Committee Reports

Charge-Coupled Device (CCD)

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

The CCD Program has completed another active and successful year in 2005. 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 were not "CCD Program Stars." This year continued the Standard Star observing program for CCD Observers. Observations were made on all twelve fields while many observers have posted their results. This is an excellent way to check how your are doing, since the fields have well observed constant stars. 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 fifteen minutes.

Personally, I can say that 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 as the highlight of my day. My new highlight occurred while data mining during the SS Cyg campaign, where the CCD scatter was overlayed by some visual data. Many thanks to the Headquarters staff for this Web presence. While the *BVRI* and CV/LPV Programs continue, I encourage each of you to Observe, Submit Online, View Online, and Data-mine whatever stars are of interest to you.

1,223 observations of the stars in the *BVRI* program were logged and put on the web. These *BVRI* CCD measurements on eight LPV's now go back twelve years. 4,184 Faint CV observations and 363 Faint LPV observations were logged. The activity on these programs increases each year, with seventy-two observers this year.

Seventeen campaigns were initiated, adding to the thirteen campaigns that I reported on at the Spring Meeting. The new campaigns were: HD 37605, N Pup 04, Var Her 04, CI Gem, SDSS 220511, SDSS 013132, LS Peg, Blazar 4C 29.45, SDSS 161033, AM Her, V2291 Oph, AE Aqr, and AS 325. Several of these had multiple active campaign periods. The thirteen campaigns of the first half of the year included IL Aqr/GJ 876, BL Lac, VV Pup, Markarian 421, HD 74156, BZ UMa, U Gem, HD 80606, N Cyg 05, and GMRT Radio Exoplanet correlation. It is clear that CCD observations are becoming a more popular method of making observations.

In addition, Aaron Price performed yeoman's duty by publishing electronic *CCD Views* numbers 327 through 338 and by supporting campaigns.

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 will also continue the Polar (magnetic variables) Program, which will include approximately a dozen stars.

Eclipsing Binary

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

AAVSO eclipsing binary observers continue to expand on the quantity of data obtained on these stars. There is also a trend toward obtaining data on more stars that have been long neglected and on newly discovered eclipsing binaries found by surveys during the past few years.

This year we have obtained well over 34,000 observations of 369 eclipsing binaries. These observations were reported to the committee by twenty-eight observers. CCD cameras were used to obtain more than 90% of these observations. Among visual observers Chris Stephan led the way with more than 1,200 observations, followed by Glenn Chaple with more than 700. Major CCD contributors with observations counted into the thousands included Gerry Samolyk, Shawn Dvorak, Steve Cook, Jerry Bialozynski, Chris Hesseltine, Steve Brady, and Josef Coloma.

Observed Minima Timings of Eclipsing Binaries, No. 10, has been completed and submitted for publication. It should be available in the very near future.

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.

[Note from Headquarters: Effective the end of the 2004–2005 fiscal year, Charles Scovil retired as Chair of the AAVSO New Chart Committee after serving as its Chair for thirteen years and as a member for many years before becoming Chair. An AAVSO Special Recognition Award was presented to Charles after the Banquet at the 94th Annual Meeting on October 15, 2005. The text of this award appears following the minutes in this issue of JAAVSO. We thank Charles for his long and faithful service to the AAVSO and to variable star astronomy through his painstaking work with comparison star sequences and variable star charts.]

Nova Search

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

For the period beginning September 1, 2004, and ending August 31, 2005, the following novae were discovered:

Nova	*Discoverer(s)*	*Magnitude*	*Date of discovery (UT)*
N Pup 2004 (V574 Pup)	A. Tago	7.6 ptg	Nov. 20.672
	Y. Sakurai	—	Nov. 20.812
N Cyg 2005 (V2361 Cyg)	H. Nishimura	9.7 ptg	Feb. 10.85
N Nor 2005 (V382 Nor)	W. Liller	9.4 red	Mar. 13.309
N Ser 2005 (V378 Ser)	ASAS-3 (G. Pojmański)	12.7V	Mar. 27.352
N Sgr 2005 (V5115 Sgr)	H. Nishimura	8.7 ptg	Mar. 28.779
	Y. Sakurai	9.1 CCD	Mar. 28.796
N Aql 2005 (V1663 Aql)	ASAS-3 (G. Pojmański)	10.8:V	Jun. 10.234
N Sgr 2005#2 (V5116 Sgr)	W. Liller	8.0: red	Jul. 4.049
N Sco 2005 (V1188 Sco)	ASAS-3 (G. Pojmański)	8.98V	Jul. 26.311
	H. Nishimura	8.7 ptg	Jul. 26.565

We suggest that you use this information to update your records until Headquarters updates its copy of the pdf file "A Historical Table of Novae." Also, an object discovered in Pyxis in March that was originally thought to be a possible nova was later determined to be a cataclysmic variable in outburst (ASAS 091858-2942.6).

During this period four observers contributed the following observations: Gary Nowak, United States, 1770; Manfred Durkefälden, Germany, 23 observations and 62 hours 10 minutes dome search; John Pickett, United States, 1185; and Ken Beckmann, United States, 378. These observers searched first the common areas and then areas along and adjacent to the common areas of the summer and winter Milky Way.

We have had several inquiries throughout the past year, largely from the internet and by email. We encourage those interested to read the information about visual nova hunting on the AAVSO website. We kindly welcome questions and inquiries about the program at kcb@nemr.net or by postal mail.

Photoelectric Photometry

Chair: AAVSO Headquarters

A hearty thank you goes to our photoelectric observers, who are continuing to send their data to Headquarters! Keep those data coming! Most data are now coming in electronically, which we very much appreciate. Thus, there is no longer much digitization needed, which eliminates possible sources of error and saves a lot of time, both at the observer's end in writing a report by hand and at Headquarters in digitizing it.

As we said in the last report we would be doing at Headquarters, during the past several months we have reviewed the photoelectric data pipeline, from the sending of the observer's raw data to the addition of reduced data to the AAVSO International Database. We developed a plan of action to bring the reduction of photoelectric data up to date and to make the data accessible for automatic downloading, and we have taken the first steps in implementing this plan.

In the past, the photoelectric data were reduced to ΔV magnitudes and archived in this way. Thus, they could not be combined with the visual and *V*-magnitude data in the AAVSO International Database. Several years ago, Ron Zissell (ZRE) at Mount Holyoke College reduced the database to *V* magnitudes, but that reduction was not continued in subsequent years. As part of the plan of action, the entire photoelectric database will be reduced to *V* magnitudes and incorporated into the online archives of AAVSO data, where they will be available for automatic downloading. Future observations will automatically be reduced to *V* magnitudes as they are processed.

The AAVSO-created software used over the years to digitize the raw data, reduce the data, and maintain the photoelectric archive dates from the early 1980s (prior to the existence of hard disks on personal computers and thus subject to extreme memory limitations) and requires a DOS environment. The software is being re-written for today's environment, to maximize efficiency, and to include reduction to *V* magnitude.

In the coming months we expect to make great progress with this extremely valuable set of data, and we look forward to reporting on it to our incredibly patient observers and our members.

The Near-IR photometry program continues to do well. Some of the original participants had to drop out of the program, but the photometers they had been loaned have been placed with other observers to carry on the work, and *J* and *H* observations continue to be made.

We are very happy to announce that AAVSO member and photoelectric observer James H. Fox (FXJ), of Afton, Minnesota, has agreed to be the Chair of the AAVSO Photoelectric Photometry Committee. Jim will officially "take office" in early 2006. Congratulations, Jim, and thank you!

RR Lyrae

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

During the past year fourteen observers have reported nearly 11,000 observations to the RR Lyrae Committee. The vast majority of these were CCD observations, with less than 3% being visual observations. Data were obtained for sixty RR Lyrae stars. Neil Butterworth reported more than 3,500 observations, followed by Gerry Samolyk with more than 3,300 and Shawn Dvorak with nearly 2,300. Good quality CCD light curves continue to provide us with detailed information about the Blazhko effect on some stars, while establishing that other stars seem precisely to repeat their light curves cycle after cycle.

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 September 2005 (Committee Chair and Sunspot Observing Group Leader: Carl E. Feehrer; Solar Flare/SID Observing Group Leader: Mike Hill).

Both the maximum and the initial minimum daily mean values of the American Relative Sunspot Index (Ra) were recorded in October of 2004. The value of the maximum has seen a progressive decline ever since. SID observers reported the greatest amount of activity in January 2005. That month was then followed by a three-month lull, after which the activity level rose again to moderate levels. A sharp increase was noted during the last month of the period.

Contributions by both sunspot and SID observers during the period remained at strong levels despite decreasing solar activity associated with the end of Cycle 23. A total of 12,013 observations was contributed by a group of 77 sunspot observers, and a total of 204 reports was contributed by a group of 25 SID observers.

Observer Awards

As explained in last Fall's report, in 1999, Director Janet Mattei and Joseph Lawrence, then chair of the Solar Committee, initiated a program aimed at formally recognizing observers who had made sustained contributions to the AAVSO's sunspot program. The criterion for award of a certificate acknowledging such contributions was established for increments of 1,500 observations, and recognition was to be given at the Fall meeting each year.

Beginning last year, formal recognition of the sustained contributions of SID observers was also given. To receive this award, an observer must have submitted reports for a period of forty months, an average of ten months over a period of four years. As with the sunspot program, recognition of the accomplishments of qualifying observers was to be given at the Fall meeting.

The list of observers eligible to receive awards continues to grow. Eleven sunspot and six SID observers have now joined the combined group of nine who qualified by the time of the Fall meeting last year. As before, the international flavor of the group of observers provides a good indication of the breadth of support enjoyed by the program. The observers are as follows:

Sunspot Observers

Brian Cudnik, TX
Miyoshi Suzuki, Japan
Biswajit Bose, India
Robert Brown, CA
Tom Fleming, TX
Monty Leventhal, Australia
Etsuiku Mochizuki, Japan
Michael Moeller, Germany
Arthur Ritchie, MA
Nick Stoikidis, Greece
David Teske, Canada

Sudden Ionic Disturbance (SID) Observers

Andy Clerkin, MA
Peter King, England
Ted Poulos, MA
Roberto Battaiola, Italy
Jon Wallace, CT
François Steyn, South Africa

Website Activity

The number of images contributed during the year is definitely lower than in previous periods, due, we believe, to the decreasing amount of activity to be observed. Within the past month, several excellent images of the recent solar eclipse have been forwarded by observers in prime observing locations. These will appear on the website shortly.

Acknowledgements

Successful performance of the Committee's work is due to the dedication and active support of an international cadre of observers, AAVSO staff, and headquarters volunteer Arthur Ritchie, who assists in the coding of the monthly sunspot data. A grateful "Thank You" goes out to all those who have contributed during the year.

Supernova Search

Chair: Rev. Robert O. Evans
Villa 7, 1 Glendarrah Street, Hazelbrook, N. S. W. 2779, Australia

The work of supernova hunting by amateur astronomers goes ahead strongly. This is illustrated by the fact that the work of Tim Puckett's team was featured in the November 2005 issue of *Sky & Telescope*, as a celebration for having found their 100th supernova, flowing from a total of 850,000 CCD observations. Just imagine the amount of work involved in this number of observations, even with the help of several telescopes, all those computers, and all the other team members. Another indication is seen in the fact that Tom Boles has just finished his term as President of the British Astronomical Association, and he gave his concluding Presidential address on his favorite subject—supernovae.

I think it is still true, as it has been now for several years, that about thirty percent of all supernova discoveries are found by amateurs. But—almost without exception —these are all found by well equipped CCD observers with computer controlled telescopes. The only exception to report over the last two years is my recent visual discovery of SN 2005df in the southern galaxy NGC 1559. This was my fortieth visual discovery, and was also the third that I have found in this galaxy. So far as I am aware, nobody else has found found three in one galaxy by photography, CCD, or visually. Over the last twenty-five years, I would have made somewhat less than half the number of galaxy observations that Puckett and his team have made during their much shorter history as supernova hunters. Many of his discoveries have been very faint, whereas many of mine have been of 14th magnitude or brighter.

I certainly hope that there is a resurgence in visual searching and discoveries by amateurs with less sophisticated gear.

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.

[Note from Headquarters: Effective the end of the 2004–2005 fiscal year, Charles Scovil retired as Chair of the AAVSO Telescope Committee after serving as its Chair for thirty-five years. An AAVSO Special Recognition Award was presented to Charles after the Banquet at the 94th Annual Meeting on October 15, 2005. The text of this award appears following the minutes in this issue of JAAVSO. We thank Charles for his very long and faithful service to the AAVSO and its members/observers

through his expert and meticulous work with observing equipment donated to the Association.

Also, with Charles' retirement from the AAVSO Telescope Committee comes the retirement of the committee itself from the list of AAVSO standing committees. The Telescope Committee was created in 1917 to manage the loan of telescopes that had been loaned or donated to the Association to variable star observers in need of an instrument. In time, this practice proved impractical, and a decision was made to stop borrowing telescopes from individuals or institutions in order to loan them to observers and to sell all telescopes donated to the Association and invest the income from the sales. The Telescope Committee took on this task, refurbishing equipment as necessary and overseeing its sale. Once the stock of equipment had been sold, the committee had occasional work as a telescope or other equipment was donated, but in recent years there has been very little of this. It was decided that there was no longer a need for a standing committee dedicated to such occasional work, so after Charles retired, the committee was dissolved.]