

## ANNUAL REPORT OF THE UNION OBSERVATORY

1919

*Director Mr. R.T.A. Innes*  
*(Union Astronomer)*

**Staff.** - There has been no change. Mr. E.L. Johnson has returned from military service in Europe, and the staff is now restored to its previous strength.

**9-inch Refractor** (Mr. Innes).- Measurements of double stars and observations of the eclipses of Jupiter's satellites have been continued. A few miscellaneous observations were also made.

**Franklin-Adams Star-Camera** (Mr. Wood).- The following minor planets have been photographically observed: 31, 43, 80, 111, 123, 193, 371, and 758. Plates have also been taken for reproduction in the Observatory Circulars.

**Twin Telescope** (Mr. Worsell).- A few additional spectrographs of Nova Aquilae have been obtained. Parallax plates of some stars having large proper motion have also been taken; this work will come to a conclusion early in 1920.

**2.5/8-inch Talcott Telescope** (Mr. Worsell). - This instrument has been used throughout the year for the purpose of maintaining the time-service.

**Blink Microscope.** - As in the previous year, work with this instrument has been almost continuous. The Sydney zones to  $-59^{\circ}$  inclusive have now been finished, and the results for the four zones  $-53^{\circ}$ ,  $-55^{\circ}$ ,  $-57^{\circ}$ , and  $-59^{\circ}$  are being prepared for press. By kind permission of H.M. Astronomer at the Cape Mr. Wood paid a third and fourth (final) visits to the Cape for the purpose of taking repeat chart plates, and got 115 and 112 pairs respectively; these are now being observed with the Blink micrometer, but will take about a year to finish.

About fifty stars having proper motions larger than 50" per century have been found during the year.

Dr. Baldwin has lent two-thirds of the zone  $-66^{\circ}$  chart plates with from 20 to 24 years' interval, and these have all been observed; the remaining third of the zone is expected daily.

Dr. Baillaud has lent a pair of plates which had undergone a thorough investigation by MM. Le Morvan and Jekhowsky. The results of the observations made here will appear in Circular No.47.

N. Gonnessiat lent three pairs of Algiers plates, and will lend another three pairs; it is hoped by means of these six pairs to be able to disentangle the Solar drift from Drift I. The regions selected are about 2h,  $-2^{\circ}$  and 8h,  $-1^{\circ}$ . The thanks of the Observatory are due to these astronomers for their ready willingness to supply it with such valuable material for measurement. Incidentally, some counts of stars on the plates of the Sydney zone have been made so as to determine its galactic condensation.

***Meteorological and Seismological Observations.*** - These have been continued on the same lines as in previous years.

***Observatory Circulars.*** - Nos. 44 and 45 were issued during the year. The chief contents of these are observations of Comet 1918 I (Reid) and of minor planets. With these circulars six maps of southern regions were distributed. Circular No.46 is in print, and Circular No.47 in MS. is in the Government printer's hands.

***Miscellaneous.*** - The preparation of the MS. of a General Catalogue of Southern Double Stars is practically finished, but publication is being delayed in the hope that the Henry Draper Catalogue of Magnitudes and Spectra will soon be available, and the valuable data it will yield can be made use of. The costs of paper and printing have risen so greatly that the Government has not yet formally sanctioned the publication.

It is hoped to accelerate the issue of the Southern Sky maps; many have been prepared for the printer, but the process of reproduction is a slow one.