

COMMITTEE REPORTS

CLASSICAL CEPHEID, Chairman: Thomas A. Cragg
Anglo-Australian Observatory
Coonabarabran, N.S.W. 2357
Australia

Data for three 1000-day intervals have been reduced for RW Cas, VX Per, SZ Cas, RW Cam, SV Per, AN Aur, RX Aur, and SY Aur. Individual plots for some have been made so dates for some specific maxima are available. Scatter and trends are to be discussed. It is intended to send Dr. John Percy of the University of Toronto a copy of the paper on these stars for his comments as he has shown interest in the project. Said paper is being written presently and should be available well in advance of the Fall Meeting. This is in accordance with discussions with the Director at the 75th Anniversary Meeting regarding the best way to publish the large amount of Cepheid data.

CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO charts distributed from Headquarters from October 1, 1987 to March 31, 1988, representing 104 orders filled:

Standard charts	4342
Finder charts	94
Photoelectric	
Photometry charts	107
AAVSO Variable	
Star Atlas	1

NEW CHART, Chairman: Clinton B. Ford
10 Canterbury Lane
Wilton, CT 06897

The following mailings of AAVSO Preliminary Charts were made from the Secretary's office between October 15, 1987, and May 1, 1988:

<u>Destination</u>	<u>No. of Different Addresses</u>	<u>Chart Copies Mailed</u>
U.S.A.	13	523
Italy	1	396
Canada	2	69
Finland	1	83
Portugal	1	23
Cyprus	1	28
TOTALS	19	1122

All of these mailings were made, as before, in response to observers' requests for preliminary charts.

The Ninth Edition of the AAVSO Preliminary Charts Catalog (dated July 15, 1986) has been supplemented by a list of 27 addenda or corrections to same as of March 4, 1988. A total of 46 copies of this catalog were issued from the Secretary's office, plus others mailed from AAVSO Headquarters, on request.

Preliminary charts of newly-discovered novae or other objects of special interest were published in monthly numbers of the AAVSO Circular, as prepared by Mr. Scovil. Work continues on the comprehensive program for up-dating all AAVSO charts as to sequences, star data, and format.

The usefulness of the Eichner plate photometer obtained from Columbia University in 1985 has proven to be limited, and the Committee is now searching for a modern instrument of this type for measuring magnitudes on photographic plates. As before, R. M. Stanton in California continues his photometric work for us, and the Ford Observatory 18-inch reflector continues to be used by Rev. R. E. Royer for photography of new fields to be charted. Messrs. Scovil and Ford process most incoming chart orders, and mailing continues to be done from the Secretary's office in Wilton, CT.

Committee personnel remains the same as in my last report. On May 2, 1988, and May 5, 1988, Messrs. Scovil, Griese, and Ford visited the Astronomy Department at Colgate University (Hamilton, NY) where a Cuffey plate-measuring photometer has generously been offered for the Committee's use by Prof. Thomas Balonek. We anticipate making good use of this photometer in the near future, for producing magnitude sequences for new and revised charts.

ECLIPSING BINARY, Chairman: Marvin E. Baldwin
Route 1
Butlerville, IN 47223

Although observations of AAVSO program stars have continued at about the usual pace, our activities are highlighted by some unusual accomplishments. The most important event was the discovery by Dan Kaiser of Columbus, Indiana, that the 8th magnitude star NSV 3005 is an eclipsing binary with a deep eclipse of long duration.

The second event concerns the star EN Aurigae, which has been sporadically observed over the past two decades with dubious results. More recently, Paul Sventek and your Committee Chairman intensively observed this star for several months. The results indicate that EN Aurigae is reaching mid-eclipse about 3.5 hours earlier than predicted by the current ephemerides. Sparse data available to us from previous years, do not clarify when a change in period may have taken place.

NOVA SEARCH, Chairman: Rev. Kenneth C. Beckmann
P. O. Box 240
Lewiston, MI 49756

During 1987 there were several nova discoveries announced in the AAVSO Alert Notices. M. Sugano (Japan) and M. Honda (Japan) independently and photographically discovered Nova Herculis 1987. U Scorpii, a recurrent nova, erupted and was reported by Danie Overbeek (South Africa). Robert McNaught (Australia) discovered photographically a nova in Sagittarius and a nova in the Large Magellanic Cloud. In November Rev. Kenneth Beckmann (USA) and Peter Collins (USA) independently visually discovered Nova Vulpeculae 1987. The committee congratulates all discoverers and especially those who visually discovered a nova!

There are seven active participants in the AAVSO Nova Search program with an average of one hundred and fifty to three hundred observations submitted each month. During a year the committee receives roughly two dozen requests for information. Upon request, the committee provides any interested observer with a booklet on the AAVSO program free of charge.

We ask those who wish to participate to use the computer forms supplied for documenting their observations. The committee also requests that the observations be received by the chairman of the committee no later than the 10th of the following month observations are made.

If you have an interest in searching the heavens for novae, please write the chairman of the committee for details.

PHOTOELECTRIC PHOTOMETRY, Chairman: Howard J. Landis
50 Price Road West
Locust Grove, GA 30248

Photoelectric observations of AAVSO Photoelectric Photometry Program stars are continuing to accumulate at a steady rate. The total number as of April 19, 1988, for fiscal 1987-1988 is now 370. Our total accumulation of photoelectric photometry data (photoelectric V program star observations submitted in an unredacted state) since we started the program 5 years ago is just above 2100.

There have been two new forms developed to assist observers in obtaining the transformation value for their telescope and photometer. Some observers need help, so this will help them to understand how the observations and the reductions are made. Headquarters is including these forms with the existing transformation information.

Communication with observers and prospective observers increases continually. Since the start of fiscal 1987-1988 I have written 71 letters to 33 different addresses.

Our observational data were used by Dr. John Percy as the basis for a paper titled, "Photoelectric and Visual Photometry of P Cygni," published in *Astronomy & Astrophysics*. Both AAVSO Photoelectric and visual data were used. Data from four of our photoelectric photometry observers were used, Clark, Landis, Milton, and Reisenweber.

We are planning to publish a report in the *Information Bulletin on Variable Stars* giving data on what photoelectric photometry observations we have available in machine-readable forms. It will be a summary showing star name, type, number of observations, the dates of the observations in JD, the number of days covered, and the mean of the standard error for each group. The data will include all observations to December 31, 1987.

The *Photoelectric Photometry Newsletter* is being published regularly and on time, thanks to Editor Dr. John Percy of the University of Toronto. He likes hearing from observers so do not fail to let him hear from you a couple of times a year or whenever you have something of interest to report.

We invite anyone interested in photoelectric observing to contact us. I will do my best to help you become a photoelectric observer. I feel that in this way you may productively contribute to variable star astronomy.

RR LYRAE, Chairman: Marvin E. Baldwin
Route 1
Butlerville, IN 47223

Much like the Eclipsing Binary Program, the RR Lyrae observing efforts are punctuated by a special observing project mounted by Richard Hill and your Committee Chairman. According to the Krakow Ephemeris, no maxima of DG Hydrae has been reported since 1973. When our efforts to observe maxima of this star at the predicted times failed, procedures were altered to observe at random. Eventually, maxima were found to be occurring about 2.7 hours earlier than predicted. Our older data provide some evidence that a major change of period may have occurred as recently as 1986. Continued observing is required.

SOLAR DIVISION, Chairman: Peter O. Taylor
 P. O. Box 8115
 Gainesville, FL 32605

Since our annual report in October, the American Sunspot Program has replied to a number of requests for information pertaining to our two principal products: the determination of (Wolf) American Relative Sunspot Numbers and their heliographic positions, and the indirect detection of solar flare activity through the monitoring of VLF radio signals.

The sunspot program in particular has benefited from these inquiries. We currently process over ninety reports each month, received from contributors located on six continents. During January, the program also received data from the seventh continent Antarctica, by computer-satellite link originating from Amundsen-Scott Station at the South Pole. The data were obtained through the efforts of longtime observer, MaryJane Taylor, currently involved with the computer-driven "continuous" photoelectric observation of certain variable-star systems from the Pole, in connection with completion of her Ph.D. in Astrophysics.

Effective this past December, we established a regular "Sunspot Feature" (GO SUNSPOT) on the CompuServe Information Service. The initiation of the Feature has resulted in a number of inquiries concerning the program's work. Equally importantly, it has allowed us to easily and rapidly receive a growing amount of data from our foreign collaborators through international Telex/TWX, or directly through electronic-mail service. A number of domestic observers also utilize the latter option. The speed of transmission that results from use of these reporting media allows us to prepare the provisional set of monthly American Sunspot Numbers much earlier than has previously been possible, and to distribute them to National Oceanic and Atmospheric Administration as well as to other members of the scientific community shortly after the close of each observed month.

The compilation, printing, and distribution of our monthly newsletter, *AAVSO Solar Bulletin*, remains on schedule; new issues appear each month. With the onset of Volume 44, we began preparation of the Bulletin with the aid of a laser-printer. The enlarged format, along with improvement in style and quality, has been very well received by recipients and contributors alike. Monthly circulation now exceeds two hundred sixty destinations, worldwide.

Bruce Wingate continues as our indirect flare patrol analyst; his work in this area is greatly appreciated.

We expect a number of new contributors to both Division programs during the next few years as the maximum of the sunspot cycle is attained, especially in light of the very rapid rise in the numbers of sunspots that we are currently experiencing. We encourage inquiries from all serious observers, and will be happy to supply them with our basic information package, and to answer specific questions relating to the program.

SUPERNOVA SEARCH, Chairman: Rev. Robert O. Evans
 57 Talbot Road
 Hazelbrook, N.S.W. 2779
 Australia

Following the inauguration of this Committee at the Annual Meeting in October, 1987, several steps have been taken:

1. The membership of the Committee presently stands at four,

comprising James Bryan and Steve Lucas in the U.S.A., and Tom Cragg and myself in Australia. It is expected that other members, especially active observers, will be added as time goes by.

2. There are two verification teams operating. The team in Australia is tried and tested, and is working well. Help is usually available at short notice from professional observers using the 2.3 meter telescope at Siding Spring Observatory. The team in the U.S. operates in conjunction with the "Sunsearch" organization. It has developed several useful contacts with professional observers, and still requires more members and contact persons, both amongst amateurs and amongst professionals who can be relied upon for help at short notice with queries which may be false alarms.

3. The first draft has been written of a Manual for amateur supernova hunting. The manuscript has been read and commented upon by other Committee members, and is to be revised. It is hoped that it will be published within the foreseeable future.

4. Two supernovae were visually discovered by committee members since October: SN 1987N in NGC 7606 (Robert Evans) and SN 1988A in NGC 4579 (M58) (Robert Evans and K. Ikeya, independently).

TELESCOPE COMMITTEE, Chairman: Charles E. Scovil
c/o Stamford Observatory
Stamford Museum
39 Scofieldtown Road
Stamford, CT 06

The status of telescopes and materials in the care of the Committee remains unchanged since our last report.