

ANNUAL REPORT OF THE REPUBLIC OBSERVATORY

JOHANNESBURG

1963

(Director, Dr W. S. Finsen)

STAFF

Mr P. E. Powell was appointed to the vacant post of Assistant Professional Officer on January 17, and Mr J. Hoevers to the vacant post of Senior Special Craftsman on February II. Mr S. W. Postma resigned on April 30.

Dr W. H. van den Bos, who had spent the previous two years at the Lick Observatory, returned to South Africa in August, and resumed his double star work at the Republic Observatory as a guest astronomer.

It is a pleasure to acknowledge once again the willing help on public nights and in other ways of the following amateurs: Messrs. H. Botham, I. R. H. Brickett, M.D. Overbeek and J. Vollmer.

Finsen attended a Symposium on Instrumental Astronomy in Tucson, Arizona, at the invitation of the American Astronomical Society, and contributed a paper on interferometric observation of double stars.

BUILDINGS

The new main building is expected to be ready for occupation in the second half of 1964.

ASTRONOMICAL RESEARCH

With the 26½-inch refractor 859 micrometer measures of double stars were obtained. The principal observers were van den Bos (193 measures on 12 nights), Knipe (592 measures on 45 nights), and Postma (70 measures on 16 nights). The telescope was also used by Finsen with his eyepiece interferometer on 216 nights for the measurement of known pairs and the search for new pairs. The extension of the survey from magnitude 6.5 to 7.5 for stars with proper motion exceeding 0".05 in either co-ordinate was completed during the year. The survey as a whole has entailed 12465 examinations of 8117 stars and has led to the discovery of 71 new close pairs.

With the Franklin Adams telescope at Hartbeespoort, Bruwer obtained 224 plates on 21 nights and Postma 7 plates on 1 night, resulting in 216 minor planet and comet positions. In addition, at the request of Dr P. Herget of the Cincinnati Observatory, Bruwer re-measured 41 minor planet positions on plates taken in earlier years. With the

same telescope Mr J. Tinbergen of the Leiden Southern Station obtained 16 plates of variable star fields.

The 9-inch refractor was again used by Knipe for photoelectric photometry of eclipsing variables and 2995 readings were obtained on 59 nights. Botham and Brickett also used this telescope, as well as the 6/7-inch refractor, for physical observations of Mars and Saturn.

TIME SERVICE

New indicating transistor thermostats were developed, which make it possible to control the oscillator room temperature to about 0.1° C under widely varying ambient conditions.

PUBLICATIONS

Republic Observatory Circular No.122 and twelve Time Service Bulletins were issued during the year. The following papers appeared elsewhere:

- Knipe, G. F. G., A new bright variable star. *MNASSA*, 22, 112, 1963.
Botham, J. H., Observations of the planets Jupiter and Saturn in 1962.
MNASSA, 22, 2,1963.