

## ANNUAL REPORT OF THE REPUBLIC OBSERVATORY

### JOHANNESBURG

1964

*(Director, Dr W. S. Finsen)*

#### ADMINISTRATION

In terms of the Finance Act, 1964, the Observatory was transferred to the South African Council for Scientific and Industrial Research with effect from April 1.

#### STAFF

Dr W. H. van den Bos was a guest astronomer throughout the year with the assistance of a Research Grant from the Council for Scientific and Industrial Research.

Mrs A. R. Canavesio resigned on May 13 and Mrs A. M. E. Hey was appointed in her place on November 2.

Messrs. H. Botham, I.R.H. Brickett, M.D. Overbeek and J.Vollmer gave generously of their time as demonstrators on public nights.

J. Hers was an official delegate to the 12th General Assembly of the International Astronomical Union.

#### BUILDINGS

The new main building, work on which began in 1962 October, was virtually completed at the end of the year and most of the offices are now occupied, but the library and most of the technical equipment have still to be moved to their new accommodation.

#### ASTRONOMICAL RESEARCH

With the 26½-in. refractor 2253 micrometer measures of double stars were obtained. The principal observers were van den Bos ( 1413 measures on 71 nights) and Knipe (838 measures on 42 nights). Finsen used the telescope on 234 nights in continuation of his interferometer programme.

At the Hartbeespoort Annexe Bruwer obtained 168 plates on 15 nights with the Franklin Adams telescope, resulting in 205 minor planet and comet positions. At the request of Dr P. Herget of the Cincinnati Observatory he also remeasured 24 minor planets on plates taken in earlier years.

The 9-in. refractor was used by Knipe for photoelectric observations of eclipsing variables and 3268 readings were obtained on 53 nights. He also completed an orbit of RR Centauri. Botham used the 9-in. and 6/7-in. refractors for physical observations of Jupiter and Saturn.

Generous offers of ICT and IBM computer facilities made it possible for Finsen to bring his edited card catalogue of visual binary orbits up to date. The programmes were written by Messrs S. W. Postma and P. Hers.

### TIME SERVICE

Preparations were made for moving the electronic time equipment into the new building. With this end in view a new measuring console was constructed, as well as improved control apparatus for the emergency power supply.

### PUBLICATIONS

Republic Observatory Circular No.123 and twelve Time Service Bulletins were issued during the year. The following publications appeared elsewhere:

Botham, J. H., Report on Saturn during 1963. *Mon. Not. Astr. Soc. S. Afr.*, **23**, 3, 1964.

Finsen, W. S., Interferometer observation of binary stars. *Astr. J.*, **69**, 319, 1964.

Finsen, W. S., The orbit of  $\phi$ 363. *J. Observateurs*, **47**, 98, 1964.

Finsen, W. S., (with Menzel, D. H., Young, A. T., deVaucouleurs, G. and Leighton, R.B.).

***Research directed toward the production of a map of the visible features of Mars.***

***Final report.*** Air Force Cambridge Research Laboratories, Bedford, Mass., 1964.

Knipe, G. F. G., A slightly variable star. *Mon. Not. Astr. Soc. S. Afr.*, **23**, 105, 1964.

van den Bos, W. H., The orbit of Hu 580. *J. Observateurs*, **47**, 34, 1964.

van den Bos, W. H., (with Jeffers, H. M. and Greeby, F.M.). Index catalogue of visual double stars, 1961.0. *Publ. Lick Obs.*, **21**, 1963.