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

Chairman's report not received at AAVSO Headquarters.

CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO charts distributed from Headquarters from October 1, 1985, to September 30, 1986. During this fiscal year 267 chart orders were filled.

Standard Charts (8.5 x 11-inch)	9966
Photoelectric Photometry Charts	376
Finder Charts	355
AAVSO Variable Star Atlas	22

Edward Halbach added epoch 2000 positions to all the 1100 standard charts. This information is important as we move closer to the year 2000. Charles E. Scovil together with Ed accomplished the revision of a significant number of the standard charts this year. A good portion of these revisions is additional magnitude information added to the charts, as Charles compared each standard chart to his **AAVSO Variable Star Atlas** work-sheets. Charles also revised the **AAVSO Standard Chart Catalog.** The date of the most recent revision of each chart has been added to the Catalog. This information will help observers to check if they have the most up-to-date charts.

Our very special thanks to Charles Scovil and Edward Halbach for their very significant and valuable work with the AAVSO standard charts and the Catalog.

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 during the period October 1985 through July 1986:

Destination	No. of Different Addressees	Chart Copies Mailed
U.S.A.	21	3,954
Belgium	1	186
England	2	120
Canada	5	104
Greece	1	32
TOTALS	30	4,396

All of these mailings were made, as before, in response to observers' requests, which included orders for three complete sets of available on request. A complete set now comprises a total of 1067 different charts for 834 variables. These figures have been somewhat larger in the recent past, since a considerable number of preliminary charts have been upgraded to standard charts and are now issued only from AAVSO Headquarters.

Entirely new Catalogs for both Preliminary and Standard AAVSO charts have been prepared by Mr. Scovil, and these catalogs reflect the above changes. The **AAVSO Standard Chart Catalog** was in much need of revision, the last issue of same being dated 1974. The new Preliminary Catalog is the **Ninth Edition** of that Catalog (dated July 15, 1986). Copies of both these new catalogs will soon be available for distribution.

During this reporting period a special set of 7 AAVSO charts was made available to observers, covering fields through which Comet Halley was predicted to pass. Approximately 50 of these sets were mailed to observers during the period.

The Eichner photoelectric plate photometer obtained from Columbia University, and installed at Stamford Observatory in Connecticut, has continued to be useful.

A comprehensive program for updating all AAVSO charts, both as to sequence and star data and as to format, has been instigated by Mr. Scovil, using the latest information from the new (1985) Russian **General Catalogue of Variable Stars** (GCVS) plus other sources, including a chart survey in progress by our member Edward A. Halbach. The results of this program should be forthcoming during the fiscal 1986 - 87.

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

In the past year fifteen observers obtained data to define 474 times of minima for 166 eclipsing binary stars. More than 7000 observations were made. Among these were 102 photoelectric photometry observations submitted by David Skillman. Of the 97 stars on the AAVSO program minima were timed for all except seven. This falls slightly short of the record set in the previous year when only three program stars escaped our observers, but still has to be considered an outstanding accomplishment. Minima were obtained for an additional 76 non-program stars as part of a continuing effort by several of our observers to provide continuous data on a large number of eclipsing binary stars.

Gerry Samolyk and Philip Atwood each observed more than 100 minima and Marvin Baldwin, Richard Hill, and David Williams each contributed more than 50 minima. Attention given to stars most in need of new data by these observers as well as by others with less time to devote to the observation of eclipsing binaries has been directly responsible for our success in this area.

In last year's annual report we noted that the three stars without minima timings were V346 Cyg, FL Lyr, and SX Oph, and we additionally noted that only one minimum was obtained for each of nine stars, those being RY Aqr, V343 Aql, Y Cam, UU CMa, UZ Dra, RW Gem, BO Mon, FL Ori, and ST Per. Several observers made special projects of these stars and minima were obtained this past year for all except UZ Dra. The seven stars for which no minima were obtained this past year are TW And, ZZ Boo, RW Cap, UZ Dra, SS Lib, XZ Per, and BU Vul. We hope observers will pick up on this most recent list without letting the previous list slip from their attention.

A special note of thanks goes to Gerry Samolyk for preparation of the 1987 ephemeris and for distribution of charts to observers.

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

During the past year, a number of novae and supernovae discoveries were reported. On September 24, 1985, AAVSO member William Liller of Chile photographically discovered a nova in Scorpio using his blink comparator.

On April 23, 1986, Rev. Robert Evans of Australia visually discovered a supernova in NGC 5253. Roughly two weeks later on May 3rd, Rev. Evans visually discovered another supernova in NGC 5128. Rev. Evans is a member of the AAVSO and a committee member of the AAVSO Nova Search Committee.

While the first few months of summer passed quietly by, in August M. Wakuda of Japan photographically discovered a nova near the symbiotic star CI Cygni. His discovery occurred on August 4th.

It is interesting to note that several observers reported novae and supernovae which were later confirmed as background stars of galaxies or star fields. This indicates that a very active and enthusiastic group of observers "toured" the heavens during 1986.

On behalf of the AAVSO Nova Search Committee and its observers, I congratulate all of those who discovered either a nova or supernova during 1986, and I am very pleased with the growing interest in nova and supernova search efforts.

While we have had an increase in the number of observers participating in our program, observation totals have not been significant. We have also had an opportunity to share information and observations with Steve Lucas and his Sunsearch Network. Steve is a member of the AAVSO and is actively involved in supernova search. We are pleased the Sunsearch group has joined us in our efforts.

During 1987, the committee will be working on several proposals to develop and update programs which assist observers in their nova and supernova search. Among these are the occasional publication of the program newsletter, **NewStar**, and a re-evaluation of current material sent to prospective and new observers who wish to participate in the program. If you wish to keep abreast of the activities of the committee, we would suggest that you send four self-addressed, stamped envelopes and the newsletter will be mailed to you regularly. Please send it to the above address.

At this time observer totals are not available. They will be sent individually to participating observers in the very near future.

We are pleased that you continue to support us with your observations.

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

This is certainly a time for celebrating! The new Headquarters building, our 75th birthday, and for Photoelectric observers we have important progress to report.

The news is that we have started reducing photoelectric data into machine-readable form. Compared with visual data the number appears small, 500 observations just now, but it has been said that the longest journey begins with a single step. By fall we expect to have 1000

observations reduced. As these data accumulate they will be available to the astronomical community just as the AAVSO visual data are.

This operation was made possible by the completion of photoelectric photometry data entry and reduction programs by Charles Jones, AAVSO's Margaret Mayall Assistant. There were extra problems that had to be solved in order for me to be able to run the programs on my own computer, necessary in order for me to be able to check out the operation of the program. This has resulted in my being the photoelectric photometry data entry person for the present. It is an interesting learning process for me. The advantage is that I am able to contact observers directly with first-hand information about observing procedures they used that need correcting.

The process is that Headquarters sends me a stack of report forms. When I get through entering the data and reducing it, I return the forms with a computer diskette which has the data on it. The programs are working very nicely and we see no problems in clearing out the backlog of reports in two or three more months.

We appreciate very much the cooperation given by the Director, Dr. Janet Mattei, Elizabeth Waagen, Dr. John Percy, Charles Jones, and others at Headquarters. This new operation would not have been possible without it.

There have been two issues of the **AAVSO Photoelectric Photometry Newsletter** published by Dr. Percy. It is available to AAVSO members at no cost. We appreciate John's work as Editor; he has been performing an invaluable service for us. Photoelectric photometry observers should make their activities known to him, as this will make the newsletter even better.

Several stars and groups of stars were brought to our attention as needing photoelectric observing. The Director's Special Request was for observations of mu Cephei. The reason was that the greater detail of the light curve that photoelectric photometry can give would be very useful. Others include SS Cygni, only when it is up, to look for variability on the order of a few hours. Dr. Hoffleit would like to see data to support whether or not V Cephei is a variable. Dr. Herbst of Wesleyan University gives us some very interesting reasons to observe some T Tauri stars. Dr. Serge Demers of the University of Montreal requests us to monitor V725 Sgr, a Cepheid with variable amplitude. CH Cygni is a very unpredictable star, and it would help astronomers solve that riddle if we could collect some fine detail of its actions. Others include RV Tauri type stars and 11 Leo Minoris.

Observing is still on the increase. Last year we had 12 observers; this year the number is the same. Last year we had 1254 observations on 41 stars; this year we have 2159 observations on 50 stars. Howard Louth of Washington is the leader with 1544 observations. He observes eclipsing binaries and he probably is the only source of photoelectric photometry data for Marv Baldwin to work with. The totals from October 1985 to July 1986 are as follows:

D. Bohme, German Dem. Rep.	176	G. Fortier, Canada	28
P. Kneipp, LA	20	G. Kohl, AZ	49
A. Koster, WI	37	K. Krisciunas, HI	1
H. Louth, WA	1544	H. Landis, GA	170
F. Melillo, NY	12	L. Pazzi, S. Africa	32
D. Pray, RI	51	R. Reisenweber, PA	39

This report gives evidence that the photoelectric section of the AAVSO now has the opportunity to produce useful data for the astronomical community. My wish is that the number of observers will increase, and that they will be persistant in the never-ending battles

with the clouds in the sky, with their instruments, and with the desire to close down and get some sleep. We now have a complete data collection and handling system in place that does work, so please, let's try to increase our production of data each year. But at the same time it is very important for us all to do our best to turn in observations with the lowest standard error possible. We must stress quality, not quantity.

I welcome your requests for information about how to join with us in photoelectric observing.

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

During this reporting period 6 observers submitted nearly 3100 observations on 37 RR Lyrae variables. Some 225 times of maximum are represented by these data. Maxima were timed for 33 of the 41 stars listed in the AAVSO ephemeris. The stars not observed are XX And, AT And, SW Aqr, VZ Cnc, RR Cet, DL Her, DY Her, and RZ Lyr. The four stars observed which are not on the ephemeris are CE Her, DG Hya, ST Leo, and AA Leo. SW Aqr, DL Her, and RZ Lyr were also not observed during the previous year.

Gerry Samolyk has brought our attention to the fact that the new 4th Edition of the **General Catalogue of Variable Stars** no longer lists VZ Cnc as an RR Lyr star, so we anticipate that it will be dropped from the program in the not too distant future.

The most active observers of the RR Lyrae stars this past year have been Richard Hill, Mark Heifner, Gerry Samolyk, and your committee chairman. Projects of special interest are SW Boo, AR Her, and SZ Hya, because we believe these stars will reveal a marked Blazhko effect which we would like to be able to define in some detail over an extended period of time. XZ Cyg continues to be the most observed star, with 18 maxima being recorded. This large number of maxima is essential for detailed examination of this star's behavior and is representative of the number of maxima we would like to obtain each year for each of the stars listed above.

Again, we would like to note our appreciation to Gerry Samolyk for preparation of ephemerides, distribution of charts, and his revision work on charts that had been copied from old sketches and suffered from field distortions.

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

Chairman's report not received at AAVSO Headquarters.

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

There has been no change since the last report. We still have on hand and for sale the 6" C. A. Post refractor complete with equatorial mounting, and a 5" refractor - tube and optics only. A few inquiries have been received as a result of publication of the last Committee report in **JAAVSO**, but no specific offers have been received.