

WORK ON THE GENERAL CATALOGUE OF VARIABLE STARS

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The Variable Stars Bureau of the Astronomical Council of the USSR Academy of Sciences presents this paper in order to provide information on our work with the hope that it will be discussed and recommendations to it will be made. More rational co-operation of our Bureau and the Strasbourg Centre de Données Stellaires is highly desirable. It should be based on the exchange of information gained in these centres in order to make both centres free from duplicating work.

The main task of the Variable Stars Bureau (VSB) consists in collecting and analysing critically all information in the field of investigating variable stars and other non-stable objects of our Galaxy (including variables in globular clusters). It is worth noting that no similar Bureau exists for treating information on variable stars in external galaxies. Our Bureau is not planning to extend our work in this respect yet.

The final output of our work is the General Catalogue of Variable Stars (GCVS). During thirty years of our work three editions of the GCVS (1948, 1958, and 1969-1971), 14 Supplements to them (1949-1976), 2 Special Supplements (1963-1972), 2 Catalogues of Suspected Variable Stars (CSV) (1951 and 1965), 19 designation lists of new variable stars (1946-1975) were published. VSB takes an active part in the publication of the journal "Variable Stars"; the 50th anniversary of the journal will be in 1978.

Now we commence working out the principles for compiling the fourth edition of the GCVS. We are not going to separate the issues of the CSV from the GCVS any longer. All the data of these publications will be collected in one series of books. We expect

the fourth edition of GCVS to consist of 7 volumes, the contents being as follows:

- Volume 1. Catalogue of suspected variable stars containing data on approximately 9000 objects.
- Volume 2. Catalogue of designated variable stars in the constellations And-Cyg, containing data on approximately 10 000 objects.
- Volume 3. Catalogue of designated variable stars in the constellations Del-Per; also about 10 000 objects.
- Volume 4. Catalogue of designated variable stars in the constellations Phe-Vul; also about 10 000 objects.
- Volume 5. Bibliography for the four preceding Volumes, list of all variables and suspected variables arranged in the order of right ascensions for the equinox 1950.0 (adopted in the catalogue), list of stars arranged according to type of variability, data on optically non-stable objects of nonstellar nature, lists of pulsars, supernovae, variable X-ray sources (it is not excluded that this Volume will consist of two books).
- Volume 6. List of all stars in the order of some other equinox (probably 1900.0), to facilitate identifications.
- Volume 7. Various nomenclature tables of variable stars, with different entries (in the order of the Catalogue itself, in the order of Durchmusterung numbers, BS and HD numbers, numbers of the Smithsonian Observatory Catalogue, in the order of preliminary designations, etc.) (it is not excluded that this Volume will be also published in two books).

The final version of the plan will be adopted after the discussion of our project at the meeting of the IAU Commission 27 in Grenoble.

The majority of scientific workers and experts of our Bureau deal with a thorough analysis of all published literature and of private communications we receive. Then goes the selection and evaluation of information of interest for us; the information is put on cards and magnetic tapes.

Serious complications in the work of the VSB arise from the laborious job of checking co-ordinates, identifying stars by using charts, etc. Despite all these checks till now there happen rare cases of giving different designations to the same object, of wrong identifications, etc. Usually all responsibility for these facts rests with the authors who do not take trouble of accurate determination of co-ordinates (even to the tenths of arcminute) or of preparation of good finding charts.

All above-stated makes it clear that our tasks are quite specific, and are different from those of the Strasbourg Centre and its Potsdam branch or the tasks of Sonneberg observatory connected with compiling the "Geschichte und Literatur".

Harmonious combination of efforts of these three centres could be very useful for all participants. For example, the existence of the General Catalogue of Stellar Identifications and of annual Supplements to it compiled at the Strasbourg Centre would help us to check our identifications and free us of this work in future. It will be useful for the Strasbourg Centre to get more operative information on new variable stars data. These data are being continuously changed and supplemented, but they are published only from time to time (time interval between the editions of the GCVS is on average 11 years, and that between the Supplements to the GCVS is about 3 years).

The work of Moscow VSB has independent significance and it does not duplicate the work of either the Strasbourg Centre or Sonneberg observatory. The results of our work are unique, and we are ready to discuss any forms of co-operation and mutual assistance.

We are sure that the main aim of both the Strasbourg Centre and our VSB is to find such ways of collecting information and of organisation of information exchange that will enable interested astronomers throughout the world to get with shortest time delays the most reliable information (with account of the latest publications or private communications) on objects of interest for them.