Committee Reports

Charge-Coupled Device (CCD)

Chair: Gary Walker
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The CCD Program is having another active and successful year in 2003.

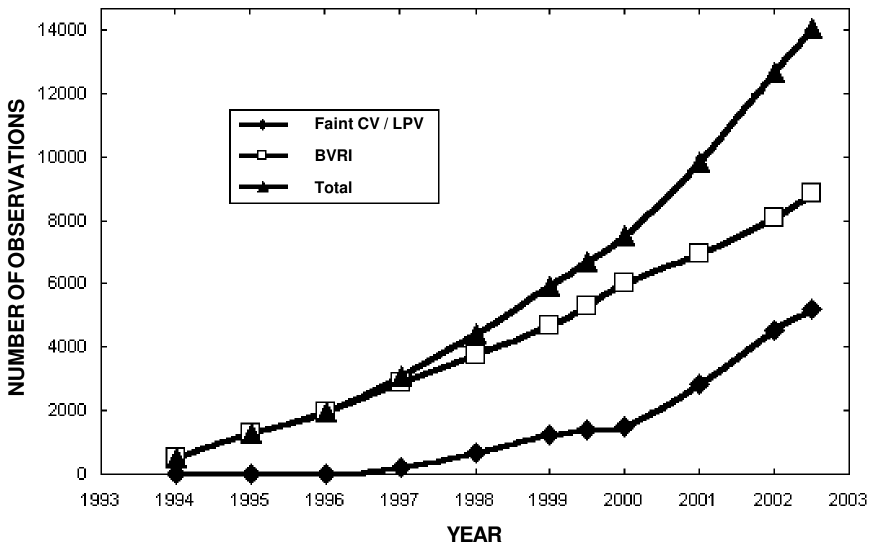
The World Wide Web continues to be a useful tool, and along with the online data submission and the online light curve generator, the tasks of collecting data, and plotting light curves continue to be done on line and updated every 15 minutes. Observers continue to perform variable star measurements with their CCD cameras. In addition to our program stars, observers continue performing significant photometry on many of the AAVSO program stars that were not "CCD Program Stars".

Personally, I can say that logging in my observations, over the Web, and then seeing how they compare to each star's history, and the other observers from the night before, is still the highlight of my day. Many thanks to the Headquarters staff for this Web presence. While the *BVRI* and CV/LPV Programs will continue, I encourage each of you to Observe, Submit Online, View Online and Data-mine whatever stars are of interest to you.

In the interval of October 2002 through February 2003, 785 observations by 12 observers of the stars in the *BVRI* program were logged and put on the web. As of the end of February, the *BVRI* CCD measurements on 8 LPVs now approach 8,900 measurements, going back 10 years. The faint CV/LPV project which was started at the Spring 1997 meeting, continues to log V magnitudes. In the same interval, 645 observations by 19 observers were logged. These observations now exceed 5,200. Combining both the *BVRI* and CV/LPV Programs gives a Grand Total CCD observations of just over 14,000 observations (see figure).

An additional 22,664 CCD observations on other stars have been submitted in the same interval, joining the existing 165,663 CCD observations in the AAVSO Database. This brings the grand-grand total to 189,727 total CCD observations. I would like to recognize our *BVRI* observers: Ron Zissell, 344 observations; Tom Michalik, 180 observations; Gary Walker, 105 observations; Don Pray, 74 observations; Frank Scheder, 28 observations; Mark Munkacsy, 24 observations; Robert James, Michael Koppelman, and Maciej Reszelski, each 6 observations; Doug West and Flavio Zattera, each 5 observations; and Ivo Peretto, 3 observations.

I would also like to recognize our Faint CV/LPV observers: Gary Billings, 174 observations; Keith Graham, 107 observations; Robert James, 106 observations; Ron Zissell, 88 observations; William Goff, 34 observations; Mark Munkacsy and Steve Robinson, each 25 observations; Gary Walker, 21 observations; Flavio Zattera, 15 observations; Roger Diethelm, 13 observations; Maurizio Martinengo, 11 observations; Frank Scheder, 8 observations; Dennis Hohman and Mike Nicholas, each 5 observations; Danny Scharnhorst, 3 observations; Ron Royer, 2 observations; and Michael Koppelman, James Case, and Radu Corlan each 1 observation.



CCD PROGRAM OBSERVATIONS

A total of 24 observers submitted CCD Program Observations. This is expected to increase now that the better weather is here.

In addition, Aaron Price performed yeoman's duty by publishing electronic issues of *CCD Views*.

I would like to thank Elizabeth Waagen for compiling and summarizing the observer totals.

The main goal for the next 6 months is to organize additional campaigns like the SU Uma, WW Cet, and Z And on-line and electronic campaign. We expect that this fast turnaround will greatly expand participation and interest. In addition, we will continue to mentor future CCD observers and be a resource to observers embarking on this fascinating segment of AAVSO.

Eclipsing Binary

Chair: Marvin E. Baldwin
8655 N. County Road 775 E., Butlerville, IN 47223

The summation of activity by eclipsing binary observers includes data reported directly to the committee chair from October through May. 20 observers obtained approximately 11,600 observations of 146 eclipsing binary stars. About 8,700 of these were obtained with CCD equipment, while the remaining 2,900 were by visual observers.

Gerry Samolyk led all observers with some 6,300 CCD observations and 300 visual observations. Mike Nichols obtained about 1,300 CCD observations, while

Chris Stephan and Scott Jameson gathered 900 visual and 600 CCD observations, respectively. Honorable mention goes to Glenn Chaple, Lew Cook, Sergio Foglia, and your committee chair, each of whom added roughly 300 observations to the database. Other observers have been actively obtaining CCD minima and we anticipate they will submit their observations for inclusion in the annual report.

A draft of *Observed Times of Minima of Eclipsing Binaries Number 8*, containing some 800 times of minima, is in the final stages of editing and will be published soon. We note a continuing trend in the number of times of minima being obtained with CCD cameras. While 21% of minima published in *Times of Minima No. 7* were CCD data, 33% of those contained in *Times of Minima No. 8* will be CCD minima.

New Chart

Chair: Charles E. Scovil
Stamford Observatory, 39 Scofieldtown Road, Stamford, CT 06903

Since the last report no charts have been mailed. A few have been sent via email.

Chart production continues, with concentration on making new charts for special programs. Marc Biesmans continues to make reversed charts and also upgrades and reverses Standard charts.

Nova Search

Chair: Rev. Kenneth C. Beckmann
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The AAVSO Nova Search Committee continues to receive monthly reports from its participants as well as inquiries about the AAVSO Nova Search program. Inquiries may be made online to the AAVSO website or by contacting the AAVSO chairman.

We will provide a list of all those who discovered novae in the last year as well as a report on the annual number of observations made by each of our observers at the fall 2003 annual meeting.

The committee is in the process of updating its handbook with additional resources which we believe will be helpful to our observers. These will include a list of novae discovered during the past one hundred years. We are also in the process of adding to the list of common areas, mentioned in the handbook. Thanks to our observers and discoveries of recent novae made during the past two decades, we are able to add four new common areas: two in the northern hemisphere and two in the southern. This will be the first time we are able to add areas south of –40 degrees to the list of common areas.

While there continues to be a host of new resources as well as hardware available to amateurs in both visual and photographic nova search, we still emphasize the value and importance of visual searches. Some of our observers are using larger aperture binoculars and rich field telescopes to peer deeper into the heavens, particularly more toward the galactic center.

We commend our observers and their dedicated work, particularly those who have been involved with the AAVSO Nova Search program and committee more than twenty years.

Observers are welcome to send their observations either by snail mail or email to the chairman. We thank all for their contributions.

Photoelectric Photometry

Chair: J. Phillip Manker
10 High Country Dr., Cedar Crest, NM 87008

During the first six months of the fiscal year 2002–2003, 13 observers contributed a total of 1,142 observations to the AAVSO Photoelectric Photometry database.

Photoelectric Photometry Observations, Octiber 1, 2002–March 31, 2003.

Observer	*Location*	*No. Obs.*	*Observer*	*Location*	*No. Obs.*
Clark, W.	MO	65	Jones, W.	S. Africa	121
Cox, L.	Canada	35	Kneipp, P.	LA	17
Crumrine, B.	NY	2	Luedeke, K.	NM	320
Dempsey, F.	Canada	31	Stoikidis, N.	Greece	90
Fox, J.	MN	52	Thompson, R.	Canada	360
Grim, B.	UT	10	Wiggins, P.	UT	30
Hodgson, W.	Australia	9			

Volume 22, Number 1, of the *AAVSO Photoelectric Photometry Newsletter* was published in January. Our sincere thanks go to *Newsletter* editor Dr. John Percy for his ongoing, excellent work.

Communication with potential and new observers continues.

RR Lyrae

Chair: Marvin E. Baldwin
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Since our last annual report, 12 observers have submitted some 3,600 observations of 32 RR Lyr stars. About 2,800 of these observations were by CCD, while the remaining 800 were by visual means. Several new observers are participating. We attribute this increased participation largely to interest inspired by the publication of the *RR Lyr Bulletin* edited by Ray Berg; Number 5 of the series was issued in December.

A breakout of the observations reveals that Neil Butterworth and Gerry Samolyk share the honors with about 1,200 CCD observation each. Glenn Chaple added more than 200 visual observations, and Jim Waller more than 200 CCD observations. Ray Berg, Rik Hill, Dave Hurdis, Rick Huziak, and Neil Simmons each added more than 100 observations to the cause.

The first AAVSO monograph on RR Lyr stars has been published. It lists 613 maxima timings of XZ Cygni extracted from 38 years of AAVSO data. The monograph tracks the period changes and behavior of the Blazhko effect in this star across the entire 38 years without any significant gaps in the data.

One year ago we reported difficulties with the ephemeris for KZ Puppis, a star listed in the *General Catalogue of Variable Stars* as a probable RR Lyr type with no predicted elements given. KZ Pup being at 17 degrees south declination, we get only brief observing windows from our mid-northern latitudes. Visual data from the first 3 years of observations matched the period near 0.4 day, but additional observations failed to confirm this period. By the time 7 years of visual data were in the archives, a period of near 0.67 day seemed to fit the bill, allowing for changes in the light curve due to a possible Blazhko effect. Last year that period became suspect. Neil Butterworth, observing from Australia, came to the rescue. When Gerry Samolyk, observing from Milwaukee, rode KZ Pup into the treetops, Neil picked it up in Australia and extended the continuous observation long enough to prove the star took more than 0.67 day to complete one cycle. Subsequent observations revealed a period near 2.0188 days. Apparently KZ Pup is a Cepheid of very short period.

Solar

Chair: Carl E. Feehrer
9 Gleason Road, Bedford, MA 01730

Casper Hossfield (1918–2002)

Shortly after the AAVSO's Fall meeting in Somerville, Massachusetts, I received word that Casper Hossfield, a member of the organization since the early 1960s, had passed away. Cap was chairman of the Solar Division from 1963 to 1979 and, until his death, continued to serve the Division actively in a variety of roles. During the three years that I have chaired the group, Cap was almost indefatigable in his efforts to recruit and train new solar observers and to educate people interested in building radio receivers that are capable of detecting solar flares and gamma-ray bursts (GRBs). His death represents a great loss to the organization.

Reorganization of the *Solar Bulletin*

Following Cap's death, the *Supplement* to the monthly *Solar Bulletin* that he had authored each month and that had come to contain mixed discussions of GRB detection, solar flare activity, and SID equipment was reconfigured. In the new arrangement, the coordination of discussions on design and operation of equipment and the publication of a new bulletin focused on GRB detection and reporting has been taken over by the AAVSO's Doug Welch, while reports related to solar flare activity continue to be analyzed and published in the *Solar Bulletin* by Mike Hill. We feel that this arrangement more effectively maintains the focus of the original Bulletin while providing better opportunities for growth in the new area of interest to SID observers.

Participation in Sun-Earth Day at the Boston Museum of Science

At the invitation of AAVSO member Larry Krozel, Mike Hill and I had the privilege of participating in the Boston Museum of Science's celebration of Sun-Earth Day on March 18. On that occasion, Mike installed in the Museum's observatory a SID receiver and antenna that he had built. This contribution enhances the Museum's ability to demonstrate solar phenomena to the public. For example, if a flare were detected with the aid of the Museum's white light and/or hydrogen-alpha telescope configurations, the receiver could be turned on and the effect of the flare on signal propagation in the ionosphere also observed.

Observer and Report Statistics

Although solar activity has begun to diminish, the numbers of observers and observations remains high. There are 103 sunspot and 20 SID observers on record, with 2 new observers having been added to each group since the last period. During the period covered by this report, 5,456 sunspot observations and 87 SID observations were submitted.

Reduction in Mailing Costs

Downloads of the web version of the *Solar Bulletin* have remained high since the initial publication in 2001. The response has been good enough so that it made sense to inquire how many subscribers to the publication would be willing to acquire it by downloading rather than by having it mailed to them each month. About 30% of subscribers have responded favorably to date and will now receive emailed reminders each month when the *Bulletin* has been posted to the website. The remainder will continue to receive the regular mailing. This should result in some reduction in the cost of Committee operations.

Acknowledgements

As in past reporting periods, the work completed in the last six months represents the outcome of a team effort. I want to extend my thanks to our loyal

observers, to Mike Hill, SID Analyst and Chairperson of the Solar Flare Group, to Arthur Ritchie, who helps in the preparation of the sunspot data, and to AAVSO staff who are responsible for getting the Bulletin mailed each month and posted to the website.

Supernova Search

Chair: Rev. Robert O. Evans
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Some statistics prepared by the Central Bureau for Astronomical Telegrams for the IAU General Assembly in Sydney provide an interesting side light on efforts to find supernovae over the last year or so.

During 2002, 292 new supernovae were reported in the *IAU Circular*, which was 50 more than the previous year. Also, 47 other supernovae were announced during 2002 which had occurred in previous years. Of all these, 158 supernovae were fainter than magnitude 20 at discovery, which was double the number for the previous year.

These figures would seem to suggest that searching for the brighter supernovae was less successful in 2002 than in the previous year, or less of it was done.

Spectroscopic observations were reported upon 90 percent of the supernovae brighter that magnitude 20, though this dropped to 40 percent for stars fainter than magnitude 20.

For supernovae which were fainter than magnitude 23, 86 percent had no spectroscopic information available about them.

So, the Bureau's report said that there still remains a question about the wisdom of continuing to include in the official list these very faint objects, fainter than magnitude 23, for which there is no spectroscopic evidence that they are, in fact, supernovae.

The brightest supernovae found in 2002 were the Type Ic supernova found in M74, and the Type Ia supernova found in NGC 1309, which were magnitude 12 and 13, respectively.

So far, in 2003, an unprecedented number of supernovae have been found, totalling almost as many in the first six months as in the entire year of 2001.

Only two of these were found visually, so far as I could find out. These were the two I found myself, both of Type II plateau, SN 2003B in NGC 1097, and SN 2003gd in M74.

I enjoyed greatly attending the IAU Colloquium 192 on Supernovae in Valencia, meeting many friends for years past, and making other friends, including some whose names I had known for twenty years but had never actually met.

About 150 professional astronomers attended from many countries, as well as a small number of Spanish amateurs.

Commemorating "Three Generations of Supernova Hunters" at the IAU Colloguium 192 on Supernovae held in Valencia. From left to right, Christian Pollas, Jose Maza, Robert Evans, Dmitri Tsvetkov, Brian Schmidt, Alex Filippenko, and Weidong Li. Photo by Mario Hamuy of the Carnegie Observatories.

Telescope

Chair: Charles E. Scovil
Stamford Observatory, 39 Scofieldtown Road, Stamford, CT 06903

We have no telescopes for sale.