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BIBLIOGRAPHY OF REPORTS ON
TROPOSPHERIC PROPAGATION

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PREFACE

In August 1945, The Wave Propagation Group of the Columbia University Division of War Research issued their last edition of "Bibliography of Reports on Tropospheric Propagation" (WPG 14), which is soon to be published in "Summary Technical Report of N.D.R.C. C.P. (Committee on Propagation), Volume 1. During March 1947, the Wave Propagation Group Library was transferred to the Basic Microwave Research Section of the Central Radio Propagation Laboratory. It is the purpose of this report to list most of the reports given in WPG 14 and to include articles which have been published since August 1945.

The reports listed are arranged according to the same subject headings as used in WPG 14 except that the headings "Transmission over Part Land--Part Sea", "Doppler Effect" and "Under-Water Sound Propagation" have been removed, and the classifications "Radar Siting and Calibration" and "Cosmic and Solar Radio Noise" have been added. The material under the first two topics has been listed under other subject headings. The recently published "Summary Technical Report of N.D.R.C., Volume 8, Divisions 5 and 6, entitled "The Physics of Sound in the Sea", includes most of the articles listed under the third subject heading.

An author index has been added to facilitate the efforts of research workers to find reports. Requests for the reports should be made to the original sources.

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Abbreviations of Source NamesAmerican

AAF or AAFB	Army Air Forces or Army Air Forces Board
Astrophys. Jour.	Astrophysical Journal
Bell Lab. Rec.	Bell Laboratories Record
Bell Sys. Tech. Jour.	Bell System Technical Journal
BTL	Bell Telephone Laboratories
Bull. Amer. Met. Soc.	Bulletin of the American Meteorological Society
CIT	California Institute of Technology
CESL or ESL	Camp Evans Signal Laboratory or Evans Signal Laboratory
CP	Committee on Propagation
CRPL formerly IRPL	Central Radio Propagation Laboratory, formerly Interservice Radio Propagation Laboratory
CUDWR-WPG	Columbia University Division of War Research- Wave Propagation Group
CUDWR-MPG	Columbia University Division of War Research- Mathematical Physics Group
Dept. Com.	Department of Commerce
Elec. Eng.	Electrical Engineering
Electronic Eng.	Electronic Engineering
FCC	Federal Communications Commission
Jour. Acous. Soc. Amer.	Journal of the Acoustical Society of America
Jour. Appl. Phys.	Journal of Applied Physics
Jour. Opt. Soc. Amer.	Journal of the Optical Society of America
Jour. Sci. Instr.	Journal of Scientific Instruments

American (Cont'd)

MIT	Massachusetts Institute of Technology
MIT-RL	Massachusetts Institute of Technology - Radiation Laboratory
NACA	National Advisory Committee on Aeronautics
NATC	Naval Air Test Center
NDRC	National Defense Research Committee
NRL	Naval Research Laboratory
NEL or NRSL	Navy Electronics Laboratory or Navy Radio and Sound Laboratory
NYU	New York University
OCSO	Office of the Chief Signal Officer
OFS	Office of Field Service
ORB	Operational Research Branch Office of the Chief Signal Officer
ORG	Operational Research Group Office of the Chief Signal Officer
OTCSO	Office of the Theatre Chief Signal Officer
Phil. Mag.	Philosophical Magazine
Phys. Rev.	Physical Review
Proc. IRE	Proceedings of the Institute of Radio Engineers and Waves and Electrons
RCA	Radio Corporation of America
RRL	Radio Research Laboratory - Harvard Univ.
Rev. Mod. Phys.	Reviews of Modern Physics
Rev. Sci. Instr.	Reviews of Scientific Instruments
Sci. Amer.	Scientific American

American (Cont'd)

Terr. Magn. Atmos. Elect.

Terrestrial Magnetism and Atmospheric
Electricity

UTEERL

University of Texas, Electrical Engineering
Research Laboratory

WSC

Washington State College

Australian

AORG

Australian Operational Research Group

ASRLO

Australian Scientific Research Liaison
Office

CSIR-RL

Council for Scientific and Industrial
Research Radiophysics Laboratory

RAAF

Royal Australian Air Force

British

A & AEE

Aircraft and Armament Experimental
Establishment

AC

Advisory Council on Scientific Research
and Technical Development

ADRDE

Air Defense Research and Development
Establishment

AORG

Army Operational Research Group

ARL

Admiralty Research Laboratory

ASE

Admiralty Signal Establishment

BAD

British Admiralty Delegation

B.C.S.O

British Commonwealth Scientific Office

BRL

Baddow Research Laboratory

CAEE

Coast Artillery Experimental
Establishment

CDES

Chemical Defense Experimental Station

British (Cont'd)

CRB	Central Radio Bureau
CVD-CL	Coordination of Valve Development Committee- Clarendon Laboratory
DMO	Director of Meteorological Office
DSIR-RRB	Department of Scientific and Industrial Research-Radio Research Board
GEC	General Electric Company Ltd.
ICI	Imperial Chemical Industries
JIEE	Journal of the Institution of Electrical Engineers
JMRP	Joint Meteorological Radio Propagation Sub-Committee
MO	Meteorological Office, Air Ministry
Met. Res. Com.	Meteorological Research Committee
NMS	Naval Meteorological Service
NPL	National Physical Laboratory
ORS-ADGB	Operational Research Section-Air Defense of Great Britain
ORG formerly ORG	Operational Electronics Group formerly Operational Research Group
POED	Post Office Engineering Department
Proc. Camb. Phil. Soc.	Proceedings of the Cambridge Philosophical Society
Proc. Phys. Soc.	Proceedings of the Physical Society
Proc. Roy. Soc.	Proceedings of the Royal Society
RAE	Royal Aircraft Establishment
RAF	Royal Air Force

British (Cont'd)

RRDE	Radar Research and Development Establishment
SRDE	Signal Research and Development Establishment
TRE	Telecommunications Research Establishment
USWP-AC	Ultra Short Wave Propagation Panel of the RDF Application Committee
USWP-WC	Ultra Short Wave Propagation Panel - Working Committee
Wireless Eng.	Wireless Engineer

Canadian

ORS-WAC	Operational Research Section - Western Air Command
CAORG	Canadian Army Operational Research Group
CRWPC	Canadian Radio Wave Propagation Committee

New Zealand

ORS RNZAF	Operational Research Section - Royal New Zealand Air Force
RDL-DSIR-NZ	Radio Development Laboratory - Department of Scientific and Industrial Research - New Zealand

Other Sources

Ann. der Physik	Annalen der Physik
Compt. Rend.	Comptes Rendus, Académie des Sciences, Paris
Naturwiss	Die Naturwissenschaften
Onde Élec.	L'Onde Électrique

Other Sources (Cont'd)

Phys. Zeit.

Physikalische Zeitschrift

URSI

International Scientific Radio Union

Zeit. für Phys.

Zeitschrift für Physik

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>CONFERENCES AND PROGRESS REPORTS</u>			
Notes on microwave propagation conference at MIT Radiation Laboratory	---	MIT RL 42-9/24/43	Sept. 24, 1943
Conference on propagation- Feb. 10-11, 1944, Empire State Building, New York	---	CUDWR WPG CP	1944
Monthly progress report for the month of March 1944 (New Zealand)	---	RDL DSIR NZ RD 1/363	Apr. 14, 1944
Report of International Radio Propagation Conference	--	IRPL C-61	June 1944
Progress report, Radio Development Laboratory for months of June and July 1944	--	RDL-DSIR-NZ RD 1/439	June July 1944
The air defense system of the near islands	T. J. Carroll	OCSO OAD-55	Aug. 30 1944
Reviews of Progress of USW Propagation Work USWP			
I. The evaluation of solu- tions of the wave equation for a stratified medium	D. R. Hartree	AC 7017 USW	Sept. 26, 1944
II. Statement of work in pro- gress relevant to investi- gations of the propagation of radio waves through the troposphere	R.L.Smith-Rose	AC 7018 USW	Sept. 25, 1944
III. Microwave propagation re- search at Signal Research & Development Establishment	---	AC 7019, USW SRDE	Sept. 26, 1944
IV. Correlation of radar opera- tional data with meteoro- logical conditions.	---	AC 7020 USW AORG	Sept. 28, 1944
V. Progress report on forecast- ing of radar conditions	---	AC 7021 USW DMO	Oct. 2, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
VI. Vertical temperature and humidity gradients at Rye.	--	DMO AC 7022 USW	Oct. 2, 1944
VII. The use of radar for detection of storms.	--	DMO AC 7023 USW	Oct. 2, 1944
VIII. Present states of theoretical study of radio propagation through the troposphere by the mathematics group.	--	TRE AC 7024 USW	Oct. 2, 1944
IX. Review of short-period experimental studies of centimeter wave propagation carried out jointly by ASE & SRDE and GEC.	E.C.S. Megaw	AC 7025 USW	Oct. 16, 1944
X. Study of cm wave propagation over Cardigan Bay to Mount Snowden.	F. Hoyle	AC 7026 USW	Oct. 14, 1944
XI. Study of reflection coefficient of the sea at centimeter wavelengths.	F. Hoyle	AC 7027 USW	Oct. 14, 1944
XII. K, X, and S (Llandudno) trials-general summary of the experimental results obtained which are concerned with the dependence of radio propagation on meteorological conditions.	--	TRE & RRDE AC 7028 USW	Oct. 14, 1944
XIII. Progress report on 369 trials by DNMS.	--	DNMS AC 7029 USW	Oct. 14, 1944
XIV. Survey of progress in the United Kingdom on the electromagnetic theory of tropospheric propagation.	--	RRDE AC 7030 USW	Oct. 16, 1944
XV. Study of meteorological factors responsible for the refractive structure of the troposphere.	--	RRDE AC 7031 USW	Oct. 16, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Scientific investigations on propagation problems in the South West Pacific area	F.W.G. White	Australia	July 25, 1944
Report No. 1, Project SWP-3.2 of OFS	P. A. Anderson	WSC	Nov. 2, 1944
Data on super-refraction supplied by Australian radar stations (Progress report on analysis of data from 200 Mc radar stations Mar.-Aug. 1944)	J.W. Reed	CSIR-RL RP 229/1	Dec. 6, 1944
Report No. 2 of project SWP - 3.2 of the OFS	P. A. Anderson	WSC	Jan. 7, 1945
Bibliography of reports on tropospheric propagation (fifth edition)	--	CUDWR WPG-14	Aug. 1945
Second report of the ultra short-wave panel working committee	--	AC 8350 USW 144	Sept. 1945
Third conference on propagation Washington D.C., Nov. 16-18, 1944	--	CUDWR WPG	1945
Atlas of radio climatology (proposal and plans)	--	JMRP No. 80	June 28, 1946
Final report-Research Laboratory of Electronics	J. A. Stratton A. G. Hill	MIT Research Laboratory of Electronics	June 30, 1946
Report on the international conference of URSI	Y. Rocard	Reviews of Science, Paris 84 pp 500-501	Nov. 1, 1946
Annual report-1946 conference on electrical insulation	--	National Research Council Division of Engineering and Industrial Research	Nov. 7-8, 1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
First technical report under Signal Corps project	--	MIT Dept. of Meteorology Weather Radar Research	Dec. 31, 1946
Weather radar research at MIT	A. C. Bemis	Bull. Amer. Met. Soc. <u>28</u> No. 3, pp 115-117	Mar. 1947
Study of the effects of precipitation and water vapor on the propagation of microwaves---Quarterly progress report	R. T. Gabler E. J. Duckett E. W. Matthews	Westinghouse Research Lab. WG 760 NP-1	Apr. 15, 1947
Interim report on measurements of radar echo intensities from rain and snow	--	TRE T 2082	July 15, 1947
Quarterly progress reports	--	MIT Research Laboratory of Electronics	1946 & 1947
Quarterly progress report	--	Westinghouse Research Lab.	July 15, 1947
Progress reports on improvement of electric hygrometer elements for meteorological use	--	Arthur D. Little, Inc.	Mar.-Aug. 1947
Progress Reports	E. L. Chaffee	Cruft Laboratory, Harvard Univ.	Jul. 1 to Oct. 1, 1947
Final report on research project in electromagnetic wave propagation	--	MFG-11 CUDWR	Nov. 15, 1947
Meteorologie et radio-electricite	A. Perlat	Onde. Elec. <u>28</u> No. 251 pp 44-54	Feb. 1948

GENERAL DISCUSSIONS

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Effects of siting conditions on operation of ground radar installations on aerodromes	J. L. Putman	TRE T 1805	No date
Considerations affecting choice of wavelength	K. T. Bainbridge	RL V-7S	Sept. 24, 1941
Notes on microwaves	W. W. Hansen	MIT RL T-2	Oct. 20, 1941
Fundamentals of early warning radar	--	ORG-E-5-1 OCSO	Mar. 5, 1943
RDF propagation at centimeter wavelengths	F. J. Kerr	Australia No. 284 RP 177	Apr. 27, 1943
Notes on ultra-short wave propagation in the United States	H. G. Booker	TRE S 4457	Aug. 9, 1943
An introduction to micro-wave propagation	D. E. Kerr P. Rubenstein	MIT RL 406	Sept. 16, 1943
Anomalous propagation and the Army	T. J. Carroll	OCSO Rpt. No. ORB-P-18-1	Mar. 4, 1944
Electrical communication systems engineering	--	War Dept. TM 11-486 (2nd Edition)	Apr. 25, 1945
German scientific library of the Bevollmachtigte für Hochfrequenzforschung (BHF)	--	Field Intelli- gence Agency Technical No.753 Pb.No.27439	1946
Lectures on propagation at the radio location convention, March 1946	--	JIEE 93 Pt IIIA No.1 pp 69-113	1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
German scientific literature published during the war	N. D. Crane	Field Intelligence Agency Technical No. 676	Jan. 1946
Factors affecting choice of transmission frequencies for line of sight systems	L. S. Schwartz	NRL R3005	Oct. 29, 1946
Elements of wave propagation using the impedance concept	H. G. Booker	Engineering <u>162</u> p 547 Discussion JIEE Pt. III pp 199-202	Dec. 6, 1946 May 1947
Meteorological investigations in connection with radio propagation	N. K. Johnson	Meteorological Factors in Radio-Wave Propagation pp 212-214, The Physical Society, London	1947
Radar system engineering (Volume I of Radiation Laboratory Series) Chapters 2 and 3	L. N. Hidenour	McGraw-Hill Book Co., New York, N.Y.	1947
Radar aids to navigation (Volume II of Radiation Laboratory Series) Chapter 7 pp 354-363, and pp 21-26	--	McGraw-Hill Book Co., New York, N.Y.	1947
The maximum range of a radar set	K. A. Norton	Proc. IRE <u>35</u> pp 474 4-24	Jan. 1947
Elementary Manual of Radio Propagation	D. H. Menzel	Printice-Hall Inc., New York	1948
Summary technical report of NDRC, CP Vol. 3, Propagation of radio waves (Volumes 1 and 2 are to be available in early 1948)	C. R. Burrows Chairman, Committee on Propagation CUDWR	War Department Library, Room 1A-522 Pentagon, Washington 25, DC	1948

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The propagation of short radio waves (Volume XIII of Radiation Laboratory Series)	D. E. Kerr	McGraw-Hill Book Co., New York, N.Y.	(Expected in spring 1948)
Office of Scientific Research and Development reports; a bibliography and index of the numbered series available from the Office of Technical Services, Pb 78000	--	Office of Technical Services, Dept. of Commerce, Washington 25, D. C.	June 1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>STANDARD ATMOSPHERE PROPAGATION</u>			
Propagation of radio waves over a plane earth (Letter to the editor of Nature)	K. A. Norton	Nature 135 p. 954	June 8, 1935
Space and surface waves in radio propagation	K. A. Norton	Phys.Rev.52 No. 2, pp 132-133	July 15, 1937
The diffraction of electromagnetic waves from an electrical point source round a finitely conducting sphere with applications to radio-telegraphy and the theory of the rainbow Parts I and II	H. Bremmer B. Van Der Pol	Phil.Mag. <u>24</u> pp 141-176 <u>24</u> pp 825-864	July 1937 Nov. 1937
The propagation of radio waves over a finitely conducting spherical earth Part III	H. Bremmer B. Van Der Pol	Phil.Mag. <u>25</u> , pp 817-837	June 1938
The propagation of radio waves over a finitely conducting spherical earth	H. Bremmer B. Van Der Pol	Phil.Mag. <u>27</u> pp 261-275	March 1939
Physical reality of space and surface waves in the radiation field of radio antennas	K. A. Norton	Proc.IRE <u>25</u> No. 9, pp 1192-1202	Sept. 1937
Application of the phase integral method to the analysis of the diffraction and refraction of wireless waves round the earth	T. L. Eckersley G. Millington	Philosophical Transactions of the Royal Society <u>237</u> pp 273-309	Jan. 1938
Ergebnisse einer Theorie die Fortpflanzung elektromagnetischer Wellen über eine Kugel endlicher Leitfähigkeit	--	Hochfrequenz- technik und Elektroakustik 51 No. 6, pp 181-188	June 1938
Further note on the propagation of radio waves over a finitely conducting spherical earth	B. Van Der Pol H. Bremmer	Phil.Mag. <u>27</u> pp 261-275	March 1939

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Horizontally polarized electromagnetic waves over a spherical earth	M. C. Gray	Phil.Mag. <u>27</u> pp 421-436	Apr. 1939
The diffraction of wireless waves round the earth	T. L. Eckersley G. Millington	Phil.Mag. <u>27</u> pp 517-542	May 1939
The experimental verification of the diffraction analysis of the relation between height and gain for radio waves of medium lengths	T. L. Eckersley G. Millington	Proc.Phys.Soc. <u>51</u> pp 805-809	Sept. 1939
On the modification of the interference method of investigating the propagation of radio waves (in English)	L. I. Mandelstam N. D. Papalexi	Compt.Rend. URSS <u>26</u> pp 775-779	1940
Ultra-high frequency wave propagation (Presented at the Television Hearing before FCC)	K. A. Norton	FCC No.38521	Jan. 15, 1940
Field intensity survey of ultra-high frequency broadcasting stations (Presented at the hearing before the FCC in the matter of aural broadcasting on frequencies above 25,000 kc.)	K. A. Norton	FCC No.40004	March 18, 1940
The calculation of ground-wave field intensity over a finitely conducting spherical earth (Presented at the hearing before the F.C.C. in the matter of Aural broadcasting on frequencies above 25,000 kc.)	K. A. Norton	FCC No.39920	March 18, 1940
A theory of tropospheric wave propagation (Presented at the hearing before the FCC in the matter of aural broadcasting on frequencies above 25,000 kc.)	K. A. Norton	FCC No.40003	March 18, 1940

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Ultra short wave propagation curves (0.1 to 10 meters)	--	Marconi Handbook	March 28, 1940
Theoretical field-strength of RDF equipment over a spherical sea	G.G. Macfarlane H.G. Booker	TRE AMRE Draft Manual M/2205	July 1940
Report on signal strength curves within the visual range	--	Marconi RD 456	Nov. 1940
The problem of plane waves incident on a circular cylinder parallel to the electric vector. Appendix: Expression for the echoing power of a cylinder	--	ASE 397	1941
The effect of the earth's curvature on ground-wave propagation	C.R. Burrows M.C. Gray	Proc. IRE <u>29</u> pp 16-24	Jan. 1941
The effect of frequency on the signal range of an ultra-high frequency radio station with particular reference to a television broadcast service (Presented at the Television Hearing before FCC)	K. A. Norton	FCC No. 48466	March 20, 1941
Theoretische resultaten over de voorplanting van radio-golven	B. Van Der Pol	Naturkundig Laboratorium translated by N.V. Philips, Gloeilampen Fabrieken, Eindhoven, Holland	Aug. 1941 Translated April 14, 1945
Ultra short wave propagation curves 0.1 to 10 meters (Supplement)	G. Millington	Marconi RD 456A	Sept. 1941

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Propagation curves for wavelengths of 13 meters, supplement to USW propagation curves RD 456	--	Marconi RD 456A	Nov. 1941
The calculation of ground-wave field intensity over a finitely conducting spherical earth	K. A. Norton	Proc. IRE <u>29</u> pp 623-639	Dec. 1941
The elements of wave-propagation using the impedance concept	--	TRE Rpt. No. M/26 or TRE T 1026	Dec. 1941
Propagation of a surface wave over curved and stratified ground (in German)	J. Grosskopf	Hochfrequenz-technik und Elektroakustik <u>58</u> pp 163-171	Dec. 1941
Microwave Interference patterns	J. A. Stratton	MIT RL C-1	Mar. 7, 1942
Diffraction round a sphere or cylinder	G. Millington	BRL No. TR 433	Mar. 18, 1942
Dependence of range of radar equipment on wavelength for ASV Case 23815 & 23817	C. R. Burrows	BTL MM-42-160-54	June 1, 1942
Theoretical field strength of ten centimeter equipment over a spherical earth	H. G. Booker	TRE M/45/HGB or TRE T 1128	July 1, 1942
Atmospheric refraction and height determination by RDF (Details and results of a numerical method of first order correction)	E. Eastwood	RAF Calibration Memo 54	July 6, 1942
Dependence of range of submarine radar equipment on wavelength-Case 20564	C. R. Burrows	BTL-MM-42-160-70	July 9, 1942

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Transmission on 100 Mc over sea water	J. A. Stratton	MIT RL C3	July 14, 1942
Transmission on 200 Mc over sea water	J. A. Stratton	MIT RL C4	July 14, 1942
Transmission on 500 Mc over sea water	J. A. Stratton	MIT RL C5	July 14, 1942
Transmission on 3000 Mc over sea water	J. A. Stratton	MIT RL C2	July 14, 1942
Theoretical ground ray field strengths and height gain curves for wavelengths of 2- 2000 M	--	BRL Section E Tech. Rpt. 383	Sept. 1942
VHF field strength curves for propagation within the line of sight	G. J. Camfield	RAE Radio/279 RAE Ref; Radio/s 2111/OPE 16	Oct. 1942
Relation of radar range to frequency and polarization	J. A. Stratton R. A. Hutner	MIT RL C6	Nov. 3, 1942
The reflection coefficient of a linearly graded layer	T. L. Eckersley	BRL TR 492	Dec. 1942
Interim report on propagation within and beyond the optical range	C. Domb M. H. L. Pryce	ASE M 448	Sept. 1942
Die Ausbreitung der elektrischen Wellen längs der Erdoberfläche (ohne Berücksichtigung der Ionosphäre)	W. Pfister	Jahrbuch der Deutschen Akademie der Luftfahrtforschung pp 221-299	Dec. 1942
1 to 10 cm propagation curves	G. Millington	Marconi TR 460	Jan. 1943
Properties of the diffracted wave field intensity	R. A. Hutner E. Lyman	MIT RL C8	Feb. 12, 1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The calculation of expected vertical coverage diagrams	M. Sherman Revised by W. S. McAfee	CESL T-17	Feb. 19, 1943 Revision Oct. 15, 1943
The effect of earth curvature on the performance diagram of an RDF station	--	TRE 29/ R, 102/LGHH	Feb. 25, 1943
Theory of the vertical field patterns for RDF stations	J. C. Jaeger	CSIR-RL RP 174	Mar. 17, 1943
Radar height finding	R. A. Hutner H. Dodson J. Gill B. Howard F. Parker J. A. Stratton	MIT RL C9	Apr. 6, 1943
Radar equation	--	Electronics <u>18</u> 92-94	Apr. 1945
Technical requirements for GCI search systems, Technical requirements for early warning radar systems	L. J. Chu, N. H. Frank	RL TCAW 1 and 2	May 10, 1943
Low-angle coverage of early warning radar systems	N. H. Frank	RL TCAW-3	July 26, 1943
Factors relating to the design of an RDF air warning set	F. J. Kerr	CSIR RL RP 187	Aug. 11, 1943
A graphical method of computing the bending of radio beams by the effective earth radius method	H. Raymond	CESL T-14	Aug. 27, 1943
Transmission at low altitude over sea water	R. A. Hutner F. Parker B. Howard H. Dodson J. Gill	MIT RL C10	Sept. 1, 1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Radio-frequency propagation above the earth's surface	P. F. Godley Jr.	RCA Lab. Rpt. No. 895-5	Sept. 11, 1943
Field intensity formulas	R. A. Hutner H. Dodson J. Gill F. Parker B. Howard	MIT RL C11	Sept. 28, 1943
Notes on field intensity computations for elevated antennas. Case 20878	M. C. Gray	BTL MM-43- 110-28	Oct. 9, 1943
Charts for use in field intensity computations	K. Bullington	NDRC Proj. C-79	Nov. 2, 1943
Notes on visibility problems, taking account of the curvature of the earth	--	AORG No. 152	Dec. 1, 1943
Simplified methods of field intensity calculations in the interference region	W. T. Fishback	MIT RL 461	Dec. 8, 1943
Field strength near and beyond the horizon for wavelengths of ten and thirty cms	--	TRE-M/Rpt 53/WW	Dec. 24, 1943
Ideal field intensity distribution in the vertical plane for transmitting or receiving antennas when each has the same pattern	J. W. Herbstreit	OCSO ORG-PP-5	1944
Theoretical field strength near and beyond horizon for orthodox propagation of 50 cm waves	--	TRE T 1635	Feb. 24, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Height/range/alpha tables (Tables relating to the height, range and angle of elevation of an aircraft)	--	ORS ADGB Radar Memo No. 50	Aug. 10, 1944
The propagation functions for an atmosphere with uniform lapse-rate of refractive index	T. Pearcey	RRDE Res. Rpt.No. 256	Sept. 1, 1944
Propagation curves	--	BTL NDRC Div. 15 Rpt.966-60	Oct. 1944
Field strength calculator for vertical coverage patterns and propagation curves	C. R. White	CESL Tech. Memo 154-E	Dec. 20, 1944
On the propagation of radio waves along an imperfect surface	E. Feinberg	Jour.Phys. USSR 1945 <u>9</u> pp 1-6	
Field intensity contours in generalized coordinates	H. Dodson J. Gill B. Howard	MIT RL 702	May 2, 1945
On the propagation of radio waves along an imperfect surface	E. Feinberg	Jour. of Physics USSR <u>10</u> , No. 5 pp 410-418	1946
On the propagation of ultra- short electro-magnetic waves in the zone of direct visi- bility (in Russian)	S. V. Braude I.E. Ostrovski	Bull.Acad. of Sciences (URSS) ser.phys. <u>10</u> No. 2 pp 225- 294	1946
Application of the "phase integral" method to the problem of radio wave propa- gation along the earth surface (in Russian)	M. I. Ponomarev	Bull.Acad. of Sciences (URSS) ser. phys. <u>10</u> (No.2) pp 189-195	1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Curved earth geometrical optics	G. Millington	Marconi Review <u>9</u> pp 1-12	Jan - Mar 1946
Propagation of microwaves	A. de Gouvenain	Toute la Radio <u>13</u> pp 50-52	Feb. 1946
On Huyghens' principle	Y. Rocard	Onde Elect. <u>26</u> , pp 288- 298	July 1946
Accuracy of the earth flattening approximation in the theory of microwave propagation	C. L. Pekeris	Phys. Rev. <u>70</u> pp 518-522	Oct. 1, 1946
A modification to ray theory allowing for ground contour	H. P. Williams	Electronic Engineering <u>19</u> , pp 17-20	Jan. 1947
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A Method for calculating electric field strength in the interference region	H. E. Newell, Jr.	Proc. IRE <u>35</u> p 777	Aug. 1947
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>PURE THEORY</u>			
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The tracing of rays in the refracting atmosphere	T. Pearcey	ADRDE AC 3878/USW	Apr. 21, 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Radar ray patterns associated with normal and anomalous propagation conditions	F. P. Dane R.U.F. Hopkins L.J. Anderson	NRSL WP-6	Dec. 10, 1943
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The theory of propagation of radio waves in an inhomogeneous atmosphere	T. Pearcey	ADRDE Res. Rpt. No. 245	Apr. 1944
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Theoretical coverage-- diagrams for 10 cm radars embracing super- refraction	--	TRE T 1634	Apr. 14, 1944
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Theoretical coverage diagrams for $1\frac{1}{2}$ m radars embracing superrefraction	--	TRE T 1708	July 23, 1944
Propagation curves embracing superrefraction: SS Duct, Profile index 0.2 (preliminary edition)	H. G. Bocker	TRE M/Memo 23/WW	Sept. 7, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
A note on the reflection coefficient of an isotropic layer of varying refractive index	G. Millington	BRL TR 497	Oct. 5, 1944
Anomalous propagation over the earth, Case 23703	S. A. Schelkunoff	BTL MM-43-110-33	Oct. 30, 1944
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Theory of characteristic functions in problems of anomalous propagation	W. H. Furry	MIT RL 680	Feb. 28, 1945

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Theoretical coverage diagrams for 3 meter radars embracing superrefraction	W. Walkinshaw R. Hensman	TRE T 1815	Mar. 18, 1945
The evaluation of the solution of the wave equation for a stratified medium (II)	D. R. Hartree	RRDE Res.Rpt. No. 279	Mar. 18, 1945
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Convergence effects in reflections from tropospheric layers	W. W. Carter	NRL Rpt. R-2546	June 2, 1945
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Perturbation theory for an exponential M-Curve in non-standard propagation	C. L. Pekeris	CUDWR WFG-12	July 1945
Graphs for computing the diffraction field with standard and super-standard refraction	P.J. Rubenstein W.T. Fishback	MIT RL 799	Aug. 13, 1945

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Five metre propagation characteristics	D. W. Heightman E. J. Williams	Royal Society G. B. Bulletin <u>22</u> pp 98-102	Jan. 1947
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>PROPAGATION - EXPERIMENT AND THEORY</u>			
Radio interpretation of meteorological observations in the first two meters of atmosphere above grass at Harlington, Middlesex Jan. to June 1940	--	TRE T 1471	1940
Atmospheric refraction and blind bombing	--	TRE T 1025	Oct. 1941
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Anomalous propagation of 10 cm RDF waves over the sea, also the first supplement	--	AORG No. 87	Feb. 6, 1943 July 26, 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The effect of atmospheric refraction on the propagation of radio waves	A. C. Stickland	RRB/s10	Mar. 20, 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The K effect in anomalous propagation of ultra-short waves	F. Syer	RAAF Australia No. 266	Aug. 10, 1943
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The propagation of 1-cm waves over the sea as deduced from meteorological measurements	J. M. C. Scott T. Pearcey	ADRDE Res. Rpt. No. 227	Nov. 11, 1943
Centimeter wave propagation over land. A preliminary study of the field strength records between March and September 1943	R. L. Smith-Rose A. C. Stickland	DSIR RRB/S.13	Nov. 14, 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Measurement of refractive index gradients	F.L. Westwater	JIEE Pt. IIIA 93 No. 1 pp 100-101	1946
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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An analysis of low level meteorological ducts	L.W. Sicinski	SRDE Rpt. 1020	July 1947
3 and 9 cm propagation in low ocean ducts	M. Katzin R.W. Bauchman W. Binnian	Proc. IRE <u>35</u> No. 9 pp 891-905	Sept. 1947
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The propagation of 10 cm waves over an inland lake. Correlation with meteorological soundings	P. A. Anderson K. E. Fitzsimmons S. T. Stephenson	WSC Rpt. No. 5	Nov. 16, 1947
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A study of tropospheric reception at 42.8 Mc and meteorological conditions	G. W. Pickard H. T. Stetson	MIT Cosmic Terrestrial Research Laboratory Tech. Rpt. No. 1948-1	Jan. 30, 1948

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Centimeter wave propagation over sea within and beyond the optical range	E.C.S. Megaw H. Archer-Thomson E. M. Hickin F. Hoyle	ASE M 532	July 1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Investigation No. 369 (Irish Sea Experiment)	--	British Ministry of Supply AC 5970 AC 5971 AC 5972 AC 5973 AC 5974 AC 6334 AC 6828 AC 7206 AC 7465 AC 7668	9/1/43 12/14/43 1/15/44 2/9/44 3/20/44 5/14/44 8/12/44 10/19/44 11/10/44 1/4/45
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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An estimation of the incidence of anomalous propagation in the Cook Strait area of New Zealand from Jan. 1943 to Jan. 1944	F.E.S. Alexander	RDL-DSIR-NZ RD 1/373	May 2, 1944
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Report on cross channel propagation of British No. 10 set	K. R. Spangenberg	OCSO OAD-2	Aug. 26, 1944
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The vertical distribution of field strength over the sea under conditions of normal and anomalous propagation	J. A. Ramsay P. B. Blow	RRDE Res. Rpt.No.267	Jan. 5, 1945
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Centimeter wave tests for long distances	O. Stützer,	Drahtlostele- graphische und Lufttelektrische Versuchsstation Air Materiel Command, Wright Field ZWB-JB-RE 1355	Apr. 1947
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The slopes of isopychnic surfaces in the lower atmosphere	--	M.O. Air Ministry JMRP No. 48	Mar. 29, 1945

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Note on errors in measurement of refractive index of the air for high frequency radio waves consequent upon errors in meteorological measurements and Addendum-Note on errors in evaluation of refractive index of the air for ultra-short radio waves from the data obtained on the Rye Tower	G. A. Bull	JMRP No. 51	Apr. 1945
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Methods of calculating characteristic values for bilinear M curves	W. H. Furry H. W. Dodson J. R. Gill B. E. Howard F. D. Parker	MIT RL No. 795	Feb. 6, 1946
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Negative resistance-temperature coefficients of thin evaporated films of bismuth	T. J. Tulley	Nature <u>157</u> p 372	Mar. 23, 1946
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The British radiosonde	P.A. Sheppard	Quarterly Journal of the Royal Meteorological Society <u>72</u> pp 169-173	Apr.- July 1946
Radiosonde telemetering systems	V. D. Hauk and others	Electronics <u>19</u> pp 120-123	May 1946
Pulse type radio altimeter	A. Goldman	Electronics <u>19</u> pp 116-119	June 1946
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Radio direction finding at 1.67 m wavelength	L. C. L. Yuan	Proc. IRE <u>34</u> pp 752-756	Oct. 1946
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A photoelectric hygrometer	B. Hamermesh F. Reines S. A. Korff	Bull. Amer. Met. Soc. <u>28</u> No. 7 pp 330--334	Sept. 1947
Meteorological radio direction finder for measurement of upper winds	R. A. Kirkman J. M. Lebedda	Journal of Meteorology <u>5</u> No. 1 pp 28-37	Feb. 1948

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>RADAR FORECASTING</u>			
Oboe propagation Aug.-Oct. 1943	H. G. Booker	TRE T 1605	1943
Forecasting of RDF conditions	---	AORG Memo No. 103	May 31, 1943
The meteorological aspects of anomalous propagation--short wave radio	R. W. Hatcher	JMRP No. 1	June 1943
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The possibility of investigating the föhn wind and sea breeze phenomena in New Zealand with a view of elucidating certain problems of radio meteorological forecasting in other parts of the world	M.A.F. Barnett F.E.S. Alexander	RDI-DSIR- NZ RD 1/471	Dec. 1, 1944
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>ATMOSPHERIC ABSORPTION AND SCATTERING</u>			
Contributions to the optics of diffusing media, particularly of colloidal metals in solution	G. Mie	Ann. der Physik <u>25</u> pp 377-445	1908
The effect of rain and fog on the propagation of very short radio waves	J.A. Stratton	Pro.IRE <u>18</u> pp 1064-1075	June 1930
Transmission of cm electro-magnetic waves	I. Wolff E.G. Linder R.A. Braden	Proc.IRE <u>23</u> pp 11-23	Jan. 1935
Die Schwachung sehr kurzer elektrischen Wellen beim Durchgang durch Wolken und Nebel	K. Franz	Hochfrequenz- technik und Elektroakustik <u>55</u> pp 141-143	May 1940
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Absorption and refraction of electromagnetic waves by the liquid water, water vapour and fog or rain	---	MOS CRB 43/2881	1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The relation of raindrop-size to rainfall intensity	J. O. Laws D. A. Parsons	National Research Council American Geophysical Union Transactions of 1943, Part II	1943
An investigation on the number and size distribution of water particles in nature	J. Mazur	Meteorological Research Committee MRP 109	June 1943
Report on the absorption of electromagnetic waves in the wave-length range 1-100 cm by water in the atmosphere	N. F. Mott	MOS CRB 43/2882	Sept. 2, 1943
Report on the absorption and refraction of electromagnetic waves by the liquid water, water vapour and fog or rain	N. F. Mott	CRB 43/2881	Sept. 2, 1943
Progress report on verification of Mie theory, calculations and measurements of light scattering by dielectric spherical particles	V.K. La Mer	Office of Scientific Research and Development 1857, Div. 10	Sept. 29, 1943
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An experimental investigation of the reflection and absorption of radiation of 9 cm wavelength	L. H. Ford R. Oliver	NPL RRB/C107	1944
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The absorption of centimeter radiation by atmospheric gases	J. M. Hough	ADRDE USWP WC	Apr. 27, 1944
Attenuation due to water drops in the atmosphere	J. M. Hough	USWP WC	Apr. 28, 1944
Transmission of light by water drops 1-5 microns in diameter	R. Ruedy	Canadian Jour. of Res. <u>22</u> Sec. A pp 53-66	May 1944
Interim report of the USW Panel Working Committee	---	USWP WC AC 7375	July August Sept. 1944
Part I Water in the atmosphere			
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Part III Attenuation of centimeter waves by rain, hail and clouds			
Part IV The attenuation of centimeter waves by rain			
Propagation of K/2 band waves	G. E. Mueller	BTL MM-44-160- 150	July 3, 1944
Preliminary note on secure communications on millimeter waves	---	TRE L/M40/WBL	Sept. 11, 1944
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The effect of rain on radar performance	S. C. Hight	BTL MM-44-170-50	Oct. 17, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The absorption of one-half centimeter electromagnetic waves in oxygen	E. R. Beringer	MIT RL 684	Jan. 26, 1945
Measurements of wave propagation	G. E. Mueller	BTL MM-45-160-17	Feb. 5, 1945
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K-band attenuation due to rainfall	L.J. Anderson J.P. Day C.H. Freres J.B. Smyth A.P.D. Stokes L.G. Trolese	NRSL WP-20	June 8, 1945
Preliminary report on optimum wavelength for storm detection	R. Wexler D. M. Swingle	CESL TM-183R	Nov. 7, 1945

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The attenuation of centimetre radio waves and the echo intensities resulting from atmospheric phenomena	J. W. Ryde	JIEE Pt. IIIA <u>93</u> No. 1 pp 101-103	1946
Atmospheric absorption in the 9 mm region and its effect on the choice of Q-band wavelength	C.R. Ditchfield	TRE U3/M132	Jan. 1946
The absorption of atmospheric water vapor in the K-band region	R. H. Dicke R. L. Kyhl A. B. Vane E. R. Beringer	MIT RL 1002	Jan. 15, 1946
Radio echoes from the planets; microwave absorption	W. D. Hershberger	Science <u>103</u> p 371	Mar. 22, 1946
Propagation of 6 mm waves (formerly BTL MM 44-160-150)	G. E. Mueller	Proc. IRE <u>34</u> No. 4 pp 181-183	Apr. 1946
The effect of rain upon the propagation of waves in the 1 and 3 cm regions (Formerly contained in BTL MM 43-160-2, 42-160-93, 42-160-87)	S. D. Robertson A. P. King	Proc. IRE <u>34</u> pp 178-180	Apr. 1946
An experimental investigation of the reflection and absorption of 9 cm wavelengths	L. H. Ford R. Oliver	Proc. Phys. Soc. <u>58</u> pp 265-280	May 1946
Absorption of microwaves by gases	W. D. Hershberger J. E. Walter	Jour. Appl. Phys. <u>17</u> pp 495-500 and pp 814-822	June 1946 Oct. 1946
The absorption of 1 cm electromagnetic waves by atmospheric water vapor	R. L. Kyhl R. H. Dicke E. R. Beringer	Phys. Rev. <u>69</u> p 694	June 1-15, 1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Absorption of microwaves by water	S. H. Autler G. E. Becker J.M.B. Kellogg	Phys. Rev. <u>69</u> p 694	June 1-15, 1946
Final report on icing research July 1, 1945 to July 1, 1946	--	GE Res. Lab.	July 1, 1946
The liquid water content of summer clouds on the summit of Mt. Washington (G.E.Cloud Meter described)	V. J. Schaefer	GE Res. Lab.	July 1, 1946
Thermal and acoustic effects attending absorption of microwaves by gases	W. D. Hershberger E. T. Bush G. W. Leck	RCA Review <u>7</u> pp 422-431	Sept. 1946
Optimum wavelength for storm detection through rain	R. Wexler	CESL TM-M 1004	Sept. 10, 1946
Atmospheric absorption measurements with a micro- wave radiometer	R. H. Dicke R. L. Kyhl E. R. Beringer A. B. Vane	Phys. Rev. <u>70</u> pp 340-348	Sept. 1-15, 1946
Water vapor absorption of electromagnetic radiation in the centimeter wave- length region	G. E. Becker S. H. Autler	Phys. Rev. <u>70</u> pp 300-307	Sept. 1-15, 1946
Attenuation of 1.24 cm radiation through rain	L. J. Anderson C. H. Freres J. P. Day A.P.D. Stokes	Phys. Rev. <u>70</u> p 449	Sept. 1-15, 1946
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Millimetre wave propagation	H.R.L. Lamont A.G.D. Watson	Nature <u>158</u> pp 943-944	Dec. 28, 1946

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The attenuation and radar echoes produced by centimeter wave-lengths by various meteorological phenomena	J. W. Ryde	Meteorological Factors in Radio Wave Propagation pp 169-189 Physical Society London	1947
Field intensities beyond line of sight at 45.5 and 91 megacycles	C. W. Carnahan N. W. Aram E.F. Classen Jr.	Proc. IRE <u>35</u> No. 2 pp 152	Feb. 1947
Attenuation of 1.25 centimeter radiation through rain	L. J. Anderson J. P. Day C. H. Freres A.P.D. Stokes	Proc. IRE <u>35</u> No. 4 pp 351-354	Apr. 1947
Absorption of microwaves by uncondensed water vapor	J. H. Van Vleck	Phys. Rev. <u>71</u> pp 425-433	Apr. 1, 1947
Absorption of microwaves by oxygen	J. H. Van Vleck	Phys. Rev. <u>71</u> pp 413-424	Apr. 1, 1947
Expected microwave absorption coefficients of water and related molecules	G. W. King R. M. Hainer P. D. Cross	Phys. Rev. <u>71</u> pp 433-443	Apr. 1, 1947
Measurement of approximate raindrop size by microwave attenuation	P. M. Austin	Journal of Meteorology <u>4</u> No. 4 pp 121-124	Aug. 1947
Rainfall intensities and attenuation of centimeter electromagnetic waves	R. Wexler J. Weinstein	Proc. IRE <u>36</u> No. 3 pp 353-355	Mar. 1948

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>DIELECTRIC CONSTANT AND LOSS FACTOR</u>			
A new method for measuring dielectric constant and loss in the range of centimeter waves	S. Roberts A. von Hippel	Department of Electrical Engineering MIT 102	March 1941
Wave guides with dielectric sections	L. J. Chu		March 1941
The electrical properties of ice	T. A. Taylor W. Jackson	AC 1516 RDF 110 Com 78	Dec. 28, 1941
The dielectric constant of water vapour and its effect upon the propagation of very short waves	A. C. Stickland	DSIR RRB/S.2	May 11, 1942
The electrical properties of soil at wavelengths of 5 meters and 2 meters	J. S. McPetrie J. A. Saxton	NPL RRB/C 44	May 19, 1942
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The interaction between electro-magnetic fields and dielectric materials	A. von Hippel R. B. Breckenridge	Div. 14 NDRC Rpt. No. 122	Jan. 1943
Progress report on ultrahigh frequency dielectrics	A. von Hippel	Div. 14 NDRC Rpt. No. 121	Jan. 1943
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The dielectric constant and absorption coefficient of water vapour for wavelengths of 9 cm and 3.2 cm (Frequencies 3,330 and 9,350 Mc)	J. A. Saxton	DSIR RRB/S.11	June 14, 1943

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Auxiliary equipment for the MIT Co-Ax instrument and its use	A. von Hippel D. G. Jelatis W. B. Westphal M. G. Haugen R. E. Charles	Div. 14, NDRP Rpt. No. 210	Nov. 1943
Dielectric transmission and scanner nacelle design Part I	J. B. Birks	TRE T 1677 & 1679	1944
The dielectric constant absorption coefficient of water vapour for radiation of wavelength 1.6 cm	J. A. Saxton	RRB/S17	1944
Memorandum on an electrical method of measuring the dielectric constant of atmospheric air and recording it continuously	--	TRE M/ Memo 15 JMRP No. 8	Jan. 6, 1944
The dielectric constant of water and ice at centimetre wavelengths	J. M. Hough	USWP WC	Apr. 28, 1944
Preliminary report on the dielectric properties of water in the K band	C. H. Collie	CVD Misc. 25	May 1944
Transmission and reflection of single plane sheets (Radome Bulletin No. 4)	R. M. Redheffer	RL 483-4	July 12, 1944
Recent dielectric constant and loss tangent measurements (on X-band) (Radome Bulletin No. 5)	E. M. Everhart	MIT RL 483-5	July 14, 1944
Dielectric transmission and scanner nacelle design Part II	J. B. Birks	TRE T 1769	Dec. 1944
Dielectric properties of water and ice at K-band	E. L. Younker	MIT RL 644	Dec. 4, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The electrical properties of soil at wavelengths of 5 meters and 2 meters	J. S. McPetrie J. A. Saxton	JIEE Pt. III <u>92</u> pp 256-258	Nov. 1945
Dielectric properties of water	C. H. Collie D. M. Ritson J. B. Hasted	Transactions of the Faraday Society <u>42A</u> pp 129-136 Discussion pp 155-170	1946
The dielectric constants of eight gases	L. G. Hector D. L. Woernley	Phys. Rev. <u>69</u> pp 101-105	Feb. 1-15, 1946
Theory of the dispersion of magnetic permeability in ferro-magnetic materials at microwave frequencies	C. Kittel	MIT Research Laboratory of Electronics Tech. Rpt. No. 2	May 20, 1946
Measurement of the electric conductivity of the air by a tetrode electrometer	J. Lacaze	Compt. Rend. <u>222</u>	May 20, 1946
The inversion spectrum of ammonia at centimeter wavelengths	B. Bleaney R. P. Penrose	CVD CL Misc. 64	June 1946
A new method for measuring dielectric constant and loss in the range of centimeter waves	S. Roberts A. Von Hippel	Jour. of Appl. Phys. <u>17</u> pp 610-616	July 1946
A microwave dielectric loss measuring technique	W. R. MacLean	Jour. of Appl. Phys. <u>17</u> pp 558-566	July 1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The anomalous dispersion of water at very high radio frequencies. Part II-- Relation of experimental observations to theory	J. A. Saxton	Meteorological Factors in Radio-Wave Propagation pp 292-306 The Physical Society London	1947
The anomalous dispersion of water at very high radio frequencies. Part III-- The dipole relaxation time and its relation to the viscosity	J. A. Saxton	Meteorological Factors in Radio-Wave Propagation pp 306-316 The Physical Society London	1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The anomalous dispersion of water at very high radio frequencies. Part IV-- A note on the effect of salt in solution	J. A. Saxton	Meteorological Factors in Radio-Wave Propagation pp 316-325 The Physical Society London	1947
The dielectric properties of water vapour at very high radio frequencies	J. A. Saxton	Meteorological Factors in Radio-Wave Propagation pp 215-237 The Physical Society London	1947
Measurement of the dielectric properties of soils and water at 3.2 cm wavelength	A. W. Straiton C. W. Tolbert	UTEERL No. 4	July 10, 1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>REFLECTION COEFFICIENT</u>			
Centimeter wave propagation over sea within the optical range	H. Archer-Thomson J. C. Dix F. Hoyle E. C. S. Megaw M. H. L. Pryce	ASE M 398	Jan. 1942
Preliminary report on the reflection of 9 cm radiation at the surface of the sea	H. Archer-Thomson N. Brooke T. Gold F. Hoyle	ASE M 542	Sept. 1943
Comment on the reflection of microwaves from the surface of the ocean-II	S. O. Rice	BTL MM-43-210-6	Oct. 13, 1943
S-band measurements of reflection coefficients for various types of earth	E. M. Sherwood	Sperry Gyroscope Co., Inc. Rpt. 5220.129	Oct. 29, 1943
Scattering	T. L. Eckersley	BRL Joint Electronics Information Agency No. 3904	Nov. 1943
Special report on the determination of the coefficient of reflection of radio waves at the ground by means of radar observations	W. S. Ament	NRL RA 3A 212A	Nov. 10, 1943
Preliminary measurements of 10-cm reflection coefficients of sea water at small grazing angles	F. J. Rubenstein W. T. Fishback	RL 478	Dec. 11, 1943
Further measurements of 3 and 10-cm reflection coefficients of sea water at small grazing angles	W. T. Fishback P. J. Rubenstein	RL 568	May 17, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Microwave propagation studies--The reflection of sound signals in the atmosphere--Case 37003, File 36691-1	F. H. Willis	BTL MM-44-160-156	July 3, 1944
Interim report on experiments on ground reflection at a wave-length of 9 cms	L. H. Ford	DSIR RRB/C.101	July 7, 1944
An experimental investigation of the reflection and absorption of radiation 9 cm wave-length	L. H. Ford R. Oliver	DSIR RRB/C.107	Oct. 27, 1944
The measurement of high reflections at low power (Radome Bulletin No. 7)	R. M. Redheffer	RL 483-7	Nov. 20, 1944
Ground reflection coefficient experiments on X-Band--Case 20564	W. M. Sharpless	BTL MM-44-160-250	Dec. 15, 1944
Reflection and scattering	T. L. Eckersley	BRL TR 506	Jan. 1945
Reflection from an inversion	L.E. Beghian F.J. Northover	AC 8210 USW 140	May 24, 1945
Electrical constants of the ground sea and water in the microwave range	--	CUDWR WPG-15	Sept. 1945
Reflexion of centimetric electromagnetic waves over ground and diffraction effects with wire netting screens	J. S. Hey S. J. Parsons F. Jackson	Proc. Phys. Soc. <u>59</u> pp 847-857	Sept. 1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>HORIZONTAL AND VERTICAL POLARIZATION</u>			
Notes on the comparison of vertical and horizontal polarization in ground wave propagation	G. Millington	BRL TR 441	Jan. 1940
Horizontal and vertical polarization	T.L. Eckersley	BRL TR/442	July 1942
The investigation of horizontally and vertically polarized direction finding on frequencies of the order of 20 to 70 megacycles per second	T.L. Eckersley	BRL TR/541	Sept. 1942
Polarization effects and aerial system geometry at centimeter wavelengths	E.C.S. Megaw H. Archer-Thomson E. M. Hickin	GEC No. 8101	Nov. 26, 1942
Change of polarization as a means of gap filling	R. A. Hutner F. Parker B. Howard J. Gill	MIT RL C7	Dec. 28, 1942
Photographic polarization tests	G. A. Garrett K. L. Mealey	MIT RL-93-3	May 7, 1943
Vertical polarization vs. horizontal polarization (Tentative report)	R. C. Loring	CESL T-1	Oct. 22, 1943
The depolarization of microwaves	M. Kessler C. E. Mandeville E. L. Hudspeth	MIT RL 458	Nov. 1, 1943
Polarization studies of S and X frequencies	O. J. Baltzer W. M. Fairbank J. D. Fairbank	MIT RL 536	Mar. 14, 1944
Alexandra Palace tests	T. L. Eckersley	BRL TR 498	Oct. 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>EFFECT OF HILLS, TREES, OBSTACLES, ETC.</u>			
Screening by hills	H. G. Booker	TRE T 1015	May 1941
Diffraction round a sphere or cylinder	--	BRL TR/433	March 1942
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The propagation of ultra short waves round hills and other obstacles	T. L. Eckersley	BRL TR 479	May 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Addendum to paper dated 20th January, 1944 entitled "Report on some further experiments on the effect of obstacles on the propagation of centimeter waves"	L. H. Ford A. C. Grace J. A. Lane	AC 5876a Com. 213a USWa	Jan.1, 1945
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An experimental investigation on the propagation of radio waves over bare ridges in the wavelength range 10 cm to 10 m (frequencies 30 to 3,000 Mc)	J.S. McPetrie and L. H. Ford	JIEE Pt.IIIA <u>93</u> No. 1 pp 108-109	1946
An experimental investigation on the propagation of radio waves over bare ridges in the wavelength range 10 cm to 10 m	L. S. McPetrie L. H. Ford	JIEE Pt.IIIA <u>93</u> No. 3 pp 527-530	1946
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>TARGETS AND ECHOES</u>			
A quantitative study of sea returns at centimeter wave-lengths for moderately small angles of elevation	A. L. Cockroft H. Davies R. A. Smith	TRE T 1933	No date
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Scattering of electromagnetic waves by an ellipsoid	W. S. McAfee H. Wolfe	CESL Tech. Rpt. T-16	Feb. 8, 1943
The resolution of composite echoes with centimeter wave RDF	J. R. Benson J. A. Ramsay P. B. Blow	CAEE 4070/C/ 104	Feb. 10, 1943
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Reflection of radar waves from targets of simple geometric form	L. J. Anderson J. B. Smyth F. R. Abbott	NRSL WP-3	Feb. 24, 1943
Radar echoes from periscopes	J. E. Freehafer	RL 42-1	Mar. 1, 1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Possible measurement of radar echoes by use of model targets	S. A. Goudsmit P. R. Weiss	MIT RL 43-24	Mar. 4, 1943
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Gratings and screens as micro-wave reflectors	---	MIT RL 54-20	Apr. 1, 1943
Optimum wavelength for long-range cw radar systems	W. W. Hansen	Sperry Gyroscope Co., Inc. Rpt. No. 5220-126	May 1, 1943
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The application of corner reflectors to radar (theoretical)	R. D. O'Neil F. S. Holt P. D. Crout	MIT RL 43-31	May 14, 1943
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Measurement of the effective echoing areas of various aircraft	R. Bateman	OCSO ORG P-8-1	July 2, 1943
Over water observations at X and S frequencies on surface targets	O. J. Baltzer V. A. Counter W. M. Fairbank W. O. Gordy E. L. Hudspeth	MIT RL 401	July 26, 1943
Corner reflector tests at Langley Field	C. M. Gilbert	RL 402	Aug. 6, 1943
Properties of corner reflectors- Case 22098	S. D. Robertson	BTL MM-43-160-130	Aug. 12, 1943

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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An investigation into the	---	A.C. Cossor Ltd. Res. Dept. Myra Works London E 10 Mr. 109	Sept. 8, 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
The use of permanent echo amplitudes for monitoring S-band radar equipment	F. J. Kerr J. F. McConnel	CSIR-RL #RP 177/2	Dec. 7, 1943
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Optical theory of the corner reflector	R. C. Spencer	MIT RL 433	Mar. 2, 1944
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
On light scattering by spheres II	L. Brillouin	Applied Mathematics Group Columbia University No. 132	1944
The performance of naval radar systems against aircraft	F. Hoyle	Joint Electronics Information Agency No. 3902	Apr. 3, 1944
Preliminary report on the fluctuation of radar signals	H. Goldstein P. D. Bales	MIT RL 569	May 16, 1944
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Radar cross section of ship targets III	W.S. Ament M. Katzin F.C. MacDonald	NRL Rpt. No. R-2295	June 27, 1944
Theory of the performance of radar on ship targets	M. V. Wilkes J. A. Ramsay P. B. Blow	ADRDE Ref. RC4/2/Cr252 CAEE Ref. 69/C/149	July 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
Notes on echoes and atmos- pherics from lightening flashes on P-band	J. L. Pawsey	CSIR-RL No. RP 49.2	July 11, 1944
Theory of ship echoes as applied to naval RCM operations	T. S. Kuhn P. J. Sutro	RRL 411-93	July 14, 1944
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Radar echoes from shell-bursts at 4 meters and 50 cm wave- lengths	S. M. Taylor F. E. W. Bugler	RRDE Res. Rpt. No. 260	Sept. 1944
Radar echoes from shell bursts at 4 meters and 50 cms wave- length	S. M. Taylor F. E. W. Bugler	RRDE Res. Rpt. No. 260	Oct. 9, 1944

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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The cancellation of permanent echoes by the use of coherent pulses (Interim report)	H. Grayson	RAE Tech. Note No. Rad. 253	Nov. 1944
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Measurements on the ionization and X-band attenuation of gun flashes	E. R. Andrew D.W.E. Axford T. M. Sugden	RRDE Res. Rpt. No. 296	1945
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Analysis of over-water tracking	E. J. Campbell	MIT RL 695	Feb. 12, 1945
Sea returns and the detection of Schnorkel	G. G. Macfarlane	TRE T 1787	Feb. 13, 1945

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
An observation of diffuse cloud-like echoes	J. L. Pawsey F. J. Kerr	OSIR RL RP 246	Mar. 6, 1945
The so-called standard target	A. H. Brown	MIT RL S-43	Mar. 10, 1945
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Comments on radar echoes from water droplets	R. G. Ross	AC 7931/USW 129	Mar. 16, 1945
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Radar cross section of ship targets VI	W. J. Barr	NRL R2467	Apr. 10, 1945
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Records of storms with radar equipment	--	Science 102 Sup. 14	Oct. 26. 1945
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Radar echoes from the moon	J. Mofenson	Electronics <u>19</u> pp 92-97	Apr. 1946
The frequency dependence of radar echoes from the surface of the sea	H. Goldstein	Phys. Rev. <u>69</u> Nos. 11/12 p 695	June 1-15, 1946
Properties of radar echoes from shell splashes	H. Goldstein	Phys. Rev. <u>70</u> pp 232-233	Aug. 1-15, 1946
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Radar observations during meteor showers 9 Oct. 1946	R. Bateman and others	Science <u>104</u> pp 434-435	Nov. 8, 1946

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Theory of radar reflection from wires of thin metal strips	J.H. Van Vleck and others	Jour. Appl. Phys. <u>18</u> pp 274-294	March 1947
Radar photography of a frontal wave	R. Wexler	Journal of Meteorology <u>4</u> No. 2	Apr. 1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Microwave telephone, Part I Omnidirectional, Part II Directional	H. H. Beverage	RCA NDRC SC-13	Mar. 22, 1943
Radiotelephone communication on 3000 Mc	P.A. Anderson K.E. Fitzsimmons C.L. Barker S.T. Stephenson	WSC Rpt. 2	June 1943
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Microwave communication link	H. R. L. Lamont R. G. Robertshaw T. G. Hammerton	Wireless Engineer <u>24</u> pp 323-332	Nov. 1947
Propagation in FM Broadcast Band	K. A. Norton	To be published 1948 in "Advances in Electronics" Academic Press, New York	

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Radar calibration report- New York region	R.C.L. Timpson	Mitchell Field, N.Y.	Nov. 30, 1943
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Reflexion of centimetric electromagnetic waves over ground, and diffraction effects with wire-netting screens	J. S. Hey S. J. Parsons F. Jackson	Proc. Phys. Soc. <u>59</u> pp 847-857	Sept. 1, 1947

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
<u>COSMIC AND SOLAR RADIO NOISE</u>			
The intensity of cosmic noise A survey of the data available	J.M.C. Scott	RRDE Rpt. No. 286	No date
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Electrical disturbances apparently of extraterrestrial origin	K. G. Jansky	Proc. IRE <u>21</u> 10, pp 1387- 1398	Oct. 1933
A note on the source of inter- stellar interference	K. G. Jansky	Proc. IRE <u>23</u> 10, pp 1158- 1163	Oct. 1935
The propagation of radio waves over the surface of the earth and in the upper atmosphere	K. A. Norton	Proc. IRE <u>24</u> pp 1367-1387 Part I Proc. IRE <u>25</u> pp 1203-1236 Part II	Oct. 1936 Sept. 1937
On the origin of interstellar radio disturbances	F. J. Whipple J. L. Greenstein	Proceedings of the National Academy of Sciences <u>23</u> , pp 177- 181	1937
Minimum noise levels obtained on short-wave radio receiving systems	K. G. Jansky	Proc. IRE <u>25</u> pp 1517-1530	Dec. 1937
Cosmic static	G. Reber	Astrophysical Journal <u>91</u> p 621	June 1940
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Signal/noise measurements on CV-58	E. Durand	MIT RL 416	Aug. 11, 1943
The theory of random processes	G. E. Uhlenbeck	MIT RL 454	Oct. 15, 1943
Cosmic static	G. Reber	Astrophysical Jour. <u>100</u> pp 279-287	1944
Survey of existing information and data on atmospheric noise level over the frequency range 1-30 mcs	H. A. Thomas R. E. Burgess	DSIR RRB/C 90	Feb. 21, 1944
Thermodynamical and statistical considerations of fluctuation noise	R. E. Burgess	DSIR RRB/C.100	July 4, 1944
The measurement of small CW signals and thermal radiation at 3.2 cm	K. F. Sander	RRDE Res. Rpt. No. 302	1945
Measurement of solar radiation at 3.2 cm during the eclipse of 9.7.45	K. F. Sander	RRDE Memo No. 1017	1945

<u>Title</u>	<u>Author</u>	<u>Source</u>	<u>Date</u>
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Microwave radiation from the sun	G. C. Southworth	Jour. Franklin Inst. <u>239</u> pp 285-297	Apr. 1945
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Measurement of cosmic noise at 60 mcs	K. F. Sander	RRDE Res. Rpt. No. 285	May 31, 1945
The measurement of thermal radiation at microwave frequencies	R. H. Dicke	MIT RL 787	Aug. 22, 1945
Radio waves from the sun	--	Nature <u>156</u> p 273	Sept. 1, 1945
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