. Rev. <u>93</u> , 346 (1954)
91	Transient Response of a p-n Junction	B. Lax S. F. Neustadter	J. Appl. Phys. <u>25</u> , 1148 (1954)
92	Ferrite Phase Shifters in Rectangular Waveguide	B. Lax K. J. Button L. M. Roth	J. Appl. Phys. <u>25</u> , 1413 (1954)
93	A Comparison of Metals and Ferrites for High-Speed Pulse Operation	D. R. Brown D. A. Buck N. Menyuk	Trans. IEE, Commun. Electron. No. 16, 631 (1955)
96	A Theory of Domain Creation and Coercive Force in Polycrystalline Ferromagnetics	J. B. Goodenough	Phys. Rev. <u>95</u> , 917 (1954)
97	Anomalous Forward Switching Transient in p-n Junction Diodes	N. T. Jones R. H. Kingston S. F. Neustadter	J. Appl. Phys. <u>26</u> , 210 (1955)
100	Magnetic Materials for Digital-Computer Components. I. A Theory of Flux Reversal in Polycrystalline Ferromagnetics	N. Menyuk J. B. Goodenough	J. Appl. Phys. <u>26</u> , 8 (1955)
104	The Scattering of Electromagnetic Waves by Turbulent Atmospheric Fluctuations	F. M. H. Villars V. F. Weisskopf	Phys. Rev. <u>94</u> , 232 (1954)



## Journal Articles

JA No.

- |          |   |   |   |
|----------|---|---|---|
| 113      | Preparation and Isolation of Carrier-Free As <sup>74</sup> from Germanium Cyclotron Targets | M. Green<br>J. A. Kafalas                                 | J. Chem. Phys. <u>22</u> , 760 (1954)     |
| 118      | Directional Properties of the Cyclotron Resonance in Germanium                              | B. Lax<br>H. J. Zeiger<br>R. N. Dexter<br>E. S. Rosenblum | Phys. Rev. <u>93</u> , 1418 (1954)        |
| 119      | The Interaction of Impurity Atoms with Dislocations in Germanium                            | A. D. Kurtz<br>S. A. Kulin                                | Acta Met. <u>2</u> , 352 (1954)           |
| 120      | Effect of Dislocations on Minority Carrier Lifetime in Germanium                            | S. A. Kulin<br>A. D. Kurtz                                | Acta Met. <u>2</u> , 354 (1954)           |
| 121<br>R | Two Formulac Involving Generalized Legendre Functions of Integral and Nonintegral Index     | G. C. Sponsler  | J. Math. and Phys. <u>34</u> , 50 (1955)  |
| 122      | Discrimination Transfer along a Pitch Continuum   | R. A. Baker<br>S. W. Osgood                               | J. Exptl. Psychol. <u>48</u> , 241 (1954) |
| 124      | Simplified LCAO Method for the Periodic Potential Problem                                   | J. C. Slater<br>G. F. Koster                              | Phys. Rev. <u>94</u> , 1498 (1954)        |
| 127      | Theory of Radio Transmission by Tropospheric Scattering Using Very Narrow Beams             | H. G. Booker §<br>J. T. deBettencourt                     | Proc. IRE <u>43</u> , 281 (1955)          |
| 131      | A Point Emitter-Junction Collector Transistor   | R. H. Kingston  | J. Appl. Phys. <u>25</u> , 513 (1954)     |
| 132      | Statistics of Electromagnetic Radiation Scattered by a Turbulent Medium                     | R. A. Silverman<br>M. Balser                              | Phys. Rev. <u>96</u> , 560 (1954)         |
| 137      | Measurement of Carrier Lifetimes in Germanium and Silicon                                   | D. T. Stevenson<br>R. J. Keyes                            | J. Appl. Phys. <u>26</u> , 190 (1955)     |
| 141      | Folded Unipole Antennas   | J. Leonhard<br>R. D. Mattuck<br>A. J. Poté                | Trans. IRE, PGAP <u>AP-3</u> , 111 (1955) |
| 145      | A Radio-Frequency Nondestructive Readout for Magnetic-Core Memories                         | B. Widrow   | Trans. IRE, PGEC <u>EC-3</u> , 12 (1954)  |
| 146      | New Ferrite-Core Memory Uses Pulse Transformers   | W. N. Papian  | Electronics <u>28</u> , No. 3, 194 (1955) |
| 148      | Wave Functions for Impurity Levels  | G. F. Koster<br>J. C. Slater                              | Phys. Rcv. <u>95</u> , 1167 (1954);       |
| 150      | Anisotropy of Cyclotron Resonance in Germanium  | B. Lax<br>H. J. Zeiger<br>R. N. Dexter                    | Physica <u>20</u> , 818 (1954).           |

JA No.			
152	On the Fourier Series Expansion of Random Functions	W. L. Root T. S. Pitcher	Ann. Math. Stat. <u>26</u> , 313 (1955)
156	Coding for Constant-Data-Rate Systems: Part II - Multiple-Error-Correcting Codes	M. Balsler R. A. Silverman	Proc. IRE <u>43</u> , 728 (1955)
158	A Method of Scalogram Analysis Using Summary Statistics	B. F. Green, Jr.	Psychometrika <u>21</u> , 79 (1956)
159	Theory of Scattering in Solids	G. F. Koster	Phys. Rev. <u>95</u> , 1436 (1954)
160	Magnetic Scattering of Slow Neutrons from O <sub>2</sub> Gas	W. H. Kleiner	Phys. Rev. <u>97</u> , 411 (1955)
161	Measurements of the Recombination Velocity at Germanium Surfaces	D. T. Stevenson R. J. Keyes	Physica <u>20</u> , 1041 (1954)
162	Trajectory-Tracer Study of Helix- and Band-Type Post-deflection Acceleration	G. C. Sponsler	J. Appl. Phys. <u>26</u> , 676 (1955)
168	Anisotropy of Cyclotron Resonance in Germanium	R. N. Dexter H. J. Zeiger B. Lax	Phys. Rev. <u>95</u> , 557 (1954); Physica <u>20</u> , 818 (1954)
169	Channels and Excess Reverse Current in Grown Germanium p-n Junction Diodes	A. L. McWhorter R. H. Kingston	Proc. IRE <u>42</u> , 1376 (1954)
178	Transistors Convert Sine Waves to Pulses	I. L. Lebow R. E. McMahon R. H. Baker	Electronics <u>27</u> , No. 5, 160 (1954)
180	Digital Computer Plug-in Units and Associated Equipment	J. N. Harris F. L. McNamara	Elcc. Eng. <u>74</u> , 326 (1955)
188	Speed and Accuracy of Reading Polar Coordinates on a Horizontal Plotting Table	B. F. Green, Jr. L. K. Anderson	J. Appl. Psychol. <u>39</u> , 227 (1955)
196	The Tactual Identification of Shapes for Coding Switch Handles	B. F. Green, Jr. L. K. Anderson	J. Appl. Psychol. <u>39</u> , 219 (1955)
208	Effective Masses of Electrons in Silicon	R. N. Dexter B. Lax A. F. Kip G. F. Dresselhaus	Phys. Rev. <u>96</u> , 222 (1954)
209	Effective Masses of Holes in Silicon	R. N. Dexter B. Lax	Phys. Rev. <u>96</u> , 223 (1954)
210	Analogue Study of Electron Trajectories	G. C. Sponsler B. F. Logan G. R. Welti	J. Assoc. Comp. Mach. <u>2</u> , 28 (1955)

## Journal Articles

JA No.

- |          |   |   |  |
|----------|---|---|--|
| 212      | Extension of Nonreciprocal Ferrite Devices to the 500-3000 Mcgacycle Frequency Range                              | R. H. Fox   | J. Appl. Phys. <u>26</u> , 128 (1955)            |
| 213      | Theory of Ionic Ordering, Crystal Distortion, and Magnetic Exchange Due to Covalent Forces in Spinels             | J. B. Goodenough<br>A. L. Loeb  | Phys. Rev. <u>98</u> , 391 (1955)                |
| 216      | Propagation of Short Radio Waves in a Normally Stratified Troposphere   | T. J. Carroll<br>R. M. Ring   | Proc. IRE <u>43</u> , 1384 (1955)                |
| 218      | Simplified Impurity Calculation   | G. F. Koster<br>J. C. Slater  | Phys. Rev. <u>96</u> , 1208 (1954)               |
| 227      | Extension of Hund's Rule  | G. F. Koster  | Phys. Rev. <u>98</u> , 514 (1955)                |
| 228      | An Analysis of Perceptual Confusions Among Some English Consonants  | G. A. Miller<br>P. E. Nicely  | J. Acoust. Soc. Am. <u>27</u> , 338 (1955)       |
| 230      | Calculation of the Space Charge, Electric Field, and Free Carrier Concentration at the Surface of a Semiconductor | R. H. Kingston<br>S. F. Neustadter  | J. Appl. Phys. <u>26</u> , 718 (1955)            |
| 231      | A Practical Method of Designing RC Active Filters   | R. P. Sallen<br>E. L. Key   | Trans. IRE, PGCT <u>CT-2</u> , 74 (1955)         |
| 236      | Antiferromagnetism  | G. W. Pratt, Jr.  | Phys. Rev. <u>97</u> , 926 (1955)                |
| 237      | Water-Vapor-Induced n-Type Surface Conductivity on p-Type Germanium   | R. H. Kingston  | Phys. Rev. <u>98</u> , 1766 (1955)               |
| 238      | ‡ Analysis of Magnetic Amplifiers by the Use of Difference Equations  | P. R. Johannessen §   | Trans. IEE, Commun. Electron. No. 16, 700 (1955) |
| 243      | ‡ Ion-Bombardment-Cleaning of Germanium and Titanium as Determined by Low-Energy Electron Diffraction             | H. E. Farnsworth §<br>R. E. Schlier §<br>T. H. George §<br>R. M. Burger § | J. Appl. Phys. <u>26</u> , 252 (1955)            |
| 245      | The Purification of Germanium: The Germanium Tetrachloride - Arsenic Trichloride System                           | M. Green<br>J. A. Kafalas   | J. Chem. Soc. <u>5943</u> , 1604 (1955)          |
| 251<br>R | Germanium-Oxygen System   | E. S. Candidus<br>D. Tuomi  | J. Chem. Phys. <u>23</u> , 588 (1955)            |
| 252      | Synchronizing Magnetic Drum Storage Speed   | E. W. Bivans  | Electronics <u>28</u> , No. 8, 140 (1955)        |
| 258      | Variation of Noise with Ambient in Germanium Filaments  | T. G. Maple<br>L. Bess<br>H. A. Gebbie                                    | J. Appl. Phys. <u>26</u> , 490 (1955)            |

JA No.			
261	Color Coding in a Visual Search Task	B. F. Green, Jr. L. K. Anderson	J. Exptl. Psychol. <u>51</u> , 19 (1956)
262	Effect of Differential Adaptation of the Eyes upon Threshold Sensitivity	R. T. Mitchell L. H. Liudansky	J. Opt. Soc. Am. <u>45</u> , 831 (1955)
264	On a Class of Binary Sequences	N. Zierler	Proc. Am. Math. Soc. <u>7</u> , 675 (1956)
265	Density of States Curve for Nickel	G. F. Koster	Phys. Rev. <u>98</u> , 901 (1955)
267	On Entropy Equivalence in the Time- and Frequency-Domains	R. Price	Proc. IRE (Correspondence) <u>43</u> , 484 (1955)
270	Magnetic Materials for Digital Computer Components. II. Magnetic Characteristics of Ultra-Thin Molybdenum-Permalloy Cores	N. Menyuk	J. Appl. Phys. <u>26</u> , 692 (1955)
272	Excited Donor Levels in Silicon	W. H. Kleiner	Phys. Rev. <u>97</u> , 1722 (1955)
273	Measurement of Susceptibility Tensor in Ferrites	J. O. Artman P. E. Tannenwald	J. Appl. Phys. <u>26</u> , 1124 (1955)
275	A Note on the Envelope and Phase-Modulated Components of Narrow-Band Gaussian Noise	R. Price	Trans. IRE, PGIT <u>IT-1</u> , 9 (1955)
278	Multiple Resonances in Cobalt Ferrite	P. E. Tannenwald	Phys. Rev. <u>99</u> , 463 (1955)
287	The Cryotron - A Superconductive Computer Component	D. A. Buek	Proc. IRE <u>44</u> , 482 (1956)
298	Design Procedure for Junction Transistor Flip-Flops	R. E. McMahon	Electronic Design (October 1955)
299	Propagation and Plasma Oscillation in Semiconductors with Magnetic Fields	B. Lax L. M. Roth	Phys. Rev. <u>98</u> , 548 (1955)
308	Figure of Merit for Microwave Ferrites at Low and High Frequencies	B. Lax	J. Appl. Phys. <u>26</u> , 919 (1955)
315	New Magnetic Materials	J. B. Goodenough F. E. Vinal	MIT Reports on Research <u>6</u> , 1 (1955)
320	Investigations of Angular Scattering and Multipath Properties of Tropospheric Propagation of Short Radio Waves Beyond the Horizon	J. H. Chisholm P. A. Portmann J. T. deBettencourt J. F. Roche	Proc. IRE <u>43</u> , 1317 (1955).
323	Hall Theory in n-Type Germanium	L. Gold	Phys. Rev. <u>99</u> , 596 (1955)

## Journal Articles

JA No.

- |     |   |  |   |
|-----|---|--|---|
| 331 | A Qualitative Characterization of Blaschke Products in a Half-Plane   | E. J. Akutowicz  | Am. J. Math. <u>78</u> , 677 (1956)         |
| 334 | Direct-Reading Noise Figure Indicator   | C. E. Chase  | Electronics <u>28</u> , 161, No. 11, (1955) |
| 338 | Some Remarks on Statistical Detection   | W. L. Root<br>T. S. Pitcher  | Trans. IRE, PGIT <u>IT-1</u> , 33 (1955)    |
| 342 | Theory of New Ferrite Modes in Rectangular Waveguide  | B. Lax<br>K. J. Button   | J. Appl. Phys. <u>26</u> , 1184 (1955)      |
| 343 | New Ferrite Mode Configurations and Their Applications  | B. Lax<br>K. J. Button   | J. Appl. Phys. <u>26</u> , 1186 (1955)      |
| 344 | Investigations of Scattering and Multipath Properties of Ionospheric Propagation at Radio Frequencies Exceeding the MUF | W. G. Abel<br>J. T. deBettencourt<br>J. F. Roehle<br>J. H. Chisholm          | Proc. IRE <u>43</u> , 1255 (1955)           |
| 347 | High Pressure Leak Detector   | W. Paul<br>D. M. Warschauer  | Rev. Sci. Instr. <u>26</u> , 731 (1955)     |
| 348 | Determination of Zinc in Presence of Iron and Nickel  | J. Lowen<br>A. L. Carney   | Anal. Chem. <u>27</u> , 1965 (1955)         |
| 351 | UHF Long-Range Communications Systems   | G. L. Mellen<br>W. E. Morrow<br>A. J. Poté<br>W. H. Radford<br>J. B. Wiesner | Proc. IRE <u>43</u> , 1269 (1955)           |
| 352 | Diversity Reception in UHF Long-Range Communications  | C. L. Mack   | Proc. IRE <u>43</u> , 1281 (1955)           |
| 357 | Theory of the Role of Covalence in the Perovskite-Type Manganites (La, M (II)) MnO <sub>3</sub>                         | J. B. Goodenough   | Phys. Rev. <u>100</u> , 564 (1955)          |
| 365 | Ferromagnetic Resonance in Manganese Ferrite Single Crystals  | P. E. Tannenwald   | Phys. Rev. <u>100</u> , 1713 (1955)         |
| 369 | Maximal Orthogonal Orbitals   | G. W. Pratt, Jr.<br>S. F. Neustadter   | Phys. Rev. <u>101</u> , 1248 (1956)         |
| 370 | Relative Influence of Majority and Minority Carriers on Excess Noise in Semiconductor Filaments                         | L. Bess  | J. Appl. Phys. <u>26</u> , 1377 (1955)      |
| 373 | Vacuum and Vibration Speed Assembly of Core Memory Planes   | E. A. Guditz<br>L. B. Smith  | Electronics <u>29</u> , No. 2, 214 (1956)   |

## Journal Articles

JA No.

380 R	A Programmed Variable-Rate Counter for Generating the Sine Function	J. N. Harris	Trans. IRE, PGEC <u>EC-5</u> , 21 (1956)
381	The Uniqueness of Laplace Integrals	E. J. Akutowicz	Duke Math. J. <u>23</u> , 165 (1956)
382	Sensitive Thyatron Relay Operates on Microampere	J. N. Harris	Electronics <u>28</u> , No. 12, 172 (1955)
384	On the Maximum Signal/Noise Ratio Realizable from Several Noisy Signals	D. G. Brennan	Proc. IRE <u>43</u> , 1530 (1955)
387	Conductivity, Hall Effect and Magnetoresistance in n-Type Germanium, and Their Dependence on Pressure	G. B. Benedek W. Paul H. Brooks	Phys. Rev. <u>100</u> , 1129 (1955)
394	Statistics and Galvanomagnetic Effects in Germanium and Silicon with Warped Energy Surfaces	B. Lax J. G. Mavroides	Phys. Rev. <u>100</u> , 1650 (1955)
397	On the Scattering of Radio Waves by Turbulent Fluctuations of the Atmosphere	F. Villars V. F. Weisskopf	Proc. IRE <u>43</u> , 1232 (1955)
403	Hall Effect in Oriented Single Crystals of n-Type Germanium	W. M. Bullis W. E. Krag	Phys. Rev. <u>101</u> , 580 (1956)
404 R	Effect of Electric Field on Surface Recombination Velocity in Germanium	J. E. Thomas, Jr. R. H. Rediker	Phys. Rev. <u>101</u> , 984 (1956)
405 R	Cyclotron Absorption in Bismuth	R. N. Dexter B. Lax	Phys. Rev. <u>100</u> , 1216 (1955)
410 R	An Analysis of Signal Detection and Location by Digital Methods	G. P. Dinneen I. S. Reed	Trans. IRE, PGIT <u>IT-2</u> , 29 (1956)
413 R	Review of Germanium Surface Phenomena	R. H. Kingston	J. Appl. Phys. <u>27</u> , 101 (1956)
416 R	Effect of Dislocations on the Minority Carrier Lifetime in Semiconductors	A. D. Kurtz S. A. Kulin B. L. Averbach	Phys. Rev. <u>101</u> , 1285 (1956)
418	Microwave Resonance Relations in Anisotropic Single Crystal Ferrites	J. O. Artman	Proc. IRE <u>44</u> , 1284 (1956)
421	Progress of Tropospheric Propagation Research Related to Communications Beyond the Horizon	J. H. Chisholm	Trans. IRE, PGCS <u>CS-4</u> , 6 (1956)
422 R	Study of $1/f$ Noise in Semiconductor Filaments	L. Bess	Phys. Rev. <u>103</u> , 72 (1956)

## Journal Articles

JA No.

424 R	Absolute Measurement of Receiver Noise Figures at UHF	E. Maxwell B. J. Leon	Trans. IRE, PGMTT <u>MITT-4</u> , 81 (1956)
428	Rapid, Precise Measurements of Krypton Adsorption and the Surface Area of Coarse Particles	A. J. Rosenberg	J. Am. Chem. Soc. <u>78</u> , 2929 (1956)
430	Bistable Circuit Uses Single Triode	R. W. Hofheimer	Electronics <u>29</u> , No. 3, 230 (1956)
433	Effects of Growth Rate on Crystal Perfection and Lifetime in Germanium	A. D. Kurtz S. A. Kulin B. L. Averbach	J. Appl. Phys. <u>27</u> , 1287 (1956)
443 R	First-Order Markov Process Representation of Binary Radar Data Sequences	G. C. Sponsler	Trans. IRE, PGIT <u>IT-3</u> , 56 (1957)
446	On the Determination of the Phase of a Fourier Integral, I	E. J. Akutowicz	Trans. Am. Math. Soc. <u>83</u> , 179 (1956)
447 R	Unrestricted Hartree-Fock Method	G. W. Pratt, Jr.	Phys. Rev. <u>102</u> , 1303 (1956)
448 R	Analysis of Cyclotron Absorption in Bismuth	B. Lax K. J. Button H. J. Zeiger L. M. Roth	Phys. Rev. <u>102</u> , 715 (1956)
449	Galvanomagnetic Theory for Electrons in Germanium and Silicon: Magnetoresistance in the High-Field Saturation Limit	L. Gold L. M. Roth	Phys. Rev. <u>103</u> , 61 (1956)
456	Estimating the Ratio of Steady Sinusoidal Signal to Random Noise from Experimental Data	M. L. Phillips	Proc. IRE (Correspondence) <u>44</u> , 692 (1956)
459 R	Interpretation of Domain Patterns Recently Found in BiMn and SiFe Alloys	J. B. Goodenough	Phys. Rev. <u>102</u> , 356 (1956)
462	Designing for Reliability	N. H. Taylor	Proc. IRE <u>45</u> , 811 (1957)
476	The Spectral Resolution of Watson Transforms	E. J. Akutowicz	Proc. Cambridge Phil. Soc. <u>54</u> , 368 (1958)
480 R	Session on Rapid-Access Storage, Including the Use of Magnetic Cores for Storage and Switching	N. H. Taylor	Proc. IEE (London) <u>103</u> , 289 (1956)
482 R	Some Effects of Unequal Spatial Distribution on the Detectability of Radar Targets	P. E. Nicely G. A. Miller	J. Exptl. Psychol. <u>53</u> , 195 (1957)
488	On the Determination of the Phase of a Fourier Integral, II	E. J. Akutowicz	Proc. Am. Math. Soc. <u>8</u> , 234 (1957)

## Journal Articles

JA No.			
494 R	Relaxation Time of Surface States on Germanium	R. H. Kingston A. L. McWhorter	Phys. Rev. <u>103</u> , 534 (1956)
495 R	High Pressure Tubing	W. Paul D. M. Warschauer	Rev. Sci. Instr. <u>27</u> , 418 (1956)
496 R	Infrared Windows for Helium Cryostats	D. M. Warschauer W. Paul	Rev. Sci. Instr. <u>27</u> , 419 (1956)
498 R	Theory of Cyclotron Resonance Absorption in Many-Valley Semiconductors	L. Gold W. M. Bullis R. A. Campbell	Phys. Rev. <u>103</u> , 1250 (1956)
507 R	Anisotropy of Cobalt-Substituted Mn Ferrite Single Crystals	P. E. Tannenwald M. H. Seavey, Jr.	Proc. IRE <u>44</u> , 1343 (1956)
510 R	Serial Effects in Auditory Threshold Judgments	W. J. McGill §	J. Exptl. Psychol. <u>53</u> , 297 (1957)
512	Microwave Resonance Relations in Anisotropic Single Crystal Ferrites	J. O. Artman	Phys. Rev. <u>105</u> , 62 (1957)
514 R	Transistorized Receiver for Vehicular Radio	S. Schwartz	Electronics <u>29</u> , No. 10, 217 (1956)
516 R	Classical Boltzmann Theory of Cyclotron Resonance for Warped Surfaces	H. J. Zeiger B. Lax R. N. Dexter	Phys. Rev. <u>105</u> , 495 (1957)
517	Cyclotron Resonance Experiments in Silicon and Germanium	R. N. Dexter H. J. Zeiger B. Lax	Phys. Rev. <u>104</u> , 637 (1956)
519 R	Strip Line Hybrid Junction	H. G. Pascalar	Trans. IRE, PGMTT <u>MTT-5</u> , 23 (1957)
521	Frequency and Loss Characteristics of Microwave Ferrite Devices	B. Lax	Proc. IRE <u>44</u> , 1368 (1956)
522	Coil for Pulsed Megagauss Fields	S. Foner H. H. Kolm	Rev. Sci. Instr. <u>27</u> , 547 (1956)
524 R	Vibrating Sample Magnetometer	S. Foner	Rev. Sci. Instr. <u>27</u> , 548 (1956)
528	Sets of Measures Not Admitting Necessary and Sufficient Statistics of Subfields	T. S. Pitcher	Ann. Math. Stat. <u>28</u> , 267 (1957)
532	Measurement of Reproducibility	B. W. White E. Saltz	Psychol. Bull. <u>54</u> , 81 (1957)
534 R	Positivity in H-Systems and Sufficient Statistics	T. S. Pitcher	Trans. Am. Math. Soc. <u>85</u> , 166 (1957)



## Journal Articles

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541	Marconi's Last Paper, "On the Propagation of Microwaves over Considerable Distances"	T. J. Carroll	Proc. IRE (Correspondence) <u>44</u> , 1056 (1956)
546 R	A Bibliography of Soviet Literature on Noise, Correlation, and Information Theory	P. E. Green, Jr.	Trans. IRE, PGIT <u>IT-2</u> , 91 (1956)
549	The Anisotropy of the Hot-Electron Problem in Semiconductors with Spheroidal Energy Surfaces	L. Gold	Phys. Rev. <u>104</u> , 1580 (1956)
552	Galvanomagnetic Effects in Oriented Single Crystals of n-Type Germanium	W. M. Bullis	Phys. Rev. <u>109</u> , 292 (1958)
558 R	Microwave Propagation Well Beyond the Horizon from Marconi to the Present	T. J. Carroll	L'Onde Elec. (Paris) <u>37</u> , 421 (1957)
561	On the Preparation and Regeneration of Clean Germanium Surfaces	P. H. Robinson A. J. Rosenberg H. C. Gatos	J. Appl. Phys. <u>27</u> , 962 (1956)
566 R	Transistorized-Core Memory	R. E. McMahon	Trans. IRE, PGI <u>I-6</u> , 157 (1957)
566A	The Noise Problem in a Coincident-Current Core Memory	F. L. McNamara	Trans. IRE, PGI <u>I-6</u> , 153 (1957)
574 R	Some Observations on Scattering by Turbulent Inhomogeneities	M. Balser	Trans. IRE, PGAP <u>AP-5</u> , 383 (1957)
576 R	Magnetization Reversal in Thin Films	D. O. Smith	Phys. Rev. <u>104</u> , 1280 (1956)
577 R	Boosting Transistor Switching Speed	R. H. Baker	Electronics <u>30</u> , No. 3, 190 (1957)
580	On the Estimation in the Presence of Noise of the Impulse Response of a Random, Linear Filter	G. L. Turin	Trans. IRE, PGIT <u>IT-3</u> , 5 (1957)
581 R	A Decomposition Theorem for the Integers Modulo $q$	N. Zierler	Am. Math. Monthly <u>65</u> , 31 (1958)
583 R	Power Generation and Distribution at Air Defense Computing Centers	J. J. Gano	Elec. Eng. <u>75</u> , 1098 (1956)
591	A Radar Detection Philosophy	W. M. Siebert	Trans. IRE, PGIT <u>IT-2</u> , 204 (1956)
592	Systems Analysis of Discrete Markov Processes	R. W. Sittler	Trans. IRE, PGCT <u>CT-3</u> , 257 (1956)

JA No.			
594	Single-Sideband Techniques in UHF Long-Range Communications	W. E. Morrow, Jr. C. L. Maek B. E. Nichols J. Leonhard	Proc. IRE <u>44</u> , 1854 (1956)
601 R	Rotating Electrometer for Comparative Work Function Measurements	H. H. Kolm	Rev. Sci. Instr. <u>27</u> , 1046 (1956)
605	A Revised Law of Comparative Judgment	W. P. Harris	Psychometrika <u>22</u> , 189 (1957)
613	Arithmetical Analysis of Digital Computing Nets	R. C. Jeffrey	J. Assoc. Comp. Mach. <u>3</u> , 360 (1956)
617	Optimum Detection of Random Signals in Noise, with Application to Scatter-Multipath Communication, I	R. Price	Trans. IRE, PGIT <u>IT-2</u> , 125 (1956)
618 R	Broad-Band Balanced Duplexers	C. W. Jones	Trans. IRE, PGMTT <u>MTT-5</u> , 4 (1957)
620 R	Ferrites as Microwave Circuit Elements	G. S. Heller	Proc. IRE <u>44</u> , 1386 (1956)
621 R	Variational Principles for Guided Electromagnetic Waves in Anisotropic Materials	W. Hauser	Quart. Appl. Math. <u>16</u> , 159 (1958)
628	Galvanomagnetic Theory for n-Type Germanium and Silicon: Hall Theory and General Behavior of Magnetoresistance	L. Gold L. M. Roth	Phys. Rev. <u>107</u> , 358 (1957)
633 R	Unsupported Area High Pressure Seal	D. M. Warschauer W. Paul	Rev. Sci. Instr. <u>28</u> , 62 (1957)
634 R	Kinetic Theory of Space Charge, I: Cutoff Character of the Static Magnetron	L. Gold	J. Electron. and Control <u>3</u> , 97 (1957)
639 R	Space Charge in the Relativistic Magnetron	L. Gold	J. Electron. and Control <u>3</u> , 87 (1957)
642 R	Ferromagnetic Resonance in Thin Films of Permalloy	P. E. Tannenwald M. H. Seavey, Jr.	Phys. Rev. <u>105</u> , 377 (1957)
647	The Output Signal-to-Noise Ratio of Correlation Detectors	P. E. Green, Jr.	Trans. IRE, PGIT <u>IT-3</u> , 10 (1957)
649 R	The Elimination of Motor-Generator Sets as Transient Buffers for SAGE Computers	J. J. Gano	Trans. IEE, Commun. Electron. No. 32, 468 (1957)

## Journal Articles

JA No.

- |          |  |   |  |
|----------|--|---|--|
| 650      | Magneto-Band Effects in InAs and InSb in DC and High-Pulsed Magnetic Fields                            | S. Zwerdling<br>R. J. Keyes<br>S. Foner<br>H. H. Kolm<br>B. Lax | Phys. Rev. <u>104</u> , 1805 (1956)                |
| 651      | Infrared Cyclotron Resonance in Bi, InSb and InAs with High-Pulsed Magnetic Fields                     | R. J. Keyes<br>S. Zwerdling<br>S. Foner<br>H. H. Kolm<br>B. Lax | Phys. Rev. <u>104</u> , 1804 (1956)                |
| 657<br>R | Thermistors for the Gradual Application of Heater Voltage in Thermionic Tubes                          | J. J. Gano<br>G. F. Sandy                                       | Trans. IRE, PGEC <u>EC-7</u> , 64 (1958)           |
| 658<br>R | Inverse Bessel Functions: Solution for the Zeros   | L. Gold   | J. Math. Phys. <u>36</u> , 167 (1957)              |
| 667      | Measurement of Ionospheric Path-Phase for Oblique Incidence  | R. Price<br>P. E. Green, Jr.                                    | Nature <u>179</u> , 372 (1957)                     |
| 669<br>R | Possible Interpretation of Cyclotron Resonance Absorption in Graphite                                  | B. Lax<br>H. J. Zeiger  | Phys. Rev. <u>105</u> , 1466 (1957)                |
| 675      | Simulation Techniques for the Test and Evaluation of Real-Time Computer Programs                       | D. R. Israel  | J. Assoc. Comp. Mach. <u>4</u> , 354 (1957)        |
| 681      | Exchange and Superexchange Coupling Between Conduction Electrons and d Electrons in Magnetic Materials | G. W. Pratt, Jr.  | Phys. Rev. <u>106</u> , 53 (1957)                  |
| 682      | New Computer – Does More with Less   | F. P. Hazel   | MIT Reports on Research <u>8</u> , 3 (1956)        |
| 683<br>R | The Effect of Signal Rate on Performance in Visual Monitoring  | H. M. Jenkins   | Am. J. Psychol. <u>71</u> , 647 (1959)             |
| 686<br>R | The Autocorrelogram of a Complete Carrier Wave Received over the Ionosphere at Oblique Incidence       | R. Price  | Proc. IRE <u>45</u> , 879 (1957)                   |
| 702<br>R | Oscillatory Magneto-Absorption of the Direct Transition in Germanium                                   | S. Zwerdling<br>B. Lax  | Phys. Rev. <u>106</u> , 51 (1957)                  |
| 704      | On the Theory of Anisotropic Obstacles in Cavities   | W. Hauser   | Quart. J. Mech. Appl. Math. <u>11</u> , 112 (1958) |
| 707      | Multipath Transmission   | P. E. Green, Jr.<br>R. Price                                    | MIT Reports on Research <u>8</u> , 4 (1957)        |

JA No.			
716 R	Concerning the Effect of Illumination Upon Measurements of Gas Adsorption	A. J. Rosenberg C. S. Martel, Jr.	J. Phys. Chem. <u>61</u> , 512 (1957)
724 R	Radar Horizon and Propagation Loss	M. I. Skolnik	Proc. IRE (Correspondence) <u>45</u> , 697 (1957)
730	Very Narrow Base Diode	R. H. Rediker D. E. Sawyer	Proc. IRE <u>45</u> , 944 (1957)
735	3-D Printed Circuits Speed Memory Plane Assembly	E. A. Guditz	MIT Reports on Research <u>8</u> , 3 (1957)
743 R	Experimental Investigations of the Electronic Band Structure of Solids	B. Lax	Revs. Modern Phys. <u>30</u> , 122 (1958)
747 R	Smooth Random Functions Need Not Have Smooth Correlation Functions	D. G. Brennan	Proc. IRE (Correspondence) <u>45</u> , 1016 (1957)
752	Investigation of Long-Distance Over-Water Tropospheric Propagation at 400 Mcps	H. E. Dinger § W. E. Garner § D. H. Hamilton, Jr. A. E. Teachman	Proc. IRE <u>46</u> , 1401 (1958)
763 R	Hydrolysis of A <sup>III</sup> B <sup>V</sup> Inter-metallic Compounds	J. A. Kafalas H. C. Gatos M. J. Button	J. Am. Chem. Soc. <u>79</u> , 4260 (1957)
766	Three-Dimensional Printed Wiring	E. A. Guditz	Electronics <u>30</u> , No. 6, 160 (1957)
768 R	Rare Earth Nickel Oxides	A. Wold B. Post § E. Banks	J. Am. Chem. Soc. <u>79</u> , 4911 (1957)
770 R	UHF Radar Observations of Aurora	S. J. Fricker R. P. Ingalls M. L. Stone S. C. Wang	J. Geophys. Res. <u>62</u> , 527 (1957)
772 R	High Field Antiferromagnetic Resonance in MnF <sub>2</sub> Using Pulsed Fields and Millimeter Wavelengths	S. Foner	Phys. Rev. <u>107</u> , 683 (1957)
773 R	Wave Functions and Energy Levels for Fe as Found by the Unrestricted Hartree-Fock Method	J. H. Wood § G. W. Pratt, Jr.	Phys. Rev. <u>107</u> , 995 (1957)
774	High-Speed Computer Stores 2.5 Megabits	W. N. Papian	Electronics <u>30</u> , No. 10, 162 (1957)
780 R	Singular Functions Associated with Markov Chains	J. R. Kinney	Proc. Am. Math. Soc. <u>9</u> , 603 (1958)

## Journal Articles

JA No.

- |          |  |   |  |
|----------|--|---|--|
| 783<br>R | Reaction of Germanium with Aqueous Solutions. I. Dissolution Kinetics in Water Containing Dissolved Oxygen | W. W. Harvey<br>H. C. Gatos                 | J. Electrochem. Soc. <u>105</u> , 654 (1958) |
| 787      | A Communication Technique for Multipath Channels   | R. Price<br>P. E. Green, Jr.                | Proc. IRE <u>46</u> , 555 (1958)             |
| 791<br>R | Magnetoresistance of Holes in Germanium and Silicon with Warped Energy Surfaces                            | J. G. Mavroides<br>B. Lax                   | Phys. Rev. <u>107</u> , 1530 (1957)          |
| 793      | Optical Properties of Semiconductors Under Hydrostatic Pressure - I. Germanium                             | W. Paul<br>D. M. Warschauer                 | J. Phys. Chem. Solids <u>5</u> , 89 (1958)   |
| 807      | Coils for the Production of High Intensity Pulsed Magnetic Fields  | S. Foner<br>H. H. Kolm                      | Rev. Sci. Instr. <u>28</u> , 799 (1957)      |
| 810      | 3-D Packaging for Transistorized Circuits  | J. A. Werek, Jr.                            | Electronics <u>30</u> , No. 11, 244 (1957)   |
| 811<br>R | Work-Function Studies of Germanium Crystals Cleaned by Ion Bombardment                                     | J. A. Dillon, Jr. §<br>H. E. Farnsworth     | J. Appl. Phys. <u>28</u> , 174 (1957)        |
| 813      | Extend Output with Regulated Flip-Flop   | R. W. Hofheimer                             | Electronics <u>30</u> , No. 12, 182 (1957)   |
| 814<br>R | Lanthanum Rhodium and Lanthanum Cobalt Oxides  | A. Wold<br>B. Post §<br>E. Banks            | J. Am. Chem. Soc. <u>79</u> , 6365 (1957)    |
| 817      | Solid-State Maser Amplifier  | A. L. McWhorter<br>J. W. Meyer              | Phys. Rev. <u>109</u> , 312 (1958)           |
| 823<br>R | On the Theorem of Gleason and Marsh  | N. Zierler                                  | Proc. Am. Math. Soc. <u>9</u> , 236 (1958)   |
| 831<br>R | Apparatus for the Direct Measurement of Adsorption on Solid Surfaces from Liquids                          | J. A. Kafalas<br>H. C. Gatos                | Rev. Sci. Instr. <u>29</u> , 47 (1958)       |
| 835      | Theory of Antiferromagnetic-Ferromagnetic Transitions in Dilute Magnetic Alloys and in the Rare Earths     | G. W. Pratt, Jr.                            | Phys. Rev. <u>108</u> , 1233 (1957)          |
| 839      | Studies on Group III-V Intermetallic Compounds   | C. R. Kolm<br>S. A. Kulin<br>B. L. Averbach | Phys. Rev. <u>108</u> , 965 (1957)           |
| 840      | Band Structure and Cohesive Energy of Potassium Chloride   | L. P. Howland                               | Phys. Rev. <u>109</u> , 1927 (1958)          |
| 843      | The Status of Microwave Applications of Ferrites and Semiconductors  | B. Lax                                      | Trans. IRE, PGMTT <u>MTT-6</u> , 6 (1958)    |

JA No.			
845	Optical Properties of Semiconductors Under Hydrostatic Pressure. II. Silicon	W. Paul D. M. Warschauer	J. Phys. Chem. Solids <u>5</u> , 102 (1958)
848	Statistics of Polymer Molecular Size Distribution for an Invariant Number of Propagating Chains	L. Gold	J. Chem. Phys. <u>28</u> , 91 (1958)
849 R	Parametric Solution for the Diode Space Charge at Relativistic Energies	L. Gold	J. Electron. and Control <u>3</u> , 564 (1957)
854	The Persistron - A Steady Information Display Panel for a Pulsed Signal Input	J. R. Leibowitz W. L. Gardner	Trans. IRE, PGED <u>ED-5</u> , 115 (1958)
855 R	Generating Characters for Cathode-Ray Readout	K. E. Perry E. J. Aho	Electronics <u>31</u> , No. 1, 72 (1958)
862 R	Some Magnetic and Crystallographic Properties of the System $\text{Li}_x^+\text{Ni}_{1-2x}^{++}\text{Ni}_x^{+++}\text{O}$	J. B. Goodenough D. G. Wickham W. J. Croft	J. Phys. Chem. Solids <u>5</u> , 107 (1958)
864 R	Measurement of Ferrite Isolation at 1300 Mcps	G. S. Heller G. W. Catuna	Trans. IRE, PGMTT <u>MTT-6</u> , 97 (1958)
875	Oscillatory Magneto-Absorption in Semiconductors	S. Zwerdling B. Lax L. M. Roth	Phys. Rev. <u>108</u> , 1402 (1957)
881 R	Loss of Signal Detectability in Band-Pass Limiters	R. Manasse R. M. Lerner R. Price	Trans. IRE, PGIT <u>IT-4</u> , 34 (1958)
884 R	On the Theory of Anisotropic Obstacles in Waveguides	W. Hauser	Quart. J. Mech. Appl. Math. <u>11</u> , 427 (1958)
886 R	Microvariations of Water Vapor in the Lower Troposphere with Applications to Long-Range Radio Communications	J. R. Bauer J. H. Meyer	Trans. Am. Geophys. Un. <u>39</u> , 624 (1958)
888 R	The Reaction of Germanium with Nitric Acid Solutions: I. The Dissolution Reaction; II. Passivity of Germanium	M. C. Lavine H. C. Gatos	J. Electrochem. Soc. <u>105</u> , 487 (1958)
890 R	Theoretical Analysis of the Operation of the Field-Displacement Ferrite Isolator	K. J. Button	Trans. IRE, PGMTT <u>MTT-6</u> , 303 (1958)
891	An Interpretation of the Magnetic Properties of the Perovskite-Type Mixed Crystals $\text{La}_{1-x}\text{Sr}_x\text{CoO}_{3-\lambda}$	J. B. Goodenough	J. Phys. Chem. Solids <u>6</u> , 287 (1958)

## Journal Articles

JA No.

- |          |   |   |  |
|----------|---|---|--|
| 892      | The Free-Energy Changes Attending the Martensitic Transformation in the Iron-Chromium and Iron-Chromium-Nickel Systems  | L. Kaufman  | Trans. AIME, Met. Soc. <u>215</u> , 218 (1959)     |
| 893      | Thermal Restoration of Oxygenated Germanium Surfaces  | A. J. Rosenberg<br>P. H. Robinson<br>H. C. Gatos  | J. Appl. Phys. <u>29</u> , 771 (1958)              |
| 894<br>R | Influence of Crystal Orientation on the Surface Behavior of InSb  | M. C. Lavine<br>A. J. Rosenberg<br>H. C. Gatos  | J. Appl. Phys. <u>29</u> , 1131 (1958)             |
| 896      | Noise Temperature Measurement on a Solid State Maser  | A. L. McWhorter<br>J. W. Meyer<br>P. D. Strum   | Phys. Rev. <u>108</u> , 1642 (1957)                |
| 897      | Discussion of the Paper: "Detection of Pulse Signals in Noise: Trace-to-Trace Correlation in Visual Displays," D. G. Tucker, J. Brit. I. R. E. <u>17</u> , 319 (1957) | M. I. Skolnik   | J. Brit. IRE <u>17</u> , 705 (1957)                |
| 900<br>R | SAGE Data System Considerations   | R. G. Enticknap<br>E. F. Schuster §   | Trans. IEE, Commun. Electron. No. 34, 824 (1959)   |
| 902      | Thermal Transpiration of Gases at Low Pressures   | A. J. Rosenberg<br>C. S. Martel, Jr.  | J. Phys. Chem. <u>62</u> , 457 (1958)              |
| 903      | Radio Observations of the Russian Earth Satellite   | R. R. Brown<br>P. E. Green, Jr.<br>B. Howland<br>R. M. Lerner<br>R. Manasse<br>G. H. Pettengill | Proc. IRE (Correspondence) <u>45</u> , 1552 (1957) |
| 906<br>R | Ferromagnetic Resonance at UHF in Thin Films  | R. H. Kingston<br>P. E. Tannenwald  | J. Appl. Phys. <u>29</u> , 232 (1958)              |
| 909      | A Binary Algebra Describing Crystal Structures with Closely-Packed Anions   | A. L. Loeb  | Acta Cryst. <u>11</u> , 469 (1958)                 |
| 911      | Ultrasonic-Delay-Line Terminating Circuits and Bandpass Measurements  | M. Axelbank   | Proc. IRE <u>46</u> , 649 (1958)                   |
| 920<br>R | Spring Loaded Differential Drive  | G. R. Heidler   | Machine Design <u>30</u> , 140 (1958)              |
| 921<br>R | Transient Response of Drift Transistors   | R. C. Johnston  | Proc. IRE <u>46</u> , 830 (1958)                   |
| 927      | X-Ray Analysis of Deformed Germanium, Gallium Antimonide, and Indium Antimonide   | C. R. Kolm<br>E. P. Warekois<br>S. A. Kulin   | Trans. AIME, Met. Soc. <u>212</u> , 827 (1958)     |

## Journal Articles

JA No.			
938 R	Electrolytic Cell for Precision Electrode Kinetic Studies	S. Sheff H. C. Gatos S. Zwerdling	Rev. Sci. Instr. <u>29</u> , 531 (1958)
939	Linear Recurring Sequences	N. Zierler	J. Soc. Ind. Appl. Math. <u>7</u> , 31 (1959)
941	A UHF Solid State Maser	R. H. Kingston	Proc. IRE (Correspondence) <u>46</u> , 916 (1958)
943 R	A Useful Theorem for Non-linear Devices Having Gaussian Inputs	R. Price	Trans. IRE, PGIT <u>IT-4</u> , 69 (1958)
946 R	The Spectrophotometric Determination of Microgram Quantities of Indium	J. E. Johnson M. C. Lavine A. J. Rosenberg	Anal. Chem. <u>30</u> , 2055 (1958)
949 R	Cataracts and Ultra-High Frequency Radiation	S. J. Fricker D. G. Cogan § D. D. Donaldson § M. Lubin § H. Hardy §	AMA Arch. Ind. Med. <u>18</u> , 299 (1958)
951 R	Theory of Nonreciprocal Ferrite Phase Shifters in Dielectric Loaded Coaxial Line	K. J. Button	J. Appl. Phys. <u>29</u> , 998 (1958)
959	System-Noise Measurement of a Solid-State Maser	A. L. McWhorter F. R. Arams §	Proc. IRE (Correspondence) <u>46</u> , 913 (1958)
960 R	Direct Transition Exciton and Fine Structure of the Magneto-Absorption Spectrum in Germanium	S. Zwerdling L. M. Roth B. Lax	Phys. Rev. <u>109</u> , 2207 (1958)
964	Detection of Statistically Defined Patterns in a Matrix of Dots	B. F. Green, Jr. A. K. Wolf B. W. White	Am. J. Psychol. <u>72</u> , 503 (1959)
968 R	Configuration Interaction in the Hydrogen Fluoride Molecule	A. M. Karo L. C. Allen §	J. Am. Chem. Soc. <u>80</u> , 4496 (1958)
976 R	Likelihood Ratios of Gaussian Processes	T. S. Pitcher	Arkiv Mat. <u>4</u> , 35 (1959)
977 R	21-Centimeter Solid State Maser	S. H. Autler N. McAvoy §	Phys. Rev. <u>110</u> , 280 (1958)
978 R	Measurements of the Bandwidth of Radio Waves Propagated by the Troposphere Beyond the Horizon	J. H. Chisholm L. P. Rainville J. F. Roche H. G. Root	Trans. IRE, PGAP <u>AP-6</u> , 377 (1958)
979 R	A Synthesis Procedure for Transmission Line Networks	A. I. Grayzel	Trans. IRE, PGCT <u>CT-5</u> , 172 (1958)
983 R	Locally Compact Division Rings	E. Weiss N. Zierler	Pacific J. Math. <u>8</u> , 369 (1958)



## Journal Articles

JA No.

- |           |  |                                       |  |
|-----------|--|---------------------------------------|--|
| 992<br>R  | Outdiffusion as a Teehniqe for the Production of Diodes and Transistors  | J. Halpern<br>R. H. Rediker           | Proe. IRE <u>46</u> , 1068 (1958)                    |
| 996       | Narrow Base Germanium Photodiodes  | D. E. Sawyer<br>R. H. Rediker         | Proe. IRE <u>46</u> , 1122 (1958)                    |
| 998       | The Chemical Behavior of Semiconductor Surfaees Germanium and A <sup>III</sup> B <sup>V</sup> Intermetallie Com-pounds | H. C. Gatos                           | Chem. Chron. Greek Chem. Soe. <u>23A</u> , 78 (1958) |
| 999<br>R  | Stable, Low-Cost One-Mc Oscillator   | J. F. Mereurio, Jr.                   | Electronics <u>32</u> , No. 6, 50 (1959)             |
| 1000      | On Extrapolating a Positive Definite Function from a Finite Interval   | E. J. Akutowicz                       | Math. Scand. <u>7</u> , 157 (1959)                   |
| 1001<br>R | Digital Rate Synthesis for Fre-quency Measurement and Control  | T. J. Rey                             | Proe. IRE <u>47</u> , 2106 (1959)                    |
| 1002<br>R | The Solid State Maser – A Super-cooled Amplifier   | J. W. Meyer                           | Electronics <u>31</u> , No. 17, 66 (1958)            |
| 1003      | Complex Analyses of Variancee: General Problems  | B. F. Green, Jr.<br>J. W. Tukey §     | Psychometrika <u>25</u> , 127 (1960)                 |
| 1006      | Optical Properties of Semicon-ductors under Hydrostatic Pres-sure. III. Germanium-Silicon Alloys                       | D. M. Warschauer<br>W. Paul           | J. Phys. Chem. Solids <u>6</u> , 6 (1958)            |
| 1007<br>R | Kinetics of the Cathodie Reduetion of Anions: Germanium Oxides   | P. H. Robinson<br>M. Green            | J. Electrochem. Soe. <u>106</u> , 253 (1959)         |
| 1008<br>R | Broad-Band Amplifier for Radar and Seatter   | J. H. Phillips<br>E. Maxwell          | Electronics <u>31</u> , No. 39, 81 (1958)            |
| 1009<br>R | Recognition of Distorted Melodies  | B. W. White                           | Am. J. Psychol. <u>73</u> , 100 (1960)               |
| 1019      | Eleetrode Potential of Germa-nium in Aqueous Solutions and the Effect of Illumination                                  | W. W. Harvey<br>H. C. Gatos           | J. Appl. Phys. <u>29</u> , 1267 (1958)               |
| 1021<br>R | Propagation of Ordinary Sound in Liquid Helium Near the $\lambda$ Point  | C. E. Chase                           | Phys. Fluids <u>1</u> , 193 (1958)                   |
| 1022      | Microwave Resonancee in Thin Ferromagnetic Films   | P. E. Tannenwald<br>M. H. Seavey, Jr. | J. Phys. Radium <u>20</u> , 323 (1959)               |
| 1025<br>R | High Pressure Techniques   | D. M. Warschauer<br>W. Paul           | Rev. Sci. Instr. <u>29</u> , 675 (1958)              |
| 1027<br>R | Linear Diversity Combining Teehniques  | D. G. Brennan                         | Proe. IRE <u>47</u> , 1075 (1959)                    |

JA No.			
1032	A Figure of Merit for Catheter Sampling Systems	H. Sherman W. L. Kraus C. B. Moore R. C. Sehlant	Circulation Res. <u>7</u> , 303 (1959)
1044 R	Crystallographic and Magnetic Properties of Several Spinel Containing Trivalent Manganese	D. G. Wiekham W. J. Croft	J. Phys. Chem. Solids <u>7</u> , 351 (1958)
1050 R	Proposal for a Maser-Amplifier System Without Nonreciprocal Elements	S. H. Autler	Proc. IRE (Correspondence) <u>46</u> , 1880 (1958)
1051 R	Statistical Theory of Irreversible Processes: I. Integral Over Fluctuation Path Formulation	D. Falkoff §	Ann. Phys. (MIT) <u>4</u> , 325 (1958)
1055 R	The Adsorption of Krypton on Germanium	A. J. Rosenberg	J. Phys. Chem. <u>62</u> , 1112 (1958)
1057	The Lincoln Keyboard - A Typewriter Keyboard Designed for Computer Input Flexibility	A. Vanderburgh, Jr.	Commun. ACM <u>1</u> , 3 (1958)
1058 R	Empirical Test of an Additive Random Number Generator	B. F. Green, Jr. J. E. K. Smith L. Kiem	J. Assoc. Comp. Mach. <u>6</u> , 527 (1959)
1059 R	Observation of Microwave Cyclotron Resonance by Cross Modulation	H. J. Zeiger C. J. Rauch M. E. Behrndt	Phys. Rev. Letters <u>1</u> , 59 (1958)
1064	Resistance Thermometer Bridge for Measurement of Temperatures in the Liquid Helium Range	C. Blake C. E. Chase E. Maxwell	Rev. Sci. Instr. <u>29</u> , 715 (1958)
1072	A Non-Real-Time Simulation of SAGE Tracking and BOMARC Guidance	D. W. Ladd, Jr. E. W. Wolf	Trans. IRE, PGEC <u>EC-8</u> , 36 (1959)
1074 R	A UHF Solid State Maser	R. H. Kingston	Trans. IRE, PGMTT <u>MTT-7</u> , 92 (1959)
1076 R	Low-Temperature Transition of Magnetic Anisotropy in Nickel-Iron Ferrite	N. Menyuk K. Dwight	Phys. Rev. <u>112</u> , 397 (1958)
1077 R	Preparation and Properties of the Systems in $\text{LaFe}_x\text{Cr}_{1-x}\text{O}_3$ and $\text{LaFe}_x\text{Co}_{1-x}\text{O}_3$	A. Wold W. Croft	J. Phys. Chem. <u>63</u> , 447 (1959)
1078	"Magnetogenics," or The Art of Generating High Magnetic Fields	H. H. Kolm S. Foner	Kelvin Scale Supplement, Arthur D. Little, Inc. (1959)

## Journal Articles

JA No.

- |           |  |  |  |
|-----------|--|--|--|
| 1085      | Exciton and Magneto-Absorption of the Direct and Indirect Transitions in Germanium   | S. Zwerdling<br>B. Lax<br>L. M. Roth<br>K. J. Button         | Phys. Rev. <u>114</u> , 80 (1959)  |
| 1086      | Theory of Optical Magneto-Absorption Effects in Semiconductors   | L. M. Roth<br>B. Lax<br>S. Zwerdling                         | Phys. Rev. <u>114</u> , 90 (1959)  |
| 1087      | MIT Lincoln Laboratory Milestones  | J. T. Gilmore, Jr.   | Commun. ACM <u>1</u> , 39 (1958)   |
| 1089<br>R | The Morse Distribution   | M. Freimer<br>B. Gold<br>A. L. Tritter                       | Trans. IRE, PGIT <u>IT-5</u> , 25 (1959)   |
| 1093<br>R | Zero-Crossing Technique Using TV Techniques  | J. A. Wereb, Jr.   | Electronics <u>32</u> , No. 19, 64 (1959)  |
| 1097<br>R | Quarter Wave Compensation of Resonant Discontinuities  | C. E. Muehe, Jr.   | Trans. IRE, PGMTT <u>MTT-7</u> , 2 (1959)  |
| 1102      | Stress Analysis of a Large Radar Antenna by Digital Computer   | S. Namyet §<br>J. M. Biggs §                                 | Civil Engineering <u>29</u> , 54 (1959)  |
| 1103<br>R | Quantum-Mechanical Three-Body Problem  | L. Eyges   | Phys. Rev. <u>115</u> , 1643 (1959)  |
| 1105<br>R | Direct Observation of Spin-Wave Resonance  | M. H. Seavey, Jr.<br>P. E. Tannenwald                        | Phys. Rev. Letters <u>1</u> , 168 (1958);<br>J. Appl. Phys. Suppl. <u>30</u> , 227S (1959) |
| 1106<br>R | Preparation and Crystallographic Properties of the Systems<br>$\text{LaMn}_{1-x}\text{Mn}_x\text{O}_{3+\lambda}$ and<br>$\text{LaMn}_{1-x}\text{Ni}_x\text{O}_{3+\lambda}$ | A. Wold<br>R. J. Arnott                                      | J. Phys. Chem. Solids <u>9</u> , 176 (1959)  |
| 1107<br>R | On the Reciprocity of HF Ionospheric Transmission  | M. Balsler<br>W. B. Smith<br>E. Warren                       | J. Geophys. Res. <u>63</u> , 859 (1958)  |
| 1108<br>R | Comparison of Measured and Computed Values of the Rapid Fading-Rate of Ultra High-Frequency Signals Reflected from the Moon  | S. J. Fricker<br>R. P. Ingalls<br>W. C. Mason<br>M. L. Stone | Nature <u>182</u> , 1438 (1958)  |
| 1123<br>R | Machine Recognition of Hand Sent Morse Code  | B. Gold  | Trans. IRE, PGIT <u>IT-5</u> , 17 (1959)   |
| 1132<br>R | On the Matrix Riccati Equation   | J. J. Levin  | Proc. Am. Math. Soc. <u>10</u> , 549 (1959)  |
| 1133      | Rigid Radome Design Considerations   | P. Davis<br>A. Cohen   | Electronics <u>32</u> , No. 16, 66 (1959)  |

## Journal Articles

JA No.			
1134 R	Syringe-Type Single-Crystal Furnace for Materials Containing a Volatile Constituent	P. L. Moody C. R. Kolm	Rev. Sci. Instr. <u>29</u> , 1144 (1958)
1138 R	Resonance Isolator at 70 kMcps	L. C. Kravitz G. S. Heller	Proc. IRE (Correspondence) <u>47</u> , 331 (1959)
1143 R	Connections Plated With Wiring	E. A. Guditz	Electronics <u>32</u> , No. 51, 96 (1959)
1143A R	Lincoln Lab Builds Electronic Package Backwards	E. A. Guditz	Business Week (2 January 1960)
1144 R	Configuration Interaction in the Lithium Hydride Molecule. I. A Determinantal AO Approach	A. M. Karo A. R. Olson	J. Chem. Phys. <u>30</u> , 1232 (1959)
1145 R	Configuration Interaction in the Lithium Hydride Molecule. II. An SCF LCAO-MO Approach	A. M. Karo	J. Chem. Phys. <u>30</u> , 1241 (1959)
1146 R	Serial Position and the Memory-Span	N. C. Waugh	Am. J. Psychol. <u>73</u> , 68 (1960)
1149	Oscillatory Magneto-Absorption in Gallium Antimonide	S. Zwerdling B. Lax K. J. Button L. M. Roth	J. Phys. Chem. Solids <u>9</u> , 320 (1959)
1155	X-Ray Method for the Differentiation of {111} Surfaces in A <sup>III</sup> B <sup>V</sup> Semiconducting Compounds	E. P. Warekois P. H. Metzger	J. Appl. Phys. <u>30</u> , 960 (1959)
1173 R	An Electron Population Analysis of LiH and HF	A. M. Karo	J. Chem. Phys. <u>3</u> , 182 (1959)
1183 R	Ground Radomes	S. C. Nilo	SPE J. <u>15</u> , 157 (1959)
1184	Characteristics of the Human Operator in Simple Manual Control Systems	J. I. Elkind C. D. Forgie	Trans. IRE, PGAC <u>AC-4</u> , 44 (1959)
1186 R	Half-Cycle Resonant Delay Circuit	B. Howland	Proc. IRE (Correspondence) <u>47</u> , 993 (1959)
1189	Electroplated Electrical Connections and Improved Through-Hole Printed Wiring	E. B. Murphy	Plating <u>46</u> , 848 (1959)
1190 R	Air Defense Research in the Space Age	C. F. J. Overhage	Tech. Rev. <u>61</u> , 239 (1959)
1193 R	The Probability Density of the Output of a Filter When the Input Is a Random Telegraphic Signal: Differential-Equation Method	J. A. McFadden	Trans. IRE, PGCT <u>CT-6</u> , 228 (1959); Trans. IRE, PGIT <u>IT-5</u> , 228 (1959)

## Journal Articles

JA No.

- |           |  |  |  |
|-----------|--|--|--|
| 1194<br>R | The Detection of Radar Echoes in Noise. Part I: Statistical Preliminaries and Detector Design; Part II: The Accuracy of Radar Measurements | E. J. Kelly, Jr.<br>I. S. Reed<br>W. L. Root                           | J. Soc. Ind. Appl. Math. <u>8</u> , 309 (I), 481 (II) (1960)                         |
| 1197<br>R | Millimicrosecond-Switching Diodes  | J. Halpern<br>R. H. Rediker  | Electronics <u>32</u> , No. 23, 66 (1959)  |
| 1198      | Maximum Angular Accuracy of Tracking a Radio Star by Lobe Comparison   | R. Manasse   | Trans. IRE, PGAP <u>AP-8</u> , 50 (1960)   |
| 1200      | Versatile and Sensitive Vibrating-Sample Magnetometer  | S. Foner   | Rev. Sci. Instr. <u>30</u> , 548 (1959)  |
| 1201      | The Representation of Signals  | R. M. Lerner   | Trans. IRE, PGCT <u>CT-6</u> , 197 (1959); Trans. IRE, PGIT <u>IT-5</u> , 197 (1959) |
| 1209<br>R | Transistorized Generator for Pulse Circuit Design  | L. Neumann   | Electronics <u>32</u> , No. 14, 47 (1959)  |
| 1210      | The Magnetic Properties of Thin Films  | J. B. Goodenough<br>D. O. Smith  | Am. Soc. Metals Seminar Volume, Chap. 7 (1959)                                       |
| 1211<br>R | Polynomial Codes Over Certain Finite Fields  | I. S. Reed<br>G. Solomon   | J. Soc. Ind. Appl. Math. <u>8</u> , 300 (1960)                                       |
| 1216      | Fine Structure in the Zeeman Effect of Excitons in Germanium   | K. J. Button<br>L. M. Roth<br>W. H. Kleincr<br>S. Zwercdling<br>B. Lax | Phys. Rev. Letters <u>2</u> , 161 (1959)   |
| 1218      | The Cryosar - A New Low-Temperature Computer Component   | A. L. McWhorter<br>R. H. Rediker                                       | Proc. IRE <u>47</u> , 1207 (1959)  |
| 1226      | The Pursuit of a Language for Expressing the Outward Behavior of Information Processing Systems  | P. R. Bagley   | Commun. ACM <u>2</u> , 1 (1959)  |
| 1229<br>R | The Velocity of Sound in Liquid Helium Near the $\lambda$ -Point   | C. E. Chase  | Phys. Rev. Letters <u>2</u> , 197 (1959)   |
| 1240<br>R | Note on a Singular Function of Minkowski   | J. R. Kinney   | Proc. Am. Math. Soc. <u>11</u> , 788 (1960)  |
| 1241      | Measurement of Switching Transistor Parameters   | R. C. Johnston<br>R. L. Burke  | Semiconductor Prod. <u>3</u> , No. 2, 43 (1960)                                      |
| 1242      | Automatic Phase Control: Theory and Design   | T. J. Rcy  | Proc. IRE <u>48</u> , 1760 (1960)  |

## Journal Articles

JA No.			
1243 R	Radar Echoes from Venus	R. Price T. J. Goblick P. E. Green, Jr. R. H. Kingston L. G. Kraft G. H. Pettengill R. Silver W. B. Smith	Science <u>129</u> , 751 (1959)
1247	On the Use of Laguerre Polynomials in Treating the Envelope and Phase Components of Narrow-Band Gaussian Noise	I. S. Reed	Trans. IRE, PGIT <u>IT-5</u> , 102 (1959)
1249 R	LCAO Wave Functions for Hydrogen Fluoride with Hartree-Fock Atomic Orbitals	A. M. Karo L. C. Allen §	J. Chem. Phys. <u>31</u> , 968 (1959)
1253 R	Means for Counting "Effective" Numbers of Objects or Durations of Signals	R. M. Lerner	Proc. IRE (Correspondence) <u>47</u> , 1653 (1959)
1254 R	Boundary Behavior of Blaschke Products in the Unit Circle	J. R. Kinney	Proc. Am. Math. Soc. <u>12</u> , 484 (1961)
1263 R	Application of Statistical Notions to Multipath Channels	P. E. Green, Jr.	Nuovo Cimento <u>13</u> , 406 (1959)
1264 R	Results Obtained from a Vowel Recognition Computer Program	J. W. Forgie C. D. Forgie	J. Acoust. Soc. Am. <u>31</u> , 1480 (1959)
1265 R	Surface-Dependent Losses in Variable Reactance Diodes	D. E. Sawyer	J. Appl. Phys. <u>30</u> , 1689 (1959)
1266 R	The Spectrochemical Analysis of High Purity Gallium	E. B. Owens	Appl. Spectroscopy <u>13</u> , 105 (1959)
1267 R	The Size Effect of Ferrite Spheres	W. Hauser L. T. Brown	Quart. J. Mech. Appl. Math. <u>13</u> , 257 (1960)
1269A R	Galvanomagnetic Effects in n-Type Silicon	W. E. Krag	Phys. Rev. <u>118</u> , 435 (1960)
1276	State of the Millimeter Wave Art	B. Lax G. S. Heller	Microwave J. <u>2</u> , No. 5, 12 (1959)
1281 R	Deformation Potential in Germanium from Optical Absorption Lines for Exciton Formation	W. H. Kleiner L. M. Roth	Phys. Rev. Letters <u>2</u> , 334 (1959)
1284	Non-Computational Uses of Digital Computers	B. F. Green, Jr.	Behavioral Sci. <u>4</u> , 164 (1959)
1288 R	Thin Magnetic Films for Digital Computer Memories	D. O. Smith	Electronics <u>32</u> , No. 26, 44 (1959)

## Journal Articles

JA No.

- |            |   |   |   |
|------------|---|---|---|
| 1290<br>R  | Suggestion Concerning Magnetic Interactions in Spinels  | D. G. Wickham<br>J. B. Goodenough                 | Phys. Rev. <u>115</u> , 1156 (1959)                           |
| 1293<br>R  | The Remarkable "Maser" Story  | B. Lax<br>H. C. Gatos                             | Tech. Rev. <u>61</u> , 36 (1959)                              |
| 1298<br>R  | Spin Waves  | P. E. Tannenwald                                  | Microwave J. <u>2</u> , No. 7, 25 (1959)                      |
| 1302<br>R  | Theory of Electrical Conduction in High Magnetic Fields   | P. N. Argyres<br>L. M. Roth                       | J. Phys. Chem. Solids <u>12</u> , 89 (1959)                   |
| 1307A      | Quantizing for Minimum Distortion   | J. Max  | Trans. IRE, PGIT <u>IT-6</u> , 7 (1960)                       |
| 1313A<br>R | Effects of Solar Radiation Pressure on Earth Satellite Orbits                                     | R. W. Parkinson §<br>H. M. Jones<br>I. I. Shapiro | Science <u>131</u> , 920 (1960)                               |
| 1318       | The Effect of a Heat Current or Rotation on Sound Propagation in Liquid Helium                    | C. E. Chase<br>J. Fineman<br>W. E. Millett §      | Physica <u>25</u> , 631 (1959)                                |
| 1321       | The Solid State Maser   | R. H. Kingston                                    | Engineers' News Supplement, N. Y. Herald Tribune, 24 May 1959 |
| 1336<br>R  | Proposal for a Feasible Programming System  | P. R. Bagley                                      | Commun. ACM <u>2</u> , 7 (1959)                               |
| 1338       | Optical Absorption of CoO and MnO Above and Below the Néel Temperature                            | G. W. Pratt, Jr.<br>R. Coelho §                   | Phys. Rev. <u>116</u> , 281 (1959)                            |
| 1340<br>R  | Perturbation of Wave Guides and Cavities by Spheres and Cylinders                                 | W. Hauser<br>L. T. Brown                          | J. Appl. Phys. <u>30</u> , 1460 (1959)                        |
| 1348       | Multilevel Pulsed Field Maser for Generation of High Frequencies                                  | S. Foner<br>L. R. Momo<br>A. Mayer                | Phys. Rev. Letters <u>3</u> , 36 (1959)                       |
| 1354<br>R  | High Magnetic Fields for Advanced Research  | H. H. Kolm  | Electronics <u>32</u> , No. 40, 43 (1959)                     |
| 1356A<br>R | Performance of a 640-Mile, 24-Channel UHF-SSB Experimental Communication System                   | B. E. Nichols                                     | Trans. IRE, PGCS <u>CS-8</u> , 26 (1960)                      |
| 1357       | Quantum Theory of Transport in a Magnetic Field   | P. N. Argyres                                     | Phys. Rev. <u>117</u> , 315 (1960)                            |
| 1359       | Cd <sub>3</sub> As <sub>2</sub> - A Non-Cubic Semiconductor with Unusually High Electron Mobility | A. J. Rosenberg<br>T. C. Harman                   | J. Appl. Phys. <u>30</u> , 1621 (1959)                        |

JA No.			
1367 R	The Reaction of Germanium with Aqueous Solutions. II. Dissolution Kinetics in Electrolytes and the Role of Specific Adsorption	W. W. Harvey H. C. Gatos	J. Electrochem. Soc. <u>107</u> , 65 (1960)
1369	Effects of UHF Radiation on Animals	M. Lubin § L. E. Bird G. W. Curtis § P. F. Daley D. G. Cogan § H. R. Dudley § S. J. Frieker	AMA Arch. Ind. Health <u>21</u> , 558 (1960)
1374 R	Gallium-Arsenide Diffused Diodes	J. Lowen R. H. Rediker	J. Electrochem. Soc. <u>107</u> , 26 (1960)
1372 R	A Review of Panel-Type Display Devices	J. J. Josephs	Proc. IRE <u>48</u> , 1380 (1960)
1373 R	Classical Spin-Configuration Stability in the Presence of Competing Exchange Forces	T. A. Kaplan	Phys. Rev. Letters <u>116</u> , 888 (1959)
1374 R	Remembering the Present States of a Number of Variables	D. B. Yntema G. E. Mueser	J. Exptl. Psychol. <u>60</u> , 18 (1960)
1376 R	Simple Null-Indicating Saturable-Core Magnetometer for the Detection of Static Magnetic Fields	E. P. McCurley C. Blake	Rev. Sci. Instr. <u>31</u> , 440 (1960)
1377 R	The Growth of Anodic Oxide Films on Germanium	S. Zwerdling S. Sheff	J. Electrochem. Soc. <u>107</u> , 338 (1960)
1378	IPL-V: The Newell-Shaw-Simon Programming Language	B. F. Green, Jr.	Behavioral Sci. <u>5</u> , 94 (1960)
1379 R	Electroforming of Intricate Electronic Components	E. B. Murphy	Electronics <u>32</u> , No. 37, 114 (1959)
1381	On a System of Integrodifferential Equations Occurring in Reactor Dynamics	J. J. Levin J. A. Nohel §	J. Math. and Mech. <u>9</u> , 347 (1960)
1382 R	Transistor-Capacitor Shift Register	R. W. Hofheimer	Semiconductor Prod. <u>3</u> , No. 7, 31 (1960)
1383 R	Mutual Coupling Effects in Large Antenna Arrays. I. Slot Arrays	S. Edelberg A. A. Oliner §	Trans. IRE, PGAP <u>AP-8</u> , 286 (1960)
1388 R	Computation and Measurement of the Fading Rate of Moon-Reflected UHF Signals	S. J. Frieker R. P. Ingalls W. C. Mason M. L. Stone D. W. Swift	J. Research Natl. Bur. Standards <u>64D</u> , 455 (1960)



## Journal Articles

JA No.

1393 R	Circulators at 70 and 140 kMcps	J. B. Thaxter G. S. Heller	Proc. IRE <u>48</u> , 110 (1960)
1396A	Characteristics of the {111} Surfaces of the III-V Inter-metallic Compounds	H. C. Gatos M. C. Lavine	J. Electrochem. Soc. <u>107</u> , 427 (1960)
1397 R	Delay-Line Specifications for Matched-Filter Communications Systems	R. M. Lerner B. Reiffen H. Sherman	Trans. IRE, PGCP <u>CP-6</u> , 263 (1959)
1398	The MIT Whirlwind I Computer	J. A. Kessler R. Eldridge	Naval Research Reviews (October 1959)
1399 R	Accuracy in Reconstructing the Arrangement of Elements Generating Kinetic Depth Displays	B. W. White G. E. Mueser	J. Exptl. Psychol. <u>60</u> , 1 (1960)
1400 R	In Defense of the Bat	J. Freedman	Contemp. Psychol. <u>4</u> , 372 (1959)
1409	Material for Microwaves	B. Lax	Microwave J. <u>2</u> , 9 (1959)
1410 R	g Factor of Electrons in Germanium	L. M. Roth B. Lax	Phys. Rev. Letters <u>3</u> , 217 (1959)
1415 R	Note on the Distribution of Locally Maximal Elements in a Random Sample	M. Freimer B. Gold	Ann. Math. Stat. <u>31</u> , 518 (1960)
1420 R	Mutual Coupling Effects in Large Antenna Arrays. II. Compensation Effects	S. Edelberg A. A. Oliner §	Trans. IRE, PGAP <u>AP-8</u> , 360 (1960)
1426A R	Classical Theory of Spin Configurations in the Cubic Spinel	T. A. Kaplan	Phys. Rev. <u>119</u> , 1460 (1960)
1428	Growth of InSb Crystals in the Polar Direction	H. C. Gatos P. L. Moody M. C. Lavine	J. Appl. Phys. <u>31</u> , 212 (1960)
1431	Magneto-Optical Phenomena in Semiconductors	B. Lax S. Zwerdling	Prog. in Semiconductors <u>5</u> , 223 (1960)
1440	Pulsed Field Millimeter Wave Maser	L. R. Momo R. A. Myers § S. Foner	J. Appl. Phys. <u>31</u> , 443 (1960)
1443 R	Light-Pen Links Computer to Operator	B. M. Gurley C. E. Woodward	Electronics <u>32</u> , No. 47, 85 (1959)
1447 R	Direct Cation- -Cation Interactions in Several Oxides	J. B. Goodenough	Phys. Rev. <u>117</u> , 1442 (1960)

JA No.			
1448 R	Observed Characteristics of an Ultra-High-Frequency Signal Traversing an Auroral Disturbance	J. C. James L. E. Bird R. P. Ingalls M. L. Stone J. W. B. Day G. E. K. Lockwood § R. I. Presnell §	Nature <u>185</u> , 510 (1960)
1454 R	The Preparation and Crystallography of FeNiN and the Series Fe <sub>4-x</sub> Ni <sub>x</sub> N	R. J. Arnott A. Wold	J. Phys. Chem. Solids <u>15</u> , 452 (1960)
1455	Dislocation Etch Pits on the {111} and $\{\bar{1}\bar{1}\bar{1}\}$ Surfaces of InSb	H. C. Gatos M. C. Lavine	J. Appl. Phys. <u>31</u> , 743 (1960)
1456 R	Studies in Partial Switching of Ferrite Cores	R. H. Tanerell R. E. McMahon	J. Appl. Phys. <u>31</u> , 762 (1960)
1457 R	Kinetics of the Oxidation of Antimony	A. J. Rosenberg A. A. Menna T. P. Turnbull	J. Electrochem. Soc. <u>107</u> , 496 (1960)
1461	Cell for the Infrared Spectroscopy of Solid and Gas-Solid Phase Reactions	F. Vratny § B. Graves §	Rev. Sci. Instr. <u>31</u> , 65 (1960)
1462 R	The Preparation of Stoichiometric Ferrites	D. G. Wickham E. R. Whipple E. G. Larson	J. Inorg. Nucl. Chem. <u>14</u> , 217 (1960)
1466	Etching Behavior of the {110} and {100} Surfaces of InSb	H. C. Gatos M. C. Lavine	J. Electrochem. Soc. <u>107</u> , 433 (1960)
1467	Review of "Paris Symposium on Radio Astronomy"	R. H. Kingston	Microwave J. <u>3</u> , No. 2, 76 (1960)
1475 R	Effect of the Lattice on Dielectric Properties of an Electron Gas	D. S. Falk	Phys. Rev. <u>118</u> , 105 (1960)
1477	Superconducting Electromagnets	S. H. Autler	Rev. Sci. Instr. <u>31</u> , 369 (1960)
1484	An IF Power Comparator With Large Dynamic Range	G. R. Curry	Proc. IRE (Correspondence) <u>48</u> , 1490 (1960)
1485	Paraboloidal Reflector Patterns for Off-Axis Feed	S. S. Sandler	Trans. IRE, PGAP <u>AP-8</u> , 368 (1960)
1489 R	On Decoding Linear Error-Correcting Codes. I.	N. Zierler	Trans. IRE, PGIT <u>IT-6</u> , 450 (1960)
1490 R	Magnetoplasma Reflection in Solids	B. Lax G. B. Wright	Phys. Rev. Letters <u>4</u> , 16 (1960)

## Journal Articles

JA No.

- |            |  |   |  |
|------------|--|---|--|
| 1493       | Digital Computer Techniques in the Study of the Nervous System   | W. A. Clark   | The Reflector <u>8</u> , 25 (1959)             |
| 1494       | Indium as a Source of Impurities in Indium Arsenide  | A. J. Strauss<br>T. C. Harman<br>E. B. Owens<br>M. C. Finn    | Solid-State Electron. <u>1</u> , 131 (1960)    |
| 1495<br>R  | Historical Sketch of Ferrites and Their Microwave Applications   | K. J. Button  | Microwave J. <u>3</u> , No. 3, 73 (1960)       |
| 1497<br>R  | Generalization of Band Theory to Include Self-Energy Corrections   | G. W. Pratt, Jr.  | Phys. Rev. <u>118</u> , 462 (1960)             |
| 1501<br>R  | Global Asymptotic Stability for Nonlinear Systems of Differential Equations and Applications to Reactor Dynamics | J. J. Levin<br>J. A. Nohel §                                  | Arch. Ratl. Mech. Anal. <u>5</u> , 194 (1960)  |
| 1502A<br>R | Preparation and Properties of $\text{CdSnAs}_2$  | A. J. Strauss<br>A. J. Rosenberg                              | J. Phys. Chem. Solids <u>17</u> , 278 (1964)   |
| 1504       | Cyclotron Resonance  | B. Lax<br>J. G. Mavroides                                     | Solid-State Phys. <u>11</u> , 261 (1960)       |
| 1506A      | Concerning Hybrids   | C. W. Jones   | Microwave J. <u>4</u> , No. 10, 98 (1961)      |
| 1510       | Etching and Inhibition of the {111} Surfaces of the III-V Intermetallic Compounds: InSb                          | H. C. Gatos<br>M. C. Lavine                                   | J. Phys. Chem. Solids <u>14</u> , 169 (1960)   |
| 1511<br>R  | Length of Series and the Learning Curve  | N. C. Waugh   | Am. J. Psychol. <u>75</u> , 177 (1962)         |
| 1514<br>R  | Background to Scientific Communication   | M. M. Kessler   | Trans. IRE, PGEWS <u>EWS-3</u> , 3 (1960)      |
| 1515       | Millimeter Cyclotron Resonance in Silicon  | C. J. Rauch<br>J. J. Stickler<br>H. J. Zeiger<br>G. S. Heller | Phys. Rev. Letters <u>4</u> , 64 (1960)        |
| 1516<br>R  | Zeeman Effect of Impurity Levels in Silicon  | S. Zwerdling<br>K. J. Button<br>B. Lax                        | Phys. Rev. <u>118</u> , 975 (1960)             |
| 1517<br>R  | The Effect of a Density Maximum Near the $\lambda$ Point on the Temperature Distribution in Liquid Helium I      | C. E. Chase<br>E. Maxwell<br>W. M. Whitney §                  | Physica <u>26</u> , 160 (1960)                 |
| 1520       | Physical Adsorption Processes and Their Relation to Order-Disorder Theory  | J. M. Honig   | Trans. N. Y. Acad. Sci. <u>22</u> , 313 (1960) |

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1521	Internal Impurity Levels in Semiconductors: Experiments in $\rho$ -Type Silicon	S. Zwerdling K. J. Button B. Lax	Phys. Rev. Letters <u>4</u> , 173 (1960)
1522 R	Magnetization Reversal and Asymmetry in Cobalt Vanadate (IV)	N. Menyuk K. Dwight D. G. Wickham	Phys. Rev. Letters <u>4</u> , 119 (1960)
1524 R	CW Millimeter Wave Maser Using $\text{Fe}^{3+}$ in $\text{TiO}_2$	S. Foncr L. R. Momo	J. Appl. Phys. <u>31</u> , 742 (1960)
1525 R	Radiochemical Evaluation of Solvent Extraction of Indium as the Bromide at High Concentrations	E. B. Owens	Anal. Chem. <u>32</u> , 1366 (1960)
1528 R	A Note on Human Recognition of Hand-Printed Characters	U. Neisser P. Weene	Inform. and Control <u>3</u> , 191 (1960)
1534 R	The Oxidation of Intermetallic Compounds. I. High Temperature Oxidation of InSb	A. J. Rosenberg M. C. Lavine	J. Phys. Chem. <u>64</u> , 1135 (1960)
1535 R	Oxidation of Intermetallic Compounds. II. Interrupted Oxidation of InSb	A. J. Rosenberg	J. Phys. Chem. <u>64</u> , 1143 (1960)
1536	Metallurgy and Semiconductor Materials	H. C. Gatos, Editor	<u>Properties of Elemental and Compound Semiconductors</u> , AIME Publications (Interscience Publishers, New York, 1960)
1537 R	Experimental Comparison of Equal-Gain Maximal-Ratio Diversity Combiners	R. V. Locke, Jr.	Proc. IRE (Correspondence) <u>48</u> , 1488 (1960)
1538	Conference on Quantum Electronics	B. Lax	Microwave J. <u>3</u> , No. 2, 21 (1960)
1542 R	Determination of the Effective Scattering Mechanism Parameter of Electron Transport Theory	T. C. Harman	Phys. Rev. <u>118</u> , 1541 (1960)
1545 R	Charging Curves for Germanium Electrodes	W. W. Harvey S. Sheff H. C. Gatos	J. Electrochem. Soc. <u>107</u> , 560 (1960)
1546A R	Derivation of the Boltzmann Transport Equation for Inelastic Collisions	P. N. Argyres	J. Phys. Chem. Solids <u>19</u> , 66 (1961)
1547 R	$g$ Factor and Donor Spin-Lattice Relaxation for Electrons in Germanium and Silicon	L. M. Roth	Phys. Rev. <u>118</u> , 1534 (1960)

## Journal Articles

JA No.

1549	Magneto-Plasma Reflection in n-Type InSb and n-Type HgSe	G. B. Wright B. Lax	Phys. Rev. Letters <u>4</u> , 16 (1960)
1555 R	First Passage Times of a Generalized Random Walk	J. R. Kinney	Ann. Math. Stat. <u>32</u> , 235 (1961)
1556	New Tools for Research	B. Lax	Microwave J. <u>3</u> , No. 6, 19 (1960)
1558 R	Evidence for the Quantization of Circulation in Liquid Helium II	C. E. Chase	Phys. Rev. Letters <u>4</u> , 220 (1960)
1560 R	Physical Adsorption Processes and Their Relation to Order-Disorder Theory	J. M. Honig	Trans. N. Y. Acad. Sci. <u>22</u> , 313 (1960)
1561 R	A Matched Filter Detection System for Complicated Doppler Signals	R. M. Lerner	Trans. IRE, PGIT <u>IT-6</u> , 373 (1960)
1563 R	Measurements of Lunar Reflectivity Using the Millstone Radar	G. H. Pettengill	Proc. IRE (Correspondence) <u>48</u> , 933 (1960)
1565A R	Semiconductor Compounds	H. C. Gatos	Nucleus <u>37</u> , 165 (1960)
1567 R	Separation of the Defect Concentration and Diffusion Coefficient in Diffusion-Limited Scaling Reactions	A. J. Rosenberg	J. Electrochem. Soc. <u>107</u> , 795 (1960)
1570 R	Magnetic Properties of $Mn_3O_4$ and the Canted Spin Problem <sup>4</sup>	K. Dwight N. Menyuk	Phys. Rev. <u>119</u> , 1470 (1960)
1573	Magnetic Properties of Perovskites	J. B. Goodenough	<u>Landolt-Bornstein Tabellen</u> , Vol. II/9 (Springer-Verlag, Berlin, 1962)
1577	Electromagnet Design	H. H. Kolm D. B. Montgomery	<u>Encyclopedic Dictionary of Physics</u> (Pergamon Press, London, 1961)
1578A	On the Global Asymptotic Behavior of Nonlinear Systems of Differential Equations	J. J. Levin	Arch. Ratl. Mech. Anal. <u>6</u> , 65 (1960)
1579	Measurements of the Spectrum of Radio Noise from 50–100 cps	M. Balser C. A. Wagner	J. Research Natl. Bur. Standards <u>64D</u> , 415 (1960)
1581A R	Improved Square Wave Inductance Bridge	B. Howland	Rev. Sci. Instr. <u>31</u> , 763 (1960)
1582 R	Optimum Approximation to a Matched Filter Response	J. W. Craig, Jr.	Trans. IRE, PGIT <u>IT-6</u> , 409 (1960)
1587	A Solid-State UHF Radar Transponder	L. Cartledge G. B. Tiffany §	Astronautics <u>5</u> , 30 (1960)

## Journal Articles

JA No.			
1589	C-W Cell Decompositions of Symmetric Homogeneous Spaces	R. Hermann	Bull. Am. Math. Soc. <u>66</u> , 126 (1960)
1590	On Geodesics That Are Also Orbits	R. Hermann	Bull. Am. Math. Soc. <u>66</u> , 91 (1960)
1590A R	Geodesics of Bounded, Symmetric Domains	R. Hermann	Comment. Math. Helvetici <u>35</u> , 1 (1961)
1591 R	On the Differential Geometry of Foliations	R. Hermann	Ann. Math. <u>72</u> , 445 (1960)
1592 R	Remarks on the Foundations of Integral Geometry	R. Hermann	Rendic. Circolo Mat. (Palermo) <u>9</u> , 1 (1960)
1593 R	Ionospheric Backscatter Observation at 440 Mcps	V. C. Pineo L. G. Kraft H. W. Briscoe	J. Geophys. Res. <u>65</u> , 1620 (1960)
1594 R	Activity Coefficients of Electrons and Holes at High Concentrations	A. J. Rosenberg	J. Chem. Phys. <u>33</u> , 665 (1960)
1597 R	Radar Echoes from Venus and a New Determination of the Solar Parallax	G. H. Pettengill R. Price	Planet. Space Sci. <u>5</u> , 70 (1961)
1599	Inclusion Theory of Kerston	N. Menyuk	<u>Encyclopedic Dictionary of Physics</u> (Pergamon Press, London, 1961)
1600	Spontaneous Magnetization	K. Dwight	<u>Encyclopedic Dictionary of Physics</u> (Pergamon Press, London, 1961)
1601	The Reaction of Semiconductors With Aqueous Solutions	H. C. Gatos, Editor	<u>The Surface Chemistry of Metals and Semiconductors</u> (Wiley, New York, 1960)
1602 R	On the Theory of Indicator-Dilution Methods Under Varying Blood-Flow Conditions	H. Sherman	Bull. Math. Biophys. <u>22</u> , 417 (1960)
1603A	An Infinite-Stage Production-Smoothing Process	M. Freimer	J. Math. Anal. Appl. <u>2</u> , 500 (1961)
1605 R	{111} Direct Transition Exciton and Magnetoreflexion in Germanium	B. Lax	Phys. Rev. Letters <u>4</u> , 511 (1960)
1607 R	Damaged Layers and Crystalline Perfection in the {111} Surfaces of III-V Intermetallic Compounds	E. P. Warekois M. C. Lavine H. C. Gatos	J. Appl. Phys. <u>31</u> , 1302 (1960)

## Journal Articles

JA No.

- |           |  |  |  |
|-----------|--|--|--|
| 1610<br>R | On Singular and Nonsingular Optimum (Bayes) Tests for the Detection of Normal Stochastic Signals in Normal Noise | D. Middleton   | Trans. IRE, PGIT <u>IT-7</u> , 105 (1964)    |
| 1612      | Review of "Alpha-Numeric Character Recognition Using Local Operations," by J. S. Bomba                           | H. Sherman   | Trans. IRE, PGEC <u>EC-9</u> , 382 (1960)    |
| 1613      | Review of "Pattern Recognition and Reading by Machine," by W. W. Bledsoe and I. Browning                         | H. Sherman   | Trans. IRE, PGEC <u>EC-9</u> , 384 (1960)    |
| 1614<br>R | Growth of GaAs Crystals in the <111> Polar Direction   | P. L. Moody<br>H. C. Gatos<br>M. C. Lavine                 | J. Appl. Phys. <u>31</u> , 1696 (1960)       |
| 1615<br>R | A Representation of Vector-Valued Random Processes   | E. J. Kelly, Jr.<br>W. L. Root                             | J. Math. and Phys. <u>39</u> , 244 (1960)    |
| 1616A     | First Aid for a Giant Bearing  | D. A. Regillo  | Am. Machinist <u>105</u> , 146 (1961)        |
| 1619<br>R | Pattern Recognition by Machine   | O. G. Selfridge<br>U. Neisser                              | Scientific American, 2 (August 1960)         |
| 1620<br>R | Oblique-Incidence Anisotropy in Evaporated Permalloy Films   | D. O. Smith<br>M. S. Cohen<br>G. P. Weiss                  | J. Appl. Phys. <u>31</u> , 1755 (1960)       |
| 1622<br>R | Note on the Equalization and Cancellation Theory of Binaural Masking Level Differences                           | N. I. Durlach  | J. Acoust. Soc. Am. <u>32</u> , 1075 (1960)  |
| 1625<br>R | Exploring the Solar System by Radar  | P. E. Green, Jr.<br>G. H. Pettengill                       | Sky and Telescope <u>20</u> , 3 (1960)       |
| 1626      | Two-Error Correcting Bose-Chaudhuri Codes are Quasi-Perfect  | N. Zierler<br>D. Gorenstein §<br>W. W. Peterson §          | Inform. and Control <u>3</u> , 291 (1960)    |
| 1627<br>R | A Possible Long-Range Communications Link Between Ground and Low-Orbiting Satellites                             | M. S. Macrakis   | J. Atmos. Terr. Phys. <u>19</u> , 260 (1960) |
| 1628      | Band Structure of Transition Metals and Their Alloys   | J. B. Goodenough   | Phys. Rev. <u>120</u> , 67 (1960)            |
| 1629<br>R | Magneto-Tunneling in InSb  | A. R. Calawa<br>R. H. Rediker<br>B. Lax<br>A. L. McWhorter | Phys. Rev. Letters <u>5</u> , 55 (1960)      |
| 1634<br>R | Method for Determining Ground-State Spin Configurations  | D. H. Lyons<br>T. A. Kaplan                                | Phys. Rev. <u>120</u> , 1580 (1960)          |

## Journal Articles

JA No.			
1634	Rotating Polarization and Periodic Bodies	J. J. Mikulski	Proc. IRE <u>49</u> , 361 (1961)
1636 R	Thermal Conduction in Rotating Liquid Helium II	C. E. Chase	Phys. Rev. <u>120</u> , 688 (1960)
1637 R	A Stochastic Model for Free Recall	N. C. Waugh J. E. K. Smith	Psychometrika <u>27</u> , 151 (1962)
1638 R	Low Temperature Paramagnetic Resonance of Trapped O <sub>2</sub>	S. Foner H. Meyer § W. H. Kleiner	J. Phys. Chem. Solids <u>18</u> , 273 (1961)
1640 R	The Average Response Computer (ARC): A Digital Device for Computing Averages and Amplitude and Time Histograms of Electrophysiological Response	W. A. Clark, Jr. R. M. Brown M. H. Goldstein C. E. Molnar D. F. O'Brien H. E. Zieman	Trans. IRE, PGBME <u>BME-8</u> , 46 (1961)
1642 R	Low Reverse Leakage Gallium-Arsenide Diodes	J. Halpern R. H. Rediker	Proc. IRE (Correspondence) <u>48</u> , 1780 (1960)
1643 R	Electromagnetic Properties of Ferrimagnetics and Their Applications from UHF to Millimeter Waves. I, II, III	B. Lax K. J. Button	Microwave J. <u>3</u> , No. 9, 2; No. 10, 52; No. 11, 49 (1960)
1644 R	Figure Coherence in the Kinetic Depth Effect	B. F. Green, Jr.	J. Exptl. Psychol. <u>62</u> , 272 (1961)
1645 R	Computer Design of Multiple-Output Logical Networks	T. C. Bartee	Trans. IRE, PGEC <u>EC-10</u> , 21 (1961)
1646 R	General Spin-Wave Dispersion Relations	R. F. Soohoo	Phys. Rev. <u>120</u> , 1978 (1960)
1647 R	Observations of Earth-Ionosphere Cavity Resonances	M. Balser C. A. Wagner	Nature <u>188</u> , 638 (1960)
1648 R	Pulsed Field Measurements of Large Zero-Field Splittings: V <sup>3+</sup> in Al <sub>2</sub> O <sub>3</sub>	S. Foner W. Low §	Phys. Rev. <u>120</u> , 1585 (1960)
1650A R	Band-Pass Measurements of a Lunar Reflection Circuit	R. P. Ingalls L. E. Bird J. W. B. Day	Proc. IRE (Correspondence) <u>49</u> , 631 (1961)
1652	The Traveling Wave Resonator and High Power Microwave Testing	S. J. Miller	Microwave J. <u>3</u> , No. 9, 50 (1960)
1653	Review of "A Tunnel Diode Tenth Microsecond Memory," by M. M. Kaufman	R. E. McMahon	Trans. IRE, PGEC <u>EC-9</u> , 527 (1960)



## Journal Articles

JA No.

- |           |   |   |   |
|-----------|---|---|---|
| 1654      | Review of "Use of a Computer to Design Character Recognition Logic," by R. J. Evey                        | W. Doyle  | Trans. IRE, PGEC <u>EC-9</u> , 522 (1960)   |
| 1655      | Frequency Variations Due to Over-the-Horizon Tropospheric Propagation                                     | J. H. Chisholm<br>S. J. Goodman §<br>J. M. Kennedy §<br>L. B. Lambert §<br>L. P. Rainville<br>J. F. Roche | Trans. IRE, PGAP <u>AP-9</u> , 384 (1961)   |
| 1657      | Review of "Encoding of Incompletely Specified Boolean Matrices," by T. A. Dolotta and E. J. McClusky, Jr. | I. L. Lebow<br>T. C. Bartee   | Trans. IRE, PGEC <u>EC-9</u> , 517 (1960)   |
| 1658<br>R | RF Hall Effect in a Superconductor  | G. F. Dresselhaus<br>M. S. Dresselhaus  | Phys. Rev. <u>120</u> , 1971 (1960)   |
| 1659      | Magnetic Film Memory Design   | J. I. Raffel<br>T. S. Crowther<br>A. H. Anderson<br>T. O. Herndon   | Proc. IRE <u>49</u> , 155 (1961)  |
| 1660<br>R | Infrared Magnetoreflexion in Bismuth. I. High Fields  | B. Lax<br>J. G. Mavroides<br>H. J. Zeiger<br>R. J. Keyes  | Phys. Rev. Letters <u>5</u> , 241 (1960)  |
| 1661<br>R | Interband Magnetoreflexion in Bismuth. II. Low Fields   | R. N. Brown<br>J. G. Mavroides<br>M. S. Dresselhaus<br>B. Lax   | Phys. Rev. Letters <u>5</u> , 243 (1960)  |
| 1662<br>R | Systems Applications of Solid-State Masers  | J. W. Meyer   | Electronics <u>33</u> , No. 45, 58 (1960)   |
| 1663<br>R | Computer Models for Cognitive Processes   | B. F. Green, Jr.  | Psychometrika <u>26</u> , 85 (1961)   |
| 1664A     | Calibration of Prism Spectrometers in the Ultraviolet, Visible, and Near-Infrared Regions                 | S. Zwerdling<br>J. P. Theriault   | Spectrochim. Acta <u>17</u> , 819 (1961)  |
| 1665      | Design Using Computers  | T. C. Bartee  | Chap. 6, <u>A Survey of Switching Circuit Theory</u> , E. J. McCluskey and T. C. Bartee, Eds. (McGraw-Hill, New York, 1962) |
| 1667      | Free Versus Serial Recall   | N. C. Waugh   | J. Exptl. Psychol. <u>62</u> , 496 (1961)   |
| 1669      | Compound Cryosars for Low-Temperature Computer Memories   | R. H. Rediker<br>A. L. McWhorter  | Solid-State Electron. <u>2</u> , 100 (1961)   |
| 1670<br>R | Calculation of Klystron Cavity Interaction  | R. L. Pease   | Trans. IRE, PGED <u>ED-8</u> , 170 (1961)   |

JA No.			
1671 R	A Theoretical Limitation on the Formation of Lossless Multiple Beams in Linear Arrays	J. L. Allen	Trans. IRE, PGAP <u>AP-9</u> , 350 (1964)
1673 R	Perturbations of the Orbit of the Echo Balloon	I. I. Shapiro H. M. Jones	Science <u>132</u> , 1484 (1960)
1674 R	Solid Solutions of $\text{In}_2\text{Te}_3$ in $\text{Sb}_2\text{Te}_3$ and $\text{Bi}_2\text{Te}_3$	A. J. Rosenberg A. J. Strauss	J. Phys. Chem. Solids <u>19</u> , 105 (1964)
1675 R	Electrical Properties of n-Type GaSb	A. J. Strauss	Phys. Rev. <u>121</u> , 1087 (1961)
1677 R	Exchange Integral in Cobalt from Spin-Wave Resonance	P. E. Tannenwald R. Weber	Phys. Rev. <u>121</u> , 715 (1964)
1678 R	The Induction-Coupled Plasma Torch	T. B. Reed	J. Appl. Phys. <u>32</u> , 821 (1961)
1680 R	Communications Through Unspecified Additive Noise	W. L. Root	Inform. and Control <u>4</u> , 15 (1964)
1681 R	Stimulus Programming in Psychophysics	J. E. K. Smith	Psychometrika <u>26</u> , 27 (1964)
1682 R	A Transient Discrete Time Queue with Finite Storage	J. R. Kinney	Ann. Math. Stat. <u>33</u> , 130 (1962)
1685 R	Measuring <u>Really</u> Large Diameters	C. A. Pappas	Am. Machinist <u>105</u> , 92 (1961)
1687	Error Statistics and Coding for Binary Transmission Over Telephone Circuits	A. B. Fontaine R. G. Gallager	Proc. IRE <u>49</u> , 1059 (1961)
1688 R	Computer Languages for Symbol Manipulation	B. F. Green, Jr.	Trans. IRE, PGEC <u>EC-10</u> , 729 (1964)
1691 R	Machine Preparation of Printed-Wiring Masks	E. A. Guditz	Trans. IRE, PGPEP <u>PEP-5</u> , 22 (1964)
1692 R	Cyclotron Resonance in Indium Antimonide at High Magnetic Fields	B. Lax J. G. Mavroides H. J. Zeiger R. J. Keyes	Phys. Rev. <u>122</u> , 31 (1964)
1693 R	A Poisson Kernel for Certain Homogeneous Spaces	R. Hermann	Proc. Am. Math. Soc. <u>12</u> , 892 (1964)
1697 R	Hexagonal Iron Nitrides	A. Wold R. J. Arnott N. Menyuk	J. Phys. Chem. <u>65</u> , 1068 (1961)
1698 R	Interferometer Techniques Applied to Radar	E. Gehrels A. Parsons	Trans. IRE, PGMIL <u>MIL-5</u> , 139 (1964)

## Journal Articles

JA No.

- |           |   |  |  |
|-----------|---|--|--|
| 1700<br>R | The Radar Measurement of Range, Velocity and Acceleration   | E. J. Kelly, Jr.                                     | Trans. IRE, PGMIL <u>MIL-5</u> , 51 (1961)     |
| 1702<br>R | Vowel Recognition Using a Multiple Discriminant Function  | J. E. K. Smith<br>L. Klem                            | J. Acoust. Soc. Am. <u>33</u> , 358 (1961)     |
| 1703      | The Lincoln Laboratory Antenna Test Range   | A. Cohen<br>A. W. Maltese                            | Microwave J. <u>4</u> , No. 4, 57 (1961)       |
| 1704<br>R | Emission Spectrographic Analysis of Fused Aluminum Oxide and Fused Tin Oxide Crystals             | E. B. Owens  | Appl. Spectroscopy <u>16</u> , 86 (1962)       |
| 1707<br>R | Necessity and Experimental Consistency of Antiferromagnetic Ground State without Long-Range Order | G. W. Pratt, Jr.                                     | Phys. Rev. <u>122</u> , 489 (1961)             |
| 1708<br>R | Cobalt Ferrite Single Crystals  | A. Ferretti<br>R. J. Arnott<br>E. Delaney<br>A. Wold | J. Appl. Phys. <u>32</u> , 905 (1961)          |
| 1709<br>R | Characteristics of the {111} Surfaces of the III-V Intermetallic Compounds. II. Surface Damage    | H. C. Gatos<br>M. C. Lavine<br>E. P. Warekois        | J. Electrochem. Soc. <u>108</u> , 645 (1961)   |
| 1710<br>R | Antimony Edge Dislocations in InSb  | H. C. Gatos<br>M. C. Finn<br>M. C. Lavine            | J. Appl. Phys. <u>32</u> , 1174 (1961)         |
| 1711<br>R | The Computer as a Pattern Generator for Perceptual Research                                       | B. W. White  | Behavioral Sci. <u>6</u> , 253 (1961)          |
| 1712<br>R | Hydromagnet: A Self-Generating Liquid Conductor Electromagnet                                     | H. H. Kolm<br>O. K. Mawardi §                        | J. Appl. Phys. <u>32</u> , 1296 (1961)         |
| 1714<br>R | Man-Computer Cooperation in Decisions Requiring Common Sense                                      | D. B. Yntema<br>W. S. Torgerson                      | Trans. IRE, PGHFE <u>HFE-2</u> , 20 (1961)     |
| 1716<br>R | A New Treatment of Bose-Chaudhuri Codes   | H. F. Mattson §<br>G. Solomon                        | J. Soc. Ind. Appl. Math. <u>9</u> , 654 (1961) |
| 1717<br>R | Stimulus-Conditions Affecting a Recently Discovered Stereoscopic Effect                           | B. W. White  | Am. J. Psychol. <u>75</u> , 411 (1962)         |
| 1718<br>R | Keeping Track of Variables That Have Few or Many States   | D. B. Yntema<br>G. E. Mueser                         | J. Exptl. Psychol. <u>63</u> , 391 (1962)      |
| 1719<br>R | 100-200 kMc Water Calorimeter   | J. B. Thaxter<br>J. McGowan, III                     | Rev. Sci. Instr. <u>32</u> , 605 (1961)        |

JA No.			
1720 R	Induction Heated Pressure Vessel for Growing Oxide Single Crystals	A. Ferretti D. G. Wickham A. Wold	Rev. Sci. Instr. <u>32</u> , 566 (1961)
1721 R	Relationship Between Crystal Symmetry and Magnetic Properties of Ionic Compounds Containing $Mn^{3+}$	J. B. Goodenough A. Wold R. J. Arnott N. Menyuk	Phys. Rev. <u>124</u> , 373 (1961)
1722 R	Atmospheric Absorption of 10-400 kMcps Radiation: Summary and Bibliography to 1961	E. S. Rosenblum	Microwave J. <u>4</u> , No. 3, 91 (1961)
1723 R	Evidence for Canted Magnetic Moments in Manganous Stannate ( $Mn_2SnO_4$ )	D. G. Wickham N. Menyuk K. Dwight	J. Phys. Chem. Solids <u>20</u> , 316 (1961)
1724 R	Recognition of Patterns in the EEG	B. G. Farley	<u>Computer Techniques in EEG Analysis</u> (Elsevier Publishing Co., Amsterdam, 1961), 49
1725 R	The Differential Geometry of Foliations, II	R. Hermann	J. Math. and Mech. <u>11</u> , 303 (1962)
1726 R	Speech Synthesis With Pre-recorded Syllables and Words	A. N. Stowe D. B. Hampton §	J. Acoust. Soc. Am. <u>33</u> , 810 (1961)
1727 R	Bats That Fish	J. J. G. McCue	Naval Research Reviews, 19 (May 1961)
1728 R	Magnetic Field Dependence of the Superconducting Energy Gap	D. H. Douglass, Jr.	Phys. Rev. Letters <u>6</u> , 346 (1961)
1729 R	A Simple Approximate Expression for Converting Directly from Noise Figures in DB to Noise Temperatures	E. P. McCurley C. Blake	Microwave J. <u>4</u> , No. 4, 79 (1961)
1730 R	Cryosar Memory Design	R. C. Johnston	Trans. IRE, PGEC <u>EC-10</u> , 712 (1961)
1733	On Differentials in Function Fields	P. L. Falb O. Zariski §	Am. J. Math. <u>83</u> , 542 (1961)
1735 R	Dangling Bonds in III-V Compounds	H. C. Gatos	J. Appl. Phys. <u>32</u> , 1232 (1961)
1736	On the Behavior of the Geometric Genus Under Ground Field Extension	P. L. Falb	Am. J. Math. <u>84</u> , 421 (1962)
1737 R	Likelihood Ratios for Diffusion Processes With Shifted Mean Values	T. S. Pitcher	Trans. Am. Math. Soc. <u>101</u> , 168 (1961)

## Journal Articles

JA No.

- |            |   |  |  |
|------------|---|--|--|
| 1738<br>R  | Properties of Orbiting Dipole Belts   | W. E. Morrow, Jr.<br>D. C. MacLellan         | Astron. J. <u>66</u> , 107 (1961)  |
| 1739<br>R  | Hole Injection During Reduction of Ferricyanide at a Germanium Electrode                      | W. W. Harvey                                 | J. Phys. Chem. <u>65</u> , 1641 (1961)   |
| 1741<br>R  | On the Existence of a Fundamental Domain for Riemannian Transformation Groups                 | R. Hermann                                   | Proc. Am. Math. Soc. <u>13</u> , 489 (1962)  |
| 1744<br>R  | Growth of Refractory Crystals Using the Induction Plasma Torch                                | T. B. Reed                                   | J. Appl. Phys. <u>32</u> , 2534 (1961)   |
| 1745<br>R  | Radar-Computer Display Traces of Alphanumeric Characters                                      | K. E. Perry<br>E. J. Aho                     | Electronics <u>34</u> , No. 26, 75 (1961)  |
| 1746<br>R  | Symmetry of Configurational Entropy in Lattice Statistics                                     | W. H. Kleiner                                | J. Chem. Phys. <u>36</u> , 76 (1962)   |
| 1748<br>R  | The Scattering Properties of the Lunar Surface at Radio Wave Lengths                          | J. V. Evans<br>G. H. Pettengill              | Chap. 5, The Moon, Meteorites, and Comets ( <u>The Solar System</u> , Vol. IV)(Univ. of Chicago Press, 1963) |
| 1749<br>R  | On the Consistency of Quantum Field Theory  | R. T. Prosser                                | Bull. Am. Math. Soc. <u>69</u> , 552 (1963)  |
| 1750<br>R  | Theory of Interband Faraday Rotation in Semiconductors  | B. Lax.<br>Y. Nishina §                      | Phys. Rev. Letters <u>6</u> , 464 (1961)   |
| 1752<br>R  | Design of Wide-Band Shielded Toroidal RF Transformers   | R. S. Berg<br>B. Howland                     | Rev. Sci. Instr. <u>32</u> , 864 (1961)  |
| 1753       | Solution of Schrödinger Equation for a Periodic Lattice                                       | L. Eyges                                     | Phys. Rev. <u>123</u> , 1673 (1961)  |
| 1757<br>R  | 'Erektor Subrack Kit' Adapts to Various Board Sizes   | W. F. McBride                                | Elec. Design News <u>7</u> , 64 (1962)   |
| 1758       | Description of Impurity Ionization in Semiconductors by Chemical Thermodynamics               | W. W. Harvey                                 | Phys. Rev. <u>123</u> , 1666 (1961)  |
| 1759<br>R  | Some Effects of Anisotropy on Spiral Spin-Configuration with Application to Rare-Earth Metals | T. A. Kaplan                                 | Phys. Rev. <u>124</u> , 329 (1961)   |
| 1760<br>R  | The Scale of the Solar System   | The Staff,<br>Millstone Radar<br>Observatory | Nature <u>190</u> , 592 (1961)   |
| 1763A<br>R | Recognition of Familiar Characters Under an Unfamiliar Transformation                         | B. W. White                                  | Percept. and Motor Skills <u>15</u> , 107 (1962)   |

JA No.			
1765A R	On a System of Integrodifferential Equations Occurring in Reactor Dynamics. II	J. J. Levin J. A. Nohel §	Arch. Ratl. Mech. Anal. <u>11</u> , 210 (1962)
1766	Impurity Striations in Unrotated Crystals of InSb	H. C. Gatos A. J. Strauss M. C. Lavine T. C. Harman	J. Appl. Phys. <u>32</u> , 2057 (1961)
1767 R	A Theory of Transistor Cutoff Frequency ( $f_T$ ) Falloff at High Current Densities	C. T. Kirk, Jr.	Trans. IRE, PGED <u>ED-9</u> , 164 (1962)
1768 R	High-Power Duplexers	C. E. Muehe, Jr.	Trans. IRE, PGMTT <u>MTT-9</u> , 506 (1961)
1769A R	Effect of Temporal Ordering on Visual Recognition	B. W. White	Percept. and Motor Skills <u>15</u> , 75 (1962)
1770 R	Ground-State Properties of Nuclear Matter	R. D. Puff	Ann. Phys. <u>13</u> , 317 (1961)
1771	Utilization of Order-Disorder Theory in Physical Adsorption. II. The Square Lattice	J. M. Honig	Advances in Chemistry Series, No. 33, 239 (1961)
1772 R	Width of the Turbulent Trail Behind a Hypervelocity Sphere	R. E. Slattery W. G. Clay	Phys. Fluids <u>4</u> , 1199 (1961)
1773 R	Some Differential-Geometric Aspects of the Lagrange Variational Problem	R. Hermann	Illinois J. Math. <u>6</u> , 634 (1962)
1775 R	Angular Dependence of Magnetoresistance in HgSe	T. C. Harman	J. Appl. Phys. <u>32</u> , 1800 (1961)
1776 R	Measurement of Mitral Regurgitation by Indicator-Dilution Techniques	W. H. Levison § W. D. Jackson § H. Sherman L. B. McGuire §	Circulation Res. <u>9</u> , 1109 (1961)
1777 R	Elements of Order-Disorder Theory	J. M. Honig	J. Chem. Educ. <u>38</u> , 538 (1961)
1779 R	Generalized Reed-Muller Codes	E. Weiss	Inform. and Control <u>5</u> , 213 (1962)
1780 R	Cyclotron Resonance	B. Lax	Science <u>134</u> , 1333 (1961)
1781 R	Direct Experimental Measurement of the Magnetic Field Dependence of the Superconducting Energy Gap of Aluminum	D. H. Douglass, Jr.	Phys. Rev. Letters <u>7</u> , 14 (1961)
1783 R	Preparation of Stoichiometric Chromites	E. Whipple A. Wold	J. Inorg. Nucl. Chem. <u>24</u> , 23 (1962)

## Journal Articles

JA No.

- |           |  |  |   |
|-----------|--|--|---|
| 1784<br>R | Discussion of Incoherent Backscatter Power Measurements at 440 Mc/s                  | V. C. Pineo<br>H. W. Briscoe                                   | J. Geophys. Res. <u>66</u> , 3965 (1961)  |
| 1785<br>R | Magnetotunneling in Lead Telluride   | R. H. Rediker<br>A. R. Calawa                                  | J. Appl. Phys. <u>32S</u> , 2189 (1961)   |
| 1786<br>R | The Negative Resistances in Junction Diodes  | I. Hefni   | Proc. IRE (Correspondence) <u>49</u> , 1427 (1961)  |
| 1788<br>R | The Dielectric Constant of Liquid Helium   | C. E. Chase<br>E. Maxwell<br>W. E. Millett §                   | Physica <u>27</u> , 1129 (1961)   |
| 1789      | Magnetism and the Chemical Bond  | J. B. Goodenough   | Magnetism and the Chemical Bond, Interscience Monographs on Chemistry, F. A. Cotton, Ed., Vol. I (Interscience-Wiley, New York, 1963) |
| 1790<br>R | Existence in the Large of Parallelism Homomorphisms                                  | R. Hermann   | Trans. Am. Math. Soc. <u>108</u> , 170 (1963)   |
| 1791<br>R | Magnetic Field Dependence of the Superconducting Penetration Depth in Thin Specimens | D. H. Douglass, Jr.  | Phys. Rev. <u>124</u> , 735 (1961)  |
| 1793<br>R | Millimeter Cyclotron Resonance Experiments in Diamond                                | C. J. Rauch  | Phys. Rev. Letters <u>7</u> , 83 (1961)   |
| 1794<br>R | Solid-State Devices Other than Semiconductors  | B. Lax<br>J. G. Mavroides                                      | Proc. IRE <u>50</u> , 1011 (1962)   |
| 1795<br>R | Oscillatory Magnetoabsorption in InSb Under High Resolution                          | S. Zwerdling<br>W. H. Kleiner<br>J. P. Theriault               | J. Appl. Phys. <u>32S</u> , 2118 (1961)   |
| 1796<br>R | Noncoherent Switching in Permalloy Films   | D. O. Smith<br>K. J. Harte                                     | J. Appl. Phys. <u>33</u> , 1399 (1962)  |
| 1797<br>R | Crystallographic Polarity in the II-VI Compounds                                     | E. P. Warekois<br>M. C. Lavine<br>A. N. Mariano<br>H. C. Gatos | J. Appl. Phys. <u>33</u> , 690 (1962)   |
| 1798      | The Structure and Switching of Permalloy Films                                       | D. O. Smith  | Chap. 31, <u>Magnetism: a Treatise on Modern Theory and Materials</u> , H. Suhl and G. T. Rado, Eds. (Academic Press, New York, 1963) |
| 1799<br>R | Proposal for Magnetic Domain-Wall Storage and Logic                                  | D. O. Smith  | Trans. IRE, PGEC <u>EC-10</u> , 708 (1961)  |
| 1802<br>R | Tangential Limits of Functions of the Class $S_\alpha$                               | J. R. Kinney   | Proc. Am. Math. Soc. <u>14</u> , 68 (1963)  |
| 1803<br>R | Compression and Coding   | E. Weiss   | Trans. IRE, PGIT <u>IT-8</u> , 256 (1962)   |

## Journal Articles

JA No.			
1805 R	Signal Sets with Uniform Correlation Properties	J. Max	J. Soc. Ind. Appl. Math. <u>10</u> , 113 (1962)
1808 R	Radiation Damage Experiments on PbS Infrared Detectors	R. R. Billups W. L. Gardner	Infrared Phys. <u>1</u> , 199 (1961)
1809 R	Sequential Decoding for Discrete Input Memoryless Channels	B. Reiffen	Trans. IRE, PGIT <u>IT-8</u> , 208 (1962)
1810 R	Effects of the Earth's Magnetic Field on the Orbit of a Charged Satellite	I. I. Shapiro H. M. Jones	J. Geophys. Res. <u>66</u> , 4123 (1961)
1812 R	Electrochemical and Adsorption Measurements on Single Crystals: The Germanium-Iodide Solution System	W. W. Harvey H. J. LaFleur H. C. Gatos	J. Electrochem. Soc. <u>109</u> , 155 (1962)
1813A R	Radiation Effects in CaF <sub>2</sub> :Sm	J. R. O'Connor H. A. Bostick	J. Appl. Phys. <u>33</u> , 1868 (1962)
1815 R	A Note on a New Class of Codes	G. Solomon	Inform. and Control <u>4</u> , 364 (1961)
1816 R	Classical Theory of the Ground Spin-State in Cubic Spinels	D. H. Lyons T. A. Kaplan K. Dwight N. Menyuk	Phys. Rev. <u>126</u> , 540 (1962)
1817 R	A Versatile Stochastic Model of a Function of Unknown and Time Varying Form	H. J. Kushner	J. Math. Anal. Appl. <u>5</u> , 150 (1962)
1818	Computer Techniques for the Study of Patterns in the Electroencephalogram	B. G. Farley L. S. Frischkopf W. A. Clark, Jr. J. T. Gilmore, Jr.	Trans. IRE, PGBME <u>BME-9</u> 4 (1962)
1819 R	Characteristics of the {III} Surfaces of the III-V Inter-metallic Compounds: III. The Effects of Surface Active Agents on InSb and the Identification of Antimony Edge Dislocations	M. C. Lavine H. C. Gatos M. C. Finn	J. Electrochem. Soc. <u>108</u> , 974 (1961)
1820 R	Interband Transitions for Metals in a Magnetic Field	M. S. Dresselhaus G. F. Dresselhaus	Phys. Rev. <u>125</u> , 499 (1962)
1821	Microwave Devices	K. J. Button	Chap. 25, <u>Magnetism: a Treatise on Modern Theory and Materials</u> , H. Suhl and G. T. Rado, Eds. (Academic Press, New York, 1963)
1822 R	Visual Acuity under Blue Illumination	R. T. Mitchell R. R. Mitchell	Trans. IRE, PGHFE <u>HFE-3</u> , 14 (1962)



## Journal Articles

JA No.

- |            |   |  |  |
|------------|---|--|--|
| 1824<br>R  | Radar Reflections from the Sun at Very High Frequencies   | W. G. Abel<br>J. H. Chisholm<br>P. L. Fleck<br>J. C. James | J. Geophys. Res. <u>66</u> , 4303 (1961)   |
| 1825<br>R  | Eyes and Ears for Computers   | E. E. David, Jr. §<br>O. G. Selfridge                      | Proc. IRE <u>50</u> , 1093 (1962)  |
| 1826       | Magnetism and Crystal Structure in Nonmetals  | J. B. Goodenough   | Chap. 9, <u>Magnetism: a Treatise on Modern Theory and Materials</u> , H. Suhl and G. T. Rado, Eds. (Academic Press, New York, 1963) |
| 1828<br>R  | Nonparabolic Conduction Band in HgSe and HgSe <sub>0.5</sub> Te <sub>0.5</sub>  | G. B. Wright<br>A. J. Strauss<br>T. C. Harman              | Phys. Rev. <u>125</u> , 1534 (1962)  |
| 1830A<br>R | The Multiplicity of Thought   | U. Neisser   | Brit. J. Psychol. <u>54</u> , 1 (1963)   |
| 1831<br>R  | Diurnal Power Variations of the Earth-Ionosphere Cavity Modes and Their Relationship to Worldwide Thunderstorm Activity | M. Balser<br>C. A. Wagner                                  | J. Geophys. Res. <u>67</u> , 619 (1962)  |
| 1832A<br>R | A New Technique for Investigation of Meteor Echoes at UHF   | G. H. Pettengill   | J. Geophys. Res. <u>67</u> , 409 (1962)  |
| 1833       | Theory of Bloch Electrons in a Magnetic Field   | L. M. Róth   | J. Phys. Chem. Solids <u>23</u> , 433 (1962)   |
| 1834       | Lifetimes of Orbiting Dipoles   | I. I. Shapiro<br>H. M. Jones                               | Science <u>134</u> , 973 (1961)  |
| 1835<br>R  | Mechanical Developer for Mass Spectrographic Plates   | E. B. Owens  | Rev. Sci. Instr. <u>32</u> , 1420 (1961)   |
| 1840<br>R  | Interband Transitions in Superconductors  | G. Dresselhaus<br>M. S. Dresselhaus                        | Phys. Rev. <u>125</u> , 1212 (1962)  |
| 1841<br>R  | An RF Multiple Beam-Forming Technique   | W. P. DeLancy  | Trans. IRE, PGMIL <u>MIL-6</u> , 179 (1962)  |
| 1841A      | Steering Radar Antenna Beams with a Lossless R-F Matrix   | W. P. Delaney  | Electronics <u>35</u> , No. 28, 50 (1962)  |
| 1847<br>R  | Tunnel Diode Burnout from the Video Transient of Gaseous Noise Sources  | C. Blake<br>W. C. Ince                                     | Trans. IRE, PGMITT <u>MTT-10</u> 88 (1962)   |
| 1848<br>R  | Computer Program for Pitch Extraction   | B. Gold  | J. Acoust. Soc. Am. <u>34</u> , 916 (1962)   |
| 1851<br>R  | Distribution of the Normalized Periodogram Detector   | R. P. Wishner  | Trans. IRE, PGIT <u>IT-8</u> , 342 (1962)  |

JA No.			
1852 R	Vapor Growth of Tin Oxide Crystals	T. B. Reed J. T. Roddy A. N. Mariano	J. Appl. Phys. <u>33</u> , 1014 (1962)
1853 R	Design of a Repairable Redundant Computer	R. Teoste	Trans. IRE, PGEC <u>EC-11</u> , 643 (1962)
1854 R	Low Electron Effective Masses and Energy Gap in $\text{Cd}_x\text{Hg}_{1-x}\text{Te}$	T. C. Harman A. J. Strauss D. H. Dickey M. S. Dresselhaus G. B. Wright J. G. Mavroides	Phys. Rev. Letters <u>7</u> , 403 (1961)
1855 R	The Effect of Ion Mass and Ion Energy on the Sensitivity of Ilford $\text{Q}_2$ Plates as Ion Detectors in Mass Spectrography	E. B. Owens	Appl. Spectroscopy <u>16</u> , 148 (1962)
1856 R	Sophistication in Computers: a Disagreement	J. R. Kelly, Jr. § O. G. Selfridge	Trans. IRE, PGIT <u>IT-8</u> , 78 (1962) Proc. IRE <u>50</u> , 1459 (1962)
1858	The Great Bat Mystery	J. J. G. McCue	Indust. Photography <u>10</u> , 48 (1961)
1860	Galvano-Thermomagnetic Effects in Degenerate Semiconductors and Semimetals with Nonparabolic Band Shapes: II. General Theory	T. C. Harman J. M. Honig	J. Phys. Chem. Solids <u>23</u> , 913 (1962)
1861 R	Properties of 400 Mcps Long-Distance Tropospheric Circuits	J. H. Chisholm W. E. Morrow B. E. Nichols J. F. Roche A. E. Teachman §	Proc. IRE <u>50</u> , 2464 (1962)
1862	Bakeable Absolute Pressure Gauge for the Millimeter of Mercury Range	W. J. Conde II § H. I. Mandelberg § T. J. Beahn § C. E. Muehe	Rev. Sci. Instr. <u>33</u> , 231 (1962)
1863A R	$\text{Nb}_3\text{In}$ : A $\beta$ -Tungsten Structure Superconducting Compound	M. D. Banus T. B. Reed H. C. Gatos M. C. Lavine J. A. Kafalas	J. Phys. Chem. Solids <u>23</u> , 971 (1962)
1864 R	{100} Facets in Pulled Crystals of InSb	A. J. Strauss	Solid-State Electron. <u>5</u> , 97 (1962)
1867 R	Solution of Schrödinger Equation for a Periodic Lattice. II.	L. Eyges	Phys. Rev. <u>126</u> , 93 (1962)
1868 R	Model for Transient Oscillations in a Three-Level Optical Maser	J. I. Kaplan R. Zier	J. Appl. Phys. <u>33</u> , 2372 (1962)

## Journal Articles

JA No.

1869 R	The Theory of Tunneling and Its Dependence on a Longitudinal Magnetic Field	P. N. Argyres	Phys. Rev. <u>126</u> , 1386 (1962)
1870	Algebraic Number Theory	E. Weiss	<u>Algebraic Number Theory</u> (McGraw-Hill, New York, 1963)
1872 R	Correlation between Maximum Solid Solubility and Distribution Coefficient for Impurities in Ge and Si	S. Fischler	J. Appl. Phys. <u>33</u> , 1615 (1962)
1873 R	Electrolytic Polarization Resulting from Longitudinal Current in Electrodes	W. W. Harvey	J. Electrochem. Soc. <u>109</u> , 638 (1962)
1874 R	A Figure of Merit for the Design of Inductance Coils Having Low Distributed Capacitance	B. Howland	Trans. IRE, PGCP <u>CP-9</u> , 102 (1962)
1875 R	Computer Applications to Psychological Research: Studies in Perception	B. W. White	Behavioral Sci. <u>7</u> , 396 (1962)
1877 R	Decision Time Without Reaction Time: Experiments in Visual Scanning	U. Neisser	Am. J. Psychol. <u>76</u> , 376 (1963)
1878 R	Small He II Tight Optical Windows	C. J. Rauch W. C. Kernan	Rev. Sci. Instr. <u>33</u> , 496 (1962)
1880B	An Experimental Study of Bibliographical Coupling Between Technical Papers	M. M. Kessler	Trans. IEEE, PTGIT <u>IT-9</u> , 49 (1963)
1881 R	On the Ideal Structure of Operator Algebras	R. T. Prosser	Memoirs Am. Math. Soc., No. 45 (1963)
1882 R	Anomalous Magnetic Films	M. S. Cohen	J. Appl. Phys. <u>33</u> , 2968 (1962)
1884 R	High Magnetic Fields and High Frequencies	B. Lax	Microwave J. <u>5</u> , No. 2, 13 (1962)
1885 R	Adaptation of Lattice Vacancy Theory to Gas Adsorption Phenomena	J. M. Honig C. R. Mueller §	J. Phys. Chem. <u>66</u> , 1305 (1962)
1886 R	Ferro- and Antiferromagnetism in a Cubic Cluster of Spins	G. F. Dresselhaus	Phys. Rev. <u>126</u> , 1664 (1962)
1887 R	Hg-Se System	A. J. Strauss L. B. Farrell	J. Inorg. Nucl. Chem. <u>24</u> , 1211 (1962)
1888 R	Infrared Oscillations from CaF <sub>2</sub> :U <sup>+3</sup> and BaF <sub>2</sub> :U <sup>+3</sup> Masers	H. A. Bostick J. R. O'Connor	Proc. IRE <u>50</u> , 219 (1962)

Journal Articles

JA No.			
1890 R	Gain and Impedance Variation in Scanned Dipole Arrays	J. L. Allen	Trans. IRE, PGAP <u>AP-10</u> , 566 (1962)
1891 R	Measurement of Turbulent Transition, Motion, Statistics, and Gross Radial Growth behind Hypervelocity Objects	R. E. Slattery W. G. Clay	Phys. Fluids <u>5</u> , 849 (1962)
1892 R	Array Radars – A Survey of Their Potential and Their Limitations	J. L. Allen	Microwave J. <u>5</u> , No. 5, 67 (1962)
1893 R	Quantitative Measurement of Semiconductor Homogeneity from Plasma Edge	D. F. Edwards P. D. Maker §	J. Appl. Phys. <u>33</u> , 2466 (1962)
1894 R	Negative Resistance InSb Diodes with Large Magnetic Field Effects	I. Melngailis R. H. Rediker	J. Appl. Phys. <u>33</u> , 1892 (1962)
1895 R	Likelihood Ratios for Stochastic Processes Related by Groups of Transformations	T. S. Pitcher	Illinois J. Math. <u>7</u> , 396 (1963)
1896 R	Hierarchies in Concept Attainment	U. Neisser P. Weene	J. Exptl. Psychol. <u>64</u> , 640 (1962)
1897A R	Riccati Algebras	J. J. Levin S. S. Shatz	Duke Math. J. <u>30</u> , 579 (1963)
1898 R	Communication Theory vs Communications	R. M. Lerner	Trans. IRE, PGIT <u>IT-8</u> , 325 (1962)
1901 R	Nonlinear Interband and Plasma Effects in Solids	B. Lax J. G. Mavroides D. F. Edwards	Phys. Rev. Letters <u>8</u> , 166 (1962)
1903 R	Idler Circuits in Varactor Frequency Multipliers	B. L. Diamond	Trans. IEEE, PTGCT <u>CT-10</u> , 98 (1963)
1904 R	Parametric Amplification and Oscillation at Optical Frequencies	R. H. Kingston	Proc. IRE (Correspondence) <u>50</u> , 472 (1962)
1905	A Heuristic Program that Solves Symbolic Integration Problems in Freshman Calculus	J. R. Slagle	J. Assoc. Comp. Mach. <u>10</u> , 507 (1963)
1907 R	An Electron Diffraction Technique for Identifying Oxide Layers on Crystal Surfaces	T. P. Turnbull	Norelco Reporter <u>9</u> , 77 (1962)
1908 R	Gibbs' Phase Rule and Euler's Formula	J. Mindel	J. Chem. Educ. <u>39</u> , 512 (1962)
1909 R	Time Optimal Control for Plants with Numerator Dynamics	M. Athanassiades P. L. Falb R. E. Kalman § E. B. Lec §	Trans. IRE, PGAC <u>AC-7</u> , 47 (1962)

## Journal Articles

JA No.

1910 R	Storage and Logic Properties of Magnetic Domain-Walls	D. O. Smith	Solid State Des. <u>3</u> , 23 (1962)
1913 R	Ferro- and Antiferromagnetism in a Simple Cubic Lattice	G. F. Dresselhaus	Phys. Rev. <u>127</u> , 1137 (1962)
1914 R	Synthesis and Superconducting Properties of Nb <sub>3</sub> Sn <sub>2</sub> and Nb <sub>2</sub> Sn <sub>3</sub>	T. B. Reed H. C. Gatos	J. Appl. Phys. <u>33</u> , 2657 (1962)
1915 R	Crystalline Structure and Surface Reactivity	H. C. Gatos	Science <u>137</u> , 311 (1962)
1916 R	Some Statistical Properties of Pulsed Oblique HF Ionospheric Transmissions	M. Balser W. B. Smith	J. Research Natl. Bur. Standards <u>66D</u> , 721 (1962)
1917 R	On Frequency Variations of the Earth-Ionosphere Cavity Modes	M. Balser C. A. Wagner	J. Geophys. Res. <u>67</u> , 4081 (1962)
1919 R	A Radar Investigation of Venus	G. H. Pettengill H. W. Briscoe J. V. Evans E. Gehrels G. M. Hyde L. G. Kraft R. Price W. B. Smith	Astron. J. <u>67</u> , 181 (1962)
1920 R	Note on the Creation of Pitch through Binaural Interaction	N. I. Durlach	J. Acoust. Soc. Am. <u>34</u> , 1096 (1962)
1921 R	Thermal Conduction in Liquid Helium II. I. Temperature Dependence	C. E. Chase	Phys. Rev. <u>127</u> , 361 (1962)
1922	Theory of Galvano-Thermomagnetic Energy Conversion Devices: I. Generators	T. C. Harman J. M. Honig	J. Appl. Phys. <u>33</u> , 3178 (1962)
1923A R	Optimal Control for Linear Time-Invariant Plants with Time, Fuel and Energy Constraints	M. Athanassiades	Trans. IEEE, Appl. and Indust. <u>82</u> , 8 (1963)
1924 R	An Alpha-State Finite Automaton for Multiplication by Alpha	J. M. Winett	Trans. IRE, PGEC <u>EC-11</u> , 412 (1962)
1925 R	Energy of a Vortex Ring in a Tube and Critical Velocities in Liquid Helium II	J. C. Fineman C. E. Chase	Phys. Rev. <u>129</u> , 1 (1963)
1927	Classical Theory of the Ground Spin-State in Normal Tetragonal Spinels. I. Neel, Yafet-Kittel, and Collinear Antiferromagnetic Modes	N. Menyuk K. Dwight D. H. Lyons T. A. Kaplan	Phys. Rev. <u>127</u> , 1983 (1962)

## Journal Articles

JA No.			
1928 R	Quantum Effects in Ge and Si. I.	J. J. Stickler H. J. Zeiger G. S. Heller	Phys. Rev. <u>127</u> , 1077 (1962)
1929 R	Distribution of Sulfur in InSb Single Crystals	M. D. Banus H. C. Gatos	J. Electrochem. Soc. <u>109</u> , 829 (1962)
1933 R	Elastic Strain Energy Associated with the "A" Surfaces of the III-V Compounds	R. E. Hanneman M. C. Finn H. C. Gatos	J. Phys. Chem. Solids <u>23</u> , 1553 (1962)
1935 R	New Method for Calculating Molecular Orbitals with Application to cyclic Systems	L. Eyges	Phys. Rev. <u>128</u> , 1715 (1962)
1937 R	Plasma Torches	T. B. Reed	Intl. Sci. and Tech. No. 6, 42 (1962)
1939 R	Theory of Indirect Exchange Interactions in Rare-Earth Metals	T. A. Kaplan D. H. Lyons	Phys. Rev. <u>129</u> , 2072 (1963)
1941 R	The Well-Rounded Man	B. Lax	Microwave J. <u>5</u> , No. 6, 13 (1962)
1943 R	Growth of Ferrous-Free Cobalt Ferrite Single Crystals	A. Ferretti W. Kunmann A. Wold	J. Appl. Phys. <u>34</u> , 388 (1963)
1944 R	Infrared Absorption Spectrum of Sulfur-Doped Silicon	W. E. Krag H. J. Zeiger	Phys. Rev. Letters <u>8</u> , 485 (1962)
1945	Theory of Galvano-Thermomagnetic Energy Conversion Devices: II. Refrigerators and Heat Pumps	T. C. Harman J. M. Honig	J. Appl. Phys. <u>33</u> , 3188 (1962)
1946 R	Transcontinental Satellite Television Transmission	D. H. Hamilton H. H. Hoover R. V. Locke D. C. MacLellan W. E. Morrow B. E. Nichols T. F. Rogers P. Waldron	Proe. IRE (Correspondence) <u>50</u> , 1522 (1962)
1948 R	A Note on Threshold Device Error Analysis	P. E. Wood, Jr.	Trans. IEEE, PTGEC <u>EC-12</u> , 403 (1963)
1949	Recombination Radiation Emitted by Gallium Arsenide	R. J. Keyes T. M. Quist	Proe. IRE (Correspondence) <u>50</u> , 1822 (1962)
1950 R	The Asymptotic Behavior of the Solution of a Volterra Equation	J. J. Levin	Proe. Am. Math. Soc. <u>14</u> , 534 (1963)

## Journal Articles

JA No.

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|-----------|--|---|---|
| 1951<br>R | High Pressure Phase Transition<br>in Mercury Selenide  | J. A. Kafalas<br>H. C. Gatos<br>M. C. Lavine<br>M. D. Banus | J. Phys. Chem. Solids <u>23</u> , 1541<br>(1962)      |
| 1952<br>R | On the Effect of Mutual<br>Coupling on Unequally<br>Spaced Dipole Arrays   | J. L. Allen<br>W. P. Delaney                                | Trans. IRE, PGAP <u>AP-10</u> , 784<br>(1962)         |
| 1954<br>R | Preparation of Niobium-Tin<br>Wires for Microscopy   | T. P. Turnbull<br>H. H. Ehlers                              | Rev. Sci. Instr. <u>33</u> , 876 (1962)               |
| 1957<br>R | Deviations from Stoichiometry<br>and Electrical Properties in<br>SnTe  | R. F. Brebrick  | J. Phys. Chem. Solids <u>24</u> , 27<br>(1963)        |
| 1958<br>R | A Circuit for the Square Root<br>of the Sum of the Squares   | T. E. Stern §<br>R. M. Lerner                               | Proc. IEEE <u>51</u> , 593 (1963)                     |
| 1959<br>R | The Computation of Electro-<br>magnetic Scattering from Con-<br>centric Spherical Structures   | J. J. Mikulski<br>E. L. Murphy                              | Trans. IEEE, PTGAP <u>AP-11</u> ,<br>169 (1963)       |
| 1960<br>R | The Convex Hull of Plane<br>Brownian Motion  | J. R. Kinney  | Ann. Math. Stat. <u>34</u> , 327 (1963)               |
| 1961<br>R | The Effect of the Earth's<br>Magnetic Field on Irregularities<br>of Ionization in the E Layer  | F. Villars §<br>H. Feshbach §                               | J. Geophys. Res. <u>68</u> , 1303 (1963)              |
| 1962<br>R | Largest-Of N Selection<br>Systems Affected by<br>Multipath Time Spreading  | J. Dumanian   | Proc. IEEE (Correspondence)<br><u>51</u> , 390 (1963) |
| 1963      | Queueing of a Telephone Data<br>Transmission System with<br>Feedback   | A. B. Fontaine  | Trans. IEEE, Commun. Electron.,<br>No. 68, 449 (1963) |
| 1965<br>R | The Relation Between the<br>Chemical Potential of Electrons<br>and Energy Parameters of the<br>Band Theory as Applied to<br>Semiconductors | W. W. Harvey  | J. Phys. Chem. Solids <u>23</u> , 1545<br>(1962)      |
| 1966<br>R | Diurnal Variation of the<br>Temperature of the F Region  | J. V. Evans   | J. Geophys. Res. <u>67</u> , 4914 (1962)              |
| 1967<br>R | Laminar-Turbulent Transition<br>and Subsequent Motion Behind<br>Hypervelocity Spheres  | R. E. Slattery<br>W. G. Clay                                | ARS J. <u>32</u> , 1427 (1962)                        |
| 1969<br>R | Error Probabilities for Adap-<br>tive Multichannel Reception<br>of Binary Signals: Addendum  | R. Price  | Trans. IRE, PGIT <u>IT-8</u> , 387<br>(1962)          |

## Journal Articles

JA No.			
1970	Theory of Galvano-Thermomagnetic Energy Conversion Devices. III. Generators Constructed from Anisotropic Materials	T. C. Harman J. M. Honig	J. Appl. Phys. <u>34</u> , 189 (1963)
1971 R	Real-Channel Aspects of an Error-Free Data Transmission System for Toll-Grade Telephone Circuits	W. G. Schmidt	Trans. IEEE, PTGCS <u>CS-11</u> , 69 (1963)
1972 R	Superconducting Resonant Cavities	E. Maxwell	<u>Progress in Cryogenics</u> , Vol. 4 (Academic Press, New York, 1964)
1973A R	The Preparation and Properties of Some Vanadium Spinels	D. B. Rogers R. J. Arnott A. Wold J. B. Goodenough	J. Phys. Chem. Solids <u>24</u> , 347 (1963)
1974 R	A Pulse Compression System Employing a Linear FM Gaussian Signal	E. N. Fowle D. R. Carey R. E. VanderSchoor R. C. Yost	Proc. IEEE <u>51</u> , 304 (1963)
1976 R	The Sensitivity of Radiometric Measurements	E. J. Kelly D. H. Lyons W. L. Root	J. Soc. Ind. Appl. Math. <u>11</u> , 235 (1963)
1978 R	The Admissible Mean Values of a Stochastic Process	T. S. Pitcher	Trans. Am. Math. Soc. <u>108</u> , 538 (1963)
1979 R	Angular and Magnitude Dispersion of the Anisotropy in Magnetic Films	T. S. Crowther	J. Appl. Phys. <u>34</u> , 580 (1963)
1980 R	Crystallographic Polarity of ZnO Crystals	A. N. Mariano R. E. Hanneman	J. Appl. Phys. <u>34</u> , 384 (1963)
1981 R	The Madistor - A Magnetically Controlled Semiconductor Plasma Device	I. Melngailis R. H. Rediker	Proc. IRE <u>50</u> , 2428 (1962)
1982 R	Optimal Stochastic Control	H. J. Kushner	Trans. IRE, PGAC <u>AC-7</u> , 120 (1962)
1983 R	Spectral Widths and Shapes and Other Characteristics of Incoherent Backscatter from the Ionosphere Observed at 440 Mcps during a 24-Hour Period in May 1961	V. C. Pineo D. P. Hynek	J. Geophys. Res. <u>67</u> , 5119 (1962)
1984 R	Gallium-Arsenide Diode Sends Television by Infrared Beam	R. H. Rediker R. J. Keyes T. M. Quist M. J. Hudson C. R. Grant R. G. Burgess	Electronics <u>35</u> , No. 40, 44 (1962)



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JA No.

1985 R	Notes on a Nonlinear Volterra Equation	J. J. Levin J. A. Nohel §	Proc. Am. Math. Soc. <u>14</u> , 924 (1963)
1986 R	The Design of a Constant-Angle or Power-Law Magnitude Impedance	R. M. Lerner	Trans. IEEE, PTGCT <u>CT-10</u> , 98 (1963)
1987 R	Comments on Similarity Considerations for Varactor Multipliers	P. Penfield § B. L. Diamond	Microwave J. <u>5</u> , No. 9, 22 (1962)
1988	A Lunar Theory Reasserted – A Rebuttal	J. V. Evans	J. Research Natl. Bur. Standards <u>67D</u> , 1 (1963)
1990 R	Exact Distribution Functions of Test Length for Sequential Processors with Discrete Input Data	J. G. Proakis	Trans. IEEE, PTGIT <u>IT-9</u> , 182 (1963)
1991 R	Operating Characteristics of Transverse (Nernst) Anisotropic Galvano-Thermomagnetic Generators	T. C. Harman J. M. Honig	Appl. Phys. Letters <u>1</u> , 31 (1962)
1992 R	Enhancement of Radar Reflectivity Associated with the Lunar Crater Tycho	G. H. Pettengill J. C. Henry	J. Geophys. Res. <u>67</u> , 4881 (1962)
1993 R	Velocity of Sound in Liquid Helium at Low Temperatures	W. M. Whitney § C. E. Chase	Phys. Rev. Letters <u>9</u> , 243 (1962)
1994 R	The Scattering Behavior of the Moon at Wavelengths of 3.6, 68 and 784 Centimeters	J. V. Evans G. H. Pettengill	J. Geophys. Res. <u>68</u> , 423 (1963)
1995 R	Operating Characteristics of Nernst Refrigerators for Anisotropic Materials	T. C. Harman J. M. Honig	J. Appl. Phys. <u>34</u> , 239 (1963)
1997 R	On the Sample Functions of Processes Which Can Be Added to a Gaussian Process	T. S. Pitcher	Ann. Math. Stat. <u>34</u> , 329 (1963)
1998	Golden Years of Applied Science	B. Lax	Microwave J. <u>5</u> , No. 10, 13 (1962)
2000 R	Nonlinear Effects in Solids	P. L. Kelley	J. Phys. Chem. Solids <u>24</u> , 607 (1963)
2001 R	Magnetoreflexion in Bismuth	R. N. Brown J. G. Mavroides B. Lax	Phys. Rev. <u>129</u> , 2055 (1963)
2004 R	Low-Cost Thermocouple Potentiometer	F. T. Worrell	Am. J. Phys. <u>31</u> , 216 (1963)
2005 R	High-Field Superconductivity in Niobium	S. H. Autler E. S. Rosenblum K. H. Goen §	Phys. Rev. Letters <u>9</u> , 489 (1962)

## Journal Articles

JA No.			
2006 R	Routing Procedures in Communications Networks. Part I: Random Procedures; Part II: Directory Procedures	R. T. Prosser	Trans. IRE, PGCS <u>CS-10</u> , 322 (1962)
2007A R	Experimental Study of Charge Drag on Orbiting Dipoles	I. I. Shapiro I. Maron § L. G. Kraft, Jr.	J. Geophys. Res. <u>68</u> , 1845 (1963)
2008 R	Switching Thresholds of Weakly Coupled Ferromagnetic Domains	K. J. Harte D. O. Smith	J. Appl. Phys. <u>34</u> , 442 (1963)
2009 R	The Microwave Spectrum of Oxygen in the Earth's Atmosphere	M. L. Meeks A. E. Lilley §	J. Geophys. Res. <u>68</u> , 1683 (1963)
2012 R	Computation with Finite Fields	T. C. Bartee D. I. Schneider	Inform. and Control <u>6</u> , 79 (1963)
2013 R	Helium-Cooled L-Band Parametric Amplifier	C. Blake L. W. Bowles E. P. McCurley J. A. Nuttall	Appl. Phys. Letters <u>2</u> , 17 (1963)
2014	Galvano-Thermomagnetic Phenomena. IV. Application to Anisotropic Adiabatic Nernst Generators	T. C. Harman J. M. Honig B. M. Tarmy	J. Appl. Phys. <u>34</u> , 2215 (1963)
2015 R	The Decarbler - A Program for Correcting Machine-Read Morse Code	C. K. McElwain M. B. Evens	Inform. and Control <u>5</u> , 368 (1962)
2016	Correlated Orientation Sounds and Ear Movements of Horseshoe Bats	D. A. Cahlander F. A. Webster § D. R. Griffin § D. C. Dunning §	Nature <u>196</u> , 1185 (1962)
2018 R	Criteria for the Optimization of the Nernst Figure of Merit	T. C. Harman	Appl. Phys. Letters <u>2</u> , 13 (1962)
2019 R	Pitch-Induced Spectral Distortion in Channel Vocoders	B. Gold J. Tierney	J. Acoust. Soc. Am. <u>35</u> , 730 (1963)
2021A R	Convergent Perturbation Expansions for Certain Wave Operators	R. T. Prosser	J. Math. Phys. <u>5</u> , 708 (1964)
2022 R	Key to Faster Computers: Ten-Nanosecond Amplifier	K. H. Konkle J. E. Laynor	Electronics <u>35</u> , No. 50, 39 (1962)
2023 R	A Survey of Varactor Diode Parametric Amplifier Characteristics	C. Freed	Microwave J. <u>6</u> , No. 1, 75 (1963)
2024 R	The Imitation of Man by Machine	U. Neisser	Science <u>139</u> , 193, (1963)

## Journal Articles

JA No.

2025	Adaptation of Lattice Liquid Model to Gas Adsorption Phenomena	J. M. Honig W. H. Kleiner	Surface Sci. <u>1</u> , 71 (1964)
2026 R	Aberration Theories for Semi-automatic Lens Design by Electronic Computers. I. Preliminary Remarks; II. A Specific Computer Program	D. S. Grey	J. Opt. Soc. Am. <u>53</u> , 672 (1963)
2028 R	Injection Electroluminescence in Gallium Antimonide	A. R. Calawa	J. Appl. Phys. <u>34</u> , 1660 (1963)
2031 R	Is the Slug Necessary?	F. T. Worrell	Am. J. Phys. <u>31</u> , 305 (1963)
2032-I R	Theory of Semiconductor Maser of GaAs	A. L. McWhorter H. J. Zeiger B. Lax	J. Appl. Phys. <u>34</u> , 235 (1963)
2032-II R	Semiconductor Maser of GaAs	T. M. Quist R. H. Rediker R. J. Keyes W. E. Krag B. Lax A. L. McWhorter H. J. Zeiger	Appl. Phys. Letters <u>1</u> , 91 (1962)
2033 R	Nonlinear Oscillations of Fixed Period	J. J. Levin S. S. Shatz	J. Math. Anal. Appl. <u>7</u> , 284 (1963)
2034 R	Keeping Track of Several Things at Once	D. B. Yntema	Human Factors <u>5</u> , 7 (1963)
2035	Cyclotron Resonance and Magneto-Optical Effects in Semiconductors	B. Lax	<u>Proceedings of the International School of Physics Enrico Fermi</u> , (Academic Press, New York, 1963)
2036 R	Phenomena at a Solid-Melt Interface	J. R. O'Connor	J. Electrochem. Soc. <u>110</u> , 338 (1963)
2037 R	Oscillatory Quantum Effects in the Ultrasonic Velocity in Bismuth	J. G. Mavroides B. Lax K. J. Button Y. Shapira §	Phys. Rev. Letters <u>9</u> , 451 (1962)
2038 R	Effect of a High-Altitude Nuclear Detonation on the Earth-Ionosphere Cavity	M. Balser C. A. Wagner	J. Geophys. Res. <u>68</u> , 4115 (1963)
2039	Galvano-Thermomagnetic Effects in Semiconductors and Semimetals. III. The Standard and Kane Band Models	T. C. Harman J. M. Honig B. M. Tarmy	J. Phys. Chem. Solids <u>24</u> , 835 (1963)
2040 R	High-Field Antiferromagnetic Resonance in $\text{Cr}_2\text{O}_3$	S. Foner	Phys. Rev. <u>130</u> , 183 (1963)

## Journal Articles

JA No.			
2041A R	Propagation Constants for TE and TM Surface Waves on an Anisotropic Dielectric Cylinder	P. R. Longaker C. S. Roberts §	Trans. IEEE, PTGMTT <u>MTT-11</u> , 543 (1963)
2042 R	Color Centers in Alkaline Earth Fluorides	J. R. O'Connor J. H. Chen §	Phys. Rev. <u>130</u> , 1790 (1963)
2043 R	High Speed Heterojunction Photodiodes and Beam-of-Light Transistors	R. H. Rediker T. M. Quist B. Lax	Proc. IEEE (Correspondence) <u>51</u> , 218 (1963)
2044 R	Likelihood Ratios for Stochastic Processes Related by Groups of Transformations, II	T. S. Pitcher	Illinois J. Math <u>8</u> , 271 (1964)
2045 R	High-Pressure Tetragonal Phase of InSb	M. D. Banus R. E. Hanneman A. N. Mariano E. P. Warekois H. C. Gatos J. A. Kafalas	Appl. Phys. Letters <u>2</u> , 35 (1963)
2046A R	Asymptotically Optimum Quantizers and Optimum Analog to Digital Converters for Continuous Signals	L. I. Bluestein	Trans. IEEE, PTGIT <u>IT-10</u> , 242 (1964)
2047 R	Power Spectrum Parameter	M. J. Levin	IEEE Trans. Inform. Theory <u>IT-11</u> , 100 (1965), DDC 618456
2048 R	Modern Radar	H. G. Weiss	Intl. Sci. and Tech. No. 13, 75 (1963)
2049 R	Heat-Transfer Intensity from Induction Plasma Flames and Oxy-Hydrogen Flames	T. B. Reed	J. Appl. Phys. <u>34</u> , 2266 (1963)
2050 R	Magnetoelastic Sensitivities in Evaporated and Electrodeposited Permalloy Films	I. W. Wolf § T. S. Crowther	J. Appl. Phys. <u>34</u> , 1205 (1963)
2052 R	Criterion for Continuous Amplitude Oscillations of Optical Masers	J. I. Kaplan	J. Appl. Phys. <u>34</u> , 3411 (1963)
2053 R	Radar Observations of Venus, 1961 and 1959	W. B. Smith	Astron. J. <u>68</u> , 15 (1963)
2055 R	Neurophysiological Investigations of the Bat, <i>Myotis lucifugus</i> , Stimulated by Frequency Modulated Acoustical Pulse	A. D. Grinnell § J. J. G. McCue	Nature <u>198</u> , 453 (1963)
2056 R	Growing Helical Density Waves in Semiconductor Plasmas	C. E. Hurwitz A. L. McWhorter	Phys. Rev. Letters <u>10</u> , 20 (1963)

## Journal Articles

JA No.

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|------------|---|--|--|
| 2057<br>R  | On the Minimum <u>a priori</u> Information Necessary to Construct Adaptive Filters for Stationary Time Series | H. J. Kushner                                  | Trans. IEEE, PTGAC <u>AC-8</u> , 179 (1963)                  |
| 2058       | An Efficient Algorithm for Finding Certain Minimum-Cost Procedures for Making Binary Decisions                | J. R. Slagle                                   | J. Assoc. Comp. Mach. <u>11</u> , 253 (1964)                 |
| 2059<br>R  | Signal and Context Components of Word-Recognition Behavior  | A. N. Stowe<br>W. P. Harris<br>D. B. Hampton § | J. Acoust. Soc. Am. <u>35</u> , 639 (1963)                   |
| 2060<br>R  | Time-, Fuel-, and Energy-Optimal Control of Nonlinear Norm-Invariant Systems                                  | M. Athans<br>P. L. Falb<br>R. T. Lacoss §      | Trans. IEEE, PTGAC <u>AC-8</u> , 196 (1963)                  |
| 2061A<br>R | Cryogenics for the Electronics Engineer   | J. W. Meyer<br>A. M. Rich                      | Electronics <u>36</u> , No. 35, 29 (1963)                    |
| 2062<br>R  | Second Harmonic Generation in Solids  | P. L. Kelley                                   | J. Phys. Chem. Solids <u>24</u> , 1113 (1963)                |
| 2064<br>R  | The Orthomatch Data Transmission System   | B. G. Kuhn<br>K. H. Morey<br>W. B. Smith       | Trans. IEEE, PTGSET <u>SET-9</u> , 63 (1963)                 |
| 2065       | New Light Sources   | B. Lax   | <u>McGraw-Hill Yearbook of Science and Technology</u> (1963) |
| 2066<br>R  | Measurement of Internal Friction in Thin Films  | G. P. Weiss<br>D. O. Smith                     | Rev. Sci. Instr. <u>34</u> , 522 (1963)                      |
| 2067<br>R  | Theory of Galvano-Thermomagnetic Energy Conversion Devices. V. Devices Constructed from Anisotropic Materials | T. C. Harman<br>J. M. Honig<br>B. M. Tarmy     | J. Appl. Phys. <u>34</u> , 2225 (1963)                       |
| 2068<br>R  | Anomalous Thermoelectric Power as Evidence for Two Valence Bands in SnTe                                      | R. F. Brebrick<br>A. J. Strauss                | Phys. Rev. <u>131</u> , 104 (1963)                           |
| 2069<br>R  | The Influence of Anisotropy Dispersion on Magnetic Properties of Ni-Fe Films                                  | M. S. Cohen                                    | J. Appl. Phys. <u>34</u> , 1841 (1963)                       |
| 2070<br>R  | Instantaneous Spectra and Ambiguity Functions   | M. J. Levin                                    | Trans. IEEE, PTGIT <u>IT-10</u> , 95 (1964)                  |
| 2073<br>R  | Equalization and Cancellation Theory of Binaural Masking-Level Differences                                    | N. I. Durlach                                  | J. Acoust. Soc. Am. <u>35</u> , 1206 (1963)                  |
| 2074<br>R  | A Note on "Very Noisy" Channels   | B. Reiffen                                     | Inform. and Control <u>6</u> , 126 (1963)                    |

## Journal Articles

JA No.			
2075 R	On a Nonlinear Delay Equation	J. J. Levin J. A. Nohel §	J. Math. Anal. Appl. <u>8</u> , 31 (1964)
2076 R	Optical Communications Employing Infrared Emitting Diodes and FM Techniques	E. J. Chatterton	Proc. IEEE (Correspondence) <u>51</u> , 612 (1963)
2078 R	Interactions Between a Hypersonic Wave and a Following Hypersonic Projectile	R. E. Slattery W. G. Clay R. R. Stevens	AIAA J. <u>1</u> , 974 (1963)
2079 R	A Low-Level Peak Holding Circuit Using an Operational Amplifier	K. H. Morey K. E. Perry	Proc. IEEE (Correspondence) <u>51</u> , 953 (1963)
2083 R	Matched Filter Approximation Errors	M. J. Levin	Trans. IEEE, PTGCS <u>CS-11</u> , 254 (1963)
2084	Encapsulating Precision Antennas in Plastic	C. A. Pappas E. B. Murphy	Electronics <u>36</u> , No. 10, 68 (1963)
2085A	Nernst and Seebeck Coefficients in Bismuth at High Magnetic Fields	T. C. Harman J. M. Honig	Adv. Energy Conversion <u>3</u> , 525 (1963)
2086 R	The Thermodynamic Activity of the Semiconductor	W. W. Harvey	J. Phys. Chem. Solids <u>24</u> , 701 (1963)
2087 R	Geomagnetic Effects on the Frequency Spectrum of Incoherent Backscatter Observed at 425 Mcps at Trinidad	V. C. Pineo D. P. Hynek G. H. Millman §	J. Geophys. Res. <u>68</u> , 2695 (1963)
2088 R	Adaptation to Displaced Vision: Visual, Motor, or Proprioceptive Change?	C. S. Harris §	Science <u>140</u> , 812 (1963)
2089A R	Galvano-Thermomagnetic Effects in Multi-Band Models	J. M. Honig T. C. Harman	Adv. Energy Conversion <u>3</u> , 529 (1963)
2090 R	Thermal Conduction in Liquid Helium II. II. Effects of Channel Geometry	C. E. Chase	Phys. Rev. <u>131</u> , 1898 (1963)
2091 R	Quantitative Mass Spectrography of Solids	E. B. Owens N. A. Giardino	Anal. Chem. <u>35</u> , 1172 (1963)
2092 R	Chemical Behavior of Semiconductors: Etching Characteristics	H. C. Gatos M. C. Lavine	<u>Progress in Semiconductors</u> , Vol. 7 (Wiley, New York, 1963), DDC 633185
2094 R	Preparation of Actual-Size Printed Wiring Layouts	E. A. Guditz	Trans. IEEE, PTGPEP <u>PEP-7</u> , 24 (1963)
2096 R	Radar Astronomy	G. H. Pettengill	Trans. Am. Geophys. Un. <u>44</u> , 453 (1963)

## Journal Articles

JA No.

- |           |   |   |   |
|-----------|---|---|---|
| 2096A     | Radar Studies of the Sun,<br>Moon, and Planets  | J. H. Chisholm<br>G. H. Pettengill  | J. Research Natl. Bur. Standards<br><u>68D</u> , 565 (1964)                 |
| 2097<br>R | Liquid-Helium Temperature<br>Regulator  | C. Blake<br>C. E. Chase   | Rev. Sci. Instr. <u>34</u> , 984 (1963)                                     |
| 2098<br>R | Small Phase-Shift Vacuum<br>Can for Low Temperature ac<br>Susceptibility Measurements                       | M. Strongin<br>E. Maxwell   | Rev. Sci. Instr. <u>34</u> , 590 (1963)                                     |
| 2099<br>R | Relativistic Potential<br>Scattering  | R. T. Prosser   | J. Math. Phys. <u>4</u> , 1048 (1963)                                       |
| 2100<br>R | Exchange Energy of an Elec-<br>tron Gas in a Periodic Potential   | L. Eyges  | Phys. Rev. <u>130</u> , 2218 (1963)   |
| 2101<br>R | The Influence of Terrain<br>Shielding on Radio Wave<br>Propagation at 8000 Mc                               | W. E. Morrow<br>D. Karp<br>R. V. Locke, Jr.<br>W. C. Provencher                           | Proc. IEEE (Correspondence)<br><u>51</u> , 955 (1963)                       |
| 2102<br>R | Modulated Infrared Diode<br>Spans 30 Miles  | R. J. Keyes<br>T. M. Quist<br>R. H. Rediker<br>M. J. Hudson<br>C. R. Grant<br>J. W. Meyer | Electronics <u>36</u> , No. 14, 38 (1963)                                   |
| 2103<br>R | Filamentary Structure in<br>Superconductors   | E. Maxwell<br>M. Strongin   | Phys. Rev. Letters <u>10</u> , 212 (1963)                                   |
| 2105<br>R | Error Statistics and Coding<br>for Digital Data Transmission<br>over Telephone and Teletype<br>Circuits     | A. B. Fontaine  | Proc. IEEE (Correspondence)<br><u>51</u> , 474 (1963)                       |
| 2106<br>R | A Lower Bound on Stability<br>in Phase-Locked Loops   | H. L. VanTrees  | Inform. and Control <u>6</u> , 195 (1963)                                   |
| 2108      | A Proposed UHF Transistor<br>Using an Electroluminescent<br>Emitter and a Collector-<br>Base Heterojunction | A. G. Foyt  | Proc. IEEE (Correspondence)<br><u>51</u> , 853 (1963)                       |
| 2109<br>R | The Resistance of Bats to<br>Jamming  | D. R. Griffin §<br>J. J. G. McCue<br>A. D. Grinnell §                                     | J. Exptl. Zoology <u>152</u> , 229 (1963)                                   |
| 2111<br>R | Prototypes for Use in Broad-<br>banding Reflection Amplifiers   | W. J. Getsinger   | Trans. IEEE, PTGMTT <u>MTT-11</u> ,<br>486 (1963)                           |
| 2112      | Directed Heating with Atoms,<br>Electrons and Photons   | T. B. Reed  | ASM Technical Report<br>No. NY9.1.62 (Natl. Metal Cong.,<br>New York, 1962) |

JA No.			
2113 R	Application of Sequential Decoding to High-Rate Data Communication on a Telephone Line	I. L. Lebow P. G. McHugh A. C. Parker P. Rosen J. M. Wozencraft §	Trans. IEEE, PTGIT <u>IT-9</u> , 124 (1963)
2115 R	Acoustical Control of Airborne Intereceptions by Bats	F. A. Webster §	Proc. Intl. Cong. on Technology and Blindness, Vol. 1, New York, June 1962
2116 R	The Reaction of Rare Earth Oxides with a High Temperature Form of Rhodium (III) Oxide	A. Wold R. J. Arnott W. Croft	J. Inorg. Chem. <u>2</u> , 972 (1963)
2117A R	Electron Ordering Transitions in Several Chromium Spinel Systems	R. J. Arnott A. Wold D. B. Rogers	J. Phys. Chem. Solids <u>25</u> , 161 (1964)
2119 R	Observations of Ionospheric Movements by Incoherent Scattering	G. H. Millman § V. C. Pineo D. P. Hynek	J. Geophys. Res. <u>68</u> , 3323 (1963)
2120 R	Segal's Quantization Procedure	R. T. Prosser	J. Math. Phys. <u>5</u> , 701 (1964)
2122 R	Electron Paramagnetic Resonance of $\text{Cr}^{3+}$ in $\text{SnO}_2$	W. H. From	Phys. Rev. <u>131</u> , 961 (1963)
2123 R	On the Dynamical Equations of Conditional Probability Density Functions, with Applications to Optimal Stochastic Control Theory	H. J. Kushner	J. Math. Anal. Appl. <u>8</u> , 332 (1964)
2124 R	Equivalence and Antiequivalence of Irreducible Sets of Operators. I. Finite Dimensional Spaces	J. S. Lomont H. E. Moses K. Yu §	J. Math. Phys. <u>4</u> , 420 (1963)
2126 R	On the Optimum Timing of Observations for Linear Control Systems with Unknown Initial State	H. J. Kushner	Trans. IEEE, PTGAC <u>AC-9</u> , 144 (1964)
2128 R	Effects of Sunlight Pressure on Air Density Determinations Involving Cylindrical Satellites	I. I. Shapiro	J. Geophys. Res. <u>68</u> , 5349 (1963)
2129 R	Negative Anisotropy in Nickel-Iron Films	D. O. Smith	Appl. Phys. Letters <u>2</u> , 191 (1963)
2130A R	Scattering of Electromagnetic Waves from Dielectric Coated Conducting Spheres	J. Rheinstein	Trans. IEEE, PTGAP <u>AP-12</u> , 334 (1964)



## Journal Articles

JA No.

- |            |   |   |   |
|------------|---|---|---|
| 2131<br>R  | Evidence for the Role of Donor States in GaAs Electroluminescence   | F. L. Galeener §<br>G. B. Wright<br>W. E. Krag<br>T. M. Quist<br>H. J. Zeiger | Phys. Rev. Letters <u>10</u> , 472 (1963)               |
| 2133<br>R  | Cleaning Vacuum Systems by Flushing   | F. T. Worrell   | Vacuum <u>13</u> , 309 (1963)                           |
| 2134<br>R  | Infinite Dimensional Control Problems. I. On the Closure of the Set of Attainable States for Linear Systems           | P. L. Falb  | J. Math. Anal. Appl. <u>9</u> , 12 (1964)               |
| 2136<br>R  | Magnetic Properties of a Single Crystal of Manganese Phosphide  | E. E. Huber, Jr.<br>D. H. Ridgley   | Phys. Rev. <u>135</u> , A1033 (1964)                    |
| 2137<br>R  | The Use of CO-CO <sub>2</sub> Atmospheres for the Preparation and Free Energy Determinations of Several Oxide Systems | W. Kunnmann<br>D. B. Rogers<br>A. Wold  | J. Phys. Chem. Solids <u>24</u> , 1535 (1963)           |
| 2138<br>R  | Quantum Theory of Kinetic Equations for Electrons in Phonon Fields  | P. N. Argyres   | Phys. Rev. <u>132</u> , 1527 (1963)                     |
| 2139       | Maser Action in InAs Diodes   | I. Melngailis   | Appl. Phys. Letters <u>2</u> , 176 (1963)               |
| 2140<br>R  | Recall as a Search Process  | D. B. Yntema<br>F. P. Trask   | J. Verb. Learning and Verb. Behav. <u>2</u> , 65 (1963) |
| 2141<br>R  | Second-Order Exchange Interactions from Spin Wave Resonance   | R. Weber<br>P. E. Tannenwald  | J. Phys. Chem. Solids <u>24</u> , 1357 (1963)           |
| 2142<br>R  | Fast AGC Amplifier Locks Monopulse Radar on Target  | W. W. Smith   | Electronics <u>36</u> , No. 39, 34 (1963)               |
| 2143A<br>R | Optical Spectra of Several d <sup>1</sup> -Electron Systems   | J. R. O'Connor<br>J. H. Chen §  | J. Phys. Chem. Solids <u>24</u> , 1382 (1963)           |
| 2144<br>R  | Early Synchrotron Radiation Resulting from the July 9 High-Altitude Nuclear Detonation                                | M. Balser<br>J. H. Pannell  | J. Geophys. Res. <u>68</u> , 4119 (1963)                |
| 2145<br>R  | Time-Optimal Control for a Class of Nonlinear Systems   | M. Athans<br>P. L. Falb   | Trans. IEEE, PTGAC <u>AC-8</u> , 379 (1963)             |
| 2147<br>R  | The Assignment of Wave Functions to Energy Densities and Probability Densities  | J. S. Lomont<br>H. E. Moses   | Nuovo Cimento <u>30</u> , 1291 (1963)                   |
| 2148<br>R  | A Maximum Principle for Stochastic Control Systems  | H. J. Kushner<br>F. C. Schweppe   | J. Math. Anal. Appl. <u>8</u> , <u>287</u> (1964)       |
| 2149<br>R  | Magnetically Tunable cw InAs Diode Maser  | I. Melngailis<br>R. H. Rediker  | Appl. Phys. Letters <u>2</u> , 202 (1963)               |

## Journal Articles

JA No.			
2151 R	Parametric Upconverter Receiving Array	H. J. Pratt, Jr. N. G. Damocogna §	Microwave J. <u>8</u> , No. 12, 35 (1965)
2152 R	Semiconductor Lasers	B. Lax	Science <u>141</u> , 1247 (1963)
2153 R	Microwave Ultrasonics	P. E. Tannenwald	Microwave J. <u>6</u> , No. 12, 61 (1963)
2154 R	Digital Circuit Redundancy	R. Teoste	Trans. IEEE, PTGR <u>R-13</u> , 42 (1964), DDC 453779
2155 R	Properties of GaAs Alloy Diodes	R. H. Rediker T. M. Quist	Solid-State Electron. <u>6</u> , 657 (1963)
2156 R	A Free-Space Method of Measuring Radar Cross Section in the Laboratory	P. C. Fritsch	Proc. IEEE (Correspondence) <u>51</u> , 1271 (1963)
2157 R	Some Interactions Between Vacuum Gauges	F. T. Worrell	Rev. Sci. Instr. <u>34</u> , 1352 (1963)
2158 R	Infrared and Visible Light Emission from Forward-Biased p-n Junctions	R. H. Rediker	Solid State Des. <u>4</u> , No. 8, 19 (1963)
2159A	Parameter Estimation for Stochastic Processes	T. S. Pitcher	Acta Math. <u>112</u> , 1 (1964)
2161 R	High-Power Low-Density Induction Plasmas	T. B. Reed	J. Appl. Phys. <u>34</u> , 3146 (1963)
2162 R	Measurement of Thermoelectric Materials and Devices	T. C. Harman	Semiconductor Prod. <u>6</u> , No. 9, 13 (1963)
2163 R	Nernst-Ettingshausen (Transverse) Energy Conversion	T. C. Harman J. M. Honig	Semiconductor Prod. <u>6</u> , No. 7, 19 (1963)
2165	VLF and LF Fields Propagating Near and Into a Rough Sea	R. M. Lerner J. Max	J. Research Natl. Bur. Standards (Radio Science) <u>69D</u> , 273 (1965)
2166A R	Searching for Ten Targets Simultaneously	U. Neisser R. Novick § R. Lazar §	Percept. and Motor Skills <u>17</u> , (1963)
2167 R	Electromagnetic Theory of the Semiconductor Junction Laser	A. L. McWhorter	Solid-State Electron. <u>6</u> , 417 (1963)
2168 R	New Method for Investigating Micrometeoroid Fluxes	I. I. Shapiro	J. Geophys. Res. <u>68</u> , 4697 (1963)
2169	An Iterative Procedure for Computing Time-Optimal Controls	H. K. Knudsen	Trans. IEEE, PTGAC <u>AC-9</u> , 23 (1964)
2170 R	Complex AC Susceptibility of Some Superconducting Alloys	M. Strongin E. Maxwell	Phys. Letters <u>6</u> , 49 (1963)

## Journal Articles

JA No.

- |            |   |   |   |
|------------|---|---|---|
| 2171<br>R  | Units in Vacuum Measurements  | F. T. Worrell                                   | Nature <u>199</u> , 476 (1963)                            |
| 2173<br>R  | Comparison of Line and Square Source Near Fields  | L. J. Ricardi<br>R. C. Hansen §                 | Trans. IEEE, PTGAP <u>AP-11</u> , 711 (1963)              |
| 2175<br>R  | Orbital Lifetime of the West Ford Dipolcs   | H. M. Jones<br>C. W. Perkins<br>I. I. Shapiro   | Science <u>140</u> , 1173 (1963)                          |
| 2176<br>R  | Instability in the Magnetron Gauge  | F. T. Worrell                                   | Rev. Sci. Instr. <u>34</u> , 1384 (1963)                  |
| 2178A<br>R | A Sensitive Threshold Circuit Using Positive and Negative Nonlinear Feedback                          | R. C. Johnston                                  | Proc. IEEE (Correspondence) <u>51</u> , 1788 (1963)       |
| 2179<br>R  | Magnetic Susceptibility of Praseodymium Oxides  | S. Kern   | J. Chem. Phys. <u>40</u> , 208 (1964)                     |
| 2180<br>R  | An Optimum Demodulator for Poisson Processes: Photon Source Detectors                                 | B. Reiffen<br>H. Sherman                        | Proc. IEEE <u>51</u> , 1316 (1963)                        |
| 2182<br>R  | Radar Observations of Venus at 38 Mcps  | J. C. James<br>R. P. Ingalls                    | Astron. J. <u>69</u> , 19 (1964)                          |
| 2183       | Some Physical Properties of Nonlinear Elastic Suspensions as Analyzed by the Averaging Method of Ritz | E. Jozefowicz                                   | Machine Design <u>35</u> , 169 (24 Oct. 1963)             |
| 2184<br>R  | Semiconductor Diode Masers of $(\text{In}_x\text{Ga}_{1-x})\text{As}$                                 | I. Melngailis<br>A. J. Strauss<br>R. H. Rediker | Proc. IEEE (Correspondence) <u>51</u> , 1154 (1963)       |
| 2185       | Threaded Plated-Through Holes   | E. A. Guditz                                    | Electron. Packaging and Prod. <u>3</u> , No. 9, 55 (1963) |
| 2186       | A More General Property Dominance for Sets of Probability Measures                                    | T. S. Pitcher                                   | Accepted Pacific J. Math.                                 |
| 2188<br>R  | Method for Fabricating Strain-Free Gallium Surfaces   | H. H. Ehlers<br>D. F. Kolesar                   | Rev. Sci. Instr. <u>34</u> , 1054 (1963)                  |
| 2189<br>R  | Partitioned IR Cell   | R. Teoste                                       | Infrared Phys. <u>4</u> , 43 (1964)                       |
| 2190A<br>R | Theory of the Infinite Stage Nernst-Ettingshausen Refrigerator  | T. C. Harman                                    | Adv. Energy Conversion <u>3</u> , 667 (1963)              |
| 2192<br>R  | The Radar Cross Section of the Moon   | J. V. Evans<br>G. H. Pettengill                 | J. Geophys. Res. <u>68</u> , 5098 (1963)                  |
| 2193<br>R  | Theory of the Faraday Effect in Solids  | L. M. Toth                                      | Phys. Rev. <u>133</u> , A542 (1964)                       |

JA No.			
2194	Magnetoreflexion Experiments in Graphite	M. S. Dresselhaus J. G. Mavroides	Carbon <u>1</u> , 263 (1964)
2195	Detection of the Peak of an Arbitrary Spectrum	L. Kleinrock	Trans. IEEE PTGIT <u>1T-10</u> , 215 (1964)
2197	Properties of InAs Diode Masers	I. McIngailis R. H. Rediker	Trans. IEEE, PTGED <u>ED-10</u> , 333 (1963)
2198 R	Index of Refraction of KDP	J. H. Dennis R. H. Kingston	Appl. Optics <u>2</u> , 1334 (1963)
2199A R	Visual Search	U. Neisser	Scientific American <u>210</u> , No. 6, 94 (1964)
2202 R	High Pressure Transition in InSb	R. E. Hanneman M. D. Banus H. C. Gatos	J. Phys. Chem. Solids <u>25</u> , 293 (1964)
2203A	The Variable-Drift Biased-Gap Klystron	I. Hefni	Proc. IEEE (Correspondence) <u>52</u> , 102 (1964)
2204 R	Band-Pass Filters with Linear Phase	R. M. Lerner	Proc. IEEE <u>52</u> , 249 (1964)
2206 R	Cathode Particle Vapors in a Glow Discharge in Pulsed Diodes	F. T. Worrell H. A. Pike	J. Appl. Phys. <u>34</u> , 3491 (1963), DDC 436141
2207 R	Alignment of a Logarithmic Amplifier-Detector	R. E. Richardson	Rev. Sci. Instr. <u>34</u> , 1446 (1963)
2209 R	Hazards in Pulse Sequential Circuits	P. E. Wood, Jr.	Trans. IEEE, PTGEC <u>EC-13</u> , 151 (1964)
2214 R	Jahn-Teller Distortions Induced by Tetrahedral-Site Fe <sup>2+</sup> Ions	J. B. Goodenough	J. Phys. Chem. Solids <u>25</u> , 151 (1964)
2216 R	The Dimension of the Support of a Random Distribution Function	J. R. Kinney T. S. Pitcher	Bull. Am. Math. Soc. <u>70</u> , 161 (1964)
2218 R	A Faraday Rotation Measurement of the Ionospheric Perturbation Produced by a Burning Rocket	M. L. Stone L. E. Bird M. Balsler	J. Geophys. Res. <u>69</u> , 971 (1964)
2219 R	Preparation and Properties of Sodium and Potassium Molybdenum Bronze Crystals	A. Wold W. Kunnmann R. J. Arnott A. Ferrerri	Inorg. Chem. <u>3</u> , 545 (1964)
2220 R	High-Pressure Phases of Some Compounds of Groups II-VI	A. N. Mariano E. P. Warekois	Science <u>142</u> , 672 (1963)
2223 R	Helium Temperature Ultra-violet Reflectometer for Use with Modified Spectrograph	W. J. Scouler	Appl. Optics <u>3</u> , 341 (1964)

## Journal Articles

JA No.

- |            |   |  |   |
|------------|---|--|---|
| 2224<br>R  | Current Regulator for Ultra-violet Light Source   | W. J. Scouler<br>E. D. Mills   | Rev. Sci. Instr. <u>35</u> , 489 (1964)               |
| 2225<br>R  | Reflectivity of HgSe and HgTe from 4 to 12 eV at 12 and 300°K                                     | W. J. Scouler<br>G. B. Wright  | Phys. Rev. <u>133</u> , A736 (1964)                   |
| 2226<br>R  | Optimum Power Division in Coherent Communication Systems  | H. L. VanTrees   | Trans. IEEE, PTGSET <u>SET-10</u> , 1 (1964)          |
| 2227<br>R  | Internal Second-Harmonic Generation in Gallium Arsenide Lasers                                    | L. D. Malmstrom<br>J. J. Schlickman<br>R. H. Kingston                                | J. Appl. Phys. <u>35</u> , 248 (1964)                 |
| 2228<br>R  | On Adding Independent Stochastic Processes  | T. S. Pitcher  | Ann. Math. Stat. <u>35</u> , 872 (1964)               |
| 2231<br>R  | A Technique for Achieving High Bit Packing Density on Magnetic Tape                               | J. E. Gillis   | Trans. IEEE, PTGEC <u>EC-13</u> , 112 (1964)          |
| 2232       | Basic Science at the Crossroads   | B. Lax   | Microwave J. <u>7</u> , No. 1, 16 (1964)              |
| 2234<br>R  | Energy Gap Measurements by Tunneling Between Superconducting Films. I. Temperature Dependence     | D. H. Douglass, Jr.<br>R. H. Meservey  | Phys. Rev. <u>135</u> , A19 (1964)                    |
| 2235<br>R  | Energy Gap Measurements by Tunneling Between Superconducting Films. II. Magnetic Field Dependence | R. H. Meservey<br>D. H. Douglass, Jr.  | Phys. Rev. <u>135</u> , A24 (1964)                    |
| 2237<br>R  | A Proposed Spacecraft-to Earth Communications Link  | J. G. Barry<br>G. F. Dalrymple<br>J. C. Fielding<br>B. S. Goldstein<br>W. F. Higgins | Trans. IEEE, Commun. Electron. <u>83</u> , 593 (1964) |
| 2238<br>R  | The Dependence of the Upper Critical Field of Niobium on Temperature and Resistivity              | E. S. Rosenblum<br>S. H. Autler<br>K. H. Goen§                                       | Revs. Modern Phys. <u>36</u> , 77 (1964)              |
| 2240<br>R  | The Representations of the Inhomogeneous Lorentz Group in Terms of an Angular Momentum Basis      | J. S. Lomont<br>H. E. Moses  | J. Math. Phys. <u>5</u> , 294 (1964)                  |
| 2241A<br>R | Ceramic Double Cell For Crystal Growth by Fused Salt Electrolysis                                 | W. Kunnmann<br>A. Ferretti   | Rev. Sci. Instr. <u>35</u> , 465 (1964)               |
| 2243<br>R  | High-Pressure Transitions in $A^{(III)}B^{(VI)}$ Compounds. I. Indium Telluride                   | M. D. Banus<br>R. E. Hanneman<br>M. Strongin<br>K. Goen§                             | Science <u>142</u> , 662 (1963)                       |

## Journal Articles

JA No.			
2245 R	Performance of Coherent Detection Systems Using Decision-Directed Channel Measurement	J. G. Proakis P. R. Drouilhet, Jr. R. Price	Trans. IEEE, PTGCS <u>CS-12</u> , 54 (1964)
2246 R	Infrared InSb Laser Diode in High Magnetic Fields	R. J. Phelan A. R. Calawa R. H. Rediker R. J. Keyes B. Lax	Appl. Phys. Letters <u>3</u> , 143 (1963)
2247	Semiconductor Lasers	B. Lax	Solid State Des. <u>4</u> , No. 11, 26 (1963)
2249 R	The Application of Semiconductor Optical Radiators to Space Communication	B. S. Goldstein J. D. Welch	Trans. IEEE, Commun. Electron. <u>83</u> , 470 (1964)
2250 R	An Acquirable Code	D. Gorenstein § E. Weiss	Inform. and Control <u>7</u> , 315 (1964), DDC 281751
2251 R	Estimation of Signals Containing Unknown Parameters: Comparison of Linear and Arbitrary Unbiased Estimates	D. J. Sakrison	J. Soc. Ind. Appl. Math. <u>13</u> , 706 (1965)
2252 R	Observations of Venus, the Region of Taurus A, and the Moon at 8.5-Millimeter Wavelength	V. L. Lynn M. L. Meeks M. D. Sohigian	Astron. J. <u>69</u> , 65 (1964)
2253A R	The Nernst-Ettingshausen Energy Conversion Figure of Merit for Bi and Bi-4% Sb Alloys	T. C. Harman J. M. Honig S. Fischler A. E. Paladino	Solid-State Electron. <u>7</u> , 505 (1964)
2254 R	Refined Treatment of the Theory Pertaining to Operating Characteristics of Anisotropic Nernst-Ettingshausen Devices	J. M. Honig B. M. Tarmy	J. Appl. Phys. <u>35</u> , 722 (1964)
2255	Near-Field Characteristics of a Linear Array	L. J. Ricardi	Microwave J. <u>8</u> , No. 3, 41 (1965)
2256 R	Channel Vocoder with Digital Pitch Extractor	J. Tierney B. Gold V. Sferrino J. A. Dumanian E. J. Aho	J. Acoust. Soc. Am. <u>36</u> , 1901 (1964)
2257	A Spectral Analysis of the Non-linear Oscillator	R. T. Prosser	Accepted J. Math. Phys.
2258	The Laser - A Long Range Future	B. Lax	Solid State Des. <u>4</u> , No. 11 (1963)

## Journal Articles

JA No.

- |           |  |   |   |
|-----------|--|---|---|
| 2260<br>R | Bulk Solution of Ginzburg-Landau Equations for Type II Superconductor: Upper Critical Field Region               | W. H. Kleiner<br>L. M. Roth<br>S. H. Autler                 | Phys. Rev. <u>133</u> , A1226 (1964)                      |
| 2261<br>R | Parametric Analysis of Jammed Active Satellite Links   | B. Reiffen<br>H. Sherman                                    | Trans. IEEE, PTGCS <u>CS-12</u> , 102 (1964)              |
| 2262<br>R | Radar Observations of the Moon at a Wavelength of 8.6 Millimeters  | V. L. Lynn<br>M. D. Sohigian<br>E. A. Crocker               | J. Geophys. Res. <u>69</u> , 781 (1964)                   |
| 2264<br>R | Two-Step Raman Scattering in Nitrobenzene  | H. J. Zeiger<br>P. E. Tannenwald<br>S. Kern<br>R. Herendeen | Phys. Rev. Letters <u>11</u> , 419 (1963)                 |
| 2265<br>R | Superconductivity in the High-Pressure InSb-Beta-Sn System   | S. D. Nye<br>M. D. Banus<br>H. C. Gatos                     | J. Appl. Phys. <u>35</u> , 1361 (1964)                    |
| 2266<br>R | The Determination of Distance by Echolocating Bats   | D. A. Cahlander<br>J. J. G. McCue<br>F. A. Webster §        | Nature <u>201</u> , 544 (1964)                            |
| 2268<br>R | Galvanomagnetic Effects in n-Type Germanium  | W. E. Krag<br>M. C. Brown                                   | Phys. Rev. <u>134</u> , A779 (1964)                       |
| 2270<br>R | Partial Pressures in Equilibrium with Group IV Tellurides. I. Optical Absorption Method and Results for PbTe     | R. F. Brebrick<br>A. J. Strauss                             | J. Chem. Phys. <u>40</u> , 3230 (1964)                    |
| 2271<br>R | Classical Ground State Spin Configurations in the Corundum Lattice   | N. Menyuk<br>K. Dwight                                      | J. Phys. Chem. Solids <u>25</u> , 1031 (1964), DDC 612550 |
| 2272<br>R | A Cluster Method for Finding Minimum Energy Spin States  | D. H. Lyons<br>T. A. Kaplan                                 | J. Phys. Chem. Solids <u>25</u> , 645 (1964)              |
| 2273<br>R | A Direct Constructive Proof of the Criterion for Complete Controllability of Time-Invariant Linear Systems       | P. L. Falb<br>M. Athans                                     | Trans. IEEE, PTGAC <u>AC-9</u> , 189 (1964)               |
| 2274<br>R | Report on Progress in Information Theory in the U. S. A., 1960-1963: Communication and Radar, Section A, General | R. Price<br>G. L. Turin                                     | Trans. IEEE, PTGIT <u>IT-9</u> , 240 (1963)               |
| 2275<br>R | High-Pressure Phase Transition in Tin Telluride  | J. A. Kafalas<br>A. N. Mariano                              | Science <u>143</u> , 952 (1964)                           |
| 2276<br>R | Ultrasonic Measurements in Normal and Superconducting Niobium  | R. Weber  | Phys. Rev. <u>133</u> , A1487 (1964)                      |
| 2277      | Theory of Spin Resonance and Relaxation  | P. N. Argyres<br>P. L. Kelley                               | Phys. Rev. <u>134</u> , A98 (1964)                        |

## Journal Articles

JA No.			
2278 R	A New Formulation of Particle Mechanics	R. T. Prosser	Memoirs Am. Math. Soc., No. 61 (1966), DDC 632968
2280 R	Tunable Lasers	R. H. Rediker	Electron. Design <u>12</u> , No. 1, 47 (1964)
2282 R	Cascade Capture of Electrons by Ionized Impurities	D. R. Hamann A. L. McWhorter	Phys. Rev. <u>134</u> , A250 (1964)
2283 R	Noise Measurements on He-Ne Laser Oscillators	J. A. Bellisio § C. Freed H. A. Haus §	Appl. Phys. Letters <u>4</u> , 5 (1964)
2284 R	Circular Aperture Synthesis	J. Ruze	Trans. IEEE, PTGAP <u>AP-12</u> 691 (1964), DDC 613881
2285 R	Partial Pressures in Equilibrium with Group IV Tellurides. II. Tin Telluride	R. F. Brebrick A. J. Strauss	J. Chem. Phys. <u>41</u> , 197 (1964)
2286 R	A Portable Receiver for Ultrasonic Waves in Air	J. J. G. McCue A. Bertolini	Trans. IEEE, PTGSU <u>SU-11</u> , 41 (1964)
2288 R	Radio Observations of OH in the Interstellar Medium	S. Weinreb A. H. Barrett § M. L. Mecks J. C. Henry	Nature <u>200</u> , 829 (1963)
2290 R	Magnetic Tuning of CW InSb Diode Laser	R. J. Phelan R. H. Rediker	Proc. IEEE (Correspondence) <u>52</u> , 91 (1964)
2291 R	A New Method of Measuring Small Radar Cross Sections by Digital Vector-Field Subtraction	P. C. Fritsch F. E. Heart	Proc. IEEE (Correspondence) <u>52</u> , 628 (1964)
2292 R	Estimation of a System Pulse Transfer Function in the Presence of Noise	M. J. Levin	Trans. IEEE, PTGAC <u>AC-9</u> , 229 (1964)
2292A R	Discussion of "Estimation of a System Pulse Transfer Function in the Presence of Noise"	L. E. McBride § M. J. Levin	IEEE Trans. Automat. Control <u>AC-10</u> , 214 (1965), DDC 621202
2293 R	Growing Helical Density Waves in Semiconductor Plasmas	C. E. Hurwitz A. L. McWhorter	Phys. Rev. <u>134</u> , A1033 (1964)
2294 R	Semiconductor Lasers	T. M. Quist	Intl. Sci. and Tech. No. 26, 80 (1964)
2295	Interface-Alloy Epitaxial Heterojunctions	R. H. Rediker S. Stopck J. H. R. Ward	Solid-State Electron. <u>7</u> , 621 (1964)
2296 R	Growth of $(\text{Ga}_x\text{In}_{1-x})\text{As}$ Single Crystals by Vapor Phase Reaction	R. C. Serrine	J. Electrochem. Soc. <u>111</u> , 750 (1964)



## Journal Articles

JA No.

- |             |  |   |   |
|-------------|--|---|---|
| 2297<br>R   | Signal Design for Dispersive Channels  | R. S. Kennedy<br>I. L. Lebow                  | IEEE Spectrum <u>1</u> , No. 3, 231 (1964)    |
| 2299<br>R   | Ionospheric Temperatures During the Launch of NASA Rocket 8.14 on July 2, 1963   | J. V. Evans                                   | J. Geophys. Res. <u>69</u> , 1436 (1964)      |
| 2300<br>R   | Radar Evidence of Solar Wind   | J. H. Chisholm<br>J. C. James                 | Astrophys. J. <u>140</u> , 377 (1964)         |
| 2302<br>R   | Injection Luminescent Pumping of $\text{CaF}_2:\text{U}^{3+}$ with GaAs Diode Lasers   | R. J. Keyes<br>T. M. Quist                    | Appl. Phys. Letters <u>4</u> , 50 (1964)      |
| 2303<br>R   | 2000-A Pulse Generator   | N. A. Sullivan                                | Rev. Sci. Instr. <u>35</u> , 639 (1964)       |
| 2304<br>R   | On Array Element Impedance Variation with Spacing  | J. L. Allen                                   | Trans. IEEE, PTGAP <u>AP-12</u> , 371 (1964)  |
| 2305<br>R   | Diffused Junction Diodes of PbSe and PbTe  | J. F. Butler                                  | J. Electrochem. Soc. <u>111</u> , 1150 (1964) |
| 2306<br>R   | Interferometric Phase Shift Technique for Measuring Short Fluorescent Lifetimes  | R. J. Carbone<br>P. R. Longaker               | Appl. Phys. Letters <u>4</u> , 32 (1964)      |
| 2307<br>R   | Impurity States in Semiconducting Masers   | H. J. Zeiger                                  | J. Appl. Phys. <u>35</u> , 1657 (1964)        |
| 2310<br>R   | The Relation of the Initial Costate to the Cost Surface in Optimal Systems   | H. K. Knudsen<br>M. Athans                    | Trans. IEEE, PTGAC <u>AC-9</u> , 315 (1964)   |
| 2312<br>R   | A Theory of Thermoluminescence of Fluorite ( $\text{CaF}_2:\text{Y}$ ). Recombination from Highly Associated Electron-Hole Pairs | J. R. O'Connor                                | Appl. Phys. Letters <u>4</u> , 126 (1964)     |
| 2313        | A Simplified Technique for Measuring High Quality Varactor Parameters  | D. E. Crook                                   | Solid State Des. <u>6</u> , No. 8, 31 (1965)  |
| 2314        | A Spectral Analysis of Central Force Motion  | R. T. Prosser                                 | Accepted J. Math. Phys.                       |
| 2316<br>R   | Generalizations of the Jost Functions  | H. E. Moses                                   | J. Math. Phys. <u>5</u> , 833 (1964)          |
| 2317-1<br>R | The Lincoln Laboratory West Ford Program - An Historical Perspective   | C. F. J. Overhage<br>W. H. Radford            | Proc. IEEE <u>52</u> , 452 (1964)             |
| 2317-2<br>R | The West Ford Experiment - An Introduction to This Issue   | W. E. Morrow, Jr.<br>T. F. Rogers             | Proc. IEEE <u>52</u> , 461 (1964)             |
| 2317-3<br>R | Orbital Properties of the West Ford Dipole Belt  | I. I. Shapiro<br>H. M. Jones<br>C. W. Perkins | Proc. IEEE <u>52</u> , 469 (1964)             |

JA No.			
2317-4 R	Measured Physical Characteristics of the West Ford Belt	F. E. Heart D. Kárp A. A. Mathiasen F. Nagy, Jr. W. R. Crowther W. B. Smith	Proc. IEEE <u>52</u> , 519 (1964)
2317-5 R	RF Characteristics of Thin Dipoles	C. L. Mack, Jr. B. Reiffen	Proc. IEEE <u>52</u> , 533 (1964)
2317-6	The West Ford Belt as a Communications Medium	I. L. Lebow P. R. Drouilhet, Jr. N. L. Daggett J. N. Harris F. Nagy, Jr.	Proc. IEEE <u>52</u> , 543 (1964), DDC 442980
2317-7 R	Effects of the West Ford Belt on Astronomical Observations	D. C. MacLellan W. E. Morrow, Jr. I. I. Shapiro	Proc. IEEE <u>52</u> , 564 (1964)
2317-8 R	The West Ford Payload	P. Waldron D. C. MacLellan M. C. Crocker	Proc. IEEE <u>52</u> , 571 (1964)
2317-9 R	West Ford Radar and Microwave Equipment	B. E. Nichols D. Karp	Proc. IEEE <u>52</u> , 576 (1964)
2317-10 R	West Ford Antenna and Feed System	B. F. LaPage E. W. Blaisdell L. J. Ricardi	Proc. IEEE <u>52</u> , 589 (1964)
2317-11 R	The Antenna Pointing System for West Ford	F. E. Heart A. A. Mathiasen	Proc. IEEE <u>52</u> , 599 (1964)
2320B R	The Kinematics of the Angular Momentum of a Particle. I. Translation Broadening of Angular Momentum	H. E. Moses S. C. Wang	Nuovo Cimento <u>36</u> , 788 (1965), DDC 621234
2323 R	A Note on the Equivalence of Certain Realizations of Boson Annihilation and Creation Operators Due to K. O. Friedrichs	H. E. Moses	Communs. Pure Appl. Math, <u>17</u> , 355 (1964), DDC 453110
2324 R	A Proposal for an Associative Memory Using Magnetic Films	J. I. Raffel T. S. Crowther	Trans. IEEE, PTGEC <u>EC-13</u> , 611 (1964), DDC 454538
2325A R	Lateral-Feed Displacement in a Paraboloid	J. Ruze	IEEE Trans. Antennas Propag. <u>AP-13</u> , 660 (1965), DDC 625018
2326 R	Oriented Single-Crystal Bismuth Nernst-Ettingshausen Refrigerators	T. C. Harman J. M. Honig S. Fischler A. E. Paladino M. J. Button	Appl. Phys. Letters <u>4</u> , 77 (1964)
2328 R	Evidence That SnTe Is a Semiconductor	J. A. Kafalas R. F. Brebrick A. J. Strauss	Appl. Phys. Letters <u>4</u> , 93 (1964)

## Journal Articles

JA No.

- |           |   |  |  |
|-----------|---|--|--|
| 2331<br>R | Evaluation of Likelihood Functions for Gaussian Signals   | F. C. Schweppe   | IEEE Trans. Inform. Theory <u>IT-11</u> , 61 (1965) DDC 618454 |
| 2332<br>R | Partial Pressures in Equilibrium with Group IV Tellurides. III. Germanium Telluride                   | R. F. Brebrick   | J. Chem. Phys. <u>41</u> , 1140 (1964)                         |
| 2333<br>R | Note on Buzz-Hiss Detection   | B. Gold  | J. Acoust. Soc. Am. <u>36</u> , 1659 (1964), DDC 453109        |
| 2334<br>R | Bandpass Compressor: A New Type of Speech-Compression Device  | B. Gold<br>C. M. Rader   | J. Acoust. Soc. Am. <u>36</u> , 1215 (1964)                    |
| 2335<br>R | Band Edge Structure of PbS, PbSe, and PbTe  | J. O. Dimmock<br>G. B. Wright  | Phys. Rev. <u>135</u> , A821 (1964)                            |
| 2337<br>R | Output Power from GaAs Lasers at Room Temperature   | C. C. Gallagher §<br>B. S. Goldstein<br>P. C. Tandy §<br>J. D. Welch | Proc. IEEE (Correspondence) <u>52</u> , 717 (1964)             |
| 2338<br>R | Multidimensional Parameter Estimation by the Summed Weighted Least Squares Minimization of Remainders | H. Schneider   | J. Astron. Sci. <u>11</u> , No. 3, 61 (1964), DDC 613884       |
| 2339<br>R | Microwave Modulation of a GaAs Injection Laser  | B. S. Goldstein<br>J. D. Welch                                       | Proc. IEEE (Correspondence) <u>52</u> , 715 (1964)             |
| 2341<br>R | Vacuum Voltage Breakdown as a Thermal Instability of the Emitting Protrusion                          | G. E. Vibrans  | J. Appl. Phys. <u>35</u> , 1600 (1964), DDC 453107             |
| 2343<br>R | On the Interpretation of Radar Reflections from the Moon  | J. V. Evans<br>T. Hagfors  | Icarus <u>3</u> , 151 (1964)                                   |
| 2344<br>R | Galvano-Thermomagnetic Effects in Semiconductors and Semimetals. IV. Mercury Selenide                 | T. C. Harman   | J. Phys. Chem. Solids <u>25</u> , 931 (1964)                   |
| 2345<br>R | Searching for Novel Targets   | U. Neisser<br>R. Lazar §   | Percept. and Motor Skills <u>19</u> , 427 (1964)               |
| 2346<br>R | Some Non-Central F-Distributions Expressed in Closed Form   | R. Price   | Biometrika <u>51</u> , 107 (1964)                              |
| 2348<br>R | High-Resolution Microwave Spectra of H and OH Absorption Lines of Cassiopeia A                        | A. H. Barrett §<br>M. L. Meeks<br>S. Weinreb                         | Nature <u>202</u> , 475 (1964)                                 |
| 2349<br>R | Note on Quantum Effects in Radiometer Observations  | T. Hagfors<br>M. L. Meeks  | Astron. J. <u>69</u> , 447 (1964)                              |
| 2350<br>R | Video Pulse Amplifier with Wide Dynamic Range   | R. E. Richardson   | Rev. Sci. Instr. <u>35</u> , 1600 (1964), DDC 454268           |

## Journal Articles

JA No.			
2351 R	The Frequency Dependence of the Powers and Impedances of Varactor Frequency Multipliers	A. I. Grayzel	Proc. IEEE (Correspondence) <u>52</u> , 1056 (1964), DDC 613885
2353-I R	Magneto-Optical Scattering from Multilayer Magnetic and Dielectric Films. I. General Theory	D. O. Smith	Optica Acta <u>12</u> , <u>13</u> (1965), DDC 622307
2353-II R	Magneto-Optical Scattering from Multilayer Magnetic and Dielectric Films. II. Applications of the General Theory	D. O. Smith	Optica Acta <u>12</u> , 193 (1965), DDC 626887
2355 R	The Bandwidth of the Abrupt-Junction Varactor-Frequency Doubler	A. I. Grayzel	IEEE Trans. Circuit Theory <u>CT-13</u> , 52 (1966)
2356 R	Ionospheric Backscatter Observations	J. V. Evans M. Loewenthal	Planet. Space Sci. <u>12</u> , 915 (1964)
2357 R	Radar Echoes from the Sun	J. C. James	Trans. IEEE, PTGMIL <u>MIL-8</u> , 210 (1964); Trans. IEEE, PTGAP <u>AP-12</u> , 876 (1964), DDC 453366
2358A	An Experimental Infrared Radar	E. D. Mills § N. A. Sullivan § J. W. Meyer	Microwave J. <u>9</u> , No. 2, 33 (1966)
2359 R	Acoustic Plasma Waves in Semiconductors	A. L. McWhorter W. G. May	IBM J. Research Develop. <u>8</u> , 285 (1964)
2360A	Thermistor Measures Dielectric Gas Content	E. B. Murphy	Electronics <u>37</u> , No. 27, 54 (1964)
2361A	Energy Levels of $d^{11}$ Electrons in $\text{CaF}_2$ . Evidence of Strong Dynamical Jahn-Teller Distortions	J. R. O'Connor J. H. Chen §	Appl. Phys. Letters <u>5</u> , 100 (1964)
2362 R	On the Angular Resolution of Multiple Targets	J. R. Sklar F. C. Scheppe	Proc. IEEE (Correspondence) <u>52</u> , 1044 (1964)
2363 R	Experiment with Speechlike Phase in a Spectrally Flattened Pitch-Excited Channel Vocoder	B. Gold	J. Acoust. Soc. Am. <u>36</u> , 1892 (1964), DDC 454697
2364A R	The Reduction of Electromagnetic Backscatter from a Plasma-Clad Conducting Body	E. L. Murphy	J. Appl. Phys. <u>36</u> , 1918 (1965), DDC 430589
2365 R	Backscattering from an Undulating Surface with Applications to Radar Returns from the Moon	T. Hagfors	J. Geophys. Res. <u>69</u> , 3779 (1964)
2366 R	Spontaneous Bending of Thin {III} Crystals of III-V Compounds	M. C. Finn H. C. Gatos	Surface Sci. <u>1</u> , 361 (1964), DDC 612566

## Journal Articles

JA No.

- |            |  |                                      |  |
|------------|--|--------------------------------------|--|
| 2369<br>R  | Radar Frequency Modulations<br>for Accelerating Targets<br>Under a Bandwidth Constraint  | F. C. Schweppe                       | IEEE Trans. Mil. Electron.<br><u>MIL-9</u> , 25 (1965), DDC 616447 |
| 2370<br>R  | Theory of Electromagnetic Field<br>Measurement and Photoelectron<br>Counting   | P. L. Kelley<br>W. H. Kleiner        | Phys. Rev. <u>136</u> , A316 (1964),<br>DDC 453103                 |
| 2371<br>R  | An F Region Eclipse  | J. V. Evans                          | J. Geophys. Res. <u>70</u> , 131 (1965),<br>DDC 613886             |
| 2372<br>R  | Lattice Energy Transfer and<br>Stimulated Emission from<br>CeF <sub>2</sub> :Nd <sup>3+</sup>  | J. R. O'Connor<br>W. A. Hargreaves§  | Appl. Phys. Letters <u>4</u> , 208 (1964)                          |
| 2373<br>R  | With Cryogenics  | J. W. Meyer                          | IEEE Student J. <u>9</u> (September<br>1964)                       |
| 2374<br>R  | Aspherical Spin Density<br>in S-State Cations  | T. A. Kaplan                         | Phys. Rev. <u>136</u> , A1636 (1964),<br>DDC 613810                |
| 2376       | Cyclotron Resonance:<br>(Diamagnetic Resonance)  | G. F. Dresselhaus                    | <u>Encyclopedia of Physics</u><br>(Reinhold, New York, 1966)       |
| 2378<br>R  | Representations of the Inhomo-<br>geneous Lorentz Group in Terms<br>of an Angular Momentum Basis:<br>Derivation for the Cases of Non-<br>zero Mass and Zero Mass,<br>Discrete Spin | J. S. Lomont<br>H. E. Moses          | J. Math. Phys. <u>5</u> , 1438 (1964)                              |
| 2379A      | The Dark Side of the Laser   | J. J. Schlickman<br>R. H. Kingston   | Electronics <u>38</u> , No. 8, 93 (1965)                           |
| 2380A<br>R | Optical deHaas-Shubnikov Effect<br>in Antimony   | M. S. Dresselhaus<br>J. G. Mavroides | Solid State Commun. <u>2</u> , 297<br>(1964), DDC 453108           |
| 2382<br>R  | Measurements of UHF and L-<br>Band Radar Clutter in the<br>Central Pacific Ocean   | G. R. Curry                          | IEEE Trans. Mil. Electron.<br><u>MIL-9</u> , 39 (1965), DDC 616441 |
| 2383<br>R  | Partial Pressures and Gibbs<br>Free Energy of Formation for<br>Congruently Subliming CdTe(c)   | R. F. Brebrick<br>A. J. Strauss      | J. Phys. Chem. Solids <u>25</u> , 1441<br>(1964), DDC 614292       |
| 2384<br>R  | Efficiency in a Tetrahedral-<br>Anvil Press as Related to Anvil<br>and Pyrophyllite Size   | M. D. Banus<br>S. D. Nye             | Rev. Sci. Instr. <u>35</u> , 1319 (1964),<br>DDC 453368            |
| 2385<br>R  | Ultrasonics – A Report on the<br>1963 Symposium  | J. J. G. McCue                       | Phys. Today <u>17</u> , No. 6, 36 (1964)                           |
| 2386<br>R  | Experimental Bound on the<br>Orbital Effects of Charge Drag  | I. I. Shapiro                        | J. Geophys. Res. <u>69</u> , 4693 (1964),<br>DDC 453365            |
| 2387A<br>R | Redirecting the Search Process   | U. Neisser<br>A. Stopper§            | Brit. J. Psychol. <u>56</u> , 359 (1965),<br>DDC 628561            |

JA No.			
2388	Lasers	R. H. Kingston	<u>Encyclopedia of Physics</u> (Reinhold, New York, 1966)
2389	Reststrahlen Reflection in HgTc	D. H. Diekey J. G. Mavroides	Solid State Commun. <u>2</u> , 213 (1964)
2390 R	Electrochemical Demer Effect in Semiconductors	W. W. Harvey M. C. Finn	Surface Sci. <u>2</u> , 456 (1964), DDC 614180
2391 R	Stimulated Raman Emission at 90° to the Ruby Beam	J. H. Dennis P. E. Tannenwald	Appl. Phys. Letters <u>5</u> , 58 (1964)
2392	Single Crystal Growth of Transition Metal Oxides from Polytungstate Fluxes	W. Kunnmann A. Ferretti R. J. Arnott D. B. Rogers	J. Phys. Chem. Solids <u>26</u> , 311 (1965)
2393 R	Vector Pitch Detection	C. M. Rader	J. Acoust. Soc. Am. <u>36</u> , 1963 (1964), DDC 453104
2394	The Band Gap of Boron Phosphide	R. I. Stearns	J. Appl. Phys. <u>36</u> , 330 (1965)
2398 R	Temperature Dependence of Attenuation of 70-Gc/sec Acoustic Waves in Quartz	J. B. Thaxter P. E. Tannenwald	Appl. Phys. Letters <u>5</u> , 67 (1964)
2399 R	Galvano-Thermomagnetic Phenomena and the Figure of Merit in Bismuth. I. Transport Properties of Intrinsic Material	T. C. Harman J. M. Honig B. M. Tarmy	Adv. Energy Conversion <u>5</u> , 1 (1965), DDC 618461
2400 R	Matched-Filter Theory for High-Velocity Accelerating Targets	E. J. Kelly R. P. Wishner	IEEE Trans. Mil. Electron. <u>MIL-9</u> , 56 (1965), DDC 616440
2401 R	The Behavior of Likelihood Ratios of Stochastic Processes Related by Groups of Transformations	T. S. Pitcher	Ann. Math. Stat. <u>36</u> , 529 (1965), DDC 616431
2404 R	A $\lambda/4$ and $\lambda/2$ Shift Method for Elimination of Unwanted Wall-Echoes in Radar-Anechoic Chambers	J. H. Halberstein P. C. Fritsch	Proc. IEEE (Correspondence) <u>52</u> , 1743 (1964), DDC 613811
2405 R	PbTe Diode Laser	J. F. Butler A. R. Calawa R. J. Phelan, Jr. T. C. Harman A. J. Strauss R. H. Rediker	Appl. Phys. Letters <u>5</u> , 75 (1964)
2407 R	Array Antennas: New Applications for an Old Technique	J. L. Allen	IEEE Spectrum <u>1</u> , No. 11, 115 (1964), DDC 454539
2409 R	Diagonal Representation of the Radar Scattering Matrix for an Axially Symmetric Body	S. L. Borison	IEEE Trans. Antennas Propag. <u>AP-13</u> , 176 (1965), DDC 613887

## Journal Articles

JA No.

- |            |   |  |  |
|------------|---|--|--|
| 2410       | Diamagnetism  | J. B. Goodenough   | <u>Encyclopedia of Physics</u><br>(Reinhold, New York, 1966)                   |
| 2411<br>R  | The Scaling of Digital Differential Analyzers   | H. K. Knudsen  | IEEE Trans. Electron. Computers<br><u>EC-14</u> , 583 (1965), DDC 625021       |
| 2412<br>R  | Peritectic Reaction in the Superconductor $Nb_3Sn$ ( $Cb_3Sn$ )   | F. J. Bachner<br>H. C. Gatos<br>M. D. Banus  | Trans. Met. Soc. AIME <u>233</u> , 227<br>(1965), DDC 613812                   |
| 2413A<br>R | Band Structure of HgTe and HgTe-CdTe Alloys   | T. C. Harman<br>W. H. Kleiner<br>A. J. Strauss<br>G. B. Wright<br>J. G. Mavroides<br>J. M. Honig<br>D. H. Dickey | Solid State Commun. <u>2</u> , 305 (1964),<br>DDC 453102                       |
| 2415<br>R  | On the Fuel-Optimal Singular Control of Nonlinear Second-Order Systems                                      | M. Athans<br>M. D. Canon   | Trans. IEEE, PTGAC <u>AC-9</u> , 360<br>(1964), DDC 613888                     |
| 2416<br>R  | Luminescence and Coherent Emission in a Large-Volume Injection Plasma in InSb                               | I. Melngailis<br>R. J. Phelan, Jr.<br>R. H. Rediker  | Appl. Phys. Letters <u>5</u> , 99 (1964)                                       |
| 2417<br>R  | Inversion of {111} Surfaces in Single Crystal Regrowth During Interface-Alloying of Intermetallic Compounds | E. D. Hinkley<br>R. H. Rediker<br>M. C. Lavine   | Appl. Phys. Letters <u>5</u> , 110 (1964)                                      |
| 2418<br>R  | Semiconductor Injection Laser   | R. H. Rediker  | <u>McGraw-Hill Yearbook of Science and Technology</u> (1965)                   |
| 2419<br>R  | PbSe Diode Laser  | J. F. Butler<br>A. R. Calawa<br>R. J. Phelan, Jr.<br>A. J. Strauss<br>R. H. Rediker                              | Solid State Commun. <u>2</u> , 303<br>(1964), DDC 453105                       |
| 2420A      | Evidence of Stimulated Emission in Ruby-Laser-Pumped GaAs   | J. J. Schlickman<br>M. E. Fitzgerald<br>R. H. Kingston   | Proc. IEEE (Correspondence)<br><u>52</u> , 1739 (1964)                         |
| 2422<br>R  | Measured Transition from Laminar to Turbulent Flow and Subsequent Growth of Turbulent Wakes                 | W. G. Clay<br>M. Labitt<br>R. E. Slattery  | AIAA J. <u>3</u> , 837 (1965),<br>DDC 618460                                   |
| 2423<br>R  | Constitutional Supercooling in Iodine Vapor Crystal Growth  | T. B. Reed<br>W. J. LaFleur  | Appl. Phys. Letters <u>5</u> , 191 (1964),<br>DDC 618455                       |
| 2425<br>R  | On the Schwartz Inequality  | M. J. Levin  | Proc. IEEE (Correspondence)<br><u>53</u> , 107 (1965)                          |
| 2428<br>R  | Circulator Synthesis  | J. A. Weiss  | IEEE Trans. Microwave Theory<br>Tech. <u>MTT-13</u> , 38 (1965),<br>DDC 616432 |

## Journal Articles

JA No.			
2429A R	Generation of Stokes and Anti-Stokes Radiation in Raman Media	H. A. Haus § P. L. Kelley H. J. Zeiger	Phys. Rev. <u>138</u> , A960 (1965), DDC 621115
2433 R	Bounds on the Volume and Height Distributions of the Ambiguity Function	R. Price E. M. Hofstetter	IEEE Trans. Inform. Theory <u>IT-11</u> , 207 (1965), DDC 622320
2434 R	On the Behavior of $f_0F_2$ During Solar Eclipses	J. V. Evans	J. Geophys. Res. <u>70</u> , 733 (1965), DDC 613889
2435	Ionospheric Investigations by the Faraday Rotation of Incoherent Backscatter	G. H. Millman § V. C. Pineo D. P. Hynek	J. Geophys. Res. <u>69</u> , 4051 (1964), DDC 453364
2436 R	Distribution of Magnetic Moment in Hexagonal Cobalt	R. M. Moon	Phys. Rev. <u>136</u> , A195 (1964), DDC 453106
2437 R	Electron-Beam-Pumped Laser	C. E. Hurwitz R. J. Keyes	Appl. Phys. Letters <u>5</u> , 139 (1964)
2443 R	Electric Furnace for Operation in Oxidizing, Neutral, and Reducing Atmospheres to 2400°C	T. B. Reed R. E. Fahey	Rev. Sci. Instr. <u>36</u> , 289 (1965), DDC 616133
2444 R	Searching Through Word Lists	U. Neisser H. K. Beller §	Brit. J. Psychol. <u>56</u> , 349 (1965), DDC 628562
2446 R	Electromagnetic Mode Mixing in Nonlinear Media	R. H. Kingston A. L. McWhorter	Proc. IEEE <u>53</u> , 4 (1965), DDC 613890
2447 R	Superconducting Characteristics of the High-Pressure InSb- $\beta$ Tin System	M. D. Banus S. N. Vernon H. C. Gatos	J. Appl. Phys. <u>36</u> , 864 (1965), DDC 616443
2451A R	Radar Observations of Meteor Deceleration	J. V. Evans	J. Geophys. Res. <u>71</u> , 171 (1966), DDC 630368
2452 R	Elastic Constants of HgTe	J. G. Mavroides D. F. Kolesar	Solid State Commun. <u>2</u> , 363 (1964), DDC 614308
2453 R	A Solid-State Room-Temperature Operated GaAs Laser Transmitter	G. F. Dalrymple B. S. Goldstein T. M. Quist	Proc. IEEE (Correspondence) <u>52</u> , 1742 (1964)
2454 R	Resistivities and Transformation Rates of High-Pressure InSb- $\beta$ Sn Alloys	M. D. Banus A. J. Strauss L. B. Farrell	J. Appl. Phys. <u>36</u> , 2186 (1965), DDC 622322
2456 R	Pressure Dependence of the Alpha-Beta Transition Temperature in Silver Selenide	M. D. Banus	Science <u>147</u> , 732 (1965), DDC 613891
2457 R	Magnetic Properties of InAs Diode Electroluminescence	F. L. Galeener § I. Melngailis G. B. Wright R. H. Rediker	J. Appl. Phys. <u>36</u> , 1574 (1965), DDC 624878



## Journal Articles

JA No.

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|-----------|--|--|---|
| 2459<br>R | Digitized Voice-Excited<br>Vocoder for Telephone-Quality<br>Inputs, Using Bandpass Sampling<br>of the Baseband Signal  | B. Gold<br>J. Tierney                        | J. Acoust. Soc. Am. <u>37</u> , 753<br>(1965), DDC 619923                           |
| 2460<br>R | Electrical Properties of Ferro-<br>magnetic $\text{CrO}_x$ ( $1.89 < x < 2.02$ )                                       | D. S. Chapin<br>J. A. Kafalas<br>J. M. Honig | J. Phys. Chem. <u>69</u> , 1402 (1965),<br>DDC 616446                               |
| 2461<br>R | Transformation from a Linear<br>Momentum to an Angular<br>Momentum Basis for Particles<br>of Zero Mass and Finite Spin | H. E. Moses                                  | J. Math. Phys. <u>6</u> , 928 (1965),<br>DDC 621116                                 |
| 2464      | Semiconductor Lasers   | R. H. Rediker                                | Phys. Today <u>18</u> , No. 2, 42 (1965),<br>DDC 613892                             |
| 2465      | A Simple Local-Sufficiency<br>Condition Based on the Second<br>Variation   | P. L. Falb                                   | IEEE Trans. Automat. Control<br><u>AC-10</u> , 348 (1965)                           |
| 2466<br>R | An Integral Expression for the<br>Log Likelihood Ratio of Two<br>Gaussian Processes                                    | T. S. Pitcher                                | J. SIAM Appl. Math. <u>14</u> , 228 (1966)  |
| 2467<br>R | Radar Observations of Venus<br>at 3.6 Centimeters  | D. Karp<br>W. E. Morrow, Jr.<br>W. B. Smith  | Icarus <u>3</u> , 473 (1964), DDC 613893  |
| 2469<br>R | Theoretical Limitations on the<br>Transmission of Data from<br>Analog Sources  | T. J. Goblick, Jr.                           | IEEE Trans. Inform. Theory<br><u>IT-11</u> , 558 (1965), DDC 633187                 |
| 2473      | Adsorption Theory from the<br>Viewpoint of Order-Disorder<br>Theory  | J. M. Honig                                  | Accepted Chap. 13, <u>The Solid Gas<br/>Interface</u> (Marcell-Dekker,<br>New York) |
| 2474<br>R | Optical Pyrometer Measurement<br>of RF Power   | T. B. Reed<br>J. T. Roddy                    | Rev. Sci. Instr. <u>36</u> , 620 (1965),<br>DDC 618453                              |
| 2475<br>R | Simple Construction for Deter-<br>mining the Phase Change of<br>Light Reflected at Normal<br>Incidence                 | G. B. Wright                                 | Appl. Optics <u>4</u> , 366 (1965),<br>DDC 614309                                   |
| 2477<br>R | Magnetoabsorption of the In-<br>direct Transition in Germanium   | J. Halpern<br>B. Lax                         | J. Phys. Chem. Solids <u>26</u> , 911<br>(1965), DDC 618459                         |
| 2479<br>R | Cause of the Mid-Latitude<br>Evening Increase in $f_oF_2$  | J. V. Evans                                  | J. Geophys. Res. <u>70</u> , 1175 (1965),<br>DDC 614310                             |
| 2480<br>R | Partial Pressures of Hg(g) and<br>Te <sub>2</sub> (g) in the Hg-Te System from<br>Optical Densities                    | R. F. Brebrick<br>A. J. Strauss              | J. Phys. Chem. Solids <u>26</u> , 989<br>(1965), DDC 621203                         |
| 2482<br>R | X-Band Modulation of GaAs<br>Lasers  | B. S. Goldstein<br>R. M. Weigand             | Proc. IEEE (Correspondence)<br><u>53</u> , 195 (1965)                               |

## Journal Articles

JA No.			
2483 R	Fourth Test of General Relativity	I. I. Shapiro	Phys. Rev. Letters <u>13</u> , 789 (1964), DDC 613894
2484 R	The Packaged and Mounted Diode as a Microwave Circuit	W. J. Getsinger	IEEE Trans. Microwave Theory Tech. <u>MTT-14</u> , 58 (1966)
2486 R	Band Structure and Magnetism of Gadolinium Metal	J. O. Dimmock A. J. Freeman §	Phys. Rev. Letters <u>13</u> , 750 (1964), DDC 613895
2487	Line Shape and Amplitude of Giant Quantum Oscillations in Ultrasonic Absorption	Y. Shapira § B. Lax	Phys. Rev. <u>138</u> , A1191 (1965)
2488 R	Ultrasonics	J. J. G. McCue	Science <u>147</u> , 309 (1965), DDC 613828
2492 R	Lorentz Microscopy of Small Ferromagnetic Particles	M. S. Cohen	J. Appl. Phys. <u>36</u> , 1602 (1965), DDC 616438
2493 R	On Surface-Wave Coupling Between Elements of Large Arrays	J. L. Allen	IEEE Trans. Antennas Propag. <u>AP-13</u> , 638 (1965), DDC 625016
2494 R	The Haystack Microwave Research Facility	H. G. Weiss	IEEE Spectrum <u>2</u> , No. 2, 50 (1965), DDC 614734
2495 R	Effect of Trivalent Manganese on the Crystal Symmetry on Some Lithium Spinels	D. B. Rogers R. W. Germann R. J. Arnott	J. Appl. Phys. <u>36</u> , 2338 (1965), DDC 622323
2496 R	An Intermediate Value Theorem for Sequential Analog to Digital Converters Without Sample-Hold	W. L. Black	Inform. and Control <u>8</u> , 451 (1965), DDC 623604
2498 R	High Efficiency Varactor Upper-Sideband Upconverter	H. J. Pratt W. J. Ince R. C. Sicotte	Proc. IEEE (Correspondence) <u>53</u> , 305 (1965), DDC 616132
2500 R	Linear Codes of Constant Weight	E. Weiss	J. Soc. Ind. Appl. Math. <u>14</u> , 106 (1966), DDC 633178
2501 R	Galvano-Thermomagnetic Phenomena and the Figure of Merit in Bismuth. II. Survey of Experimental Data and Calculation of Device Parameters	T. C. Harman J. M. Honig L. Jones §	Adv. Energy Conversion <u>5</u> , 183 (1965), DDC 628559
2503 R	Electron Density Decay in Wakes	W. M. Kornegay	AIAA J. <u>3</u> , 1819 (1965), DDC 626880
2504 R	Simulation of Radar Back-scattering in a Ripple Tank	A. J. Bogush, Jr.	Proc. IEEE <u>53</u> , 1093 (1965), DDC 624733
2505 R	Longitudinal Injection-Plasma Laser of InSb	I. Melngailis	Appl. Phys. Letters <u>6</u> , 59 (1965), DDC 613903
2506 R	Observation of Interband Transitions in Antimony	M. S. Dresselhaus J. G. Mavroides	Phys. Rev. Letters <u>14</u> , 259 (1965), DDC 614312

## Journal Articles

JA No.

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|------------|--|---|--|
| 2509       | Properties of Mercury Chalcogenides  | T. C. Harman                                    | Accepted Chap. 15, <u>Properties of II-VI Compounds</u> (North-Holland, Amsterdam) |
| 2510<br>R  | Measurement of Amplitude Noise in Optical Cavity Masers  | C. Freed<br>H. A. Haus §                        | Appl. Phys. Letters <u>6</u> , 85 (1965), DDC 614737                               |
| 2511<br>R  | Spin Density of s Electrons in Iron  | T. A. Kaplan                                    | Phys. Rev. Letters <u>14</u> , 499 (1965), DDC 618457                              |
| 2512<br>R  | Midlatitude Ionospheric Temperatures on Magnetically Quiet and Disturbed Days  | J. V. Evans                                     | J. Geophys. Res. <u>70</u> , 2726 (1965), DDC 621233                               |
| 2514       | A Per Letter Converse to the Channel Coding Theorem  | B. Reiffen                                      | Accepted IEEE Trans. Inform. Theory  |
| 2515<br>R  | Optically Pumped Semiconductor Laser   | R. J. Phelan, Jr.<br>R. H. Rediker              | Appl. Phys. Letters <u>6</u> , 70 (1965), DDC 613905                               |
| 2516<br>R  | Chemical Inhomogeneities and Square B-H Loops  | J. B. Goodenough                                | J. Appl. Phys. <u>36</u> , 2342 (1965), DDC 622927                                 |
| 2517<br>R  | Properties of the PbSe Diode Laser   | J. G. Butler<br>A. R. Calawa<br>R. H. Rediker   | IEEE J. Quant. Electron. <u>QE-1</u> , 4 (1965), DDC 621204                        |
| 2518       | Free Carrier Magneto-Optical Effects   | E. D. Palik §<br>G. B. Wright                   | Accepted <u>Physics of III-V Compounds</u> , Vol. 2 (Academic Press, New York)     |
| 2519<br>R  | Comparison of Vector and Auto-correlation Pitch Detectors  | L. I. Bluestein<br>C. M. Rader                  | J. Acoust. Soc. Am. <u>37</u> , 751 (1965), DDC 618451                             |
| 2520<br>R  | The Relation of the Electrical Conductivity in Single Crystals of Rhenium Trioxide to the Conductivities of Sr <sub>2</sub> MgReO <sub>6</sub> and Na <sub>x</sub> WO <sub>3</sub> | A. Ferretti<br>D. B. Rogers<br>J. B. Goodenough | J. Phys. Chem. Solids <u>26</u> , 2007 (1965), DDC 630364                          |
| 2521A<br>R | Radio-Echo Studies of Meteors at 68-Centimeter Wavelength  | J. V. Evans                                     | J. Geophys. Res. <u>70</u> , 5395 (1965), DDC 626897                               |
| 2522<br>R  | Transformation from a Linear Momentum to an Angular Momentum Basis for Relativistic Particles of Nonzero Mass and Any Spin   | H. E. Moses                                     | J. Math. Phys. <u>6</u> , 1244 (1965), DDC 624865                                  |
| 2523<br>R  | Field Effect on Magnetoresistance of n-Type Indium Antimonide  | S. Kawaji §<br>H. Huff §<br>H. C. Gatos         | Surface Sci. <u>3</u> , 234 (1965), DDC 621205                                     |
| 2524<br>R  | A Bandwidth-Insertion-Loss Tradeoff  | W. L. Black                                     | IEEE Trans. Circuit Theory <u>CT-12</u> , 615 (1965), DDC 633174                   |
| 2525       | Interband Magneto-Optical Effects  | B. Lax<br>J. G. Mavroides                       | Accepted <u>Physics of III-V Compounds</u> , Vol. 2 (Academic Press, New York)     |

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JA No.			
2527 R	On the Accuracy and Resolution of Radar Signals	F. C. Schweppe	IEEE Trans. Aerospace Electron. Syst. <u>AES-1</u> , 235 (1965), DDC 633179
2528 R	S-Band GaAs Gunn Effect Oscillators	T. M. Quist A. G. Foyt	Proc. IEEE (Correspondence) <u>53</u> , 303 (1965), DDC 622309
2529A R	GaAs-InSb n-n Heterojunction: A Single-Crystal "Schottky" Barrier	E. D. Hinkley R. H. Rediker D. K. Judus §	Appl. Phys. Letters <u>6</u> , 144 (1965), DDC 618597
2530 R	Preparation and Paramagnetism of the Rare Earth Trifluorides	S. Kern P. M. Raccach	J. Phys. Chem. Solids <u>26</u> , 1625 (1965), DDC 624722
2531 R	Greater Doubler Efficiency Using Varactor Diodes with Small Values of Gamma	A. I. Grayzel	Proc. IEEE (Correspondence) <u>53</u> , 505 (1965), DDC 620981
2532 R	Effects of Electron Irradiation on Metal-Oxide Semiconductor Transistors	A. G. Stanley	Proc. IEEE (Correspondence) <u>53</u> , 627 (1965), DDC 621206
2533 R	A Universal Micropower Logic Element	W. G. Schmidt	Proc. IEEE (Correspondence) <u>53</u> , 629 (1965), DDC 621207
2535 R	Higher Order Corrections to the Molecular Field Theory of the Magnetic State	G. F. Dresselhaus	Phys. Rev. <u>139</u> , A855 (1965), DDC 621113
2537 R	Propagation and Scattering in Plasmas	R. D. Kodis	Proc. IEEE <u>53</u> , 1016 (1965), DDC 623620
2542A R	Optically Pumped InAs Laser	I. Melngailis	IEEE J. Quant. Electron. <u>QE-1</u> , 104 (1965), DDC 621208
2544 R	Telling a Computer How to Evaluate Multidimensional Situations	D. B. Yntema L. Klem	IEEE Trans. Human Factors Electron. <u>HFE-6</u> , 3 (1965), DDC 628564
2545 R	Experiment in Solar Orientation of Spin Stabilized Satellite	M. C. Crocker E. A. Vrablik	AIAA J. <u>3</u> , 1350 (1965), DDC 620979
2546 R	Digital Differential Analyzers with Arbitrary Stored Interconnections	P. E. Wood, Jr.	IEEE Trans. Electron. Computers <u>EC-14</u> , 936 (1965), DDC 636362
2547 R	Scattering of Short Pulses of Electromagnetic Waves	J. Rheinstejn	Proc. IEEE <u>53</u> , 1069 (1965), DDC 624732
2548A R	Ionospheric Backscatter Observations at Millstone Hill	J. V. Evans	Planet. Space Sci. <u>13</u> , 1031 (1965), DDC 616607
2549 R	Correlation of Experimental and Theoretical Active Impedances of a Dipole in an Array	B. L. Diamond T. B. Lewis	IEEE Trans. Antennas Propag. <u>AP-13</u> , 806 (1965), DDC 627136

## Journal Articles

JA No.

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|------------|--|--|--|
| 2550<br>R  | Spin-Orbit Interaction in Graphite   | G. F. Dresselhaus<br>M. S. Dresselhaus         | Phys. Rev. <u>140</u> , A401 (1965),<br>DDC 625017                 |
| 2553<br>R  | A Comparison of Rocket, Satellite, and Radar Determinations of Electron Temperature at Midlatitudes      | J. V. Evans                                    | J. Geophys. Res. <u>70</u> , 4365 (1965),<br>DDC 623603            |
| 2554A<br>R | Irreducible Representations of the Rotation Group in Terms of Euler's Theorem                            | H. E. Moses                                    | Nuovo Cimento <u>40</u> , 1120 (1965),<br>DDC 636370               |
| 2555<br>R  | Reachability of Subspaces  | P. L. Falb                                     | IEEE Trans. Automat. Control <u>AC-10</u> , 472 (1965), DDC 632149 |
| 2556<br>R  | Long-Range Exchange Interactions from Spin-Wave Resonance  | R. Weber<br>P. E. Tannenwald                   | Phys. Rev. <u>140</u> , A498 (1965),<br>DDC 626883                 |
| 2557<br>R  | Statistical Properties of the Turbulent Wake Behind Hypervelocity Spheres                                | W. G. Clay<br>J. Herrmann<br>R. E. Slattery    | Phys. Fluids <u>8</u> , 1792 (1965),<br>DDC 633181                 |
| 2559<br>R  | Radar Signal Design Subject to Simultaneous Peak and Average Power Constraints                           | F. C. Schewpe<br>D. Gray                       | IEEE Trans. Inform. Theory <u>IT-12</u> , 13 (1966), DDC 635331    |
| 2560<br>R  | Some Results on the Stochastic Signal Parameter Estimation Problem                                       | E. M. Hofsterrer                               | IEEE Trans. Inform. Theory <u>IT-11</u> , 422 (1965), DDC 624866   |
| 2562<br>R  | Magnetic Measurements with Lorentz Microscopy  | M. S. Cohen                                    | IEEE Trans. Magnetics <u>MAG-1</u> , 156 (1965), DDC 623611        |
| 2564       | Phased Arrays - There Is a Future  | J. L. Allen                                    | Microwave J. <u>8</u> , No. 6, 108 (1965)                          |
| 2565<br>R  | A Spectral Radiometer for Reentry Measurements   | R. V. Meyer                                    | Appl. Optics <u>5</u> , 159 (1966),<br>DDC 630366                  |
| 2566<br>R  | Techniques for Speech Bandwidth Compression, Using Combinations of Channel Vocoders and Formant Vocoders | B. Gold  | J. Acoust. Soc. Am. <u>38</u> , 2 (1965),<br>DDC 622321            |
| 2567<br>R  | Electron Beam Pumped Lasers of PbS, PbSe, and PbTe   | C. E. Hurwitz<br>A. R. Calawa<br>R. H. Rediker | IEEE J. Quant. Electron. <u>QE-1</u> , 102 (1965), DDC 622308      |
| 2568       | More on Wet Radomes  | J. Ruze  | IEEE Trans. Antennas Propag. <u>AP-13</u> , 823 (1965)             |
| 2569<br>R  | Cause of the Midlatitude Winter Night Increase in $f_oF_2$   | J. V. Evans                                    | J. Geophys. Res. <u>70</u> , 4331 (1965),<br>DDC 623606            |
| 2570<br>R  | Space-Time Symmetry of Transport Coefficients  | W. H. Kleincor                                 | Phys. Res. <u>142</u> , 318 (1966),<br>DDC 635328                  |

JA No.			
2572 R	Magnetostriction Effects in Remanence Phase Shifters	E. Stern D. H. Temme	IEEE Trans. Microwave Theory Tech. <u>MTT-13</u> , 873 (1965), DDC 631166
2573 R	Radio Echo Observations of Venus and Mercury at 23 cm Wavelength	J. V. Evans R. A. Brockelman J. C. Henry G. M. Hyde L. G. Kraft W. A. Reid W. W. Smith	Astron. J. <u>70</u> , 486 (1965), DDC 624731
2576	Random Sampling of Random Processes: Impulse Processes	O. A. Z. Leneman	Accepted Inform. and Control
2577 R	Random Sampling of Random Processes: Optimum Linear Interpolation	O. A. Z. Leneman	J. Franklin Inst. <u>281</u> , 302 (1966)
2579 R	Impurity and Exciton Effects on the Infrared Absorption Edges of III-V Compounds	E. J. Johnson H. Y. Fan §	Phys. Rev. <u>139</u> , A1991 (1965), DDC 623668
2580 R	Particle Sizes of Clay Minerals by Small-Angle X-Ray Scattering	R. J. Arnott	Am. Mineralogist <u>50</u> , 1563 (1965), DDC 630376
2582	Radar Astronomy	G. H. Pettengill I. I. Shapiro	Ann. Rev. Astron. Astrophys. <u>3</u> , 377 (1965)
2583	Structural Analysis of the Haystack Antenna	W. R. Fanning	J. Struct. Div. ASCE <u>92</u> , No. ST 1, 431 (1966), DDC 633180
2584	Progress in Semiconductor Lasers	B. Lax	IEEE Spectrum <u>2</u> , No. 7, 62 (1965).
2587	A Multidimensional Sampling Theorem	R. T. Prosser	Accepted J. Math. and Mech.
2588 R	Quenching of Dy <sup>+2</sup> Fluorescence by Y <sup>+2</sup> in CaF <sub>2</sub> :Dy <sup>+2</sup> Lasers	J. R. O'Connor	Appl. Phys. Letters <u>7</u> , 54 (1965), DDC 623612
2589	Effect of Y <sup>+3</sup> on the Reduction of Sm <sup>+3</sup> in CaF <sub>2</sub>	J. R. O'Connor R. M. Hilton §	Appl. Phys. Letters <u>7</u> , 53 (1965)
2590 R	Simple Apparatus for Applying Uniaxial Pressure at Very Low Temperatures	J. H. R. Ward	Rev. Sci. Instr. <u>36</u> , 1376 (1965), DDC 625020
2591 R	Properties of InAs Lasers	I. Melngailis	J. Appl. Phys. <u>37</u> , 899 (1966)
2592	Random Sampling of Random Processes: Stationary Occurrence Processes	F. J. Beutler § O. A. Z. Leneman	Accepted Inform. and Control

## Journal Articles

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- |            |   |   |   |
|------------|---|---|---|
| 2593<br>R  | Relationship of Geometric Optics and Autocorrelation Approaches to the Analysis of Lunar and Planetary Radar  | T. Hagfors  | J. Geophys. Res. <u>71</u> , 379 (1966), DDC 633184             |
| 2594<br>R  | Reduction of the Electromagnetic Vector Potential to the Irreducible Representations of the Inhomogeneous Lorentz Group and Manifestly Covariant Quantization with a Positive-Definite Metric for the Hilbert Space | H. E. Moses   | Nuovo Cimento <u>42</u> , 757 (1966)                            |
| 2596<br>R  | The Lorentz Force   | M. S. Cohen<br>K. J. Harte<br>J. R. Szablya §         | Proc. IEEE (Correspondence) <u>53</u> , 1145 (1965), DDC 624723 |
| 2597<br>R  | The Bohr-Sommerfeld Quantization Rule and the Weyl Correspondence   | P. N. Argyres   | Physics <u>2</u> , 131 (1965), DDC 626877                       |
| 2599<br>R  | High Field Magnetoabsorption of the Indirect Transition Exciton in Germanium at 1.7°K   | J. Halpern<br>B. Lax                                  | J. Phys. Chem. Solids <u>27</u> , 114 (1966), DDC 630372        |
| 2600       | Partial Pressure of Se <sub>2</sub> and Optical Density of Selenium Vapor in the Visible and Ultraviolet  | R. F. Brebrick  | J. Chem. Phys. <u>43</u> , 3031 (1965), DDC 626893              |
| 2601<br>R  | Differential Input-Controlled Gated Oscillator  | Y. Cho  | Proc. IEEE (Correspondence) <u>53</u> , 1641 (1965), DDC 626878 |
| 2604<br>R  | PbS Diode Laser   | J. F. Butler<br>A. R. Calawa                          | J. Electrochem. Soc. <u>112</u> , 1056 (1965), DDC 623624       |
| 2605<br>R  | Electrical Properties of Metal Oxides Characterized by "Hopping" Charge Carriers  | J. M. Honig   | J. Chem. Educ. <u>43</u> , 76 (1966)                            |
| 2606<br>R  | Atomic Spectra and Radiation Processes – A Report on the Oxford Conference  | L. C. Bradley<br>H. M. Foley §                        | Phys. Today <u>18</u> , No. 8, 40 (1965)                        |
| 2608       | Determinable Classes of Channels  | R. T. Prosser<br>W. L. Root §                         | Accepted J. Math. and Mech.                                     |
| 2609       | deHass-vanAlpen Effect in Pyrolytic and Single-Crystal Graphite   | S. J. Williamson §<br>S. Foner §<br>M. S. Dresselhaus | Phys. Rev. <u>140</u> , A1429 (1965)                            |
| 2610<br>R  | Pressures of Hg and Selenium over HgSe (C) from Optical Density Measurements  | R. F. Brebrick  | J. Chem. Phys. <u>43</u> , 3846 (1965), DDC 632151              |
| 2613A<br>R | Automatic Potentiometric EDTA and Redox Titrations for Determinations of Stoichiometry  | M. C. Gardels<br>J. C. Cornwell                       | Anal. Chem. <u>38</u> , 774 (1966)                              |

JA No.			
2614 R	Experimental Observation of the Creeping-Wave Phenomenon in Backscatter Using a Short-Pulse Radar System	D. E. Foreman § D. F. Sedivec	Proc. IEEE <u>53</u> , 1102 (1965), DDC 612537
2615	Preface to the Radar Reflectivity Issue	P. C. Fritsch	Proc. IEEE <u>53</u> , 770 (1965)
2616 R	Scattering of Electromagnetic Waves from Conducting Spheres with Thin Lossy Coatings	J. Rheinstejn	IEEE Trans. Antennas Propag. <u>AP-13</u> , 983 (1965), DDC 632148
2617 R	A Note on the Theory of Scattering from an Irregular Surface	R. D. Kodis	IEEE Trans. Antennas Propag. <u>AP-14</u> , 77 (1966), DDC 635329
2620	A Volumetric Determination of Arsenic and Antimony in Mixed Manganese Arsenide, Antimonide and Phosphide Compounds	E. R. Whipple § D. H. Ridgely	Accepted Anal. Chim. Acta
2621	Superconductivity in the Transition Metal Carbides: Mo <sub>4.8</sub> Si <sub>3</sub> C <sub>0.6</sub> , Mo <sub>0.95</sub> Hf <sub>0.05</sub> C <sub>0.75</sub> and Mo <sub>2</sub> C	V. Sadagopan § H. C. Gatos	J. Phys. Chem. Solids <u>27</u> , 235 (1966)
2622	Towards a Theory of the Anomalous Thermoelectric Effect in Magnetically Dilute Alloys	L. L. Van Zandt A. W. Overhauser §	Phys. Rev. <u>141</u> , 583 (1966)
2625 R	Cyclotron Resonance of Piezoelectric Polarons	D. M. Larsen	Phys. Rev. <u>142</u> , 428 (1966), DDC 635332
2626 R	Photocurrent Spectrum and Photoelectron Counts Produced by a Gaseous Laser	C. Freed H. A. Haus §	Phys. Rev. <u>141</u> , 287 (1966), DDC 633186
2627 R	Tenuous Surface Layer on the Moon: Evidence Derived from Radar Observations	T. Hagfors R. A. Brockelman H. H. Danforth L. B. Hanson G. M. Hyde	Science <u>150</u> , 1153 (1965), DDC 628565
2628	On Mean-Square Reconstruction Error	O. A. Z. Leneman J. B. Lewis	IEEE Trans. Automat. Control <u>AC-11</u> , 324 (1966)
2629 R	Physics of Quantum Electronics - A Conference Report	P. E. Tannenwald P. L. Kelley B. Lax	Phys. Today <u>18</u> , No. 9, 58 (1965), DDC 627135
2631 R	The Lincoln Calibration Sphere	R. T. Prosser	Proc. IEEE (Correspondence) <u>53</u> , 1672 (1965), DDC 457238
2632	Step-Wise Interpolation for Various Sampling Schemes	O. A. Z. Leneman J. B. Lewis	Accepted J. Franklin Inst.
2633 R	A Note Concerning the Temperature Profile within a Thermomagnetic Energy Converter	T. C. Harman J. M. Honig	Adv. Energy Conversion <u>6</u> , 127 (1966)



## Journal Articles

JA No.

- |           |   |  |  |
|-----------|---|--|--|
| 2635<br>R | Cross-Coupling in High Speed Digital Systems  | J. B. Connolly   | IEEE Trans. Electron. Computers <u>EC-15</u> , 323 (1966)                                    |
| 2636<br>R | Pressure-Tuned PbSe Diode Laser   | J. M. Besson §<br>J. F. Butler<br>A. R. Calawa<br>W. Paul §<br>R. H. Rediker | Appl. Phys. Letters <u>7</u> , 206 (1965), DDC 628560  |
| 2637      | Non-Stoichiometry in Binary Semiconductor Compounds, $M_{\frac{1}{2}-\delta}N_{\frac{1}{2}+\delta}(c)$                            | R. F. Brebrick   | Accepted <u>Progress in Chemistry of the Solid State</u> , Vol. 3 (Pergamon Press, New York) |
| 2638      | Absolute Instabilities with Drifted Helieons  | A. Bers §<br>A. L. McWhorter   | Phys. Rev. Letters <u>15</u> , 755 (1965)  |
| 2640      | Discussion of "Theory of Non-equilibrium Thermodynamics with Application to the Transport Processes in a Solid" by M. R. El-Saden | J. M. Honig  | Trans. ASME, J. Heat Transfer, Series C, <u>62</u> (1966)                                    |
| 2641      | Magnetic and Electric Properties of $ReO_2$ : Theoretical   | J. B. Goodenough<br>P. Gibart §<br>J. Brenet §                               | Compt. rend. <u>261</u> , 2331 (1965)  |
| 2642<br>R | Solution Regrowth of Planar InSb Laser Structures   | I. McIngailis<br>A. R. Calawa  | J. Electrochem. Soc. <u>113</u> , 58 (1966), DDC 630373                                      |
| 2643<br>R | Large Aperture Seismic Array Signal Handling System   | R. V. Wood<br>R. G. Enticknap<br>C. S. Lin<br>R. M. Martinson                | Proc. IEEE <u>53</u> , 1844 (1965)   |
| 2644<br>R | The Gunn Effect in Polar Semiconductors   | A. G. Foyt<br>A. L. McWhorter  | IEEE Trans. Electron Devices <u>ED-13</u> , 79 (1966), DDC 636369                            |
| 2647<br>R | Maximizing the Longitudinal Magneto-Optical Transmission-Scattering from Multilayer Magnetic and Dielectric Films                 | D. O. Smith  | Optica Acta <u>13</u> , 121 (1966)   |
| 2648<br>R | Upper Limit on 2- and 3.75 Centimeter Radiation from Blue Stellar Objects   | I. I. Shapiro<br>S. Weinreb  | Astrophys. J. <u>143</u> , 598 (1966), DDC 635326  |
| 2649<br>R | Data Recording and Processing for the Experimental Large Aperture Seismic Array   | H. W. Briscoe<br>P. L. Fleck   | Proc. IEEE <u>53</u> , 1852 (1965)   |
| 2650<br>R | Optimum Rate Allocation for Encoding Sets of Analog Messages  | L. M. Goodman  | Proc. IEEE (Correspondence) <u>53</u> , 1776 (1965)  |
| 2651<br>R | Principles of an Experimental Large Aperture Seismic Array (LASA)   | P. E. Green, Jr.<br>R. A. Frosch §<br>C. F. Romney §                         | Proc. IEEE <u>53</u> , 1821 (1965)   |
| 2653<br>R | Resistance Heated Crystal Puller for Operation at 2000°C  | T. B. Reed<br>R. E. Fahey  | Rev. Sci. Instr. <u>37</u> , 59 (1966)   |

## Journal Articles

JA No.			
2655 R	Irreducible Representations of the Rotation Group in Terms of the Axis and Angle of Rotation	H. E. Moses	Ann. Phys. <u>37</u> , 224 (1966)
2656 R	Testing General Relativity with Radar	I. I. Shapiro	Phys. Rev. <u>141</u> , 1219 (1966)
2658	Optical Scattering from Cubic Electro-Optical Films	D. O. Smith	Accepted Optica Acta
2661	Observation of Interband Transitions	E. D. Haidemcnakis § J. G. Mavroides M. S. Dresselhaus D. F. Kolesar	Solid State Commun. <u>4</u> , 65 (1966)
2662 R	Content-Addressed Memory Using Magneto- or Electro-Optical Interrogation	D. O. Smith K. J. Harte	IEEE Trans. Electron. Computers <u>EC-15</u> , 123 (1966)
2663 R	Solar Rotation and Planetary Orbits	I. I. Shapiro	Icarus <u>4</u> , 549 (1965), DDC 631166
2664 R	Semiconductor Laser Communications Through Multiple-Scatter Paths	E. J. Chatterton	Proc. IEEE <u>53</u> , 2114 (1965), DDC 631168
2665 R	Observations of Polarized OH Emission	S. Weinreb M. L. Meeks J. C. Carter A. H. Barrett § A. E. E. Rogers §	Nature <u>208</u> , 440 (1965)
2666 R	The Performance of Sequential Decoding in Conjunction with Efficient Modulation	K. L. Jordan, Jr.	IEEE Trans. Commun. Tech. <u>COM-14</u> , 283 (1966)
2667 R	Four-Probe Device for Accurate Measurement of the Temperature Dependence of Electrical Resistivity on Small, Irregularly Shaped Single Crystals	R. W. Germann D. B. Rogers	Rev. Sci. Instr. <u>37</u> , 273 (1966), DDC 636363
2668 R	Polaron Energy Spectrum	D. M. Larsen	Phys. Rev. <u>144</u> , 697 (1966)
2670 R	Remarks on "An Explanation of the High Cation Vacancy Concentration and $\beta$ -Type Conductivity in Semiconductors Containing a Multivalent Metal in Its Lowest Valence State"	R. F. Brebrick	J. Phys. Chem. Solids <u>27</u> , 617 (1966), DDC 636220
2672 R	Pseudobinary InSb-InTe System	A. J. Strauss M. D. Banus M. C. Finn	J. Electrochem. Soc. <u>113</u> , 458 (1966)
2673	Computation of the Performance of the Abrupt Junction Varactor Doubler	A. I. Grayzel	Accepted IEEE Trans. Microwave Theory Tech.

## Journal Articles

JA No.

2674 R	A Formal Semantics for Computer Languages and Its Application in a Compiler-Compiler	J. A. Feldman	Commun. ACS <u>9</u> , 3 (1966), DDC 633177
2676 R	The Special Issue on Ultrasonics	J. J. G. McCue R. W. Damon §	Proc. IEEE <u>53</u> , 1286 (1965)
2677 R	Radar Astronomy at Millimeter and Submillimeter Wavelengths	J. W. Meyer	Proc. IEEE <u>54</u> , 484 (1966)
2678 R	Antenna Tolerance Theory – A Review	J. W. Meyer	Proc. IEEE <u>54</u> , 633 (1966)
2680 R	On "Error Bounds for Jittered Sampling"	O. A. Z. Leneman	IEEE Trans. Automat. Control <u>AC-11</u> , 150 (1966)
2683 R	Effect of Electron Irradiation on N-Channel MOS Transistors	A. G. Stanley	Proc. IEEE (Correspondence) <u>53</u> , 2140 (1965)
2684 R	Self-Focusing of Optical Beams	P. L. Kelley	Phys. Rev. Letters <u>15</u> , 1005 (1965), DDC 628563
2685	On Nonlinear Binary Sequential Circuits and Their Inverses	B. Reiffen H. Yudkin	Accepted IEEE Trans. Electron. Computers
2688	A Note on Overdriven Abrupt Junction Varactor Doublers and Frequency Converters	A. I. Grayzel	Proc. IEEE (Correspondence) <u>53</u> , 2140 (1965)
2692	Antenna Cost, Efficiency and System Noise	J. Ruze	IEEE Trans. Antennas Propag. <u>AP-14</u> , 249 (1966)
2693 R	A Note on the Abrupt Junction Large Signal Upconverter	A. I. Grayzel	Proc. IEEE (Correspondence) <u>54</u> , 78 (1966), DDC 634856
2694 R	On Some New Results in Shot-Noise	O. A. Z. Leneman	Proc. IEEE (Correspondence) <u>53</u> , 2130 (1965)
2697 R	Bulk GaAs Microwave Amplifiers	A. G. Foyt T. M. Quist	Rev. Sci. Instr. <u>37</u> , 273 (1966), DDC 634858
2698 R	Structure of Equations Specifying Operating Characteristics of Energy Converters Constructed of Anisotropic Materials	J. M. Honig T. C. Harman	Adv. Energy Conversion <u>6</u> , 149 (1966)
2699 R	Radio Structure of the Galactic Center Region	D. Downes § A. Maxwell § M. L. Meeks	Nature <u>208</u> , 1189 (1965), DDC 635327
2701 R	Radar Echo Variations of a Large Rough Sphere	M. L. Burrows	IEEE Trans. Antennas Propag. <u>AP-14</u> , 455 (1966)
2702	Some Results in Random Pulse Trains	O. A. Z. Leneman	IEEE Trans. Automat. Control <u>AC-11</u> , 331 (1966)

JA No.			
2708 R	Photoelectron Statistics Produced by a Laser Operating Below the Threshold of Oscillation	C. Freed H. A. Haus §	Phys. Rev. Letters <u>15</u> , 943 (1965)
2710 R	Ross-Schiff Analysis of a Proposed Test of General Relativity: A Critique	I. I. Shapiro	Phys. Rev. <u>145</u> , 1005 (1966)
2713	Three Signaling Systems for Double Access to an Active Satellite	F. Jelinek §	IEEE Trans. Commun. Tech. <u>COM-14</u> , 140 (1966)
2716 R	Approximation by Realizable Transfer Functions	J. W. Craig L. M. Goodman	Proc. IEEE (Correspondence) <u>54</u> , 63 (1966), DDC 635333
2717 R	Some Remarks on "Spectrums of Modulated Pulse Trains"	O. A. Z. Leneman	Proc. IEEE (Correspondence) <u>54</u> , 793 (1966)
2718 R	A New Vocoder Conferencing Scheme	C. M. Rader W. R. Crowther	Proc. IEEE (Correspondence) <u>54</u> , 95 (1966), DDC 635336
2719	Partial Pressures of $\text{Te}_2(\text{g})$ in Equilibrium with $\text{Ge}_{\frac{1}{2}-\delta}\text{Te}_{\frac{1}{2}+\delta}(\text{c})$ from Optical Density Data	R. F. Brebrick	Accepted J. Phys. Chem. Solids
2720 R	Optimum Sampling and Quantizing Rates	L. M. Goodman	Proc. IEEE (Correspondence) <u>54</u> , 90 (1966)
2721	Note on the Effect of Shadowing on the Backscattering of Waves from a Random Rough Surface	R. A. Brockelman T. Hagfors	Accepted IEEE Trans. Antennas Propag.
2722	Comment on a "Closed Form Expression for the Mie Series for Large, Low-Density Dielectric Spheres"	J. Rheinstein M. Rockowitz	Proc. IEEE (Correspondence) <u>54</u> , 436 (1966), DDC 633175
2723	Single Crystal Growth and Electrical Transport Properties of Intermediates in the Spinel System $\text{Co}_{1+\delta}\text{V}_2-\delta\text{O}_4$	D. B. Rogers A. Ferretti	Accepted J. Phys. Chem. Solids
2726	Random Sampling of Random Processes: Mean-Square Comparison of Various Interpolators	J. B. Lewis O. A. Z. Leneman	Accepted IEEE Trans. Automat. Control
2727	Photoelectron Statistics Produced by a Laser Operating Below and Above the Threshold of Oscillation	C. Freed H. A. Haus §	Accepted J. Quant. Electron.
2729 R	Pole-Shared Linear-Phase Band-Pass Filter Bank	P. R. Drouilhet, Jr. L. M. Goodman	Proc. IEEE (Correspondence) <u>54</u> , 701 (1966)
2731 R	Comparative Data on CdS Transducers from 14 Me/s to 70 Ge/s	R. Weber	Proc. IEEE (Correspondence) <u>54</u> , 333 (1966)
2732 R	Large Cross-Linked Polystyrene Slab Suffers Thermal Fatigue	E. B. Murphy	SPE J. <u>22</u> , No. 4, 53 (1966)

## Journal Articles

JA No.

- |           |  |  |  |
|-----------|--|--|--|
| 2735<br>R | Fermi Surface, Magnetic Ordering, and Electrical Properties of Rare-Earth Metals           | A. J. Freeman §<br>J. O. Dimmock<br>R. E. Watson § | Phys. Rev. Letters <u>16</u> , 94 (1966)<br>DDC 633176   |
| 2736      | The Augmented Plane Wave Method and the Electronic Properties of Rare-Earth Metals         | A. J. Freeman §<br>J. O. Dimmock<br>R. E. Watson § | Accepted <u>Theory of Atoms, Molecules and Solids</u> (Academic Press, New York)                                   |
| 2739      | Oscillatory Faraday Rotation of the Indirect Transition in Germanium at 1.7°K              | J. Halpern   | Accepted J. Phys. Chem. Solids   |
| 2740      | Millimeter Wave Phonon Generation, Propagation and Attenuation                             | J. B. Thaxter<br>P. E. Tannenwald                  | Accepted IEEE Trans. Sonics and Ultrasonics  |
| 2741      | A Note on Reconstruction for Randomly Sampled Data   | J. B. Lewis<br>O. A. Z. Leneman                    | Accepted IEEE Trans. Automat. Control  |
| 2743<br>R | Evidence for Impurity States Associated with High Energy Conduction Band Extrema in n-CdTe | A. G. Foyt<br>R. E. Halsted §<br>W. Paul §         | Phys. Rev. Letters <u>16</u> , 55 (1966),<br>DDC 635337  |
| 2747      | Space-Time Symmetry Restrictions on Transport Coefficients. II. Two Theories Compared      | W. H. Kleincr                                      | Accepted Phys. Rev.  |
| 2748<br>R | The Effect of Mercury Contamination of the Work Function of Gold                           | E. E. Huber, Jr.                                   | Appl. Phys. Letters <u>8</u> , 169 (1966)  |
| 2749      | Absorption Near the Fundamental Edge   | E. J. Johnson                                      | Accepted <u>Physics of III-V Compounds</u> , Vol. 3, R. K. Willardson and A. C. Beer, Eds. (Academic Press, N. Y.) |
| 2751<br>R | Trial Spacing in Instrumental Running  | J. L. Fozard                                       | Psychol. Reports <u>18</u> , 623 (1966)  |
| 2753      | Resonance Scattering of Lyman- $\alpha$ Radiation by Hydrogen Atoms in the Ground State    | H. E. Moses  | Accepted Phys. Rev. Letters  |
| 2754<br>R | Large Radar Shield Fabricated at Ground Level  | P. Stetson   | Civil Eng. (ASCE) <u>42</u> (June 1966)  |
| 2755<br>R | Asymptotically Optimum Pre-Emphasis and De-Emphasis Networks for Sampling and Quantizing   | L. M. Goodman<br>P. R. Drouilhet, Jr.              | Proc. IEEE (Correspondence) <u>54</u> , 795 (1966)   |
| 2757<br>R | Electron-Beam Pumped Lasers of CdSe and CdS  | C. E. Hurwitz                                      | Appl. Phys. Letters <u>8</u> , 121 (1966)  |
| 2760<br>R | Polaron Induced Anomalies in the Interband Magnetoabsorption of InSb                       | E. J. Johnson<br>D. M. Larsen                      | Phys. Rev. Letters <u>16</u> , 655 (1966)  |

## Journal Articles

JA No.

- |           |  |  |  |
|-----------|--|--|--|
| 2761<br>R | Effects of Electron Irradiation of Metal-Nitride-Semiconductor Insulated Gate Field-Effect Transistors | A. G. Stanley<br>H. A. R. Wegener §                    | Proc. IEEE (Correspondence) <u>54</u> , 784 (1966) |
| 2762<br>R | An Electron-Bombardment Technique for the Deposition of CdS Film Transducers                           | R. Weber   | Rev. Sci. Instr. <u>37</u> , 955 (1966)            |
| 2766<br>R | Spontaneous and Coherent Photoluminescence in $Cd_xHg_{1-x}Te$   | I. Melngailis<br>A. J. Strauss                         | Appl. Phys. Letters <u>8</u> , 179 (1966)          |
| 2768      | Anomaly in the X-Ray Scattering of ZnSe  | P. M. Raccach<br>R. J. Arnott<br>A. Wold               | Accepted Phys. Rev. Letters                        |
| 2771<br>R | Quantum Oscillations in the Ultrasonic Attenuation and Magnetic Susceptibility of InBi                 | Y. Shapira §<br>S. J. Williamson §<br>S. Fischler      | Phys. Rev. <u>144</u> , 715 (1966)                 |
| 2775<br>R | The Cutoff Frequency of a Varactor Diode with Variable Series Resistance                               | A. I. Grayzel  | Proc. IEEE (Correspondence) <u>54</u> , 875 (1966) |
| 2776      | Efficient Visible Lasers of $CdS_xSe_{1-x}$ by Electron-Beam Excitation                                | C. E. Hurwitz  | Appl. Phys. Letters <u>8</u> , 243 (1966)          |
| 2782<br>R | Recursive, Complex Fourier Analysis for Real-Time Applications   | J. H. Halberstein                                      | Proc. IEEE (Correspondence) <u>54</u> , 903 (1966) |
| 2783      | Operating Characteristics from Yes-No and Forced-Choice Procedures                                     | A. I. Schulman<br>R. R. Mitchell                       | Accepted J. Acoust. Soc. Am.                       |
| 2794<br>R | High Temperature Expansions - The Classical Approach   | H. E. Stanley<br>T. E. Kaplan                          | Phys. Rev. Letters <u>16</u> , 981 (1966)          |
| 2802<br>R | Observation of the Interaction of Plasmons with Longitudinal Optical Phonons in GaAs                   | A. Mooradian<br>G. B. Wright                           | Phys. Rev. Letters <u>16</u> , 999 (1966)          |
| 2806<br>R | Laser Properties of a Vapor-Grown Ruby   | J. R. O'Connor<br>P. S. Schaffer §<br>R. A. Bradbury § | Appl. Phys. Letters <u>8</u> , 336 (1966)          |
| 2816<br>R | Band Structure and Laser Action in $Pb_xSn_{1-x}Te$  | J. O. Dimmock<br>I. Melngailis<br>A. J. Strauss        | Phys. Rev. Letters <u>16</u> , 1193 (1966)         |
| 2822<br>R | Electroreflectance in Metals   | J. Feinleib  | Phys. Rev. Letters <u>16</u> , 1200 (1966)         |
| 2824      | Incoherent Source Optical Pumping of Visible and Infrared Semiconductor Lasers                         | R. J. Phelan   | Accepted Proc. IEEE                                |

## MEETING SPEECHES\*

JA No.			
78	The M.I.T. Magnetic-Core Memory	W. N. Papian	Proc. Eastern Joint Computer Conf., Washington, Dec. 1953
317	Theory of Ferrites in Rectangular Waveguides	K. J. Button B. Lax	Proc. Symp. on Electromagnetic Wave Theory, Ypsilanti, June 1955
434 R	Communication through Noisy, Random-Multipath Channels	G. L. Turin	IRE Natl. Conv. Record (1956)
475 R	Conference Keynote Speech	N. H. Taylor	Proc. Western Joint Computer Conf., San Francisco, Feb. 1956
542	Theory of Magneto-Band Effect and Cyclotron Resonance at Infrared Frequencies	B. Lax K. J. Button	Bull. Am. Phys. Soc. Ser. II, <u>1</u> , 299 (1956)
543	A Pulsed Magnetic Field System for Cyclotron Resonance and Magneto-Band Effects at Infrared Frequencies	S. Foner H. H. Kolm	Bull. Am. Phys. Soc. Ser. II, <u>1</u> , 298 (1956)
544	High-Speed, Sensitive Infrared Detector for Magneto-Band Effect and Cyclotron Resonance Measurements	R. J. Keyes S. Zwerdling	Bull. Am. Phys. Soc. Ser. II, <u>1</u> , 299 (1956)
545	Experiments on Magneto-Band Effect and Cyclotron Resonance at Infrared Frequencies	S. Zwerdling R. J. Keyes S. Foner H. H. Kolm H. Lipson D. Warschauer B. Lax W. Paul	Bull. Am. Phys. Soc. Ser. II, <u>1</u> , 299 (1956)
569	Long Time Work Function Changes Induced by Light and Electrostatic Fields	G. W. Pratt, Jr. H. H. Kolm	Proc. Conf. on Physics of Semiconductor Surfaces, Univ. of Pennsylvania, June 1956
570 R	1/f Noise and Germanium Surface Properties	A. L. McWhorter	Proc. Conf. on Physics of Semiconductor Surfaces, Univ. of Pennsylvania, June 1956
575	The Interaction of Oxygen with Clean Germanium Surfaces	P. H. Robinson M. Green J. A. Kafalas	Proc. Conf. on Physics of Semiconductor Surfaces, Univ. of Pennsylvania, June 1956

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\* Only Meeting Speeches published or accepted for publication are included.

## Meeting Speeches

JA No.

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|----------|--|--|--|
| 602      | Contributions to the Proceedings of the Conference on the Physics of Semiconductor Surfaces    | R. H. Kingston<br>W. H. Kleiner<br>G. W. Pratt, Jr.<br>H. H. Kolm<br>S. H. Autler<br>A. L. McWhorter | Proc. Conf. on Physics of Semiconductor Surfaces, Univ. of Pennsylvania, June 1956 |
| 611      | The Production and Use of High Intensity Pulsed Magnetic Fields                                | S. Foner<br>H. H. Kolm   | Proc. Conf. on Magnetism and Magnetic Materials, Boston, Oct. 1956                 |
| 636<br>R | Advances in Solid-State Electronics - Magnetics  | P. E. Tannenwald   | Proc. Natl. Electronics Conf., Chicago, Oct. 1956                                  |
| 659<br>R | TX-0, A Transistor Computer with a 256 by 256 Memory   | J. L. Mitchell<br>K. H. Olsen  | Proc. Eastern Joint Computer Conf., New York, Dec. 1956                            |
| 838<br>R | Magnetic Properties of Dilute Magnetic Alloys and of the Rare Earth Metals                     | G. W. Pratt, Jr.   | J. Appl. Phys. <u>29</u> , 520 (1958)  |
| 850<br>R | Detection of Dislocation Tilts and Strains by X-Rays   | L. Kaufman<br>S. A. Kulin  | Proc. AIME, Chicago, Nov. 1957   |
| 856<br>R | Constraint Principle in Ferromagnetic Domain Theory  | L. Gold  | J. Appl. Phys. <u>29</u> , 544 (1958)  |
| 857<br>R | Magnetization Processes in Heat-Treated Single Crystal Cobalt Ferrite                          | S. Foner<br>J. O. Artman   | J. Appl. Phys. <u>29</u> , 443 (1958)  |
| 860      | Digital-Analog Function Generators   | R. W. Hofheimer<br>K. E. Perry   | Proc. IRE Instrumentation Conf., Atlanta, Nov. 1957                                |
| 861<br>R | Ferromagnetic Resonance in Ultra-Thin Films  | M. H. Seavey, Jr.<br>P. E. Tannenwald  | J. Appl. Phys. <u>29</u> , 292 (1958)  |
| 863<br>R | Recent Advances in the Design of High Field DC Solenoid Magnets                                | H. H. Kolm   | J. Appl. Phys. <u>29</u> , 489 (1958)  |
| 865<br>R | Steady-State and Pulse Measurement Techniques for Thin Magnetic Films in the VHF-UHF Range     | D. O. Smith<br>G. P. Weiss   | J. Appl. Phys. <u>29</u> , 290 (1958)  |
| 866      | Suggestion Concerning the Role of Wave-Function Symmetry in Transition Metals and Their Alloys | J. B. Goodenough   | J. Appl. Phys. <u>29</u> , 513 (1958)  |
| 867      | Some Ferrimagnetic Properties of the System $\text{Li}_x\text{Ni}_{1-x}\text{O}$               | J. B. Goodenough<br>D. G. Wickham<br>W. J. Croft   | J. Appl. Phys. <u>29</u> , 382 (1958)  |
| 868      | Static and Dynamic Behavior of Thin Permalloy Films  | D. O. Smith  | J. Appl. Phys. <u>29</u> , 264 (1958)  |



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869	Some Magnetic and Crystallographic Properties of the System $\text{LaMn}_{1-x}\text{Ni}_x\text{O}_{3+\lambda}$	A. Wold R. J. Arnott J. B. Goodenough	J. Appl. Phys. <u>29</u> , 387 (1958)
870 R	Domain-Wall Structure in Permalloy Films	E. E. Huber, Jr. D. O. Smith J. B. Goodenough	J. Appl. Phys. <u>29</u> , 294 (1958)
871 R	Further Development of the Vibrating-Coil Magnetometer	K. Dwight N. Menyuk D. O. Smith	J. Appl. Phys. <u>29</u> , 491 (1958)
878	SAGE — A Data Processing System for Air Defense	R. R. Everett C. A. Zraket H. D. Benington §	Proc. Eastern Joint Computer Conf., Washington, Dec. 1957
879 R	Operation of the SAGE Duplex Computers	P. R. Vance L. G. Dooley § C. E. Diss §	Proc. Eastern Joint Computer Conf., Washington, Dec. 1957
910	A Band Separation Filter for the 225-400 Mcps Band	A. I. Grayzel	IRE Natl. Conv. Record (1958)
912	Signals with Uniform Ambiguity Functions	R. M. Lerner	IRE Natl. Conv. Record (1958)
913	The Measurement of Delay-Line Transducer Resistance	J. J. G. McCue J. A. Leavitt §	IRE Natl. Conv. Record (1958)
914 R	Analysis of the Spectral Shape of Modulation Splatter	R. Price	IRE Natl. Conv. Record (1958)
916	Algebraic Decoding for the Binary Erasure Channel	M. A. Epstein	IRE Natl. Conv. Record (1958)
933 R	Recent Developments on Solid State Masers	J. W. Meyer	Proc. Intl. Conf. on Solid State Physics in Electronics and Telecommunications, Brussels, June 1958
937	Tutorial Session on Detection Theory and Its Applications: Communications Applications	W. B. Davenport, Jr.	IRE Natl. Conv. Record (1958)
950	A Study of Sea Clutter Spectra	J. W. McGinn, Jr. E. W. Pike	Proc. Symp. on Statistical Methods in Radio Wave Propagation, Univ. of California, June 1958
958 R	Oscillatory Magneto-Absorption of Radiation in Semiconductors	S. Zwerdling	Proc. Am. Optical Soc., Washington, Mar. 1958
994	Resonance and Magneto-Absorption in Solids at Millimeter and Infrared Frequencies	B. Lax	Proc. Intl. Conf. on Solid State Physics in Electronics and Telecommunications, Brussels, June 1958

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995	Low-Temperature Semiconducting Computing Elements	R. H. Rediker A. L. McWhorter	Prof. Intl. Conf. on Solid State Physics in Electronics and Telecommunications, Brussels, June 1958
1012A R	Magneto-Absorption Experiments in Semiconductors	S. Zwerdling	Proc. Intl. Conf. on Solid State Physics in Electronics and Telecommunications, Brussels, June 1958
1015 R	Liquid Helium Cryostat with an Integral Superconducting Resonator	E. Maxwell A. F. Schmidt §	Proc. Intl. Inst. of Refrigeration, Delft, June 1958
1033 R	Cross Modulation of DC Resistance by Microwave Cyclotron Resonance	H. J. Zeiger C. J. Rauch M. E. Behrndt	J. Phys. Chem. Solids <u>8</u> , 496 (1958)
1034 R	Quantum Magneto-Absorption Phenomena in Semiconductors	B. Lax L. M. Roth S. Zwerdling	J. Phys. Chem. Solids <u>8</u> , 311 (1958)
1035 R	The Direct and Indirect Transition Excitons in Germanium	S. Zwerdling L. M. Roth B. Lax	J. Phys. Chem. Solids <u>8</u> , 397 (1958)
1036 R	A Man-Body Treatment of Dielectric Screening for Impurity States and Excitons in Semiconductors	L. M. Roth G. W. Pratt, Jr.	J. Phys. Chem. Solids <u>8</u> , 47 (1958)
1039 R	A Computer-Integrated Rapid-Access Magnetic-Tape System with Fixed Address	R. L. Best T. C. Stockebrand	Proc. Western Joint Computer Conf., Los Angeles, May 1958
1049	Optical Information Handling with Thin Magnetic Films	L. Kleinrock	Proc. Natl. Electronics Conf., Chicago, Oct. 1958
1091	Radar Observation of Birds	R. E. Richardson J. M. Stacey H. M. Kohler F. R. Naka	Proc. Seventh Weather Radar Conf., Miami Beach, Nov. 1958
1104	Angular Diversity Reception at 2290 Mcps Over a 188-Mile Path	J. H. Chisholm J. F. Roche L. P. Rainville H. G. Root	Rec. IRE Symp. on Extended Range and Space Communications, George Washington University, Oct. 1958
1111 R	Anisotropy in Permalloy Films	D. O. Smith	J. Appl. Phys. <u>30</u> , 264S (1959)
1112 R	Properties of Permalloy Films Having a Magnetoelastic Easy Axis Normal to the Film	E. E. Huber, Jr. D. O. Smith	J. Appl. Phys. <u>30</u> , 267S (1959)
1113 R	Magnetic Properties of Nickel-Iron Ferrite	N. Menyuk K. Dwight	J. Appl. Phys. <u>30</u> , 36S (1959)

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1115 R	Internal Structure of Cross-Tie Walls in Thin Permalloy Films Through High Resolution Bitter Techniques	R. M. Moon	J. Appl. Phys. <u>30</u> , 82S (1959)
1116 R	Test of Spin-Wave Theory with Precision Magnetization Measurements	S. Foner E. D. Thompson	J. Appl. Phys. <u>30</u> , 229S (1959)
1119 R	The Logical Design of CG 24	G. P. Dinneen I. L. Lebow I. S. Reed	Proc. Eastern Joint Computer Conf., Philadelphia, Dec. 1958
1128 R	Earth Satellite Observations Made with the Millstone Hill Radar	G. H. Pettengill L. G. Kraft, Jr.	Avionics Research, AGARD No. 40, 125 (1958)
1139 R	Automatic Design of Logical Networks	T. C. Bartee	Proc. Western Joint Computer Conf., San Francisco, Mar. 1958
1148	Wind Regimes for Radome Design	J. M. Austin § S. L. Hensel, Jr.	Proc. Lincoln Laboratory Rigid Radome Symp., MIT, Sept. 1958
1151	† Stress Distribution and Jump Phenomena in Spherical Frameworks under Pressure Loading	J. F. Besseling §	Proc. Lincoln Laboratory Rigid Radome Symp., MIT, Sept. 1958
1160 R	A Dynamic Programming Approach to Adaptive Control Processes	M. Freimer	IRE Natl. Conv. Record (1959)
1161 R	The Probability Density of the Output of a Filter When the Input is a Random Telegraphic Signal	J. A. McFadden	IRE Natl. Conv. Record (1959)
1163 R	Measuring the Characteristics of Present-Day Ultrasonic Delay Lines	J. J. G. McCue M. Axelbank	IRE Natl. Conv. Record (1959)
1164	Operating Characteristics of a Thin Film Memory	J. I. Raffel	J. Appl. Phys. <u>30</u> , 60S (1959)
1174	Impulse Switching of Ferrites	R. E. McMahon	Proc. Solid State Circuits Conf., Philadelphia, Feb. 1959; Proc. Eastern Joint Computer Conf., Philadelphia, Dec. 1958
1180 R	Optical Absorption of CoO and MnO Above and Below the Néel Temperature	G. W. Pratt, Jr. R. Coelho §	Proc. Am. Phys. Soc., New York, Jan. 1959
1219 R	Millimeter Instrumentation for Solid State Research	G. S. Heller	Proc. Symp. on Millimeter Waves, Polytechnic Institute of Brooklyn, Mar. 1959

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1301 R	Transistor Circuit Techniques for a Core Memory with 500 Millimicroseconds Cycle Time	V. J. Sferrino	Rec. IRE, WESCON Conv., San Francisco, Aug. 1959
1314	Self-Organizing Models for Learned Perception	B. G. Farley	Proc. Information Systems Branch Conf., Illinois Institute of Technology, May 1959
1317 R	An Error Correcting Encoder and Decoder for Phone Line Data	K. E. Perry	Rec. IRE, WESCON Conv., San Francisco, Aug. 1959
1324	A Communication System for a Small Interplanetary Vehicle	M. I. Skolnik L. Cartledge	Proc. IRE, PGSET Conv., San Francisco, Sept. 1959
1325 R	Properties of Thin Magnetic Films for Microwave Applications	P. E. Tannenwald	Rec. IRE, WESCON Conv., San Francisco, Aug. 1959
1326	Space-Charge Theory of Multicavity Klystrons	A. Bers § S. F. Catalano H. M. Jones	Rec. IRE-AIEE Conf. on Electron Tube Research, Univ. of Mexico, June 1959
1350	A Study of UHF Space Communications Through an Aurora Using the Moon as a Reflector	R. P. Ingalls J. C. James M. L. Stone	Ballistic Missiles and Space Technology <u>3</u> , 272 (1961)
1352A	Mechanical Design of 150-Foot Diameter Metal Space Frame Radome	L. P. Farnsworth T. F. King	Proc. ASME, Atlantic City, Nov. 1959
1375 R	Chemical Configuration of Germanium Surfaces in Aqueous Media	W. W. Harvey	J. Phys. Chem. Solids <u>14</u> , 82 (1960)
1380A R	Automatic Digital Data Error Recorder	E. J. Hofmann	Trans. IRE, PGI <u>I-10</u> , 27 (1961)
1384	Some Properties of Magnetic Films by Microwave Resonance	P. E. Tannenwald	Proc. Intl. Conf. on Structures and Properties of Thin Films, Lake George, Sept. 1959
1385	Etching and Inhibition of the {111} Surfaces of the III-V Intermetallic Compounds: InSb	H. C. Gatos M. C. Lavine	J. Phys. Chem. Solids <u>14</u> , 169 (1960)
1386	Some Structure-Sensitive Magnetic Properties of Permalloy Films	D. O. Smith	Proc. Intl. Conf. on Structures and Properties of Thin Films, Lake George, Sept. 1959
1391 R	The Oxidation of Intermetallic Compounds - III. The Room-Temperature Oxidation of A <sup>III</sup> B <sup>V</sup> Compounds	A. J. Rosenberg	J. Phys. Chem. Solids <u>14</u> , 175 (1960)

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JA No.			
1392A R	The Oxidation of Intermetallic Compounds: IV. The Sorption of Oxygen by InSb at 78°K	A. J. Rosenberg A. A. Menna	<u>Reactivity of Solids</u> , J. H. deBoer, <u>et al.</u> , Eds. (Elsevier, Amsterdam, 1960)
1412A	Pulsed Field Millimeter Wave Maser	S. Foner L. R. Momo A. Mayer R. A. Myers §	Proc. Quantum Electronics Conf., Bloomingburg, N. Y., Sept. 1959
1421 R	Initial Susceptibility Spectra of Permalloy Films	R. F. Soohoo	J. Appl. Phys. <u>31</u> , 218S (1960)
1422 R	Galvanomagnetic Effects in Ferromagnetic Resonance	M. H. Seavey, Jr.	J. Appl. Phys. <u>31</u> , 216S (1960)
1423A	The Millstone Radar in Satellite and Missile Tracking	J. S. Arthur J. C. Henry G. H. Pettengill P. B. Sebring	Ballistic Missiles and Space Technology <u>3</u> , 84 (1961)
1424 R	Direct Cation-Cation Interactions in Primarily Ionic Solids	J. B. Goodenough	J. Appl. Phys. <u>31</u> , 359S (1960)
1425 R	Interpretation of the Magnetic and Crystallographic Properties of Several Iron, Nickel, and Iron-Nickel Nitrides	J. B. Goodenough A. Wold R. J. Arnott	J. Appl. Phys. <u>31</u> , 324S (1960)
1426 R	Classical Theory of Spin Configurations in the Cubic Spinel	T. A. Kaplan	J. Appl. Phys. <u>31</u> , 364S (1960)
1429 R	Magnetic Transitions in Ti <sub>2</sub> O <sub>3</sub> and V <sub>2</sub> O <sub>3</sub>	P. H. Carr S. Foner	J. Appl. Phys. <u>31</u> , 344S (1960)
1430 R	Low-Temperature X-Ray Diffraction Studies on Vanadium Sesquioxide	E. P. Warekois	J. Appl. Phys. <u>31</u> , 346S (1960)
1433 R	Flux Reversal by Noncoherent Rotation in Magnetic Films	K. J. Harte	J. Appl. Phys. <u>31</u> , 283S (1960)
1451	Cyclotron Resonance and Impurity Levels in Semiconductors	B. Lax	Proc. Quantum Electronics Conf., Bloomingburg, N. Y., Sept. 1959
1472	The Spin Wave Spectrum in Magnetic Fields	R. F. Soohoo	Bull. Am. Phys. Soc. <u>4</u> , 453 (1959)
1478 R	Solid State Microwave Devices	R. H. Kingston	Nachrichtentechnische Fachberichte, Band 22 (1961)
1486 R	Anisotropy and Inversion in Permalloy Films	D. O. Smith E. E. Huber, Jr. M. S. Cohen G. P. Weiss	J. Appl. Phys. <u>31</u> , 295S (1960)

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- |       |  |   |   |
|-------|--|---|---|
| 1487  | Investigations into the Origin of Anisotropy in Oblique-Incidence Films  | M. S. Cohen<br>E. E. Huber, Jr.<br>G. P. Weiss<br>D. O. Smith | J. Appl. Phys. <u>31</u> , 291S (1960)  |
| 1496  | Thermal Conduction in Rotating Liquid Helium II                          | C. E. Chase   | Bull. Am. Phys. Soc. <u>5</u> , 13 (1960)                                       |
| 1507  | Application of Boolean Matrices to the Analysis of Flow Diagrams         | R. T. Prosser   | Proc. Eastern Joint Computer Conf., Boston, Dec. 1959                           |
| 1518A | Activity in Networks of Neuron-Like Elements                             | B. G. Farley<br>W. A. Clark                                   | Proc. Fourth Symp. on Information Theory, London, Aug. 1960                     |
| 1518B | Activity in Networks of Neuron-Like Elements                             | B. G. Farley<br>W. A. Clark                                   | Proc. IRE Natl. Aeronautics Elec. Conf., Wright-Patterson AFB, Dayton, May 1960 |
| 1530  | Communication in Digital Systems   | I. L. Lebow   | <u>Information Theory</u> (Butterworths, London, 1961)                          |
| 1544  | Recognition of Sloppy, Hand-Printed Characters                           | W. Doyle  | Proc. Western Joint Computer Conf., San Francisco, May 1960                     |
| 1552  | Use of Pivotal Microbalance Design for the Determination of Mass Changes | J. M. Honig   | Proc. Conf. on Microbalance Techniques, Ft. Monmouth, Jan. 1960                 |
| 1564  | Critical Heat Currents in Rotating Liquid Helium II                      | C. E. Chase   | Bull. Am. Phys. Soc. <u>5</u> , 291 (1960)                                      |
| 1584  | Precision Speed Control of a High-Speed Camera                           | D. A. Cahlander   | Proc. Fifth Intl. Cong. on High-Speed Photography, Washington, Oct. 1960        |

Note: Since 1960, Meeting Speeches are designated MS rather than JA.

MS No.

- |     |   |   |   |
|-----|---|---|---|
| 10A | Some Characteristics of Ionospheric Backscatter Observed at 440 Mc/s      | V. C. Pineo<br>L. G. Kraft<br>H. W. Briscoe   | J. Geophys. Res. <u>65</u> , 2629 (1960)                      |
| 14  | Minimum Energy Spin Configurations in the Spinel Structure                | T. A. Kaplan<br>K. Dwight<br>N. Menyuk        | Bull. Am. Phys. Soc. <u>5</u> , 460 (1960)                    |
| 22  | Magneto-Spectroscopy in Semiconductors                                    | B. Lax  | Proc. Intl. Conf. on Semiconductor Physics, Prague, Aug. 1960 |
| 24  | Damaged Layers in the {111} Surfaces of the III-V Semiconductor Compounds | H. C. Gatos<br>M. C. Lavine<br>E. P. Warekois | Proc. Intl. Conf. on Semiconductor Physics, Prague, Aug. 1960 |

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25	Moon Relay Communication	W. H. Radford	IRE Intl. Conv. Record (1960)
26	Impact Ionization of Impurities in Compensated Germanium	A. L. McWhorter R. H. Rediker	Proc. Intl. Conf. on Semiconductor Physics, Prague, Aug. 1960
28	On Geodesics That Are Also Orbits	R. Hermann	Bull. Am. Math. Soc. <u>66</u> , 91 (1960)
32 R	Pattern Recognition with an Adaptive Network	L. G. Roberts	IRE Intl. Conv., Record (1960)
40	General Spin-Wave Dispersion Relations	R. F. Soohoo	Bull. Am. Phys. Soc. <u>5</u> , 356 (1960)
42 R	Reproducibility of Electro-deposited Thin Film Memory Arrays	I. W. Wolf § T. S. Crowther	Proc. IRE Electronics Components Conf., Washington, May 1960
45 R	Magnetoplasma Effects in Solids	B. Lax	Trans. IRE, PGMTT <u>MTT-9</u> , 83 (1961)
49 R	Quantum Mechanical Three-Body Problem. II	L. J. Eyles	Phys. Rev. <u>121</u> , 1744 (1961)
52	Proposed Symbology for Digital Systems	T. C. Bartee	Proc. AIEE Natl. Electronics Conf., Chicago, Oct. 1960
56 R	Some Results in the Measurement of Impulse Noise on Several Telephone Circuits	H. L. Yudkin	Proc. AIEE Natl. Electronics Conf., Chicago, Oct. 1960
58 R	Measured Error Distributions on the Bell A-1 Facility over Various Media	E. J. Hofmann	Proc. AIEE Natl. Electronics Conf., Chicago, Oct. 1960
59 R	The Testing of Digital Data Transmission Channels and Circuits	R. G. Enticknap	Proc. AIEE Natl. Electronics Conf., Chicago, Oct. 1960
60	The Design of Data Transmission Systems	R. G. Enticknap R. M. Lerner	Proc. AIEE Winter General Meeting, New York, 1961
61	Advanced Radar Information Evaluation System - ARIES	D. L. Lovenvirth W. F. Holst	<u>Ballistic Missile and Space Technology</u> , Vol. III, D. P. LeGalley, Ed. (Academic Press, New York, 1960)
66 R	Errors in Data Transmission Systems	R. G. Enticknap	Trans. IRE, PGCS CS-9, 15 (1961)
67 R	Modulation and Signal Selection for Digital Data Systems	R. M. Lerner	Proc. AIEE Natl. Electronics Conf., Chicago, Oct. 1960
69 R	A Helium <sup>3</sup> Refrigerator	C. J. Rauch	Proc. Cryogenic Eng. Conf., Boulder, Aug. 1960

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78 R	The Effect of Channel Geometry and Rotation on the Critical Heat Current in Liquid Helium II	C. E. Chase	Proc. Seventh Intl. Conf. on Low Temperature Physics, Univ. of Toronto, Aug. 1960
82	Low-Temperature Devices	A. L. McWhorter	Trans. IRE, PGE <u>E-3</u> , 137 (1960)
84	Learning in Random Nets	M. Minsky O. G. Selfridge	<u>Information Theory</u> (Butterworths, London, 1961)
86 R	An Account of the Factors That Are Important in the Tracking of Space Vehicles by Means of Radar	W. W. Ward	Trans. IRE, PGSET Natl. Symp., Washington, Sept. 1960
86A R	Radar Tracking of Space Vehicles	W. W. Ward	NEREM Record, Boston (1960)
89 R	The Computer as a Pattern Generator for Perceptual Research	B. W. White	Behavioral Sci. <u>6</u> , 252 (1961)
91 R	Distances and Ratios in Psychophysical Scaling	W. S. Torgerson	Acta Psychol. <u>19</u> , 201 (1961)
94 R	Spin-Lattice Interaction for Electrons in Semiconductors	L. M. Roth	Proc. Intl. Conf. on Semiconductor Physics, Prague, Aug. 1960
106 R	Anisotropy in Permalloy Films Evaporated at Grazing Incidence	M. S. Cohen	J. Appl. Phys. Suppl. <u>32</u> , 87S (1961)
112 R	Superconducting Resonant Cavities	E. Maxwell	Proc. Cryogenic Eng. Conf., Boulder, Aug. 1960
121 R	Excitation and Boundary Effects in Spin-Wave Resonance	R. F. Soohoo	J. Appl. Phys. Suppl. <u>32</u> , 148S (1961)
124 R	Impulse Selection for Core Logic	R. H. Tancrell	J. Appl. Phys. Suppl. <u>32</u> , 40S (1961)
126 R	Antiferromagnetic Resonance in $(\text{Cr}_2\text{O}_3)_{1-x} \cdot (\text{Al}_2\text{O}_3)_x$ Single Crystals	S. Foner	J. Appl. Phys. Suppl. <u>32</u> , 63S (1961)
127 R	Annealing of Oblique-Incidence Permalloy Films	G. P. Weiss D. O. Smith	J. Appl. Phys. Suppl. <u>32</u> , 85S (1961)
132 R	Anisotropy in Nickel-Iron Films	D. O. Smith	J. Appl. Phys. Suppl. <u>32</u> , 705S (1961)
133 R	Classical Theory of the Ground Spin State in Spinels	T. A. Kaplan K. Dwight D. H. Lyons N. Menyuk	J. Appl. Phys. Suppl. <u>32</u> , 135S (1961)
135 R	Areas for Research and Development in the Millimeter Wavelength Region	J. W. Meyer G. S. Heller	NEREM Record (1960)



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141 R	Antiferromagnetic Materials for Millimeter and Sub-millimeter Devices	G. S. Heller J. J. Stickler J. B. Thaxter	J. Appl. Phys. Suppl. <u>32</u> , 307S (1961)
143 R	A Random Access Cryosar Memory	R. C. Johnston	NEREM Record (1960)
144A R	CW Millimeter Wavelength Maser	S. Foner L. R. Momo J. B. Thaxter G. S. Heller R. M. White	<u>Advances in Quantum Electronics</u> , J. R. Singer, Ed. (Columbia Univ. Press, New York, 1961)
159 R	A Sequential Detection System for the Processing of Radar Returns	A. A. Galvin	Proc. IRE <u>49</u> , 1417 (1961)
160 R	Radar System Performance in a Dense-Target Environment	E. N. Fowle E. J. Kelly, Jr. J. A. Sheehan	IRE Intl. Conv. Record (1961)
161 R	A Method of Designing Signals of Large Time-Bandwidth Product	E. L. Key E. N. Fowle R. D. Haggarty	IRE Intl. Conv. Record (1961)
162 R	Ultrasonic Instrumentation for Research on Bats	J. J. G. McCue	IRE Intl. Conv. Record (1961)
163 R	The Measurement of the Phenomena Associated with the Hypervelocity Re-entries Into the Atmosphere	G. F. Pippert	NEREM Record (1960)
170A	Stochastic Approximation and Its Application to Problems of Prediction and Control Synthesis	L. A. Gardner, Jr.	<u>International Symposium on Non-linear Differential Equations and Nonlinear Mechanics</u> (Academic Press, New York, 1963)
172 R	Radar Measurements of the Lunar Surface	G. H. Pettengill J. C. Henry	Proc. Lunar Symp. of Intl. Astronomical Union, Leningrad, Dec. 1960; <u>Advances in the Astronautical Sciences</u> , Vol. 8 (Plenum Press, New York, 1963)
173	The Design of an "Error-Free" Data Transmission System for Telephone Circuits	B. Reiffen W. G. Schmidt H. L. Yudkin	Proc. AIEE Winter General Meeting, New York (1961)
178	An Operational UHF Reactance Amplifier	A. Parsons E. McCurley C. Blake	Proc. Symp. on Low Noise Receivers, Lincoln Laboratory MIT, Oct. 1960
179	Recent Experiences with an X-Band Maser Receiver and an S-Band Parametric Amplifier Radar Receiver	F. J. Dominick	Proc. Symp. on Low Noise Receivers, Lincoln Laboratory, MIT, Oct. 1960

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180 R	Perturbation Theory of the Reciprocal Ferrite Phase Shifter	K. J. Button B. Lax	Proc. IEE <u>109B</u> , Suppl. 21, 56 (1962)
181 R	Stoichiometry of Copper Bonding Using Copper Oxide	E. B. Murphy T. P. Turnbull	Proc. Am. Electroplaters' Soc., Newark (1961)
199	Nonquadratic Conduction Band in HgSe	G. B. Wright A. J. Strauss T. C. Harman	Bull. Am. Phys. Soc. <u>6</u> , 155 (1961)
200	Electrical Properties of HgSe and HgSe-HgTe Alloys	A. J. Strauss T. C. Harman	Bull. Am. Phys. Soc. <u>6</u> , 156 (1961)
201	Overlapping Bands in HgSe and HgSe-HgTe Alloys	T. C. Harman A. J. Strauss	Bull. Am. Phys. Soc. <u>6</u> , 156 (1961)
202	Ferro- and Antiferromagnetism for Spin I	G. F. Dresselhaus	Bull. Am. Phys. Soc. <u>6</u> , 124 (1961)
203	Observation of Quantum Effects in Germanium and Silicon at Millimeter Wavelengths	J. J. Stickler C. J. Rauch H. J. Zeiger G. S. Heller	Bull. Am. Phys. Soc. <u>6</u> , 115 (1961)
204	Interband Transitions in Metals	M. S. Dresselhaus G. F. Dresselhaus	Bull. Am. Phys. Soc. <u>6</u> , 146 (1961)
205	Simple Theory of Tunneling and Its Dependence on a Magnetic Field	P. N. Argyres B. Lax	Bull. Am. Phys. Soc. <u>6</u> , 105 (1961)
208	One-Electron Energy Band Method	L. J. Eyges	Bull. Am. Phys. Soc. <u>6</u> , 108 (1961)
209	High-Resolution Oscillatory Magneto-Absorption Measurements of InSb at Liquid-Helium Temperature	S. Zwerdling J. P. Theriault	Bull. Am. Phys. Soc. <u>6</u> , 147 (1961)
210	Perturbation Theory of Cavities	R. F. Soohoo	Bull. Am. Phys. Soc. <u>6</u> , 125 (1961)
211	Antiferromagnetic Ground Site	L. M. Roth	Bull. Am. Phys. Soc. <u>6</u> , 124 (1961)
217 R	Cyclotron Resonance Maser	B. Lax	<u>Advances in Quantum Electronics</u> , J. R. Singer, Ed. (Columbia Univ. Press, New York, 1961)
227 R	Spin-Orbit vs Jahn Teller Deformation in Chromium Spinels	J. B. Goodenough	J. Phys. Soc. Japan <u>17</u> , Suppl. B-1, 185 (1962)
229	Design of a Twelve Horn Monopulse Feed	L. J. Ricardi L. Niro	Rec. Seventh Annual Radar Symp., Univ. of Michigan, May 1961
237 R	Spin Wave Resonance in Magnetic Films	P. E. Tannenwald	J. Phys. Soc. Japan <u>17</u> , Suppl. B-1, 592 (1962)

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- |           |  |   |  |
|-----------|--|---|--|
| 238<br>R  | Positive and Negative Anisotropy in Nickel-Iron Films  | D. O. Smith   | J. Phys. Soc. Japan <u>17</u> , Suppl. B-1, 550 (1962)   |
| 240       | Deep Space Probes at Millimeter Wavelengths  | J. W. Meyer<br>V. L. Lynn<br>C. M. Steinmetz<br>E. A. Crocker | Rec. Seventh Annual Radar Symp., Univ. of Michigan, May 1961<br>H-417, M \$1.50, P \$6.15  |
| 241<br>R  | Mass Spectrographic Evidence for Deviations from Stoichiometry in GaSb   | E. B. Owens<br>A. J. Strauss                                  | Proc. Conf. on Ultrapurification of Semiconductor Materials, Boston, Apr. 1961   |
| 242<br>R  | Technical Information Flow Patterns  | M. M. Kessler   | Proc. Western Joint Computer Conf., Los Angeles, May 1961  |
| 249       | Baseball: An Automatic Question-Answerer   | B. F. Green, Jr.<br>A. K. Wolf<br>C. Chomsky<br>K. Laughery   | Proc. Western Joint Computer Conf., Los Angeles, May 1961  |
| 253A<br>R | Experimental Studies of the F Region Using the Incoherent Backscatter Technique at Frequencies Around 400 Mc/s | V. C. Pineo<br>L. G. Kraft<br>H. W. Briscoe<br>D. P. Hynek    | <u>Electron Density Profiles</u> (Pergamon Press, New York, 1962)  |
| 257<br>R  | High Field Magnetic Resonance Experiments  | S. Foner  | J. Phys. Soc. Japan <u>17</u> , Suppl. B-1, 424 (1962)   |
| 267<br>R  | Solar Radiation Pressure Effects, Gas Leakage Rates, and Air Densities Inferred from the Orbit of Echo I       | H. M. Jones<br>I. I. Shapiro<br>P. E. Zadunaisky §            | <u>Space Research II</u> (Proc. Second Intl. Space Science Symp.), H. C. Van de Hulst, <u>et al.</u> , Eds. (North-Holland, Amsterdam, 1961) |
| 268<br>R  | Band Structure of HgSe and HgSe-HgTe Alloys  | T. C. Harman<br>A. J. Strauss                                 | J. Appl. Phys. <u>32S</u> , 2265 (1961)  |
| 269<br>R  | Magnetoreflexion Experiments in Intermetallics   | G. B. Wright<br>B. Lax  | J. Appl. Phys. <u>32S</u> , 2113 (1961)  |
| 270<br>R  | Interband Faraday Rotation in III-V Compounds  | B. Lax<br>Y. Nishina §  | J. Appl. Phys. <u>32S</u> , 2128 (1961)  |
| 272<br>R  | Infrared and Dielectric Analysis of Structural Polyurethane Foams  | E. B. Murphy<br>W. A. O'Neil                                  | SPE J. <u>18</u> , 47 (1962)   |
| 285<br>R  | Report from a Symposium on the Application of Low Noise Receivers to Radar and Allied Equipment                | J. W. Meyer   | <u>Low Noise Electronics</u> (Proc. Fifth AGARD Avionics Panel Conf.) (Pergamon Press, London, 1962)   |
| 292       | Some Results of Computer Simulation of Neuron-Like Nets  | B. G. Farley  | Proc. Fed. of Amer. Socs. for Exptl. Biology, Apr. 1961  |
| 301<br>R  | Magnetic Field Dependence of the Superconducting Energy Gap in Ginzburg-Landau Theory with Application to Al   | D. H. Douglass, Jr.   | IBM J. Research Develop. <u>6</u> , 44 (1962)  |

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307 R	Texture and Orientation of Evaporated Bismuth Films	T. P. Turnbull E. P. Warekois	<u>Metallurgy of Semiconductor Materials</u> (Interscience Publishers, New York, 1962)
328	The Design of Radar Astronomy Instrumentation	H. G. Weiss	NEREM Record (1961)
343	The $(1 - \cos \varphi)$ Radiometer	J. W. McGinn	NEREM Record (1961)
344	Radiometric Instrumentation at Eight Millimeters	J. W. Meyer J. J. Kirwan D. M. Towle	NEREM Record (1961)
347 R	Statistical Mechanics of Dilute Solid Solutions	R. F. Brebrick	J. Appl. Phys. <u>33S</u> , 422 (1962)
350 R	Cobalt Ferrite Crystal Growth from the Ternary Flux System $\text{Na}_2\text{O}-\text{CoO}-\text{Fe}_2\text{O}_3$	W. Kunnmann A. Wold E. Banks	J. Appl. Phys. <u>33S</u> , 1364 (1962)
351 R	Vanadium Iron Oxides	A. Wold D. Rogers R. J. Arnott N. Menyuk	J. Appl. Phys. <u>33S</u> , 1208 (1962)
353 R	Antiferromagnetic Resonance in $\text{MnTiO}_3$	J. J. Stickler G. S. Heller	J. Appl. Phys. <u>33S</u> , 1302 (1962)
356 R	Isotropic Stress Measurements in Permalloy Films	G. P. Weiss D. O. Smith	J. Appl. Phys. <u>33S</u> , 1166 (1962)
361 R	Magnetic Properties of $\text{Cr}_5\text{S}_6$ in Chromium Sulfides	K. Dwight R. W. Germann N. Menyuk A. Wold	J. Appl. Phys. <u>33S</u> , 1341 (1962)
362 R	Magnetic Transitions in Cubic Spinels	N. Menyuk A. Wold D. B. Rogers K. Dwight	J. Appl. Phys. <u>33S</u> , 1144 (1962)
363 R	Cation-Cation Three-Membered Ring Formation	J. B. Goodenough	J. Appl. Phys. <u>33S</u> , 1197 (1962)
369A R	Time-Varying Channels with Delay Spread	P. E. Green, Jr.	Proc. Conf. on Microwave Communication, Budapest, 12-15 June 1962
381	An Electronic Decoder for Bose-Chaudhuri-Hocquenghem Error-Correcting Codes	T. C. Bartee D. I. Schneider	Trans. IRE, PGIT <u>IT-8</u> , S-17 (1962)
382 R	Demonstration of Magnetic Domain-Wall Storage and Logic	J. M. Ballantyne	J. Appl. Phys. <u>33S</u> , 1067 (1962)
391 R	Digital Techniques in Neuroelectric Data Processing	W. A. Clark	<u>Computer Techniques in EEG Analysis</u> (Elsevier, Amsterdam, 1961)

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394 R	Superconducting Magnets	S. H. Autler	NEREM Record (1961)
396 R	A Simple Iterative Procedure for the Identification of the Unknown Parameters of a Linear Time Varying Discrete System	H. Kushner	J. Basic Eng. <u>85</u> , 227 (1963)
423	Scattering from Plasma Cylinders with Radial Variations in Electron Density	C. M. deRidder S. Edelberg	Proc. Conf. on the Plasma Sheath, Boston, Apr. 1962
424 R	Conductance of Germanium in Contact with Aqueous Electrolytes	W. W. Harvey	Ann. N. Y. Acad. Sci. <u>101</u> , 904 (1963)
433 R	A VHF Solar Radar System	W. G. Abel J. H. Chisholm P. L. Fleck J. C. James	IRE Intl. Conv. Record, Pt. 5, (1962)
436 R	Crystallographic Orientation Effects on Some High Temperature Reactions of Germanium	H. C. Gatos M. C. Lavine	Ann. N. Y. Acad. Sci. <u>101</u> , 983 (1963)
437 R	Near-Field Characteristics of a Linear Array	L. J. Ricardi	Proc. Symp. on Electromagnetic Theory and Antennas, Copenhagen, June 1962
441 R	High Magnetic Field Research	B. Lax	J. Appl. Phys. <u>33S</u> , 1025 (1962)
444 R	Error Probabilities for Adaptive Multichannel Reception of Binary Signals	R. Price	Trans. IRE, PGIT <u>IT-8</u> , 305 (1962)
447A R	Comparative Analyses of Thin Paraboloidal Shells	J. W. Mar § F. Y. M. Wan	Proc. World Conf. on Shell Structures, San Francisco, Oct. 1962
448 R	SECO: A Self-Regulating Error Correcting Coder-Decoder	K. E. Perry J. M. Wozencraft §	Trans. IRE, PGIT <u>IT-8</u> , 128 (1962)
449 R	Statistical Mechanical Theory of Resonance	P. N. Argyres	Proc. Intl. Conf. on Magnetic and Electric Resonance and Relaxation, Eindhoven, July 1962
451 R	Transport Theory of Electrons in Electric, Magnetic and Phonon Fields	N. J. Horing P. N. Argyres	Proc. Intl. Conf. on Physics of Semiconductors, Exeter, July 1962.
453 R	Optical and Electrical Properties of $Cd_xHg_{1-x}Te$ Alloys	A. J. Strauss T. C. Harman J. G. Mavroides D. H. Dickey M. S. Dresselhaus	Proc. Intl. Conf. on Physics of Semiconductors, Exeter, July 1962

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MS No.

454 R	Millimeter Cyclotron Resonance in Diamond	C. J. Rauch	Proc. Intl. Conf. on Physics of Semiconductors, Exeter July 1962
455 R	Magneto-Absorption in InSb: Valence Band Anisotropy. Measurements Far Above Absorption Edge	S. Zwerdling W. H. Kleiner J. P. Theriault	Proc. Intl. Conf. on Physics of Semiconductors, Exeter, July 1962
456 R	Effective Mass Measurements in Semiconductors	B. Lax	Proc. Intl. Conf. on Physics of Semiconductors, Exeter, July 1962
457 R	Dispersion Theory, Interband and Plasma Effects	B. Lax J. G. Mavroides J. Kolodiczak §	Proc. Intl. Conf. on Physics of Semiconductors, Exeter, July 1962
461A R	Ferromagnetism and Antifer- romagnetism in a Simple Cubic Lattice	G. F. Dresselhaus	Proc. Intl. Conf. on Low Tempera- ture Physics, London, Sept. 1962
470 R	Keynote: Some Notes on the Technology of Recognition	O. G. Selfridge	Proc. Symp. on Optical Character Recognition, Washington, Jan. 1962
475A R	Foamed Materials in the Design of Precision Radar Reflectors	C. A. Pappas E. B. Murphy	Proc. Regional Tech. Conf. of Soc. Plastics Engineers, Boston, June 1962
479 R	Quantum Effects in Germanium and Silicon	G. S. Heller J. J. Stickler H. J. Zeiger	Proc. Intl. Conf. on Magnetic and Electric Resonance and Relaxa- tion, Eindhoven, July 1962
480	Antiferromagnetic Resonance in Powders	G. S. Heller J. J. Stickler A. Wold	Proc. Intl. Conf. on Magnetic and Electric Resonance and Relaxa- tion, Eindhoven, July 1962
482A R	Some Similarities Between the Behavior of a Neural Network Model and Electrophysiological Experiments	B. G. Farley	Proc. Conf. on Self-Organizing Systems, Chicago, May 1962
487	Radar Measurements of Venus	G. H. Pettengill	Proc. Third Intl. Space Science Symp., Washington, May 1962
504	Theory of Indirect Exchange in Rare Earth Metals	D. H. Lyons T. A. Kaplan	Bull. Am. Phys. Soc. <u>7</u> , 313 (1962)
508 R	A Computer Program for Recognizing the English Fricative Consonants  f  and  θ	J. W. Forgie C. D. Forgie	Proc. Fourth Intl. Cong. on Acoustics, Copenhagen, Aug. 1962
509 R	Problems in the Study of the Nervous System	B. G. Farley	Proc. Western Joint Computer Conf., San Francisco, May 1962
510	Circuits for the FX-1 Computer	K. H. Konkle	Proc. Western Joint Computer Conf., San Francisco, May 1962

## Meeting Speeches

MS No.			
512 R	The Niobium-Tin System: Stability Ranges and Superconducting Properties of Nb <sub>2</sub> Sn <sub>3</sub> and Nb <sub>3</sub> Sn <sub>2</sub>	T. B. Reed H. C. Gatos W. J. LaFleur J. T. Roddy	<u>Superconductors</u> (Interscience Publishers, New York, 1962)
513 R	Description of a Computer Program for Pitch Detection	B. Gold	Proc. Fourth Intl. Cong. on Acoustics, Copenhagen, Aug. 1962
519 R	The Chemical Approach to Semiconductors	H. C. Gatos A. J. Rosenberg	Proc. Symp. on Physics and Chemistry of Ceramics, Pennsylvania State Univ., May 1962
521 R	Radar Reflections from the Sun at VHF	W. G. Abel J. H. Chisholm J. C. James	<u>Space Research III</u> (Proc. Third Intl. Space Science Symp.) (North-Holland, Amsterdam, 1963)
524	C-Band Radar - Beacon Tracking for Project Mercury	B. H. Labitt	Trans. IEEE, Commun. Electron., No. 69, 647 (1963)
525	Tracking Performance of the Mercury Quad-Helix Acquisition Aid	J. G. Barry G. F. Dalrymple	Trans. IEEE, Commun. Electron., No. 69, 657 (1963)
527	Performance Evaluation Techniques for a Large Aperture Millimeter System	V. L. Lynn E. A. Crocker J. W. Meyer	Proc. Electromagnetic Window Symp., Columbus, June 1962
531 R	The Organization of Organization	O. G. Selfridge	Proc. Conf. on Self-Organizing Systems, Chicago, May 1962
543 R	Critical Heat Currents in Liquid Helium II	C. E. Chase	Proc. Intl. Conf. on Low Temperature Physics, London, Sept. 1962
544	Energy of a Vortex Ring in a Tube and Critical Velocities in Liquid He II	J. C. Fineman C. E. Chase	Proc. Intl. Conf. on Low Temperature Physics, London, Sept. 1962
548B	A Pulse Compression System Employing a Linear FM Gaussian Signal	E. N. Fowle § D. R. Carey R. E. VanderSchoor R. C. Yost	Proc. RADC Symp., Griffiss AFB, New York, Oct. 1962
549 R	Hill Climbing Methods for the Optimization of Multi-parameter Noise Disturbed Systems	H. J. Kushner	J. Basic Eng. <u>85</u> , 157 (1963)
551 R	Measurements of the Superconducting Energy Gap in Lead and Aluminum Films	D. H. Douglass, Jr. R. H. Meservey	Proc. Intl. Conf. on Low Temperature Physics, London, Sept. 1962
556 R	New Method for Measuring Changes in Surface Impedance: Application to Superconducting Tin at X-Band	M. S. Dresselhaus D. H. Douglass, Jr. R. H. Kyhl §	Proc. Intl. Conf. on Low Temperature Physics, London, Sept. 1962

## Meeting Speeches

MS No.

- |          |   |   |   |
|----------|---|---|---|
| 560<br>R | Real-Channel Aspects of an Error-Free Data Transmission System for Toll-Grade Telephone Circuits          | W. G. Schmidt   | Proc. WESCON, Los Angeles, Aug. 1962  |
| 567<br>R | Thunderstorm Excitation of the Earth-Ionosphere Cavity  | M. Balsler<br>C. A. Wagner                                | Proc. AGARD Conf., Munich, Sept. 1962   |
| 581      | Mobility Without Vision by Living Creatures Other Than Man (With Special Reference to Insectivorous Bats) | F. A. Webster §   | Proc. Mobility Research Conf., M.I.T., Oct. 1961  |
| 583<br>R | An Evaluation of Recent Developments in the Field of Learning Machines                                    | O. G. Selfridge   | IRE Intl. Conv. Record (1962)   |
| 588<br>R | Vapor Growth and Doping of Silicon Crystals Using Tellurium as Carrier                                    | S. Fischler   | <u>Metallurgy of Advanced Electronic Materials</u> , Vol. 19 (Interscience Publishers, New York, 1963)  |
| 589<br>R | Superconducting Behavior of Some $\beta$ -Tungsten Structure Niobium Compounds and Their Alloys           | T. B. Reed<br>H. C. Gatos<br>W. J. LaFleur<br>J. T. Roddy | <u>Metallurgy of Advanced Electronic Materials</u> , Vol. 19, (Interscience Publishers, New York, 1963) |
| 590<br>R | Analysis of Large Pin-Connected Three-Dimensional Frameworks  | K. S. Parikh §<br>E. C. Rossow §<br>J. M. Biggs §         | Proc. Symp. on Use of Computers in Civil Engineering, Lisbon, Oct. 1962                                 |
| 591<br>R | Current Status of High-Field Superconductivity  | S. H. Autler  | <u>Metallurgy of Advanced Electronic Materials</u> , Vol. 19 (Interscience Publishers, New York, 1963)  |
| 594<br>R | The Reaction of Stannane with Niobium Wires, and Their Resulting Superconducting Behavior                 | M. D. Banus<br>H. C. Gatos<br>M. C. Lavine<br>T. B. Reed  | <u>Metallurgy of Advanced Electronic Materials</u> , Vol. 19 (Interscience Publishers, New York, 1963)  |
| 595      | Radar Studies of the Lunar Surface  | J. V. Evans   | NEREM Record (1962)   |
| 599      | Growth and Nucleation Sites on Iron Whiskers, as Revealed by an Oxide Replica Technique                   | T. P. Turnbull<br>M. J. Button                            | Proc. Intl. Cong. for Electron Microscopy, Philadelphia, Aug. 1962                                      |
| 601      | A Lorentz Attachment for the RCA EMU-3 Microscope   | M. S. Cohen   | Proc. Intl. Cong. for Electron Microscopy, Philadelphia, Aug. 1962                                      |
| 615<br>R | Minimum Fuel Feedback Control Systems: Second Order Case  | M. Athans   | Trans. IEEE, Appl. and Indust. 81, 321 (1963)   |
| 621      | Experimental Evaluation of a 1000-Wavelength Antenna  | V. L. Lynn<br>K. J. Keeping<br>W. D. Fitzgerald           | NEREM Record (1962)   |



MS No.

- |          |  |   |   |
|----------|--|---|---|
| 626<br>R | Visual Pattern Recognition:<br>The Problems and Promise  | O. G. Selfridge   | Proc. Intl. Cong. on Technology<br>and Blindness, New York,<br>June 1962          |
| 627<br>R | The Biased-Gap Klystron  | I. Hefni  | Proc. High-Power Microwave<br>Tube Symp., Fort Monmouth,<br>Sept. 1962            |
| 628<br>R | Antiferromagnetic Materials<br>and Their Application at<br>Millimeter and Submillimeter<br>Wavelengths | G. S. Heller  | NEREM Record (1962)   |
| 630      | Magnetostatic Modes in Thin<br>Films   | K. J. Harte   | Bull. Am. Phys. Soc. <u>7</u> , 448 (1962)  |
| 632<br>R | Cascading Low-Gain Parametric<br>Amplifier Stages  | C. Blake  | Proc. Natl. Electronics Conf.,<br>Chicago, Oct. 1962                              |
| 640<br>R | Spiral and Concentric-Circle<br>Walls Observed by Lorentz<br>Microscopy                                | M. S. Cohen   | J. Appl. Phys. <u>34</u> , 1221 (1963)  |
| 641      | The Self-Shielded Microwave<br>Discharge   | C. E. Muehe   | NEREM Record (1962)   |
| 644<br>R | Measurement of the Surface<br>Temperature of a Solid Under<br>Electron Bombardment                     | E. Silverman  | Proc. High-Power Microwave<br>Tube Symp., Fort Monmouth,<br>Sept. 1962            |
| 645      | Radio Echo Studies of the Moon   | J. V. Evans   | Proc. Conf. on Lunar Exploration,<br>Virginia Polytechnic Institute,<br>Aug. 1962 |
| 654      | Stimulated Infrared Emission<br>from Small Glass Fibers  | H. A. Bostick   | Proc. Boston Laser Conf.,<br>Northeastern Univ., Aug. 1962                        |
| 660<br>R | Rotatable Anisotropy in Negative<br>Magnetostriction Ni-Fe Films                                       | S. S. Lehrer  | J. Appl. Phys. <u>34</u> , 1207 (1963)  |
| 662<br>R | Crystallographic Transitions<br>in Several Chromium Spinel<br>Systems                                  | A. Wold<br>R. J. Arnett<br>E. Whipple<br>J. B. Goodenough | J. Appl. Phys. <u>34</u> , 1085 (1963)  |
| 665<br>R | Thermodynamic Self-Consistent<br>Theory of Indirect Exchange<br>in Metals                              | T. A. Kaplan  | J. Appl. Phys. <u>34</u> , 1339 (1963)  |
| 666<br>R | Magnetic Properties of a<br>Single Crystal of Manganese<br>Phosphide                                   | E. E. Huber, Jr.<br>D. H. Ridgley                         | J. Appl. Phys. <u>34</u> , 1099 (1963)  |
| 669<br>R | Atomic Moments and Magnetic<br>Coupling in Cation Excess-<br>Nickel Arsenides                          | J. B. Goodenough  | J. Appl. Phys. <u>34</u> , 1193 (1963)  |

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MS No.

671 R	Flux Growth of $\text{NiFe}_2\text{O}_4$ Crystals by the Czochralski Method	W. Kunnmann A. Ferretti A. Wold	J. Appl. Phys. <u>34</u> , 1264 (1963)
674 R	The Raman Maser	H. J. Zeiger P. E. Tannenwald	Quantum Electronics III, Vol. 2 (Columbia Univ. Press, New York, 1964)
675 R	Recombination Radiation Emitted by Gallium Arsenide	R. J. Keyes T. M. Quist	Quantum Electronics III, Vol. 2 (Columbia Univ. Press, New York, 1964)
676 R	Optically-Pumped Parametric Oscillators at Microwave and Infrared Frequencies	J. H. Dennis P. R. Longaker R. H. Kingston	Quantum Electronics III, Vol. 2 (Columbia Univ. Press, New York, 1964)
679 R	Antiferromagnetism in $\text{NiTiO}_3$	G. S. Heller J. J. Stickler S. Kern A. Wold	J. Appl. Phys. <u>34</u> , 1033 (1963)
680 R	Drive Current Margins of Magnetic Film Memories	A. H. Anderson T. S. Crowther J. I. Raffel	J. Appl. Phys. <u>34</u> , 1165 (1963)
685 R	Nonlinear Effects in Solid State Plasmas	B. Lax A. L. McWhorter J. G. Mavroides	Quantum Electronics III, Vol. 2 (Columbia Univ. Press, New York, 1964)
694 R	High Power Tube Techniques	G. L. Guernsey	Proc. Sixth Natl. Conf. on Elec- tron Tube Techniques, New York, Sept. 1962
702	The Haystack Experimental Facility	H. G. Weiss	NEREM Record (1962)
703 R	Time-Optimal Velocity Control of a Spinning Space Body	M. Athans P. L. Falb R. T. Lacoss	Trans. IEEE, Appl. and Indust. <u>82</u> , 206 (1963)
704	Estimation of a System Pulse Transfer Function in the Presence of Noise	M. J. Levin	Proc. Fourth Joint Automatic Control Conf., Minneapolis, June 1963
707	A New Method of Locating the Maximum Point of an Arbitrary Multipeak Curve in the Presence of Noise	H. J. Kushner	J. Basic Eng. <u>86</u> , 97 (1964)
709	Optimal Control of Self-Adjoint Systems	M. Athans P. L. Falb R. T. Lacoss	Trans. IEEE, Appl. and Indust. <u>83</u> , 161 (1964)
710	Minimum-Fuel Control of Second-Order Systems with Real Poles	M. Athans	Trans. IEEE, Appl. and Indust. <u>83</u> , 148 (1964)

MS No.			
732	Methods for the Adaptive Optimization of Binary Detection Systems	H. J. Kushner	IEEE Intl. Conv. Record, Pt. 4 (1963)
735 R	Semiconductor Maser of GaAs	T. M. Quist R. J. Keyes W. E. Krag B. Lax A. L. McWhorter R. H. Rediker H. J. Zeiger	<u>Quantum Electronics III</u> , Vol. 2 (Columbia Univ. Press, New York, 1964)
752	Comments on the Lincoln Laboratory GaAs Diode Maser	R. H. Rediker	Proc. Lasers and Applications Symp., Ohio State Univ., Nov. 1962
762 R	A Portable Detector for Ultrasounds	J. J. G. McCue A. Bertolini	IEEE Intl. Conv. Record, Pt. 9 (1963)
770 R	Fuel-Optimal Control of a Double-Integral Plant with Response Time Constraints	M. Athans	Trans. IEEE, Appl. and Indust. <u>83</u> , 240 (1964)
774 R	Trends in Radome Design Parameters	M. M. Hannoosh § R. A. Muldoon	Proc. Society of Plastics Industry, Reinforced Plastics Division, Chicago, Feb. 1963
779B R	Semiconductor Masers	B. Lax	Proc. Symp. on Optical Masers, Polytechnic Institute of Brooklyn, Apr. 1963
779E R	Semiconductor Lasers	B. Lax	Ann. N. Y. Acad. Sci. <u>122</u> , 598 (1965), DDC 621114
787 R	Electrical Properties of Praseodymium Oxides	J. M. Honig A. A. Cella J. C. Cornwell	Proc. Third Rare Earth Conf., Clearwater, Florida, Apr. 1963
828 R	Theoretical Temperature Rise in Materials Due to Electron Beams	G. E. Vibrans	Proc. Fifth Annual Electron Beam Symp., Boston, Mar. 1963
831 R	Report on Progress in Information Theory in the U.S.A., 1960-1963: Radar Waveform Selection	R. M. Lerner	Trans. IEEE, PTGIT <u>IT-9</u> , 246 (1963)
835 R	Praseodymium - Group V Compounds. I. Vaporization Behavior and Nonstoichiometry of PrP, PrAs, PrSb and PrBi	K. A. Gingerich §	Proc. Third Rare Earth Conf., Clearwater, Florida, Apr. 1963
836 R	Studies of the F-Region by the Incoherent Backscatter Method	J. V. Evans	<u>Electron Density Distribution in the Ionosphere and Exosphere</u> (Proc. NATO Advanced Study Institute) (North-Holland, Amsterdam, 1964)

## Meeting Speeches

MS No.

843	Approximate Theory of Magnetic Ordering in Heisenberg Magnets	T. A. Kaplan	Proc. Symp. on Some Problems of the Physics of Ferromagnetism and Ferroelectricity, Leningrad, May 1963
845 R	Nonlinear Effects in a Plasma	M. S. Macrakis	Proc. Intl. Symp. on Ionization Phenomena, Paris, July 1963
867	The Effects of Computer Science on Engineering Mathematics	T. C. Bartee	Proc. OECD Conf. on Engineering Mathematics, Rome, May 1963
873 R	Functional Techniques for the Analysis of the Nonlinear Behavior of Phase-Locked Loops	H. L. VanTrees	Proc. IEEE <u>52</u> , 894 (1964)
877 R	Radar Determination of the Astronomical Unit	I. I. Shapiro	Proc. Intl. Astronomical Union, Paris, May 1963
881 R	AC Susceptibility Measurements on Transition Metal Superconductors Containing Rare Earth and Ferromagnetic Metal Solutes	M. Strongin E. Maxwell T. B. Reed	Revs. Modern Phys. <u>36</u> , 164 (1964)
892	Combination Diplexer and Circular Polarization Transducer	J. B. Rankin	NEREM Record (1963)
895 R	Rapid-Freeze Method for Growth of Bismuth Single Crystals	S. Fischler	Trans. Met. Soc. AIME <u>230</u> , 340 (1964)
896	Long-Range Millimeter Radars	V. L. Lynn M. D. Sohigian	NEREM Record (1963)
904	Recent Developments in Plasma Generation	T. B. Reed	Proc. Natl. Electronics Conf., Northwestern Univ., Oct. 1963
909	Use of Burst Mode Waveforms in High Resolution Radars	A. A. Galvin	NEREM Record (1963)
910	Injection Lasers and Injection Luminescence	R. H. Rediker	NEREM Record (1963)
913A R	A Multilayer Dielectric- and Magnetic-Film Memory Cell Designed for Optical Read-Out	D. O. Smith	J. Appl. Phys. <u>35</u> , 772 (1964)
917B R	Magnetic Properties of Ni-Fe-Cr Films	M. S. Cohen	J. Appl. Phys. <u>35</u> , 834 (1964)
918 R	Deposition Temperature and Compositional Dependence of Negative Anisotropy in Nickel-Iron Films	G. P. Weiss D. O. Smith	J. Appl. Phys. <u>35</u> , 818 (1964)
921	Nernst-Ettingshausen Energy Conversion	T. C. Harman	NEREM Record (1963)

## MS No.

- |           |  |  |   |
|-----------|--|--|---|
| 923<br>R  | Long Range Communication by Orbiting Dipole Belts  | W. E. Morrow, Jr.  | <u>Progress in Radio Science 1960-1963</u> , Vol. 8 (Elsevier, Amsterdam, 1965), DDC 614214 |
| 925       | Ferrimagnetic Spiral Configurations in Cobalt Chromite   | N. Menyuk<br>K. Dwight<br>A. Wold  | J. de Physique <u>25</u> , 528 (1964)   |
| 940<br>R  | Narrow Band vs Localized d Electrons   | J. B. Goodenough   | Proc. Buhl Intl. Conf. on Materials, Pittsburgh, Oct. 1963                                  |
| 941<br>R  | Spin Correlations Among Narrow-Band Electrons  | J. B. Goodenough   | J. Appl. Phys. <u>35</u> , 1083 (1964)  |
| 943<br>R  | Electrical Conductivity in the Spinel System $\text{Co}_{1-x}\text{Li}_x\text{V}_2\text{O}_4$  | D. B. Rogers<br>J. B. Goodenough<br>A. Wold                                  | J. Appl. Phys. <u>35</u> , 1069 (1964)  |
| 946<br>R  | Effects of High-Pressure, High-Temperature Treatment on the Properties of Electronic Materials | E. P. Warekois   | Special Technical Publication No. 374, ASTM (1965)  |
| 952<br>R  | Future Developments in Large Magnetic Film Memories  | J. I. Raffel   | J. Appl. Phys. <u>35</u> , 748 (1964)   |
| 968<br>R  | The Fermi Surface of Graphite  | M. S. Dresselhaus<br>J. G. Mavroides   | IBM J. Research Develop. <u>8</u> , 262 (1964)  |
| 985A<br>R | Experiments on Room Temperature Nernst-Ettingshausen Refrigerators                             | T. C. Harman<br>J. M. Honig<br>S. Fischler<br>A. E. Paladino<br>M. J. Button | J. Eng. Indust. (Trans. ASME B) <u>87</u> , 21 (1965)                                       |
| 989       | The Phase Transition Region of $\text{PrO}_{1.5}$  | D. S. Chapin<br>M. C. Finn<br>J. M. Honig                                    | Proc. Fourth Rare Earth Conf., Tempe, Arizona, Apr. 1964                                    |
| 1001<br>R | Band Edge Structure of PbS, PbSe and PbTe  | J. O. Dimmock<br>G. B. Wright  | Proc. Seventh Intl. Conf. on Physics of Semiconductors, Paris, July 1964, DDC 453889        |
| 1002      | Galvano-Thermomagnetic Phenomena in Bismuth  | T. C. Harman<br>J. M. Honig<br>B. M. Tarmy                                   | Proc. Seventh Intl. Conf. on Physics of Semiconductors, Paris, July 1964                    |
| 1009<br>R | Magnetic Properties of $\text{V}^{3+}$ Ions in Cubic Spinels                                   | K. Dwight<br>N. Menyuk<br>D. B. Rogers<br>A. Wold                            | Proc. Intl. Conf. on Magnetism, Nottingham, Sept. 1964<br>DDC 614319                        |
| 1010<br>R | On the Symmetry of Spin Configurations in Magnetic Crystals                                    | J. O. Dimmock  | Proc. Intl. Conf. on Magnetism, Nottingham, Sept. 1964,<br>DDC 614859                       |

## Meeting Speeches

MS No.

1011	Injection Luminescence in InAs Diodes	I. Melngailis	Proc. Symp. on Radiative Recombination in Semiconductors, Paris, July 1964
1012 R	Least-Squares Array Processing for Signals of Unknown Form	M. J. Levin	Radio and Electron. Eng. <u>29</u> , 213 (1965), DDC 618772
1013	Injection Luminescence and Laser Action in InSb	R. J. Phelan, Jr. R. H. Rediker	Proc. Symp. on Radiative Recombination in Semiconductors, Paris, July 1964
1014 R	Spin Quenching in the System $MnAs_{1-x}P_x$ and $MnAs_{1-y}Sb_y$	J. B. Goodenough D. H. Ridgley W. A. Newman	Proc. Intl. Conf. on Magnetism, Nottingham, Sept. 1964, DDC 616043
1033 R	Progress in Magneto-Optical Effects	B. Lax	Proc. Seventh Intl. Conf. on Physics of Semiconductors, Paris, July 1964, DDC 453890
1049	Automatic Film Reading at Lincoln Laboratory	H. L. Kasnitz	Proc. Society of Photographic Instrumentation Engineers, St. Louis, Mar. 1964
1087	Field Emission in a Very Inhomogeneous Field	G. E. Vibrans	Proc. Physical Electronics Conf., M.I.T., Mar. 1964
1088	Computation of the Space Charge Spreading of an Electron Beam Under Acceleration	G. E. Vibrans	Proc. Sixth Electron Beam Symp., Boston, Apr. 1964
1111A R	Analog Communication over Randomly-Time-Varying Channels	H. L. VanTrees	IEEE Trans. Inform. Theory <u>IT-12</u> , 51 (1966)
1116 R	Transition-Metal Oxides with Metallic Conductivity	J. B. Goodenough	Bull. Soc. Chim. France, No. 4, 1200 (1965) DDC 618458
1131 R	Electrical and Electro-Optical Properties of Interface-Alloy Heterojunctions	R. H. Rediker S. Stopck E. D. Hinkley	Trans. Met. Soc. AIME <u>233</u> , 463 (1965), DDC 614320
1156	Radar Determination of Planetary Motions	I. I. Shapiro	Proc. Twelfth General Assembly of the Intl. Astronomical Union, Hamburg, Aug. 1964
1158 R	Modulation of GaAs Injection Lasers	B. S. Goldstein R. M. Weigand J. D. Welch	NEREM Record (1964), DDC 454540
1165	Thickness Dependence of Creep Switching in Magnetic Films	G. P. Gagnon T. S. Crowther	J. Appl. Phys. <u>36</u> , 1112 (1965)
1172 R	Investigation of Eddy-Current-Induced Nondestructive Readout in Thin-Film Memories	M. S. Maltz	J. Appl. Phys. <u>36</u> , 1121 (1965), DDC 616436

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| 1173<br>R | Graphical Communication<br>and Control Languages   | L. G. Roberts  | Proc. Second Congress on Infor-<br>mation Sciences, Hot Springs,<br>Nov. 1964, DDC 626882 |
| 1174<br>R | Complex vs Band Formation in<br>Perovskite Oxides  | J. B. Goodenough<br>P. M. Raceah                                 | J. Appl. Phys. <u>36</u> , 1031 (1965),<br>DDC 616433                                     |
| 1175<br>R | Determination of Magnetic<br>Ordering in Heisenberg Magnets<br>from High-Temperature Ex-<br>pansions | T. A. Kaplan<br>H. E. Stanley<br>K. Dwight<br>N. Menyuk          | J. Appl. Phys. <u>36</u> , 1129 (1965),<br>DDC 616434                                     |
| 1176<br>R | Magnetic Properties of<br>$MnCr_2S_4$  | N. Menyuk<br>K. Dwight<br>A. Wold                                | J. Appl. Phys. <u>36</u> , 1088 (1965),<br>DDC 616436                                     |
| 1177<br>R | Diffuse Paramagnetic Neutron<br>Scattering in Chromium Spinels                                       | K. Dwight<br>N. Menyuk<br>T. A. Kaplan                           | J. Appl. Phys. <u>36</u> , 1090 (1965),<br>DDC 616435                                     |
| 1186<br>R | Lorentz Microscopy of Small<br>Ferromagnetic Particles   | M. S. Cohen  | J. Appl. Phys. <u>36</u> , 962 (1965),<br>DDC 616438                                      |
| 1187<br>R | Spin-Wave Effects in Magnetic-<br>Film Switching   | K. J. Harte  | J. Appl. Phys. <u>36</u> , 960 (1965),<br>DDC 616442                                      |
| 1189<br>R | Uniaxial-Anisotropy Spectrum<br>in Nonmagnetostrictive Perm-<br>alloy Films                          | D. O. Smith<br>G. P. Weiss                                       | J. Appl. Phys. <u>36</u> , 962 (1965),<br>DDC 616444                                      |
| 1196      | DeHaas-Van Alphen Effect in<br>Pyrolytic and Single Crystal<br>Graphite                              | S. J. Williamson §<br>S. Foner<br>M. S. Dresselhaus              | Proc. Eleventh Intl. Conf. on<br>Low Temperature Physics,<br>Columbus, Sept. 1964         |
| 1197<br>R | Rotating Shallow Elastic<br>Shells of Revolution   | E. Reissner §<br>F. Y. M. Wan                                    | J. Soc. Indust. Appl. Math. <u>13</u> ,<br>333 (1965), DDC 618596                         |
| 1215<br>R | Longitudinal Kerr Effect<br>Using a Very Thin Fe Film  | D. O. Smith  | J. Appl. Phys. <u>36</u> , 1120 (1965),<br>DDC 616437                                     |
| 1240<br>R | Experiments on Systems   | J. L. Morey §<br>D. B. Yntema                                    | Proc. Second Congress on<br>Information System Sciences,<br>Hot Springs, Nov. 1964        |
| 1294<br>R | Energy Band Parameter<br>Determination in Graphite   | M. S. Dresselhaus<br>J. G. Mavroides                             | Carbon <u>3</u> , 465 (1966)  |
| 1339      | Amplitude Noise in Gas Lasers<br>Below and Above the Threshold<br>of Oscillation                     | C. Freed<br>H. A. Haus §   | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)                    |
| 1343      | Sum and Difference Frequency<br>Generation in Gases and Liquids                                      | P. N. Butcher §<br>W. H. Kleiner<br>P. L. Kelley<br>H. J. Zeiger | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)                    |

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| 1396       | Magneto-Emission Studies of Pbs, PbTe, and PbSe Diode Lasers                               | J. F. Butler<br>A. R. Calawa   | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)  |
| 1397       | Laser Emission by Optical Pumping of Semiconductors  | R. J. Phelan, Jr.  | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)  |
| 1398       | Multiple Stimulated Brillouin Scattering in Solids   | P. E. Tannenwald   | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)  |
| 1399       | Plasmon Scattering of Light and Stimulated Emission of Plasmons in Solids                  | A. L. McWhorter  | <u>Physics of Quantum Electronics</u><br>(McGraw-Hill, New York, 1966)  |
| 1420<br>R  | A Graphical Service System with Variable Syntax  | L. G. Roberts  | Commun. ACM <u>9</u> , 173 (1966)<br>DDC 636364   |
| 1438<br>R  | Electronic Band Structure and Optical Properties of Rare-Earth Metals                      | J. O. Dimmock<br>A. J. Freeman §<br>R. E. Watson §                               | <u>Optical Properties and Electronic Structure of Metals and Alloys</u> ,<br>(North-Holland, Amsterdam, 1966) |
| 1443       | Coding for a Class of Unknown Channels   | I. G. Stiglitz   | Accepted IEEE Trans. Inform. Theory   |
| 1447<br>R  | Semiconductor Bulk Injection Lasers  | I. Melngailis  | NEREM Record (1965), DDC 633182   |
| 1451<br>R  | Magnetoreflexion Studies in the Band Structure of Antimony                                 | M. S. Dresselhaus<br>J. G. Mavroides   | <u>Optical Properties and Electronic Structure of Metals and Alloys</u> (North-Holland, Amsterdam, 1966)      |
| 1459<br>R  | Ferromagnetism in $\text{CdCr}_2\text{Se}_4$ and $\text{CdCr}_2\text{S}_4$                 | N. Menyuk<br>K. Dwight<br>R. J. Arnott<br>A. Wold                                | J. Appl. Phys. <u>37</u> , 1387 (1966)  |
| 1463<br>R  | Reduced Manganese Moment in Manganese Chromite   | K. Dwight<br>N. Menyuk<br>J. Feinleib<br>A. Wold                                 | J. Appl. Phys. <u>37</u> , 962 (1966)   |
| 1464<br>R  | Single-Crystal Growth and Properties of the Perovskites $\text{LaVO}_3$ and $\text{YVO}_3$ | D. B. Rogers<br>A. Ferretti<br>D. H. Ridgley<br>R. J. Arnott<br>J. B. Goodenough | J. Appl. Phys. <u>37</u> , 1431 (1966)  |
| 1467<br>R  | Theory of Large-Angle Ripple in Magnetic Films   | K. J. Harte  | J. Appl. Phys. <u>37</u> , 1295 (1966)  |
| 1468A<br>R | Origin of Quadrature Flux in Magnetic Films  | K. J. Harte<br>M. S. Cohen<br>G. P. Weiss<br>D. O. Smith                         | Phys. Stat. Sol. <u>15</u> , 225 (1966)   |



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| 1469<br>R | Antiferromagnetic Resonance in $\text{RbMnF}_3$ Below the Spin-Flop Transition                        | W. J. Ince                                   | J. Appl. Phys. <u>37</u> , 1132 (1966)               |
| 1470<br>R | Sensitive Pulsed Magneto-resistive Measurement of Magnetic Film $H_k$                                 | R. C. Johnston                               | J. Appl. Phys. <u>37</u> , 1466 (1966)               |
| 1472<br>R | Measured Relaxation Times for the Uniaxial-Anisotropy Spectrum in Nonmagnetostrictive Permalloy Films | D. O. Smith<br>G. P. Weiss<br>K. J. Hartc    | J. Appl. Phys. <u>37</u> , 1464 (1966)               |
| 1473<br>R | Temperature Stabilization of Unsaturated Microwave Ferrite Devices                                    | E. Stern<br>W. J. Ince                       | J. Appl. Phys. <u>37</u> , 1075 (1966)               |
| 1474<br>R | Temperature Variation of the Spin-Wave Dispersion Relation  | R. Weber<br>P. E. Tannenwald                 | J. Appl. Phys. <u>37</u> , 1058 (1966)               |
| 1475<br>R | Covalency Criterion for Localized vs Collective Electrons in Oxides with the Perovskite Structure     | J. B. Goodenough                             | J. Appl. Phys. <u>37</u> , 1415 (1966)               |
| 1477<br>R | Crystallographic Study of Several Chromium Spinel   | P. M. Raccach<br>R. J. Bouehard §<br>A. Wold | J. Appl. Phys. <u>37</u> , 1436 (1966)               |
| 1501<br>R | Saturable Shielding - A Technique for Nonlinear Coupling in Magnetic Circuits                         | R. Berger<br>T. S. Crowther<br>J. I. Raffel  | J. Appl. Phys. <u>37</u> , 1359 (1966)               |
| 1551<br>R | A Real-Time Computing System for LASA   | H. W. Briscoe<br>P. L. Fleck                 | Proc. Spring Joint Computer Conf., Boston, Apr. 1966 |
| 1559<br>R | Statistical Properties of Random Pulse Trains   | O. A. Z. Leneman                             | IEEE Intl. Conv. Record, Pt. 6, (1966)               |

## REPORTS PREPARED FOR LINCOLN LABORATORY

			DDC No.	Hayden Serial and Prices
Research Report on Arbitrary Linear System Synthesis	Andersen Laboratories, Inc.	29 June 1953	221624	
A Report on the Conversion of Collins 207B-1 Transmitters, Engineering Report No. 221	Collins Radio Co.	9 July 1951	221566	
Frequency Modulation and Frequency Shift Keying Exciter, Collins Part No. 505 4702 004, Engineering Report No. 224	Collins Radio Co.	31 July 1951	221564	
Operation of a VHF Transmitter for Long-Distance Propagation Test, Research Report No. 113	Collins Radio Co.	1 Nov. 1951	118400	
Rhombic Antenna Pattern Measurements, Research Report No. 126	Collins Radio Co.	31 Oct. 1952	118401	
Operation of a VHF Transmitter for Long Distance Propagation Test, Research Report No. 129	Collins Radio Co.	1 July 1953	221568	
Operation of a VHF Transmitter for Long Distance Propagation Test, Research Report No. 130	Collins Radio Co.	31 Jan. 1954	221565	
Operation of a VHF Transmitter for Long Distance Propagation Test, Research Report No. 135	Collins Radio Co.	1 July 1954	221567	
Rhombic Antenna Pattern Measurement, Research Report No. 133	Collins Radio Co.	16 July 1954	221563	
Final Engineering Report and Instruction Book on 50 Megacycle Pulse Receiver Development Type 53B-1, Engineering Report No. 380	Collins Radio Co.	15 Dec. 1954	240867	
Operation of a VHF Transmitter for Long Distance Propagation Test, Research Report No. 136	Collins Radio Co.	1 Jan. 1955	240781	
Operation of a VHF Transmitter for Long Distance Propagation Test, Engineering Report No. 417	Collins Radio Co.	1 July 1955	221562	

## Reports Prepared For Lincoln Laboratory

			<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
Final Report -- Operation of a VHF Transmitter for Long Distance Propagation Test, Engineering Report No. 457	Collins Radio Co.	1 Jan. 1956	240798	
Contract for Services, Materials and Facilities for the Development of Ferrites for Digital Computers, Final Report	General Ceramics Corp.	1 May 1952 - 30 June 1955	221571	
Analysis of Magnetic Amplifiers by the Use of Difference Equations, Technical Report No. SRL 7002-7	MIT Servomechanisms Laboratory	27 Aug. 1954	240458	
Application of a Magnetic Amplifier to a High Performance Instrument Servo, Technical Report No. SRL 7002-10	MIT Servomechanisms Laboratory	May 1955	81981	
A Magnetic-Amplifier Simulator, Technical Report No. SRL 7002-11	MIT Servomechanisms Laboratory	23 May 1955	81980	
A Differentiator for A-C Computers, Technical Report No. SRL 7002-12	MIT Servomechanisms Laboratory	May 1956	130676	
Power Switching Transistors in Servo-Amplifiers, Technical Report No. SRL 7002-13	MIT Servomechanisms Laboratory	June 1956	240456	
An Accurate Transistorized Multiplier-Divider, Technical Report No. SRL 7002-14	MIT Servomechanisms Laboratory	June 1956	240459	
Coulomb Friction Compensation of Potentiometer Wire-Stepping Oscillation in Servos, Technical Report No. SRL 7002-15	MIT Servomechanisms Laboratory	15 June 1956	240460	
A Study of Dual-Mode Damper-Stabilized Servo, Technical Report No. SRL 7002-16	MIT Servomechanisms Laboratory	15 June 1956	240488	
Development of Two Megawatt 675 MC Pulse Magnetron QK517, Summary Technical Report	Raytheon Co.	27 Dec. 1955 - 1 June 1956	246817	
Development of QK516 Two Megawatt UHF Tunable Pulse Magnetron, Interim Progress Report	Raytheon Co.	1 June 1956 - 1 Feb. 1957	246816	

## Reports Prepared For Lincoln Laboratory

			DDC No.	Hayden Serial and Prices
Development of a Two Megawatt UHF-Band Tunable Magnetron, QK499-QK508-QK516 Final Engineering Report	Raytheon Co.	15 Feb. 1954 - 30 June 1957	246815	
Evaluation of Fluid Bearing Types for Large Antennas, Interim Progress Report No. I-A2245-1	The Franklin Institute	15 Dec. 1958 - 15 June 1959	256449	
Study of the Application of Hydrostatic Lubrication to the Support of a 300 Foot Paraboloid Antenna. . . , Interim Report No. I-A2245-2	The Franklin Institute	1 Sept. 1959	242191	
Analysis of Radial Bearings, Consisting of a Number of Hydrostatic Bearing Pads Mounted on Elastic Supports, Interim Report No. I-A2245-3	The Franklin Institute	28 Sept. 1959	241707	
Analysis of Captive Thrust Bearings Consisting of a Number of Hydrostatic Bearing Pads on Elastic Supports, Interim Report No. I-A2245-4	The Franklin Institute	Nov. 1959	241703	
Analysis of Non-Captive Thrust Bearings Consisting of a Number of Hydrostatic Bearing Pads on Elastic Supports, Interim Report No. I-A2245-5	The Franklin Institute	16 Oct. 1959	241764	
Analysis of Some Structural Problems Associated with the Design of Large Hydrostatic Bearings, Interim Report No. I-A2245-6	The Franklin Institute		241765	
Hydrostatic Bearing Compensating Element Study, Interim Report No. I-A2245-7	The Franklin Institute		241704	
The Effect of the Method of Compensation on Hydrostatic Bearing Stiffness, Interim Report No. I-A2245-8	The Franklin Institute	Dec. 1959	241705	
A Comparative Analysis of Hydrostatic Bearing Pad Configuration, Interim Report No. I-A2245-9	The Franklin Institute	Jan. 1960	241706	

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			<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
Hydrostatic Bearings and Related Topics: A Survey of Technical Literature. . . , Interim Report No. I-A2245-10	The Franklin Institute		241584	
Hydrostatic Bearings for Large Antennas, A Survey, Final Report F-A2245	The Franklin Institute	Jan. 1960	241585	
A Method to Study the Static and Dynamic Behavior of a Radome Panel, LL-VII-22	MIT Aeroelastic and Structures Research Laboratory	Aug. 1960	246187	H-211 M \$1.50 P \$13.60
Survey of Hypervelocity Impact Information ASRL Report No. 99-1, LL-II-60	MIT Aeroelastic and Structures Research Laboratory	Sept. 1961	267289	H-363 M \$3.50 P \$62.90
Survey of Hypervelocity Impact Information, Addendum ASRL Report No. 99-1, Add. LL-II-60	MIT Aeroelastic and Structures Research Laboratory	Sept. 1961	267289	H-364 M \$2.40 P \$47.90

## SPECIAL REPORTS

		<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
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Conference on Lubrication of Large Bearing and Drive Gearing Systems, Lincoln Laboratory, 13-14 May 1959	Dec. 1959		
Symposium on the Application of Low Noise Receivers to Radar and Allied Equipment, Lincoln Laboratory, 24-28 October 1960	22 Nov. 1960		
†Vol. 2		248691	
†Vol. 3		248692	
†Final Report, Project Barnstable	30 June 1960	240363	

## LINCOLN LABORATORY PUBLICATIONS

An Introduction to the Theory of Random Signals and Noise	W. B. Davenport, Jr. W. L. Root	1958	McGraw-Hill Book Co., Inc., New York
The Prediction of Ballistic Missile Trajectories from Radar Observations	I. I. Shapiro	1958	McGraw-Hill Book Co., Inc., New York
Microwave Ferrites and Ferrimagnetics	B. Lax K. J. Button	1962	McGraw-Hill Book Co., Inc., New York
Theory and Design of Digital Machines	T. C. Bartee I. L. Lebow I. S. Reed	1962	McGraw-Hill Book Co., Inc., New York
Digital Computers in Research	B. F. Green, Jr.	1963	McGraw-Hill Book Co., Inc., New York
Communication Nets - Stochastic Message Flow and Delay	L. Kleinrock	1964	McGraw-Hill Book Co., Inc., New York
Optimal Control	M. Athans P. L. Falb	1966	McGraw-Hill Book Co., Inc., New York

## ABSTRACTS

		<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
Abstracts of Scientific and Engineering Papers			
†1954-1956		249720	H-240 M\$2.05 P\$57.40
1956-1960	June 1960	249839	H-241 M\$2.20 P\$51.10
1960-1962	June 1962	276880	H-449 M\$1.50 P\$21.65
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No.			<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
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2	Infrared Spectrum Analysis of Plastics and Resins, Particularly Polyurcthanes, Polyesters, Epoxys, and Polymers (1950-1960)			
3	Preparation and Properties of Indium Antimonide Thin Films and Devices Using Indium Antimonide (1955-1960)	28 Dec. 1960	250957	H-252 M \$1.50 P \$4.90
4	Continuous Motion Principle as Applied to Photography and Television (1950-1960)			
5	Adaptive or Self-Optimizing Control Systems (1950-February 1961)	8 Feb. 1961	254335	H-282 M \$1.50 P \$4.90
6	Instrumentation for Recovery and Re-entry of Manned Spacecraft (1955-April 1961)			
7	Perturbative Forces Affecting the Motions of Artificial Earth Satellites (1955-April 1961)	2 Oct. 1961	272830	H-381 M \$1.50 P \$14.40
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11	Ship Stabilization and Position Keeping Devices (1950-March 1962)			
12	Tropospheric Scatter Communication Systems (1955-July 1962)			
13	Soviet Books on Radiotechnology and Electronics in 1962 (1962)	4 Sept. 1962	285491	H-429 M \$1.50 P \$12.40



## Reference Bibliographies

No.			<u>DDC No.</u>	<u>Hayden Serial and Prices</u>
14	Radar Astronomy (1946-August 1962)	31 Dec. 1962	294683	H-462 M \$1.50 P \$4.15
15-1	Radomes, Part I (1949-November 1962)	31 Jan. 1963	401159	H-493 M \$1.50 P \$7.90
16	Raman Spectra of Inorganic Solids with Emphasis on Quartz (1947-December 1962)			
17	Diamond: Synthesis and Properties (1958-December 1962)	30 Apr. 1963	415716	H-509 M \$1.50 P \$4.20
18	Superconducting Magnets and Properties of Superconductors (1960-January 1963)			
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