

## COMMITTEE REPORTS

CHART DISTRIBUTION, AAVSO Headquarters

Between 10/1/76 and 9/30/77 a total of 314 orders was filled, including 116 sets for new observers.

8 x 10 charts	15,528
Finder charts	328
Atlases	18

Headquarters would like to extend its thanks and appreciation to Jack Pinkham for his meticulous work of drafting our preliminary charts that are ready to be finished.

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

During the period May 30 to September 30, 1977, the following mailings of AAVSO Preliminary Chart copies have been made from the Secretary's office. As before, most mailings have resulted from requests by observers.

U.S.A.	23 observers	2,764 copies
Canada	1 "	728 "
Finland	4 "	241 "
Other countries (4)	4 "	243 "
	<u>32</u>	<u>3,976</u>

As in previous reports, a more detailed breakdown of these figures is available, if desired. A total of 4 complete sets of the Preliminary Charts was mailed during the above period. A complete set now consists of 728 charts, this number again being somewhat smaller than in previous reports, since some preliminary charts are now considered as "final".

The backlog number of variables awaiting preliminary charting now stands at 76. The amount of usable material continues to increase, as in previous reports. The newly-revised Catalog of Preliminary Charts is still in preparation, but it is hoped to have it completed and ready for issue sometime in January 1978. This revised Catalog, when issued, will list about 75 variables not included in the present (June 1974) Catalog.

The Committee has successfully enlisted several active observers for "sky-checking" of newly-drafted preliminary charts. The number of these observers now stands at seven, including the valuable addition of Thomas A. Cragg who, since he moved to Australia in 1976, is sky-checking new southern hemisphere charts for us.

NOVA SEARCH, Chairman: Carmine Borzelli  
12 Corbin Avenue  
Jersey City, NJ 07306

The chairman received 5066 nova-search observations from 20 observers and 92 super-nova-search observations from 3 observers. Of the 20 nova searchers, 9 submitted reports every month. Outside of our program, several novae were discovered; all but one were below our visual limit of 7.75 mag. and the one was discovered at that limit.

Several observers sent in proposed standardized search-area charts. The chairman is particularly thankful to Messrs. Sarna and Constanza for their efforts.

Particular interest in the coming year will be concentrated on standardizing charts and program procedures for the supernova search program. Efforts will also be made to substantially increase interest in photographic nova-search programs.

All programs are still in great need of observers. Anyone interested may write to the chairman for details.

## Nova Search Reports:

<u>Observer</u>	<u>Location</u>	<u>Affiliation</u>	<u># Areas</u>	<u># Observa.</u>
A.Barrett	Australia	Ast.Soc.Vic.	4	79
C.Borzelli	New Jersey	AAVSO	88	2282
T.Brelstaff	England	BAA	3	33
D.Constanzo	Virginia	AAVSO	5	284
M.Durkefalden	West Germany	AAVSO	141	618
F.Farr	Australia	ASV	1	10
D.Fraser	Australia	ASV	3	60
P.Garnevich	Maryland	AAVSO	2	14
R.Hill	N.Carolina	AAVSO	80	302
L.Hiett	Virginia	AAVSO	2	12
J.Kuhns	Georgia	AAVSO	3	28
D.Levy	Canada	AAVSO	6	253
W.Luft	New York	AAVSO	2	69
P.Martin	Australia	BAA/NSW	5	29
T.Sarna	Illinois	AAVSO	6	40
F.Schmidt	New York	AAA/NYC	3	15
J.Scholl	New York	AAVSO	15	462
J.Trainer	Australia	ASV	2	146
F.Traynor	Australia	BAA/NSW	Dome Searches only	
T.Wilson	W.Virginia	AAVSO	9	366
				5102

Supernova Search Observations

			<u># Galaxies</u>	
C. Borzelli	New Jersey	AAVSO	3	15
R. Godden	England	BAA	7	38
R. Hill	N.Carolina	AAVSO	4	39
				92

PHOTOELECTRIC PHOTOMETRY, Chairman: Howard Landis  
2395 Wood Hill Lane  
East Point, GA 30344

Photoelectric Photometry has experienced a good increase in activity with several new observers. We hope the new observers will continue the good start they have made and that we will attract even more PEP activity.

Leonard Kalish continued his long series of minima of SW Lac, submitting two more in the past year.

Howard Louth collected data on the long period EB star VV Cep as it entered eclipse last year. The star will exit eclipse next year.

Tom Renner submitted very valuable data on several EB stars with shallow minima difficult to observe visually. These stars are ZZ Boo,  $\mu$  Her, WW Aur, HU Tau, and W UMA.

Douglas Sharpe observed FL Lyr, AI Dra, U Sge, and AG Vir. He was assisted by two new PEP observers, Allyn Smith and Jack Jewel, on one series of AI Dra observations.

Roy Tucker submitted very valuable data on Y Cyg, another EB star with a very shallow minimum.

Larry Lovell and I are continuing our observations of the new and controversial RS CVn-type stars under the direction of

Dr. D.S. Hall of Dyer Observatory. At the American Astronomical Society meeting this summer, in Atlanta, Dr. Hall presented a paper reporting some of our results.

Observations of 75 Gem from Landis Observatory and Dyer Observatory have shown it to be a new variable star with a range of about 0<sup>m</sup>1. This was announced by Dr. Hall in The I.A.U. Information Bulletin on Variable Stars, Number 1328.

A paper entitled "1976-77 Photometry of UX Ari, HR 1099, and  $\lambda$  And" has been submitted to The Astronomical Journal for publication. The authors are Landis, Lovell, Hall, Henry and Renner. The three binaries were observed in the far ultra-violet by the satellite "Copernicus" during late 1976. Our observations are the only ones known to us to have been made from the surface of the earth during the "Copernicus" observing program.

We experienced a small decrease in the number of requests for PEP information in the past 6 months. With correspondence continuing with several interested people, we had new contacts with ten prospective observers. We do welcome new contacts with anyone interested in observing photoelectrically.

VARIABLE STAR ATLAS, Chairman: Clinton B. Ford  
10 Canterbury Lane  
Wilton, CT 06987

Mr. Scovil is continuing his work on the AAVSO Variable Star Atlas at the Stamford (Conn.) Observatory, per the Committee's May, 1977, Report.

The status of this work as of September 30, 1977, is as follows:

1. Charts nos. 1 thru 125: Fully completed, now at AAVSO Headquarters for final checking.
2. Charts nos. 126 thru 146: Completed, ready to send to Henry Specht for checking.
3. Chart no. 147: In preparation (21<sup>h</sup>R.A. at Decl. -26° to -46°).
4. Balance of Charts (nos. 148 thru 178): Master chart blanks drafted and assembled, showing numbered coordinates but no variable star data.

This indicates slower progress than in previous reports, mostly because many of the charts involved are in congested areas of the southern Milky Way. Mr. Scovil's work has been entirely on a voluntary basis since March 1, 1977, when funding for the Atlas Project was terminated.

The AAVSO Treasurer has submitted a statement of funds in the AAVSO Atlas account as of September 30, 1977, which shows net cash on hand of \$2,629.25. This balance is deposited in two accounts with Harvard Trust Co., Cambridge, Mass. They are bearing interest, and the proceeds will be used to defray further expenses for materials in connection with completion of the Atlas.

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

Thirty-seven observers participated in the eclipsing binary program during the past 12 months producing more than 12,000 observations. Eighteen observers timed a total of 830 minima of 250 stars. The remaining 19 observers participated in a special project on Theta<sup>1</sup> Orionis A or other projects where useful data were collected but times of minima were not determined.

This very high level of activity sustained through yet another year is producing more useful information than ever. In addition to obtaining minima on several stars not observed for many years, sufficient data was collected to determine accurate periods for three stars whose periods were previously unknown. These are RY Lyncis, HP Aurigae and GU Orionis. At least one other, DV Cephei, appears likely to join this list in the near future. Gerry Samolyk, Gary Wedemayer and other members of the Milwaukee Astronomical Society were instrumental in determining these new periods. Four observers, Leonard Kalish, Tom Renner, Doug Sharpe and Roy Tucker submitted a total of 17 photoelectric minima.

Twelve program stars remained unobserved or had only partial minima observed during this reporting period. These stars are: V342 Aql, RW Cap, V346 Cyg, UZ Dra, RW Gem, T LMi,  $\delta$  Lib, RU Mon, BO Mon, FL Ori, Y Psc, AM Tau. Hopefully, persons who have observed these stars in the past will place them high on their priority lists again this year.

The eclipsing binary program continues to function smoothly only because several energetic individuals continue to apply their special skills to the program's needs. MJ and Peter Taylor continue key punching all data and computer sort and list data as needed. Don Livingston continues to produce our computerized ephemerides and Gary Wedemayer maintains and controls updating of charts for the program. Our deepest appreciation goes to these and other persons who are faithfully supporting the program.

RR LYRAE, Chairman: Marvin E. Baldwin

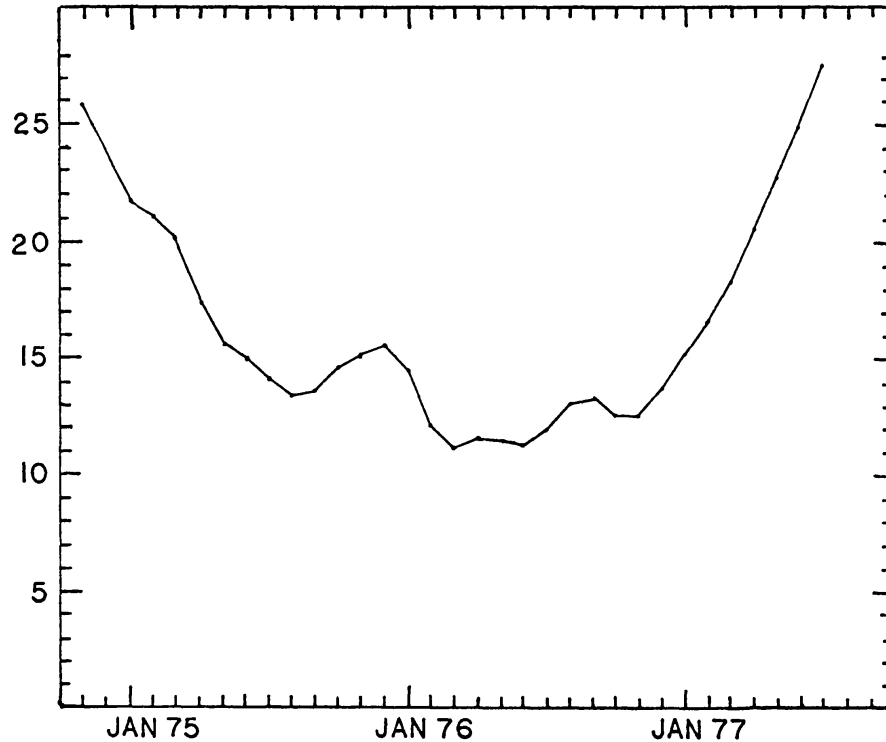
During the past 12 months five observers made more than 2000 observations of some 25 RR Lyrae stars. Our records for many of these stars are now extended to 13 years. It is very important that these records be extended indefinitely into the future so that their behavior over a long period of time can be unambiguously defined. XZ Cygni continues to be a favorite among observers because of its pronounced Blazhko effect and because of its extraordinarily large change of period a few years ago. At least three papers on XZ Cygni, all based primarily on AAVSO data, have already been published. Its continued unpredictable behavior seems certain to spawn more papers in the future if the data become available.

Recognizing the potential that exists for extracting useful information from the large amount of data collected by AAVSO observers on RR Lyrae stars, Peter Taylor has undertaken a project to make computer analyses of some of these data. At this early stage of development a preliminary computer program has already paid off in outstanding fashion. His efforts unveiled a previously unknown Blazhko effect in the star SW Bootis. (See Taylor's article on page 56 of this issue for details). This important development should spur observers to renewed efforts so that the nature of the SW Bootis Blazhko effect can be accurately determined.

SOLAR DIVISION, Chairman: Casper H. Hossfield  
 119-B Second Street  
 Mahwah, NJ 07430

The graph shows 12-month means of the American sunspot numbers from November 1974 through July 1977. The lowest point occurred in March 1976, at a value (11.1) that was almost reached three months later (11.2). Although the means rose slowly at first from the low point in March, a definite upward trend has continued since November 1976, leaving little doubt that we are well along on the upward swing of a new sunspot cycle.

Efforts to set up a network of visual aurora observers, as announced in the last issue of this Journal, have been abandoned due to our failure to find enough observers to make the program meaningful.



The activities of the AAVSO Solar Division are supported by a grant from the National Oceanic and Atmospheric Administration, which we acknowledge with thanks.