

COMMITTEE REPORTS

CHART DISTRIBUTION, AAVSO Headquarters

Between October 1, 1976 and March 31, 1977, 150 orders were filled, including 47 sets for new members.

8 x 10 charts	4,750
Finder charts	164
Atlases	14

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

The primary thrust and activity of the Eclipsing Binary Section continues unabated in spite of an extraordinarily hard winter in the eastern half of the USA. About 400 minima have been reported since the books were closed for the last annual report. Emphasis on some specialized observing by a few individuals has continued -- particularly by members from the Milwaukee Astronomical Society -- resulting in more useful data on stars which were not observed for several decades. Their efforts have been expanded to include several eclipsing binaries with long periods. This work is more difficult than observation of the standard program stars, but the minima obtained can be of exceptional value and among these stars the potential always exists for making a significant new discovery.

Several dozen preliminary charts have been added to the basic list through the efforts of our Milwaukee observers guided by the able leadership of Ed Halbach. Gary Wedemayer continues to distribute charts for this program.

Progress continues in the development of a computer programmed plotting system suitable for measuring times of minima. Research in this area is being independently pursued by three individuals; Peter Collins, Peter Taylor, and Walter Hawley.

Our special observing program for Theta¹ Orionis A is essentially complete although a few reports continue to arrive from time to time. The shorter period for this star is now well established.

The success of the eclipsing binary program continues to hinge on the diverse skills of many individuals who lavish their time and efforts on it with a minimum of reward or recognition. Walter Farrar, verification of new charts; Donald Livingston, provision of computerized ephemerides for both EB and RR stars; and M.J. Taylor, keypunching of large volumes of data for both EB and RR programs, are among those providing specialized services of great value on a continuing basis.

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

Since October 1976, the following mailings of A.A.V.S.O. Preliminary Chart copies have been made from the secretary's office. Virtually all mailings have resulted from requests from observers:

<u>Destination</u>	<u>No. of Different Addressees</u>	<u>Chart Copies Mailed</u>
U.S.A.	21	1,054
Canada	5	189
England	2	636
Japan	1	682
Other countries (3)	3	735
Totals	32	3,297

As in previous reports, a more detailed breakdown of these figures is available, if desired. Three complete sets of the Preliminary Charts have been mailed during the past six months. A complete set now consists of 778 charts, this number being somewhat smaller than in previous reports, since some preliminary charts have been designated as "final" and are issued only from A.A.V.S.O. headquarters.

The backlog number of variables now awaiting preliminary charting stands at 62. The amount of usable materials continues to increase. The newly revised Catalog of Preliminary Charts is still in preparation, since much new revision data has recently been received. This revised catalog, when issued, will list about 50 variables not included in this present (June 1974) catalog.

The cooperative project for revising existing southern hemisphere charts, mentioned in earlier reports, has been further delayed but is still in process.

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

During this period 17 observers made 2753 observations of 162 areas. Again no nova was discovered. It should be pointed out however that two observers searched area # 78 two days before Nova Sge 1977 was discovered. This should serve as an example of the fact that although the program does work, we have too few observers. Area #78 has in the past produced, along with Nova Sge 1977, several novae in Vulpecula and the famous nova HR Del 1967. To this end area 78 has been declared "common" and the chairman has urged all current prospective observers to add this area to their observing programs. Also during the six months period two observers searched six galaxies in 33 observations. No supernova was discovered under the program.

The chairman, during his expedition to see the October 23, 1976, Australian Eclipse, met Dr. John Graham of Cerro Tololo Observatory of Chile, the photographic discoverer of two novae in Large Magellanic Cloud. Dr. Graham has agreed to aid the program in any way he can.

At the October 1977 meeting, time permitting, the chairman will conduct a Nova and Supernova workshop. Anyone interested in taking part in either or both Nova or Supernova search programs may write to the chairman for instructions and assignment.

PHOTOELECTRIC PHOTOMETRY, Chairman: Howard J. Landis
2395 Wood Hill Lane
East Point, Ga. 30344

L.P. Lovell and I continue to observe several of the RS CVn type variables under the direction of Dr. Douglas S. Hall, Vanderbilt University. He has suggested that we are building the "band-wagon" that theoretical astrophysicists will soon be jumping on.

Since the Fall Meeting, we have received requests for information and replies have been sent to eleven people interested in Photoelectric activity. One each came from Germany and Switzerland, the rest were from the U.S.A.

The list of five Eclipsing Binaries mentioned in the last report, from M.E. Baldwin, is being worked on primarily by the Chairman. Only one of these has a Beta Lyra type light curve, the others are of the Algol type with short duration eclipses. This causes severe constraints on the relative amount of time during which meaningful data is obtainable. Efforts will continue, in spite of this, and when meaningful results are available, they will be reported in the J.A.A.V.S.O.

Your inquiries relating to Photoelectric Photometry will be most welcome.

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

Routine observation of RR stars continues with little or no change of status. Most stars observed by members of this section for the past 10 to 12 years are being observed again this year in a continuing effort to extend the unbroken year-to-year record of their behavior.

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

The sun has shown an increase in activity during recent months that seems to herald the beginning of the new solar cycle, number 21. The smoothed means of the American sunspot numbers continue an upward trend that if continued, will place the low point of the curve in the spring of 1976. The lowest smoothed monthly mean of that period was 11.1 in March 1976. This is a rather high mean for the low point of the cycle. It is well above the low point of the last cycle during the summer of 1964 when smoothed means fell close to 4.0.

Another measure of the level of solar activity is the number of ionospheric disturbances, and these too remained at a comparatively high level for sunspot minimum. There has been several months when no disturbances were recorded but nothing like the low level of the last minimum when not one event was recorded for the entire year of 1964 by AAVSO observers. Some of this difference can undoubtedly be accounted for by the more sensitive detection methods now in use compared to 1964 but nevertheless, if 1976 does turn out to be the minimum year its level will be far above that of 1964.

Various people who have analyzed the strip-chart recordings of the AAVSO indirect flare patrol group have noted certain interesting anomalies in the traces over the years that are not directly related to solar flares. These are thought to be related to disturbances in the earth's magnetosphere. The Solar Division would like to check on how closely these anomalies correlate with auroral activity. A few volunteers are needed to set up a Solar Division aurora observing group. These will be very simple aurora observations with the observer merely checking the sky each clear night to see if there is or is not an aurora visible. Anyone interested in making aurora observations should contact the Solar Division.

The activities of the AAVSO Solar Division are supported by a grant from the National Oceanographic and Atmospheric Administration.

TELESCOPE LOANS, Chairman: Charles E. Scovil
 Stamford Observatory
 Stamford Museum
 Stamford, Conn. 06903

At its meeting on May 13, 1977 the AAVSO Council passed a motion to the effect that the AAVSO will no longer accept donations of telescopes except those bequeathed to the Association. It has been our intention for some years to get out of the telescope loan business insofar as possible.

The Council also approved the sale of the 8-inch Fernald telescope to a group of observers in Florida.

The 4½-inch Fitz telescope has been sold to Robert Ariail who is making a study of Fitz and other telescopes of the same period in comparison with modern instruments of the same size.

This leaves only a 4-inch antique telescope of unknown origin, complete with equatorial mount and tripod, and a 3¼-inch refractor, tube and optics only, available for sale. There are also miscellaneous mirrors in sizes from 6 to 12 inches, most of questionable figure.

VARIABLE STAR ATLAS COMMITTEE, Chairman: Clinton B. Ford
 10 Canterbury Lane
 Wilton, Conn. 06897

Per previous VSA Committee reports since October 1975, direct financial support for Mr. Scovil's work in preparing the A.A.V.S.O. Variable Star Atlas was terminated on March 1, 1977. However, also as previously stated, Mr. Scovil is continuing this work on a voluntary basis as time permits, and he expects to do so until the Atlas is completed and ready for publication.

The status of work on the Atlas charts as of May 15, 1977 is as follows:

1. Charts nos. 1 through 125: Fully completed, now at A.A.V.S.O. Headquarters for final checking.
2. Charts nos. 126 through 141: Completed, ready to send to Henry Specht for checking.
3. Chart no. 142: In preparation.
4. Balance of Charts, (nos. 143 through 178): Master charts blanks drafted and assembled, showing numbered coordinates but no variable star data.

The publication of a statement in a recent issue of Sky and Telescope magazine to the effect that the A.A.V.S.O.'s "new Variable Star Atlas" is now nearing completion, has led to many inquiries from readers of that magazine who assume that the Atlas is in fact completed and now ready for sale.

Unfortunately, this is not true, and probably will not be in the immediate future. The VSA Committee, and Mr. Scovil, are continuing the project, and further reports to the A.A.V.S.O. Council will be made as the work progresses.

TREASURER'S REPORT: OCT. 1, 1976 TO MARCH 31, 1977

GENERAL FUND

RECEIPTS

Annual Dues	\$ 7023
New Members	450
Application Fees	48
Contributions	1081
Subscriptions	1136
Chart & Atlas Sales	1350
Chart Catalog, Manual, & PEP Sales	76
NOAA Grant	852
AAVSO Circular	389
Solar Division	40
Miscellaneous Sales	203
Book Sales	2071
Insignia	222
Meetings	627
Transfer from Endowment Fund Income	<u>17669</u>
Total Receipts	\$33237

EXPENDITURES

Salaries & Payroll Taxes	\$17592
Rent	5086
Light, Heat	724
Telephone	412
Data Processing	2652
Mailings	1233
Zerex, Printing	980
Insurance & Alarm	599
General Office	621
Charts	15
AAVSO Journal	30
AAVSO Circular	388
Solar Division	469
Eclipsing Binary & RR Lyrae	135
Cost of Books	1335
Special Taxes	24
Meetings	<u>942</u>
Total Expenditures	\$33237