Committee Reports

Charge-Coupled Device (CCD)

Chair: Gary Walker
179 South Main Street, Sherborn, MA 01770

The CCD Program started another active and successful year in the fall of 2004. Observers continued to perform variable star measurements with their CCD cameras. In addition to our program stars, observers continue to participate in various campaigns and perform significant photometry on many of the AAVSO stars that are not "CCD Program Stars."

This year continued the Standard Star observing program for CCD Observers. Observations were made on all twelve fields and many observers have posted their results. This is an excellent way to check how you are doing, since the fields have well observed constant stars.

Many observations of the stars in the *BVRI* program were logged and put on the web. The *BVRI* CCD measurements on eight LPVs now go back over twelve years. The faint CV and LPV project, which was started at the Spring 1997 meeting, continues to log *V* magnitudes. The activity on these programs increases each year. It is clear that CCD observations are becoming a more popular method of making observations.

Thirteen campaigns, on IL Aqr/GJ 876, BL Lac, VV Pup, Markarian 421, HD 74156, BZ UMa, U Gem, HD 80606, V2361 Cyg (N Cyg 05), and GMRT Radio Exoplanet targets, have been carried out so far this year.

In support of these campaigns, Aaron Price performed yeoman's duty by publishing electronic *CCD Views* Nos. 325–332 and *AAVSO Alert Notice 312*, and Elizabeth Waagen published *AAVSO Alert Notice 311*.

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, with the online data files updated every fifteen minutes. Many thanks to the Headquarters staff for this Web presence.

Personally, I can say that the highlight of my day—batch uploading hundreds of time series observations over the web, in a matter of seconds, without typing in any data, and then seeing how they compare to each star's history, and other observers from the night before—has been replaced. My new highlight occurred while attending the AAVSO and NASA's Third High-Energy Astrophysics Workshop for Amateur Astronomers in Las Cruces, New Mexico, when I saw my data from the BL Lac and VV Pup Campaigns being presented by Gordon Spear and Steve Howell.

While the *BVRI* and CV/LPV Programs continue, I also encourage each of you

to observe, submit online, view online and data-mine whatever stars are of interest to you.

The main goal for the next six months is to continue the *BVRI*, Faint CV and LPV, and Standard Stars programs, to mentor future CCD observers, and to support future campaigns, thereby being a resource to observers embarking on this fascinating segment of AAVSO. We are also starting a Polar Program, which will include approximately a dozen stars. An announcement will be made on the web and in the photometry discussion groups in the near future.

Eclipsing Binary

Chair: Marvin E. Baldwin
8665 N. County Road 775 E, Butlerville, IN 47223

During this reporting period twenty-three observers obtained more than 18,000 observations of 278 eclipsing binary stars. Nearly 90% of these observations were acquired with CCD cameras. Glenn Chaple, Gerry Samolyk, David Williams, and Rik Hill gathered the visual observations. Visual observers are trending toward the application of their skills to the brighter stars where CCD cameras are usually unable to include both the variable and a suitable comparison star in the same field.

Four observers each collected more than one thousand CCD observations. Gerry Samolyk reported nearly 6,000, Shawn Dvorak more than 5,000, and Steve Brady and Steve Cook each report nearly 1,500. Josef Coloma and Jerry Bialozynski were only a little short of 1,000 observations each.

Observed Minima Timings of Eclipsing Binaries, Number 9 was published last year. A draft of the tenth monograph has been assembled by Gerry Samolyk. Editing should be completed within the next several weeks if it is to be prepared for publication in time for the Fall meeting in Cambridge.

All published AAVSO eclipsing binary minima are being prepared by Gerry Samolyk and Kate Davis for listing on the AAVSO website. When this task is completed all the minima, listed by star, may be viewed and downloaded there.

New Chart

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

No sales of charts have been made, since all charts are available on the website or CD.

The committee continues to revise charts into the new computer format, and to generate new charts that way.

Nova Search

Chair: Rev. Kenneth C. Beckmann
330 North Washington, Kahoka, MO 63445

A list of observers and total observations received for the period September 1, 2004 through August 31, 2005, will be forthcoming in the Annual 2005 report.

While a number of our observers continue to use binoculars and small telescopes to search visually for novae, a few of our observers use digital cameras and computer software to obtain real-time observations of search areas. One observer, John Pickett, lives in the southwest United States and has been using a digital camera and computer software to obtain photovisual, real-time observations to the ninth apparent magnitude of many search areas along the summer and winter Milky Way. We continue to receive his observations.

We also receive observations from observers who have used small rich field telescopes to search visually to the ninth and tenth apparent magnitudes in the rich star fields of the southern summer Milky Way.

Recently, the AAVSO made available a "Historical Atlas of Novae" on the Nova Search Observing web pages. This atlas includes a significant number of novae over the past three hundred years. It offers the following information about each nova: (1) Year, (2) Nova (Constellation), (3) Variable Star Designation, (4) Right Ascension, (5) Declination, (6) Galactic Coordinates, (7) Magnitude, (8) Visual or photographic discovery, (9) Name of Discoverer (it identifies AAVSO members who have discovered a nova). The Atlas is in PDF format so it can be downloaded.

We encourage our observers to continue sending their observations by the tenth of the month following the month in which the observations are made. You may either send by email to kcb@nemr.net or to the address given above.

Photoelectric Photometry

Chair: AAVSO Headquarters

Many thanks to our photoelectric observers who are sending their data—current and backlogged—to Headquarters. Except for specific stars in response to requests from astronomers, we have not yet begun to process the photoelectric data from the last two years at Headquarters. We do expect to begin working on that and other photoelectric data-related projects in the coming months. We will be reviewing the entire photoelectric data pipeline, with the long-desired goal of being able to incorporate the AAVSO photoelectric photometry data archive into the online files of the AAVSO International Database, where the data may be seen and downloaded automatically.

The Near-IR photometry program is off and running, with the participants becoming familiar with their new equipment and making more and more *J* and *H* observations.

To all of our photoelectric observers, please keep up the good work, and thank you for your patience and dedication!

RR Lyrae

Chair: Marvin E. Baldwin
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Since the last Annual Report ten observers have obtained nearly 7,000 observations of 50 RR Lyrae type stars. Nearly all of these observations were via CCD. Only 130 visual observations were reported, with Glenn Chaple acquiring most of those. Shawn Dvorak led the way in the CCD realm, obtaining well over 2,000 observations, followed by Neil Butterworth with nearly 2,000 observations. Gerry Samolyk, Steve Brady, and Jerry Bialozynski obtained nearly 1,400, 600, and 300 observations, respectively. Walt Rauscher, Bob Manske, and Neil Simmons also added significant numbers to the database.

Neil Butterworth continues working southern RR stars from Australia, diligently striving to obtain data on each star on his list each year. This makes it possible to refine periods and identify which stars are candidates for significant Blazhko activity.

Gerry Samolyk has started compiling data for a second monograph on RR Lyrae stars. This monograph will list times of observed maxima, display the O–C curves, which help identify period changes, and will likely give particular attention to the Blazhko Effect in some of these stars.

Solar

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

The following is a summary of AAVSO Solar Committee Activity for the Period October 2004 to January 2005.

Chair and Sunspot Observing Group Leader: Carl E. Feehrer; Solar Flare/SID Observing Group Leader: Mike Hill.

Monthly reporting by sunspot and SID observers continued at relatively strong levels during the period. A small decrease in the number of sunspot observers actually reporting , 59 as opposed to 62 for a similar period in 2003, was compensated for by an essentially unchanged report total, 855 as opposed to 863. The number of

SID observers reporting actually increased to 17 from a 2003 level of 13, with a total of 63 validated events reported during this period compared to 67 in 2003.

Observer Awards

Sunspot Observers

Two additional observers, Brian Cudnik of the United States and Miyoshi Suzuki of Japan, have now met the initial goal of 1,500 observations, bringing the total to seven since inception of the awards program in 1999. Certificates of achievement will be presented to these two observers and to others who have met the 1,500 criterion by the time of the next annual meeting.

SID Observers

Two additional observers, Peter King of England and Ted Poulos of the United States, join the earlier group of nine SID observers who have met the initial criterion of 40 months of reporting. Certificates of achievement will also be presented to these observers and later qualifiers at the next annual meeting.

Website Activity

Judging from the numbers of downloads, the solar pages of the website, including those devoted to the *Solar Bulletin*, SID, and sunspot data files, and images contributed by observers, continue to be popular. During this reporting period, a total of 30,091 download requests—an average of 244 per day—were satisfied. In the corresponding period last year, a total of 26,390 pages—an average of 214 pages per day—were satisfied.

Several important updates of and revisions to SID equipment and station information files have been posted to the SID pages during the period.

The number of new images of the sun contributed during the period continues to decrease. This is due, we believe, to the progressive decline in good photographic opportunities as solar minimum is approached rather than to loss of interest.

Acknowledgements

The efforts of the Solar Committee continue to be supported by a loyal group of observers, many of whom have contributed to the program for a long time. We express our thanks to these observers and to volunteer Arthur Ritchie and AAVSO staff who aid in preparing data, distributing the Bulletin, and keeping the website up to date.

Supernova Search

Chair: Rev. Robert O. Evans
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Supernova searching—visual, CCD, and photographic—continues to be an active area of amateur astronomer involvement. Between October 1, 2004, and March 31, 2005, over 35 supernovae were discovered by amateur astronomers; all discoveries were CCD. Congratulations to the discoverers!

Telescope

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

There are no telescopes or accessories for sale, and there has been no committee activity this year.