

#### 4. COMMISSION DES ÉPHÉMÉRIDES

PRÉSIDENT: M. E. W. BROWN, *Professor of Mathematics, Yale University, New Haven, Conn., U.S.A.*

MEMBRES: MM. Comrie, Cowell, Da Costa Lobo, Eichelberger, Fayet, Fukumi, Herrero, Kopff, Robertson, Mlle Vinter Hansen.

On July 31, 1930, Commission 3 reported that the names of two stars to which two names are commonly given had been settled. These two stars are:

Gamma Scorpii = Sigma Librae  
Upsilon Persei =  $\gamma$  Andromedae

They have been fixed as in Libra and Andromeda respectively. In accordance with the suggestion of the Secretary of the Union, this report was communicated to the Directors of the Nautical Almanacs, no objection being raised by the members of the Commission.

Dr L. J. Comrie, Director of the British Nautical Almanac Office, suggests that the question of duplicate printing in the national volumes of ephemerides be discussed at the forthcoming meeting. He points out that if there were, for example, one international publication giving the places of some 800 or 900 stars, the duplication of the printing of apparent places could be avoided with consequent economy. Prof. Herrero suggests that the ideal would be an international almanac. Dr Comrie transmits also the following information concerning the present and future plans of the Nautical Almanac:

With regard to the work of this Office, the Nautical Almanac was remodelled and considerably enlarged in 1931. In particular, a very detailed explanation was added. Impending changes in future issues are as follows:

- 1935 (1) All variations are being replaced by finite differences.
- (2) The G.M.T. of Transit of the Sun at Greenwich has been added.
- (3) The Cape Day Numbers  $\tau + x$  and  $\tau + y$  have been added.
- 1937 (1) The logarithms of the Besselian Day Numbers are being discontinued, the natural values only being given.
- (2) Means are provided for reducing the apparent positions of stars directly to the equinox of 1950.0 or vice versa.

We expect to publish before the meeting our volume giving co-ordinates, both spherical and rectangular, of the planets for the equinox of 1950.0 covering the years of 1920-40 with extension to earlier years in the cases of Jupiter and Saturn. The publication of this volume will undoubtedly give a stimulus to the work of computing special perturbations and will once more bring to the forefront the methods of Encke and Cowell, which are adapted to calculating machines.

Tables of natural trigonometric functions to seven decimals for every second of time have been produced and are being used in manuscript. It is hoped that they will ultimately be published. Seven- and eight-figure tables for every second of arc are being produced in co-operation with Prof. J. Peters of the Rechen-Institut.

Considerable progress has been made in the mechanisation of the work of this Office; logarithms have ceased to be used. The summation of the harmonic terms in Brown's Tables of the Moon has been very successfully carried out on a Hollerith tabulating machine. A Burroughs Class II machine has been used to produce tables by integrating from predetermined second differences.

Miss Vinter Hansen suggests that the Equation of Time be given with the same sign in all the Almanacs.

ERNEST W. BROWN  
*President of the Commission*