

## COMMITTEE REPORTS

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

There has been no change in the status of the Classical Cepheid Committee since the chairman's last report.

**CHART DISTRIBUTION**, AAVSO Headquarters

The following is a report of AAVSO charts distributed from Headquarters from October 1, 1987, to September 30, 1988. During this period 203 chart orders were filled.

Standard Charts (8.5 x 11-inch)	12081
Photoelectric Photometry Charts	430
Finder Charts	567
<b>AAVSO Variable Star Atlas</b>	4

The second edition of the **AAVSO Variable Star Atlas** should be available in 1990. **Sky & Telescope** magazine will have an advertisement on the Atlas when it is completed.

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

The following mailings of AAVSO Preliminary Charts have been made from the Secretary's Office between October 1, 1987, and October 15, 1988:

<u>Destination</u>	<u>No. Different Addresses</u>	<u>Charts Mailed</u>
USA	16	43
Canada	4	42
Italy	3	1137
Cyprus	1	28
England	1	62
Finland	1	83
Portugal	<u>1</u>	<u>23</u>
TOTALS	27	2406

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

A new **Tenth Edition** of the **AAVSO Preliminary Chart Catalog**, dated October 1988, has been prepared, and copies are expected to be ready for distribution at the Association's annual meeting, October 21-22, 1988, and for mailing as requested later. Copies of this Catalog continue to be furnished gratis.

Copies of preliminary charts of newly-discovered novae or other objects of special interest, prepared by Mr. Scovil, have continued to be published in monthly issues of the **AAVSO Circular**. Chart preparation work continues to be concentrated on our program for updating all AAVSO charts, both as to magnitude sequences and star data as well as to format.

The work on sequences has now been greatly aided through the kindness of Dr. Thomas Balonek of the Astronomy Department at Colgate University (Hamilton, NY), who has made it possible for Mr. Scovil and others to use the Cuffey iris-type plate photometer at that institution for measurement of our many plates. Arrangements are now in process for the Chart Committee to obtain the temporary loan of this instrument from Colgate University, involving its possible relocation to Stamford (CT) Observatory, specifically for our use. Thanks to Dr. Balonek, such a move should finally solve our long search for an adequate plate-measuring instrument.

Photography of new fields continues by Rev. R. E. Royer with the 18-inch reflector at Mt. Peltier, California. Plate measurements have also been made at Yale University Observatory by Messrs. Griese and John Lee, using a Perkin-Elmer PDS microdensitometer. This work has been authorized by Dr. William VanAltena of the Yale Astronomy Department.

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

Fifteen observers reported nearly 9000 observations of eclipsing binary stars during the past twelve months. These observations will reduce to an estimated 464 minima of 169 stars. Three observers, Howard Louth, Robert Nelson, and David Williams, submitted photoelectric data, with Howard Louth submitting a total of 895 photoelectric observations.

The most notable single event of this reporting period was the discovery by Daniel Kaiser that the eighth magnitude star, NSV 3005, is an eclipsing binary with a deep eclipse and long period. This event, briefly noted in our spring report, is now reported in detail in **IBVS** 3196 and 3233 and also in the December 1988 issue of **Sky & Telescope**.

Other observing projects include three stars which have long been neglected. These are V Ser, RS Ser, and CQ Ser. Eclipses of all three of these stars occur hours from the times predicted by the **GCVS** elements. A detailed report will be forthcoming upon the completion of the 1989 observing season when enough data should be available to better define these stars' behavior. Observers interested in participating in an ongoing monitoring of these stars may obtain field sketches and visual comparison star sequences from the committee chairman.

Another project starting for the observation of neglected stars includes a number of stars in Orion and Monoceros. At this point the results are not definitive and the number of stars eventually included in this project will depend partially upon observer participation. Most of these stars require special observing procedures due to long duration of eclipses or their shallow depth or both.

Last year we reported that observations of EM Aur by Paul Sventek and your committee chairman indicated minima were some 3.5 hours earlier than the ephemerides predicted. Continued intense observation of this star now defines its current behavior but leaves hanging some nagging questions about its past behavior.

Note: In last year's report EM Aurigae was mistakenly listed as EN Aurigae.

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

For the year beginning September 1, 1987 and ending August 31, 1988, ten observers contributed a total of 2083 observations. The Nova Search Committee is proud of its observers who continue to actively support the program with their observations and assistance.

Two discoveries of novae were reported for the year. Nova Vulpeculae 1987 was visually and independently discovered by Peter Collins, USA, and Rev. Kenneth Beckmann, USA, on November 15, 1987. At discovery the nova was seventh magnitude. The second nova was photographically discovered by M. Wakuda of Japan on April 10, 1988. The Committee congratulates Peter Collins, M. Wakuda, and Rev. Kenneth Beckmann for their discovery of a nova.

The Committee continues to publish its newsletter, **Newstar**. This publication, published as warranted, gives current information on novae discoveries and their discoverers, updates on historical novae, reviews of resources which provide general information about novae, and helpful hints on the search for novae. If you would like a copy of the newsletter you may contact Headquarters or the chairman.

Currently there is discussion within the Committee about creating a nova search atlas. This discussion surfaced when novice and prospective nova hunters requested an atlas to help in their search. Using the "binocular star constellation concept" the Committee hopes to begin publishing a series of charts for those who wish to participate actively in the program.

The Committee is also providing on request a loose-leaf booklet about nova hunting. The booklet contains an introduction to visual nova search written by the chairman. Several tables accompany the text offering information about how to create a personal program of search for novae. Also included are a table of novae discoveries for the past decade, a list of corrections of the **Skalnate Pleso Atlas of the Heavens** provided by Manfred Durkefalden, an active AAVSO nova hunter, search area location forms, reporting forms, and a binocular star constellation chart of area #78. If you wish to obtain a copy of the booklet please contact the chairman.

**TABLE I**

Novae Search Observations

<u>Observer</u>	<u>Areas</u>	<u>Observations</u>
Kenneth Beckmann, MI	24	934
Robert Browning, NJ	10	73
Manfred Durkefalden, West Germany	16	107
Robert Fidrich, Hungary	8	87
Ferenc Foldesi, Hungary	2	4
Barbara Lux, PA	9	51
Uberti Massimo, Italy	9	29
Warren Morrison, Canada	20	794
Frank Schmidt, NY	1	2
Szildrid Teichnev, Hungary	<u>1</u>	<u>2</u>
TOTALS	80	2083

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

The total number of AAVSO Photoelectric observations received to

date exceeded 2500 in September 1988. Visual observer data are celebrated in Megasteps, photoelectric data in Kilosteps!

During the 1987-88 Fiscal Year, 18 observers contributed 903 raw data observations of AAVSO photoelectric program stars.

F. Dempsey, Canada	21	G. Fortier, Canada	7	R. Johnsson, MD	2
G. Kohl, AZ	27	P. Kneipp, LA	10	K. Luedeke, WA	80
H. Landis, GA	183	T. Langhans, CA	29	R. Milton, CA	272
D. Pray, RI	49	H. Powell, TN	60	L. Pazzi, S. Africa	8
R. Reisenweber, PA	42	D. Slauson, IA	6	D. Shannon, WA	16
J. Wood, CA	68	T. Walker, OR	15	D. Williams, IN	8

We have 8 new PEP observers this year, Dempsey, Johnsson, Luedeke, Pazzi, Shannon, Wood, Walker, and Williams, making this year probably a record one for new observers.

Photoelectric observations of non-AAVSO program stars were submitted by M. Amoretti, D. Bohme, K. Krisciunas, H. Louth, R. Monella, L. Snyder, J. Soder, and R. Cameron.

Special observing requests were published in the **AAVSO Photoelectric Photometry Newsletter**. E. R. Seaquist of David Dunlap Observatory requested observations of CH Cygni in UBV light to correlate with radio data of this very interesting star. A. Underhill of the University of British Columbia requests observations of the eclipsing binary V444 Cygni in order to obtain a current ephemeris. She is doing spectrographic work on the system.

With new observers starting up, demands for letters increase. By September 24, 118 letters had been written to 40 addresses. Training new people is interesting and satisfying to me, and of course it helps to stay in touch with the regular observers.

Half of our contributors this year sent their data already entered on computer disk, which has saved me many hours. The other observers used our manual data entry sheet. Three-fourths of the observers use SSP-3 photometers; all other observers use photon counting except one, who uses the strip chart method.

The format for making our observations available to the astronomical community has been approved by Dr. Mattei, Dr. Percy, and me. I have written the necessary programs to sort the data, re-arrange the columns slightly, and sort them chronologically. The material will be made available at AAVSO Headquarters on computer diskette as a printable file. The files will be updated periodically.

A report of what stars we have observed and how many observations of each over what time span will be published in the IAU's **Information Bulletin on Variable Stars**. This way the astronomical community will be alerted to our small but growing photoelectric data base.

Dr. John Percy edits the **AAVSO Photoelectric Photometry Newsletter**, which is free to interested AAVSO members by requesting it from Headquarters. It is the best source of information about our program and news of activities of the stars we observe. Please write to the editor so all of us may enjoy knowing what you are doing.

I wish to thank each of our observers for their contribution of so many observations. It takes a bit more time and patience to observe photoelectrically and observers are more often interrupted by clouds. We have a faithful group at work and they are making an invaluable contribution to astronomy. I thank Dr. Mattei and Elizabeth Waagen in particular for the increased help they have given in support of the photoelectric program. The observations from observers now come

regularly from Headquarters, often with apologies for the small quantity. But since 1983, we have processed 2649 photoelectric observations. Without our observers and the support from HQ, we would have nothing of substance to report.

If you would like to join with us and help add to our data base of photoelectric observations, please let me hear from you.

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

Four observers submitted data on RR Lyrae stars during the past 12 months. Approximately 2600 observations were received and will be used to define some 167 times of maxima. Altogether 38 stars were observed. DG Hya continues to be our most urgent observing project because we suspect that it has had a recent change of period. Sufficient data must be obtained each year to establish a well-defined O-C curve and establish the new period.

One of the most remarkable stars in our program, showing no change of period and giving no hint of changes in shape of the light curve after a quarter of a century of monitoring by the AAVSO, is DH Hya. Because it appears to be perfectly predictable we are often advised to drop it from our program. But we have noted that some RR Lyrae stars that have been designated as stars of constant period in the past have later changed period. We shall continue to be stubborn.

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

For the first time since the program's inception in 1944, the international network of collaborators in the AAVSO's American Sunspot Program now exceeds one hundred active participants. Contributors are geographically distributed over six continents so that twenty-four hour coverage of the Sun is provided for nearly all days (see Figure 1).

The index of American Sunspot Numbers is well supported by the scientific community. We continue to supply the National Oceanic and Atmospheric Administration (NOAA) with our monthly analyses of provisional and final values of Relative Sunspot Numbers, and with other relevant material when the need arises.

We have several papers submitted to the **Journal of the AAVSO**, an invited article slated for appearance in **Sky & Telescope** magazine around the first of the year, and a second invited paper describing the Program for recipients of the German publication, **SONNE**, that will also appear in a forthcoming issue.

Publication and distribution of our monthly newsletter, **AAVSO Solar Bulletin**, is up-to-date; circulation currently approaches three hundred. We have received many favorable comments on the improved format, preparation technique, and content of the **Bulletin** since we instituted the changes with the onset of Volume 44.

In light of the general expectation for an approaching cycle maximum of high-intensity in both sunspot number and solar flare level, a number of our contributors have embarked on an effort to monitor the Sun for occurrences of rare white-light solar flares, in cooperation with Sacramento Peak Observatory's on-going program. We believe that our observers are uniquely qualified for this endeavor, and are indebted to Dr. Donald F. Neidig of the National Solar Observatory

(Sacramento Peak) and to observer-network member Thomas G. Compton for supplying very important material in this regard.

We continue our association with the CompuServe Information Service through our Sunspot Feature. This relationship has proven to be a valuable resource for us in the distribution of information and in the rapid acquisition of observer data, especially from overseas collaborators such as those from locations in Australia and Europe who utilize our Telex facility.

Our contributors who electronically monitor VLF radio signals in order to indirectly detect solar flare events, continue to provide valuable information for the scientific community. Although few in number, they are among the most dedicated of our observers. Bruce Wingate continues to coordinate the analysis of this data, while David Warshaw remains as a strong resource for technical information. These analyses are also supplied to NOAA each month.

The Division notes with sadness the recent loss of three of its valued members, David Rosebrugh and Fred Ames from Florida, and A. O. Pearson from Scotland. Their enthusiasm and dedication will be missed by all who knew them.

Finally, we express our gratitude to all those individuals who provide their time and expertise to the work of the Division, and to the National Oceanic and Atmospheric Administration for continuing the grant that funds our efforts. As always, we welcome new participants to the work of the Division, and will be happy to supply interested parties with additional information on our various activities.

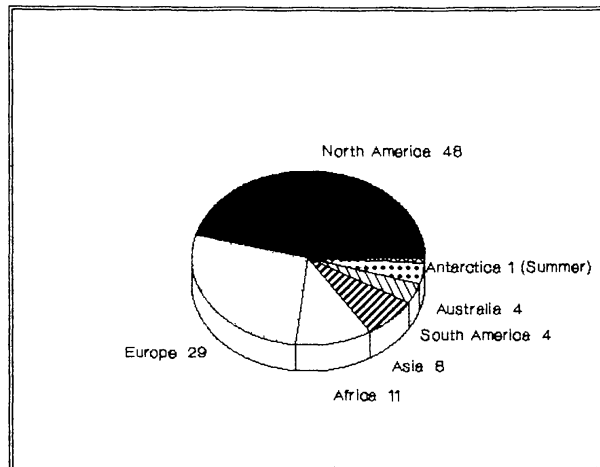


Figure 1. Distribution of participants in the AAVSO American Sunspot Program.

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

The main news since the May 1988 Report is that the proposed **AAVSO Supernova Search Manual** manuscript has been further refined.

The Nova and Supernova Search Workshop at the 1988 AAVSO annual meeting provided a great opportunity to share information and meet with Dr. Brian Marsden. The committee chairman was able to be present, and was thankfully able to cover costs of air fares from Australia, etc.,



by giving talks at various universities, observatories, and clubs. The talks and meetings with various people all helped to further the cause of supernova work.

Apart from being at the AAVSO workshop, talks were given at the University of California (Berkeley), the University of Chicago, the Chicago Astronomical Society, the Harvard-Smithsonian Center for Astrophysics, the Stamford Astronomical Society, the San Antonio Astronomical Society, the University of Texas (Austin), the Very Large Array, the Dominion Astrophysical Observatory, and the Jet Propulsion Laboratory (Pasadena).

Supernova search statistics for AAVSO members are currently combined with those of the Sunsearch Organization of Chicago. Figures for January - September, 1988, include ten observers making 14534 galaxy observations.

**TELESCOPE, Chairman:** Charles E. Scovil  
c/o Stamford Museum  
39 Scofieldtown Road  
Stamford, CT 06903

At the 1988 Spring Meeting held at Cornell University member Don Hurless donated a 5-inch Maksutov telescope built for his wife Carolyn by Jaroslav Kruta of Czechoslovakia. He told of Jaroslav's sending the telescope part by part, since he could not legally export it from his country as a complete instrument. This telescope is not to be sold, but will be on permanent display at Headquarters as a memorial to Carolyn Hurless and a reminder of the dedication of Jaroslav Kruta to the ideals of the AAVSO as presented to him in a "pen-pal" correspondence with Carolyn over the years.

Following the recent death of long-time member David Rosebrugh we have acquired his telescopes: a 102mm Goto refractor, complete with equatorial mount, drive, eyepieces, and a box for the telescope; a 3-inch Sears refractor complete with equatorial mount and clock drive; and a 76mm Cook refractor on an alt-azimuth mounting. This instrument is the one used by Mr. Rosebrugh for solar observations over a period of 44 years. Its objective is chipped, but this does not affect its performance as a solar telescope.

The first two of the Rosebrugh telescopes are available for sale. The chairman of the solar division, Peter Taylor, has requested the loan of the solar telescope so that it can be used by himself or by new solar observers. This will require Council action since it is contrary to our policy of selling all acquired telescopes.

We still have on hand the 6-inch C. A. Post refractor, complete with equatorial mounting, eyepieces, and finder; and a 5-inch refractor (tube & optics only) built by John Mellish. Both have excellent lenses. We have received one definite offer on the Post telescope, but it has been rejected as far too low. A second tentative offer is under consideration. An offer has also been received on the 5-inch Mellish instrument, and negotiations are under way.

We still have on hand a plate glass mirror of 10.3-inch diameter and poor figure. Following a recent committee report member Robert Goff of Texas, an optician, offered to refigure this mirror, making it more saleable. It is proposed that we accept his generous offer.

Inquiries on any of the telescopes may be addressed to the chairman. Photos of the Post and Mellish telescopes, which are at Stamford Observatory, are available. The Rosebrugh telescopes are still in Florida where he lived.