CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO standard charts distributed from Headquarters from October 1, 1980, through September 30, 1981. A total of 570 orders was filled, including 131 new member sets.

8 x 10 charts	18667
Finder charts	688
"Old" AAVSO Atlas	18
"New" AAVSO Variable Star Atlas	391

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

The following mailings of AAVSO Preliminary Charts have been made from the Chairman's office during the past six months. All mailings have resulted from requests from observers:

Destination	No. of Different Addressees	Chart Copies Mailed
U.S.A.	19	2953
West Germany	1	780
Brazil	1	440
Italy	1	25
TOTALS	22	4198

A detailed breakdown of these figures is available, as usual. Three complete sets of the Preliminary Charts have been shipped during the past six months, each set now containing approximately 780 charts.

Twenty copies of the new May 1981 AAVSO Preliminary Chart Catalog have been shipped by request to observers, and a total of 16 copies were distributed to persons attending the May 1981 AAVSO Meetings held in Tucson, Arizona. Some of the latter group did not contain an addenda and errata sheet, which is available from the Chairman's office on request.

It has been necessary to raise the price of the Preliminary Charts from $0.10 to $0.15 each, per information in the May 1981 Catalog, and an initial issue of 25 such charts free of charge has had to be eliminated, due to rising costs.

Members of the Committee continue to be very active in producing charts for previously uncharted objects, and in measuring new and revised magnitude sequences for comparison stars. Special mention should again go to Richard Stanton and Fr. Ronald Royer in California, and to Charles Scovil at the Stamford Observatory in Connecticut.

The back-log of new material to be charted continues to increase, and revisions of existing sequences are proceeding as rapidly as they can be confirmed. All observers using the Preliminary Charts should take special note of the notice concerning chart revisions published on Page 46 of JAAVSO 10, 1 (1981).

PHOTOELECTRIC PHOTOMETRY, Chairman: Howard Landis
Price Road West
Rt. 2 Box 44ED
Locust Grove, GA 30246

The computer program obtained by AAVSO Headquarters for the reduction of photoelectric data is now working with the VAX Computer at the Harvard-Smithsonian Center For Astrophysics. A User's Manual has been written to assist the operators at Headquarters in the use of the program. A preliminary form has been drawn up for the use of photoelectric observers in reporting data. Another form will be used to provide Headquarters with fixed permanent data pertaining to location of the observatory and other pertinent details of the individual PEP instrument system. This form would be sent in once when an observer starts submitting data, and again any time changes are made in the observer's instrument system. We are grateful to Michael Davis from Villanova University, the summer research assistant at Headquarters under the Margaret W. Mayall Assistantship Program, for his fine effort on the project.

Our Director, Mrs. Mattei, is developing a photoelectric observing program for stars other than eclipsing binaries. This, I believe, will be the first really coordinated AAVSO photoelectric photometry program that will provide all the information the observer needs. There will be finder charts with comparison and check stars noted. The observers will be notified further about this in the AAVSO Photoelectric Photometry Newsletter.

Work on the eclipsing binary program list has been frustrated by our not being able to identify the comparison and check stars used by professional observers. However, we have gone through the list and have added notes as to whether or not the star is on the charts of the AAVSO Variable Star Atlas. We find 60% of them are, but not all of them have comparison stars because many stars are of too small a magnitude range to be observed visually. The Atlas is intended primarily for the visual observer.

I visited Minneapolis recently and was invited to a meeting of the Minnesota Astronomical Society by one of our local members. I was requested to give a short talk about the AAVSO and Photoelectric Photometry.

We invite anyone who is interested in observing photoelectrically to write to me. I particularly enjoy answering specific questions about PEP.

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

During the 1980 - 1981 reporting period, six observers recorded visual data for 127 maxima of 30 RR Lyrae type stars. Three or more maxima were recorded for each of 13 stars, and two maxima for each of 11 stars. Five stars - TT Cnc, TW Her, VX Her, WW Leo, and RV UMa - were observed for only one maximum each. Among those RR Lyrae stars which are usually observed each year but failed to receive attention during this reporting period are TV Boo, UU Hya, and DH Hya.

The level of production on the part of observers during this reporting period is very nearly the same as during the previous year. This is a strong indication of the stability of the RR Lyrae observing program, and of our capability to establish a continuous record of data on these stars from year to year.

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

During the past year, eighteen observers reported data for 561 minima of 228 eclipsing binary stars. These figures compare favorably with the previous year's report, showing a modest increase in activity which assures a continuous record of data for most stars in our program.

Although most program stars have received attention adequate to establish the times of minimum necessary to detect any important changes of period, a few still need additional effort. We have not established reliable times of minimum for any of the following program stars within the past two years:

SS Lib	RU Mon	BO Mon	AM Tau

Further, the stars listed here have had only one adequately observed minimum in the past two years:

TW And	XX Cep	TT Del	TY Peg
RY Aqr	V346 Cyg	SX Oph	AQ Peg

Additional stars which need more attention from observers include the following:

XZ Aql	FZ Del	U Oph	AC Tau
V342 Aql	TW Dra	Z Per	RV Tri
WW Aur	CT Her	RV Per	RS Tri
SS Cet	TT LMi	V505 Sgr	AG Vir
BR Cyg	SS Lib		

We should note at this point that in addition to the data obtained for our program, we are collecting an increasingly important store of data for a large number of non-program stars. This collection is occuring largely through the observing efforts of Gerry Samolyk. During the past year, he and other observers obtained data for a total of 141 non-program stars. Many of these stars are being observed at least once each year, and so we will eventually be able to make definitive statements about the behavior of their periods.

SOLAR DIVISION, Chairman: Robert B. Ammons
411 Keith Avenue
Missoula, MT 59801

This report is presented as a set of statements.

1. Both sunspot and indirect radio flare patrol reports were sent each month to NOAA, in Boulder, Colorado, well before deadlines set by that agency. 30 to 40 active observers.

2. With the help of Headquarters and of Carolyn Hurless, a new system was designed and partly put into operation to keep track of observers in the Solar Division and to provide address lists for mailing the Solar Bulletin.

3. The AAVSO Solar Bulletin was published and mailed for each month, well within the originally established time goals.

4. A cooperative arrangement has been started with the Belgian R_i group, giving the prospect of exchange beyond the routine level, as well as exchange of detailed information on observational methods and their use. Routine data are already being exchanged each month.

5. A cooperative arrangement is being set up with the British solar group.

6. A repository has been established for radio records (VLF for SES). A file of all data will be maintained, either of original records or of copies in the case where the observer wishes his original records returned after analysis and reporting to NOAA and publishing in the Solar Bulletin.

7. A start has been made on planning of training materials for both sunspot and radio observing, with contributions of ideas and sample materials from numerous persons, including David Rosebrugh, William Winkler, and Douglas Ammons. A format of question-and-answer has tentatively been adopted. Any interested member should send a list of solar "observer" questions to which he always wanted answers to the Chairman.

8. A great many persons have contributed to the Solar Division's successes during the year, including:

More than 40 observers;
Peter Taylor - timely and excellent sunspot number computations and reports under the supervision of his various computers;
Carolyn Hurless - mighty wrestler with address lists;
Casper Hossfield - encouragement, activation, and a great deal of useful information;
Douglas Ammons - preparation of monthly sunspot interpretations for the the Solar Bulletin, individual work with sunspot observers-in-training;
Stephanie Ammons - reading of SES records, preparation of SES section of the Solar Bulletin, preparation of the monthly SES report to NOAA, preparation of the monthly SWF report to NOAA, preparation of exchange material for the British Astronomical Association, extensive consultation with observers.

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

The re-doing of all of the data for the 1000-day interval, JD 2442000 - 2443000, is nearing completion. The only major object being analyzed currently is X Cyg, for which there are some 2000 estimates. Upon completion of this analysis, the mean curves can be prepared and the comments written.

George Kelley offered his help in the computerized reduction of data. Having the data reduced by computer will speed up the work by orders of magnitude.

Observers should continue to send to Headquarters all their classical cepheid estimates, as the computer printouts of the data, compiled monthly, are the most reliable means of ensuring that all of the data are together - hopefully eliminating the problems associated with the current pending report.

There may exist a question regarding the continuation of including some of the northern cepheids on which recent literature demonstrates some good professional work is being done. I suggest that we keep monitoring even these stars temporarily, for the sake of continuity as well as to "calibrate" our observers.

Only recently have we obtained charts for most of the good

southern cepheids. In this area, little professional work is being done, and the maximum number of long period cepheids abounds. I strongly suggest that we attempt to concentrate on these, as in some cases not even a decent mean light curve exists.

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

During this fiscal year, 11264 observations from 16 observers covering 110 areas in the nova search program were received, and 1427 observations from 9 observers covering 85 different galaxies in the supernova search program were received.

While there were no discoveries by these observers, there were a number of interesting incidents. Several involved omissions on the new Atlases released this year. The most interesting of these resulted in a phone call from a new observer who thought he had spotted twin novae. A check of the Atlas Borealis showed these objects to be omissions.

NGC 2985 in Ursa Major, a galaxy in the supernova search program which gained temporary fame this year with the report of a suspected supernova (see JAAVSO 10, p. 46), continues to be monitored closely by several observers, although there are still no photographs of it available. It seems unlikely that a galaxy of its type (Sb) has not produced a supernova. This 11th magnitude galaxy is within 4 degrees of M81. The Committee recommends steady observing of NGC 2985, which probably has at least one observable occurence of a supernova a year. Charts and materials are available from the chairman and AAVSO HQ. If you have written and received no reply, write again and/or call.

Nova Search Observations

Observer	Location	Affiliation	No. of Areas Searched	No. of Observations
Kenneth Beckmann	Missouri	AAVSO	52	4020
Alan Birkner	Illinois	AAVSO	3	5
Carmine Borzelli	New Jersey	AAVSO	103	3932
Robert Buss	N. Dakota	AAVSO	2	42
Joseph Caruso	New York	AAVSO	6	24
Manfred Durkefälden	West Germany	AAVSO	78	592
Timothy Hrutkay	Pennsylvania	AAVSO	6	220
Herbert Luft	New York	AAVSO	2	210
Alan Massey	Australia	BAA-NSW	3	3
Warren Morrison	Canada	AAVSO	22	1345
Frank Schmidt	New York	AAA-NY	1	35
Stephen Shervais	Virginia	AAVSO	4	29
Chris Spratt	Canada	AAVSO	4	41
Daniel Troiani	Illinois	AAVSO	22	48
Frank Traynor	Australia	BAA-NSW	Dome Search Only	
Thomas Wilson	W. Virginia	AAVSO	8	718
				11264

Supernova Search Observations

Observer	Location	Affiliation	No. of Areas Searched	No. of Observations
Kenneth Beckmann	Missouri	AAVSO	23	280
Carmine Borzelli	New Jersey	AAVSO	18	369
Thomas Fetterman	New Jersey	AAVSO	53	110 - 96 I.S.*
Gus Johnson	Maryland	AAVSO	31	76
Patrick Madden	Louisiana	AAVSO	1	10 - 5 I.S.
Chris Spratt	Canada	AAVSO	8	21
Daniel Troiani	Illinois	AAVSO	49	96 - 29 I.S.
Thomas Wilson	W. Virginia	AAVSO	1	1 - 1 I.S.
Mike Witkoski	Pennsylvania	AAVSO	64	444 - 8 I.S.
				1427

* I.S. - Inner Sanctum (magnitude 14.0 and fainter)

TELESCOPE LOAN, Chairman: Charles E. Scovil
Stamford Observatory
Stamford Museum
Stamford, CT 06903

It should be re-stated that the Committee no longer makes loans of telescopes, and except for the 6-inch C. A. Post and the 8-inch Van Biesbroeck telescopes, all telescopes on hand are for sale.

Telescopes on hand:

6-inch C. A. Post Refractor;
4-inch refractor returned from David Pickering, (Mfr. Byrne?), Minimum bid $500. Complete with equatorial head and tripod;
5-inch refractor from Beidler, made by John Mellish, Minimum bid $1000, tube and optics only, several eyepieces;
5-inch Alvan Clark, donated by J. Welsh, Minimum bid $1500, tube and optics only, 3 eyepieces.

Telescopes on loan:

8-inch Van Biesbroeck Dynamax, to J. and M. Mattei;
2-inch transit, to R. Ariail;
Petzval camera lens, to P. T. Menoher.

Mirrors on hand:

11 13/16 plate glass, from D. Brocchi, fair figure, not silvered;
10 3/16 plate glass, poor figure, aluminizing poor.

Bids on the telescopes may be sent to the committee chairman. All bidders will be notified of the highest bids before action is taken.