CLASSICAL CEPHEID, Chairman: Thomas A. Cragg
Anglo-Australian Observatory
Private Bag 4
Coonabarabran, N.S.W. 2857
Australia

Chairman's report not received at AAVSO Headquarters.

CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO standard charts distributed from Headquarters from October 1, 1983, to September 30, 1984. 307 chart orders were filled.

Standard Charts (8.5 x 11-inch)	10008
Finder Charts	204
Photoelectric Photometry Charts	804
"Old" AAVSO Atlas	8
"New" AAVSO Variable Star Atlas	37

We are happy to report that we now have special **Reversed** charts for observers with Celestron or other types of diagonal-equipped eyepieces. This project was started by Richard Hill, and completed by Ed Halbach when he visited Headquarters on his way home from Egypt. We have 85 charts of stars that are easy to observe. More reversed charts may be prepared as the need arises.

Please use the Standard Chart Order Form when ordering charts. This form is available from Headquarters. If ordering Photoelectric Photometry charts, please use the Photoelectric Photometry Chart Catalog and the special Photoelectric Photometry Chart Order Form, also available from Headquarters.

Since April we have been adding postage and handling charges to chart orders. The charges allow the observer to choose the rate of mailing they wish, i.e., first class/fourth class/air mail/etc.

Sky Publishing Corporation and Cambridge Press are still interested in a second printing of the AAVSO Variable Star Atlas when the current stock runs out. We are still very interested in hearing from members and/or observers having suggestions, comments, or corrections for the second printing.

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 during the period of May 31, 1984, through October 24, 1984:

Destination	No. of Different Addressees	Chart Copies Mailed
U.S.A.	18	865
Greece	1	146
Argentina	1	122
Holland	1	42
Australia	1	28
TOTAL	22	1203

All of these mailings have been made in response to requests from observers; a detailed breakdown of these figures is available on request.

A new Seventh Edition of the AAVSO Preliminary Chart Catalog was completed, dated May 1984, containing listings for a total of 960 variable stars and 1159 different charts for them, none of which were available in standard, quantity-reproducible form prior to the 1966 inception of the Preliminary Charts program. About 75 copies of this Catalog have been issued, per requests, including addenda and correction sheets updating each shipment to current chart availabilities. Mr. Scovil is preparing an Eighth Edition of the Catalog by means of our TRS-80 computer and printout; we anticipate it will be available by the time of the 1985 Spring Meeting.

We now have a computer program set up for the AAVSO Standard Chart Catalog, as available only from AAVSO Headquarters. A completely updated version of that Catalog is in preparation.

In addition to the Chairman, active Committee members have been Mr. Charles Scovil (CT), Fr. Ronald Royer (CA), John Riggs (NY), and Larry Hazel (NY). We have received very helpful chart copies from Frank Bateson of the Royal Astronomical Society of New Zealand Variable Star Section, Émile Schweitzer of the Association Française des Observateurs d'Étoiles Variables, and Thomas Cragg in Australia.

The Eichner photoelectric plate photometer for determining magnitude sequences on preliminary chart photos, obtained on loan from Columbia University per my May 1984 report, is still not operational because of electronic problems. Progress has been slow on this project, since many components have had to be replaced (the machine is vintage 1950), and some of the optical parts replaced.

The backlog of material to be charted continues to increase. Hardly a day passes without the receipt of either an order for preliminary charts from an active observer or some information to be considered in preliminary chart revision.

ECLIPSING BINARY, Chairman:

Marvin E. Baldwin
Route 1
Butlerville, IN 47223

During the past year 13 observers submitted 5167 observations of 140 eclipsing binary stars. A total of 295 minima were observed. Compared to the previous year these figures represent a modest increase in observing activity. Minima were timed for 72 program stars and for 68 additional stars not included as a part of the AAVSO standard program. We are pleased to see our observers continuing to secure data each year on a number of these non-program stars, thereby establishing a baseline for evaluation of any change of period that might occur.

For the benefit of those who would like to determine where they may most productively apply their observing efforts, we again identify those program stars that have received the least attention from observers and, therefore, are most in need of being given a high priority. The 25 program stars not observed this past year are:

TW And	SS Cet	TT Del	BO Mon	Y Psc
V346 Aql	RV Crv	UZ Dra	EQ Ori	RW Tau
ZZ Boo	BR Cyg	Y Leo	AQ Peg	AM Tau
Y Cam	V346 Cyg	SS Lib	RV Per	RS Tri
XX Cep	W Del	RU Mon	XZ Per	AG Vir

With the exception of Y Cam, W Del, Y Leo, SS Lib, and BO Mon, these stars are all repeat offenders from the previous year. Two consecutive years without data can leave a serious gap in the O-C curve. It is a matter of considerable urgency that minima timings be made for all these stars during the coming months.

Except for the outstanding observational efforts of a few of our observers, several other difficult stars (and some not so difficult) would have gone two consecutive years without observation. Some notable examples: V343 Aql observed by Stephen Cook, RW Cap by Philip Atwood, EW Lyr by Richard Hill, V387 Cyg by Paul Sventek, EW Lyr and ST Per by Mark Heifner, and several minima by Gerry Samolyk and David Williams including XZ Aql, AL Cam, R CMa, UU CMa, V387 Cyg, AV Hya, T LMi, Delta Lib, EW Lyr, RW Mon, FL Ori, and TY Peg.

In addition to the 25 stars which were not observed, another 23 were observed through only one minimum. These were:

RY Aqr	UU CMa	Z Dra	T LMi	U Peg	AC Tau
XZ Aql	RW Cap	YY Eri	Delta Lib	Z Per	V Tri
V342 Aql	V Crt	SW Lac	SX Oph	ST Per	VV UMa
V343 Aql	WW Cyg	CM Lac	FL Ori	Beta Per	

The reader can see that there are sufficient data gaps to keep the most ambitious of observers fully occupied. We encourage the qualified observer to obtain informational materials from the committee chairman, carve out a piece of the action for himself, and help plug some of these data gaps.

As this report is tendered, our observers are about to leaf through the last of a long series of computerized eclipsing binary ephemerides which were established and provided by Peter Taylor. Peter has provided this service for several years and has asked to be relieved of this responsibility since he has accepted the position of Chairman of the Solar Division. We wish to gratefully acknowledge the many services and the assistance Peter has provided for the eclipsing binary program these past several years.

Beginning in January of 1985, a new ephemeris format will be pressed into service. This new computerized ephemeris will be the handiwork of Paul Sventek and we wish him good fortune as he strives to eliminate glitches and input errors on his way to matching the professional quality service Peter always provided.

NOVA SEARCH, Chairman: Kenneth C. Beckmann
111 West College Street
Hagerstown, IN 47346

During the year September, 1983, to August, 1984, the AAVSO has received word of a number of supernova and nova discoveries. The discovery of novae and supernovae by amateur astronomers helps to demonstrate the valuable contributions amateurs continue to make to the astronomical community.

The first discovery announced for the period was on November 25, 1983. The Reverend Robert Evans of Maclean, Australia, visually discovered his fifth supernova, in the barred spiral NGC 1365.

During the last few days of March, 1984, Reverend Evans discovered his second supernova of the period, this one in the spiral NGC 3169.

During the summer, Reverend Evans discovered two supernovae within

seven days of each other. The first was discovered on July 20, 1984, in the spiral NGC 7184. His second visual discovery during July occurred on the 27th, in the spiral NGC 1559.

Reverend Evans discovered yet another supernova in the spiral NGC 991 on August 28, 1984.

Bob Evans' success in discovering extra-galactic supernovae is truly a remarkable story, one which should endure for a very long time to come.

Also of significant importance was the photographic discovery of Nova Vulpeculae 1984 (No. 1) on July 27, 1984. At maximum, this nova reached near naked-eye visibility. M. Wakuta of Japan is credited with the discovery. Mr. Wakuta also discovered Nova Serpentis 1983.

On behalf of the AAVSO Nova Search Committee, I congratulate both Reverend Robert Evans and Mr. M. Wakuta for their discoveries of supernovae and nova, respectively.

I also wish to encourage many of you who have in the past supported the Nova Search Program with your observations to continue this tradition. Your observations are invaluable to our understanding of nova and supernova activity in our own galaxy and in distant galaxies, respectively. Every observation you record and forward to us assists us in furthering your efforts to discover the heavens and hopefully a nova or supernova.

TABLE I

Supernova Search Observations Received

Observer	State or Country	Number of Areas Observed	Total of Observations
Lester Bugler	Maine	16	26
Gus Johnson	Maryland	60	119
	TOTALS	76	145

TABLE II

Nova Search Observations Received

Observer	State or Country	Number of Areas Observed	Total of Observations
Don Aucoin	Maine	1	1
Ken Beckmann	Maine	19	175
Andy Corkill	Nebraska	4	38
Manfred Durkfalden	West Germany	82	1016
Aaron Evans	Maryland	2	2
Dennis Hall	Maine	6	42
	TOTALS	114	1274

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

We continue to have the interest of a lot of prospective contributors of data to the AAVSO photoelectric photometry program. My

communication with observers and prospective observers reached a new high since the last annual meeting. A lot of the contacts were involved in helping observers with the observing procedures necessary to fit the requirements of the reduction program at Headquarters. My file shows 16 contacts with new prospects and the year's total of 55 letters to 31 people.

From February, 1983, to September, 1984, Headquarters received 402 photoelectric observations on 37 stars in the AAVSO photoelectric photometry program. These 37 stars represent about 55% of those in the program, and we are very proud of the interest shown. William Barksdale, Jr. of Florida is top observer with 256 observations.

The AAVSO Photoelectric Photometry Newsletter, published quarterly, is a very useful publication through which we reach observers and interested others. We report special observing requests, news of what others are observing, and inspirational articles from our Editor, Dr. John R. Percy. Growth of the newsletter's circulation to about 300 is gratifying, as we feel it is an indication of the newsletter's worth. It is available to any AAVSO member free of charge, or to anyone else at an annual subscription rate of $5.00. Those interested should contact Headquarters.

The Photoelectric Photometry committee receives special requests for data from professional astronomers. Dr. M. A. Barstow of England wanted a recent light curve of the RS CVn star, V711 Tauri. These data were acquired by Landis and Lines. Dr. A. Underhill wants observations of TV Geminorum. We were asked to contribute to the SS Cygni campaign during August of 1984 in collaboration with the AAVSO visual observers, the EXOSAT, Voyager, and IUE satellites, and other facilities. Drs. S. B. Parsons and T. B. Ake of the Space Telescope Science Institute asked for observations of the new zeta Aurigae system, 22 Vulpeculae.

If you have read about the new automated photoelectric photometry telescope systems, do not feel that owners of simpler systems will no longer be effective contributors. As Dr. Percy wrote in the newsletter, the human observer is as important as ever. Remember, science is a human endeavor. So if you want to learn more about what we are doing, please get in touch with me; I will enjoy helping you.

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

Five observers submitted 847 observations of 22 RR Lyrae-type stars during this reporting period. Some 58 times of maxima will be extracted from these data. We list here the 41 stars included in the AAVSO ephemeris for maxima of RR Lyrae stars. The number of observed maxima is indicated for each star.

SW And 2	ST Boo 0	YZ Boo 2	RW Dra 1	DY Her 4	TV Leo 0
XX And 5	SW Boo 5	RW Cnc 1	XZ Dra 0	SZ Hya 1	WW Leo 0
AT And 2	SZ Boo 2	TT Cnc 0	RR Gem 3	UU Hya 0	SZ Lyn 0
SW Aqr 0	TV Boo 1	VZ Cnc 0	TW Her 4	VX Hya 0	RZ Lyr 3
TZ Aur 1	TW Boo 0	RR Cet 2	VX Her 0	DH Hya 0	AV Peg 2
BH Aur 1	UU Boo 1	XZ Cyg 10	AR Her 0	RR Leo 2	RV UMa 0
RS Boo 2	UY Boo 0	DM Cyg 2	DL Her 0	SS Leo 0	

As in the past, XZ Cyg continues to the most popular among observers. However, if this star's aberrant behavior of the past is projected through the present and into the future, the ten maxima observed will probably be barely sufficient to track the subtle changes

in its Blazhko effect. This star's changing period has resulted in a large deviation from the AAVSO ephemeris.

We remain highly desirous of establishing a continuing program for frequent observation of maxima of SW Boo and SZ Hya. These two stars seem to exhibit a robust Blazhko effect similar to that of XZ Cyg, and a large pool of data is needed to define the details of these stars' behavior. Gerry Samolyk obtained the sole observed maximum of SZ Hya, and Glenn Chaple, Lewis Cook, and Mark Heifner obtained the five maxima of SW Boo. These data are very useful, but they are not sufficient to determine these stars' secondary periods and the details of the Blazhko effect. A much more intense observing effort is required.

As already noted in the Eclipsing Binary Report, a new ephemeris service is being instituted for 1985 as Peter Taylor concludes his long series of RR Lyrae ephemerides and Paul Sventek initiates a new format for our observers' use. We appreciate Paul's willingness to accept this responsibility and provide this service which is crucial to the continued success of the program.

SOLAR DIVISION, Chairman: Peter O. Taylor
P.O. Box 1476
Boca Raton, FL 33429

Interest in the Solar Division remains at a high level. We receive new inquiries concerning our programs each month. As a direct result, some excellent new observers have become part of the sunspot program. We are particularly indebted to Danie Overbeek for his promotion of our work among South African observers, who currently account for five reports each month. Herb Luft deserves credit for introducing Danie to sunspot observing.

We have recently prepared short, descriptive papers covering the Solar Division and its activities for the November 1984 issue of Sky & Telescope magazine, and for SONNE, a German-language, amateur solar journal with a wide European circulation. In this way, we hope to continue to stimulate international interest in the American sunspot program, and in the AAVSO indirect flare detection (SID) project. John McKinnon of the National Oceanic and Atmospheric Administration (NOAA) and David Rosebrugh were extremely helpful in supplying me with information fundamental to the preparation of these articles.

We have continued to prepare and distribute the Solar Bulletin each month. The Bulletin is currently mailed to well over two hundred individuals, scientific organizations, and universities around the world. In addition, the American sunspot index is regularly carried in many domestic and foreign publications, both amateur and professional in nature. It is gratifying to note the value attached to our work by the scientific community.

We have submitted a detailed report of Division expenses over the fiscal year to the Treasurer, Mr. Wales.

All original sunspot reports continue to be forwarded to AAVSO Headquarters each year for inclusion in the permanent archives.

We express our thanks to Dr. Mattei, and to the Headquarters staff for their efforts on our behalf, and to Committee members Thomas Cragg, J. Virginia Lincoln, David Rosebrugh, Harold Stelzer, Winston Wilkerson, and Bruce Wingate for their valuable contributions to the Solar Division.

Finally, we gratefully acknowledge the untiring efforts of the sixty-plus members of our sunspot observer network and those contributors to the indirect flare detection program, who continue to make the Solar Division programs a success, and a pleasure to me personally.

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

The following telescopes remain on hand and are for sale:

1. 5" Mellish refractor, tube and optics only, with some eyepieces and accessories. Excellent optics. Bids of $1,000 or more.

2. 8" Dynamax.

3. 6" reflector, temporarily on loan to Dave Branchett (Florida).

4. Several old mirrors, all unsilvered (mostly poorly figured, plate glass) - 6", 10", 11", 13".

5. At the May meeting, the Council authorized the sale of the 6" Post refractor. It is complete with tripod and equatorial mount, and some eyepieces. Built by Wm. Gregg, ca. 1880. Has extra 6" lens to correct for photography. Bids of $5,000 or more are solicited.

6. A standard Questar (3.5) has recently been donated by Margaret and Newton Mayall. Bids of $1,000 or more are solicited.

An advertisement has been placed in Astronomy magazine.