

ANNUAL REPORT OF THE UNION OBSERVATORY

1933

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26½-inch Grubb Visual Refractor. - The number of visual micrometrical measures of double stars made during the year was 3489. Experimental work was carried out with an eyepiece interferometer and 98 measures were made. The results were very satisfactory and it was evident that, with the use of this simple accessory, it will be possible to continue the observations of certain binaries after the separation has become too small for direct micrometer measures to be made.

In continuation of the programme of observations of Saturn's satellites, instituted by the late Professor Georg Struve of Neubabelsberg, 77 measures of the satellites Enceladus and Mimas were made. Some position observations were made of the large white spot which appeared on Saturn in 1933 August.

Using a yellow screen and yellow sensitive plates, 11 plates of double stars and 52 plates of N.G.C. 3532 were obtained.

Franklin-Adams Star Camera. - During the year 550 plates were obtained with this instrument.

The distribution of the plates was as follows:-

Minor planet regions and star maps	376 plates
Variable star regions	116 "
Comets	58 "

Comet 1932n (Forbes-Dodwell) was under observation from 1932 December 18 to 1933 January 7; Comet 1933b (Pons-Winnecke) was observed from 1933 May 27 to September 22. An unsuccessful search for Comet Finlay was carried out during April and May.

During the search for Comet Finlay the trail of a minor planet with an unusually large motion was found on the plates. This object was provisionally designated 1933 HH, and the early observations suggested that the planet was moving on an orbit of very

small semi-axis. From a longer series of observations identity of the object with 192 (Nausikaa), which came to opposition in November, was established.

A new minor planet 1932 EB1, discovered here in 1932, was observed again in 1933 and is now numbered and named - 1241 Dysona.

During the year 396 measured positions of minor planets have been forwarded to the Astronomisches Rechen-Institut.

Occultations of Stars by the Moon. - The programme of the last few years has been maintained without alteration, and 191 occultations were observed during the year.

The results of the year's observations are as follows:-

	s	"
1933.11	7.9	4.3
.40	10.6	5.8
.66	8.2	4.5
.84	8.3	4.5
Mean for year	.59	8.8

The second column indicates the time by which the Moon has arrived too early at any longitude, and the third column the distance the Moon is ahead of its tabular longitude.

A number of occultations observed by Messrs. G.E. Ensor and H.J.F. Burroughs, both of Pretoria, has been reduced and forwarded to Professor E.W. Brown.

Union Observatory Circulars. - During the year Circular No.89 has been distributed and No.90 has been completed and passed for press. Fifteen southern star maps were issued with Circular No. 89.

The present state of the project is as follows:-

Maps already issued	462
Maps in hands of Government printer	31
Maps still to be prepared	63
Total	<hr/> 556

Miscellaneous. - Dr. H. van Gent returned to the observatory from Leiden on 1933 September 11. Professor H. Kimura of Mizusawa visited the observatory on October 18. The number of visitors to the observatory during the year was 1574.