MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

Vol. LXVIII. December 13, 1907. No. 2

H. F. Newall, Esq., M.A., F.R.S., President, in the Chair.

Burdett Mason, Larondouette, Bayonne, France; and
Arthur William Meers, F.R.G.S., Lugano, Wickham Road, Beckenham,

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:—

Henry Hermann Grunig, M.Sc., Patent Agent and Engineer, 3 Blakesley Avenue, Ealing, W. (proposed by Rev. F. B. Allison);
Jan B. Hubrecht, Christ's College, Cambridge (proposed by Bryan Cookson);
Victor A. Lowinger, Trigonometrical Survey Department, Taiping, Federated Malay States (proposed by Sir David Gill);
Rev. Malcolm Parker Miller McLean, M.A., The Rectory, West Raynham, Norfolk (proposed by Henry T. Gerrans);
Alfred W. Porter, B.Sc., Assistant Professor of Physics, University College, London, W.C. (proposed by L. N. G. Filon);
Harold Knox Shaw, B.A., Trinity College, Cambridge (proposed by S. A. Saunder);
Capt. Eldred Weston White, Brockley Villa, Upton Road, Southville, Bristol (proposed by E. Fawcett White).
Mr. A. E. Conrady, Mr. R. Inwards, and Mr. G. J. Newbegin were appointed auditors of the Treasurer's accounts for 1906.

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

Abbadia Observatory, Observations, tome 5; and Bordeaux Observatory, Catalogue photographique du ciel, Coordonnées rectilignes, tome 2, presented by the Observatories; Groningen Astronomical Laboratory, Libration of the three inner large satellites of Jupiter (W. de Sitter), presented by the Laboratory; Ziegler Polar Expedition, Scientific results, presented by the estate of Wm. Ziegler.

Astrophic Chart; 16 charts presented by the Royal Observatory, Greenwich; and 19 charts presented by the French Minister of Public Instruction.


§ 1. The construction of a standard catalogue of photographic star places along the track of the planet Eros was undertaken in the first instance to provide for the reduction of those series of photographs of the planet which, having a field smaller than 2° square, could not be reduced directly with the étoiles de repère; and also to provide exact places of the stars which had been used in visual micrometric comparisons with the planet.

It now seems probable that the standard catalogue may have an extended use; for, as will be shown later, it will be possible by its aid to effect very simply the equivalent of a re-reduction of all the published places of the planet to this new system of stars, lying close to the track of the planet, and more nearly equal to it in magnitude than are the étoiles de repère. This should provide a powerful method of searching for systematic errors in the photographic places of the planet and the value of the Solar Parallax derived from them.

§ 2. The published material for the construction of the catalogue was found in the Paris Eros Circulars, Nos. 10 and 11.* The results of an inter-comparison of the work of the different observatories were published in Solar Parallax Papers Nos. 4 and 5 (M.N., vol. lxvi. p. 481, vol. lxvii. p. 70, 1906 June and November). In those papers may be found the following conclusions:—

1. That several series of photographic star places are affected with a magnitude equation of serious amount.
2. That other series are affected by progressive discordances,

* Circular No. 12 appeared after the principal part of the work was finished. But see later, §§ 11 and 12.