

COMMITTEE REPORTS

CLASSICAL CEPHEID, Chairman: - Thomas A. Cragg
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The reduction of the data on 30 classical cepheids for the time interval JD 2442000-3000 has now been completed. The data have been compiled and prepared in the form of a paper, and submitted to the Journal of AAVSO for publication. The reduction for the next time interval, JD 24443000-4000, will be carried on as soon as the listings of observations submitted during this time are received from Headquarters.

CHART DISTRIBUTION, AAVSO Headquarters

The following is a report of AAVSO standard charts distributed from Headquarters from October 1, 1981, to September 30, 1982. 394 chart orders were filled, which included 110 sets to new members.

Standard Charts (8.5 x 11-inch)	13,972
Finder Charts	256
"Old" <u>AAVSO Atlas</u>	21
"New" <u>AAVSO Variable Star Atlas</u>	47

Please use the Standard Chart Order Form when ordering charts. This form is available from Headquarters.

See the Announcement about the AAVSO Variable Star Atlas on page 115 of this issue of JAAVSO.

NEW CHART, Chairman: Clinton B. Ford
10 Canterbury Lane
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The following mailings of AAVSO Preliminary Charts have been made from the Secretary's office during the period of May 1, 1982, through October 30, 1982.

<u>Destination</u>	<u>No. of Different Addressees</u>	<u>Chart Copies Mailed</u>
U.S.A.	26	2,054
Venezuela	1	840
Italy	1	825
Canada	2	821
Australia	2	80
Japan	2	14
South Africa	<u>1</u>	<u>8</u>
TOTALS	36	4,642

A detailed breakdown of these figures is available. Three complete sets of the Preliminary Charts were shipped during this period. A complete set now comprises 801 different charts.

About 35 copies of the May 1981 (4th Edition) AAVSO Preliminary Chart Catalog have been mailed and the supply of this Catalog is nearly exhausted. A new 5th Edition of the Catalog has now been

completed (October 1982) and is ready for distribution. It contains nearly 20 pages of information.

Committee members continue to be active: Mr. Lowder with sketching of new fields; Messrs. Scovil and Hazel with chart drafting; Mr. Stanton with obtaining photoelectric comparison star sequences on faint variable star fields (as noted in April 1982 Report); Rev. Ronald Royer with desired photography of fields to aid in revision work; Mr. Ford mostly with copying, mailing, and distribution.

During the past six months, the Committee has acquired a TRS-80 desk-top computer which has been programmed by Mr. Peter Taylor to enable the rapid retrieval of all information regarding the status of Preliminary Charts by dates of issue and revision, and their current distribution. Association Headquarters and the Chart Committee will thus have rapid access to useful information concerning "who has what, where, and when."

In spite of the increase in our coverage of new fields, the backlog of new material to be charted or revised continues about as before. If and when the 4th Edition of the General Catalogue of Variable Stars is issued by the Russians, the percentage of over-all listed variables which are charted or suitable for charting for visual observation by the AAVSO or other organizations (RASNZ, etc.) will probably drop from about 30% to around 20%.

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

Eighteen observers submitted nearly 6000 observations constituting 413 minima of 181 eclipsing binary stars during this report period. Included were scattered observations of several additional stars, mostly of long period with eclipses of long duration. These data have not yet been evaluated to determine if times of minima can be defined. Among the 181 stars for which well-defined minima were obtained were 76 program stars and 105 additional stars not included in the official program. Some of the more productive observers during this reporting period were: Gerry Samolyk, 160 minima; Ed Halbach, 75 minima; Marvin Baldwin, 65 minima; David Williams, 61 minima.

The following is a complete listing of the 98 AAVSO program stars with number of minima observations indicated for each star. 22 of these stars were not observed during this reporting period.

Program Stars

RT And	2	EG Cep	7	RW Gem	2	AQ Peg	0
TW And	1	SS Cet	0	SZ Her	8	Z Per	0
WZ And	1	U CrB	0	TU Her	0	RT Per	3
XZ And	4	W Crv	0	CT Her	1	RV Per	2
AB And	7	RV Crv	0	AV Hya	1	ST Per	7
RY Aqr	1	V Crt	3	SW Lac	3	XZ Per	2
CX Aqr	6	Y Cyg	1	VX Lac	4	Per	0
XZ Aql	0	SW Cyg	1	CM Lac	3	Y Psc	2
OO Aql	4	WW Cyg	3	Y Leo	2	U Sge	2
V342 Aql	0	ZZ Cyg	4	T LMi	0	V505 Sgr	4
V343 Aql	1	BR Cyg	4	SS Lib	3	RW Tau	2
V346 Aql	3	CG Cyg	5	Lib	0	AC Tau	0
WW Aur	1	V346 Cyg	0	EW Lyr	2	AM Tau	0
ZZ Boo	0	V387 Cyg	8	FL Lyr	3	V Tri	3
Y Cam	3	V477 Cyg	3	RU Mon	1	X Tri	4
SV Cam	3	W Del	2	RW Mon	2	RS Tri	3

Program Stars (cont'd)

AL Cam	10	TT Del	1	BO Mon	0	RV Tri	5
R CMa	2	TY Del	4	U Oph	0	W UMa	1
UU CMa	0	YY Del	3	SX Oph	0	TX UMa	3
RW Cap	1	FZ Del	4	EQ Ori	3	VV UMa	4
RZ Cas	7	Z Dra	5	ER Ori	6	XZ UMa	2
TV Cas	5	TW Dra	1	FL Ori	0	RU UMi	2
AB Cas	8	UZ Dra	1	U Peg	1	AG Vir	0
U Cep	14	AI Dra	4	TY Peg	6	BU Vul	10
XX Cep	4	YY Eri	1				

The following is a listing of the 105 non-program stars for which minima were observed, again with the number of minima indicated for each star.

Non-Program Stars

UU And	1	IS Cas	1	V401 Cyg	1	ET Ori	1
AD And	2	IV Cas	13	V456 Cyg	1	FT Ori	1
BD And	1	LR Cas	2	V548 Cyg	1	GU Ori	2
BX And	1	MM Cas	2	V1034 Cyg	1	UX Peg	1
CZ Aqr	1	OR Cas	1	V1084 Cyg	1	VW Peg	2
KO Aql	1	OX Cas	1	RZ Dra	1	BB Peg	2
KP Aql	1	QQ Cas	1	BH Dra	1	BG Peg	1
SS Ari	2	V346 Cas	2	S Equ	1	BK Peg	2
SX Aur	1	V375 Cas	2	TZ Eri	1	BX Peg	2
AK Aur	1	SU Cep	1	U Gem	2	DI Peg	1
AP Aur	1	WW Cep	1	SX Gem	2	UZ Pup	1
CL Aur	1	ZZ Cep	2	WW Gem	1	AV Pup	1
EM Aur	2	AI Cep	1	UX Her	1	EL Sge	3
EP Aur	1	DL Cep	2	AD Her	1	AO Ser	1
HP Aur	1	DK Cep	2	LT Her	1	RZ Tau	1
TU Boo	3	DV Cep	2	WY Hya	1	WY Tau	1
TY Boo	1	EE Cep	1	DF Hya	1	HU Tau	1
UW Boo	1	EX Cep	1	DK Hya	1	UX UMa	2
VW Boo	1	TY Cet	1	AR Lac	1	ZZ UMa	1
AD Boo	1	RW Com	1	CO Lac	4	VV Vir	1
RT CMa	1	RZ Com	1	DG Lac	1	AZ Vir	1
RU CMa	1	RW CrB	1	UU Leo	1	AW Vul	1
SX CMa	1	AE Cyg	2	VZ Leo	1	AY Vul	1
TZ CMa	1	DK Cyg	1	RY Lyn	1	BS Vul	1
XZ CMi	3	KV Cyg	2	UZ Lyr	1	BT Vul	1
AM Cmi	1	V388 Cyg	1	EP Mon	1	CD Vul	2
DZ Cas	1						

It is gratifying to note not only that minima are being obtained for a large number of stars not included in our program, many of which are rarely observed, but also that a high percentage of our program stars continue to be observed each year, providing the data needed to detect any changes of period soon after their occurrence.

In support of our contributing observers the Eclipsing Binary Committee and AAVSO Headquarters provide the following services:

Distribution of eclipsing binary charts;
 Distribution of ephemerides for program stars;
 Distribution of a brief information sheet provided primarily as
 an introduction to the observation of eclipsing binaries;
 Answers to questions and provision of special materials on
 a discretionary basis.

For details about any of these services, please write to the Committee Chairman (address above).

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

Chairman's report not received at AAVSO Headquarters.

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

I am happy to report that this year we have published two issues of the AAVSO Photoelectric Photometry Newsletter. This was accomplished with the very valuable help of the Newsletter Editor, Russell Genet, and the assistance of the personnel and facilities at Headquarters. I feel that the Newsletter is much needed to attract the attention of people who should be observing who perhaps are not. Also, it is a means of communicating with those who are observing and those who at present are just interested.

Dr. John Percy has re-checked the comparison and check stars on our P.E.P. Program star charts. These were checked in reference to suitability of magnitude and spectral class. We appreciate his interest and his contribution to the program.

We received ten new requests for information from members or potential new members. My letter file relating to P.E.P. is about half an inch thick each year.

Observing activity has been good. Richard and Helen Lines of Arizona have observed 29 Dra, II Peg, HD 1813, HD 175742, HD 185151, V380 Cyg, 5 Cet, and TX Oph. Harold Stelzer of Illinois has been observing 39 Cet, 12 Cam, 75 Gem, HR 4665, 29 Dra, HR 7275, HD 185151, HK Lac, HR 8703, Lambda And, and II Peg. David Skillman, now of Arizona, observed V471 Tau, HD 86590, SAO 015338, and Sigma CrB. Tom McFaul observed HD 166181, HD 185151, HR 7275, and II Peg. Howard Landis observed HK Lac, HR 7275, 39 Cet, V711 Tau, 75 Gem, HR 4665, RR UMi, HR 8703, and Lambda And. From the AAVSO P.E.P. Program, I made observations of RZ Ari and Rho Per. I also had a request from George Kelley to check a suspected variable in the Pleiades. It has a provisional identification of 034123?, and my four nights over eight days showed possible variation of 0.015 magnitude in yellow light. Richard Lines planned a program for us to observe an eclipse of V380 Cyg this month, but clouds at both locations prevented any observations.

We welcome your inquiries concerning photoelectric photometry observing. I will be most happy to assist interested persons in becoming active in this fascinating endeavor.

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

Ten observers submitted nearly 1500 observations for 94 maxima of 20 RR Lyrae stars during this reporting period. As usual, XZ Cygni was by far the most popular object in our ephemeris. 29 maxima of this star were obtained.

Stars observed are listed here with the number of maxima observed for each star indicated. Please note that this format differs from that given in a similar 1976 listing given in JAAVSO 4, page 110. The earlier listing gave the number of observations rather than

number of maxima.

SW And	9	BH Aur	5	RR Cet	2	SZ Hya	2
XX And	7	ST Boo	1	XZ Cyg	29	VX Hya	2
AC And	1	TW Boo	1	DM Cyg	6	RR Leo	3
AT And	2	TT Cnc	3	RR Gem	4	SZ Lyn	3
TZ Aur	5	VZ Cnc	1	TW Her	2	AV Peg	6

Again, we would like to emphasize the importance of obtaining data on each RR Lyrae star on an annual basis. When a change of period occurs, establishment of the O-C curve becomes a vastly more difficult problem if gaps exist in the data. The availability of continuous year-to-year data greatly enhances the value of any O-C analysis.

SOLAR DIVISION, Chairman: Robert B. Ammons
Box 9229
Missoula, MT 59807

1. Development of the Solar Observer Manual is continuing. We are also receiving materials prepared by several foreign groups, and are in close touch with groups located in England and Germany.
2. The Solar Bulletin has been prepared and mailed for each month through July, while the August issue is in progress.
3. Subscriptions to the Solar Bulletin have increased in number, and problems over addresses have been practically eliminated thanks to considerable assistance from AAVSO Headquarters.
4. Several members of the Solar Division attended a symposium in Boulder, Colorado, in August. The symposium dealt extensively with solar-terrestrial relations, with special reference to weather. Three of us presented a paper on weather cycling during the last 50 million years as evidenced by ring patterns in fossil trees. We were very pleased at the numerous, strong, positive comments by professional astronomers about the present AAVSO Solar Program.
5. Observers are being trained and added to the sunspot observer group. We are pleased to note acquisition of observers in South Africa, East Germany, and the British Isles, among others. Monthly contributors are distributed on six continents.
6. Radio (SES) observers have been added in South Africa and on Guam. Records should be forthcoming in the next few months.
7. Discussions were carried on with representatives of the Mitre Corporation regarding possible monitoring of use of VLF frequencies on a contract basis. Any further contact with them is to be with Janet Mattei.
8. The Chairman has attempted to find or develop source(s) for reasonably priced, high-quality Herschel wedges suitable for refractors using "Japanese" 1 1/4- and 2-inch oculars. Optica b/c and Clave (which actually use a pentaprism rather than a Herschel wedge) are the only sources located so far. However, neither can supply 1 1/4- or 2-inch equipment. The Chairman would welcome leads from anyone with information in this regard.
9. Assistance of the following persons is especially acknowledged: Janet Mattei (for nearly everything); Peter Taylor (handling contacts with sunspot observers, processing sunspot observational reports, and preparation of NOAA and Solar Bulletin

sunspot calculations); Doug Ammons (sunspot observer encouragement and training, reference sunspot observing, preparation of the sunspot narrative for the Solar Bulletin); David Rosebrugh and Tom Cragg (personal encouragement and Solar Observing Manual preparation); Stephanie Ammons (analysis of all SES data, preparation of NOAA and Solar Bulletin reports); and most importantly, all of the excellent sunspot and radio observers who patiently record and contribute their data. Cap Hossfield has continued to give wise advice, develop state-of-the-art radio equipment, and train SES radio observers.

10. The Chairman encourages the Council and membership to organize to support various endangered space programs.

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

Chairman's report not received at AAVSO Headquarters.

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ANNOUNCEMENT

SECOND PRINTING OF AAVSO VARIABLE STAR ATLAS

Sales of the AAVSO Variable Star Atlas have been so successful that a second printing is planned. Sky Publishing and Cambridge Press will together reprint the Atlas, once current stocks are depleted. Publication of the second printing is anticipated in early 1984. The price of the Atlas will be somewhat higher than the current \$49.95, perhaps on the order of \$60.00.

The AAVSO is soliciting revisions and/or suggestions from users of the Atlas, for incorporation into the revised edition. Please send any comments, suggestions, or corrections to AAVSO Headquarters, 187 Concord Avenue, Cambridge, Massachusetts, 02138, U.S.A., as soon as possible.

Copies of the current edition of the AAVSO Variable Star Atlas may be ordered from AAVSO Headquarters or from Sky Publishing Corporation for \$49.95 (Massachusetts residents please add 5% sales tax; orders outside the U.S.A. please add \$5.00 for postage).

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