MONTHLY NOTICES
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Major E. H. Hills, C.M.G., F.R.S., President, in the Chair.

F. C. H. Carpenter, M.A., B.Sc., University Observatory, Durham;
Douglas F. Horsefield, St. Silas' Vicarage, Bristol;
Harold Spencer Jones, B.A., B.Sc., Royal Observatory, Greenwich, S.E.; and

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended:

Richard Henry Bulkeley, J.P., Wallerawang, New South Wales, Australia (proposed by W. F. Gale);
Richard Thomas Cullen, Royal Observatory, Greenwich, S.E. (proposed by F. W. Dyson);
R. Jarry-Desloges, Director of the Observatory, Sétif, Algeria (proposed by A. de la Baume Pluvinel);
Robert John Pocock, B.A., B.Sc., Queen's College, Oxford (proposed by H. H. Turner);
William Thow, M.Inst.C.E., Inglewood, Warrawee, New South Wales, Australia (proposed by W. F. Gale);
Lloyd A. H. Warren, M.A., Ph.D., Assistant Professor of Mathematics and Astronomy in the University of Manitoba, Winnipeg, Canada (proposed by F. R. Moulton); and William Moody Witchell, Royal Observatory, Greenwich, and 36 Sandbourne Road, Brockley, S.E. (proposed by F. W. Dyson).

Dr. J. W. Capstick, Mr. H. P. Hollis, and Mr. Richard Inwards were appointed Auditors of the Treasurer’s Accounts for 1913.

Fifty-four presents were announced as having been received since the last meeting, including, amongst others:—

Tycho Brahe, Opera Omnia, edidit J. L. E. Dreyer, Tomus I., presented by Dr. Dreyer; Birkeland (Kr.), The Norwegian Aurora Polaris Expedition, 1902–3; Cause of Magnetic Storms and Origin of Terrestrial Magnetism, 2 vols., presented by the author; Perth Observatory, Western Australia, Astrographic Catalogue, Perth Section, vols. 2, 3, presented by the Observatory.


I. General Discussion.

Until Hill published his Researches in the Lunar Theory practically all our knowledge of the possible solutions of the problem of three bodies was derived from the discussion of the motions of such bodies as were found in the solar system. The body whose motion departed most from the Keplerian ellipse was the moon, and when inquiries came to be made into more complex motions than existed in our system, it was natural that the question of remote satellites should be first considered, especially as the theory of the moon’s motion was not altogether satisfactory. In his Researches Hill gave the “variational curves” for eleven different values of the relative mean motion of the satellite and the primary, ranging from the case of our moon to that of a satellite having 1.78 lunations in the period of the primary. The motion in all the cases actually treated by Hill was direct. Darwin by laborious arithmetical methods obtained a considerable number of “periodic orbits,” but only one refers to a retrograde satellite, and the results it indicated seem to have been ignored. Poincaré, Brown, and others have considered by analytical processes various possible types of periodic motion, but never with respect to retrograde satellites. The discoveries of Phoebe and J VIII moving in retrograde orbits at great distances from their respective