

## COMMITTEE REPORTS

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

Reduction and plotting is complete for three program stars for three 1000-day intervals. Work is continuing on the reduction of data for other program stars.

**CHART DISTRIBUTION**, AAVSO Headquarters

The following is a report of AAVSO charts distributed from Headquarters from October 1, 1986, to September 30, 1987. During this period 393 chart orders were filled.

Standard Charts (8.5 x 11-inch)	11541
Photoelectric Photometry Charts	1635
Finder Charts	536
<b>AAVSO Variable Star Atlas</b>	<b>4</b>

Ed Halbach has prepared additional reversed charts for telescopes with an odd number of reflections. We appreciate the valuable work which Ed has put into this project.

The second edition of the **AAVSO Variable Star Atlas** should be available around the end of 1988. **Sky & Telescope** magazine will have an advertisement when it is completed.

The increase in chart orders is due to significant revisions in a many of the charts.

**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 between May 15, 1987, and October 15, 1987:

<u>Destination</u>	<u>No. Different Addresses</u>	<u>Charts Mailed</u>
USA	5	107
England	3	62
Canada	1	44
Netherlands	<u>1</u>	<u>36</u>
TOTALS	10	249

As before, all of these mailings have been made in response to requests from observers.

A total of 14 copies of the Ninth Edition of the **AAVSO Preliminary Chart Catalog** (dated July 15, 1986) have been mailed, per observer request.

The activities of the Committee continue essentially as reported in my last report, for the period ending May 15, 1987.

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

More than 11,000 observations of eclipsing binary stars were reported during the past year by 16 observers. These data will be sufficient to determine approximately 590 times of minima of a large variety of eclipsing binaries. Both Howard Louth and David Williams reported photoelectric photometric data, with Howard Louth submitting a total of 1389 photoelectric observations.

**NOVA SEARCH**, Chairman: Rev. Kenneth C. Beckmann  
P.O. Box 240  
Lewiston, MI 49756

For the year beginning September 1, 1986, and ending August 31, 1987, observers have been active in the search for and discovery of novae and supernovae.

Three novae and one supernova were discovered toward the end of 1986. On October 7, our member, Rev. Robert Evans, discovered a supernova in NGC 1559. On November 22, another member, Robert McNaught, discovered a bright nova in Centaurus. On November 22, M. Honda discovered a nova in Lacerta. During the month of December yet another nova was discovered, in Andromeda, by M. Suzuki.

1987 has also been a very active year for observers worldwide. On January 25 and 27, M. Honda and M. Sugano, respectively, discovered Nova Herculis 1987. Less than a month later, on February 24, Ian Shelton discovered a very bright supernova in the Large Magellanic Cloud. Also on February 24, Robert Evans discovered a supernova in NGC 5850. Later, on May 24, Robert McNaught discovered another nova in Sagittarius.

On behalf of the AAVSO Nova Committee, I extend our congratulations to all who have discovered a nova or supernova. And a special congratulations to our member discoverers.

Our committee continues to re-organize although the progress has been slow. The **Newstar** newsletter continues to be generated on an occasional basis. We continue to receive inquiries from interested individuals and organizations. This year we have received observations from sixteen active observers. A summary of observer activity is presented in Table I. We are hopeful that you will continue to support us with your observations and suggestions. I wish everyone a productive and successful 1987 season.

**TABLE I**

**Novae and Supernovae Observations**

Nova Search:

<u>Observer</u>	<u>Location</u>	<u>Observations</u>
Robert Browning	New Jersey	111
Barbara Lux	Pennsylvania	23
Frank Schmidt	New York	10
Manfred Durkfalden	F.R. Germany	264
Warren Morrison	Canada	1169
Ken Beckmann	Michigan	559
	<b>TOTAL</b>	<b>2136</b>

## Supernova Search:

<u>Observer</u>	<u>Location</u>	<u>Observations</u>
Robert Evans	Australia	15600
David Ribeca	Illinois	21
Richard Marcisz	Illinois	36
Ronnie Hawes	North Carolina	4
David Weier	Wisconsin	3
Dana Patchick	California	186
Daniel Troiani	Illinois	9
J. Albert		75
Steve Lucas	Illinois	98
Gus Johnson	Maryland	166
	TOTAL	16198

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

Observations by observers in the Photoelectric Photometry Program reached another new high in the 1986-1987 fiscal year. Production of observations rose from 292 in fiscal 1985-1986 to 663 in 1986-1987, an increase of 227%.

We are counting observations that were contributed as raw data and observations of stars included in the AAVSO Photoelectric Program. Observers submitting raw data and their totals follow.

P. Beckmann, MN	40	R. Milton, CA	176
G. Fortier, Canada	27	H. Powell, TN	10
P. Kneipp, LA	13	D. Pray, RI	118
G. Kohl, AZ	111	R. Reisenweber, PA	20
H. Landis, GA	137	J. Soder, OH	11

Other observers submitted 336 reduced photoelectric observations of stars in the AAVSO Visual Observing Program. These observers and their photoelectric totals are:

D. Böhme, German		R. Monella, Italy	31
Dem. Rep.	133	L. Pazzi, A. Africa	90
S. Elwin, Australia	34	R. Schmidt, MN	9
A. Koster, AZ	7	T. Szybowicz, MI	1
K. Krisciunas, HI	31		

Howard Louth contributes partially-reduced Eclipsing Binary observations to Marvin Baldwin, Chairman of the Eclipsing Binary Committee. Howard contributed 1389 observations this year.

Data entry is done by Landis and is about 20 observations behind at present but will be taken care of. Of the 663 observations being reported for 1987, 217, or 33%, of them were sent to me in computer-readable form by Milton, Powell, Reisenweber, and Soder. I spend at least one hour keying in and checking 10 observations; therefore these observers therefore did 22 hours of work for us. We appreciate the help very much and encourage other observers to put their computers to work for us.

The total number of observations of AAVSO Photoelectric Photometry Observing Program stars reduced by the Chairman now stands at 1559, for the fiscal years 1983 through 1987. The mean standard error of all data in the archives is 0.008 magnitude.

The **AAVSO Photoelectric Photometry Newsletter** should be read by anyone interested in making photoelectric observations. It is

available from AAVSO Headquarters on request. Dr. John R. Percy is its very able editor and we thank him much for his continuing contribution. He would like to hear from you telling him of things you are doing in photometry that would be of interest to your colleagues.

I am actively helping two prospective observers, one in Spain and one in the USA, with the electronic and optical aspects of building and using photoelectric photometers. During fiscal 1987, 83 letters were written to 38 individuals.

If you would like to contribute photoelectric data to the AAVSO please get in touch with me.

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

The past twelve months saw six observers reporting approximately 4100 observations, which will eventually be reduced to nearly 300 times of maxima. Data continued to be obtained for nearly all of the 41 program stars.

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

The Solar Division continues to thrive in its role as an international network of contributors and observers serving the university and scientific communities, and other interested parties throughout the world. Currently we receive regular sunspot contributions from some seventy-seven sources located on six continents. The names and countries of sunspot observers and contributors who have submitted regular reports over the past fiscal year appear in Table I, and contributors to our program of electronic detection of sudden ionospheric disturbances appear in Table II.

Each month we supply the National Oceanic and Atmospheric Administration with our reduced data series, American Sunspot Numbers (both provisional and final values), and Sudden Ionospheric Disturbances (SID), recorded by our flare patrol. These analyses are reprinted in a number of domestic and foreign publications.

Effective this past September, we have made the provisional American Sunspot Numbers available to those parties with access to the CompuServe Information System (CIS). One can receive these values through the Astroforum, by reading or downloading the ASP.TXT file placed in the DL4 (planetary astronomy) section of the forum's Data Library by the twelfth of each month following the observed month. Final values and additional information supersede the preliminary report after the twenty-fifth. Utilization of the first option allows interested parties to receive our provisional data at the same time as scientists at NOAA, eliminating publication delays. Apparently the CompuServe management has been sufficiently impressed with the quality of the work produced through the American Sunspot Program to offer us the opportunity of an incorporated "Sunspot Feature." The feature will include these files along with additional files documenting the reduced analyses of the program since its inception in 1944, and others. In light of the 300,000-plus world-wide CIS subscribers, we are eager to participate in this endeavor. Dick DeLoach, NASA scientist at the Langley facility and a CompuServe system-operator, has offered invaluable support and assistance in this regard.

We continue to prepare and mail our monthly newsletter, the **AAVSO Solar Bulletin**, to some 250 universities, scientific organizations, and

individuals in the United States and thirty-seven additional countries around the world. The "gaps" in completed and distributed issues of the *Bulletin* that existed previously have been eliminated. The mailing list of all contributors and *Bulletin* subscribers, exchangers, and recipients has been fully computerized.

Our correspondence load is up-to-date; we currently answer more than twenty individual queries each month.

We have prepared, and currently distribute, a fairly comprehensive "sunspot-observers-package" of printed material to novice observers and others interested in contributing to the sunspot program.

Our analysis of the recent sunspot minimum (the end of Cycle 21 and onset of Cycle 22) has been completed using smoothed mean American Relative Sunspot Numbers. The time of minimum determined, September 1986, agrees with professional computations utilizing sunspot numbers calculated by the Solar Index Data Center, Royal Observatory of Belgium.

We are extremely pleased to report that our longtime, expert observer, Herbert Luft, was recently awarded the E. E. Barnard Observer Award by the Western Amateur Astronomers at their joint meeting with the Astronomical Society of the Pacific. The award, for over sixty years of solar observations, is a tremendous achievement and a tribute to Mr. Luft, a highly valued contributor to our program.

Bruce Wingate continues to provide an extremely competent analysis of the data recorded by our electronic flare detection group. His fine contribution is greatly appreciated by all of us.

Now that sunspot and related flare activity is rapidly increasing, we anticipate an increasing interest in both sunspot and flare-detection programs. We encourage serious observers to investigate our programs with an eye towards full-scale participation in this rewarding and scientifically-productive work. Please contact us directly for more information on this opportunity.

We wish to extend our appreciation to Dr. Mattei and the Headquarters staff for their co-operation and interest in the Division, to the National Oceanic and Atmospheric Administration for their continued support, and to our many fine contributors for their untiring efforts and excellent work.

#### TABLE I

##### Contributors to the American Sunspot Program, 1986-87

Abbot, A., Canada	Luft, H., USA
Adams, R., USA	Mackenzie, R. (FRAS), England
Armes, F., USA	Malde, K. (NAS), Norway
Barker, J., South Africa	Mansfield, J., South Africa
Barksdale, W., USA	Martin, R., USA
Bate, D., Jr., Canada	Miller, J., USA
Begbie, M., Jr., Zimbabwe	Mochizuki, E., Japan
Beltran, G., Bolivia	Moeller, M., F.R. Germany
Betancourt, O., Mexico	Moore, W., USA
Blain, D., USA	National Obs. of Athens, Greece
Brauning, H., F.R. Germany	Oriental Astron. Assoc., Japan
Brown, P., Canada	Otero, J. (SOVAF), Venezuela
Browning, R., USA	Overbeek, D., South Africa
Brutsche, E., USA	Pereira, A., Portugal
Campos, J., South Africa	Rosebrugh, D., USA
Compton, T., USA	Rousom, J., Canada
Cragg, T., Australia	Sanchez, A., Mexico
Dobrovolski Solar Obs., New Zealand	Schiller, D., South Africa

Dragesco, J., Rwanda	Scholl, G., USA
Durham, D., Canada	Simpson, C., USA
Elias, D., Greece	Stelzer, H., USA
Eugenides Foundation, Greece	Stemmler, G., German D.R.
Evans, C., USA	Stephenson, E., USA
Ferreira, V., Brazil	Suzuki, M., Japan
Fike, T., USA	Szymanski, W. (TOS), Poland
Friedrichs, J., F.R. Germany	Taipei Observatory, Rep. of China
Fujimori, K., Japan	Takuma, H., Japan
Garcia, G., USA	Taylor, M.J., USA
Giovanoni, R., USA	Teske, D., USA
Hill, R., USA	Tlamicha, A., Czechoslovakia
Istanbul University Obs., Turkey	Uberti, M., Italy
Jahn, J., F.R. Germany	Van Nieuwkerk, F., South Africa
Jeffrey, T., USA	Vasquez, M., Chile
Klekociuk, A., Australia	Williams, J., Australia
Knight, J. & S., South Africa	Wilson, W., USA
Koeckelenbergh, A. (SIDC), Belgium	Winkler, W., USA
Koster, A., USA	Winskill, C., South Africa
Koyama, H., Japan	Wunder, E., F.R. Germany
Lohvinenko, T., Canada	

#### TABLE II

Contributors to the Sudden Ionospheric Disturbance Program, 1986-87

Conroy, P., USA	Scharlach, W., USA
Hansen, S., USA	Slezak, J., USA
Martin, R., USA	Warshaw, D., USA
Moore, W., USA	Wingate, B., USA
Overbeek, D., South Africa	Winkler, J., USA

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

There has been one change since last year's report. We sold to the Fairfield County Astronomical Society (Stamford, CT) a plate-glass mirror of about 11.75-inch diameter. This mirror came from the estate of Mr. D. F. Brocchi, who drew many of the AAVSO variable star charts. This leaves on hand a mirror of 10.3-inch diameter, also plate glass, not aluminized, and of poor figure. Neither of these mirrors have been mentioned in recent reports since absolutely no inquiries had been received about them following their last mention in the report.

We still have on hand the 6-inch C. A. Post refractor, complete with equatorial mounting, eyepieces, and finder, and a 5-inch refractor (tube & optics only) built by John Mellish. Both have excellent lenses. A few inquiries about these two telescopes have been received, but no specific offers.

At this 1987 Annual Meeting the telescope bequeathed to the AAVSO by Carolyn Hurless was delivered to Headquarters. It is a Newtonian reflector of 8-inch aperture, about f/4, on an alt-azimuth tripod mount. There are several eyepieces from 32mm down to about 4mm, and a finder is included. This telescope was used by Mrs. Hurless to make many of the 79,000 observations she contributed, and therefore it is of considerable historical and sentimental value to the AAVSO. We hope that a good home can be found for it with a member who will use it seriously for variable star work.

Inquiries on any of the telescopes may be addressed to the Committee Chairman.