Committee Reports

Charge-Coupled Device (CCD)

Chair: Gary Walker
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The CCD Program continues another active year. Fortunately, the large changes that I have previously reported have settled down.

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 database updated every 15 minutes.

Observers continue to perform variable star measurements with their CCD cameras. In many cases, we had observers performing significant photometry on many of the AAVSO program stars that were not "CCD Program Stars."

Personally, I can say that going to work each morning and logging in my observations before work, over the Web, and then seeing how they compare to each star's history, and those of the other observers from the night before, is still the highlight of my day. Many thanks for the HQ 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 2001 through March 2002, 696 observations of the stars in the *BVRI* program were logged and put on the web. As of 31 March 2002, the *BVRI* CCD measurements on the 8 program long period variables now approach 7,700 measurements, going back 9½ years. The faint CV/LPV project which was started in 1997 continues to log *V* magnitudes. In the same 6-month interval, 1,207 observations were logged, for a cumulative total of more than 4,200. Combining both the *BVRI* and CV/LPV Programs gives a Grand Total of CCD Program star observations of nearly 11,900 observations. Soon, they will all be available on the web. An additional 23,785 CCD observations on other stars have been submitted in the same interval and join the existing 40,000 observations in the AAVSO International Database. This brings the grand-grand total to 75,685 CCD observations.

A total of 23 observers submitted CCD Program observations, slightly more than all of last year.

I would like to recognize our *BVRI* observers: Ron Zissell, 228 observations; Tom Michalik, 198 observations; Gary Walker, 91observations; Frank Scheder, 84 observations; Donald Pray, 48 observations; Doug West, 20 observations; Ladislav Smelcer, 17 observations; Robert James and Michael Nicholas, each 3 observations; Alain Bruno, 2 observations; and Keith Graham, Michael Koppelman, Harald Maier, Angus O'Fearghail, each 1 observation.

I would also like to recognize our Faint CV/LPV observers: Ron Zissell, 188 observations; Gary Billings, 181 observations; Don Starkey, 154 observations;

Gary Walker, 138 observations; Robert James, 135 observations; Angus O'Fearghail, 114 observations; Keith Graham, 77 observations; Roger Diethelm, 59 observations; Christina Sanchez, 45 observations; Frank Scheder, 33 observations; Walter MacDonald, 19 observatons; Steve Robinson, 18 observations; Alain Bruno, 16 observations; Dave Hurdis, 13 observations; Lou Cohen, 9 observations; Aaron Price, 5 observations; Donald Pray, 2 observations, Danny Scharnhorst, 1 observation.

In addition, Aaron Price of AAVSO Headquarters performed yeoman's duty by publishing 3 electronic issues of *CCD Views*.

The main goal for the next 6 months is to organize additional campaigns like the SU UMa on-line and electronic campaign. We expect that this fast turn around 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
8665 N. County Road 775E, Butlerville, IN 47223

Eight months have passed since our annual report, with a lot of activity on eclipsing binary stars occurring in this interval. Approximately 25,500 observations have been made by 29 observers, with data submitted on 243 stars. About 19,000 of these observations were made by 6 CCD observers. Shawn Dvorak submitted some 7,500 CCD observations, Andy Howell over 5,500, and Gerry Samolyk about 5,400.

Visual observers accounted for about 6,500 observations, with Gerry Samolyk leading the way with more than 2,000. Chris Stephan submitted more than 1,000 observations, followed by Richard Hill, Ray Berg, David B. Williams, Robert Hays, Mike Simonsen, Sergio Foglia, Bob Manske, Jerry McKenna, and others.

We have published several eclipsing binary monographs in recent years, and we plan to publish another one this Fall. For the first time an appreciable portion of the minima included in a monograph will be derived from CCD observations. These will account for about 20% of the minima listed. We expect that this ratio will increase in the future.

The ad hoc team of eclipsing binary observers continue to support each other by exchanging technical information while honing their CCD skills observing little known eclipsers discovered by the ROTSE program. Visual and CCD observers co-operate to find when minima are occurring and generate a workable ephemeris. Then CCD observers continue with precision data to refine the period, provide color information, etc., and proceed to publish the results.

Revision and standardization of charts for all EB program stars has been completed. This extensive task was accomplished by Mike Simonsen working closely with experienced observers familiar with these stars' fields and the problems existing with the old charts.

New Chart

Chair: Charles E. Scovil
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Since the last report approximately 100 charts have been mailed and a few have been sent via email. Most observers are acquiring preliminary charts by downloading them from the AAVSO web site.

Chart production continues. Several charts for novae and supernovae have been made. 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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A full report for the period 1 October 2001 to 30 September 2002 of observers' participation and observations received by the AAVSO Nova Search committee will be forthcoming in the annual 2002 report.

We continue to encourage observers who are interested in the program, or those already involved in the AAVSO Nova Search program, to use the AAVSO web site (www.aavso.org) as a resource for planning a visual nova search program. There are many excellent resources available on these web pages. Shortly, a list of all historical novae discovered since 1781 will be available on the AAVSO Nova Search web pages.

If you do not have access to the internet, you are welcome to write the AAVSO Nova Search chairman and we will be pleased to send you a hard copy of the web pages.

Recently, we have found that certain planetarium software programs may aid observers in hunting for novae. By using a notebook computer in the field, several computer programs provide real sky simulation and make searching for novae far less difficult than the conventional handling of star charts, atlases, maps, and flashlights. The internet provides several web pages which describe a variety of programs available to be downloaded at cost, for a trial period, or free.

We continue to encourage observers to send in their observations by the 10th of the month following the month in which the observations are made. These observations are important and are greatly valued by the AAVSO Nova Search committee. You may send observations to the AAVSO Nova Search committe chair.

Photoelectric Photometry

Chair: J. Phillip Manker
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During the first six months of the fiscal year 2001–2002, 15 observers contributed a total of 1,676 observations to the AAVSO Photoelectric Photometry database. Individual observer totals will be printed in the annual committee report appearing in the next issue of JAAVSO.

New photoelectric photometry observers are: Thomas Baskin, Arkansas; Larry Sumner, Virginia; Jo Nylands, Australia; and Doug West, Kansas.

Dr. Doug West is working with OPTEC to design an IR photometer. Several of the prototypes will be handed over to our most experienced observers for trials. This will take place next year.

Support of the Gravity Probe-B satellite

During this fiscal year the AAVSO Photoelectric Photometry observers have provided ground-based support for the Gravity Probe-B satellite. Our task is to monitor IM Pegasi prior to launch of the satellite, which will be occurring early 2003. IM Peg is the satellite's guide/navigation star; the camera will lock on it to keep the satellite's platform stable.

IM Peg is a K2 spectroscopic binary with a high level of activity due to short-lived flares and photospheric spots, and a period of ~24.7 days. We need to know exactly when maxima occur because when the star flares, the camera may reject the star because the magnitude has changed. The result is that the satellite platform will become unstable, and the data will be flawed.

At this time we have 93 observations of IM Peg. The following observers contributed to this project: Wayne Clark, Frank Dempsey, Sergio Dallaporta, Jim Fox, Paul Kneipp, Ken Ludeke, Nik Stoikidis, and Ray Thompson.

RR Lyrae

Chair: Marvin E. Baldwin
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During this reporting period we have received approximately 3,100 observations of RR Lyrae stars by five observers, including data on 47 of these variables. Some 2,100 of these observations are CCD data obtained by Gerry Samolyk. Four observers obtained the remaining visual observations.

Examination of our visual data has resulted in some interesting new developments. We have found problems in the ephemerides for KZ Pup and DG Hya. We have been observing KZ Pup for several years and determined that its period is about 0.67 day. Since the star is far south for midwestern observers, providing only a brief window for observations each night, and since the period is very nearly 2/3 day, finding maxima is very difficult some years. This past season we made frequent observations but were unable to observe a maximum. The ephemeris promises better opportunity for next year, however.

DG Hya has not been at maximum when its ephemeris predicted that it should. This has been a chronic problem with this star for many years. This past season we made frequent observations and found that the maximum might run an hour ahead of schedule one night and then be one or two hours behind schedule a few cycles later. Basing the next year's ephemeris on one or two maxima obtained the previous year left us with obvious problems when predicting maxima. We have been able to make an adjustment in the fundamental period and look forward to next year to see if DG Hya has other surprises for us.

Further information on these and other RR stars will continue to be published in the *AAVSO RR Lyrae Bulletin,* edited by Ray Berg. Ray has worked very hard on it, and has done a really nice job on the three issues published so far. We are especially proud of the excellent job he has done in producing this publication and we thank him for his efforts.

The project for revision of charts for all the RR Lyrae program stars has been completed with Mike Simonsen leading the way. This accomplishment followed the completion of the revision of the eclipsing binary charts, with Mike working closely with experienced observers of the RR stars for selection of comparison stars and elimination of problems existing in the old charts.

Solar

Chair: Carl E. Feehrer
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The Solar observing community continues to benefit from the presence of the *Solar Bulletin* and associated data on the AAVSO web site and from media attention being paid to the Sun during the continuing maximum. In the period covered by this report, 9 new sunspot observers and three new SID observers have contributed observations, bringing the totals in each group to 89 and 18, respectively.

Sunspot Reports

During the period, 623 sunspot reports containing a total of 9,189 observations were received and processed.

SID Reports

One hundred fifty reports containing a total of 650 validated events were received and processed.

Web site Activity

The Solar Photo Gallery now contains 88 images, an increase of 63 since the last reporting period.

The SID portion of the web site has been particularly attractive to viewers owing to the addition of two simplified receiver circuits, one of which was designed by Arthur Stokes shortly before his death in October of 2001, and the second of which was designed very recently by Casper Hossfield.

Figure 1 presents the numbers of downloads from the AAVSO Solar web site through the reporting period, and Figure 2 presents the subset of downloads associated with the *Solar Bulletin*.

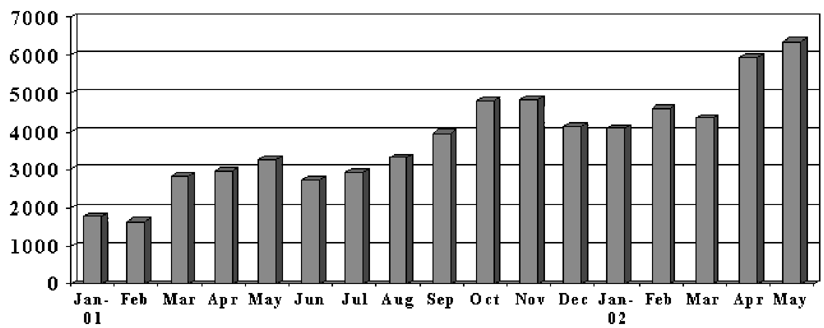

Figure 1. All solar pages downloaded.

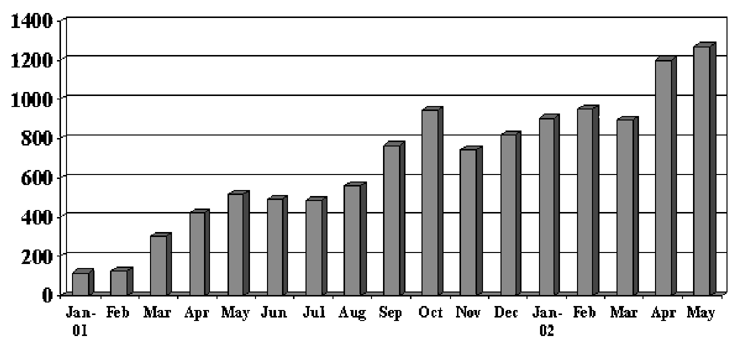

Figure 2. *Solar Bulletin* pages downloaded.

I want to acknowledge the valuable contributions to the Solar Committee's performance and products that were made during the period by the parties listed below. Each has given unstintingly of his/her time and has helped our organization continue to grow:

- the many dedicated observers who send their reports each month;
- Mike Hill, Analyst and Chairperson of the SID group, and Editor of the SID portion of the *Solar Bulletin*;
- Casper Hossfield, Editor of the monthly *SID Supplement* to the *Solar Bulletin*;
- Kate Davis, the AAVSO's web site maintainer;
- Arthur Ritchie, a volunteer at AAVSO Headquarters who ably assists in the preparation of the monthly sunspot data.

Thank you all.

It should be noted that the name "AAVSO Solar Division" was changed to "AAVSO Solar Committee" in the revised by-laws adopted at the 90th Annual meeting in October, 2001.

Supernova Search

Chair: Rev. Robert O. Evans
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No report was made.

Telescope

Chair: Charles E. Scovil
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We have recently acquired an 8-inch Dynamax Schmidt-Cassegrain telescope complete with eyepieces, equatorial wedge, and extremely heavy-duty tripod. The telescope has its own trunk for protection and storage. Asking price complete is $500.

Note added in press: This telescope, together with its accessories, has been sold.