

COMMITTEE REPORTS

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

Analysis is under way on T Mon, studying its confirmed maxima. Work on other program stars continues as well.

CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO charts distributed from Headquarters from October 1, 1988, to September 30, 1989. During this period 316 chart orders were filled.

Standard Charts (8.5 x 11-inch)	4983
Photoelectric Photometry Charts	465
Finder Charts	477
Standard HIPPARCOS Charts	8170
Preliminary HIPPARCOS Charts	1607
Supernova Charts	25
AAVSO Variable Star Atlas	2

The Second Edition of the **AAVSO Variable Star Atlas** is currently in press and should be available in the summer of 1990. **Sky & Telescope** magazine will have an advertisement on the Atlas when it has been published.

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 15, 1988, and October 25, 1989:

<u>Destination</u>	<u>No. of Different Addresses</u>	<u>Chart Copies Mailed</u>
U.S.A.	26	3371
Italy	3	725
Australia	2	258
Hungary	1	67
England	1	66
Netherlands	2	41
West Germany	1	38
Canada	1	34
Poland	1	33
South Africa	<u>1</u>	<u>18</u>
TOTALS	39	4651

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

The Tenth Edition of the **AAVSO Preliminary Chart Catalog** (dated October, 1988) has been distributed to these observers and others as requested, along with four editions of **Corrections and Addenda** sheets to that catalogue as needed, the latest such sheet dated September 1, 1989. The total number of charts listed on those sheets (new or revised, including charts produced for the European Space Agency's HIPPARCOS program) is 107. Virtually all of these charts have been

produced by committee member Charles E. Scovil, working at the Observatory at the Stamford Museum in Connecticut, using photographs obtained there or from data obtained from the Geneva Observatory in Switzerland. Every possible attempt has been made to photograph and make preliminary charts for current novae, and to distribute chart copies of these to observers in all parts of the world.

The use of the Cuffey plate photometer from Colgate University has greatly facilitated this work, as previously acknowledged.

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

During the past year 14 observers obtained 9821 visual observations of 221 eclipsing binary stars. From these data approximately 475 times of minima can be determined, and partial eclipse light curves can be defined for 36 stars, most of which are seldom observed. In some of these cases two or more partial minima can be combined to determine a normal time of minimum. In addition, Howard Louth has reported several hundred photoelectric observations on five stars, TV Cas, AK Her, FL Lyr, beta Per, and HS Per.

Five observers obtained minima of several stars which are rarely observed. Michael Smith reported data on TX CMa, Z Per, ST Per, SW Cyg, and Y Psc, as well as on many other stars requiring continuing attention. Philip Atwood reported observations of UU CMa, RU Mon, AQ Peg, SX Oph, SW Cyg, WW Cyg, and EW Lyr. Stephen Cook reported a minimum of UU CMa, and Richard Hill observed EW Lyr and UU And. Gerry Samolyk continues to obtain minima of a wide variety of stars, including many which receive little attention.

Dan Kaiser has discovered more bright new variable stars, including several eclipsing binaries. In addition to OW Gem and SAO 38830, which were previously reported, his list now includes SAO 23229, a seventh magnitude star with a period of 4.22 days; SAO 76868, eighth magnitude and period of 1.39 days; and SAO 80992, ninth magnitude and period of 1.38 days. Periods, where known, have been roughly determined by visual observing and are being refined by a photoelectric effort being led by David Williams. Two other Kaiser discoveries may be eclipsing binaries and need extensive observing so that the problem can be resolved. These stars are SAO 125345 and SAO 81369. Individuals with an interest in observing any of these stars should contact the chairman for preliminary charts and additional information.

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

The Nova Search program continues to be increasingly active, with 14 observers reporting search results this past year.

References to the program in various publications aroused public interest in it, with the result that 30 to 40 individuals requested information about the program.

Among the proposals awarded amateur astronomer observing time on the Hubble Space Telescope (HST) is one particularly related to this committee's interest. John Hewitt will use the HST to search for Oort clouds of comets around bright novae. We wish John the best of luck with his very interesting project.

The committee welcomes new nova searchers. If you are interested, please contact the chairman for information.

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

Another milestone has passed for the AAVSO Photoelectric Photometry committee this year. Two requests for our data have been received at HQ, one from the Harvard-Smithsonian Center for Astrophysics and the other from the University of Utrecht in the Netherlands. We were most happy that we were ready and able to fill these requests for data.

During the 1988-89 fiscal year, 17 observers contributed 938 raw data observations of AAVSO photoelectric program stars. We appreciate each and every observation contributed by the following observers and we miss those who did not contribute this year but who have sent in good data in past years.

W. Clark, MO	73	D. Currott, AL	20	G. Fortier, Canada	57
R. Johnsson, MD	22	G. Kohl, AZ	87	H. Landis, GA	104
K. Luedeke, WA	160	R. Milton, CA	111	L. Pazzi, S. Africa	7
H. Powell, TN	8	D. Pray, RI	52	R. Schmidt, MN	9
L. Snyder, NV	25	H. Sorensen,		T. Walker, OR	18
D. Werner, CA	1	Denmark	10	J. Wood, CA	174

We have 3 new photoelectric observers this year, David Currott of Alabama, Hans Sorensen of Denmark, and David Werner of California.

Special observing requests were published in the **AAVSO Photoelectric Photometry Newsletter**. Drs. Rita and Roger Griffin requested data on 8 zeta Aurigae-type binary stars. Dr. John R. Percy requested observations of the Be/shell stars omicron Andromedae and 28 Cygni.

George Kohl made 8 observations of 45 Cancri, and Russ Milton made 22 observations of HR 4047, both for the Griffins. Russ Milton also made 42 observations of 28 Cygni for Dr. Percy. There may be other observers who obtained special request data of which I am not aware.

Any observer using the SSP-3 photometer and our raw data entry program should ask for a new and faster replacement program from me. It permits entry of your multiple 10-second integrations and then takes the mean and inserts it into the data file. All of your data work is then done by the computer instead of having to get your means on a calculator first. The program has been well tested by Russ Milton and he likes it.

Data management has been easier for me since making some changes in the output of the reduction program. Each reduced observation is appended to the proper star file as the program runs each batch of raw data. No sorting is required except for putting them in order by JD.

Dr. John Percy edits the **AAVSO Photoelectric Photometry Newsletter**, which is published three times per year and is available to interested AAVSO members by requesting it from Headquarters. It is always interesting and informative, and we learn more about the program, the stars we observe, and new ones we may not have observed.

If you would like to join with us and help add to our data base of photoelectric observations, please let me hear from you. I am always glad to help those seriously interested in learning about observing photoelectrically.

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

Four observers obtained 2497 observations which will be used to determine 152 times of maxima of 38 stars. Special project stars include DG Hya and V363 Cas. The DG Hya project is an on-going effort with participation by Paul Sventek, Richard Hill, and your chairman. The star appears to exhibit a strong Blashko effect with some maxima being much brighter than others during recent months.

The V363 Cas project was established in response to a paper by Jean Nowakowski (*Journ. Amer. Assoc. Var. Star Obs.* 17, 7). This star proved to have a very small visual brightness range and requires a very careful observing technique to obtain useful results. Although we succeeded in obtaining a light curve that can be measured for time of maximum, this star is probably not a satisfactory one for general visual work.

SOLAR DIVISION, Chairman: Peter O. Taylor
P.O. Box 5685
Athens, GA 30604

The AAVSO Solar Division continues to operate at an active pace. During the past year, 117 collaborators located on 6 continents participated in the sunspot program, observing on a total of 2527 days. A smaller number of electronic observers monitored the atmospheric effects of solar flares with enough regularity so that thousands of sudden ionospheric disturbances (SID) were recorded. Analyses of both data sets are supplied to the National Oceanic and Atmospheric Administration (NOAA) each month.

Arthur J. Stokes has improved on his original receiver and loop antenna designs so that we now have a very reliable system and a complete information package to send to potential SID observers. Interest in this important facet of the program has risen greatly over the past year, generated in large part to Mr. Stokes' diligent efforts in this regard, and to our two appearances on the weekly program "Communicator," broadcast worldwide on Radio Australia. AAVSO Solar Division program results are now regularly included in these weekly broadcasts.

In addition to these appearances, our article in *Sky & Telescope* magazine and interview last year on NASA Select television have produced many inquiries regarding the division's programs. Consequently, we answer a number of requests for information each month from those interested in learning more about the division.

Bruce R. Wingate continues to analyze a large portion of the SID data. A growing number of observers has undertaken this responsibility for their own work, and their doing so has greatly expedited the analysis and transmission of these data to NOAA.

The **AAVSO Solar Bulletin**, the division's newsletter, has been published monthly throughout the year. At present, the Bulletin is sent to just over 300 locations in the United States and abroad. Thomas G. Compton has generously supplied interesting information for the Bulletin, and superb photographs of the Sun taken at the National Solar Observatory - Sacramento Peak and at other professional installations.

Data exchange from overseas contributors has been greatly improved through the INTERNET electronic service; an increasing number of European collaborators submit their data in this manner or by FAX.

Several South African contributors to both SID and sunspot programs have utilized the latter medium during the past year, and the receipt of their data in a timely manner has proven to be very important to the program's data reduction and dispersal processes.

Finally, we wish to express our thanks to the many observers whose skill and dedication continue to make the program a success, and to the National Oceanic and Atmospheric Administration for their annual grant to the AAVSO, which allows the division's work to proceed.

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

AAVSO observers are continuing their search for supernovae. Three European participants who have been in touch with me recently are Stefano Pesci and Andrea Boattini from Italy, and Jose Ripero and his group from Madrid, Spain.

Our combined tally of observations, in collaboration with the Sunsearch organization, is increasing.

No new amateur supernovae discoveries have been made since January, 1989 (SN 1989B in M66 was the latest).

Latest statistics on the frequency of the appearance of supernovae appeared in the **Astrophysics Journal**, Volume 345 (October, 1989), page 752, titled "Revised Supernova Rates in Shapley - Ames Galaxies," by Evans, van den Bergh, and McClure. These statistics are based on my observations over an eight-year period.

The most recent good news is that the charts for supernovae hunting by G. Thompson and J. Bryan have now been published by Cambridge University Press as **The Supernova Search Charts and Handbook** (ISBN 0 521 26721 8). They are an expensive but essential resource.

Also, I hope that the **AAVSO Supernova Search Manual** which I wrote last year will soon be published - hopefully in time for the AAVSO meeting in Brussels, Belgium.

TELESCOPE, Chairman: Charles E. Scovil
Stamford Observatory
39 Scofieldtown Road
Stamford, CT 05903

The 3-inch Rosebrugh telescope has been sold to member George Lenz for \$300.00. This leaves the 4-inch Rosebrugh Goto refractor available for sale. Photos can be provided to seriously interested parties. The telescope remains in Florida since it is too heavy to ship to Stamford unnecessarily.

Still on hand are the 6-inch C. A. Post refractor and the 5-inch Mellish refractor. Some offers have been made on these, but no sales have been concluded.

Recently we received as a donation a 4.5-inch reflector complete with equatorial mount and sturdy tripod. This is in rather poor condition with the mirrors needing aluminizing.