

COMMISSION 27: VARIABLE STARS (ÉTOILES VARIABLES)

Report of Meetings, 19 and 21 August 1970

PRESIDENT: L. Detre.

SECRETARY: W. S. Fitch.

During the Brighton General Assembly, the Commission conducted one administrative session, one general scientific meeting, and two specialized sessions devoted to the spectra of variable stars and to the absolute magnitudes of the RR Lyrae stars.

Business Meeting

Following the introduction of the Secretary and of the Interpreter (J. Jung for French), the President remarked briefly on the replies he had received to his request for information to be included in the draft report, and then opened the meeting to general business.

M. W. Feast requested that the Committee on the Spectra of Variable Stars (Chairman: Feast) be dissolved. After a brief discussion, this request was formally approved by the Commission and has been transmitted to the Executive Committee.

The Commission approved a request from *Mrs H. B. Sawyer-Hogg* that the Committee on Variable Stars in Clusters (Chairman: Mrs Sawyer-Hogg; Members: G. H. Herbig, M. W. Feast, L. Rosino) be renamed the Committee on Variable Stars in Globular Clusters. *Herbig* noted that this action should be brought to the attention of Commission 37.

A brief report of the Working Group on Flare Stars (Chairman: P. F. Chugainov; Members: A. D. Andrews, R. E. Gershberg, Sir Bernard Lovell, V. Oskanian) was read by the President. The Commission then approved the request by Chugainov that this Working Group be continued, with their observing activity being especially concentrated on YZ Cmi, UV Cet, EV Lac, and AD Leo.

The Commission also supported the President's motion that the Working Group on Variable Stars in the Magellanic Clouds (Chairman: S. C. B. Gascoigne; Members: S. Gaposchkin, B. Kukarkin, J. Landi Dessy, P. Th. Oosterhoff, A. Thackeray, Sir Richard Woolley), presently engaged in the preparation of a Catalog of Magellanic Cloud variables, be continued.

Zwicky's request that the Working Group for Research on Supernovae (Chairman: F. Zwicky; Members: V. A. Ambartsumian, Ch. Bertaud, A. A. Boyarchuk, L. Detre, E. A. Dibaj, G. Haro, B. V. Kukarkin, H. Lambrecht, L. Rosino, K. Rudnicki, J. L. Sersic, A. D. Thackeray, B. E. Westerlund, P. Wild) be moved from Commission 28 to Commission 27 was supported by *Rosino*, and then approved by Commission 27.

The President raised the question as to whether pulsars should be included in the domain of specific interest of Commission 27. After a discussion in which it was pointed out that there is currently only one known optical pulsar, whose variability may be due entirely to rotation and/or a binary state, it was unanimously agreed that no action should be taken on this question until future developments in pulsar research clearly indicate an appropriate decision.

The President presented to Commission 27 a proposal submitted to the Executive Committee of the Union by the U.S.S.R. National Committee for Astronomy, requesting the creation within the IAU of a Sub-commission on the Physics of Unstable Stars. *Eggen* stated that this appeared to be a new name for the present Commission 27. After vigorous discussion, it was unanimously agreed that the membership of Commission 27 opposed the formation of such a Sub-commission, pending full clarification of the distinction between the physics of variable stars and the physics of unstable stars.

Plans for two new colloquia were announced, pending final approval by the Executive Committee of the IAU. The Vth Variable Star Colloquium, on 'New Directions and Frontiers in Variable Star

Research', is planned to be held at Bamberg, D.B.R. in late August or early September, 1971. A Colloquium on 'Observational Aspects of Novae and Supernovae' is tentatively scheduled for 10-15 September 1971, at Padua and Venice, Italy.

The President read a brief report from Professor Kukarkin, and then he moved the following resolution:

"We, the members of Commission 27, express our great admiration and deep appreciation for the difficult and extremely important work being carried out by our colleagues in the Moscow Bureau, and we request that the IAU grant an annual subvention of \$ 1000 toward publication costs of the *General Catalog of Variable Stars*, edited by B. V. Kukarkin, P. N. Kholopov, and Yu. N. Efremov."

The Commission unanimously endorsed this resolution.

The President brought to the attention of the Commission the following requests:

1. *Van Herk* reported experiencing difficulties in a program for improving proper motions of long period variables, due to poor photometric elements. *Mrs Mayall* was requested to send to the *Information Bulletin* for rapid circulation any new photometric data on these stars.

2. *Van Hoof* requested that cooperative observing programs on β CMa stars be carried out at observatories situated in different longitudes, especially in the southern hemisphere.

3. *Cesevich* requested simultaneous photometric and spectroscopic observations of two RW Aurigae-type stars, FG and FH Aq1.

4. *Opolski* requested simultaneous UBV and velocity measures of δ Cephei-type variables, and urged those who plan to make velocity measures to circulate their plans as early as possible via the *Information Bulletin*, so that photometric observers can arrange to observe at the same time.

5. *Mumford* requested finding charts for old novae, and the Commission expressed its approval of the work on the preparation of finding charts which is being carried out by Dr. Bertaud.

A letter from the late Dr A. V. Nielsen was read by the President. Dr Nielsen had requested Commission 27 to publish the long series of observations of southern variables by the late A. W. Roberts. *Detre* will publish in the *Information Bulletin* the list of stars observed by Roberts. *Feast* suggested that photocopies of the observations be made available to interested workers.

The President reopened a proposal initiated by W. J. Miller at the Prague meeting, to the effect that a new scheme be devised for the rapid naming of newly discovered variables. After a short discussion in which *Herbig* stated that he and Kukarkin opposed any present change, the proposal was tabled.

In conclusion, the President proposed and the Commission approved that names of new officers of Commission 27 be forwarded to the Executive Committee of the Union.

JOINT SESSION OF COMMISSIONS 24, 27, 30, 33 AND 37

CHAIRMAN: B. J. Bok.

SECRETARY: W. S. Fitch.

The proceedings of this Joint Meeting will be published in the volume *Highlights of Astronomy* 1970. The following papers were presented:

Sir Richard Woolley: On the Determination of the Absolute Magnitudes of the RR Lyrae Stars.

R. F. Christy: Absolute Magnitudes of RR Lyrae Stars.

G. van Herk: Review of Observational Data on RR Lyrae Stars.

S. V. M. Clube: Absolute Magnitudes of RR Lyrae Stars.

A. R. Klemola: The Lick Observatory Program of Proper Motions of RR Lyrae Stars.