VARIABLE STAR OBSERVING IN FINLAND

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Abstract

The activities and plans of the Finnish Variable Star Section of the Ursa Astronomical Association are described.

1. History

Variable star observing in the Nordic Countries began in Denmark in the 1920's, in Norway before World War II (and again twenty years ago), and in Sweden after World War II. In Finland we began in 1968, initially under the Swedish section (Svenska Astronomiska Sällskapet). In 1972 we founded our own Finnish observing group, "Mira", which is now the variable star section of the Ursa Astronomical Association. From the beginning it has cooperated with amateurs of The Scandinavian Variable Star Observers (SVSO). Over the years, more than 60 Finnish persons have made observations; at present the number of active observers is about 20. Generally over 60% of the Nordic observations have come from Finland.

2. Basic Tasks of the Section

Our section attends to the national tasks in the Nordic variable star work. The goals are to:

- recruit and guide new observers
- provide observers with necessary material, e.g. variable star charts
- control the implementation of the observing program
- notify observers about objects worth observing, e.g. novae
- collect and handle observations
- inform the members about current general affairs
- inform other amateur astronomers and the public about variable star astronomy.

The channels for information are:

- variable star pages in "Ursa Minor", the bulletin of Ursa's sections
- "Tähdet ja Avaruus", the magazine of Ursa
- the information computer of Ursa
- personal letters and telephone calls
- meetings of Ursa and the local astronomical clubs
- national gatherings of amateur astronomers (Cygnus camp, star days).

3. Observing Program

The common Nordic frame program contains about 360 variables. There are

mimeographed charts for 190 variables. The stars belong to three sub-programs:

- Eruptive and cataclysmic variables (100 stars)
- Mira stars (170)
- "S-program" (mostly semiregular variables, 90).

The aims of observing are to:

- detect as many dwarf nova outbursts as possible (over 250 outbursts are found by SVSO every year)
- provide observations for computing times of maxima of Miras and for drawing their light curves (our material is usually sufficient for 60-70 Miras)
- provide observations for reliable 10-day means for our S-stars (these means are used for statistical analysis).

4. Publications

A large part of the work of handling and publishing the SVSO observations is done in Finland. Computers have been used since 1975. Now many persons are busy with their personal computers.

The total number of the Nordic observations since 1972 now exceeds 260,000. Most of them have been published in *REPORTS*, offset-printed leaflets (63 Reports, 2614 pages). Preparations are being made to publish one thicker report every year. The observations are also available in computer files.

5. Foreign Connections

Besides the Scandinavian cooperation, we have contacts with many associations and professional astronomers from around the world. Reports are sent to over ten countries and publications are received in exchange.

We have connections with scientists at Sternberg University (Moscow), Sonneberg Observatory (Germany), University of Sussex in England, and Vatican Observatory in Italy.

The most important cooperating foreign associations are:
AAVSO in USA, BAA in Great Britain, AFOEV in France, and Pleione in Hungary. Observations are sent also to *The Astronomer* in England. In the future we will use international computer networks in foreign connections.

6. Conclusion

Our northern latitudes cause two major difficulties: bright summer nights and cold winter weather. Despite these drawbacks, our variable star observers have obtained fine results. Variable star observing is indeed an excellent specialized field for every amateur astronomer who wishes to do planned observational work of scientific value and to find new challenges.