

chromatic.—G. H. Dieke and Harold D. Babcock : The structure of the atmospheric absorption bands of oxygen.—Charles E. St. John : Revision of Rowland's preliminary tables of solar spectrum wave-lengths. The starting point of Rowland's system (1893) was the mean wave-length of the D_1 line of sodium as referred to the standard metre by five observers. In 1893, Michelson and Benoit, and in 1907, Benoit, Fabry, and Perot, using a Michelson interferometer, obtained the absolute wave-length of the red cadmium line in terms of the *mètre des archives*, and this was adopted as the primary standard in the international system of wave-lengths. For many years now, measurements have been made at Mount Wilson, one series utilising simultaneous exposures to the centre of the sun and the standard iron arc with the 30 ft. and, later, the 75 ft. spectrograph, and the other interferometer measurements, and the results corrected for the rotation and orbital motion of the earth. The results are to be issued shortly by the Carnegie Institution of Washington as a "Preliminary Table of Solar Spectrum Wave-lengths."—George de Thierry: Application of the law of similitude to hydraulic laboratory research.—A. Keith Brewer : Some factors influencing the ignition of carbon monoxide and oxygen. The ignition point of an explosive mixture of carbon monoxide and oxygen, using a condensed discharge, is, at constant pressure, determined by the energy of the spark, while at different pressures the ignition points are related as the voltage. Water vapour as an impurity lowers the ignition point, the merest trace enabling the reaction to proceed to completion, whereas in the dried mixture there was seldom more than 10 per cent. completion. Other impurities may be (1) inert except that they absorb energy, increasing the ignition potential (nitrogen, carbon dioxide, chloroform, alcohol, etc.), or (2) oxidised in the explosion and thus lower the ignition potential (water, hydrogen, alcohol, carbon disulphide, etc.). The effect of alcohol depends on the amount of oxygen present. It is suggested that the lowering of ignition potential is brought about by the catalytic activity of 'new-born' decomposition products of the impurity.

Air Ministry. Annual Report of the Meteorological Committee to the Air Council for the Year ended 31st March 1927. (M.O. 298.) Pp. 76. (London : H.M. Stationery Office.) 2s. net.
University of London : University College. Calendar, Session 1927-1928. Pp. lxx+x+476+lxix+cciv+40. (London : Taylor and Francis.)

FOREIGN.

Observatoire de Zi-ka-wai. Annales de l'Observatoire astronomique de Zo-sé (Chine). Tome 16 : Coopération de l'Observatoire de Zi-ka-wai à la revision internationale des longitudes. Pp. iv+156+17 planches. (Zi-ka-wai.)
Classified List of Smithsonian Publications available for Distribution, September 15, 1927. Compiled by Helen Munroe. (Publication 2922.) Pp. vi+29. (Washington, D.C. : Government Printing Office.)
Department of the Interior : Bureau of Education. Publications available September 1927. Pp. 25. (Washington, D.C. : Government Printing Office.)
Social Research Department. First Annual Report. Pp. 8. (Peking : The China Foundation for the Promotion of Education and Culture.)
Reale Istituto Lombardo di Scienze e Lettere, Milano. Nel centenario della morte di Alessandro Volta. Discorsi e note del Presidente Berzolari, dei MM. E. Grassi e Murani, e dei SS. CC. Somigliana e Volta. Pp. 149. (Milano : Urico Hoepli.)
Smithsonian Miscellaneous Collections. Vol. 79 (whole Volume) : World Weather Records. Collected from Official Sources by Dr. Felix Exner, Dr. G. C. Simpson, Sir Gilbert Walker, H. Helm Clayton, Robert C. Mossman. Assembled and arranged for publication by H. Helm Clayton. Published under Grant from John A. Roebling. (Publication 2913.) Pp. vii+1199. (Washington, D.C. : Smithsonian Institution.)
Department of Commerce : Bureau of Standards. Circular of the Bureau of Standards, No. 328 : Testing of Measuring Tapes at the Bureau of Standards. Pp. 16. (Washington, D.C. : Government Printing Office.) 10 cents.
Field Museum of Natural History. Report Series, Vol. 7, No. 1 : Annual Report of the Director to the Board of Trustees for the Year 1926. (Publication 243.) Pp. 174+20 plates. Botanical Series, Vol. 4, No. 5 : i. Various Spermatophytes, by J. Francis MacBride ; ii. Mosses of Peru, by R. S. Williams. (Publication 244.) Pp. 99-189+8 plates. (Chicago, Ill.)
Department of the Interior : U.S. Geological Survey. Bulletin 787 : Geology and Ore Deposits of the Mogollan Mining District, New Mexico. By Henry G. Ferguson. Pp. vi+100+25 plates. 65 cents. Water-Supply Paper 569 : Surface Water Supply of the United States, 1923. Part 9 : Colorado River Basin. Pp. v+189. 25 cents. Water-Supply Paper 574 : Surface Water Supply of the United States, 1923. Part 12 : North Pacific Slope Drainage Basins. C : Lower Columbia River Basin and Pacific Slope Drainage Basins in Oregon. Pp. v+194+li+3 plates. 35 cents. Professional Paper 149 : Correlation of Geologic Formations between East-Central Colorado, Central Wyoming and Southern Montana. By Willis T. Lee. Pp. v+80+35 plates. 50 cents. (Washington, D.C. : Government Printing Office.)
Agricultural Experiment Station, Michigan State College of Agriculture and Applied Science. Circular Bulletin No. 104 : Flies commonly found in Dwellings. By Eugenia McDaniel. Pp. 15. (East Lansing, Mich.)
Bulletin of the American Museum of Natural History. Vol. 54, Art. 3 : The Reptiles of Hainan. By Karl Patterson Schmidt. Pp. 395-465+plate 27. Vol. 54, Art. 4 : Notes on Chinese Reptiles. By Karl Patterson Schmidt. Pp. 467-551+plates 28-30. (New York City.)

Official Publications Received.

BRITISH.

County Borough of Halifax. Second Annual Report of the Corporation Museums for the Year 1926-7. Pp. 20+2 plates. (Halifax.)
Report of the Marlborough College Natural History Society for the Year ending Christmas, 1926. (No. 75.) Pp. 91+2 plates. (Marlborough.) To members, 8s. ; to non-members, 5s.
Journal of the Indian Institute of Science. Vol. 10A, Part 3 : Influence of the Sulphur Atom on Optical Rotatory Power. By P. P. Shukla. Pp. 83-41. 8 annas. Vol. 10A, Part 4 : The Constitution of the Acid formed by the Action of Sulphuric Acid on Camphorquinone. By Madhay Balaji Bhagvat and John Lionel Simonsen. Pp. 43-55. 8 annas. (Bangalore.)
A List of the Serial Publications available for Consultation in the Libraries and Scientific Institutions of the Union of South Africa. Compiled for the Research Grant Board of the Department of Mines and Industries by A. C. G. Lloyd. New and revised edition. Pp. iv+259. (Cape Town.)
Journal of the Society of Glass Technology. Edited by Prof. W. E. S. Turner. Vol. 11, No. 43, September. Pp. xx+vii+31-45+277-362+229-320+xxi-xxx. (Sheffield.) 10s. 6d.
Colony of the Gambia. The Annual Report of the Department of Agriculture for the Period January 1st, 1926, to March 31st, 1927. Pp. 58. (London : The Crown Agents for the Colonies.) 5s.
British Honduras. Annual Report of the Forest Trust for the Year ended 31st March 1927. Pp. 22. (Belize, British Honduras.)
Report of the Council of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne, intended to be presented at the Annual Meeting of the Society, 2nd November 1927. Pp. 40. (Newcastle-upon-Tyne.)
Tanganyika Territory. Report of the Department of Agriculture for the Year ending 31st March 1927. Pp. 46. (London : The Crown Agents for the Colonies.) 2s. 6d.
Wigan and District Mining and Technical College. Report of the Principal on the Work of the Session 1926-27. Pp. 24. (Wigan.)
Battersea Polytechnic, London, S.W.11. Report of the Principal for the Session 1926-27. Pp. 38. Examination Lists, August 1927. Pp. 36. (London.)

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Diary of Societies.

SATURDAY, NOVEMBER 12.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS (Southern District Meeting) (at Town Hall, Chippenham), at 11.30.
ROYAL INSTITUTION OF GREAT BRITAIN, at 8.—E. Cammaerts : The Main Features of Modern English Literature (II.)
PHYSIOLOGICAL SOCIETY (at Institute of Physiology, Cardiff University)

MONDAY, NOVEMBER 14.

ROYAL GEOGRAPHICAL SOCIETY (at Lowther Lodge), at 5.—Col. H. S. I. Winterbotham : The Triangulation of Africa.
ROYAL SOCIETY OF MEDICINE (War Section), at 5.—Major E. C. Lambkin : Recent Investigations into the Treatment of Gonorrhoea.
BRITISH PSYCHOLOGICAL SOCIETY (Education Section) (at London Day Training College), at 6.—Dr. W. S. Inman : Emotional States and their Relation to Eye Symptoms and Diseases.
INSTITUTION OF ELECTRICAL ENGINEERS (North-Eastern Centre) (at Armstrong College, Newcastle-upon-Tyne), at 7.—A. H. Law and J. P. Chittenden : Higher Steam Pressures and their Application to the Steam Turbine.
INSTITUTE OF METALS (Scottish Local Section) (at 39 Elmbank Crescent, Glasgow), at 7.30.—A. Logan : Brass Foundry Practice.
RAILWAY CLUB (25 Tothill Street, S.W.), at 7.30.—H. A. Vallance : London's First Railway—the London and Greenwich.
ROYAL SOCIETY OF ARTS, at 8.—Prof. H. C. H. Carpenter : Alloy Steels, their Manufacture, Properties, and Uses (Cantor Lectures) (I.)
SURVEYORS' INSTITUTION, at 8.—E. S. Cox : Presidential Address.
INSTITUTION OF ELECTRICAL ENGINEERS (Western Centre) (at Bristol).—A. R. Cooper : Electrical Equipment of Track on the Underground Railways of London.
MEDICAL SOCIETY OF LONDON.—Clinical Evening.

TUESDAY, NOVEMBER 15.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, at 5.—Dr. P. C. Varrier-Jones : Village Settlements and the Tuberculous (Mitchell Lecture).
ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Sir John Herbert Parsons : Light and Sight (III.)
ROYAL SOCIETY OF MEDICINE, at 5.30.—General Meeting.