

A MODERN CLASSIC AMONG BOOKS ON VARIABLE STARS
C. HOFFMEISTER, Veränderliche Sterne

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C. HOFFMEISTER, Veränderliche Sterne (Variable Stars). Leipzig:
Johann Ambrosius Barth (1970). 214pp.

Cuno Hoffmeister, who prior to his death in 1968 was director of the Sonneberg Observatory in the German Democratic Republic, was long regarded as one of the world's leading astronomers specializing in variable star research. The Mitteilungen über Veränderliche Sterne (MVS), published by the observatory, is a primary reference for variable star discovery, identification, and photometric investigation. One of Hoffmeister's last projects was the writing of the present book, which was posthumously prepared for publication by his associates, G. Richter and W. Wenzel.

Given the author's long experience in the discovery and observation of variable stars and his encouragement of amateur participation in such programs, I read the book in the hope that its content would emphasize these subjects. It did not disappoint me and proves to be a worthy successor to the book that originally stimulated my own interest, that by Campbell and Jacchia (1941). Hoffmeister himself notes in his introduction that no really comprehensive presentation of the methods and results of variable star research has appeared since the latter book. This situation has changed somewhat with the recent publication of the Russian volumes reviewed in the last issue of this journal (Lowder, 1972) and of the books in English by Glasby (1968) and Strohmeier (1972). However, the only real rival to Hoffmeister's book as a modern, authoritative, and comprehensive discussion of the observational properties of variable stars suitable for the advanced amateur as well as the professional observer is that by Tsesevich (1970).

After an introductory chapter containing informative discussions of basic concepts, the determination of light curves and periods, the naming of variable stars, and the history of their discovery, the bulk of the book is devoted to a survey of the properties of the various classes of variable stars. The treatment reflects in part the author's interests, the section on the RW Aurigae and nebular variables being unusually extensive as compared with those on the UV Ceti or RV Tauri stars, for example. Although sufficient attention is given to the spectral and astrophysical properties of each class, special emphasis is given to their photometric properties. Both typical and anomalous photometric behavior are discussed, and the book contains many figures illustrating the light curves of stars exemplifying such behavior. This is particularly valuable to the amateur, whose research efforts are usually limited to studies of light variations. At several points, particular stars exhibiting unusual behavior are individually discussed, which serves to whet the reader's appetite for observing them and watching for analogous behavior in other stars. Of similar value is the list of old novae and nova-like stars that deserve continued watch for possible recurrence of their outbursts, with notes added indicating the basis for this judgement. It is interesting that two

stars on the list, V1017 Sgr and FN Sgr, have very recently undergone significant outbursts (see AAVSO Circulars for March and May 1973).

The observational emphasis is continued in the final chapters of the book, where techniques of observation, the determination of magnitude sequences, methods of variable star discovery, the probability of such discovery according to class and brightness, and the role of variable star research in studies of stellar evolution and galactic structure are discussed. In a short chapter on organizations, the author lists the foremost amateur associations and outlines possible contributions that amateur observers can make, most notably in the study of period changes of pulsating and eclipsing variables and in the observation of outbursts of nova-like, U-Geminorum, and flare stars. The AAVSO is specially mentioned in this context for its history of valuable work on the Mira and U Geminorum variables. The book concludes with a useful appendix containing a discussion of available star catalogs and charts, a bibliography of the variable star literature, and a seven-page list of references mentioned in the text.

It is inevitable that such a book should have its shortcomings. The depth and extent of the treatments of the various classes of variable stars are themselves somewhat variable, and references to the considerable Russian-language literature are surprisingly sparse. However, the value of the book is such that one can only hope that an English version of this modern classic in its field will shortly be forthcoming. It should be in the library of every serious observer of these fascinating stars.

REFERENCES

- Campbell, L. and Jacchia, L. 1941, The Story of Variable Stars (Philadelphia: Blakiston)
- Glasby, J. S. 1968, Variable Stars (London: Constable)
- Lowder, W. M. 1972, JAAVSO, 1, 64.
- Strohmeier, W. 1972, Variable Stars (Oxford: Pergamon)
- Tsesevich, V. P. 1970, Peremennye Zvezdy i Sposoby ikh Issledovaniya [Variable Stars and Methods for their Investigation] (Moscow: Izdatel'stvo "Pedalogika")

EDITOR'S NOTE:

R. E. Gershberg of the Crimean Astrophysical Observatory writes that his book Flares In Red Dwarf Stars, which was reviewed in JAAVSO 1, 66 (1972), has been translated into English by J. J. Mullan and is available from Armagh Observatory, Northern Ireland.