

List of publications by G.M.B. Dobson. Compiled by R.J. Wells.

Notes

1. When the volume of a journal includes more than one year, the years covered are included in brackets.
2. After about 1960 a considerable number of papers were published as Memoranda of the Department of Atmospheric Physics, Clarendon Laboratory, Oxford. The substance of most of these eventually appeared in scientific journals, except those relating to matters concerned with the Dobson spectrophotometer which have been brought together in the publication listed under 1975. The Memorandum of 1967 is included in this list, however, because the material did not appear elsewhere.

Numbers to the right give the 14 papers which he submitted in 1923/24 to Oxford University for the degree of D.Sc.

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| 1911 | Seiches in Windermere. <i>Nature, Lond.</i> 86 , 278–279.
(With G. F. C. SEARLE & A. C. W. ALDIS) On a revolving table method of determining the curvature of spherical surfaces. <i>Phil. Mag.</i> (6) 21 , 218–224. | 1 |
| 1912 | 1913 (With R. CORLESS & C. CHREE) Meteorological, electrical and magnetic observations during the solar eclipse of April 17, 1912. <i>Quart. J. R. Met. Soc.</i> 39 , 221–236. | 2 |
| 1914 (?) | Report of the work of the Meteorological Officer at the Central Flying School during 1913. | |
| 1914 | A comparison of the electrical conditions of the atmosphere at Kew and Eskdalemuir, with notes on observations on atmospheric electricity made in other countries. <i>Meteor. Office Geophys. Mem.</i> no. 7, 155–169.
Pilot balloon ascents at the Central Flying School, Upavon, during the year 1913. <i>Quart. J. R. Met. Soc.</i> 40 , 123–135. | 4 |
| | Atmospheric electricity observations made at Kew Observatory. <i>Proc. Phys. Soc.</i> 26 , 334–336. | 3 |
| 1919 | Measurement of turbulence in the atmosphere by the spreading of a smoke trail. Advisory Committee for Aeronautics, <i>Reports and Memoranda</i> , no. 671. (4 pages, 3 figures.) | 6 |
| 1920 | Design of instruments for navigation of aircraft. <i>Geogr. J.</i> 56 , 370–389.
Winds and temperature gradients in the stratosphere. <i>Quart. J. R. Met. Soc.</i> 46 , 54–64. | 7 |
| 1921 | Causes of errors in forecasting pressure gradients and wind. <i>Quart. J. R. Met. Soc.</i> 47 , 261–269.
(With G. L. SMITH) Measurements of atmospheric turbulence in the free air. Royal Aircraft Establishment, Farnborough, Report. no. H882.
Meteorology in the service of aviation. <i>Aeronaut. J.</i> 25 , 223–236. | 8 |
| 1922 | (With F. A. LINDEMANN) A theory of meteors, and the density and temperature of the outer atmosphere to which it leads. <i>Proc. R. Soc. Lond. A</i> 102 , 411–437. | 9 |
| 1923 | (With F. A. LINDEMANN) A note on the temperature of the air at great heights. <i>Proc. R. Soc. Lond. A</i> 103 , 339–342.
A flicker type of photoelectric photometer giving high precision. <i>Proc. R. Soc. Lond. A</i> 104 , 248–251.
Measurements of the sun's ultra-violet radiation and its absorption in the earth's atmosphere. <i>Proc. R. Soc. Lond. A</i> 104 , 252–271.
(With F. A. LINDEMANN) Note on the photography of meteors. <i>Mon. Not. R. Astron. Soc.</i> 83 , 163–166 (and plate 7).
The characteristics of the atmosphere up to 200 kilometres as indicated by observations of meteors. <i>Quart. J. R. Met. Soc.</i> 49 , 152–165. | 13
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Paper 5 was missing from the Royal Society bibliography. The reference is:
1917 Observations of Wind Structure Made at Upavon in 1914, Advisory Committee for Aeronautics, Reports and Memoranda, no 325.

- 1924 Apparatus for measuring photographic densities. *Nature, Lond.* **113**, 494–495.
The progress of meteorology in the last quarter of a century. Meteorology in education. Report of a conference held at the Birkbeck College on January 3rd 1924 between the Royal Meteorological Society, the Geographical Association, and the Science Masters' Association, pp. 3–12.
- 1925 (With D. N. HARRISON) Measurements of the amount of ozone in the upper atmosphere. *Quart. J. R. Met. Soc.* **51**, 363–369.
(With D. N. HARRISON) Measurement of the amount of ozone in the earth's atmosphere. *Proc. Phys. Soc.* **38**, 74–75.
- 1926 (With I. O. GRIFFITH & D. N. HARRISON) *Photographic photometry—a study of methods of measuring radiation by photographic means*. Oxford: Clarendon Press. (121 pages.)
(With D. N. HARRISON) Measurements of the amount of ozone in the earth's atmosphere and its relation to other geophysical conditions. *Proc. R. Soc. Lond. A* **110**, 660–693.
Discussion on the electrical state of the upper atmosphere. *Proc. R. Soc. Lond. A* **111**, 1–13 (contribution at p. 11).
The uppermost regions of the earth's atmosphere. The Halley Lecture. Oxford: Clarendon Press. 22 pages.
- 1927 (With D. N. HARRISON & J. LAWRENCE) Measurements of the amount of ozone in the earth's atmosphere and its relation to other geophysical conditions. II. *Proc. R. Soc. Lond. A* **114**, 521–541.
(With I. O. GRIFFITH) Measurement of absorption coefficients of light filters. *Proc. Phys. Soc.* **39**, 223–226.
The upper atmosphere. Lecture delivered to the Science Masters' Association in Oxford, January 1927. *School Sci. Rev.* **8**, 198–203.
Note on the accuracy of spectroscopic measurements of the amount of ozone in the atmosphere. *Z. Geophys.* **3**, 307–308.
- 1928 (With F. W. P. GÖTZ) Observations of the height of the ozone in the upper atmosphere. *Proc. R. Soc. Lond. A* **120**, 251–259.
Symposium on the ultra-violet ray. *Trans. Ophthalm. Soc.* **48**, 273–278.
- 1929 (With D. N. HARRISON & J. LAWRENCE) Measurements of the amount of ozone in the earth's atmosphere and its relation to other geophysical conditions. III. *Proc. R. Soc. Lond. A* **122**, 456–486.
(With F. W. P. GÖTZ) Observations of the height of the ozone in the upper atmosphere. II. *Proc. R. Soc. Lond. A* **125**, 292–294.
Ozone absorption during long arctic night. *Nature, Lond.* **123**, 712.
Atmospheric ozone. *Gerlands Beitr. Geophys.* **24**, 8–15.
The ozone in the earth's upper atmosphere. *Beitr. Phys. Freien Atmos.* **16**, 76–85.
- 1930 Observations of the amount of ozone in the earth's atmosphere and its relation to other geophysical conditions. IV. *Proc. R. Soc. Lond. A* **129**, 411–433.
(With D. S. PERFECT) A method of comparing very small amounts of light by means of a photoelectric cell and a valve amplifier. In *Photoelectric cells and their applications. A discussion at a joint meeting of the Physical and Optical Societies, June 4 and 5, 1930*, pp. 79–84. London: The Physical and Optical Societies.
A spectrophotometer for measuring the amount of ozone in the upper atmosphere. In *Photoelectric cells and their applications. A discussion at a joint meeting of the Physical and Optical Societies, June 4 and 5, 1930*, pp. 185–186 (also in Discussion, p. 223). London: The Physical and Optical Societies.
- 1931 Discussion on ultra-penetrating rays. *Proc. R. Soc. Lond. A* **132**, 345–346.
A photoelectric spectrophotometer for measuring the amount of atmospheric ozone. *Proc. Phys. Soc.* **43**, 324–338.
Ozone in the upper atmosphere and its relation to meteorology. (Weekly evening meeting of the Royal Institution, Friday, 6 March 1931.) *Proc. R. Inst. G.B.* **26**, 373–383 (1929–31); also published in *Nature, Lond.* **127**, 668–672.

- 1934 (With F. W. P. GÖTZ & A. R. MEETHAM) The vertical distribution of ozone in the atmosphere. *Proc. R. Soc. Lond. A* **145**, 416–446.
 (With A. R. MEETHAM) Atmospheric ozone and meteorology. (Some problems in modern meteorology, no. 15.) *Quart. J. R. Met. Soc.* **60**, 265–278.
- 1935 (With A. R. MEETHAM) The vertical distribution of atmospheric ozone in high latitudes. *Proc. R. Soc. Lond. A* **148**, 598–603.
 The upper atmosphere. *Sci. Progr.* **30**, 1–15 (1935–6); reprinted in the *Smithsonian Report* for 1935, pp. 183–196.
- 1939 The vertical distribution of ozone. *Quart. J. R. Met. Soc.* **65**, 314–319.
- 1942 Atmospheric radiation and the temperature of the lower stratosphere. *Quart. J. R. Met. Soc.* **68**, 202–204.
- 1943 (With A. R. MEETHAM) The air we breathe in town and country. (Weekly evening meeting of the Royal Institution, Friday, 12 February 1943.) *Proc. R. Inst. G.B.* **32**, 423–434; the substance of this discourse also appeared in *Nature, Lond.* **151**, 324–327.
- 1946 (With A. W. BREWER & B. M. CWILONG) Meteorology of the lower stratosphere. (The Bakerian Lecture.) *Proc. R. Soc. Lond. A* **185**, 144–175.
 The temperature of the upper atmosphere. (In three parts.) *Weather* **1**, 58–59, 73–77, 115–118.
 (With A. W. BREWER) Meteorology and high altitude aviation. *J. R. Aeronaut. Soc.* **50**, 787–810.
- 1948 (With A. W. BREWER & B. M. CWILONG) Measurement of absolute humidity in extremely dry air. *Proc. Phys. Soc.* **60**, 52–70.
 Some meteorological aspects of atmospheric pollution. (Presidential Address delivered before the Royal Meteorological Society on 21 January 1948.) *Quart. J. R. Met. Soc.* **74**, 133–143.
- 1949 Ice in the atmosphere. (Presidential Address delivered before the Royal Meteorological Society on 26 January 1949.) *Quart. J. R. Met. Soc.* **75**, 117–130.
 Some solar and terrestrial relationships. (Popular lecture to the Royal Meteorological Society on 6 April 1949.) *Weather* **4**, 277–282.
- 1950 Physics and the atmosphere. (Fifth Charles Chree Address, delivered on 4 November 1949.) *Proc. Phys. Soc. B* **63**, 252–266.
 Introductory Address, Centenary Symposium on Physics of Clouds and Precipitation. *Centen. Proc. R. Met. Soc.* pp. 34–36.
- 1951 Recent work on the stratosphere. *Quart. J. R. Met. Soc.* **77**, 488–494.
- 1952 Ozone in the earth's atmosphere. *Endeavour* **11**, 215–219.
- 1953 Sunlight observations. Method adopted to measure ozone in the world-wide network. (With other contributions.) Proceedings of international symposium on Atmospheric Ozone, at Oxford, 2–5 September 1952. *Bull. d'Information de l'U.G.G.I.*, 2e année, pp. 295–322.
 Remarks on 'Line absorption and radiative equilibrium' (a paper by J. I. King). *J. Met.* **10**, 234.
- 1956 Origin and distribution of polyatomic molecules in the atmosphere. *Proc. R. Soc. Lond. A* **236**, 187–193.
 (With A. W. BREWER & R. H. KAY) Some measurements of the vertical distribution of atmospheric ozone by a chemical method to heights of 15 km from aircraft. *Scientific Proceedings of the International Association of Meteorology, Tenth General Assembly, Rome September 1954*, pp. 189–193. London: Butterworths' Scientific Publications.

- 1957 (With C. W. B. NORMAND) Observer's handbook for the ozone spectrophotometer. *Ann. Int. Geophys. Year* 5, 46–81. Four appendixes to the above. *Ann. Int. Geophys. Year* 5, 82–89.
Adjustment and calibration of ozone spectrophotometer. *Ann. Int. Geophys. Year* 5, 90–114.
- 1962 (With C. W. B. NORMAND) Determination of constants etc, used in the calculation of the amount of ozone from spectrophotometer measurements and an analysis of the accuracy of the results. *Ann. Int. Geophys. Year* 16, 161–191.
(With A. W. BREWER & J. T. HOUGHTON) The humidity of the stratosphere. *J. Geophys. Res.* 67, 902–903.
(With C. W. B. NORMAND) Comments on a paper by H. C. Willett, 'The relationship of total atmospheric ozone to the sunspot cycle'. *J. Geophys. Res.* 67, 4095.
- 1963 *Exploring the atmosphere*. Oxford: Clarendon Press.
Note on the measurement of ozone in the atmosphere. *Quart. J. R. Met. Soc.* 89, 409–411.
- 1966 Annual variation of ozone in Antarctica. *Quart. J. R. Met. Soc.* 92, 549–552.
- 1967 The structure of the vertical distribution of ozone in the stratosphere. Clarendon Laboratory, Oxford. Atmospheric Physics Memorandum 67.5.
- 1968 Forty years' research on atmospheric ozone at Oxford: a history. *Appl. Optics*, 7, 387–405.
Exploring the atmosphere. (2nd edition much revised.) Oxford: Clarendon Press.
On the accuracy of spectroscopic measurements of atmospheric ozone. International Ozone Seminar, Potsdam, 26.9–1.10.1966. National Komitee für Geod. und Geophys. der D.D.R. *Geod. Geophys. Veröff.*, Reihe II, 7, 9–12. (This paper is included in the collection of 1975, *vide infra*.)
- 1971 (With B.M.F. MCGARRY & C. D. WALSHAW) Absorption coefficients of ozone for use in the determination of atmospheric ozone. *Quart. J. R. Met. Soc.* 97, 75–82.
- 1973 Atmospheric ozone and the movement of the air in the stratosphere. (Read at the International Ozone Symposium at Arosa, 1972.) *Pure Appl. Geophys.* (PAGEOPH) 106–108, 1520–1530.
The development of instruments for measuring atmospheric ozone during the last fifty years. *J. Phys.* E 6, 938–939.
The laminated structure of the ozone in the atmosphere. *Quart. J. R. Met. Soc.* 99, 599–607.
- 1975 Ten papers issued by Dobson on matters relating to the use of the ozone spectrophotometer between 1963 and 1974, with an introduction by C. D. Walshaw. *Pub. Inst. Geophys. Polish Acad. Sci.* 89, 61–115.