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**ANNUAL REPORT OF THE REPUBLIC
OBSERVATORY**

JOHANNESBURG

1965

(Acting Director, J. Hers)

STAFF

Dr W. S. Finsen retired in June, after 41 years service at the Observatory, but continued his interferometric observations of double stars as a guest astronomer.

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

Mr J. L. Newburg was appointed Senior Research Officer in June. In the time department Mr C. D. de Villiers was appointed Assistant Research Officer in July, replacing Mr F. E. Powell, who resigned in May, while Mr R. Lake was appointed Senior Technician in August. Mr D. Grinker resigned in February, and Mr H. F. Schulze was appointed in his place as Administrative Officer.

The valuable assistance rendered on public nights by Messrs J. H. Botham, I. R. H. Brickett, M. D. Overbeek and J. Vollmer is again gratefully acknowledged.

BUILDINGS

The two 16 ft stainless steel domes on the roof of the new main building have been completed, and the existing 9in. and 6/7 in. refractors are being installed in them. All books have been transferred to the new library.

ASTRONOMICAL RESEARCH

With the 26½-in. refractor 3233 micrometer measures of double stars were obtained, the observers being van den Bos (1457 measures on 96 nights), Knipe (967 measures on 70 nights) and Newburg (809 measures on 66 nights). Finsen used the telescope on 144 nights in continuation of his interferometer programme.

With the Franklin Adams telescope at the Hartbeespoort Annexe Bruwer obtained 140 plates on 15 nights, resulting in 181 minor planet and comet positions. At the request

of Dr P. Herget of the Cincinnati Observatory he also remeasured thirty minor planets on plates taken in earlier years.

The 9 in. refractor was used by Knipe for photoelectric observations of eclipsing variables, and 1732 readings were obtained on 40 nights.

TIME SERVICE

Three oscillators were transferred to cellars in the new building, to form the basis of a duplicate time installation, which will make it possible to achieve a smooth transition to the new quarters without interrupting any outgoing frequencies or time signals.

Throughout the year the ZUO frequency was adjusted daily with reference to the frequency of GBR, the deviation being less than 1 part in 10^{10} for 54 per cent of the time, and less than 5 parts in 10^{10} for 97 per cent of the time.

PUBLICATIONS

Republic Observatory Circular No.124 and twelve Time Service Bulletins were issued during the year. The following papers appeared elsewhere:

Hers, J., A battery~powered transistor oscillator drive, *Sky Telesc.*, **30**, 243.

Knipe, G. F. G., The eclipsing binary RR Centauri, *Astrophys. J.*, **142**, 1068.

Knipe, G. F. G., The triple system HR7486, *Mon. Notes astr. Soc. sth. Afr.*, **24**, 92.

Knipe, G. F. G., (With A. D. Thackeray) The eclipsing variable HD161783 (BV420),

Mon. Notes astr. Soc. sth. Afr., **24**, 109.

van den Bos, W. H., Note on the double star ι Serpentis,

Mon. Notes astr. Soc. sth. Afr., **24**, 123.