

CBJ:AN  
I-6

DEPARTMENT OF COMMERCE  
BUREAU OF STANDARDS  
WASHINGTON

Letter  
Circular  
No. 207.

(September 4, 1926)

BIBLIOGRAPHY ON RADIO WAVE PHENOMENA AND MEASUREMENT  
OF RADIO FIELD INTENSITIES.

These references are intended to be a fairly complete bibliography of this subject. It is requested that persons using it notify the Bureau of references to any articles that should be included and of any mistakes, if any are found, in the references. After some months a revised edition will be issued.

The reference numbers heading the sections are according to Circular 138, "A Decimal Classification of Radio Subjects - An Extension of the Dewey System," obtainable from the Superintendent of Documents, Government Printing Office, Washington, D.C., for ten cents a copy.

R112.1.-- Radiation.

Optimum wave length in radio telegraphy. A.H.Taylor. Physical Review, 1, pp.321-325; April, 1913. Sci.Abs.B, No.380, 1913.

Radiated and received energy in radio telegraphy. L.W.Austin. Proceedings of the American Philosophical Society, 52, p.407; May-Aug., 1913. Sci.Abs.B, p.540; 1913.

The nature of electromagnetic radiation employed in radio telegraphy and mode of propagation. G.W.O.Howe. Electrician, 71, p.965; Sept.19, 1913.

The mechanism of radiation and propagation in radio communication. F. Lowenstein. Proceedings Institute of Radio Engineers, 4, pp.271-281; June, 1916.

On the wave length and radiation of loaded antennae. B. van der Pol, Jr. Proceedings Physical Society (London), 29, pp.269-289; 1916.

Principles of radio transmission and reception with antennae and coil aerials. J.H.Dellinger. B.S.Sci.Papers No.354. 1919.

R113.--Transmission Phenomena.

Hindering and assisting influences in wireless transmission. P. Schwartzhaupt. Elektrotechnische Zeitschrift, 31, pp.113-114; Feb.3, 1910. Elec. Engineering, 45, p.239; Feb.25, 1910. Sci. Abs.B, p.112; 1910.

Über einige Versuche mit Radiotelegraphie auf grosse Entfernung. L. W. Austin. Jahrbuch der drahtlosen Telegraphie, 5, p.75; 1912.

Montana State University  
Bozeman, Montana

17

## Montana State University

Montana State University  
Bozeman, Montana

Montana State University  
Bozeman, Montana

Montana State University  
Bozeman, Montana

## Montana State University

Montana State University  
Bozeman, Montana

## Montana State University

Montana State University  
Bozeman, Montana

Montana State University  
Bozeman, Montana

Local absorption in radio telegraphy. A.H.Taylor. Electrical World, 61, p.350; 1913.

Quantitative results in recent radio telegraphic tests between Arlington, Va. and U.S.S.Salem. J.V.L.Hogan. Electrical World, 61, pp.1361-1366; June 21, 1913.

A study of the propagation and interception of energy in wireless telegraphy. C.A.Culver. Physical Review, 3, p.282; 1914.

Quantitative experiments on radio telegraphic transmission. L.W.Austin. Jahrbuch der drahtlosen Telegraphie, 8, pp.575-594; August, 1914. Sci. Abs. B, No.236, 1914.

Propagation of waves. E. Thomson. General Electric Review, 18, May, 1915.

Long distance transmission. L. Cohen. Electrician, 76, p.743; February 25, 1916.

Strength of signals. E.W.Marchant. Electrician, 75, pp.267-270; May 28, 1915. Electrician, 75, pp.309-311; June 4, 1915. Sci.Abs. B, p.311; July 26, 1915.

Sustained wave receiving data. L.F.Fuller. Proceedings Institute Radio Engineers, 4, p.305; 1916.

Signaling range in radio telegraphy. J.V.L.Hogan. Electrical World, 66, p.1250; December 4, 1915. Electrician, 76, p.699, February 18, 1916.

Quantitative measurements at Washington on the signals from the German radio stations at Nauen and Eilvese. L.W.Austin. Journal Franklin Institute, 182, pp.605-611; November, 1916. Electrician, 78, pp.465-466; January 12, 1917. Sci.Abs.B, No.64, 1917.

The U.R.S.I. signals. Wireless World & Radio Review, 10, p.20; April, 1922.

Radiation measurements in wireless telegraphy. R. Mesny. L'Onde Electrique, 1, pp.54-61; January, 1922. Sci.Abs.B, No.558, April, 1922.

La propagation des ondes electromagnetiques a la surface de la terre. L. Bouthillon. Radioélectricité, 3, pp.289-294; July, 1922.

Application to radio of wire transmission engineering. L. Espenschied. Bell System Technical Journal, 1, pp.117-141; November, 1922. Proceedings Institute of Radio Engineers, 10, p.344; October, 1922.

On propagation phenomena and disturbances of reception in radio telegraphy. F. Kiebitz. Proceedings Institute of Radio Engineers, 12, pp.233-241; June, 1924.

1994:10:2505-2520  
A Comparison of the Diurnal Cycle of Cloud Cover and Precipitation in the Northern Hemisphere

John E. Hahn<sup>1</sup>, Michael S. Weller<sup>2</sup>, and James R. McPhee<sup>3</sup>

<sup>1</sup>Department of Earth Sciences, University of California, Santa Barbara, California  
<sup>2</sup>Department of Earth Sciences, University of California, Santa Barbara, California  
<sup>3</sup>Department of Earth Sciences, University of California, Santa Barbara, California

(Manuscript received 12 January 1994, in final form 12 April 1994)

Editorial handling: John T. Kiehl

**ABSTRACT.** The diurnal cycle of cloud cover and precipitation in the Northern Hemisphere is examined using data from the National Centers for Environmental Prediction (NCEP) reanalysis. The NCEP reanalysis is used to estimate the diurnal cycle of the fraction of the Northern Hemisphere covered by clouds and the diurnal cycle of precipitation over the Northern Hemisphere.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The diurnal cycle of the fraction of the Northern Hemisphere covered by clouds is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC. The diurnal cycle of precipitation is shown to have a minimum around 0600–0700 UTC and a maximum around 1800–1900 UTC.

The effect of the earth in the transmission of electromagnetic waves in radiotelegraphy. G.W.O.Howe. Electrician, 83, pp.148-149; August 8, 1934.

Distribution of radio waves from broadcasting stations over city districts. R.Bown and G.D.Gillatt. Proceedings Institute of Radio Engineers, 12, pp.395-410; August, 1924.

Étude sur les irrégularités de propagation des ondes courtes. P. Lardry. L'Onde Électrique, 3, pp.449-466; September, and pp. 502-510; October, 1924.

Sur l'absorption des ondes courtes. J. Granier. L'Onde Électrique, 3, pp.572-582; December, 1924.

Recent investigations on the propagation of electromagnetic waves. M. Baeumler. Proceedings Institute of Radio Engineers, 13, pp.5-27; February, 1925.

Die Ausbreitung der elektromagnetischen Wellen in der Grossstadt. Elektrotechnische Zeitschrift, 46, pp.973-974; June 25, 1925.

On recent advances in wireless propagation both in theory and in practice. A.S.Eve. Journal Franklin Institute, 200, pp.327-333; September, 1925.

A statistical study of conditions affecting the distance range of radio telephone broadcasting stations. C.M.Jansky, Jr. B.S. Technologic Papers No.297. 1925.

An investigation of transmission on the higher radio frequencies. A.H.Taylor. Proceedings Institute of Radio Engineers, 13, pp.677-683; December, 1925.

Distribution of wireless waves (how blind spots in broadcast transmission are produced). R.L.Smith-Rose. Wireless-World & Radio Review, 18, pp.401-405; March 17, 1926.

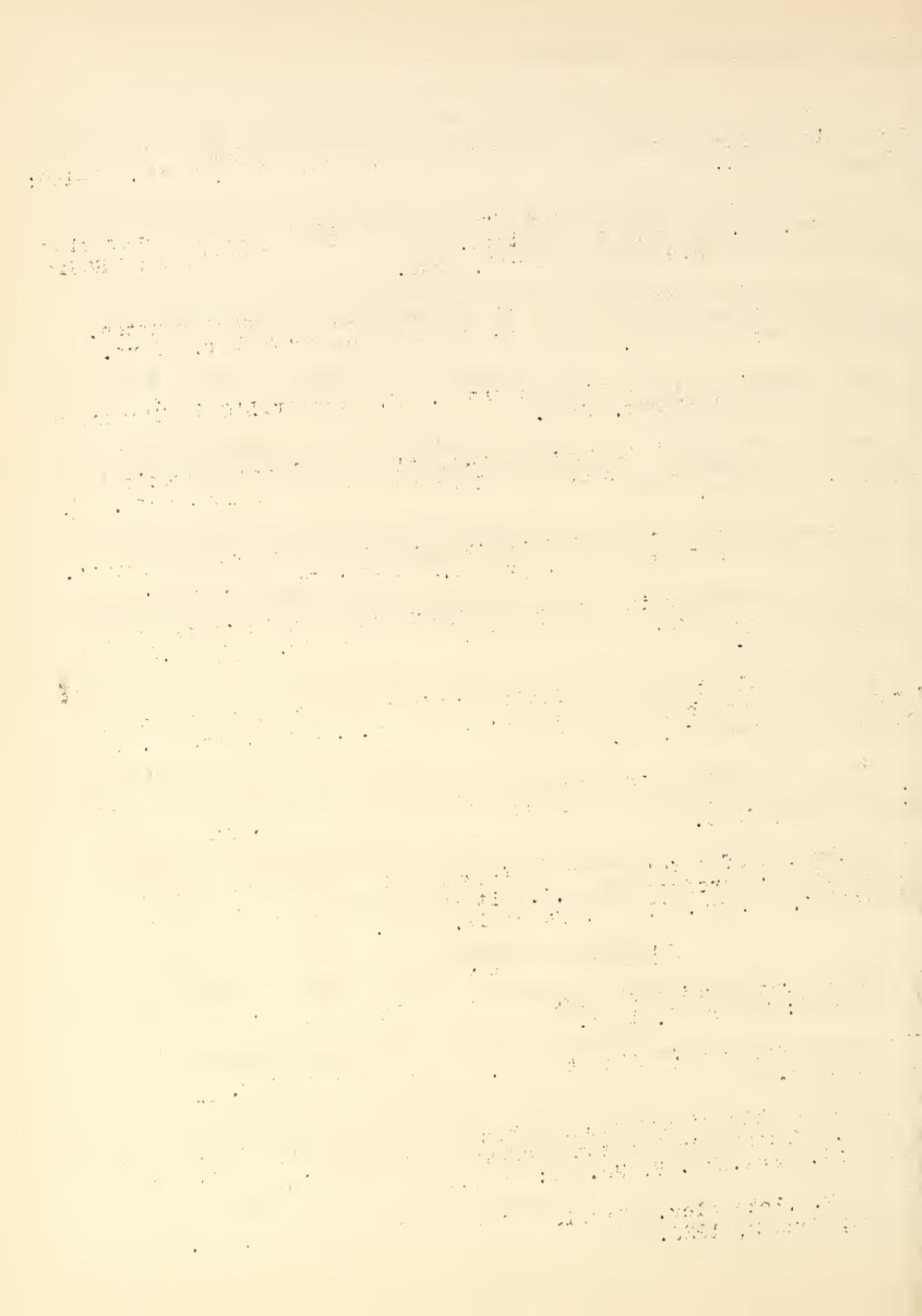
#### R113.1.-- Fading.

Wireless transmission phenomena. J. Williamson. Wireless World, 8, pp.868-869; March 19, 1921.

Wireless Phenomena (fading tests). Electrical Review, 88, p.654; March 20, 1921.

Radiotelegraphic signal fading phenomena. J.H.Dellinger and L.E. Whittemore. Journal Washington Academy of Sciences, 11, pp.245-259; June 4, 1921. Sci.Abs. B, No.924; Sept., 1921.

Fading. P.P.Eckersley. Wireless World & Radio Review, 12, pp.298-299; June 9, 1923.



Fading. W.R.Burne and J.A.Cash. Wireless World & Radio Review, 12, pp.510-513; July 21, 1923.

A study of radio signal fading. J.H.Dellinger, M.E.Whittemore and S. Kruse. B.S.Sci.Papers No.476; 1923.

The fading of signals (fading on short waves). O.F.Brown. Experimental Wireless (London), 1, pp.9-11; October, 1923.

Some experiments on fading of signals. J.A.Cash. Experimental Wireless (London); 1, pp.132-135; December, 1923.

Short period variations in radio reception. G.W.Pickard. Proceedings Institute of Radio Engineers, 12, pp.119-158; April, 1924.

Fading measurements. E.A.Anson. Experimental Wireless (London), 2, pp.645-649; July, 1925.

Some recent observations on periodic fading and the night effect. P.D.Tyers. Experimental Wireless (London), 2, pp.650-654; July, 1925.

Investigation on fading of signals. S.R.Chapman. Experimental Wireless (London), 2, pp.775-779; September, 1925.

The nature, cause and reduction of fading. G.W.Pickard. Radio News, 7, pp.772-773; December, 1925. Modern Wireless, 5, pp.349-354; December, 1925.

Some studies in radio broadcast transmission. R.Bown, DeL.K. Martin and R.K.Potter. Proceedings Institute of Radio Engineers, 14, pp.57-131; February, 1926. Bell System Technical Jnl., 5, pp.143-213; January, 1926. Electrician, 96, pp.168-171; Feb.12, 1926.

The mystery of fading (some notes of observations taken on broadcast stations). O.Hall. Experimental Wireless (London), 3, pp.211-214; April, 1926.

#### R113.2.-- Daily Variations. Seasonal Variations.

Diurnal disturbances in earthed wireless telegraph systems. K.E.F.Schmidt. Electrician, 59, pp.19; April 19, 1907.

On certain phenomena accompanying the propagation of electric waves over the surface of the earth. W.H.Eccles. Electrician, 69, pp.1015-1019; 1912.

On the diurnal variations of the electric waves occurring in nature and on the propagation of electric waves round the bend of the earth. W.H.Eccles. Proceedings Royal Society, 87, p.79; August 13, 1912.

the first time in the history of the world, the  
whole of the human race has been gathered  
together in one place, and that is the  
present meeting of the World's Fair.  
The people of the United States have  
done well in bringing their countrymen  
from all parts of the globe to this  
place where they can see the progress  
of civilization, and where they can  
see the progress of science, and where  
they can see the progress of art,  
and where they can see the progress  
of industry, and where they can  
see the progress of commerce,  
and where they can see the progress  
of agriculture, and where they can  
see the progress of navigation,  
and where they can see the progress  
of engineering, and where they can  
see the progress of architecture,  
and where they can see the progress  
of literature, and where they can  
see the progress of music,  
and where they can see the progress  
of painting, and where they can  
see the progress of sculpture,  
and where they can see the progress  
of photography, and where they can  
see the progress of chemistry,  
and where they can see the progress  
of physics, and where they can  
see the progress of mathematics,  
and where they can see the progress  
of astronomy, and where they can  
see the progress of geology,  
and where they can see the progress  
of biology, and where they can  
see the progress of zoology,  
and where they can see the progress  
of botany, and where they can  
see the progress of physiology,  
and where they can see the progress  
of psychology, and where they can  
see the progress of ethics,  
and where they can see the progress  
of politics, and where they can  
see the progress of law,  
and where they can see the progress  
of government, and where they can  
see the progress of society,  
and where they can see the progress  
of religion, and where they can  
see the progress of philosophy,  
and where they can see the progress  
of morality, and where they can  
see the progress of humanity,  
and where they can see the progress  
of the world.

Difference in strength of day and night signals in radio-telegraphy. L.W.Austin. Journal Washington Academy of Sciences, 3, pp.326; June 4, 1913. Electrical Review and Western Electric, 62, p.1332; June 21, 1913. Sci. Abs. B, p.420; 1913.

Intensity measurement of radio telegraphic signals at different times of year and day. H. Mosler. Elektrotechnische Zeitschrift, 34, p.996; August 28, 1913. Electrician, 72, p.529; Jan.2, 1914.

The daylight effect in radiotelegraphy. A.E.Kennelly. Proceedings Institute of Radio Engineers, 1, pp.39-52; July, 1913. Sci.Abs.B, p.163; March 28, 1914.

Diurnal and annual variations in overland radio transmission. A.H.Taylor. Physical Review, 4, pp.435-439; November, 1914. Sci.Abs.B, p.78; 1915.

Conditions affecting the variations in strength of wireless signals. E.W.Merchant. Journal Institution of Electrical Engineers, 53, pp.329-348; March 1, 1915. Engineering, 92, pp.232-236; Feb. 19, 1915. Electrician, 74, pp.621-624; Feb.12, 1915. Sci.Abs. B, p.204; 1915.

Seasonal variation in strength of radiotelegraphic signals. L.W.Austin. Proceedings Institute of Radio Engineers, 3, pp.103-105; June, 1915. Sci.Abs. B, p.455; September 28, 1915.

Variations in nocturnal transmission. A.H.Taylor and A.S. Blatterman. Proceedings Institute of Radio Engineers, 4, p.131; April, 1916.

Experiments at the U.S.Naval Radio Station at Darien, Canal Zone. L.W.Austin. Proceedings Institute of Radio Engineers, 4, pp.251-269; 1916. Journal Washington Academy of Sciences, 6, pp.81; 1916. Jahrbuch der drahtlosen Telegraphie, 11, pp.125-132; 1916.

Quantitative measurements at Washington of the signals from the German radio stations at Nauen and Eilvese. Journal of the Franklin Institute, p.605; 1916.

Measurement of the electromagnetic field of waves received during transoceanic transmission. G. Vallauri. Proceedings Institute of Radio Engineers, 8, p.286; 1920.

Measurement of the signals received in Washington from the Lafayette station. L.W.Austin. Radio Review, 2, p.2; 1921.

Measurement of the intensity of the signals of the Lafayette station. L.W.Austin. Radio Review, 2, pp.301-303; June, 1921. Sci.Abs.B, No.486, August, 1921.

Über das gleichzeitige auftreten atmosphärischer Störungen. M. Baumler. Jahrbuch der drahtlosen Telegraphie, 19, pp.102-109; February, 1922.



Reception measurements at Naval Radio Research Laboratory.  
L.W.Austin. Proceedings Institute of Radio Engineers, 10,  
pp.158-160; June, 1922.

The monthly averages of signal strength of Nauen in Washington  
1915-1921 and the monthly averages of atmospheric disturbances  
in Washington 1918-1921. L.W.Austin. Proceedings Institute of  
Radio Engineers, 10, pp.153-157; June, 1922.

Observations on Lafayette and Nauen stations in Washington,  
March 1, 1922 to February 28, 1922. L.W.Austin. Proceedings  
Institute of Radio Engineers, 11, pp.459-465; October, 1923.

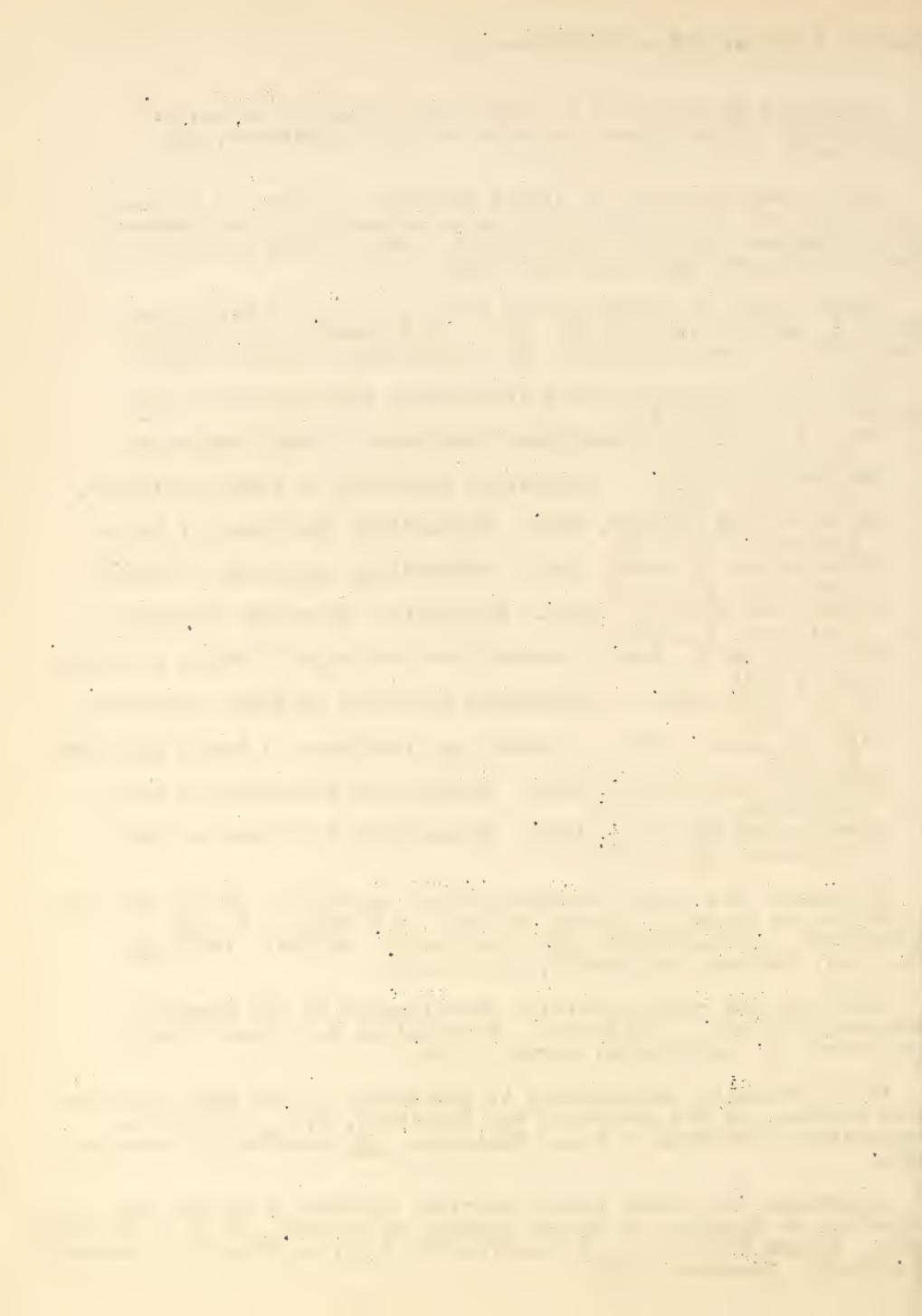
Receiving measurements and atmospheric disturbances at the  
Bureau of Standards for  
March and April. Proceedings Institute of Radio Engineers,  
10, p.315; 1922.  
May and June, 1922. Proceedings Institute of Radio Engineers,  
10, p.421; 1922.  
September and October, 1922. Proceedings Institute of Radio  
Engineers, 10, p.3;  
November and December, 1922. Proceedings Institute of Radio  
Engineers, 11, p.23;  
January and February, 1923. Proceedings Institute of Radio  
Engineers, 11, p.187;  
March and April, 1923. Proceedings Institute of Radio Engineers,  
11, p.333;  
May and June, 1923. Proceedings Institute of Radio Engineers,  
11, p.579;  
July and August, 1923. Proceedings Institute of Radio Engineers,  
12, p.3;  
September and October, 1923. Proceedings Institute of Radio  
Engineers, 12, p.113;  
November and December, 1923. Proceedings Institute of Radio  
Engineers, 12, p.227;

Diagrammes des forces electromotrices mesurées à Meudon pour les  
émissions de Bordeaux, Nantes et Rome. M.R.Mesny. L'Onde  
Électrique, 2, pp.296-299; May; pp.599-601, October, 1923; 3,  
pp.43-46; January; pp.374-375; July, 1924.

Long distance radio receiving measurements at the Bureau of  
Standards in 1923. L.W.Austin. Proceedings Institute of Radio  
Engineers, 12, pp.389-394; August, 1924.

Field intensity measurements in Washington on the Radio Corpora-  
tion stations at New Brunswick and Tuckerton, N.J. L.W.Austin.  
Proceedings Institute of Radio Engineers, 12, pp.681-692; December,  
1924.

Diagrammes des forces electromotrices mesurées à Meudon pour les  
émissions de Bordeaux et Nantes pendant le premier, 2<sup>e</sup> et 3<sup>e</sup> trimestre  
1924. L'Onde Électrique, 3, pp.374-375; July; pp.551-553; November;  
pp.599-601, December, 1924.



Signal strength measurements. A report on some experiments made over great distances during 1922 and 1923 by an expedition sent to Australia. H.J.Round, T.L.Eckersley, K. Tremellen and F.C.Lunnon. Electrician, 34, pp.538-539; May 8, 1925.

Some trans-Pacific radio field intensity measurements. L.W. Austin. Proceedings Institute of Radio Engineers, 13, pp.151-157; April, 1925. Jnl. Washington Academy of Sciences, 15, p.133; 1925.

Long distance radio receiving measurements in 1924. L.W.Austin. Proceedings Institute of Radio Engineers, 13, pp.283-290; June, 1925. Journal Washington Academy of Sciences, 15, No.11, 1925.

Diagrammes des champs électriques mesurés à Meudon. L'Onde Électrique, 4, pp.252-255, June; pp.350-352, August; pp.555-557, December, 1925.

Short wave observations (effect of wave length on daily variations of signal strength). R.W.P.Collings. Wireless World & Radio Review, 18, pp.127-128; January 27, 1926.

Transatlantic radio telephone transmission. Espenschied, Anderson and Bailey. Proceedings Institute of Radio Engineers, 14, p.7; February, 1926.

Sur la propagation des ondes courtes émises à bord du "Jacques Cartier". Decambre and Bureau. L'Onde Électrique, 5, pp.53-71; February, 1926.

Diagramme de champs électriques mesurés à Meudon pendant le troisième trimestre 1925. L'Onde Électrique, 5, pp.186-187; April, 1926.

Diagramme des champs électriques mesurés à Meudon pendant le quatrième trimestre 1925. L'Onde Électrique, 5, pp.223-226; May, 1926.

On the diurnal variation of ultra-short wave wireless transmission. E.V.Apoleton. Proceedings Cambridge Phil. Soc., 23, part 2, p.155; April, 1926.

#### R113.3.--Directional Variations.

Variation in direction of propagation of long electromagnetic waves. A.H.Taylor. Bureau of Standards Sci. Papers No.353, 1919.

Radio direction changes and variations in audibility. C.Kinsley and A. Sobey. Proceedings Institute of Radio Engineers, 8, p.299; August, 1920.

Radio-goniometric and atmospheric influences. E. Rothe. Comptes Rendus, 172, pp.1345-1347; May 30, 1921.



Letter Circular 207 -- 9/4/26 -- 8.

Directional measurement with the Royal Air Force. J. Hollingsworth.  
Radio Review, 2, pp.282-301; June, 1921. Sci.Abs. B, 24, No.844;  
May, 1921.

Effect of the Heaviside layer upon the errors of direction  
finders. T.L. Eckersley. Radio Review, 2, pp.60-65, February; pp.  
231-248, May, 1921. Sci.Abs. B, 24, No.749, July, 1921.

Variation en direction et en intensité du champ electro-  
magnétiques d'une émission. R.Mesny. L'Onde Électrique, 1,  
pp.501-517; September, 1922.

Variation en direction et en intensité du champ électromag-  
netiques d'une émission. L'Onde Électrique, 1, pp.577-587;  
October, 1922.

The direction and intensity of waves from European radio-  
telegraphic stations. G.W.Pickard. Proceedings Institute of  
Radio Engineers, 10, pp.161-175; June, 1922. Sci.Abs. B, No.  
1067, Oct., 1922.

On the determination of the direction of the forces in wireless  
waves at the earth's surface. R.L.Smith-Rose and R.H.Barfield.  
Proceedings Royal Society (London), 107, pp.587-601; March 2, 1925.

A new phenomena in sunset direction variations. L.W.Austin.  
Proceedings Institute of Radio Engineers, 13, pp.409-412; August,  
1925. Journal Washington Academy of Sciences, 15, 1925.

Discussion on "A new phenomena in sunset radio direction varia-  
tions." R.L.Smith-Rose and R.H.Barfield. Proceedings Institute of  
Radio Engineers, 13, pp.781-783; December, 1925.

A suggestion for experiments on apparent radio direction varia-  
tions. E. W. Austin. Proceedings Institute of Radio Engineers,  
13, p.3; February, 1925.

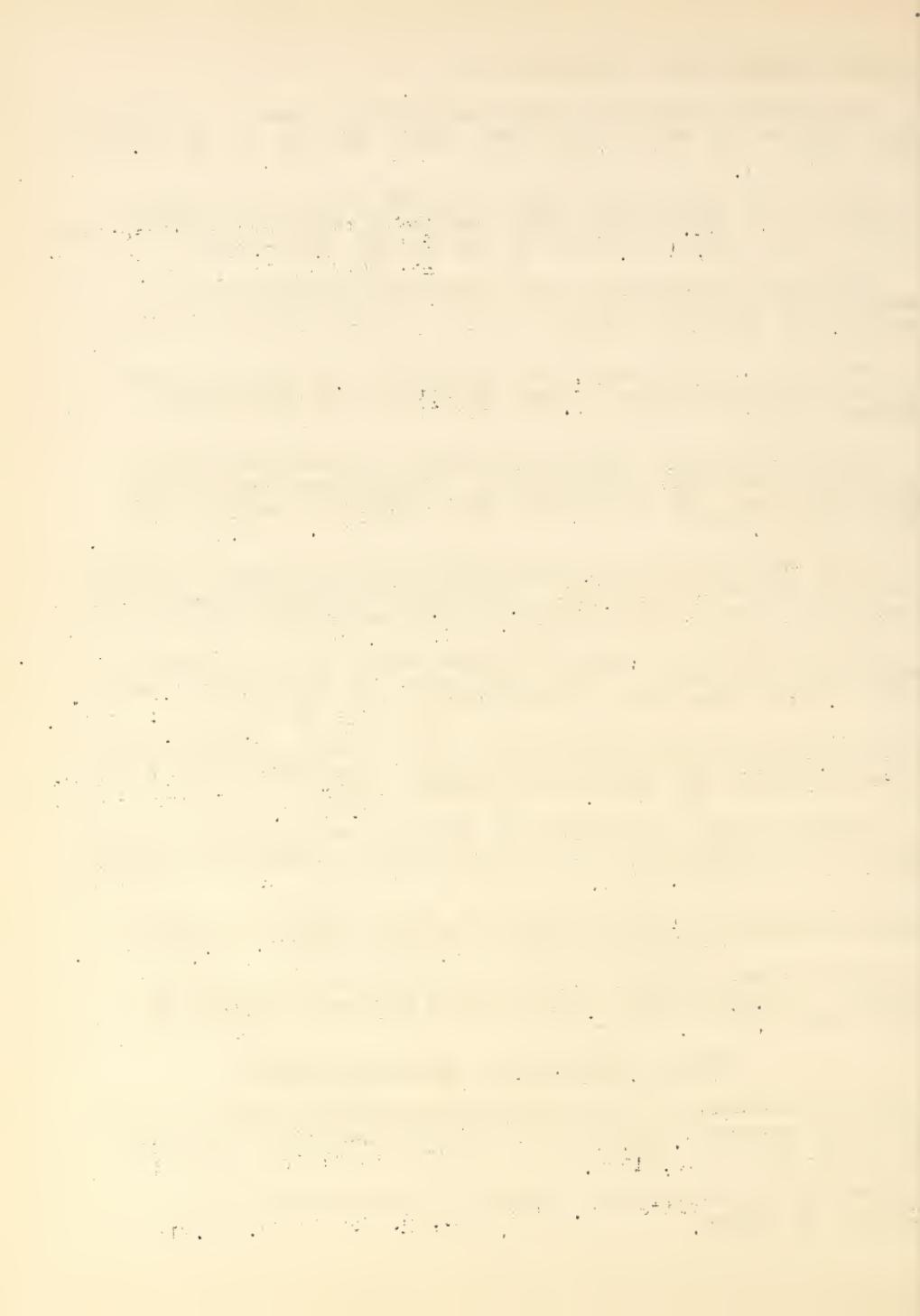
Direction and intensity changes of radio waves. C.C.Bidwell.  
Journal Franklin Institute, 201, pp.107-112; January, 1926.

The cause and elimination of night errors in radio direction  
finding. R.L.Smith-Rose. Experimental Wireless (London), 3,  
p.367; June, 1926.

#### R113.4. Ionization. Heaviside Layer.

On the elevation of the electrically-conducting strata of the  
earth's atmosphere. A.E.Kennelly. Electrical World & Engineer,  
39, p.473; March 15, 1902.

Encyclopedia Britannica. 10th Ed., 9, Heaviside. p.215;  
December 19, 1902.



Effect of ionization of air on electrical oscillations and its bearing on long distance wireless telegraphy. E.H.Barton and W.B.Kelby. Philosophical Magazine, 26, pp.567-578; October, 1923. Sci.Abs.A, No.329, 1914.

Atmospheric ionization and transmission. H.Nagaoka. Proceedings Mathematical Physical Society Tokyo, 7, pp.428 and 430; 1914.

The propagation of electric waves at the surface of the earth and the ionized layer of atmospherics (explains sunset-sunrise and eclipse effects). H.Nagaoka. Electrician, 77, p.741; February 25, 1916.

Die Heaviside Schicht. E.W.Marchant. Jahrbuch der drahtlosen Telegraphie, 12, pp.56-61; June, 1917. Proceedings Institute of Radio Engineers, 4, pp.511-521; 1916.

Die Fortpflanzung elektrischer Wellen auf der Oberfläche der Erde und die ionisierte Schicht der Atmosphäre. H. Nagaoka. Jahrbuch der drahtlosen Telegraphie, 12, pp.35-45; June, 1917.

Sur le theorie du development de Heaviside. J.B.Pomey. Revue Generale de l'Electricité, 4, p.693; November 9, 1918.

Über die Ursache der Zunahme der Ionisation der Atmosphäre mit der Höhe. A. Cockel. Physikalische Zeitschrift, 19, p.114; 1918.

Über die Ursache der Ionisation der Atmosphäre. J.A.Fleming. Jahrbuch der drahtlosen Telegraphie, 8, p.339, 1914; 12, p.175, 1918.

Electrical phenomena in the upper atmosphere. S.Chaoman. Scientific American Supplement, 88, p.199; September 27, 1919.

An ion-producing effect in the upper atmosphere. W. Hammer. Physikalische Zeitschrift, 21, pp.218-219; April 15, 1920. Radio Review, 1, p.563; August, 1920.

The upper atmosphere and radio telegraphy. G.W.O.Howe. Radio Review, 1, pp.381-383; May, 1920.

The effect of the Heaviside layer on the apparent direction of electromagnetic waves. T.L.Eckersley. Radio Review, 2, p.234; 1921.

Berechnung von integral effekten mittels der Heaviside-regel. K.H.Warfvinge. Archiv für Elektrotechnik, 10, pp.374-376; January 28, 1922.

Spannungsgefalle und vertikaler leitungsstrom in der freien atmosphäre nach messungen bei hochfahrten im freiballon. E. Everling and A. Wiegand. Annalen der Physik, 66, pp.261-282; 1921. Telegrafen und Fernsprechtechnik, 11, p.15; April, 1922.



The Heaviside layer (editorial). G.W.O. Howe. Electrician, 89, pp.240-261; September 8, 1922.

The ionized strata. H. deA. Donisthorpe. Wireless Age, 10, p.61; June, 1923.

The overworked Heaviside layer problem and a possible alternative. G.W.O. Howe. Electrician, 92, p.720; June 13, 1924.

The Heaviside layer and how it may be produced. O.F.Brown. Experimental Wireless (London), 1, pp.595-597; July, 1924.

A radio method of estimating the height of the conducting layer. G.Breit and M.A.Tube. Nature, 116, p.357; September 5, 1925.

Local reflections of wireless waves from the upper atmosphere. E.V.Apleton and M.A.F.Barnett. Nature, 115, p.333; 1925.

The Kennelly-Heaviside layer and radio wave propagation. E.O.Hulbert. Journal Franklin Institute, 201, p.597; May, 1926.

#### R113.5. Meteorological.

Climate as a controlling factor in long distance transmission of electrical energy. A.G.Mcadie. Monthly Weather Review, 25, p.439; October, 1897.

Radiotelegraphic experiments made during the transit of Halley's comet. Deutsche Verkehrs-Zeitung, 34, p.256; 1910. Elektrotechnische Zeitschrift, 31, p.644; June 23, 1910. Sci.Abs. B, p.304; 1910.

Einfluss der Atmosphare auf Sender und Empfanger. A.Essau. Physikalische Zeitschrifft, 13, p.721; 1912.

Effects of sunlight on transmission of wireless signals. B.L.Dolbear and J.A.Proctor. Electrical World, 58, p.321; August 5, 1911. Sci.Abs. B, p.86, 1912.

Effects of sunlight and mountains on radio telegraphy. P.Schwartz-Haupt. Elektrotechnische Zeitschrift, 32, p.1313; December 28, 1911. Sci.Abs.B, p.85; 1912.

Influence on the sun's rays on the propagation of Hertzian waves. E. Rothe. Comptes Rendus, 154, p.1454; May 28, 1912. Sci.Abs.B, p.470; 1912.

Effect of the moon on wireless signals. A.M.Curtis. Electrician, 70, pp.1104-1105; March 21; 71, p.143, May 3, 1913. Sci.Abs.B, p.332, 1913. Sci.Abs.B, p.382, 1913.

Radio transmission and weather (correlation of cloud areas shown on weather maps with good transmission). A.H.Taylor. Electrical World, 62, pp.425-427; August 30, 1913. Physical Review, 3, p.348; May, 1914.



Influence of the state of atmosphere on transmission and reception of Hertzian waves. E. Rothe and R. Clarte. Comptes Rendus, 158, pp.699-702; March 9, 1914. Sci.Abs.B, p.339; June, 1914.

Effect of atmospheric conditions on the strength of signals received at Liverpool from Paris and some other places, together with an account of the diurnal variation in the energy received. British Assoc. Report, p.607; 1914.

The effect of water vapour in the atmosphere on the propagation of electromagnetic waves. Jahrbuch der drahtlosen Telegraphie, 12, p.184; August, 1917.

Der Einfluss geophysikalischer und meteorologischer Faktoren auf die drahtlose Telegraphie. Paul Ludewig. Jahrbuch der drahtlosen Telegraphie, 12, pp.122-155; August, 1917.

The aurora of March 22-25, 1920 and associated display. Its effect on radio signaling. C.F.Brooks and H.Lyman. Monthly Weather Rev., 48, pp.379-392; July, 1920.

Detection of storms and their travel by radio equipment. C.N.Keyser. Radio Review, 2, p.105; February, 1921. Weather Review, 48, pp.263-264; May, 1920.

Forecasting thunderstorms by means of static electricity. F.W.Reichelderfer. Monthly Weather Review, 49, p.152; March, 1921.

Aurora Borealis of the night May 14-15, 1921 and simultaneous magnetic phenomena. M. Bernard Lyst. Comptes Rendus, 172, pp. 1230-1231; May 17, 1921. Sci.Abs.A, No.1699, October, 1921.

Relation between the propagation of electromagnetic waves and conditions of the atmosphere. S. Viedenhoff. Jahrbuch der drahtlosen Telegraphie, 18, pp.242-260; October, 1921. Electrical World, 78, p.1336; December 31, 1921.

Effects of aurora on telegraphs, telephones and wireless. A. Gibbs. Post Office Electrical Engineers Journal (London), 15, pp.39-42; April, 1922.

Atmospheric conditions and electric waves. K. Stoye. Jahrbuch der drahtlosen Telegraphie, 19, pp.58-72; January, 1922. Sci.Abs. B, No.660, May, 1922.

Effects of aurora on telegraphs, telephones and wireless in New Zealand. A. Gibbs. Telegraph and Telephone Age, 40, pp.248-24.. June, 1922.

Influence of meteorological factors on wireless telegraphy. P. Ludewig. Elektrotechnik und Maschinenbau, 32, pp.181-187; March 1; pp.209-214, March 8, 1924.

A l'aurora de la radioelectricité. M. Adam. Radioelectricité, 5, pp.150-153; March 25, 1924.



Letter Circular 207 -- 9/4/26 -- 12.

, Portée des ondes; action de L'atmosphère. J. Guinchant. L'Onde Electrique, 3, pp.445-448; September, 1924.

Air temperature and intensity of radio signals. L.W.Austin. Monthly Weather Review, 52, p.590; December, 1924.

Do weather conditions influence radio? E.Van Cleef. Radio Broadcast, 7, pp.90-94; May, 1925.

Wireless, the moon and the barometer. W.J.Turberville-Crewe. Experimental Wireless (London), 2, pp.901; November, 1925.

Can we forecast radio reception by the weather? J.C.Jensen. Radio Broadcast, 8, pp.558-562; March, 1926.

#### R113.6.-- Reflection, Refraction, Diffraction.

The bending of electric waves round a conducting obstacle (diffraction). H.M.MacDonald. Proceedings Royal Society, 71A, pp.251-258; 1903.

Reflection and refraction by ionization. R.A.Fessenden. Nature, 76, p.444; 1907.

Bending of waves. Poincare. Jahrbuch der drahtlosen Telegraphie, 3, p.445; 1909-1910. Comptes Rendus, 149, p.621; 1909. Schaeffer. Jahrbuch der drahtlosen Telegraphie, 3, p.183; 1909-1910. Nicholson. Phil.Mag., 19, p.516, 1910; 20, p.157; 1910. MacDonald. Phil. Trans., A210, p.113; 1910. Sommerfeld. Annalen der Physik, 1909.

Bending of electric waves round the earth. J.W.Nicholson. Phil. Magazine, 19, pp.276-278; February, 1910. Sci.Abs.A, No.430; 1910.

Über die Beugung elektrische Wellen um die Erdkugel. J.W. Nicholson. Jahrbuch der drahtlosen Telegraphie, 4, p.20; 1910.

On the bending of electric waves round a large sphere (diffraction). J.W.Nicholson. Phil. Magazine, 22, pp.62-68; 1911.

Atmospheric refraction in wireless telegraphy. W.H.Eccles. Electrician, v.969; September 19, 1913.

Transmission of electromagnetic waves through and around the earth. G.W.O.Howe. Electrician, 72, p.484; December 26, 1913.

Über die Brechung der elektrischen Wellen in der Atmosphäre. F.Kiebitz. Jahrbuch der drahtlosen Telegraphie, 7, p.154; 1913.

Reflection and refraction of waves. W.Eccles. Electrician, September 27, 1912 and September 19, 1913.

150 - 151 - 152 - 153 - 154 - 155 - 156 - 157 - 158 -

159 - 160 - 161 - 162 - 163 - 164 - 165 - 166 - 167 -

168 - 169 - 170 - 171 - 172 - 173 - 174 - 175 - 176 -

177 - 178 - 179 - 180 - 181 - 182 - 183 - 184 - 185 -

186 - 187 - 188 - 189 - 190 - 191 - 192 - 193 - 194 -

195 - 196 - 197 - 198 - 199 - 200 - 201 - 202 - 203 -

204 - 205 - 206 - 207 - 208 - 209 - 210 - 211 - 212 -

213 - 214 - 215 - 216 - 217 - 218 - 219 - 220 - 221 -

222 - 223 - 224 - 225 - 226 - 227 - 228 - 229 - 230 -

231 - 232 - 233 - 234 - 235 - 236 - 237 - 238 - 239 -

240 - 241 - 242 - 243 - 244 - 245 - 246 - 247 - 248 -

249 - 250 - 251 - 252 - 253 - 254 - 255 - 256 - 257 -

258 - 259 - 260 - 261 - 262 - 263 - 264 - 265 - 266 -

267 - 268 - 269 - 270 - 271 - 272 - 273 - 274 - 275 -

276 - 277 - 278 - 279 - 280 - 281 - 282 - 283 - 284 -

285 - 286 - 287 - 288 - 289 - 290 - 291 - 292 - 293 -

294 - 295 - 296 - 297 - 298 - 299 - 300 - 301 - 302 -

303 - 304 - 305 - 306 - 307 - 308 - 309 - 310 - 311 -

Atmospheric refraction and its bearing on the transmission of electromagnetic waves around the earth's surface. Proceedings Physical Society of London, 26, p.318; 1914.

Effect of the earth's curvature on wireless telegraphy. A. Sommerfeld. Jahrbuch der drahtlosen Telegraphie, 12, pp.2-15; June, 1917. Sci. Abs. A, No.1171, October 3, 1917.

Diffraction of electromagnetic waves. M. Sjostrom. Jahrbuch der drahtlosen Telegraphie, 14, pp.171-180; July, 1919.

Diffraction of electric waves. G.N.Watson. Radio Review, 1, p.39; October, 1919.

Diffraction of electric waves by the earth. G.N.Watson. Royal Society Proceedings, 95, pp.83-93; October 7, 1918. Sci.Abs.A, No.206, 1918.

Refraction of electric waves. T.L.Eckersley. Radio Review, 1, pp.421-428; June, 1920. Jahrbuch der drahtlosen Telegraphie, 18, pp.369-378; November, 1921.

The propagation of radio waves. J. Hollingworth. Journal Institution of Electrical Engineers (London), 61, pp.501 and 597; 1923; pp.573-583, May, 1926.

Geophysical influence on the transmission of wireless waves (reflection). Proceedings Physical Society (London), 37, part 2, p.17D; February 15, 1925.

On some direct evidence for downward atmospheric reflection of electric rays. E.V.Appleton and M.A.F.Barnett. Proceedings Royal Society A, 109, pp.621-641; 1925.

An investigation of wireless waves arriving from the upper atmosphere. R.L.Smith-Rose and R.H.Barfield. Proceedings Royal Society A, 110, 1926.

#### R113.7. Transmission, Theories, Formulas, Range.

Über die Ausbreitung der Wellen in der drahtlosen Telegraphie. A. Sommerfeld. Annalen der Physik, 28, p.665; 1909.

The propagation of waves in wireless telegraphy taking into consideration the nature of the ground. Jahrbuch der drahtlosen Telegraphie, 4, pp.176-187; December, 1910.

Propagation of waves in wireless telegraphy. A. Sommerfeld. Jahrbuch der drahtlosen Telegraphie, 4, p.157; December, 1910. Sci.Abs. B, No.462, 1911.

Some quantitative experiments in long distance radio telegraphy. L.W.Austin. Bureau of Standards Scientific Paper 159, 1911. Reprint S226.

## THE EARTHQUAKE

On the morning of January 15, 1906, at 5:13 A.M., there was a violent earthquake in San Francisco. It was the most violent ever experienced in the city. The shock was so violent that it caused great damage to many buildings, especially those made of brick and stone. The ground trembled for several minutes, and the buildings swayed and tilted. Many people were killed or injured, and many more were left homeless. The city was thrown into chaos, and it took many months to rebuild.

Theorie der gleichzeitigen Messungen von Sende und Empfangstrom.  
H. Barkhausen. Jahrbuch der drahtlosen Telegraphie, 5, p.261; 1912.

Über gewisse die Fortpflanzung elektrische Wellen über die Oberfläche des Erdballs begleitende Erscheinungen. W.H.Eccles. Jahrbuch der drahtlosen Telegraphie, 7, p.191; 1913.

Eccles' theory of wireless telegraphy. H. Parodi. Lum. Elec., 25, pp.443-453; April 4, 1914. Sci.Abs. B, p.286, 1914. Sci. Abs.A, No.109, 1913. Sci.Abs. A, No.1871, 1913.

The propagation of electromagnetic waves in wireless telegraphy. G. R. Dean. Electrician, 73, p.13 and 896, April 10 and Sept. 11, 1914.

Die Ausbreitung der Elektromagnetischen Wellen in der drahtlosen Telegraphie. H. Barkhausen. Elektrotechnische Zeitschrift, 35, p.448; 1914.

Transmission of electric waves over the surface of the earth. A.E.H.Love and F.R.S.Sedleian. Trans. Royal Society, 215, (Ser.A), 1915. Also No.526, pp.105-131.

Transmission of electric waves. A.E.H.Love. Trans. Royal Society, 91, p.219; March 1, 1915.

Sur l'application de la formule d'Austin-Cohen à la résolution de quelques problèmes importants de la technique des radio communications. L. Bouthillon. Revue Générale d'Électricité, 3, pp.419-424; March 23, 1918.

The transmission of electromagnetic waves around the earth. G.W.O.Howe. Radio Review, 1, p.78; November, 1913. Tech. Review, 5, p.198; November 25, 1919.

The transmission of electric waves round the earth. G.N. Watson. Proceedings Royal Society, 95, p.546, 1919. Nature, 102, p.517; 1919.

On the propagation of electromagnetic waves round the earth. B. van der Pol. Phil. Mag., 38, pp.365-380; September, 1919. Radio Review, 1, p.98; November, 1919. Proceedings Royal Society, 95A, pp.546-563, July, 1919. Wireless World, 7, p.502; Dec., 1919.

Über die Ausbreitung der Wellen in der drahtlosen Telegraphie. A. Sommerfeld. Annalen der Physik, 367, pp.35-96; May 20, 1920.

Über die Anwendung der Austin-Cohen Formel zur Lösung einiger wichtiger Probleme in der Technik des radiotelegraphischen Verkehrs. Franz Tank. Jahrbuch der drahtlosen Telegraphie, 16, p.114; August, 1920.



On the propagation of electromagnetic waves around the earth.  
B. van der Pol. Phil. Mag., 40, p.163; July, 1920. Radio Review, 1, p.725; November, 1920.

The transmission of electromagnetic waves about the earth.  
J.Erskine-Murray. Radio Review, 1, p.237; 1920. Wireless World, 7, p.651; 1920.

Transmission formulas. G.W.O.Howe. Radio Review, 1, p.598; September, 1920. Elektrotechnische Zeitschrift, 42, p.313; March 31, 1921.

Discussion on "Long distance wireless transmission." H.J.Round and F.C.Lunnon. Journal Institution Electrical Engineers (London), 59, p.685; 1921.

Note sur le choix de la longueur d'onde la plus efficace selon la formula de Austin. Q. Zappuli. Radioelectricité, 3, pp.20-21; January, 1922.

Long distance radio communication. L.W.Austin. Journal Franklin Institute, 193, pp.437-460; April, 1922. Sci.Abs. B, No. 737, June, 1922.

Drahtloser Verkehr über grosse Entfernung. L.W.Austin. Jahrbuch der drahtlosen Telegraphie, 20, pp.372-386; Nov., 1922.

Expose critique des theories de la propagation. L. Bouthillon. L'Onde Électrique, 2, pp.274-283, May; pp.345-359, June, 1923.

Etat actuel des formules sur la propagation des ondes. L.W. Austin. L'Onde Electrique, 2, pp.504-507; September, 1923.

Notes on wireless matters -- a new theory of long distance radiocommunication. G.W.O.Howe. Electrician, 93, pp.282-283; September 12, 1924.

Spreading of electric waves above the earth. A. Meissner. Jahrbuch der drahtlosen Telegraphie, 24, pp.85-92; 1924. Abstracted in Zeitschrift Technische Physikalische, pp.485-488; 1924.

Why wireless electric rays can bend round the earth. Joseph Larmor. Phil. Mag., 48, pp.1025-1036; December, 1924.

Joseph Larmor's theory: why wireless electric rays can bend round the earth. G.W.deTunzelman. Electrician, 94, pp.30-31; January 9, 1925.

Wireless wave propagation. E.V.Appleton and M.A.F.Barnett. Electrician, 94, p.398; April 3, 1925.

Propagation of electric waves over the earth. H.W.Nichols and J.O.Schelleng. Bell System Tech. Journal, 4, pp.215-234; April, 1925.



Radio propagation. G.W.deTunzelman. Electrician, 35, pp.56-57; July 17, 1925.

Transmission of electric waves around the earth's surface. H.M.MacDonald. Proc. Royal Society, 92, p.493; August 1, 1916. Proc. Royal Society, 490, pp.50-60; April, 1914. Proc. Royal Society, 98, pp.216-222; Dec. 20, 1920. Sci.Abs.A, No. 1601, September, 1922. Proc. Royal Society, 78, pp.409-411; March 3, 1921. Sci.Abs. A, No.1602, September, 1921. Proc. Royal Society, 108, pp.52-76; May, 1925. Sci.Abs. B, No.1340, September, 1925.

A new theory of wave transmission. E.F.W.Alexanderson. Popular Radio, 9, pp.207-212; March, 1926. Radio (Canada), 9, pp.17-18; August, 1926. Radio News, 7, pp.410-411; Oct., 1925.

The propagation of radio waves over the earth. A.H.Taylor and E.O.Hulbert. Physical Review, 27, pp.189-215; February, 1926.

The propagation of radio waves. J. Hollingworth. Experimental Wireless (London), 3, pp.178-181; March, 1926. Electrician, 96, p.291; March 12, 1926.

A propos de la theorie de la propagation des ondes electriques et des recentes mesures URSI. M.A.Turpain. L'Onde Électrique, 5, pp.181-185; April, 1925.

Versuche über die Ausbreitung der elektromagnetischen Wellen (propagation of waves). M. Bauemler and J. Zenneck. Elekt. Nachrichten Technik, 3, pp.139-141; April, 1926.

The propagation of radio waves. J. Hollingworth. Journal Inst. Electrical Engineers (London), 64, pp.579-595; May, 1926.

Preliminary note on proposed changes in the constants of the Austin-Cohen transmission formula. L. W. Austin. Proceedings Institute of Radio Engineers, 14, pp.377-380; June, 1926.

Über die Fortpflanzung elektromagnetischer Wellen. G.J. Elias. Jahrbuch der drahtlosen Telegraphie, 27, pp.66-73; 1926.

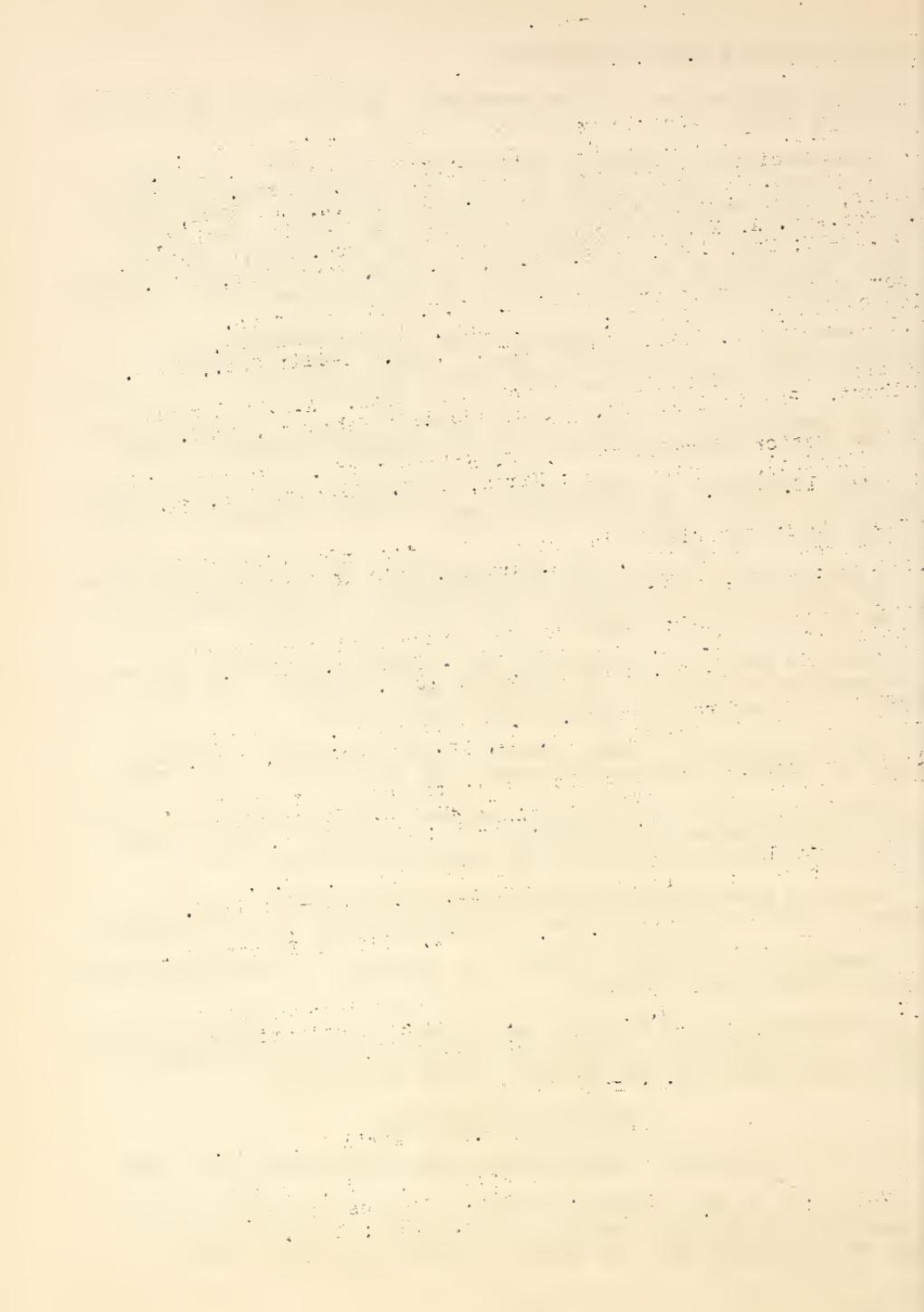
Transmission en ondes courtes. H. Chireix. L'Onde Électrique, 5, pp.237-262; June, 1926.

The attenuation of wireless waves due to the resistance of the earth. R.L.Smith-Rose and R.H.Barfield. Journal Institution of Electrical Engineers, 64, No.355, p.266; July 1926.

#### R113.8. -- Eclipses.

Effect of eclipses. Electrician, 69, p.109; April 26, 1912.

Influence of the eclipse of the sun, April 17, 1912, on the propagation of electric waves. M.A.Turpain. Comptes Rendus, 154, pp.1457-1461; May 28, 1912. Sci.Abs. B, p.395; 1912.



Influence of solar eclipse on propagation of Hertzian waves.  
A. Boutarie and G. Meslin. Comptes Rendus, 154, pp.1746-1747;  
June 17, 1912. Sci.Abs. B, p.471; 1912.

Reception of radiotelegraphic signals from the Eiffel Tower  
during the solar eclipse. M. Flajolet. Comptes Rendus, 154,  
p.1488; June 3, 1912. Sci.Abs.B, p.472; 1912.

Wireless telegraphy and the eclipse of the sun April, 1912.  
F. Kiebitz. Physikalische Zeitschrift, 13, pp.890-892; September  
15, 1912. Jahrbuch der drahtlosen Telegraphie, 6, pp.151-153;  
1912. Sci. Abs. B, p.48; 1913.

Wireless telegraphy measurements at Marburg and Grez during  
the recent eclipse of the sun. E.Take and M. Vos. Dautsch. Phys.  
Gesell. Verh., 14, 18, pp.837-843; September 30, 1912. Sci.Abs.  
B, 16, No.101; 1913.

Proposed investigation of effect of eclipse. Physical Review,  
3, p.479; June, 1914.

Wireless telegraphy and solar eclipse. J.A.Fleming. Nature,  
102, p.405; January 23, 1919.

Radiotelegraphy and the solar eclipse. Engineering, 107,  
p.614; May 9, 1919.

Radiotelegraphic investigations in connection with the solar  
eclipse on May 29, 1919. British Assoc. Committee. Sir Oliver  
Lodge, Chairman. Electrician, 82, pp.551-553; May 9, 1919.

Über radioelektrische Versuche während der Sonnenfinsternis am  
29 Mai 1919. Jahrbuch der drahtlosen Telegraphie, 14, pp.293-300;  
August, 1919.

Wireless telegraphy and the solar eclipse of May 28th. Revue  
Generale d'Électricité, 5, p.55B, September, 1919.

Solar Eclipse and wireless reception. Electrical Review, 85,  
p.532; October 24, 1919.

The solar eclipse and wireless transmission. Wireless World,  
7, p.399; October, 1919.

Radiotelegraphic investigations in connection with the solar  
eclipse of May 29, 1919. Electrician, 82, p.550; 1919.

Radiotelegraphy during the solar eclipse of May 29, 1919. Nature,  
104, pp.323-324; November 20, 1919. Sci.Abs. B, No.133; January,  
1920. Radio Review, 1, pp.24-26; October, 1919. Radio Review  
Abs. Nos. 302 and 384, April and May, 1920.

Report of the Committee on Radio telegraphic investigations  
(solar eclipse report). Radio Review, 1, p.24; 1920.

100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121  
122  
123  
124  
125  
126  
127  
128  
129  
130  
131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144  
145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167  
168  
169  
170  
171  
172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400  
401  
402  
403  
404  
405  
406  
407  
408  
409  
410  
411  
412  
413  
414  
415  
416  
417  
418  
419  
420  
421  
422  
423  
424  
425  
426  
427  
428  
429  
430  
431  
432  
433  
434  
435  
436  
437  
438  
439  
440  
441  
442  
443  
444  
445  
446  
447  
448  
449  
450  
451  
452  
453  
454  
455  
456  
457  
458  
459  
460  
461  
462  
463  
464  
465  
466  
467  
468  
469  
470  
471  
472  
473  
474  
475  
476  
477  
478  
479  
480  
481  
482  
483  
484  
485  
486  
487  
488  
489  
490  
491  
492  
493  
494  
495  
496  
497  
498  
499  
500  
501  
502  
503  
504  
505  
506  
507  
508  
509  
510  
511  
512  
513  
514  
515  
516  
517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532  
533  
534  
535  
536  
537  
538  
539  
540  
541  
542  
543  
544  
545  
546  
547  
548  
549  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
600  
601  
602  
603  
604  
605  
606  
607  
608  
609  
610  
611  
612  
613  
614  
615  
616  
617  
618  
619  
620  
621  
622  
623  
624  
625  
626  
627  
628  
629  
630  
631  
632  
633  
634  
635  
636  
637  
638  
639  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
650  
651  
652  
653  
654  
655  
656  
657  
658  
659  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
670  
671  
672  
673  
674  
675  
676  
677  
678  
679  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
700  
701  
702  
703  
704  
705  
706  
707  
708  
709  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
750  
751  
752  
753  
754  
755  
756  
757  
758  
759  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
800  
801  
802  
803  
804  
805  
806  
807  
808  
809  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
850  
851  
852  
853  
854  
855  
856  
857  
858  
859  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
900  
901  
902  
903  
904  
905  
906  
907  
908  
909  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
950  
951  
952  
953  
954  
955  
956  
957  
958  
959  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
1000

Letter Circular 207 --3/4/26-- 18.

Eclipse of the sun April 8, 1921 --effects produced at wireless stations. F. Addey. Radio Review, 2, pp.226-227; May, 1921.

Observe effects of eclipse on radio signals. Telegraph & Telephone Age, 39, p.390; September 1, 1921.

Messungen der Empfangsintensität der atmosphärischen Ionisation und anderer meteorologischer Elemente während der Sonnenfinsternis am 8 April 1921. B. Illin. Jahrbuch der drahtlosen Telegraphie, 23, pp.128-132; September, 1923.

Atmospheric electric observations during the total solar eclipse of September 10, 1923. H.F. Johnston. Terrestrial Magnetism, 29, pp.13922; March, 1924. Sci.Abs. A, No.1533; June, 1924.

Observations radiotelegraphiques pendant l'eclipse du soleil du 10 Septembre 1923. L.W. Austin. L'Onde Electrique, 3, pp.591-594; December, 1924.

Wireless and the eclipse -- results of signal measurements between England and the U.S. Electrician, 34, pp.152-153; February 6, 1925.

The solar eclipse and the wireless signals (correspondence). W.H. Eccles. Electrician, 34, p.208; February 20, 1925.

The effects of the eclipse on radio. A.P. Lane and F.X. Walsh. Scientific American, 132, pp.224-226; April, 1925.

Changes observed in the direction of radio signals at the time of the eclipse of January 24, 1925. E.Merritt, C.C.Bidwell and H.J.Reich. Journal Franklin Institute, 193, pp.485-492; April, 1925.

La T.S.F. et l'eclipse du soleil du 24 Janvier 1925. A. Morizot. La T.S.F. Moderne, 6, pp.344-348; June, 1925.

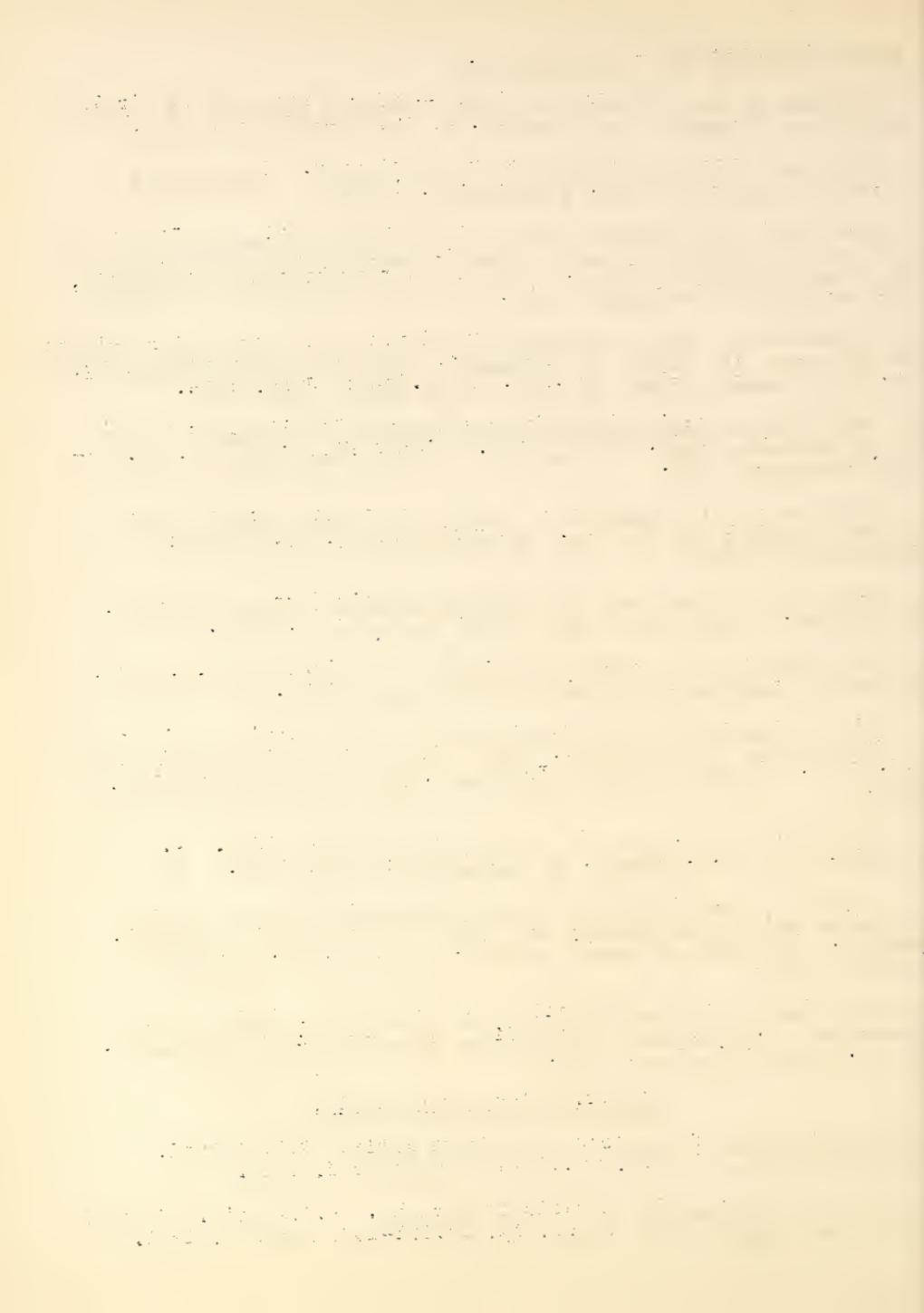
A note on wireless signal strength measurements made during the solar eclipse of January 24, 1925. E.V. Appleton and M.A.F. Barnett. Proceedings Cambridge Phil. Soc., 22, pp.672-675; July 20, 1925.

The effect of the solar eclipse of January 24, 1925 on radio reception. G.W.Pickard. Proceedings Institute Radio Engineers, 13, pp.539-569; October, 1925.

#### R113.2.-- Wave Front Angle.

Determination of wireless wave front angle. G.W.Pickard. Electrical Review (N.Y.), pp.494-495; October 3, 1908.

The wave front angle in radio telegraphy. L.W.Austin. Journal Washington Academy of Sciences, 11, pp.101-106; March 4, 1921.



On the determination of the directions of the forces in wireless waves at the earth's surface. R.L.Smith-Rose and R.H.Barfield. Proceedings Royal Society, 107, p.587; March, 1925.

Measuring traveling wave fronts by means of coupled oscillating circuits. Harold Müller. Archiv. f. Elekt., 15, pp.37-120; Sept. 21, 1925.

Some measurements on wireless wave fronts. R.L.Smith-Rose and R.H.Barfield. Experimental Wireless (London), 2, pp.737-749; September, 1925.

Polarization of wireless waves (experiments of vertically and horizontally polarized waves). R.L.Smith-Rose. Wireless World & Radio Review, 17, pp.853-862; December 16, 1925.

A further question of nomenclature: the polarization of electromagnetic waves. Experimental Wireless (London), 3, pp.201-202; April, 1926.

Polarization of radio waves. G.W.Pickard. Proceedings Institute of Radio Engineers, 14, p.205; April, 1926.

Changes in the polarization of radio waves. G.W.Pickard. Radio News, 7, pp.1540-1541; May, 1926.

Discussion on "Polarization of radio waves," by G.W.Pickard. E.F.W.Alexanderson. Proceedings Institute of Radio Engineers, 14, pp.391-393; June, 1926.

#### R114.-- Strays.

Atmospheric electricity, origin, variations and perturbations, Brillouin's theory. Monthly Weather Review, 35, p.440; October, 1887.

Atmospheric electricity considered from the viewpoint of theory of electrons. Monthly Weather Review, 31, p.223; May, 1903.

Notes on the electrical waves occurring in nature. W.H.Eccles and H.M.Airey. Proceedings Physical Society, 85, pp.145-150; 1911.

Wireless telegraphy in reference to interference and perturbations. H.M.Airey. Journal Institution Elec. Engineers (London), 47, p.160; 1911. Electrician, 67, p.29; April 14, 1911.

Interruptions and perturbations in wireless telegraphy. J.E. Taylor. Electrician, 66, p.1022; 1911. Electrical Review, 58, p.752; 1911. Journal Institution Electrical Engineers (London), 47, p.119; 1911.

Atmospheric potential and wireless disturbances. G. Lutz. Sci. Abs. B, p.351; May 27, 1914.

Radiotelegraphic investigations --analysis of records of strays. Electrician, 75, pp.307-308; September 24, 1915.



Letter Circular 207 --9/4/26--20.

Investigation of atmospheric electrical variations at sunrise and sunset. E.H.Nichols. Proceedings Royal Society, 32, p.401; July 1, 1916.

The relation between atmospheric disturbances and wave length in radio reception. L.W.Austin. Proceedings Institute of Radio Engineers, 1920.

Strays and their origin. Wireless World, 8, p.346; Aug.7, 1920.

Atmospherics and weather forecasts. H.J.Hinks. Radiograph, 2, p.100; October, 1920.

On vertical electric currents and the relation between terrestrial magnetism and atmospheric electricity. Louis A. Bauer. Terrestrial Magnetism, 25, pp.145-162; December, 1920.

Electrical phenomena occurring at high levels in the atmosphere. S. Chapman. Journal Institution Electrical Engineers (London), October, 1920. Electrical World, 77, p.108; January 8, 1921.

Radio-goniometry and atmospheric influences. E. Rothe. Comptes Rendus, 172, pp.1345-1347; May 30, 1921. Sci.Abs. B, No.845, August, 1921.

The direction of atmospheric disturbances in wireless telegraphy. L.W.Austin. Journal Franklin Institute, 191, pp.613-629; May, 1921. Sci.Abs. B, No.748, July 30, 1921.

Atmospheric disturbances and wave lengths. L.W.Austin. Proceedings Institute of Radio Engineers, 9, pp.28-40; February, 1921. Jahrbuch der drahtlosen Telegraphie, 17, pp.402-403; June, 1921. Sci.Abs.B, No.734; July, 1921.

The diminution of atmospheric disturbances in wireless telegraphy. L.W.Austin. Proceedings Institute of Radio Engineers, 9, pp.41-55; February, 1921. Jahrbuch der drahtlosen Telegraphie, 17, pp.410-426; June, 1921. Sci. Abs. B, No.925; September, 1921.

Determination of the direction of atmospheric disturbances or static in radio telegraphy. Journal Franklin Institute, p.613; 1921.

The relation between atmospheric disturbances and wave length in radio reception. L.W. Austin. Proceedings Institute of Radio Engineers, 9, p.28; 1921.

The reduction of atmospheric disturbances in radio reception. L.W.Austin. Proceedings Institute of Radio Engineers, 9, p.41; 1921.

Optimum wave length and atmospherics. L.B.Turner. Radio Review, 2, pp.524-534; October, 1921. Sci.Abs.B, No.151, Jan., 1922. L'Onde Électrique, 1, p.257; April, 1922.



Bestimmung der richtung atmosphärischen oder statischer Störungen in der drahtlosen Telegraphie. L.W.Austin. Jahrbuch der drahtlosen Telegraphie, 19, pp.115-120; February, 1922.

New radiozeniometric observations of atmospheric disturbances. M.J.Lacoste. Comptes Rendus, 173, pp.843-845; 1921; 174, pp.707-708, 1922; 175, pp.707-708, October 23, 1922. Sci.Abs.A, No.749, April, 1922.

Static interference as a function of wave length. H.T.Friis and L.J.Sivian. Wireless World and Radio Review, 10, pp.285-288; June 3, 1922.

The origin of atmospherics. R.A.Watson-Watt. Nature, 110, pp.680-681; 1922.

Les parasites: leur origines et leur élimination. G. Malgorn and J. Brun. Radioelectricité, 4, pp.36-40; January, 1923.

Directional observations of atmospheric disturbances 1920-21. R.A.Watson-Watt. Proceedings Royal Society A, 102, pp.460-478; 1922. L'Onde Électrique, 2, pp.187-188; March, 1923.

The nature of atmospherics. O.F.Brown. Modern Wireless (London), 1, pp.303-306; June, 1923.

Perturbations atmosphériques et communications par T.S.F. H.Gebeluscize. Radioelectricité, 4, pp.32-36; January; pp.70-76, Feb; pp.113-120, March; pp.151-156, April; pp.1-4, June 15; pp.17-21, July 15, 1923.

Les perturbations atmosphériques. R. Mesny. L'Onde Electrique, 2, pp.391-405, July, 1923.

Das gleichzeitige Auftreten atmosphärischer Störungen. Max Baumler. Jahrbuch der drahtlosen Telegraphie, 22, pp.2-8; July, 1923.

Observations on atmospherics. R.A.Watson-Watt. Wireless World & Radio Review, 12, pp.601-612, August 1; pp.636-637, August 8, 1923.

On the nature of atmospherics. R.A.Watson-Watt and E.V. Apleton. Proceedings Royal Society A, 103, pp.84-102; 1923.

On the radiogoniometry of atmospheric disturbances and the prediction of weather. E. Rothe. Ann. d. Phys., 17, pp.383-415; 1922. L'Onde Électrique, 2, pp.7-18; 1923.

Directional observations of atmospherics (1916-1920). R.A. Watson-Watt. Phil. Mag., 45, pp.1010-1026, May, 1923. Proceedings Royal Society A, 102, pp.460-478, 1923.



Letter Circular 207 -- 3/4/26 -- 23.

The study of radiotelegraphic atmospherics in relation to meteorology. Journal Royal Meteorological Society, 49, pp.35-39; 1923.

The direction of atmospheric disturbances. F. Schindelhauer. Jahrbuch der drahtlosen Telegraphie, 22, pp.133-167; 1923.

The energy of atmospherics. T.L.Eckersley. Electrician, 93, pp.150-151; August 8, 1924.

Recent experiments on atmospherics. E.V.Appleton. Yearbook of Wireless Telegraphy, pp.307-309; 1924.

The meteorological origin of certain disturbances in radio receivers. R. Bureau. Comptes Rendus, 176, pp.556-558; and 1623-1625; 1924.

Our present knowledge concerning the atmospheric disturbances of radio telegraphy. L.W.Austin. Bulletin National Research Council, No.41, p.127; 1924.

Onze mois d'observation des atmosphériques (Nov. 1923 to October, 1924). R.Bureau. L'Onde Électrique, 4, pp.31-43; January, 1925.

Atmospherics. R.L.Smith-Rose. World Power (London), 3, pp.20-25; January, 1925.

The present status of radio atmospheric disturbances. L.W. Austin. Proceedings Institute of Radio Engineers, 14, pp.133-138; February, 1926.

The directional recording of atmospherics. R.A.Watson-Watt. Experimental Wireless (London), 3, pp.234-238; April, 1926. Journal Inst. Electrical Engineers (London). 64, pp.598-610; May, 1926.

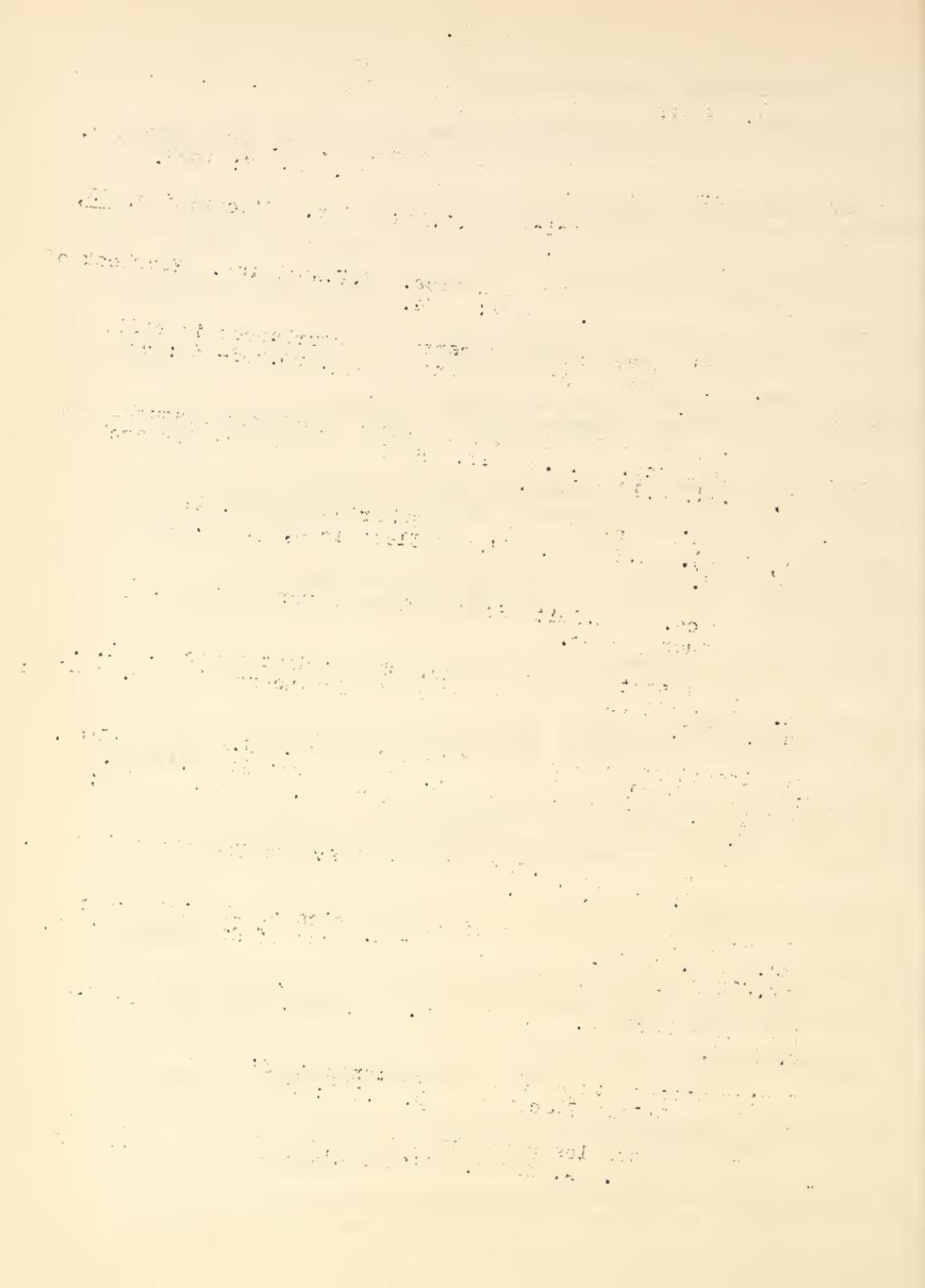
A static recorder. H.T.Friis. Bell System Technical Journal, 5, pp.282-291; April, 1926.

Direction determinations of atmospherics on the Isthmus of Panama. L.W.Austin. Proceedings Institute of Radio Engineers, 14, pp.373-376; June, 1926.

Les Atmosphérique. M.R.Bureau. L'Onde Électrique, 5, p.302; July, 1926.

Perturbations atmosphériques et longueur d'ondes. H. de Bellescize. L'Onde Électrique, 5, p.347; July, 1926.

Relations entre les perturbations électromagnétique et les troubles solaires. A. Nodon. L'Onde Électrique, 5, p.359; July, 1926.



R270.--Measurement of Signal Intensity.

Measurements in wireless. Duddell and Taylor. Electrician, 55, p.260; June 2, 1905.

Some quantitative measurements in connection with radio-telegraphy. J.A.Fleming. Journal Institution Electrical Engineers (London), 44, pp.344-388; 1910. Electrician, 64, pp.381-384; pp.429-434, 467-469, 1910. Sci.Abs.B, No.253, 1910.

The measurement of electrical oscillations in the receiving antenna. L.W.Austin. Bureau of Standards Scientific Papers No.157; Bulletin of Bureau of Standards, 7, p.235; 1910.

Some quantitative experiments in long distance radio telegraphy. L.W.Austin. Bureau of Standards Scientific Paper No.159; Bulletin of Bureau of Standards, 7, p.315; 1911.

Magnitude of receiver currents in wireless telegraphy. H. Barkhausen. Jahrbuch der drahtlosen Telegraphie, 5, pp.261-269; January, 1912. Sci.Abs. B, No.441, 1912.

The measurement of received radiotelegraphic signals. L.W. Austin. Journal Washington Academy of Sciences, 3, pp.133-137; March 4, 1913. Sci. Abs. B, No.564, 1913.

The problem of range with electromagnetic waves (quantitative measurements at receiver). K.E.F.Schmidt. Physikalische Zeitschrift, 15, pp.202-209; February 15, 1914.

Absolute measurement in Strassburg of the field of the Eiffel Tower radiation. F.Braun. Jahrbuch der drahtlosen Telegraphie, 8, pp.132-133; February, 1914.

Measurement of strength of radio telegraph signals and their quantitative value. A. Klages and O. Dämmler. Jahrbuch der drahtlosen Telegraphie, 3, p.212; March, 1914. Sci.Abs.B, p.405; 1914.

Radio telegraphic measurements by the shunted telephone method. H. Braun. Jahrbuch der drahtlosen Telegraphie, 8, pp.203-212; March, 1914. Sci.Abs. B, No.389, 1914.

Employment of string electrometer in wireless telegraphy. T. Wulf. Phys. Zeits. 15, pp.611-616; June 15, 1914. Sci. Abs. B, No.1133, 1914.

Radiotelegraphic measurements. J. Erskine-Murray. Electrician, 73, p.354; June, 1914. Sci.Abs. B, No.385, 1914.

Quantitative experiments in radio telegraphic transmission. L.W.Austin. Bureau of Standards Scientific Paper No.226; Bulletin of Bureau of Standards, 2, p.63; 1914.



On telephonic measurements in a radio receiver. J. Zenneck.  
Proceedings Institute of Radio Engineers, 4, p.363; August, 1916.

Measurement of signal intensity. J.V.L.Hogan. Yearbook of  
Wireless Telegraphy, pp.562-570; 1916.

Relation of audibility factory of a shunted telephone to the  
antenna current. B. van der Pol. Phil. Mag., September, 1917.

The measurement of radio telegraphic signals with the oscillating audion. L.W.Austin. Proceedings Institute of Radio Engineers, 5, pp.239-247; August, 1917. Jahrbuch der drahtlosen Telegraphie, 12, pp.296-304; October, 1917.

Note on "The measurement of radio telegraphic signals with the oscillating audion" L.W.Austin. Proceedings Institute of Radio Engineers, 5, p.327; 1917.

Relation of the audibility factory of a shunted telephone to the antenna current. G.W.O.Howe. Phil. Mag., 35, pp.131-133; January, 1918. Sci.Abs. B, No.223, 1918.

Tikker and telephone for current measurement. Gondet.  
Electrician, 31, p.113; June 14, 1913.

Measurement of small a.c. by Raleigh resonator. R.R.Watson.  
Physical Review, 13, p.237; April, 1913.

On measurement of signal strength. W.H.Eccles. Proceedings  
Institute of Radio Engineers, 7, p.267; June, 1919.

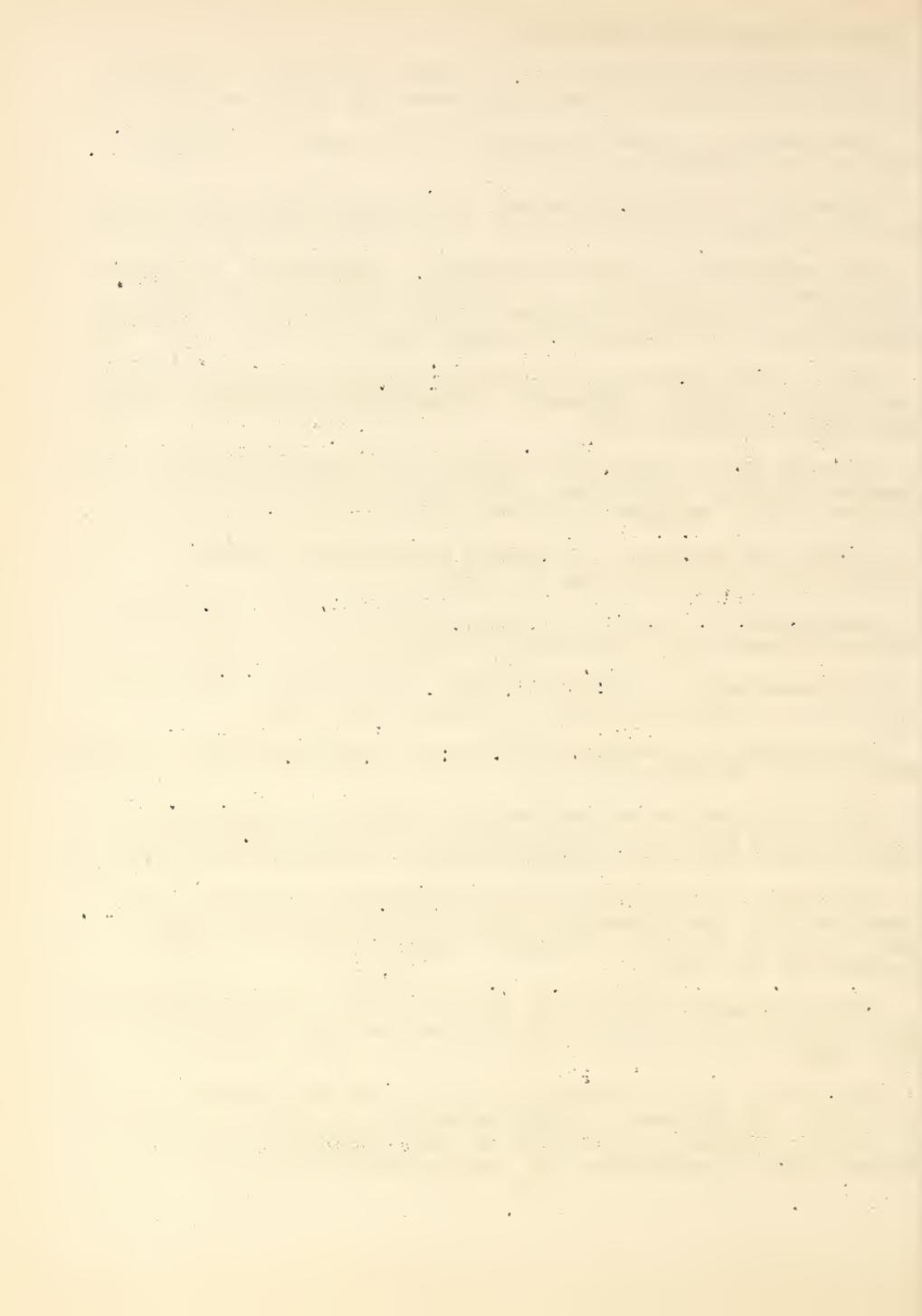
Measurement of alternating waves with the Braun tube. E. Lubke.  
Electrician, September 12, 1919.

Über die quantitative Bestimmung elektromagnetischer Strahlungsfelder in der drahtlosen Telegraphie. H.R. von Traubenberg.  
Jahrbuch der drahtlosen Telegraphie, 14, pp.569-578; November, 1919.

Measurement of intensity of radiotelegraphic signals. H.  
deBellecize. Revue Generale d'Electricite', 7, pp.325-323;  
March 7, 1920. Sci.Abs. B, No.431, April, 1920. Technical  
Review, May 25, 1920.

The measurement of received radio currents with the electrometer.  
E.O. Hulbert and G. Breit. Physical Review, 15, pp.405-403;  
May, 1920.

Misure del campo elettromagnetico di onde radiotelegrafiche tra oceaniche. G. Vallauri. L'Elettrotecnica, 7, p.293, June 15 and  
25, 1920. Proceedings Institute of Radio Engineers, 3, pp.238-239;  
August, 1920. Electrician, 36, pp.249-250; February 25, 1921.



System for measuring the amount of static interference. A.N. Curtis. Proceedings Institute of Radio Engineers, 9, pp.225-227; June, 1921. Sci. Abs. B, No.927, September, 1921.

The measurement of radiation (signal). A. G. Lee. Post Office Elec. Engineers Journal (London), 15, pp.254-262; October, 1922.

Die Brauchbarkeit der Parallellohmethode fur lautstarkemessungen in die Funktelegraphie. M. Bauemler. Jahrbuch der drahtlosen Telegraphie, 20, pp.263-277; October, 1922.

Note on measurement of radio signals. C.R.Englund. Proceedings Institute of Radio Engineers, 11, pp.26-33; February, 1923.

Radio transmission measurements. R.Bown, C.R.Englund, and H.T.Friis. Proceedings Institute of Radio Engineers, 11, pp.115-152; April, 1923. Electrician, 90, pp.645-643; June 15, 1923.

The measurement of signal strength. A.D.Cowper. Modern Wireless,(London), 1, pp.330-332, June; pp.514-518, August, 1923.

Radio transmission measurements on long wave lengths. H.H. Beverage and H.O.Peterson. Proceedings Institute of Radio Engineers, 11, pp.681-673; December, 1923.

The measurement of the electric intensity of received radio signals. J. Hollingsworth. Journal Institution Electrical Engineers (London), 61, pp.501-516; 1923.

A resume of modern methods of signal measurement. J. Hollingsworth. Wireless World & Radio Review, 14, pp.435-437; July 23; pp.513-520, July 30; pp.543-549, Aug. 6; pp.573-579, August 13, 1924.

An instrument to compare signal strengths. A. Castellain. Wireless World & Radio Review, 14, pp.134-133; May 14, 1924.

A method of measuring radio field intensities and atmospheric disturbances. L. W. Austin and E. B. Judson. Proceedings Institute of Radio Engineers, 12, pp.521-532; October, 1924.

Empfangs und Störungsmessungen in drahtlosen Telegraphie und Telephonie. Guido Anders. Elektrotechnische Zeitschrift, 45, pp.1433-1443; December 25, 1924.

Empfangsmessungen Europäischer Grosstationen an der Funkstelle Strelitz. S. Wiedenhoff. Elektrische Nachrichten Technik, 1, p.64; 1924.

Portable receiving sets for measuring field strengths at broadcasting frequencies. A.G.Jensen. Proceedings Institute of Radio Engineers, 14, pp.333-344; June, 1923.

A radio field strength measuring system for frequencies up to forty megacycles. H.T.Friis and E.Bruce. Proceedings Institute Radio Engineers, 14, pp.507-520; August, 1926.



