

AAVSO



The American Association of Variable Star Observers



Annual Report
2010-2011

The American Association of Variable Star Observers

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On the cover...

Shown here is just a sampling of the many celebratory scenes in and around AAVSO Headquarters during the AAVSO's centennial year. Clockwise from left: Thomas R. and Anna Fay Williams honored at the dedication of the AAVSO Archives in their name; longest-time members present at the 100th Annual Meeting were Owen Gingerich and Martha Stahr Carpenter, who were given the honor of cutting the AAVSO's birthday cake; AAVSOers at the Headquarters dedication ceremonies; AAVSO Director Arne Henden proudly displaying a certificate of congratulations and recognition of 100 years of service to the astronomical community presented to the AAVSO by the American Astronomical Society in May 2011.

Picture credits

In addition to images from the AAVSO and its archives, the editors gratefully acknowledge the following for their image contributions: Glenn Chaple, Shawn Dvorak, Mary Glennon, Bill Goff, Barbara Harris, Mario Motta, NASA, Gary Poyner, Msgr. Ronald Royer, the Mary Lea Shane Archives of the Lick Observatory, Chris Stephan, and Wheatley, et al. 2003, MNRAS, 345, 49.

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1. About the AAVSO

AAVSO Vision

Discovering the Universe through variable stars.

The AAVSO's Mission

The AAVSO is an international non-profit organization of variable star observers whose mission is:

- to observe and analyze variable stars
- to collect and archive observations for worldwide access
- to forge strong collaborations between amateur and professional astronomers
- to promote scientific research and education using variable star data.

About the AAVSO

The American Association of Variable Star Observers (AAVSO) is a non-profit worldwide scientific and educational organization of amateur and professional astronomers who are interested in stars that change in brightness—variable stars.

The AAVSO was founded in 1911 to coordinate variable star observations—made largely by amateur astronomers—for Harvard College Observatory. The AAVSO was incorporated in the Commonwealth of Massachusetts in 1918 as a non-profit scientific and educational organization. Today, as an independent, private research organization headquartered in Cambridge, Massachusetts, with active participants in 108 countries, and an archive of over 21 million variable star observations, it is the world's largest association of variable star observers.

Membership in the AAVSO is open to anyone—professionals, amateurs, and educators alike—interested in variable stars and in contributing to the support of valuable research. Professional astronomers have neither the time nor the telescopes needed to gather data



Participants in the AAVSO's 100th Annual Meeting, 2011

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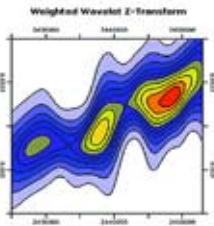
on the brightness changes of thousands of variables, and amateurs make a real and useful contribution to science by observing variable stars and submitting their observations to the AAVSO International Database.

What We Do

The AAVSO coordinates, evaluates, compiles, processes, publishes, and disseminates variable star observations to the astronomical community throughout the world.



Observers send their data to Headquarters, where they are checked, processed, and added to the AAVSO International Database. The AAVSO and its observers frequently provide the professional community with archival data, intensive monitoring of interesting variable stars, and target-of-opportunity event notification for coordinated observing campaigns and satellite observations.



AAVSO publications provide the astronomical community with valuable information. The type of published information is diverse, and includes *The Journal of the AAVSO*, a peer-reviewed collection of scientific papers focused on variable stars, the *Manual for Visual Observing*, now available in eight languages, the *CCD Observing Manual*, the quarterly *AAVSO Newsletter*, the *Eclipsing Binary and RR Lyrae Ephemerides*, and the *AAVSO Annual Report*.

Additionally, the AAVSO is actively involved in education and outreach. We have several programs designed to assist with disseminating information to educators and the public.

The AAVSO has an active Mentor Program that is available to any observer requesting personal instruction in observing techniques and methods.



The Speakers Bureau is a service established for people and groups looking for enthusiastic, knowledgeable speakers.

Our Presentation Library offers free POWERPOINT™ presentations on variable stars, observing techniques, and other astronomical topics.

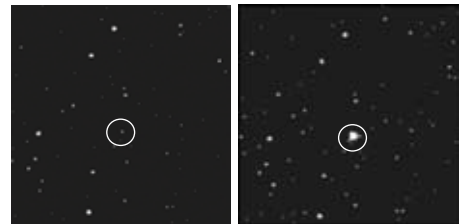
Our Writers Bureau offers variable star and topical astronomy content on a monthly basis to editors of astronomy club and society newsletters.

Variable Star Astronomy (VSA) is a flexible set of hands-on educational materials, activities, and investigations, based on the AAVSO's unique electronic database of variable star measurements.

Members and observers have a unique opportunity to present and exchange ideas at the AAVSO meetings. The AAVSO organizes two meetings a year, one in the fall and one in the spring. The fall meeting is the official AAVSO annual meeting that is always held at or near the AAVSO Headquarters in Cambridge, Massachusetts. The spring meeting is held outside of the state of Massachusetts with the intention of attracting more members and observers to attend. Everyone interested in the AAVSO and its activities is invited and encouraged to participate in these exciting events.

What Are Variable Stars?

Variable stars are stars that change brightness. The brightness changes of these stars can range from a thousandth of a magnitude to as much as twenty magnitudes over periods of a fraction of a second to years, depending on the type of variable star. Over 150,000 variable stars are known and catalogued, and many thousands more are suspected to be variable.



The variable star U Geminorum in its faint state (left) and its bright state (right)

There are a number of reasons why variable stars change their brightness. Pulsating variables, for example, swell and shrink due to internal forces. An eclipsing binary will dim when it is eclipsed by a faint companion, and then brighten when the occulting star moves out of the way. Some variable stars are actually extremely close pairs of stars, exchanging mass as one star strips the atmosphere from the other.

The different causes of light variation in variable stars provide the impetus for classifying the stars into different categories. Variable stars are classified as either intrinsic, wherein variability is caused by physical changes such as pulsation or eruption in the star or stellar system, or extrinsic, wherein variability is caused by the eclipse of one star by another, the transit of an extrasolar planet, or by the effects of stellar rotation.

Why Observe Variable Stars?

Variable stars need to be systematically observed over decades in order to determine their long-time behavior. Professional astronomers have neither the available time nor the

1. About the AAVSO

unlimited telescope access needed to gather data on the brightness changes of thousands of variable stars. Thus, it is amateur astronomers utilizing visual, photographic, photoelectric, and CCD techniques who are making a real and highly useful contribution to science by observing variable stars and submitting their observations to the AAVSO International Database. These important data are needed to analyze variable star behavior, to schedule satellite observations of certain stars, to correlate data from satellite and ground-based observations, and to make computerized theoretical models of variable stars possible.

Research on variable stars is important because it provides information about stellar properties, such as mass, radius, luminosity, temperature, internal and external structure, composition, and evolution. Some of this information would be difficult or impossible to obtain any other way. In many cases, it is the nature of the variability that provides the clues to the answers. This information can then be used to understand other stars.

Variable stars continue to play a crucial role in our understanding of the universe. Cepheid variables have played a major part in determining distances to far-away galaxies and determining the age of the Universe. Mira variables give us a glimpse into the future evolution of our own star, the Sun. Accretion disks in cataclysmic variables help us to understand larger scale disk behavior, like the activity inside active galaxies with super-massive black holes. Supernovae have led us to the surprising realization that the expansion of the Universe is accelerating. Even the search for extra-terrestrial life is illuminated by variable stars. Transiting extrasolar planets provide clues into the processes of planetary formation, and the very stuff life as we know it is made of comes from the hearts of stars that explode in the final stages of their evolution.

The AAVSO International Database

The AAVSO International Database has over 21 million variable star brightness estimates going back over one hundred years. It is the largest and most comprehensive digital variable star database in the world. Over 1,000,000 new variable star brightness measurements are added to the database every year by over 700 observers from all over the world.

Quality

The AAVSO International Database is not only the largest but also the highest quality database available to researchers. The AAVSO and its technical staff spend more time and resources on database maintenance and quality control than any other organization.

Quality control begins before the observation is even made. Extensive training materials are sent to new AAVSO observers and a large section of the AAVSO website is designed specifically for observing techniques. The AAVSO holds two meetings per year where

members come together to discuss their observing strategies, compare results, and much more. Workshops are routinely held at these meetings, bringing the best professionals in the field in contact with the observers. Since 2000, workshops have been held on CCD imaging, Eclipsing Binary star observing, GRB afterglow hunting, data mining, and data analysis. The AAVSO also has an active mentoring program for new observers.

We have data entry error checks at every stage in the process. Whether the observer is using WebObs, PCObs, or sending their data in via e-mail, we have error checking routines running to automatically identify the most common data entry errors. In addition, every month we comb through all the observations using both human scrutiny and automated programs to look for misidentifications, typos, and any other errors. The best check, however, is the observers themselves who check their submitted data by using the Quick Look file, Light Curve Generator, and by comparing their own records with their observations in the AAVSO International Database.

Data validation ensures the quality of our permanent archives

This practice is what really separates AAVSO data from others. Every data point that comes from the AAVSO International Database has been validated—that is, put through a rigorous system of data integrity checks. This system involves running automated programs and also requires a human being to actually look at and validate each data point. Not a point gets through the system without being looked at by a real person. This combination of techniques takes advantage of the benefits that both humans and automation can bring to the process, and it is applied not only to new observations, but also to every observation in the database, even the ones made a century ago.

Observers

The AAVSO International Database would not exist without the dedication, tireless effort, and enthusiasm of thousands of variable star observers. Our observers come from all over the world. Over two-thirds of AAVSO observers contributing data come from outside of the United States.

Thanks to this broad network of observers we have coverage across most time zones and latitudes regardless of weather or other regional disruptions.

To make it easier for the widely-scattered AAVSO members and observers to gather together in person, the AAVSO meetings held every spring or summer take place in different parts of the United States or, as often as possible, in different countries.



Mary Glennon, AAVSO member-observer since 1999

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The AAVSO receives observations from members of other variable star observing associations around the world for inclusion in the AAVSO International Database and dissemination to the astronomical community worldwide. These observations are sent regularly by the group leader/representative or directly by the group members themselves. The AAVSO values these fruitful, mutually beneficial collaborations, and truly appreciates the ongoing efforts of everyone involved in working together for the benefit of the astronomical community.

Access

Observations from the database are available to anyone at anytime. For raw observations, simply fill out our online request form. For access to light curves, use our Light Curve Generator which works in all browsers (you do not need JAVA or any special plug-ins), and for really quick access to recent data, visit our Quick Look file. Our online systems are updated every ten minutes with the latest data.

Observing Variable Stars

Astronomy is a unique science that cannot be studied in a typical laboratory setting here on earth. Instead, astronomers turn their attention and telescopes to the sky in order to study their subjects. Since professional astronomers often do not have the telescope time needed to follow a particular star or group of stars, the dedication of amateur astronomers is often an invaluable means of collecting information. Nowhere is this more true than in the field of variable star astronomy. Since 1911, thousands of amateur astronomers from all over the world and from all backgrounds have contributed observations, one at a time, to make up the over 21 million data points housed in the AAVSO International Database!

Anyone can be a variable star observer. All you really need to begin observing are:

- your unaided eyes, a pair of binoculars, or a telescope
- some variable star charts to help you navigate your way through the sky
- some basic instructions
- a little patience

For those interested in observing activity on our closest star, the sun, or a particular type of variable, such as the Eclipsing Binary and RR Lyrae type stars, or if hunting for novae, supernovae, or optical counterparts to energetic Gamma-Ray Bursts strikes your fancy, we have observing programs designed to help satisfy your appetite.

The AAVSO Mentor Program is available to all observers to assist newcomers in the methods and techniques of visual variable star observation, as well as CCD and PEP observation.



*Msgr. Ron Royer, AAVSO member
observer since 1953*

Services to Astronomy

The AAVSO provides a wide range of services to the astronomical community. AAVSO International Database data are disseminated extensively to astronomers around the world, upon request, and are freely available from the AAVSO website. AAVSO data and services have been used, referenced, and acknowledged in hundreds of professional astronomical publications.



Mario Motta, M.D., an AAVSO member-observer since 1985, at his 32-inch telescope

Services to Astronomers

AAVSO services are sought by astronomers for the following purposes:

- real-time, up-to-date information on unusual stellar activity
- scheduling of variable star observing programs coordinating earth-based large telescopes and instruments aboard satellites
- simultaneous optical observations of program stars and immediate notification of their activity during earth-based or satellite observing programs
- correlation of AAVSO optical data with spectroscopic, photometric, and polarimetric multi-wavelength data
- collaborative statistical analysis of stellar behavior using long-term AAVSO data

Collaboration between the AAVSO and professional astronomers for real-time information or simultaneous optical observations has enabled the successful execution of hundreds of observing programs using satellites such as:

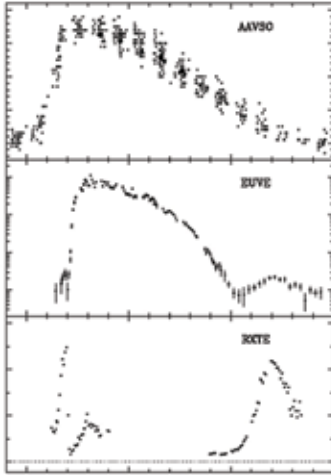
- Hubble Space Telescope
- Chandra X-Ray Observatory
- Spitzer Space Telescope
- XMM-Newton X-Ray Observatory
- Extreme Ultraviolet Explorer
- High Energy Astronomical Observatories 1 and 2
- International Ultraviolet Explorer
- Roentgen Satellite
- European X-Ray Observatory Satellite
- High Precision Parallax Collecting Satellite (HIPPARCOS)



AAVSO services have been used by researchers affiliated with such satellites as Chandra, XMM, RXTE, FUSE, HST, Spitzer, and many more

A significant number of rare events have been observed with these satellites as a result of timely notification by the AAVSO.

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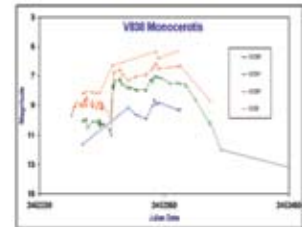


With the outburst detected by AAVSO Observers, simultaneous AAVSO visual, EUVE, and RXTE observations of SS Cygni were triggered, providing astronomers with important information about the behavior of dwarf novae (from Wheatley et al. 2003, MNRAS, 345, 49)

In recent years, the SWIFT satellite has been sending real-time notification to ground-based observers in the AAVSO High-Energy Network to alert them of Gamma-Ray Bursts (GRBs). Several GRB optical afterglows have been detected by AAVSO observers. In this way, AAVSO observers are contributing to cutting-edge, high-energy astrophysics.

Services to Observers and Members

The AAVSO enables variable star observers to contribute vitally to variable star astronomy by accepting their observations, incorporating them into the AAVSO International Database, publishing them, and making them available to the professional astronomer. Incorporating an observer's observations into the AAVSO archives means that future researchers will have access to those observations, so the observer is contributing to the science of the future as well as the present.



The AAVSO coordinates observing campaigns between professional and amateur astronomers, in which observations from amateur astronomers play an important role in correlating observations obtained with special instruments at earth-based observatories or aboard satellites.

On request, the AAVSO will help set up an appropriate observing program for an individual, an astronomy club, an elementary school, a high school, college, and so forth. In this way observers, students, and faculty are able to make the best use of their resources to do valuable science. The AAVSO can also assist in teaching observing techniques and in suggesting stars to be included in a program through the AAVSO Mentor Program.



Gary Poyner, AAVSO member-observer since 1991, with his 14-inch telescope

Education and Outreach

The AAVSO believes that Education and Outreach are important to our mission:

- to attract, train, and retain new variable star observers and members of all ages
- to increase awareness, understanding, and appreciation of variable star astronomy and variable star observing among amateur and professional astronomers, educators, students, and the general public
- to improve science education and literacy through the unique power of variable stars and variable star observing to motivate students, young and old.

Projects, Programs, and Activities

The AAVSO Writers Bureau offers variable star and topical astronomy content on a monthly basis to editors of astronomy club and society newsletters. This gives us the chance to inform the public about the fascinating objects we study, as well as the science and research being done, while providing reliable, accurate information to newsletter editors who may lack the time or expertise to write or vet articles for publication.



The AAVSO has much experience in hosting successful educational lectures such as the series of High-Energy Astrophysics Workshops for Amateur Astronomers

The AAVSO Mentor Program connects experienced observers with new observers to assist them in observing, recording, and reporting observations of variable stars to the AAVSO International Database.

The Speakers Bureau is a service established for people and groups looking for enthusiastic, knowledgeable speakers to provide informative presentations for astronomy clubs, star parties, banquets, Scout Troops, Astronomy Day activities, and other public and private astronomy functions.

Our Presentation Library contains POWERPOINT™ presentations on variable stars, observing techniques and other astronomical topics. These are available free to the to use in making your own presentations.

1. About the AAVSO

Variable Star Astronomy (VSA) is an AAVSO educational project, originally developed as *Hands-On Astrophysics (HOA)* with funds from the National Science Foundation. It is a flexible set of hands-on educational materials, activities, and investigations, based on the AAVSO's unique electronic database of variable star measurements. Students will be able to experience the excitement of doing real science with real data! By carrying out all aspects of the research process, they can develop and integrate skills in science, math, computing, and other areas. VSA has been converted to a web-based format and is available via the AAVSO website (<http://www.avso.org/educations/vsa>).

VStar is the software that accompanies the activities for VSA. The original DOS-based programs have been ported to a Java platform and are being developed as part of the Citizen Sky project, with funding from the National Science Foundation.



Glenn Chaple, AAVSO member-observer since 1980



Bill Goff, an AAVSO observer since 1981. His telescope is a Planewave 20" CDK with an Apogee U9 camera.

Chris Stephan, AAVSO member-observer since 1975



On January 28, 2010, AAVSO observers Barbara Harris (left) and Shawn Dvorak (right) detected a rare outburst of the recurrent nova U Scorpii, which set in motion satellite observations by the Hubble Space Telescope, Swift gamma-ray satellite, and the Spitzer Space Telescope.





2. The Year in Review

Introduction

The centennial year of the AAVSO was celebrated with two major meetings. The 100th Spring Meeting was held May 21–26, 2011, at The Westin Copley Place Hotel in Boston in conjunction with the 218th meeting of the American Astronomical Society (AAS). The 100th Annual Meeting was held October 4–8, 2011, in Cambridge and Woburn, Massachusetts, at AAVSO Headquarters and the Hilton-Woburn Hotel. The Spring and Annual Council meetings were held at AAVSO Headquarters May 20 and October 4, respectively. For in-depth coverage of the AAVSO Centennial meetings and other centennial events, please read *AAVSO Newsletter* Nos. 49 (July 2011) and 51 (January 2012), and *Journal of the AAVSO*, Volume 40, Number 1 (2012).

Minutes of the 100th Spring Meeting of the AAVSO, Held May 21–26, 2011, Boston and Cambridge, Massachusetts

Gary Walker, Secretary

Friday: Council Meeting

Members of the AAVSO Council gathered for its day-long meeting at Headquarters in Cambridge on May 20, the day before the AAVSO 2011 Spring Meeting/AAS Meeting membership events began. Along with the ordinary business items, including the Secretary's Report and the Treasurer's Report, the agenda included an abbreviated presentation of the Director's Semiannual Report, the full version of which was given at the membership meeting.

Director Arne Henden updated the Council on grant proposals submitted to various agencies. Among the twelve grant proposals submitted, three were not selected for funding; the other nine are still under consideration.

Arne's Semiannual Report to Council was punctuated by details regarding current membership, observation totals for the International Database, updates on AAVSONet assets and their deployment, Bright Star Monitor (BSM) projects, progress on the AAVSO

2. The Year in Review

Photometric All-Sky Survey (APASS), outcomes from his recent travel abroad, future travel plans, observing campaigns, computer hardware changes at headquarters, the identity of the next Janet Mattei Research Fellow, and the many other projects and initiatives that are on the horizon.

Modera (formerly Back Bay Financial) gave an update on our investments and commented on their recent merger with Modera. Treasurer Gary Billings presented his report, which included the current total for the endowment (\$13.495 million), operational expenses at \$0.865 million versus the budget figure of \$1.020 million, and the current tally of 929 members in good standing. The Treasurer also laid out the projected annual expenses and income for the organization through 2012, showing the expected decline in spending and slow but steady rise on the income side over that time.

Arne presented details regarding the 2nd Generation Synoptic Survey (2GSS) (formerly the Photometric Small Synoptic Survey Telescope (PSSST)) proposal. 2GSS would be funded through the Robert Martin Ayers Sciences Fund, and would provide nightly coverage of the entire sky to 17th magnitude in V and I. Council discussed this proposal in detail, particularly with respect to the impact on the observers. They felt that since the technology and funding were available, if AAVSO did not act, others would be glad to jump on the opportunity, and Council voted to proceed with the pilot phase of the program.

Based on the outstanding work completed by Dr. Arne Henden, and with the preliminary findings of the Director's Review Committee in hand, Council was happy to renew his contract with the AAVSO for another five years.

Council voted to name the AAVSO Archives the "Thomas R. and Anna Fay Williams AAVSO Archives" in grateful recognition of Tom and Anna Fay's role as major benefactors to the AAVSO for the preservation of the archives and in thanks to them for their devoted interest in and generosity towards the Association.

Details of future AAVSO meetings, including the organization's Centennial Celebration in October, were discussed. Council also voted to obtain councilor/officer indemnity and employment practices insurance. After a long and productive day, the Council meeting was adjourned.

The AAVSO-related events of the joint AAVSO/AAS meeting in Boston started the next afternoon, Saturday, May 21, with the membership meeting.

Saturday: Membership Meeting, AAVSO Paper Session I, AAVSO Banquet and Awards

The meeting was called to order on Saturday, May 21, at 1 pm and a warm welcome was given by AAVSO President Jaime García to the AAVSO and AAS attendees at the



*Group photo at the 100th Spring Meeting of the AAVSO, Boston, Mass., May 21–25, 2011
(numerous attendees were not present for the photo)*

first official event celebrating the AAVSO centennial. Gary Walker gave the Secretary's Report and Gary Billings gave the Treasurer's Report, which were approved. Director Arne Henden reported on deceased members and friends of the AAVSO: Adriaan Blaauw, James L. Elliot, Edward A. Halbach (age 101), Jeremy H. Knowles, Brian G. Marsden, Leif J. Robinson, Andrew P. Rupp, and Allan R. Sandage. We also noted the passing the AAS past President, John P. Huchra. The attendees stood for a moment of silence.

Director Arne Henden presented his semiannual report to the attendees, and reported that we are having another excellent year. As of this meeting, we had 20.5 million observations in the AAVSO International Database, of which about 75% are visual and 25% are CCD, photoelectric, or photographic. The AAVSO has 1053 members in good standing. In preparation for the Centennial meetings, renovations to Headquarters (not the house interior)—including a suspended ceiling in the meeting room being raised by 18 inches, heating and air conditioning systems moved into a new room, modernization of the upstairs bathrooms, replacement of exterior siding, updated electrical and new security systems, roof access to the Cohen-Menke Observatory site, and many smaller items, as well as a pergola for the house—were completed. The project was slightly over budget, but the difference was covered by Linda and Arne Henden. There are numerous tasks remaining to be done before the Annual meeting and formal dedication of the new Headquarters.

2. The Year in Review

Arne reported that the British Astronomical Association has given the AAVSO for inclusion in the AAVSO International Database approximately 1 million of its observations, mostly visual, that were not previously in our database. In addition, the Royal Astronomical Society of New Zealand has given 9 boxes of observations, estimated to be 200,000 in number, also not previously in our database. Work has begun on digitizing and incorporating them. Arne spoke about the PSSST (Now 2GSS—2nd Generation Synoptic Survey) to explain its place alongside visual, CCD, and photoelectric observations. He also reported that the AAVSO Photometric All-Sky Survey (APASS) is operating quite well; Data Releases 1 and 2 are available, and the survey to date includes 10 million stars over 10,000 square degrees of sky.

AAVSO members William Goff, Steve Smith, Arne Henden, Richard Sabo, Robert Buchheim, and Gary Walker were honored at the AAS/Hubble Space Telescope Heritage Press Conference for their observations of M31-V1, Hubble's first Cepheid in another Galaxy. These observations, gathered through an AAVSO observing campaign announced in *AAVSO Alert Notice 422*, were used to characterize the behavior after all these years for a current Hubble Observation. The photometry was impressive at 19th magnitude.

Mention was made to the membership that there is need for Solar Section leaders, particularly for the Sunspot program. The SID effort is to be lead by Rodney Howe. Interested members were encouraged to contact Headquarters.

President García announced the election results from the preceding Annual Meeting. Elected to council were Edward Guinon, Arlo Landolt, Robert Stein, Donn Starkey, and Michael Koppleman.

Director Henden also spoke of the upcoming Centennial Annual meeting to be held in Cambridge and Woburn in November, and gave some hints of the events to be included in that singular meeting. After discussion, the meeting was adjourned at 2 pm and a short break followed.

Attendees reconvened for AAVSO Paper Session I, during which the first of several groups of papers were presented and discussed. This session was chaired by John Percy and included seven papers on current research from AAVSO members. A list of papers and speakers from all the AAVSO-related sessions of the Spring meeting follows these minutes. Abstracts and other details may be viewed on the AAVSO website, under meetings/archive of prior meetings, and on the meetings section of the AAS website.

The AAVSO banquet was held that evening at AAVSO Headquarters. It was a great pleasure to welcome so many AAS members—and in particular nearly all of the AAS Council members—to the evening. After a delicious buffet dinner, awards were presented. AAVSO Observer Awards were announced for 96 observers reaching visual, photoelectric photometry, and

CCD observation totals milestones; included was an award to Albert Jones of New Zealand for having reached the astonishing milestone of over 450,000 (463,657!) visual observations. The awards were presented to those observers in attendance. The Director's Award for 2011 was presented to David Benn of Klemzig, South Australia, in recognition of his work in porting *Variable Star Astronomy* (evolved from *Hands-on Astrophysics*) software into a modern Java tool. VSTAR became the showpiece for the Citizen Sky project. Arne said, "David is the perfect example of a volunteer who brings to the table expertise not available at headquarters, devotes an enormous amount of time and effort in supporting our organization, and does this without asking for any recognition. This award is only a small token of my appreciation for his contributions."

Following the presentation of awards, Dr. Nancy Morrison of the University of Toledo spoke to the attendees on P Cygni, the high-mass, high-luminosity star known as a Luminous Blue Variable or an S Doradus variable and much studied by amateur and professional astronomers. She described how concurrent spectroscopic and photometric monitoring of P Cyg has been able to shed light on the nature of its variations. Questions and discussion followed her very interesting talk. The evening was concluded by President García, who reminded everyone that, unlike the usual pattern of the Banquet closing the meeting, several paper sessions were yet to come at the joint AAVSO/AAS meeting.

Sunday: AAVSO Scientific Paper Session II, AAVSO/AAS HAD Paper Session, AAS Reception

Sunday was a very full day, with a morning AAVSO Paper Session, an afternoon joint session with the AAS Historical Astronomy Division (HAD,) and the AAS Opening Reception.

AAVSO Paper Session II, chaired by Dr. Arne Henden, was held from 9:30 am to 12 pm. Six AAVSO members gave scientific papers on their research.

The AAS History of Astronomy Division (HAD) held the first of two Special Sessions, titled *Women in the History of Variable Star Astronomy*, from 1:30 to 3. It was organized by Dr. Thomas R. Williams and chaired by Dr. Sara Schechner, and included four papers from AAVSO and AAS members. The second HAD Special Session, titled *Variable Star Astronomy in Theory and Practice*, was also organized by Tom Williams and was chaired by Arne Henden. From 3:20 to 5:30 six AAVSO and AAS members gave papers on their scientific research.

The AAS Opening Reception—which also welcomed AAVSO meeting attendees—was held Sunday evening from 7 to 9:30 at the Fairmont Copley Plaza hotel. It offered a special opportunity for AAVSO members and observers to meet and talk with professional astronomers from all the branches of the field, and vice versa.

2. The Year in Review

Monday: Variable Star Science Plenary Talks, AAVSO-sponsored Variable Star Sessions, AAVSO Poster Session, AAVSO Open House

Monday was also very full, including two plenary talks that included variable star science and two AAVSO-sponsored, variable star special sessions. Astrophysics with Small Telescopes was chaired by Dr. Matthew Templeton, and six papers were presented between 10 and 11:30. Variable Stars in the Imaging Era was chaired by Dr. Lee Anne Willson, and five papers were presented between 2 and 3:30. Also, there was an all-day AAVSO Poster Session 8 am—7 pm which featured 12 posters.

Prior to the first plenary talk, the AAS recognized the AAVSO's centennial—and status as the meeting co-host—with remarks and the presentation of a plaque. AAS President Debra Elmegreen offered her and the AAS' congratulations along with the plaque to Director Arne Henden, who accepted all with great pleasure.



AAS President Debra Elmegreen congratulates Director Henden and the AAVSO.

The day was capped by an evening Open House at AAVSO Headquarters from 7 to 9:30. Attendees enjoyed exploring the remodeled AAVSO Headquarters in its expanded Bay State Road setting while sharing conversation, snacks, and drinks with friends new and old.

The Open House concluded the AAVSO part of the joint meeting (AAS events had run concurrently on Monday and they continued through Thursday), and the very successful 100th Spring meeting of the AAVSO came to an end.

Tuesday—Thursday: non-AAVSO AAS meeting events

AAS meeting events continued through May 26, 2011, and each day included dozens of talks covering a wide range of astronomical topics.

Papers Presented at the Joint Meeting of the American Astronomical Society and the American Association of Variable Star Observers (100th Spring Meeting of the AAVSO), Held in Boston, Massachusetts, May 21–26, 2011

AAVSO Paper Session I, Saturday, May 21, 2011

David Boyd	"Recent Changes in the Orbital Periods of Some Eclipsing SW Sextantis Stars"
David A. Hurdis Tom Krajci	"Secular Variation of the Mode Amplitude-Ratio of the Double-Mode RR Lyrae Star NSVS 5222076, Part 2"
Jaime García	"The Pulsational Behavior of the High Amplitude δ Scuti Star RS Gruis"
Gary Walker	"H α Emission Extraction using Narrowband Photometric Filters"
Matthew R. Templeton Joyce Ann Guzik Arne A. Henden William Herbst	"Preliminary Analysis of MOST Observations of the Trapezium"
David G. Turner K. Moncrieff C. Short Robert F. Wing Arne A. Henden	"AAVSO Estimates and the Nature of Type C Semiregulars: Progenitors of Type II Supernovae"
David Lane R. Ouyed D. Leahy Doug Welch	"The Hunt for the Quark-Nova: A Call for Observers"

AAVSO Paper Session II, Sunday, May 22, 2011

Matthew R. Templeton Michael Saladyga Kevin B. Paxson Robert J. Stine C. Froschlin Andrew Rupp	"New Life for Old Data: Digitization of Data Published in the <i>Harvard Annals</i> "
Kristine Larsen	"The Effect of Online Sunspot Data on Visual Solar Observers"
John Pazmino	"The World Science Festival"

continued on next page

2. The Year in Review

papers and posters, cont.

Richard C. S. Kinne	"Variable Star Observing with the Bradford Robotic Telescope"
Kevin Krisciunas	"Cosmology with Type Ia Supernovae"
David R. Soderblom	"Edwin Hubble's Famous Plate of 1923, and a Hubble-Hubble Connection"

Abstracts of Papers and Posters Presented at the Joint Meeting of the American Astronomical Society and the American Association of Variable Star Observers, Held in Boston, Massachusetts, May 21–26, 2011

AAVSO: Astrophysics with Small Telescopes, Monday, May 23, 2011

Arne A. Henden	"Contributions by Citizen Scientists to Astronomy"
Mike Simonsen	"The Z CamPaign Early Results"
Joseph Patterson	"Cataclysmic Variables in the Backyard"
Gaspar Bakos	"Planet Hunting with HATNet and HATSouth"
Robert E. Stencel	"Lessons Learned During the Recent ϵ Aurigae Eclipse Observing Campaign"
John R. Percy	"Long-Term Visual Light Curves and Modern Visual Observing in Astrophysics"

AAVSO: Variable Stars in the Imaging Era, Monday, May 23, 2011

Margarita Karovska	"Imaging Variable Stars with HST"
Thomas G. Barnes	"Interferometry and the Cepheid Distance Scale"
Brian K. Kloppenborg	"Spots, Eclipses, and Pulsation: The Interplay of Photometry and Optical Interferometric Imaging"

History of Astronomy Division I: Women in the History of Variable Star Astronomy, Sunday, May 22, 2011

Barbara L. Welther	"The Legacy of Annie Jump Cannon: Discoveries and Catalogs of Variable Stars"
Katherine Bracher	"Anne S. Young: Professor and Variable Star Observer Extraordinaire"

continued on next page

papers and posters, cont.

- | | |
|-----------------|---|
| Maria J. Cahill | "The Stars Belong to Everyone: Astronomer and Science Writer Dr. Helen Sawyer Hogg (1905–1993)" |
| Kristine Larsen | "Variable Stars and Constant Commitments: The Stellar Career of Dorrit Hoffleit" |

History of Astronomy Division II: Variable Star Astronomy in Theory and Practice, Sunday, May 22, 2011

- | | |
|--|--|
| Martin Lunn | "King Charles' Star: A Multidisciplinary Approach to Dating the Supernova Known as Cassiopeia A" |
| Linda M. French | "John Goodricke, Edward Pigott, and Their Study of Variable Stars" |
| Matthew Stanley | "The Development of Early Pulsation Theory, or, How Cepheids Are Like Steam Engines" |
| Wayne Osborn | "Frank Elmore Ross and his Variable Star Discoveries" |
| Steven D. Kawaler
Candice J. Hansen | "Stellar Pulsation Theory from Arthur Stanley Eddington to Today" |
| John R. Percy | "The AAVSO Photoelectric Photometry Program in its Scientific and Socio-Historic Context" |

AAVSO Poster Session, Monday, May 23, 2011

- | | |
|---|---|
| Arne A. Henden
Stephen E. Levine
Dirk Terrell
T. C. Smith
Doug Welch | "Data Release 3 of the AAVSO All-Sky Photometric Survey (APASS)" |
| Mike Simonsen | "AAVSONet: The Robotic Telescope Network" |
| Aaron Price
Gary Billings
B. Gary
Brian K. Kloppenborg
Arne A. Henden | "High Speed UBV Photometry Of Epsilon Aurigae's 2009–2011 Eclipse" |
| Elizabeth O. Waagen | "20 Million Observations: the AAVSO International Database and its First Century" |

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2. The Year in Review

papers and posters, cont.

Michael Saladyga
Elizabeth O. Waagen

"Professional Astronomers in Service to the AAVSO"

Rebecca Turner
Aaron Price
Ryan Wyatt

"The Citizen Sky Planetarium Trailer"

Frederick John Vrba
J. A. Munn
C. B. Luginbuhl
T. M. Tilleman
Arne A. Henden
H. H. Guetter

"Status of the USNO Infrared Astrometry Program"

David G. Turner
J. M. Rosvick
D. D. Balam
A. A. Henden
D. J. Majaess
D. J. Lane

"Membership of the Planetary Nebula Abell 8 in the Open Cluster Bica 6 and Implications for the PN Distance Scale"

Matthew R. Templeton

"Amateur Observing Patterns and Their Potential Impact on Variable Star Science"

Richard C. S. Kinne
Michael Saladyga
Elizabeth O. Waagen

"An Overview of the Evolution of the AAVSO's Information Technology Infrastructure Between 1965–1997"

Aaron Price

"Rasch Analysis of Scientific Literacy in an Astronomical Citizen Science Project"

Brian K. Kloppenborg
Aaron Price
Rebecca Turner
Arne A. Henden
Robert E. Stencil

"Collaborative Research Efforts For Citizen Scientists"

New Members Accepted at the Spring Meeting, May 21, 2011

- | | |
|--|--|
| <p>Au, Yu Shan Aiken, Hong Kong
 Abegglen, Heinz, Switzerland
 S Arminski, Andrzej, Poland
 S Arndt, Martina, MA
 Attlesey, Stewart, Canada
 Blanco, Gerardo, Argentina
 Boardman, James, WI
 Bosh, Amanda, MA
 Brickley, Mark, England
 Brinsfield, James, CA
 Bulger, Henry, NM
 Burgess, Scott, ME
 Calderwood, Tom, MA
 Chamberlin, Joan, ME
 Charles, Monty, England
 Ciocca, Marco, KY
 Clark, Larry, NY
 Clugston, William, WA
 Cook, Michael, Canada
 Cottle, James, CA
 Curtis, Christopher, England
 Darlington, Graham, England
 Delchamps, Stephen, IL
 Durkee, Russell, MN
 Edens, Thomas, NC
 Engle, Scott, PA
 Fedeli, Fabio Mario, Italy
 Fischler, Evan, ND
 Guerard, Carlos-Kjell, France
 Halloran, Martin, Australia
 Hatfield, James, WV
 Hergenrother, Carl, AZ
 Hoskin, Arnold, IL
 Hubbell, Gerald, VA
 Hudson, Ken, CA
 Johns, Sherman, AE
 Johnson, Carol, CA
 Kafka, Styliani, DC</p> | <p>Kandah, Basem, MI
 Kearns, Martin, Spain
 Klekamp, Thomas, LA
 Koziol, Jack, IL
 Kuplin, Robert, AZ
 Lacombe, Hugues, Canada
 Lewis, Jeff, AZ
 Maasho, Aklilu, TN
 S Maerz, Brian, MA
 Makarios, Selene, CA
 Makela, Veikko, Finland
 Marcoux, Francois, Canada
 Melso, Nicole, PA
 Morelle, Etienne, France
 Muyllaert, Eddy, Belgium
 Nagle, John, LA
 O'Connell, Michael, Ireland
 O'Morain, Christopher, England
 Phung, Giai Oai, Canada
 Richmond, Michael, NY
 Riordan, Robert, NV
 Rybak, James, CO
 Shaffer, Sherrill, WY
 Shah, Nirav, NJ
 Spielbusch, Stanley, AZ
 Thompson, Pamela, CA
 Ulowitz, Joseph, IL
 Virtanen, Jani, Finland
 Volpe, Anthony, England
 Wagner, Richard, Canada
 Walsh, Laura, Canada
 Wandless, Gregory, VA
 Ward, Glen, WV
 Wilson, Matthew, NJ
 Young, David, MA
 Zardin, Danilo, Italy
 Zecchin, Franck, France</p> |
|--|--|

S = sustaining membership

2. The Year in Review

Deceased Members, Observers, and Colleagues

Blaauw, Adriaan, DC
Elliot, James L., MA
Halbach, Edward A., CO
Knowles, Jeremy H., RI

Marsden, Brian G., MA
Robinson, Leif J., MA
Rupp, Andrew P., NY
Sandage, Allan R.

AAVSO Director's Award Recipient

David Benn of Klemzig, South Australia was awarded the AAVSO Director's Award in recognition of his "work in porting Variable Star Astronomy (Hands-on Astrophysics) software into a modern Java tool. VSTAR became the showpiece for the Citizen Sky project. David is the perfect example of a volunteer who brings to the table expertise not available at headquarters; devotes an enormous amount of time and effort in supporting our organization; and does this without asking for any recognition. This award is only a small token of my appreciation for his contributions."



David Benn

AAVSO Observer Awards

Presented or announced at the 100th Spring Meeting, Boston, Massachusetts, May 21–26, 2011

<i>Award/recipient</i>	<i>Affiliation**</i>	<i>Country/State</i>	<i>Interval</i>	<i>Total</i>
<i>Over 450,000 Visual Observations*</i>				
Albert Jones	09	New Zealand	1960–2010	463,657
<i>Over 175,000 Visual Observations*</i>				
Rod Stubbings	09	Australia	1997–2010	184,763
<i>Over 150,000 Visual Observations*</i>				
Georg Comello	05	Netherlands	1966–2010	151,898
<i>Over 75,000 Visual Observations*</i>				
Attila Kosa–Kiss	07	Romania	1976–2010	79,377
Jose Ripero Osorio	06	Spain	1978–2010	78,412
Glenn Chaple		USA	1980–2010	78,373
Sandor Papp	07	Hungary	1983–2010	77,167
Frank Vohla	04	Germany	1990–2010	76,212
Roger Kolman		USA	1962–2010	75,000
<i>Over 50,000 Visual Observations*</i>				
Patrick Abbott	08	Canada	1982–2010	51,363
<i>Over 25,000 Visual Observations*</i>				
Alfredo Glez–Herrera		Spain	1990–2010	36,460
Christopher Spratt	08	Canada	1961–2010	33,092
Guy Hurst	03	England	1974–2010	29,181
<i>Over 10,000 Visual Observations*</i>				
Patrick Wils	13	Belgium	1976–2010	14,088
Lajos Bartha	07	Hungary	1949–2010	13,108
Michael Kohl		Switzerland	1966–2010	11,895
Claude Peguet	01	France	1981–2010	11,247
Richard Tyson		USA	1972–2010	10,722
Jozsef Erdei	07	Hungary	1995–2010	10,646

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2. The Year in Review

Observer Awards, cont.

<i>Award/recipient</i>	<i>Affiliation**</i>	<i>Country/State</i>	<i>Interval</i>	<i>Total</i>
<i>Over 1,000 Visual Observations*</i>				
Tony Markham	03	England	2009–2010	2,845
Salvador Aguirre		Mexico	2006–2010	1,863
Jan Starzomski		Poland	2005–2010	1,498
Carlos Adib		Brazil	2009–2010	1,497
Gyorgy Soponyai	07	Hungary	2008–2010	1,401
Paolo Siliprandi	11	Italy	2005–2010	1,361
<i>Over 100 Visual Observations*</i>				
Gonzalo Beltran		Bolivia	2008–2010	913
Alan Baldwin	09	New Zealand	2009–2010	847
Kim Pukero		Finland	2008–2010	695
Artemy Kilin		Russia	2010–2010	493
Brad Young		USA	2003–2010	341
Jean Pierre Sciolla	01	France	2009–2010	303
Walter Basso		Canada	2010–2010	288
Robert Schippers		Netherlands	2009–2010	275
Christian Martin		USA	2009–2010	271
Kostas Panourakis		Greece	2008–2010	242
Maurice Fitzgerald		USA	2009–2010	235
Daryl Stager		USA	2010–2010	233
Denise Terpstra		USA	2010–2010	230
Bohdan Widla		Poland	2009–2010	190
Alexander Oertlin	04	Germany	2009–2010	186
Jesus Blanco Gonzalez		Spain	2009–2010	162
Ryan Fuller		USA	2009–2010	161
Marcel Popescu		Romania	2009–2010	161
Robert Wilson		USA	2008–2010	153
Robin Andersson		Sweden	2010–2010	137
Glen Schrader		Australia	2009–2010	137
Michael Hessom		USA	2006–2010	131
Thomas Zimmermann	04	Germany	2009–2010	129
Gerardo Jimenez	06	Spain	2001–2010	128
Christopher Wyatt		Australia	2008–2010	123
Dirk Lehmann		Germany	2002–2010	108
Shervin Taheran		USA	2009–2010	107

continued on next page

Observer Awards, cont.

<i>Award/recipient</i>	<i>Affiliation**</i>	<i>Country/State</i>	<i>Interval</i>	<i>Total</i>
Linda O'Connor		USA	2009–2010	104
Eugene Crist		USA	2010–2010	100
<i>Over 300,000 CCD Observations*</i>				
Ray Tomlin		USA	2006–2010	395,018
Robert James		USA	1953–2010	366,142
<i>Over 200,000 CCD Observations*</i>				
Bart Staels	13	Belgium	1994–2010	239,908
<i>Over 100,000 CCD Observations*</i>				
Leroy Snyder		USA	1970–2010	154,639
Franz-Josef Hambsch	13	Belgium	2002–2010	131,242
Etienne Morelle	01	France	2005–2006	122,810
David Boyd	03	England	2003–2010	104,126
Timothy Crawford		USA	2001–2010	101,207
<i>Over 50,000 CCD Observations*</i>				
Keith Graham		USA	1981–2010	90,697
William Goff		USA	1981–2010	75,101
Arto Oksanen	12	Finland	2001–2010	70,046
Robert Koff		USA	2003–2010	59,459
Peter Nelson		Australia	1990–2010	56,719
<i>Over 10,000 CCD Observations*</i>				
Chris Stockdale		Australia	2004–2010	24,158
Jani Virtanen	12	Finland	1999–2010	11,029
Lienhard Pagel	04	Germany	2009–2010	10,790
Peter Kalajian		USA	2009–2010	10,673
<i>Over 1,000 CCD Observations*</i>				
Robert Henderson		England	2009–2010	8,070
Gary Vander Haagen		USA	2006–2010	4,153
Stefano Padovan		Spain	2009–2010	4,081
Richard Berg		USA	1956–2010	3,535
Mika Luostarinen	12	Finland	2000–2010	3,332

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2. The Year in Review

Observer Awards, cont.

<i>Award/recipient</i>	<i>Affiliation**</i>	<i>Country/State</i>	<i>Interval</i>	<i>Total</i>
John Menke		USA	2007–2010	3,203
Caisey Harlingten		England	2010–2010	2,837
Timo Kantola	12	Finland	2009–2010	2,727
Martin Crow	03	England	2009–2010	1,944
Javier Ruiz Fernandez		Spain	1990–2010	1,936
Eric Southgate		Australia	2009–2010	1,935
Jari Suomela		Finland	2008–2010	1,894
Emery Erdelyi		USA	2008–2010	1,788
Maurizio Martinengo		Italy	2002–2010	1,415
Barbara Harris		USA	2002–2010	1,242
Kevin Paxson		USA	2001–2010	1,218
Jeroen Van Wassenhove	13	Belgium	1983–2010	1,206
Michael Sallman		USA	2005–2010	1,198
Kirill Sokolovsky	02	Germany	2000–2010	1,089
Mark Salisbury		England	2009–2010	1,087
Juda Curto Amigo		Spain	2005–2010	1,005
<i>Over 1,000 PEP Observations*</i>				
Charles Calia		USA	2002–2010	1,095
<i>Over 100 PEP Observations*</i>				
Adrian Ormsby		USA	2006–2010	270
John Martin		USA	2009–2010	132
<i>Over 100 Photographic Observations*</i>				
Robert Kaufman		Australia	2008–2010	219

* Years include total AAVSO observing interval (not only PEP/CCD/Ptg observing).
Total includes only visual or PEP/CCD/Ptg observations, depending on award.

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Observer Awards, cont.

**These symbols indicate observers are also affiliated with the groups below:

- 01 Association Française des Observateurs d'Étoiles Variables (AFOEV)
- 02 Association of Variable Star Observers "Pleione" (Russia)
- 03 British Astronomical Association, Variable Star Section
- 04 Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne E.V. (BAV)
(Germany)
- 05 Koninklijke Nederlandse Vereniging voor Weeren Sterrenkunde, Werkgroep
Veranderlijke Sterren (Netherlands)
- 06 Madrid Astronomical Association M1 (Spain)
- 07 Magyar Csillagászati Egyesület, Valtócsillag Szakcsoport (Hungary)
- 08 Royal Astronomical Society of Canada
- 09 Royal Astronomical Society of New Zealand, Variable Star Section
- 10 Variable Stars South
- 11 Unione Astrofili Italiani (Italy)
- 12 Ursa Astronomical Association, Variable Star Section (Finland)
- 13 Vereniging voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium)

2. The Year in Review

Minutes of the 100th Annual Meeting of the AAVSO, Held October 4–8, 2011, Cambridge and Woburn, Massachusetts

Gary Walker, Secretary

Tuesday: Council meeting

The AAVSO Council met at Headquarters in Cambridge on October 4, the day before the Annual Meeting began. Along with the regular business items, including the Secretary's Report and the Treasurer's Report, the agenda included a short Director's Report, the full details of which were given at the Membership Meeting.

Director Dr. Arne Henden reported that we were successful in obtaining grants from the Bob Ayers Sciences Fund for 2GSS (Formerly called PSSST) for hardware for the pilot phase. We expect to receive additional funding in 2012, provided that the pilot phase is successful. Dr. Aaron Price spoke on his 2 Eyes/3D grant, which includes a substantial amount for the AAVSO. Arne reported that Donna Young's Chandra grant proposal has been funded to cover the next ten years; she will be based at AAVSO Headquarters. In addition, there are funds for the AAVSO from Citizen Sky for 2012. He also reported six other grant proposals are still pending.

The Director's Annual Report to Council included details regarding current membership, observation totals for the International Database, updates on AAVSONet assets and their deployment, Bright Star Monitor (BSM) projects, APASS progress, the 2nd Generation Synoptic Survey (2GSS), outcomes from recent collaborations, future travel plans, observing campaigns, the next Janet Mattei Fellow, and many other projects. Details are included in the Membership Meeting section below.

Treasurer Gary Billings presented the Treasurer's Report, which included the current totals for the endowment (\$11.623 million), operational expenses at \$1,410,791 versus the plan of \$1,020,000. He said that timing issues affect these numbers, and are expected to be more favorable when the books close. The Treasurer also laid out the projected annual expenses and income for the organization through 2012, showing the expected decline in spending and slow but steady rise on the income side over that time.

Arne Henden gave the Development Report for Mike Simonsen. Since 2008 the increase in donations and grants has been far more than in prior years, before a Development and Membership Director was hired. Also, 79 individuals joined the AAVSO as members in the past six months, for a total membership of 1,156.

2. The Year in Review

Arne reported that PayChex is now our outsourced human resource company, covering paycheck and insurance administration. In addition, they are generating an employee handbook that will replace the current outdated one.

Jamie García gave the report of the Nominating Committee: nominated for Council to be voted on by the membership at the 2011 annual meeting were Roger Kolman, Chryssa Kouveliotou, Kevin Marvel, Kevin Paxon, Robert Stine, David Turner, and Christopher Watson.

Elections of Officers were held by the Council members. Mario Motta, MD, was re-elected President, Jenó Sokolovsky First Vice President, Michael Koppleman Second Vice President, Gary Billings Treasurer, and Gary Walker Secretary. All terms are for one year.

Following more discussion, the Council meeting was adjourned.

Wednesday: AAVSO History Paper Sessions 1–4, Leadership Banquet

The meeting started on Wednesday with a hot breakfast which was enjoyed by all (the hotel-catered hot breakfast buffet in the meeting room itself, which we have offered at the last few annual meetings, has become a real hit with attendees, as it is delicious and provides the opportunity for a nutritious, substantial breakfast without having to take time to go to a restaurant before the first session). The meeting was called to order and attendees were welcomed by President Jaime García. AAVSO History Sessions 1 and 2, titled Women in AAVSO History, occupied the morning, with four papers given by members. In the afternoon History Sessions 3 and 4, titled The History of Variable Star Organizations, were held, and included six papers from members. Information on authors and titles from these and all meeting sessions is given in the list following these minutes.



On Wednesday evening, a leadership banquet for present and past officers, councilors, staff, award winners, and benefactors was held by invitation in the

Some of the AAVSO's top benefactors and past officers gathered for a photo at the leadership banquet. On the wall above them is part of the 100-year light curve of SS Cygni, and historical portraits of AAVSO's observers and officers.

yet-to-be-dedicated Dorrit Hoffleit Conference Center at AAVSO Headquarters. Over 75 people attended and greatly enjoyed the evening of dinner, conversation, remarks (including a well-received appeal from Development Director Mike Simonsen for everyone's continued leadership through their philanthropic support of the AAVSO), and group photos. Individuals not present in person were represented during the evening by the many historical posters made by AAVSO Archivist Dr. Michael Saladyga showing photos and names of the directors, officers, council members, staff, volunteers, top observers, and other luminaries from the past century.

Thursday: Dedication of AAVSO Headquarters, the Thomas R. and Anna Fay Williams Historical Archives, and the Dorrit Hoffleit Conference Center, AAVSO Birthday Party, Amphibious Tour of Boston and Lobsterbake

On Thursday morning school buses transported attendees to AAVSO Headquarters in Cambridge for the Dedication ceremonies, luncheon, and preparation of the time capsule. Everyone gathered outside near the front door in the perfect weather and Director Arne Henden welcomed them. David B. Williams, who had been President when the Bay State Road property was purchased, made a brief speech, and then he and Arne unveiled the sign for the Clinton B. Ford Astronomical Research Center—the same sign that had graced the Birch Street building. The ribbon—appropriately suspended between two telescopes—was cut using AAVSO-historically significant scissors.

Everyone then crowded into the foyer and onto the stairs and around the front door so they could hear Arne's remarks leading to the dedication of the Thomas R. and Anna Fay Williams Historical Archives, whose door is just inside the front door. Tom and Anna Fay generously enabled the creation, organization, cataloguing, and housing of the AAVSO archives with its quantities of paper records and material objects.

Everyone then turned around to face the door of the AAVSO meeting room, which opens off the other side of the foyer. Development Director Mike Simonsen spoke about the bequest from Dorrit Hoffleit which, along with generous donations from the Henden, had enabled the creation of an efficient, comfortable conference center for AAVSO and other events, and the dedication of the Dorrit Hoffleit Conference Center was underway. Everyone went inside and admired the space and the beautiful portrait



Anna Fay and Tom Williams at the entrance to the AAVSO Archives dedicated in their name.

2. The Year in Review

of Dorrit gracing the wall, and then sat down to listen to dedicatory remarks from former President David B. Williams on the several locations of the AAVSO Headquarters during its first century, American Astronomical Society (AAS) Press Officer and former *Sky & Telescope* magazine Editor Rick Fienberg on the history of the AAS-AAVSO relationship and the growth of professional-amateur collaborations in astronomy, Maria Mitchell Observatory Director and chief astronomer Dr. Vladimir Strel'nitski on Dorrit Hoffleit, and Harvard-Smithsonian Center for Astrophysics Director Dr. Charles Alcock on the development of research in related fields and the future of variable star research and the role AAVSO observers will continue to play (crucial). The speakers' remarks were enthusiastically received.

Attendees then started exploring the AAVSO items in the room: the historical posters created by Mike Saladyga giving a Who's Who in AAVSO history, the 100-year light curve of SS Cyg created by Sara Beck wrapped around all four walls near the ceiling that carried on the tradition of displaying the ever-growing SS Cyg light curve at AAVSO meetings by wrapping it around the pier of the Harvard College Observatory 15-inch telescope, and the large lighted glassed display cabinet showing representative items and photographs from the era of each of the Directors: Olcott, Campbell, Mayall, Mattei, and Henden. Lunch was served and good discussions were had by all.

A copy of Tom Williams and Mike Saladyga's new book on the history of the AAVSO was passed around for everyone to sign and write a message to the future. It was to be added to other items in the AAVSO time capsule (to be opened at the 150th anniversary celebration) being orchestrated by Mike Simonsen.



Longest-time members present were Owen Gingerich and Martha Stahr Carpenter, who were given the honor of cutting the AAVSO's birthday cake.

The AAVSO Birthday Party started with a bagpipe flourish from Ron Zissell, who marched in playing "Happy Birthday". Everyone sang Happy Birthday to the AAVSO, with Gerry Dyck accompanying on the Henden's piano which resides in the conference center. The two beautiful cakes (baked by Aaron Price's pastry chef wife Erma) were ceremonially cut by Dr. Martha Stahr Carpenter and Dr. Owen Gingerich (both lifetime AAVSO members since the 1940s), and cake and ice cream were distributed by AAVSO staff. Mike Simonsen displayed the 2061 time capsule, which will be stored at AAVSO Headquarters, and



AAVSOers at the Headquarters rededication ceremonies.

showed the articles, letters, and other items being included, and offered an invitation for attendees to think of other suitable items for the future to view. Buses arriving to return attendees to the hotel forced the party to come to an end.

Later that afternoon, everyone trooped back onto a bus to head into Boston to take part in a tour of the city on land and in the Charles River via Duck Boat (a large WWII surplus amphibious assault vehicle now painted in bright colors). After a somewhat hair-raising bus ride into the city through rush hour commuter traffic, we climbed aboard our Ducks and toured downtown Boston on land and then were treated to a ride in the Charles River to see the lights of Boston come on as the sun finished setting. Because we needed to use two Ducks, our group was split, one part leaving and the other part waiting for the second Duck to fight its way to the departure area through extraordinarily heavy traffic (on top of rush hour, the Stanley Cup hockey trophy was being paraded by the champion Boston Bruins through the tour area at the exact time of our tour). Our two Ducks crossed each other in the river to much good natured chaffing from both sides. The tour was cold, especially on the river, but wonderful. Everyone reconnected at nearby Legal Seafood restaurant for a delicious lobsterfest and more kidding and conversation. The bus then took all of the tired partiers home.

Friday: Membership Meeting, Scientific Sessions 1 and 2, History Session 5

On Friday morning, with the hotel's hot breakfast putting a smile on everyone's faces, the membership meeting was called to order at 9:00 and a warm welcome was given by AAVSO President Jaime García. Gary Walker gave the Secretary's Report and Gary Billings gave the Treasurer's Report, which were approved. Director Arne Henden reported on deceased members and friends of the AAVSO: Thomas Cragg, Allan Hastings, Bruce McHenry, Richard Schwartz, Fred West's wife Margaret, Wayne Warren's wife Martha,

2. The Year in Review

Barbara Kinne (Headquarters staff member Richard (Doc) Kinne's mother), Elizabeth Messick (Doc's foster sister), and Apple co-founder Steve Jobs. The membership stood for a moment of silence.

In his Annual Report to the membership, Director Arne Henden reported that we have a total of 20.7 million observations in the AID (AAVSO International Database). The breakdown of observations is approximately 75% visual and 25% CCD, photoelectric, and photographic. We had 79 members join over the past six months, bringing the 12-month total to 155; two-thirds of these are from the USA and one-third from other countries. Our dues-paying membership now stands at 1156. Now that we are reporting only numbers of members whose dues are up to date, we can see better how the membership is growing. AAVSO member Dr. Douglas Welch is the third Janet A. Mattei Research Fellow; he worked at Headquarters during the summer of 2011. Some of the accomplishments for the year Arne reported on included the revision of the visual observing manual; the recognition of the observing campaign on M31_V1 (the first variable in M31 discovered by Edwin Hubble) at the AAS and HST Press Conference at the AAS Meeting in May; many other successful observing campaigns including those on T Pyx and V445 And; the introduction of Digitizer Awards, recognizing the contributions of those who digitize historical, published, or other selected variable star observations for inclusion in the AAVSO International Database (AID); the incorporation in the AID of approximately 96% of the over one million observations in the RASNZ historical database; the generation and publication of hundreds of sequences, modification of the AAVSO Variable Star Plotter to improve flexibility of usage; and planning for and executing all of the 2011 events in celebration of the AAVSO's centennial.

Arne reported that 52 solar observers had earned AAVSO Solar Observer Awards, 51 for Sunspots and one for Sudden Ionospheric Disturbances (SID); a special solar observer commendation was also being awarded. He also announced that the William Tyler Olcott Award for Distinguished Service, two Honorary AAVSO Memberships, and two Special Commendations were to be awarded. Names of all award recipients were to be announced at the AAVSO Banquet Saturday evening.

Arne followed with a summary of the status of current and pending grants, including a grant awarded to the AAVSO by the Robert M. Ayers Science Foundation for the pilot phase of 2GSS, a survey that will image the entire sky every night in V and I'. The camera is a 12-inch astrograph with resolution of 2 arc-seconds per pixel, generating 0.5 terabyte of data per night. It will be located at Vermillion Cliffs, Colorado, at Jerry Foote's observatory. 2GSS plans to offer immediate access, 2 colors, with FWHM much better than existing surveys, coverage of the entire sky each night, 50 million stars per night, magnitude 17 limit - better than LSST (the Large Synoptic Survey Telescope).

The impact of this survey on AAVSO observations was discussed. In summary, it will be available for follow-up on Alerts and the photometry degrades fainter than 15th magnitude, so CCD and some visual observers have a niche at the fainter end. It will have one-day cadence, so coverage of the RR Lyrae/Eclipsing Binaries will not be affected. It will only cover V and I, leaving UBRI, and u' g' r' z' for CCD observers. CV's will not be affected except for some detections. 2GSS saturates at magnitude 10-11, so anything brighter than this will not be covered in the survey. It will have difficulty near full moon, and near the horizon. The prototype is funded, but additional scopes will require future grants. Operation is expected to start in 2012–2013. The Director issued a Call to Action for the next three years for visual observers to be very active in covering all the legacy stars, to provide a good overlap to correlate the 2GSS photometry and visual data.

A discussion was initiated about the reduction of visual observing numbers. It was noted that the peak had been 300,000 observations per year, and it is now about 200,000 per year. Simultaneously, CCD observations have grown to 900,000 per year. Causes of the reduction were suggested as the aging of the observers, high output observers passing away, observers changing from visual to CCD observing, the great visual observer Albert Jones slowing down with reaching his 90s, and the cloudy weather, unsubstantiated by data, but strongly mentioned in an anecdotal sense.

The agenda then turned to the subject of future AAVSO membership meetings. Rebecca Turner, Project Manager and Sponsored Research Officer, gave a report on plans for future meetings and announced the following: Spring 2012, May 22–25, 2012, Big Bear, CA (joint meeting with the Society for Astronomical Sciences); Annual 2012, October 25–28, 2012, Woburn, MA; Spring 2013, May 15–18, 2013, Appalachian State University, Boone, NC.

President Jamie García announced that Roger Kolman, Chryssa Kouveliotou, Robert Stine, David Turner, and Christopher Watson had been elected to council. The membership meeting then adjourned shortly after 11:00.

Following the meeting, Thomas R. Williams and Michael Saladyga read excerpts from and autographed copies of their new book, *Advancing Variable Star Astronomy: The Centennial History of the AAVSO*. Tom and Mike were besieged by excited and happy AAVSOers eagerly leafing through the extensive and detailed chronicle of the AAVSO's first hundred years. After the readings and during the signings, we were entertained by Tom Callinan, Connecticut's State Troubadour, who had written a wonderful ballad about William Tyler Olcott, the founding of the AAVSO, and the work of its observers, called "Heavenly Gazetteers."

2. The Year in Review

After lunch, Scientific Paper Sessions 1 and 2 were held, with nine papers presented on attendees' current research. These two sessions were followed in the evening by History Session 5, with three presentations by members. Perhaps the highlight was the 50 years of recollections by Charles Scovil, who has seen most everything in the organization.

Saturday: Scientific Sessions 3, 4, and 5, Poster Session, Centennial Banquet, Awards, Banquet Speaker

Saturday morning and afternoon were filled with papers and posters. Scientific Paper Sessions 3 and 4 took place in the morning, and Session 5 was held after lunch. In total, 13 papers were presented. Session 5 was followed by a Poster Session and much general discussion. The science portion of the meeting concluded at 5:00.

Before attendees returned to their rooms to prepare for the banquet, many group photos were taken to commemorate the centennial, including everyone ever serving as a Councilor, Officer, Committee Chair, member for more than so many years, international attendees, women attending, etc., etc., etc.

The AAVSO Centennial Banquet was held Saturday evening at the Hilton-Woburn Hotel, the meeting venue, and a wonderful time was had by all. After a delicious buffet banquet, awards were presented.

The William Tyler Olcott Award for Distinguished Service was presented to Brian A. Skiff "for his unwavering support of variable star astronomy and observing, in both the professional and non-professional realms, through his ambassadorial online presence as friend and mentor to those yearning to learn more about variable stars and astronomy in general, as well as his tenacious dedication to the betterment of astronomical data worldwide."

Honorary AAVSO Membership was bestowed on AAVSO members Georg Comello of the Koninklijke Nederlandse Vereniging Voor Weer-en Sterrenkunde, Werkgroep Veranderlijke Sterren, and Albert F. A. L. Jones, OBE of the Royal Astronomical Society of New Zealand and of Variable Stars South, for their contributions to the AAVSO and to variable star astronomy.

Two members were given special recognition with a plaque and citation: Thomas A. Bretl, in recognition of his outstanding volunteer efforts in the creation of hundreds of new and revised sequences for AAVSO program stars; and Jan A. Smit, in recognition of his visual observations of Southern Hemisphere variable stars, minor planet occultation work, mentoring of many younger observers in the art of variable star observing, and education efforts in introducing basic astronomy to the public in Southern Africa.

AAVSO Solar Observer Awards, 51 for Sunspots and one for Sudden Ionospheric Disturbances (SID), were announced; Gerry Dyck was present to receive his award for 1500 Sunspot reports. A special solar observer commendation was also awarded to Peter King for his achievement of 1500 sunspot observation reports and 105 SID observation reports.

John Toone, representing the British Astronomical Association, very graciously presented a plaque of congratulations from the BAA to the AAVSO on achieving its centenary; Arne happily accepted it on behalf of the AAVSO. John then made another presentation, that of the BAA Variable Star Section's third Charles Butterworth Award, to Michael A. Simonsen, in recognition of his outstanding contribution to the development of charts and sequences. Mike was, uncharacteristically, rendered speechless by this honor.

Following the presentation of awards, attendees were treated to an entertaining talk by Dr. Owen Gingerich, Professor Emeritus of Astronomy and of the History of Science at Harvard University, a senior astronomer emeritus at the Smithsonian Astrophysical Observatory, and an AAVSO member since he joined at age 16 in 1947. Owen spoke on "Centennial Highlights in Astronomy," dividing the century into its ten decades and selecting a single highlight from that decade. Owen's remarks, along with all other presentations from the centennial meeting, will be published in *The Journal of the AAVSO*, Volume 40, Number 1. After enthusiastic thanks to Owen by attendees, Jaime García concluded his duties as President by passing the traditional gavel to Mario Motta, MD, the first AAVSO President of its second century, and proclaiming the Centennial Celebration complete.



Group photo at the 100th Annual Meeting of the AAVSO, Cambridge and Woburn, Mass. October 4–8, 2011

2. The Year in Review

Papers and Posters Presented at the 100th Annual Meeting of the AAVSO, Held in Cambridge and Woburn, Massachusetts, October 4–8, 2011

Variable Star Astronomy History and AAVSO History

Wednesday, October 5, 2011

History Session 1: Women in AAVSO History

Kristine Larsen	"The Career and Contributions of Martha Stahr Carpenter: Between a Rock and (Several) Hard Places"
Michael Saladyga	"Margaret W. Mayall in the AAVSO Archives"

History Session 2: Women in AAVSO History

Elizabeth O. Waagen	"Guiding Forces and Janet A. Mattei"
Thomas R. Williams	"The AAVSO Widow—or should we say Spouse?"

History Session 3: The History of Variable Star Organizations

John Toone	"BAA VSS 1890–2011"
Josch Hamsch, Joachim Hübscher	"Introduction to BAV"
Patrick Wils Eric Broens Hubert Hautecler Frans Van Loo	"The 'Werkgroep Veranderlijke Sterren' (Working Group Variable Stars) of the Belgian 'Vereniging Voor Sterrenkunde' (Society for Astronomy)"

History Session 4: The History of Variable Star Organizations

Stan Walker Albert Jones (read by Don Starkey)	"The RASNZ Variable Stars Section and Variable Stars South"
Josch Hamsch J. -F. LeBorgne E. Poretti the GEOS association	"The GEOS Association of Variable Star Observers"
David B. Williams Marvin E. Baldwin	"The Visual Era of the AAVSO's Eclipsing Binary Program"

continued on next page

papers and posters, cont.

Friday, October 7, 2011

History Session 5: Variable Star Observers

Roger S. Kolman Mike Simonsen	"Walking With AAVSO Giants—A Personal Journey"
John E. Bortle Charles Scovil	"Variable Star Observers I Have Known"
Tony Hull	"Appreciation for Clint Ford and the AAVSO of Fifty Years Ago"

Paper Sessions

Friday, October 7, 2011

Paper Session 1

Mario Motta, M.D.	"Medical Effects of Poor Lighting"
Seiichi Sakuma	"Star Watching Promoted by the Ministry of the Environment, Japan"
Karen J. Meech	"An Amateur-Professional International Observing Campaign for the EPOXI Mission: New Insights Into Comets"
John Percy Drew MacNeil Leila Meema-Coleman Karen Morenz	"High School Students Watching Stars Evolve"
Caroline Moore	"The World's Strangest Supernova May Not Be A Supernova At All"

Paper Session 2

Paula Szkody Boris Gaensicke Arne Henden Steve Howell Janet Mattei Anjum Mukadam Ed Sion Matthew Templeton Dean Townsley Elizabeth Waagen Gary Walker	"Twenty-eight Years of CV Results With the AAVSO"
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2. The Year in Review

papers and posters, cont.

Robert Alan Hatch	"Inventing Mira Ceti: First Inklings, Second Guesses, Second Thoughts"
Barry B. Beaman	"Illinois—Where Astronomical Photoelectric Photometry Grew Up"
Gerald P. Dyck	"The Variable Star Observations of Frank E. Seagrave"

Saturday, October 8, 2011

Paper Session 3

Rodney Howe	"Solar Cycle 24—Will It Be Unusually Quiet?"
Jamie Riggs	"A Generalized Linear Mixed Model for Enumerated Sunspots"
Sebastian Otero	"Data Evolution in VSX: Making A Good Thing Better"
Christopher L. Watson	"VSX: The Next Generation"
Stephanie J. Slater	"Exploring the Breadth and Sources of Variable Star Astronomers' Astronomy Knowledge: First Steps"

Paper Session 4

Josch Hamsch	"Intense Observations of Cataclysmic Variables, RR Lyr Stars and High Amplitude Delta Scuti (HADS) Stars"
Jerry Horne	"RS Sge—Looking for Eclipses"
Horace A. Smith	"Things We Don't Understand About RR Lyrae Stars"
Edward Guinan Michael Bonaro Scott Engle Andrej Prsa	"Eclipsing Binaries That Don't Eclipse Anymore: The Strange Case of the Once (and Future?) Eclipsing Binary QX Cas"

Paper Session 5

Lee Anne Willson, Qian Wang	"What Mass Loss Modeling Tells Us About Planetary Nebulae"
Kevin B. Paxson	"Introduction to Digital Archiving: Where the Past Lives Again"
Edward J. Los	"Use of APASS to Calibrate Harvard Plates"
Arlo U. Landolt	"The Acquisition of Photometric Data"

continued on next page

papers and posters, cont.

Poster Session

Marco Ciocca
Ethan E. Kilgore
Westley W. Williams

"Automation of EKV Observatory and Preliminary Data"

Kristine Larsen

"Flares, Fears, and Forecasts: Public Misconceptions About the Sunspot Cycle"

Seiichiro Kiyota

"History of Amateur Variable Star Observations in Japan"

Shelby Delos
Gary Ahrendts
Timothy Barker

"Light Curve of Minor Planet 1026 Ingrid"

Costantino Sigismondi

" δ Scorpii 2011 Periastron: Visual and Digital Photometric Campaign"

Sai Gouravajhala
Edward F. Guinan
Louis Strolger
Andrew Gott

"Bright New Type Ia Supernova in the Pinwheel Galaxy (M101): Physical Properties of SN 2011fe From Photometry and Spectroscopy"

Stan Walker

"RASNZ Photometry Section, Incorporating the Auckland Photoelectric Observers' Group"

Paul Valleli

"Apollo 14 Road Trip"

2. The Year in Review

New Members Accepted at the Annual Meeting, October 4, 2011

- Aggas, Steven, AZ
Ahrendts, Gary, MA
Bentz, Misty, GA
Bergmans, Bas, Netherlands
Biever, Barbara, CA
Billiaert, Bruno, Belgium
Bohlsen, Terrence, Australia
Branly, Rolando, FL
Breivik, Katie, UT
Brown, Michelle, CA
Canfield, Mike, TX
Chabot, Russell, WI
Crowson, Paul, MS
Cruz, Andre, FL
Damasso, Mario, Italy
Davis, George, TX
Delos, Shelby, RI
de Miguel, Enrique, Spain
Diers, Mitchell, CA
Douglas, Ramey, NM
Evans, Philip, OK
Foote, Jerry, UT
Gerlach, Jim, MD
Gish, Alexander, MD
Gozzoli, Enrico, Italy
S Granslo, Bjorn, Norway
Green, Wayne, CO
S Herndon, Mark, OK
Holland, Scott, NC
Hovell, Stephen, New Zealand
Hyder, Dan, OR
Jenkins, David, UT
Keyser, Robert, TX
Kidd, David, England
Kinsella, Stephen, Canada
Kolenberg, Katrien, MA
Kouveliotou, Chryssa, AL
S Kuhl, Derek, TX
Larson, Shane, UT
Lorraine, Daniel, RI
Manner, Mark, TN
Markham, Tony, England
Mikolajczyk, Dean, IL
Murphy, Andrew, MD
O'Brien, James, IL
Pak, Soojong, South Korea
Paret, Regis, France
Parker, Ernest, CO
Parks, James, GA
S Patterson, Joseph, NY
S Perry, Wendell, OR
Pierce, Thomas, OH
Plumb, Andrew, SD
Porebski, Ted, NJ
Rahe, Charles, OR
Rios, Rick, CA
Rubio Albacete, Ricardo, Spain
Schieber, Eric, CA
Scibek, David, CT
Silver, Robert, MI
Simpson, Todd, OH
Stanley, Brian, OK
Starr, Mark, FL
Steck, Timothy, IN
Steenwyk, Steven, MI
Stringfellow, Guy, CO
Thomas, Les, England
Tramazzo, Vincent, AZ
Travaglino, Franco, Italy
S Tubbs, Carl, MN
Turnshek, Diane, PA
Uthas, Helena, NY

continued on next page

new members, cont.

Van Graan, Ernst, South Africa
 van Rooijen-McCullough, Lynn,
 Netherlands
 Vincenzi, Marco, Italy

Walters, Mark, England
 Wells, William, OK
 White, Sandra-Lynn, RI

S = sustaining membership

Deceased Members, Observers, and Colleagues

Cragg, Thomas A., Australia
 Douglas, Bruce McHenry, MA
 Hastings, Allen E., MA
 Kameny, Franklin E., NY
 Kinne, Barbara, NY

Messick, Elizabeth, NY
 Schwartz, Richard D., WA
 Warren, Martha, MD
 West, Margaret, MD

AAVSO William Tyler Olcott Distinguished Service Award Recipient (presented at the 100th Annual Meeting in Woburn, MA, October 8, 2011)

Brian A. Skiff was awarded the AAVSO William Tyler Olcott Distinguished Service Award "...for his unwavering support of variable star astronomy and observing, in both the professional and non-professional realms, through his ambassadorial online presence as friend and mentor to those yearning to learn more about variable stars and astronomy in general, as well as his tenacious dedication to the betterment of astronomical data worldwide."

Special Recognition Award Recipients (presented at the 100th Annual Meeting in Woburn, MA, October 8, 2011)

Thomas A. Bretl received a special award of recognition "...of his outstanding volunteer efforts in the creation of new and revised sequences for AAVSO program stars. In just a few short years, he has elevated the use of photometric resources, AAVSO software and tools, and the guidelines for sequence creation to an art form. Not only is he a conscientious, reliable, and valued volunteer, he has become the most prolific member of the charts and sequences team in this decade, producing sequences for over 500 variable stars since 2009. Tom is well liked and respected by all the members of the team. His energy and enthusiasm are infectious, and it is an honor to work with him."

Jan A. Smit received a special award of recognition "...of his valuable contribution to the AAVSO International Database since 1986 of 19,027 visual observations of

2. The Year in Review

Southern Hemisphere variable stars; his contributions to minor planet occultation work; his mentoring of many younger observers in the art of variable star observing; and his public education efforts in introducing basic astronomy to the public during the open evenings and star parties at the Pretoria Centre of the Astronomical Society of Southern Africa.”

AAVSO Solar Observer Awards (announced at the 100th Annual Meeting in Woburn, MA, October 8, 2011)

Sunspot Observers

5,000 observations

Piotr Urbanski (URBP), Poland

3,500 observations

Brenda Branchett (BRAB), USA

German Chavas Morales (CHAG), Bolivia

3,000 observations

Gema Araujo (ARAG), Spain

Robert Brown (BROB), USA

Brian Cudnik (CKB), USA

Miyoshi Suzuki (SUZM), Japan

David Teske (TESD), USA

2,500 observations

Robert Branch (BRAR), USA

Franky Dubois (DUBF), Belgium

K. Fujimori (FUJK), Japan

John Kaplan (KAPJ), USA

James and Shirley Knight (KNJS), South Africa

Javier Jarboles Maranon (MARJ), Spain

Etsuiku Mochizuki (MCE), Japan

Michael Moeller (MMI), Germany

E.C. Richardson (RICE), England

Gerd-Lutz Schott (SCGL), Germany

Nick Stoikidis (STQ), Greece

A. Gonzalo Vargas (VARG), Bolivia

William M. Wilson (WILW), USA

Hulya Yesilyaprak (YESH), Turkey

2,000 observations

Javier Ruiz Fernandez (FERJ), Spain

Monty Leventhal (LEVLM), USA

Arthur Ritchie (RITA), USA

Gerhard Stemmler (STEM), Germany

Continued on next page

Solar observer awards, cont.

1,500 observations

Biswajit Bose (BOSB), India
Gerald Dyck (DGP), USA
Kim Hay (HAYK), Canada

IPS Observatory (OBISO), Australia
H. Takuma (TAKH), Japan

1,000 observations

J. Alonso (AJV), Spain
R. Battaiola (BATR), Italy
Ray Berg (BEB), USA
J. Berdejo (BERJ), Spain
D. Branchett (BRAD), USA
A. Buck (BVC), Isle of Man
J. Carlson (CARJ), USA
Laurent Corp (CLZ), France
Thomas Compton (COMT), USA
Jacques van Delft (DEJV)

Jean Dragesco (DRAJ), France
Richard Giovanoni (GIOR), USA
David W. James (JAMD), USA
Jose Lirriba (LARJ)
Michel Lerman (LERM)
Jay Miller (MILJ), USA
Susan Oatney (OATS), USA
Clyde Simpson (SIMC), USA
Javier Temprano (TVJ), Spain
Daniel Vidican (VIDD), Romania

Sudden Ionospheric Disturbance Observers (40 or more months of reports)

Peter King, England

2. The Year in Review

Annual Report of the Director for Fiscal Year 2010-2011

Arne A. Henden, Director



We made it! One hundred years of variable star observing. Who would have dreamed in 1911 that not only is there still lots of interest in variable stars, but that the amateur community was still in demand to satisfy the needs of researchers. We have come a long way in those 100 years, as detailed elsewhere in this Annual Report, as well as in the great history book written by Michael Saladyga and Tom Williams.

I have looked at some of those early reports. What I find most interesting is the handwriting. People did not use typewriters much at the turn of the century, and writing was a real art. Even numbers were easily readable on almost all reports, in nice black ink on acid-free paper, and the accompanying letters were gorgeous. They really gave you an insight as to what it was like to be a variable star observer a century ago. I envy Tom and Michael in their access to the archives while researching the book; you can get so easily engrossed in reading and lose track of time.

Now, looking back at the beginnings of our organization is fascinating, but we must remember that the AAVSO did not become “100” by sitting around; we’ve been active, producing tens of millions of observations, and changing with the times, from the purely visual days of last century to a combination of techniques today. I see variable stars as a continuing research area for the next century, with more Citizen Scientists needed to handle the wide variety of new objects that are going to be discovered. If you thought the last few decades were fun, you haven’t seen anything yet!

AAVSO International Database

In FY2010, we collected 1.2 million observations: 201,079 of these were visual observations; 1,392 were photoelectric photometry (PEP) of photographic observations. The remainder (933,952) were CCD observations. The CCD totals remain high, as we get many thousands of observations for any time-series campaign (SS Cyg is an example). The two charts on pages 50 and 51 show the annual submission totals since 1911, and the total submitted observations (“Megasteps”) since 1911. You can see that the trend is exponential, so that by 2021, we will be collecting 15 million observations per year!

We passed the 20 million observation mark this year, and in honor of that event, held

2. The Year in Review

a contest to see who could predict when the mark would be reached. The winner was Chris Watson, and the 20 millionth observation was of GV And by Josch Hamsch.

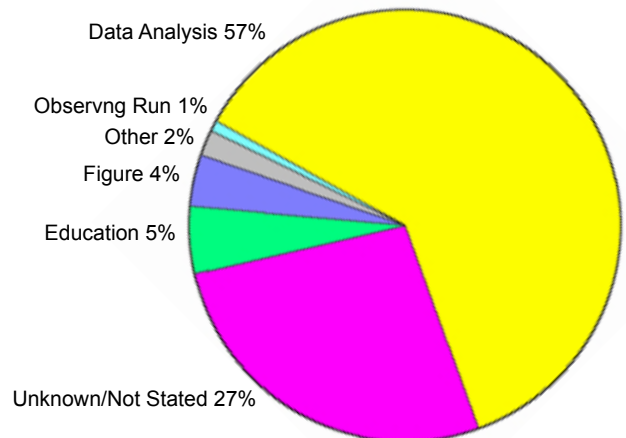
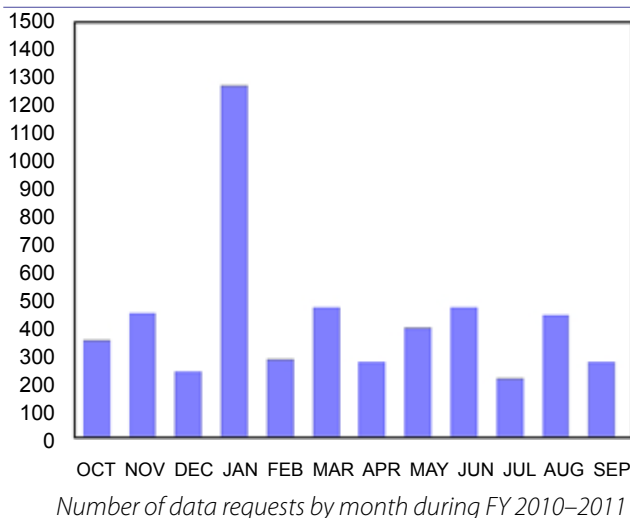
Work continues on importing the electronic database of the Royal Astronomical Society of New Zealand (RASNZ). A large fraction of the observational data comes from just a few observers, such as Albert Jones and Danie Overbeek, and so was straightforward to import. The remaining observations require assigning observer codes to those observers who were not regular AAVSO submitters, as well as determining what charts and comparison stars were used. We hope to finish this project in the near future.

A couple of years ago, Grant Christie of the RASNZ shipped several boxes of file folders from Frank Bateson to the AAVSO HQ. These file folders contained southern-star observations, some that made it into the RASNZ database and then into the AID when that database was transferred to us, and some observations that were never digitized. Mike Saladyga is starting to go through those boxes, sorting and cleaning up the filing, and discovering how many new observations are included in the shipment. We expect there to be quite a few estimates that need to be digitized so that they can be imported into the AID, and likely will ask for volunteers to help in the process.



AAVSO archivist Michael Saladyga examines papers from the RASNZ-Bateson collection

We had 5,092 data requests from a multitude of researchers during the year. The data request rate is pretty constant throughout the year, but has definitely continued its upward trend.



Areas in which AAVSO data or services were used during FY 2010–2011

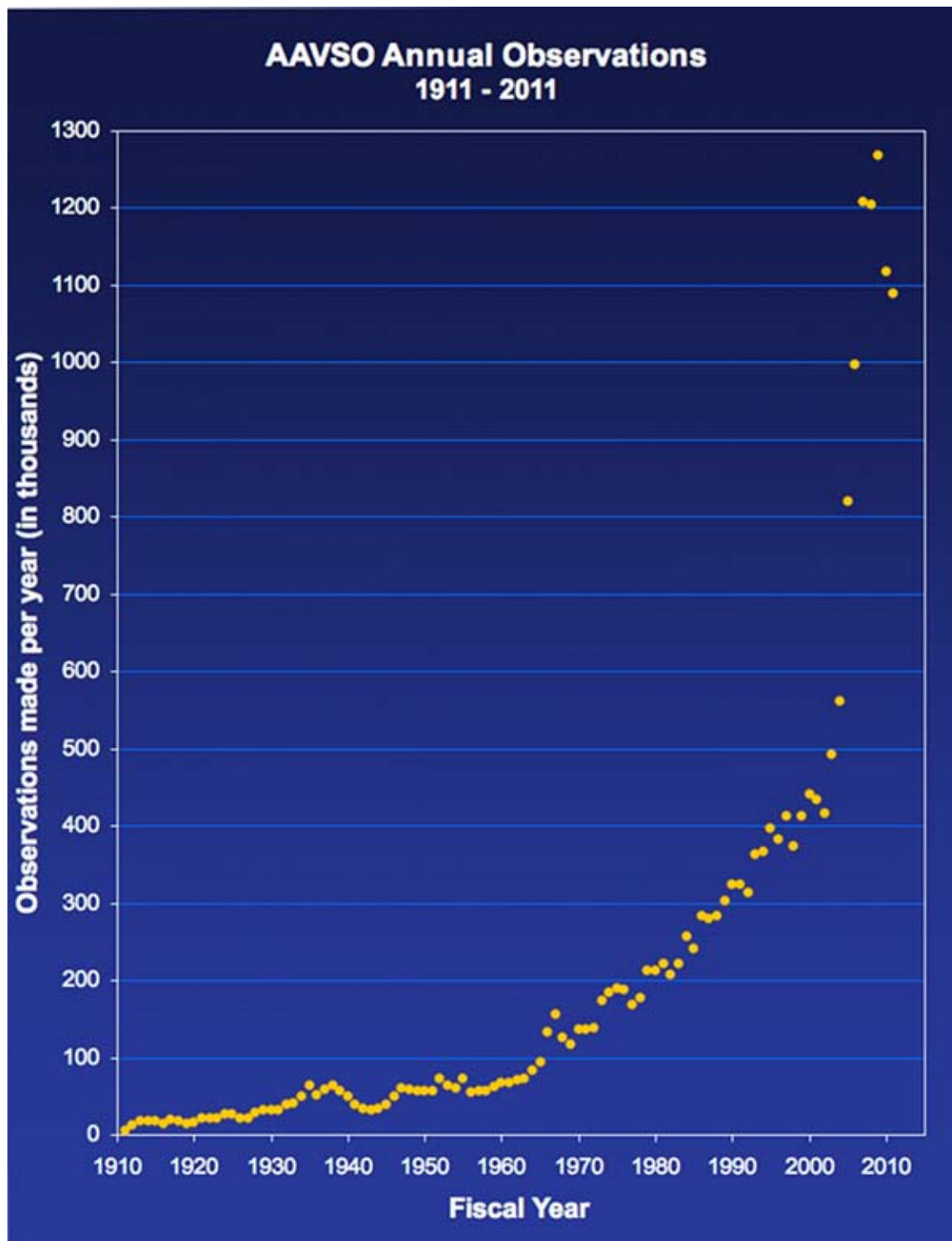
International Cooperation

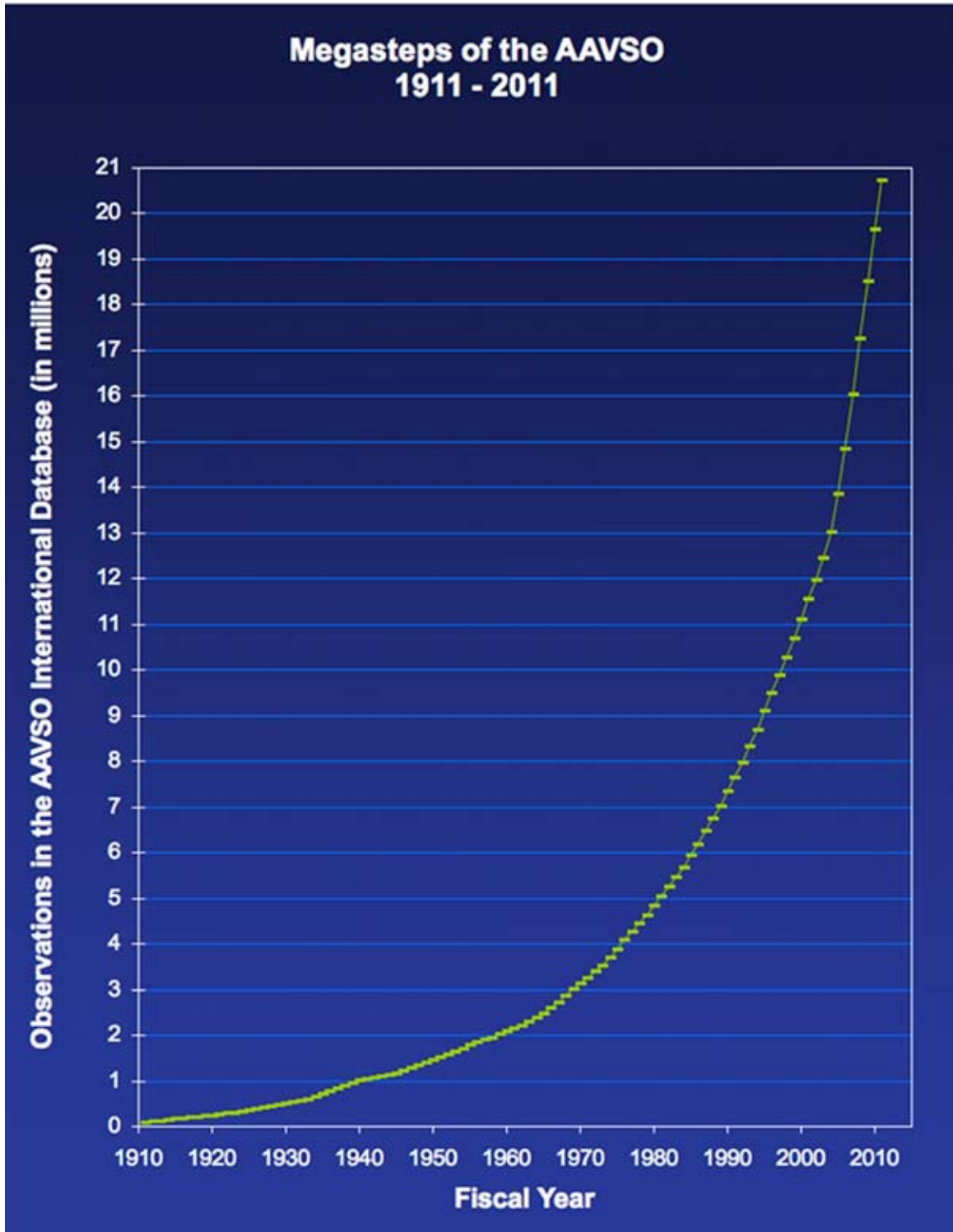
We acknowledge with appreciation the observations sent to the AAVSO by members of the following variable star associations, either individually or as a group, for inclusion in the AAVSO International Database for dissemination to the astronomical community worldwide:

- a. Agrupacion Astronomica de Sabadell (Spain)
- b. Association of Variable Star Observers "Pleione" (Russia)
- c. Association Française des Observateurs d'Étoiles Variables (AFOEV) (France)
- d. Astronomical Society of Southern Africa, Variable Star Section
- e. Astronomisk Selskab (Scandinavia)
- f. Astronomischer Jugendclub (Austria)
- g. British Astronomical Association (BAA), Variable Star Section
- h. Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV) (Germany)
- i. Center for Backyard Astronomy
- j. Koninklijke Nederlandse Vereniging Voor Weer-en Sterrenkunde, Werkgroep Veranderlijke Sterren (Netherlands)
- k. Liga Ibero-Americana de Astronomia (South America)
- l. Madrid Astronomical Association M1 (Spain)
- m. Magyar Csillagászati Egyesület, Valtócsillag Szakcsoport (Hungary)
- n. Norwegian Astronomical Society, Variable Star Section
- o. Red de Observadores (Montevideo, Uruguay)
- p. Rede de Astronomia Observacional (Brazil)
- q. Royal Astronomical Society of Canada
- r. Royal Astronomical Society of New Zealand, Variable Star Section
- s. Svensk Amator Astronomisk Förening, Variabelsektionen (Sweden)
- t. Ukraine Astronomical Group, Variable Star Section
- u. Unione Astrofili Italiani (Italy)
- v. URSA Astronomical Association, Variable Star Section (Finland)
- w. Variable Stars South (New Zealand)
- x. Vereniging Voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium)

Leonid Berdnikov stayed in the Feibelman Guest Suite while he was working at the Harvard Plate Stacks investigating the long-term behavior of Cepheid variables. Bas Bergmans, a student of Erwin van Ballegoij, visited headquarters for a week while learning how to do research.

2. The Year in Review





2. The Year in Review

Software

VPHOT, the premier photometry analysis program written by Geir Klingenberg, has been moved to the Amazon Cloud. This is our first experience with cloud computing, and has been very successful. Users upload their images to the cloud server and can then analyze them there. An AAVSO Extended Format report is generated and can be submitted to the AAVSO through WebObs.

Dr. Matthew Templeton has released his observation planning tool on the website. This uses VSX, as well as searching the AID, and produces a list of objects that meet certain criteria chosen by the observer for monitoring on the current night.

VSTAR, the Java program written by David Benn as part of Citizen Sky, has undergone several improvements this past year. The major new feature involves plugins; you can add analysis routines of your own to the system or increase the ability to read external datasets. For example, Doug Welch added a SuperWASP plugin that can read the FITS table format of the photometry from this survey.

Will McMains, our web developer, has been porting features from our previous website, at the same time improving those features. WebObs now has many search and sort options to give you more flexibility when submitting observations. The membership/subscription module was redone. We have added new section pages, expanded the AAVSONet web pages, and Matt wrote a neat Bulletin Generator for the LPV AAVSO *Bulletin* that gives you the ability to pick and choose a customized list of stars to follow. MyNewsFlash was ported to the new website.

AAVSONet News

We are making considerable progress towards fully populating AAVSONet. We added three new telescopes this year: BSM-south at Ellinbank Observatory (Australia; Peter Nelson), along with K28 and K35 at Astrokolhoz Observatory (New Mexico; Tom Krajci). K28 is unique in that it primarily uses the Sloan g',r',i',z' filter set. The 50-cm at Sonoita Research Observatory is now fully operational, in fact, John Gross sold his C-14, thereby "burning our bridges."

We have started the refurbishment of the New Mexico State University 24-inch telescope on Tortugas Mountain. Called TMO61 (for Tortugas Mountain Observatory 61-cm), this telescope refurbishment project has been jointly funded by Bart Staels, Gary Walker, and NMSU. The telescope was originally installed in the 1960s, and was heavily used for several decades to produce some really excellent planetary images, especially of

Uranus and Neptune. It resides on an isolated 1,000-ft. mountain just on the northern edge of Las Cruces, and so has a very nice laminar air flow with excellent seeing. The sky darkness is fine to the north and east; to the south, you pick up a bit of El Paso, and to the west, you have the lights of Las Cruces. This will be a deep imaging, good seeing site, with an excellent pixel match on the CCD camera. We expect it to come on-line during 3rd quarter 2012.

We have made numerous improvements to the processing pipeline. Each AAVSONet telescope has its own pipeline, and starts processing at a fixed hour through the next day. As images are processed, they are stored locally, sent to the ftp site, and optionally sent to a user's VPHOT account. An email notification is sent when images for a specific project are available.

APASS News

The AAVSO Photometric All-Sky Survey (APASS) continues to operate nominally. We moved the original telescope/camera configuration from Dark Ridge Observatory (DRO), where it had been operating for several months, down to the Cerro Tololo Inter-American Observatory (CTIO), where it was placed in the PROMPT6 clamshell. Dan Reichart, the Principal Investigator for PROMPT, gave us permission to use this clamshell as it was not essential for PROMPT. They loaned a Paramount ME to us, a god-send as getting mounts into Chile is not the easiest task! Tom Smith and I went down to CTIO in November 2010 to install the system. It was up and running inside of a week, with only minimal shake-down needed thereafter. We then purchased another set of telescopes/cameras and installed them on top of Tom Bisque's Paramount at DRO.

That said, APASS has not been operating as efficiently as I would have liked. We have had several hardware failures, including a camera sensor that became inoperable, a primary mirror that was misfigured, and a filter wheel that failed. Including operator errors and poor weather, we've been running at about 25% efficiency for the first year. Hopefully that percentage will improve, now that most of the bugs have been shaken out of the system.

We released Data Release 3 (DR3) during this fiscal year, with about 8 million stars. We expect to make a new data release about once/quarter, covering both northern and southern hemispheres. Now that the catalog is being made available to the public, we are starting to see increased interest from the community. APASS has been included in the Seqplot database, and so is being used by the Sequence Team for updating variable star sequences.

2. The Year in Review

The AAVSO Citizen Sky Project

As part of the IYA 2009 celebration, the AAVSO was awarded a major NSF grant to involve a large number of Citizen Scientists in a real research project—following the 27-year eclipse of ϵ Aurigae and developing scientific projects related to the event. The first workshop occurred just before FY 2009/2010, but the second workshop was held in early September 2010. That one, at the California Academy of Sciences, was devoted to data analysis and paper writing. The eclipse occurred on schedule, with thousands of estimates reported to the AAVSO. We're still monitoring the star out of eclipse to more fully understand the pulsational behavior of the visible F-class star. This will also help in removing the pulsational signature seen during the eclipse, so that we can study just the eclipse phenomenon itself.



Several “teams” were formed that designed science projects. One team created the Southern Gems beginner’s set of objects for southern hemisphere observers. Another experimented with DSLR cameras, finding that they are excellent photometric instruments, especially for bright stars. In fact, we are hoping to hold a third and final workshop, funding permitting, on DSLR photometry and the creation of a manual for use of these cameras in variable star astronomy.

MOST NASA Grant

Dr. Matthew Templeton was awarded a NASA grant last year, using the Canadian MOST spacecraft. MOST is a 12-cm telescope with a CCD camera, designed to observe a single field for weeks on end, obtaining precision photometric data of bright stars. Originally, MOST concentrated on stars 4th magnitude or brighter, obtaining micromagnitude precision. More recently, they’ve used their guiding chip to image fainter objects down to about 12th magnitude with lower precision, but still far better than ground-based observations. Matt proposed using MOST to study stars in the Orion Trapezium region, concentrating on BM Ori but also imaging another couple of dozen stars. Those observations were taken during December 2010 and January 2011, for a total of about 30 consecutive days of data. We supported those observations with a ground-based campaign to acquire photometry before, during, and after the MOST window. Many nights of data were also obtained with the AAVSO Bright Star Monitor. Matt is now in the process of analyzing the observations, with several papers expected in collaboration with Bill Herbst (Weslyan University) and Joyce Guzik (Los Alamos National Laboratory).

Two Eyes, 3D NSF Grant

Dr. Aaron Price submitted another Education Research grant to the NSF Informal Science Education (ISE) branch, and was again successful. This grant, called *Two Eyes, 3-D*, studies the cognitive processes and learning outcomes involved in 2D and stereoscopic visualizations of highly spatial scientific objects, with a goal of building a more effective learning experience. Aaron will study school children using a series of images in both 2D and 3D and ask content and spatial questions about what they see. A pair of HD stereoscopic films about colliding galaxies and supernovae will be developed and presented by the Alder Planetarium as well, to study how adults learn spatial concepts. The tie-in for the AAVSO is in the variable star aspects of the movies and images, an understanding of how to better make finding charts, and the additional funding that will be available for our infrastructure.

Second Generation Synoptic Survey Grant

We have also received a major new grant from the Robert Martin Ayers Sciences Fund. Provisionally called the Second Generation Synoptic Survey (2GSS), this project aims to cover the entire sky, every night, from 10th to 17th magnitude, in two simultaneous bandpasses. This is much like ASAS on steroids. It is a follow-on to APASS, highly leveraging its excellent calibrations to permit observations anywhere in the sky in even non-photometric weather. The grant pays for the first node of an anticipated 5-node network. Once the initial node is operational, we will submit an NSF grant to pay for the remaining installations. We expect to be taking science data with the first node by the end of 2012, covering 8000 square degrees every clear night.

Janet A. Mattei Research Fellowship

Our third Janet Mattei Research Fellow was Dr. Doug Welch (McMaster University). Doug was at HQ for about three weeks in Summer 2011. His main work was with our RR Lyrae data, which he wrote into a blog posting. He also wrote scripts for staff for using the open source tesseract OCR program, and for using the astrometry.net libraries for image plate solving. He also advised the VSTAR team on building plug-ins for CLEANEST and WWZ analysis, and wrote a plug-in for the SuperWASP variability data. He also hosted a public chat session about "The Science of Variables." We had many fruitful discussions with Doug about database and IT issues; Doug has tirelessly campaigned for us to make more use of the Cloud.

2. The Year in Review

Headquarters Renovation Work

We purchased the HQ building from Sky Publishing “as-is.” In general, the building was in fine shape, but needed some basic repairs after many years of service. We replaced the exterior siding last year, changing the exterior from “industrial sheet metal” to more of a New England clapboard style. This year, we had the exterior ground floor painted. There were two styles of construction—a simple



100th anniversary banner hung on the HQ building. Exterior siding and painting improvements can be seen here.



Past President David B. Williams and Director Arne Henden unveil the AAVSO sign at the start of the Headquarters rededication ceremonies during the AAVSO's 100th Annual Meeting

stucco/cement on the house, and concrete masonry units for the office portion. We used a textured paint to blend these two styles together, and use a complementary color to match the new siding. Once painted, the original Clinton B. Ford Astronomical Data and Research Center sign that was on the exterior of the 25 Birch building was re-hung on our new headquarters. Together, these changes made for a very attractive external appearance for members coming to visit during the Centennial celebration. Inside, we held a couple of “painting days” to repaint the conference center. The final phase of the renovation is new landscaping, and we hope to begin that phase in the coming year.

Our phone system was nearing the end of its lifetime. It was “computerized” with software running on a PC running OS/2 (remember that operating system?). Doc researched the available options, and we ended up purchasing a new VOIP system. Doc also installed a cable modem and a special router that combines the modem and T-1 lines when possible to increase transfer speeds.

Centenary Celebrations

The celebration of our centenary is covered elsewhere in this Report. Needless to say, we had a good time planning the activities, and enjoyed the meetings as much as the rest of the membership! There were some neat observer challenges through the year: the trivia contest; the 100 stars in 100 days; 2,011 observations in 2011, etc. Predicting the future for the time capsule was a blast. We sold more T-shirts with my signature on them than I expected! Aaron came up with the idea for a long banner advertising our Centennial, and, together with Mike Saladyga, hung it on the building. Sara Beck and

Mike Saladyga created a long banner of the 100-year light curve of SS Cyg and hung it around the Conference Center. Now, what do we do for our 200th year celebration?

Staffing

Arthur Ritchie continues volunteering at HQ. He comes in whenever we call for assistance, usually to help in stuffing envelopes, mailing *Solar Bulletins*, and general sorting. We really appreciate his efforts, and they save considerable staff time.

We have hired a new Administrative Assistant, Lauren Rosenbaum. We had dozens of applications for the position, and narrowing down the list to a small set of finalists was a difficult process. We brought in the short-list applicants to meet the staff in an informal setting so that we could see how personalities meshed and view them as real people instead of printing on a page. After that process, Lauren came out head and shoulders above the other applicants, and her first months here at HQ have not lessened our respect for her abilities. Lauren is working on an advanced degree at Tufts, and spends half of her time at HQ. She has been an able assistant, and we've been expanding her duties to utilize her more effectively.

Donna Young (Chandra satellite education/public outreach) approached us this year, and asked if we would be interested in having her join the AAVSO staff. Donna has a long history with the AAVSO, and was a key person in the development of the *Hands-on Astrophysics* project. She was stationed at the Tufts Wright Center for the past few years, on contract with Chandra to do much of the education/public outreach, especially to teachers. As the Wright Center was closing, her move to the AAVSO was an obvious choice, and her contract moved with her. She now lives in Bullhead City, Nevada, and travels extensively to give workshops. She returns to HQ several times a year. Donna is also a key person with the Science Olympiad, and has highlighted variable star topics in that competition.

Sebastian Otero started work at the AAVSO as an external contractor. While living in Argentina, Sebastian is telecommuting, primary working on VSX, moderating the Spanish forum on the website, and doing Spanish translations for the website, documentation, and press releases.

Benjamin (Ben) Briggs was our 2010 Margaret Mayall summer assistant. He is a Computer Science major at Tufts, and is working with Aaron and Will on website programming tasks.

Aaron completed his doctoral work at Tufts University in Science Education. He held his defense in November 2010 and graduated in May 2011. He used the Citizen Sky project as the basis for his research.

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Other than these changes, headquarters staffing has remained constant. With the new additions, we have twelve full-time employees, along with two part-time employees and a contracted accountant. All permanent employees are described on our website at <http://www.aavso.org/aavso/about/staff.shtml>. I encourage you to read about these folk that support the members and observers; it is a really nice and efficient staff at HQ!

Publications

Mike Saladyga and Tom Williams finished the Centenary book (*Advancing Variable Star Astronomy: The Centennial History of the American Association of Variable Star Observers*), and it was published by Cambridge University Press in time for the AAS meeting in May. Mike and Tom held a book reading and a book-signing session at the AAVSO Annual meeting. We still have several copies of this book for sale from HQ at a special price.



Mike Saladyga and Tom Williams signing copies of their AAVSO history book

We started the Carolyn Hurlless Online Institute for Continuing Education (CHOICE). Two classes have been given so far: *Developing a Visual Variable Star Observing Program* (by Mike Simonsen), and *Uncertainty about Uncertainty* (by Aaron Price). The response has been enthusiastic, and we hope to continue these courses in the future.

JAAVSO volume 38, number 2, through volume 39, number 1, were published. Many *eJAAVSO* articles were posted. We posted 23 *Alert Notices* and 39 *Special Notices*. Three "Variable Star of the Season" articles were published. We contributed sections for the *RASC Observer's Handbook*. Elizabeth Waagen completed long period variable maxima/minima *AAVSO Bulletin Number 74*. The AAVSO released the annual eclipsing binary/RR Lyrae stars ephemerides as well as the monthly *Solar Bulletin*. Several new translations of the *AAVSO Manual for Visual Observing of Variable Stars* were made, including Russian and Farsi.

There were over 25 staff publications (Henden, Price, Saladyga, Templeton, Waagen; *PASP*, *AJ*, *JAAVSO*, etc.). We noted that 82 papers in journals such as *Astronomy and Astrophysics*, *MNRAS*, *ApJ*, *AJ*, *PASP*, etc. were published using AAVSO data and assistance. The actual number is larger than this, as many posters and papers at AAS meetings use our light curves in their presentations.

Travel and Meetings

As this was the centenary year, there was quite of bit of travel to meetings and star

parties by the staff. I went to Stellafane, where I gave a talk on ϵ Aurigae. Mike Simonsen went to the Texas and Nebraska Star Parties. Rebecca Turner was at the Table Mountain Star Party. Sara Beck and John O'Neill talked about variable star observing at the Galway Star Party. I gave a talk on APASS and 2GSS at the IAU 285 colloquium in Cambridge, UK, robotic telescopes at the AFAR meeting in Hawaii, MOST at the AAS meeting in Seattle, variable star research with small telescopes at Iowa State University, and on variable star projects at Utah State University. I also gave a talk at ALCON, held at Bryce Canyon, and received the Leslie C. Peltier award from the Astronomical League while there. Finally, I was invited to sit on a couple of NSF/NASA review panels. I would also like to mention that much of my travel is subsidized by the hosts of the attended meetings. Sometimes they can contribute towards the plane fares, and often provide housing, meals, and logistical support. This is gratefully appreciated!

The May meeting was a joint venture between the American Astronomical Society and the AAVSO. We had a good history of variable star astronomy session on Sunday (organized by Tom Williams), followed by two variable star sessions during the main meeting (see full description in the Minutes of the 100th Spring Meeting). We were able to get the AAS Council to AAVSO HQ for the banquet, and had an open house for meeting registrants.

Looking Towards the Future

Coming up over the next fiscal year will be a number of improvements in support of our observers. We will be adding more precision photometry to the comparison star database. APASS will complete its primary 2-observation survey. More campaigns will be announced. The robotic telescope network will be expanded, with all of the 24-inch telescopes coming on-line. Hopefully some of our submitted grants will be awarded. All-in-all, I think it will be another great year for the AAVSO!

Acknowledgements

This is not a one-person show, or even a dozen-person show. Everyone who has contributed data, made a monetary donation, volunteered their time and energy, has made this organization the success that it is. We "stand on the shoulders of giants" that came before us and built the foundation of the organization. Clint Ford contributed enormously to the organization, which is why his name bears such prominence everywhere. Previous Directors organized the association and had the vision for its future. The Council guides the AAVSO, volunteering their efforts to make the organization financially solvent and relevant. Our section leaders handle specific areas of interest, working with enthusiastic observers and making reports to the membership

2. The Year in Review

and Council. Others work quietly behind the scene, acting as scientific advisors to programs, writing important software, or participating in important projects such as the Sequence Team. Finally, many institutions and government agencies see our research important enough to provide financial support. Without all of these people, the AAVSO would not exist.

Observer Totals

Our special appreciation and thanks go to our enthusiastic and dedicated observers, who are the heart of the AAVSO and whose ongoing efforts make this association vital to variable star research. Listed on the following pages are the observation totals that we have received at Headquarters.

Table 1. AAVSO Observer Totals 2010–2011 by Country.*

Country	No. Observers	No. Obs.	Country	No. Observers	No. Obs.	Country	No. Observers	No. Obs.
Argentina	6	111	Germany	40	32022	Serbia	1	663
Australia	33	114127	Greece	8	1499	Slovakia	1	5120
Austria	3	818	Hungary	54	24349	Slovenia	5	295
Belarus	2	363	India	2	3	South Africa	7	371
Belgium	17	46404	Ireland	4	168	Spain	45	56101
Bermuda	1	48	Italy	40	9935	Sweden	6	5568
Bolivia	1	151	Japan	4	1097	Switzerland	3	97
Brazil	22	3750	Lithuania	1	4	Turkey	3	31
Bulgaria	2	34	Mexico	1	890	Ukraine	3	158
Canada	47	19145	Netherlands	14	1922	U.S.A.	515	578771
China	7	365	New Zealand	6	2995	Uruguay	1	31
Colombia	1	24	Nicaragua	2	29			
Croatia	2	5720	Norway	2	994	TOTAL	1055	1136640
Cyprus	1	8413	Peru	1	1			
Czech Republic	3	172	Philippines	1	349			
Denmark	5	858	Poland	27	11813			
England	43	71793	Portugal	3	867			
Finland	14	28570	Romania	8	6474			
France	32	91742	Russia	5	1415			

Table 2. AAVSO Observer Totals 2010–2011 USA by State or Territory.*

State	No. Observers	No. Obs.	State	No. Observers	No. Obs.	State	No. Observers	No. Obs.
Alabama (AL)	1	5	Maine (ME)	4	555	Oregon (OR)	2	40399
Arizona (AZ)	18	5717	Maryland (MD)	12	170	Pennsylvania (PA)	11	2377
Arkansas (AR)	1	27	Massachusetts (MA)	207	35146	Rhode Island (RI)	3	1807
California (CA)	39	23979	Michigan (MI)	7	7848	South Carolina (SC)	3	205
Colorado (CO)	6	8268	Minnesota (MN)	5	877	Tennessee (TN)	4	118
Connecticut (CT)	8	442	Mississippi (MS)	3	971	Texas (TX)	22	9441
Delaware (DE)	2	16	Missouri (MO)	5	4413	Utah (UT)	2	1625
District of Columbia (DC)	2	1055	Montana (MT)	1	40592	Vermont (VT)	6	68
Florida (FL)	14	75024	Nebraska (NE)	1	83	Virginia (VA)	4	504
Georgia (GA)	6	521	Nevada (NV)	1	21763	Washington (WA)	8	484
Hawaii (HI)	2	1170	New Hampshire (NH)	4	467	West Virginia (WV)	2	1215
Illinois (IL)	19	134331	New Jersey (NJ)	6	87	Wisconsin (WI)	7	21926
Indiana (IN)	8	3298	New Mexico (NM)	5	116449	Wyoming (WY)	3	865
Iowa (IA)	2	249	New York (NY)	21	11764			
Kansas (KS)	5	448	North Carolina (NC)	6	238	TOTAL	515	578771
Kentucky (KY)	3	432	Ohio (OH)	7	371			
Louisiana (LA)	2	29	Oklahoma (OK)	5	932			

*Totals reflect observations made during fiscal 2010–2011 and do not include historical data (data preceding fiscal 2010–2011) submitted during fiscal 2010–2011.

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Table 3. AAVSO Observers, 2010–2011.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
AAP		P. Abbott, Canada	3195	BCP	20	C. Beech, England	388
AAN	02	A. Abe, Germany	120	BRAA		R. Bell, CA	6
AALA		A. Abouzahr, MA	7	BZX		A. Beltran, Bolivia	151
ABNA		B. Abu-Eid, MA	10	BRGA		R. Bendetson, MA	7
ARV		R. Adamson, CA	3	BHS		H. Bengtsson, Sweden	1012
ACN	13	C. Adib, Brazil	741	BDJB		D. Benn, Australia	39
AJRB		J. Adler, MA	6	BTY		T. Benner, PA	315
AUIA		U. Agha, MA	10	BERA		E. Bennett, MA	7
ASA		S. Aguirre, Mexico	890	BMRA		M. Bennett, NY	2
ADEA		D. Aktas, MA	8	BEB		R. Berg, IN	859
ACO	20	C. Allen, Sweden	2135	BRIC		R. Berg, DC	1040
AJC	13	J. Almeida, Brazil	141	BANB		A. Berman, MA	11
AJV	15	J. Alonso, Spain	330	BVO		V. Bibe, Argentina	1
AANB		A. Altman, MA	14	BIC	01	L. Bichon, France	4
ACMA		C. Alvarez, FL	10	BBAC		B. Biever, CA	3
AAA	13	A. Alves, Brazil	1	BQM		M. Bignotti, Italy	61
AAX	13	A. Amorim, Brazil	2594	BBI	05	B. Billiaert, Belgium	1003
ARLA		R. Andersson, Sweden	379	BMAA		M. Bird, MA	3
AADA		A. Anunziato, Argentina	3	BZP	03	Z. Biro, Hungary	4
AMIC		M. Apoj, FL	8	BXN	01	M. Bisson, France	273
AJN	27	J. Appleyard, Canada	166	BXT	08	T. Bjerkgaard, Norway	278
AAM		A. Arminski, Poland	1090	BRAC		R. Black, OK	284
ARJ		J. Arnold, TX	21	BMGA		M. Blackford, Australia	18386
ARN	01	L. Arnold, France	42	BKL		J. Blackwell, NH	68
ATE		T. Arranz, Spain	40471	BVZ		J. Blanco Gonzalez, Spain	45
APCA		P. Artis, MA	12	BLD	10	D. Blane, South Africa	214
ATI	03	T. Asztalos, Hungary	147	BDSA		D. Blazko, Slovenia	164
AAUA		M. Audejean, France	355	BJTA		J. Bloom, MA	10
ADI	02	D. Augart, Germany	521	BRCA		R. Bloom, MA	5
ARX		R. Axelsen, Australia	1	BWZ		E. Blown, New Zealand	1005
AANC		A. Ayiomamitis, Greece	1	BREI	02	R. Boettcher, Germany	8
ANIA		N. Azimi, MA	10	BHQ	29	T. Bohlson, Australia	833
PBC		P. Bacci, Italy	210	BOI		B. Bois, Canada	1
BOZ	03	B. Bago, Hungary	1156	BBOA		B. Boitnott, TX	462
BPEA		P. Bagyinszki, Hungary	198	BVS		S. Bolzoni, Italy	130
BIY		D. Bailey, IL	1	BZU		M. Bonnardeau, France	880
BFO	03	J. Bakos, Hungary	2327	BRJ		J. Bortle, NY	4550
BALJ	14	A. Baldwin, New Zealand	15	BMDA		M. Bossen, MA	10
BVN	18	M. Banfi, Italy	2106	BCRC		C. Boulay, MA	11
BAQA		A. Bangser, MA	6	BMU	04	R. Bouma, Netherlands	26
BGZ		G. Banialis, IL	266	BTKA		T. Bove, MA	5
BBDA		B. Barad, CA	11	BDG	20	D. Boyd, England	10120
BRAI		R. Barman, MA	5	BBTA		B. Boyle, Canada	1
BTJA		T. Barnard-Hawkins, MA	7	BMK		M. Bradbury, IN	141
BRJA		R. Baron, Canada	2	BXS		S. Brady, NH	389
BSR	18	S. Baroni, Italy	240	BRAF		R. Braga, Italy	35
EED		E. Barreto, Brazil	1	BANA		A. Branz, MA	6
BPO		D. Barrett, France	2344	BNW	02	W. Braune, Germany	6
BQ	03	L. Bartha, Hungary	3322	BJOA		J. Breakstone, FL	9
BVT		T. Bartlett, TX	215	BQC	01	J. Breard, France	71
BENA		E. Basilier, AZ	1	BKAB		K. Breivik, UT	25
BALA		A. Baskin, MA	5	BTB		T. Bretl, MN	263
BWAA		W. Basso, Canada	185	BQE		E. Briggs, Canada	1
BBA		B. Beaman, IL	2380	BPEB		P. Brock, England	331
BWX	27	A. Beaton, Canada	13	BOS	05	E. Broens, Belgium	1
BSJ		S. Beck, MA	1	BXV	15	X. Bros Caton, Spain	1
BQB	03	B. Becsy, Hungary	29	BOA	01	A. Bruno, France	12030
BDQ		A. Bedard, WA	214	BJRA		J. Bruton, CA	100
BJS		J. Bedient, HI	8	BHU		R. Buchheim, CA	190

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
BRAH		R. Buchwald, WI	6	CEMB		E. Conseil, France	356
BWCA		W. Buckley, MA	7	CMJA		M. Cook, Canada	560
BGMA		G. Burruss, MA	15	CAGA		A. Copland, NC	7
BSRA		S. Buser, MA	7	CPI	18	P. Corelli, Italy	4
BIW		N. Butterworth, Australia	7592	CLZ		L. Corp, France	7147
CDC		S. Cacedo, Spain	26	CAI		A. Correia, Portugal	432
CAMC		A. Calfas, MA	8	CLMA		L. Cotton, MA	7
CCB		C. Calia, CT	361	CWD		D. Cowall, MD	5
CCZ		C. Calis, Turkey	8	CDN		D. Cowles, TX	2
CMMA		M. Callahan, MA	17	CFY		J. Craig, MA	10
CMN		R. Cameron, Australia	25	CTX		T. Crawford, OR	11391
CMQ		P. Camilleri, Australia	10	CEJA		E. Crist, AZ	95
CMP		R. Campbell, FL	855	CAMB		A. Crittenden, MA	7
CEM	15	E. Capella, Spain	7	CMY	20	M. Crook, England	1
CANA		A. Capirci, NY	10	CBLA		B. Crosby, SC	12
CPG		P. Caponnetto, Italy	13	CMD	20	M. Crow, England	87
CALA		A. Caradossi, Italy	21	CBZ	03	B. Csak, Hungary	2
CANB		A. Cardenas, MA	11	CTI	03	T. Csorgei, Hungary	33
CLTA		L. Carey, MA	12	CSM	03	M. Csukas, Romania	697
CMNA		M. Carrier, VT	10	CKB		B. Cudnik, TX	2736
CROA		R. Carstens, New Zealand	586	CCHA		C. Curtis, England	1
CNBA		N. Cartier, MA	9	DJIB		J. Dapkus, WI	5
CVJ		J. Carvajal Martinez, Spain	10	DGSA	20	G. Darlington, England	2330
CPAA		P. Casado, South Africa	9	DDRA		D. Darnell, Canada	2
CNY		A. Cason, GA	23	DJEA		J. Darnet, France	1
CLQ		L. Cason, SC	36	DAM	06	A. Darriba Martinez, Spain	226
CJE	01	J. Castellani, France	598	DNIA		N. Davari, MA	13
CJAA		J. Castillo, MA	9	DBEA		B. Davies, CA	447
CKN		K. Castle, AZ	7	DAJ		J. Davis, MD	5
CWO		W. Castro, OH	17	DMA		M. Davis, SC	157
CJWA		J. Caveny, NH	2	DSAA		S. Dawley, CA	6
CDZ		D. Cejudo Fernandez, Spain	1152	DJX	27	M. De Jong, Canada	339
CQJ		J. Centala, IA	227	DENA		E. De Miguel, Spain	186
CNRA		N. Cerf, MA	12	DPP		P. De Ponthiere, Belgium	5584
CMA		M. Cerruti, Argentina	84	SWQ	13	W. De Souza, Brazil	85
CMAB		M. Cervoni, Italy	114	DLEA		L. Deaderick, MA	8
CAAA		A. Chadha, IL	5	DCEA		C. Deal, MA	12
CPIA		P. Chalou, MA	6	DSWA		S. Delchamps, IL	62
CYUA		Y. Chang, MA	9	DFR	27	F. Dempsey, Canada	15
CARA		A. Chanrai, MA	3	DWEA		W. Deng, MA	6
CNT		D. Chantiles, CA	465	DDE		D. Denisenko, Russia	82
CGF		G. Chaple, MA	62	DAT		A. Derdzikowski, Poland	4186
CBEA		B. Chardi, Spain	1	DNO		O. Deren, Poland	244
CBHA		B. Chen, MA	9	DFVA		F. Desalvo, FL	5
CCAA		C. Chen, MA	5	DBRA		B. Desoete, Belgium	5
CQS		S. Cheng, China	318	DSI		G. Di Scala, Australia	16952
CMDA		M. Chrobak, PA	9	DANA		A. Diaz, MA	7
CYOA		Y. Chung, MA	8	DJEB		J. Dietrich, KS	6
CMAA		M. Ciocca, KY	425	DRD		R. Dietz, CO	8
CPY		P. Clayton, England	1	DLA		A. Dill, KS	345
CPE	06	P. Closas, Spain	86	DIL		W. Dillon, TX	4
CKRB		K. Cohen, MA	6	DSAB		S. Diss, NJ	5
CDK		D. Collins, NC	109	DJJA		J. Dodds, MA	7
COL		P. Collins, AZ	29	GDB	03	G. Domeny, Hungary	16
CME	18	E. Colombo, Italy	86	DVHA		V. Dorer, FL	10
CTIA		T. Colombo, Italy	85	DRDA		R. Dos Santos, Brazil	21
CMG	04	G. Comello, Netherlands	9	DRDB		R. Dos Santos, Brazil	2
CJA	10	J. Compos, South Africa	12	DDJ		D. Dowhos, Canada	46
CDSA		D. Conner, England	56	DMJA		M. Dragosits, Canada	7

2. The Year in Review

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
DPV	09	P. Dubovsky, Slovakia	5120	GAJ		J. Garcia, Argentina	1
DAJB		A. Dumbleton, England	5	GAA		P. Garey, IL	27
DMO	01	M. Dumont, France	739	GARA		A. Garg, MA	9
CLW01		D. Durig, TN	2	GKI		K. Geary, Ireland	16
DMPA		M. Durkin, NY	49	GCLA		C. Garvey, MA	10
DFEA		F. Dutton, MI	69	GJCA		J. Geary, TX	105
DKS		S. Dvorak, FL	71334	GQR		R. Gherase, Romania	4
DGP		G. Dyck, MA	664	GHI	18	M. Ghiri, Italy	20
EARA		A. Ede, VT	10	GAO		A. Giambersio, Italy	1
EHEA		H. Eggenstein, Germany	51	JMG		M. Gibaja, Spain	1
ERJB		R. Egger, MA	10	GGU	04	G. Gilein, Netherlands	362
EMA		M. Eichenberger, Switzerland	34	GKIA		K. Gillies, MA	6
ELKA		L. Eilbert, MA	7	GSEB		S. Girard, OK	389
ESAA		S. El-Abboud, MA	5	GSAA		S. Glass, MA	6
EM		G. Emerson, NM	703	GNAA		N. Glassman, MA	8
ERB		R. Eramia, WA	37	GCMSA		C. Glazier, IL	10
EJO	03	J. Erdei, Hungary	1385	GMV		M. Glennon, Ireland	2
EEY		E. Erdelyi, CA	1599	GZN		A. Glez-Herrera, Spain	2625
ERJA		R. Erhardt-Ohren, IL	7	GLG		G. Gliba, MD	2
EJC		J. Escudero, Spain	5	GKAA		K. Glick, MA	6
EEDA		E. Ethan, MA	8	GCHA		C. Glowinski, Germany	44
ERW	14	R. Evans, New Zealand	24	GFB	31	W. Goff, CA	11601
EJDA		J. Evelan, AZ	3	GMJA		M. Goldstein, MA	6
FSU		S. Fanutti, Canada	29	GNGA		N. Gollin, MA	5
FEO	03	E. Farkas, Hungary	19	GLFA		L. Gomes, Brazil	12
FKDA		K. Farrell, FL	10	GOT	06	T. Gomez, Spain	995
FFAA		F. Fedeli, Italy	1	GED		E. Goncalves, Brazil	13
RCFA		C. Fernandez Rivero, Spain	254	GNZ		G. Gonzalez, PA	7
FRF	03	R. Fidirich, Hungary	1616	GVG		V. Gonzalez Garcia, Spain	1
FMZ		M. Fitzgerald, TX	44	GDJA		D. Gorney, AZ	28
FARA		A. Flores, MA	7	GSE		S. Gouaichault, France	7
FLE		L. Florin, Romania	32	GENB		E. Gozzoli, Italy	14
FLEB		L. Florsheim, MA	7	GHN		G. Graham, OH	13
FJUA		J. Flumenbaum, MA	8	GKA		K. Graham, IL	25716
FDA	03	A. Fodor, Hungary	87	GMAA		M. Granado Sanchez-Toscano, Spain	15
FBZ	03	B. Fodor, Hungary	10	GNJ		J. Green, Canada	2
FSE	18	S. Foglia, Italy	27	GJOA		J. Greening, Canada	19
FMR		M. Fonovich, Croatia	5715	GDY	27	D. Grey, Canada	6
FEWA		E. Forsell, MA	4	GMKA		M. Griffiths, England	23
SNH01		K. Fortak, Germany	1043	GTZ		T. Grzybowski, NM	153
FJQ		J. Foster, CA	5172	GCO		C. Gualdoni, Italy	1809
FXJ		J. Fox, NM	170	GHEA		H. Guanjie, China	2
FSJA		S. Franks, CA	6	GERA		E. Guido, Italy	10
FBN	10	B. Fraser, South Africa	24	GPR		P. Guilbault, RI	25
FMSA		M. Freedman, CT	9	GSTA		S. Gupta, MA	8
FDWA		D. Frey, MA	4	GPSA		P. Gurny, MD	5
FML	04	M. Fridlund, Netherlands	3	GPIA		P. Guzik, Poland	17
FCHA		C. Froeschlin, Germany	17	GGX	01	G. Guzman, France	238
FBMA		B. Fruchter, MA	13	HDSA		D. Haas, MA	6
FGIA		G. Frustaci, Italy	46	HNIA		N. Habic, Slovenia	13
FMG		G. Fugman, NE	83	HCS	03	C. Hadhazi, Hungary	2196
FFAB		F. Fujiwara, Brazil	37	HDH	03	S. Hadhazi, Hungary	485
FRTA		R. Fuller, TX	91	HWDA		W. Haeger, IL	12
FSAA		S. Fung, MA	12	HTY		T. Hager, CT	34
GHT	27	G. Gaherty, Canada	56	HKB		B. Hakes, IL	135
GGL	18	G. Galli, Italy	33	HCU		C. Halbrook, GA	1
GTN		T. Gandet, AZ	21	HJW		J. Hall, CO	40
GNJA		N. Gannon, NY	1	HMB	05	F. Hamsch, Belgium	34212
GJPA		J. Garbose, MA	6	HBJA		B. Hancock, MS	7

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
HPL		P. Hansen, Denmark	64	JSP		S. James, Australia	155
HSMA		S. Hansen, MA	8	JZO	03	Z. Jankovics, Hungary	582
HDC		D. Harper, NC	23	JDG		D. Janky, WA	2
HBB		B. Harris, FL	234	JGRA		G. Jenkins, DC	15
HBRA		B. Harris, MA	6	JMIB		M. Jian, China	3
HMQ		M. Harris, GA	12	JCHA		C. Jiaravanon, MA	10
HHU	05	H. Hautecler, Belgium	450	JGE	06	G. Jimenez, Spain	47
HKY	27	K. Hay, Canada	1	JOG		G. Johnson, MD	58
HTIA		T. Hayes, CT	6	RPB		P. Johnson, GA	3
HAB		R. Hays, IL	784	JRA		R. Johnson, MN	21
HSEA		S. Heath Howe, MA	11	JA	14	A. Jones, New Zealand	513
HTHA		T. Hebbeker, Belgium	1	JFEA		F. Jones, MA	4
HQA		A. Henden, MA	4307	JJI		J. Jones, OR	29008
HND		R. Henderson, England	1545	JAZ	03	A. Juhasz, Hungary	379
HELB		E. Heneghan, MA	8	JLZ	03	L. Juhasz, Hungary	226
HMJA		M. Hensley, KY	1	KRAC		R. Kadish, MA	6
HGO		G. Henson, TN	23	KPK		P. Kalajian, ME	443
HCVW		C. Hergenrother, AZ	20	KCI	03	C. Kalup, Hungary	14
HREA		R. Herman, MA	6	KFAA		F. Kamisli, MA	8
HMV		M. Hessom, CA	126	KAM	02	A. Kammerer, Germany	14
HNDA		N. Hewitt, England	34	KSTA		S. Kang, MA	8
HJJ		J. Hewlett, CA	6	KTU		T. Kantola, Finland	1243
HEY	05	B. Heyndrickx, Belgium	25	KMO		M. Kardasis, Greece	107
HIM		W. Hill, MA	6	KSF		S. Karge, Germany	252
HJS		J. Hissong, OH	2	KMAB		M. Karklin Fontana, Brazil	32
HELA		E. Ho, MA	5	KTHA	19	T. Karlsson, Sweden	1918
HMAA		M. Hochhauser, MA	14	KPAB		P. Kastritis, MA	5
HEK	11	E. Hoeg, Denmark	96	KLUA		L. Katz, NY	7
HFO	01	G. Hoffer, Germany	77	KBJ		R. Kaufman, Australia	335
HALA		A. Hoffman, MA	8	KMQ	06	M. Kearns, Spain	21
HDF		D. Hohman, NY	69	KKEA		K. Kelso, AL	5
HOO	04	G. Hoogeveen, Netherlands	1	KGRA		G. Kerr, MA	5
HJG		J. Horne, CA	162	KSH	29	S. Kerr, Australia	55
HJZ		J. Horne, CA	824	KSZ	03	S. Keszthelyi, Hungary	444
HJUB		J. Hose	1	KJMA		J. Ketchum, MO	1
HDAA		D. Houser, PA	39	KROA		R. Keyser, TX	42
HSP	14	S. Hovell, New Zealand	852	KIY		A. Kilin, Russia	437
HOA		A. Howell, FL	503	KEJA		E. Kim, CA	5
HSW		S. Howerton, KS	70	KHAA		H. Kim, MA	7
HGRA		G. Hubbell, VA	2	KKYA		K. Kim, MA	8
HGSA		G. Huddart, MA	6	KJAA		J. King, MA	3
HRAA		R. Hug, MA	7	KRAA		R. King, VA	468
HDU		D. Hurdis, RI	1781	KRB		R. King, MN	582
HUR	20	G. Hurst, England	1218	KQR		R. Kinne, MA	8
HTN		K. Hutton, CA	13	KSJ	27	S. Kinsella, Canada	45
HUZ		R. Huziak, Canada	151	KLSA		L. Kirkland, MO	6
HUI	03	S. Huzina, Hungary	5	KIL	03	L. Kiss, Australia	21
ILE	03	E. Illes, Hungary	601	KPC		P. Klages, England	1
ICAA		C. Inledon, MA	10	KJFA		J. Kleban, MD	7
IRO	03	R. Istvan, Hungary	1	KKAA		K. Klindt-Jensen, Denmark	369
JTAA		T. Jaarsma, MA	106	KMAA		M. Kline, MA	6
JPM	10	P. Jacobs, South Africa	48	KZAA		Z. Kline, MA	6
JMA		M. Jacquesson, France	19	KGE	08	G. Klingenberg, Norway	716
JTP	01	P. Jacquet, France	172	KGT		G. Knight, ME	14
JAT	03	T. Jakabfi, Hungary	33	KSP		S. Knight, ME	95
JTAB		T. Jakabfi, Hungary	28	KJAB		J. Ko, MA	6
JDA		D. Jakubek, Poland	2	KBSA		B. Kochman, MA	1
JNDA		N. James, England	595	KLO		L. Kocsmaros, Serbia	663
JM		R. James, NM	96949	KVAA		V. Koehler, MA	7

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Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
KRV		R. Koff, CO	8050	LMI		M. Lierl, KY	6
KKT	03	K. Kohler, Hungary	37	LCBA		C. Limmer, MA	7
KRS		R. Kolman, IL	2070	LPAA		P. Linder, Sweden	1
KMA		M. Komorous, Canada	2233	LMK		M. Linnolt, HI	1162
KTOA		T. Kooij, Netherlands	12	LKDA		K. Lipman, MA	8
KNK	03	K. Korei-Nagy, Hungary	1	LCO		C. Littlefield, NY	6172
KDAA		D. Korniak, Poland	3	LSZ		S. Liu, China	1
KCS	03	C. Koros, Hungary	24	LYZ		Y. Liu, CA	2
KJAC		J. Kos, Slovenia	29	LLZ	03	L. Liziczai, Hungary	27
KOS	03	A. Kosa-Kiss, Romania	4871	LTE	20	T. Lloyd Evans, England	1965
KLX		L. Koscianski, MD	1	LOB	06	J. Lobo Rodriguez, Spain	84
KPAA		P. Kottaridis, Greece	18	LRD		D. Loring, UT	1600
KNIA		N. Kourounis, Greece	13	LAJA		A. Loshkajian, MA	7
KVI	03	I. Kovacs, Hungary	45	LDS	20	D. Loughney, England	57
KAF	03	A. Kovacs, Hungary	597	LBG		G. Lubcke, WI	4169
KASA		A. Kreshtool, DE	8	LSWA		S. Luk, MA	7
KESA		E. Kreshtool, DE	8	LCHA		C. Luo, MA	11
KJOA		J. Kribbel, Austria	1	LMJ	17	M. Luostarinen, Finland	2079
KWO	02	W. Kriebel, Germany	1351	LWYA		W. Lyoo, MA	6
KIS	02	G. Krisch, Germany	1724	MJEA		J. , MO	48
KARB		A. Krishnamurthy, MA	8	MSTA		S. MacDonald-Brown, England	107
KGEA		G. Kristiansen, England	78	MDW	27	W. MacDonald, Canada	9
KRDA		R. Kroll, MA	5	MJOA		J. MacLennan, MA	12
KTZ		T. Krzyt, Poland	679	MMRT		M. Magris, Italy	3
KBA		B. Kubiak, Poland	456	MYB	03	M. Magyari, Hungary	11
KUC	01	S. Kuchto, France	1530	MMKB		M. Maher, MA	10
KSRA		S. Kupferberg, MA	6	MPEA		P. Mahoney, MA	9
KJTA		J. Kupras, Poland	4	MALB		A. Maidik, Ukraine	126
KSQ		S. Kuznetsov, Russia	808	MFA	09	A. Maidyk, Ukraine	4
KJKA		J. Kwon, MA	11	MHE	02	H. Maier, Germany	1
LCR	15	C. Labordena, Spain	744	MLI		L. Maisler, NY	34
LHS		H. Lacombe, Canada	55	MYN		A. Majczyzna, Poland	20
LMU		M. Lahteenmaki, Finland	3	MDAV		D. Majors, CA	86
LSA	17	S. Lahtinen, Finland	16	MVO	17	V. Makela, Finland	594
LPB		P. Lake, Australia	772	MJHN	20	J. Mallett, England	3
LDEA		D. Lambert, NY	6	MESB	17	E. Mangelaja, Finland	18
LPEA		P. Lancaster, Australia	11	MUQ		D. Manousos, Greece	1
LAL		A. Landolt, LA	28	MKE		B. Manske, WI	405
LDJ	27	D. Lane, Canada	2132	MGK		G. Maravelias, Greece	44
LJOB		J. Lapin, MA	8	MNRA		N. Marchand, MA	6
LMF	13	M. Lara, Brazil	8	MXI	18	A. Marchini, Italy	273
LMJB		M. Larsen-Strecker, MA	10	MFRA		F. Marcoux, Canada	17
LTM		T. Laskowski, IN	20	MIOA		I. Marinescu, Canada	2
LMAA		M. Lauzikas, Lithuania	4	MFB	01	F. Mariuzza, Italy	291
LZT		T. Lazuka, IL	659	MTON	20	T. Markham, England	4500
LEB	01	R. Lebert, France	1	MKW		A. Markiewicz, Poland	75
LALA		A. Lee, MA	7	MXS	03	S. Marosi, Hungary	132
LJAA		J. Lee, MA	8	MANG		A. Marrero, Spain	46
LWOA		W. Lee, MA	8	MNIB		N. Marshall, MA	5
LMT		M. Legutko, Poland	121	MMN	18	M. Martignoni, Italy	876
LDA		D. Lehman, MD	1	MCDA		C. Martin, AZ	4
LCLA		C. Lemaire, Germany	172	MCHR		C. Martin, CO	151
LPD	01	P. Lemarchand, France	25	UIS01		J. Martin, IL	20
LMA		D. Lemay, Canada	1	MMG		M. Martinengo, Italy	672
LMOA		M. Lerner, NY	7	MAFA		A. Martinez, CA	5
LMSA		M. Lesser, NY	6	MMIA		M. Martinez, VT	7
LEV		A. Leveque, CA	132	MTHB		T. Martinez, MA	10
LVY		D. Levy, AZ	119	MVIA		V. Marttila, Finland	2
LXIA		X. Li, NJ	14	MBS		B. Massey, CA	52

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
MIDA	I.	Massey, England	1	MUY	05	E. Muylaert, Belgium	2309
MLOA	L.	Masterson, VT	10	MGAR		G. Myers, WA	7
MTH	H.	Matsuyama, Australia	8224	MGW		G. Myers, CA	1372
MTM	M.	Mattei, MA	13	NNNA		N. Naftali, MA	7
MPR	P.	Maurer, Germany	423	NJT	03	J. Nagy, Hungary	5
MBE	B.	McCandless, MD	14	NRIA		R. Naik, WA	9
MQS	S.	McCann, England	1	NDQ	01	D. Naillon, France	238
MEKA	E.	McCarthy, MA	8	NLX		P. Nelson, Australia	10601
MJAB	J.	McCullough, Australia	33	NLZ	03	L. Nemeth, Hungary	112
MJUE	R.	McDaniel, TX	1781	NMGA		M. Nemetz, TX	9
MDP	27	P. McDonald, Canada	972	NAVA		A. Nguyen, MA	11
MGH	20	H. McGee, England	29	NMR		M. Nicholson, England	369
MMAC	M.	McKinnon, NY	6	NOT		O. Nickel, Germany	15
MJTA	J.	McLaughlin, CA	6	NHS	11	H. Nielsen, Denmark	5
MWVA	W.	McMain, MA	2	NCPA		C. Nilson, CT	9
MMAE	M.	McNeely, IN	486	NJLA		J. Noack, MA	9
MED	20	K. Medway, England	1015	NCH		C. Norris, TX	106
MJFA	J.	Mee, MA	8	NLSA		L. Novak, MA	7
MFR	F.	Melillo, NY	17	NRU		R. Novak, Czech Republic	115
MJAC	J.	Mendal, MA	7	NAO		A. Novichonok, Russia	81
MFAB	F.	Mendez, FL	9	NKL		K. Nuber, Germany	1
MBCA	B.	Menendez, MA	8	NDRA		D. Nunez, MA	9
MZU	J.	Menendez, Spain	1	NAN		A. Nygaard, England	28
MZK	K.	Menzies, MA	17854	OCX		L. O'Connor, MA	42
MLIA	L.	Merchan, FL	5	OCN		S. O'Connor, Bermuda	48
MDEN	D.	Merrill, CA	123	OGJA		G. O'Flaherty, Ireland	25
MHEA	H.	Mikuz, Slovenia	9	ONJ		J. O'Neill, Ireland	125
MBAA	B.	Miller, CA	3	OSN		S. Oatney, KS	2
MIW	20	I. Miller, England	25913	OANA		A. Oberley, ME	3
MMGA	M.	Miller, TN	1	OLUA		L. Ocampo, IL	9
MADA	A.	Mills, Canada	24	OAS		A. Odasso, Italy	194
MMEA	M.	Millward, Australia	21	OALA	02	A. Oertlin, Germany	450
MNAA	N.	Millstein, CA	9	OYE		Y. Ogmen, Cyprus	8413
MTIA	T.	Mitropoulos, MA	11	OJMA		J. Ojanpera, Finland	20
MZS	03	A. Mizser, Hungary	259	OAR	17	A. Oksanen, Finland	18218
MCE	E.	Mochizuki, Japan	16	OKEA		K. Olson, MA	6
MRV	R.	Modic, OH	131	ORGA		R. Oltion, WY	2
MHH	J.	Moehlmann, PA	866	OAD		A. Ormsby, MI	128
MQE	K.	Mogul, GA	60	OADA		A. Ortiz, NY	13
MOD	D.	Mohrbacher, OH	24	OPR		P. Ossowski, Poland	21
MWLA	W.	Mokwa, Poland	1	OCGA		C. Osteen, CO	6
MHC	12	C. Montalvo, Peru	1	OSE		S. Otero, Argentina	7
MDPA	D.	Monteiro, Portugal	2	OSJ		J. Otero Saiz, Spain	6
MTHC	T.	Moon, MA	9	OCR	05	C. Otten, Belgium	141
MAMC	A.	Moore, CT	11	OEH		E. Ozturk, Turkey	4
MJOH	20	J. Moore, England	287	PLA	13	A. Padilla Filho, Brazil	2
MEV	01	E. Morelle, France	57899	PTHA		T. Page, CA	6
MCBA	C.	Morford, NC	57	PLN	02	L. Pagel, Germany	16416
MDJA	D.	Moriarty, Australia	4091	PJLA		J. Pakula, MA	6
MJAD	J.	Morris, MA	8	PLP		L. Palazzi, Italy	1036
MOW	W.	Morrison, Canada	4883	PCHB		C. Palmer, WY	6
MKAA	K.	Moser, MA	7	PBC		B. Paolo, Italy	210
MCEA	C.	Mostertz, MA	12	PPS	03	S. Papp, Hungary	3185
MMX	M.	Motta, MA	82	PREA		R. Paret, France	6
MPS	27	P. Mozel, Canada	4	PCN		C. Parrinello, IL	4
MMH	M.	Muciek, Poland	14	PTQ		T. Parson, MN	2
MDU	D.	Mulinski, Poland	39	PDIA		D. Paschos, Greece	1
MBQ	B.	Mullin, MN	9	PCG		J. Pascual Gutierrez, Spain	2
MIAA	I.	Munro, MA	8	PKV		K. Paxson, TX	2133

2. The Year in Review

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
PEX	14	A. Pearce, Australia	76	OJR		J. Ripero Osorio, Spain	1739
PBT		R. Pearson, VA	16	RWAA		W. Riva, Italy	3
PEI	11	E. Pedersen, Denmark	324	RNDA		N. Rivard, Canada	16
PEG	01	C. Peguet, France	867	RIV		M. Rivera, Italy	357
PWD		W. Pellerin, TX	136	RLJA		L. Robert, France	8
PDRA		D. Perez, Spain	15	REE		E. Robinson, England	32
PJVA		J. Perez, Spain	13	RDAA		D. Rodriguez, Spain	4
PDAB		D. Pernick, MA	5	RMU	06	M. Rodriguez Marco, Spain	4790
PGPA		G. Petkov, Bulgaria	19	ROE		J. Roe, MO	4332
PVA	27	V. Petriew, Canada	13	RMAC		M. Roe, MA	9
PRP		R. Pickard, Australia	1	RRO		R. Rogge, Germany	4
PXR	20	R. Pickard, England	6946	RKAA		K. Rogstad, VT	14
PROC		R. Pieri, France	83	RWNA		W. Rose, MA	6
PDKA		D. Pienkowski, Poland	33	RMAB		M. Rosicarelli, Italy	9
PLQ	01	L. Pinatelle, France	122	RCWA		C. Ross, MA	6
PEMA		E. Pinon, MA	17	ROG		G. Ross, MI	106
PIJ	03	J. Piriti, Hungary	1679	RJJA		J. Ross, NC	21
PLU		L. Pirozzi, Italy	7	RGN		G. Rossi, Italy	1
PPL		P. Plante, OH	181	REHA		E. Rothstein, MA	6
PHN	04	H. Pleijsier, Netherlands	5	RJNA		J. Rousseau, MA	7
PBMA		B. Plugis, MA	8	RAFA		A. Roussell, Canada	5
PAW		A. Plummer, Australia	2885	RCJA		C. Roussell, Canada	10
AST	12	R. Podesta, Argentina	15	RBRA		B. Rowe, MA	6
PCHA		C. Poh, MA	5	RR		R. Royer, CA	87
PRX		R. Poklar, AZ	5026	ART		R. Rubio Albacete, Spain	4
PSOA		S. Poma, MA	13	RJV		J. Ruiz Fernandez, Spain	1399
PMV		M. Popescu, Romania	7	RNL		N. Ruocco, Italy	180
PDM		A. Popowicz, Poland	8	RMDA		M. Russiani, Italy	10
PRV		R. Potter, MI	5	RTH		T. Rutherford, TN	92
PSEB		S. Pouliot, Canada	545	RZM		M. Rzepka, Poland	1124
POX		M. Poxon, England	191	SHAB		H. Sabanci, MA	8
PYG		G. Poyner, England	8435	SJD		J. Sabia, PA	7
PJCA		J. Preston, MA	9	SRIC		R. Sabo, MT	40592
PAH		A. Price, MA	14	SJQ		A. Sajtz, Romania	851
PRT		R. Price, Australia	14	STAA		T. Sakamoto, MD	56
PSIA		S. Prieto Saavedra, Spain	6	SSU		S. Sakuma, Japan	1057
PAI		A. Prokopovich, Belarus	11	SDAA		D. Sala Tapias, Spain	18
PMB		M. Prokosch, TX	3	SJAV		J. Salas, Spain	3
PDQ	01	D. Proust, France	44	SMRK		M. Salisbury, England	360
PUJ	06	F. Pujol-Clapes, Spain	599	SQL	26	R. Salvo, Uruguay	31
PKU		K. Pukero, Finland	114	SAH		G. Samolyk, WI	13254
PHG		H. Purucker, Germany	170	SPEA		P. Sanchez, Nicaragua	24
QYIA		Y. Qiu, China	29	SMDC		M. Sanda, MA	5
QCHA		C. Quesada, AZ	3	SJLA		J. Sanduski, MA	6
QFI	05	F. Questier, Belgium	2	SGE	27	G. Sarty, Canada	4
RKE	02	K. Raetz, Germany	470	SVA		A. Saw, Australia	384
RINA		I. Rait, MA	7	SDAV		D. Scanlan, England	128
RCFB		C. Ramos, MA	8	SRIB		R. Scarpa, Spain	5
RBMA		B. Read, MA	10	SCLA		C. Schachter, NY	7
RAJB		A. Redmond, MA	10	SDY	02	D. Scharnhorst, Germany	476
REP	24	P. Reinhard, Austria	431	SFS		S. Schiff, VA	18
RKZ	13	K. Resende, Brazil	1	SRBR		R. Schippers, Netherlands	459
RMLA		M. Restiano, MA	6	SPK	01	P. Schmeer, Germany	1
RKL	02	K. Retzlaff, Germany	1	SPCA		P. Schmidt, MA	11
RLUA		L. Ribe, Spain	41	SREA		R. Schoenbrun, MA	8
RJG		J. Ribeiro, Portugal	433	SAQ	04	A. Scholten, Netherlands	3
RHJ		J. Richmond, MI	66	SFRA		F. Schorr, GA	422
RHM		M. Richmond, NY	75	SGLE		G. Schrader, Australia	41
RIJ		S. Riley, CT	6	SYU	02	M. Schubert, Germany	1334

Table 3. AAVSO Observers, 2010–2011, cont.*

<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>	<i>Code</i>	<i>Org.</i>	<i>Name</i>	<i>No. Obs.</i>
SAND	02	A. Schumann, Germany	443	SDB		D. Starkey, IN	1605
SJEA	01	J. Sciolla, France	430	SPET		P. Starr, Australia	6963
SRYA	27	R. Scott, Canada	23	SJAT		J. Starzomski, Poland	1058
SMIA		M. Sednaoui, MA	9	STAS		T. Stebler, Switzerland	34
SDMA		D. Selmo, Brazil	10	SELA		E. Stecher, MA	6
SMJB		M. Senday, Brazil	10	SYO		T. Steck, IN	20
SSSA		S. Sepetiba, Brazil	3	STI		P. Steffey, FL	576
STVA		T. Sepetiba, Brazil	3	SWIL		W. Stein, NM	18474
SIV		I. Sergey, Belarus	352	SVR		R. Stencil, CO	13
SJMB		J. Sessler, MA	6	SET		C. Stephan, FL	1456
SFJA		F. Sevilla, Spain	3	SABA		A. Stevens, MA	10
SSTA	27	S. Shadick, Canada	514	SMDB		M. Stewart, KS	25
SSHA		S. Shaffer, WY	857	SRB		R. Stine, CA	1011
SHS		S. Sharpe, Canada	2610	SOX		C. Stockdale, Australia	15015
SDP		D. Sharples, NY	8	SPSA		P. Stoj, Poland	8
SERB		E. Shaw, PA	11	SMRA		M. Stolzer, MA	8
SFY	20	J. Shears, England	3516	SWAA		W. Stonefield, MA	8
SHW		W. Sherman, TX	2	SDI	20	D. Storey, England	33
SLH		L. Shotter, PA	769	SFU	29	M. Streamer, Australia	6031
SGQ		C. Sigismondi, Italy	102	SNJ		N. Stritof, Slovenia	80
SRAF		R. Sikora, Poland	1	SMAE		M. Stuart, England	1
SBAB		B. Silberstein, MA	9	SRX	14	R. Stubbings, Australia	3895
SPAO	18	P. Siliprandi, Italy	533	SUK		M. Stuka, CA	11
SMSA		M. Silva, Brazil	1	SAXA		A. Suarez, MA	10
SBN	13	A. Silva Barros, Brazil	31	SUQ		A. Sucker, Germany	7
SNE		N. Simmons, WI	4082	SUS	02	D. Suessmann, Germany	410
SXN		M. Simonsen, MI	7174	TSUA		T. Sukumaran, India	2
SLIA		L. Sindelar, Czech Republic	26	STIA		T. Sullivan, MO	26
SANG		A. Sing, Philippines	349	SJAR		J. Suomela, Finland	1704
SPAB		P. Singh, India	1	SCHA		C. Surum, MA	9
STOC		T. Sitek, Czech Republic	31	SRLA		R. Sutter, AZ	15
SGOR		G. Sjoberg, MA	10322	SBOB		B. Sutuntivorakoon, MA	3
SDN		D. Slauson, IA	22	SBIA		B. Swalwell, England	5
SEVG		E. Smirnov, Russia	7	SWV		D. Swann, TX	353
SMI		A. Smith, England	16	SSW		S. Swierczynski, Poland	269
SBAD		B. Smith, England	18	SKIT	03	K. Szabo, Hungary	4
SCAA		C. Smith, MA	6	SFX	03	T. Szalai, Hungary	1
SHA		H. Smith, MI	300	SZX	03	Z. Szalma, Hungary	1
SDCA		D. Smith, NY	60	SAO	03	A. Szauer, Hungary	97
SJE		J. Smith, CA	110	SXB		M. Szczerba, Poland	2
SSTB		S. Smith, CA	77	TUO		U. Tagliaferri, Italy	111
SLEE		L. Smojver, WA	13	TTG		T. Tan, Australia	7423
SX		L. Snyder, NV	21763	TCEB		C. Tapia Ayuga, Spain	7
SJTB		J. Sobo, NJ	10	TJOB		J. Tapioles, Spain	36
STAK		T. Soejima, Japan	12	TNDA		N. Tarrh, MA	5
SKA	16	K. Sokolovsky, Germany	32	TSZ	03	S. Teichner, Hungary	309
SJAA		J. Sokolski, MA	11	TJV		J. Temprano, Spain	19
SBX		A. Sonka, Romania	9	TCI	03	C. Tepliczky, Hungary	27
SGYO	03	G. Soponyai, Hungary	519	TPS	03	I. Tepliczky, Hungary	1597
SYP		P. Soron, Canada	15	TDN		D. Terpstra, AZ	70
SOW	17	J. Sorvari, Finland	128	TTU		T. Tezel, Turkey	19
SJZ		J. Speil, Poland	2193	TGMA		G. Thomas, MA	7
SSJA		S. Spielbusch, AZ	151	T5		G. Thompson, NH	8
SDAC		D. Spira, MD	8	GPJ		P. Thompson, CA	7
SC	27	C. Spratt, Canada	182	TRDA		R. Thrall III, PA	13
SXR	03	M. Sragner, Hungary	17	TIA	03	A. Timar, Hungary	294
SBL	05	B. Staels, Belgium	1085	TBRA		B. Tobias, TX	2
SVAE		V. Stanimirov, Bulgaria	15	TRL		R. Togni, AR	27
STR		R. Stanton, CA	25	TBRB		B. Toman, LA	1

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Table 3. AAVSO Observers, 2010–2011, cont.*

Code	Org.	Name	No. Obs.	Code	Org.	Name	No. Obs.
TRE		R. Tomlin, IL	91461	WCB		C. Webster, PA	333
TWP		W. Toomey, MA	2	WGAA		G. Webster, Canada	4
TVT		V. Tramazzo, AZ	1	WPT	10	P. Wedepohl, South Africa	43
TFR		F. Travaglino, Italy	1	WPU		P. Weeks, CA	90
TWA		W. Travis, MA	6	WRKA		R. Weisenburger, AZ	2
TRF		C. Trefzger, Switzerland	29	WCAA		C. Welch, NJ	6
TALB		A. Troncoso, MA	9	WKFA		K. Weller, MA	7
TDW		D. Trowbridge, WA	200	WDZ		D. Wells, TX	1142
TRX		R. Truta, Romania	3	WWL		W. Wells, OK	3
TMHA		M. Tsang, Canada	8	WKL	15	K. Wenzel, Germany	789
TSJ		S. Tsuji, Japan	12	WRP		R. Wheeler, OK	1
TYS		R. Tyson, NY	659	WDO		D. Whelan, RI	1
UAN	03	A. Uhrin, Hungary	12	WWIA		W. Whitehead, NJ	46
UJHA		J. Ulowetz, IL	10703	WBN		B. Widla, Poland	137
UPIA		P. Us, MA	13	WTHA		T. Will, Germany	10
VMAB		M. Valatkaite, MA	8	WAWB		A. Williams, MA	8
BVE	04	E. Van Ballegoij, Netherlands	518	WI		D. Williams, IN	1
VBR		H. Van Bommel, Canada	22	WIG		G. Williams, OH	3
VDF		F. Van den Abbeel, Belgium	1	WPX	29	P. Williams, Australia	3227
VBH	05	H. Vandenbruene, Belgium	12	WLP	05	P. Wils, Belgium	185
VLYA		L. Van Rooijen-McCullough, Netherlands	52	WWJ		B. Wilson, England	1023
VLE	04	J. Van T'Leven, Netherlands	1	WJPA		J. Wilson, MA	7
VUG	04	G. Van Uden, Netherlands	181	WBH		R. Wilson, AZ	122
VWS	05	J. Van Wassenhove, Belgium	1384	WSN		T. Wilson, WV	1205
VJCA		J. Vannini, Nicaragua	5	WAS	02	A. Winkler, Germany	65
VSD	05	D. Vansteelant, Belgium	4	WBLA		B. Wise, CA	20
VKN		K. Vardijan, Croatia	5	WEMA		E. Wise, NJ	6
VED	01	P. Vedrenne, France	4940	WKM		M. Wiskirken, WA	2
VCLA		C. Veliz, VT	17	WMAA		M. Witko, NY	6
VDI	03	D. Vereb, Hungary	6	WGJA		G. Witz, CT	6
VIA	01	J. Vialle, France	175	WBS		R. Wobus, MD	8
VMAA		M. Vieira, Brazil	1	WJSB		J. Wolff, MA	7
VBI	03	B. Vigh, Hungary	4	WGI	02	G. Wollenhaupt, Germany	30
VBRA		B. Vincent, MA	6	WGO		G. Wood, NC	21
FVAA		F. Violat-Bordonau, Spain	12	WVR		R. Wood, TX	50
VJA	17	J. Virtanen, Finland	4430	WUB	04	E. Wubbena, Netherlands	290
VGRA		G. Vitale, MA	14	WUN	02	E. Wunder, Germany	39
VGK		G. Vithoulkas, Greece	1314	WCG		C. Wyatt, Australia	14
VAQA		A. Vodniza, Colombia	24	XWEA		W. Xiong, MA	6
VFK	02	F. Vohla, Germany	4943	XWE		W. Xu, China	1
VOL		W. Vollmann, Austria	386	YALA		A. Yanez, MA	16
VAIA		A. Vorontseva, Ukraine	28	YMAA		M. Yanover, MA	8
VSA		S. Vuorinen, Finland	1	YBA		B. Young, OK	255
WLY		L. Wade, MS	856	YDV		D. Young, MA	118
WROA		R. Wahlstrom, Sweden	123	YON		R. Young, PA	8
WNBA		N. Wakefield, South Africa	21	ZFRA		F. Zecchin, France	98
WGR		G. Walker, MA	31	ZPA		P. Zeller, IN	166
WEVA		E. Wallace, MA	6	ZXUA		X. Zheng, China	11
WRIA		R. Wallheimer, MA	10	ZXIA		X. Zhu, WI	5
WBY		B. Walter, TX	2	ZTO	02	T. Zimmermann, Germany	18
WJX		J. Wan, Australia	1	ZPAA		P. Ziolk, MA	11
WYUB		Y. Wang, MA	7	ZALA		A. Zonta, Germany	73
WYUA		Y. Wang, MA	8	ZAMA		A. Zuckerman, MA	10
WGE		G. Ward, WV	10	ZJIB		J. Zuniga, MA	7
WAU		A. Wargin, Poland	8	ZGA	03	G. Zvara, Hungary	2
WDC		D. Watts, MS	108				

*Totals reflect observations made during fiscal 2010–2011 and do not include historical data (data preceding fiscal 2010–2011) submitted during fiscal 2010–2011.

Table 3. AAVSO Observers, 2010–2011, cont.

These codes, which appear in the Table (AAVSO Observers 2010–2011), indicate observers are also affiliated with the groups below:

- 01 Association Française des Observateurs d'Étoiles Variables (AFOEV)
- 02 Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV) (Germany)
- 03 Magyar Csillagászati Egyesület, Valtózcillag Szakcsoport (Hungary)
- 04 Koninklijke Nederlandse Vereniging voor Weer-en Sterrenkunde, Werkgroep Veranderlijke Sterren (Netherlands)
- 05 Vereniging Voor Sterrenkunde, Werkgroep Veranderlijke Sterren (Belgium)
- 06 Madrid Astronomical Association M1 (Spain)
- 08 Norwegian Astronomical Society, Variable Star Section
- 09 Ukraine Astronomical Group, Variable Star Section
- 10 Astronomical Society of Southern Africa, Variable Star Section
- 11 Astronomisk Selskab (Scandinavia)
- 12 Liga Iberoamericana de Astronomia (South America)
- 13 Rede de Astronomia Observacional (Brazil)
- 14 Royal Astronomical Society of New Zealand, Variable Star Section
- 15 Agrupacion Astronomica de Sabadell (Spain)
- 16 Association of Variable Star Observers "Pleione" (Russia)
- 17 URSA Astronomical Association, Variable Star Section (Finland)
- 18 Unione Astrofili Italiani (Italy)
- 19 Svensk Amator Astronomisk Förening, Variabelsektionen (Sweden)
- 20 British Astronomical Association, Variable Star Section
- 24 Astronomischer Jugendclub (Austria)
- 26 Red de Observadores (Montevideo, Uruguay)
- 27 Royal Astronomical Society of Canada
- 29 Variable Stars South (New Zealand)
- 31 Center for Backyard Astronomy

Table 4. Observation statistics for fiscal year 2010–2011.*

<i>Observations (increments of 1000)</i>	<i>No. Observations per increment</i>	<i>% of All Observations</i>	<i>No. Observers per increment</i>
1–999	85900	7.8	928
1000–1999	61067	5.5	45
2000–2999	44417	4	19
3000–3999	20340	1.8	6
4000–4999	63074	5.7	14
5000–5999	26617	2.4	5
6000–6999	26112	2.3	4
7000–7999	29336	2.6	4
8000–8999	33122	3	4
9000–9999	0	0	0
10000+	746655	68	26

*Totals reflect observations made during fiscal 2010–2011 and do not include historical data (data preceding fiscal 2010–2011) submitted during fiscal 2010–2011.

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Section Reports

Cataclysmic Variable (CV)

Section Leaders: *Mike Simonsen, 2615 S. Summers Road, Imlay City, MI 48444*
Gary Poyner, 67 Ellerton Road, Kingstanding, Birmingham, B44 0QE,
England

CV Section Website

The CV Section story website is hosted by Google at:

<https://sites.google.com/site/aavsocvsection/Home>

The main features on the home page are a left-hand news column and navigation box, a center column feature and recent pre-prints for arXiv on CVs and a right-hand column with Activity at a Glance (outbursts from the past 72 hours), CV outbursts from CRTS, and boxes for the Z CamPaig, Hamburg Survey CVs, and the Long-Term Polar Monitoring Programme.

The home page is maintained and updated daily, often several times per day, by section co-leaders Simonsen and Poyner. All the remaining content, including the blog, feature articles and interviews, is written, edited, and maintained by Simonsen.

Activities

The main activity of our observers has been to monitor the CVs in the AAVSO program for activity and report their data to the AAVSO International Database (AID). Little or no analysis of the data is done by AAVSO members or staff. The only exception to this is the Z CamPaig, which has quarterly updates reported to the section on the campaign targets. Three papers resulting from the Z CamPaig have been accepted for publication in the *Journal of the AAVSO*.

Section co-leaders Mike Simonsen and Gary Poyner moderate all the CVnet mail lists. The three CVnet lists are:

CVnet Discussion

The discussion list has 261 subscribers. The past year's activity is best described as an announcement list. Actual discussion seldom takes place. Notes from *AAVSO Alert* and

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Special Notices, IAU Circulars, and The Astronomer telegrams get forwarded here also.

CVnet Outburst

The outburst list has 236 subscribers. This list has daily activity and is used by observers to announce outburst detections and unusual behavior of CVs, as well as Z Cam standstills and time series results.

CVnet Circular

The Circular has 167 subscribers and is edited and maintained by Chris Watson and Mike Simonsen. Daily average magnitudes of all the CVs in the AAVSO International Database are calculated and tabulated for a 30-day period and distributed automatically via email each Monday morning at 00:00UT.

Charts and Sequences

Section Leader: *Mike Simonsen, 2615 S. Summers Road, Imlay City, MI 48444*

The Team

The charts and sequences team is made up of volunteers who work countless hours each month revising old sequences and creating new sequences. Our most active team members account for about 90% of the work, notably Tom Bretl, Tim Crawford, Robert Fidirich, Jim Jones, and Keith Graham. Bob Stine serves as our team visual sequence evaluator and Sebastian Otero provides invaluable insight into bright star catalogs and photometry as well as southern hemisphere sequences.

The Tools

The primary tool, SeqPlot, displays stars with reliable photometry in three colors, green, red, and blue. This makes it easy for team members to select non-red and non-blue stars based on B-V color. Selecting a star for a sequence is done by clicking on that star, which in turn sends it to a text file, formatted for uploading into the AAVSO variable star/comp star database, VSD.

Files and notes on sequences are shared through the sequence team mail list. Simonsen collects and archives the files and once or twice per week evaluates the submissions,

uploads the data to VSD, checks the resulting charts, and notifies the team of implementations via the mail list.

The other important tool in the chain is the VSD Admin tool, which allows the team leader to access, edit, add, and delete information from the comp star database.

Changes are all tracked online in a Google spreadsheet accessible to the public at: <https://spreadsheets.google.com/ccc?key=0Ar0ujdSb5ufQdEhkTE5jREhWRm95dDRialMOR1ZGREE&hl=en&pli=1#gid=0>

CHET, the chart error tracking tool, which allows observers to report and track the progress of chart issues, had been offline since implementation of the new website. CHET was re-launched early in 2011 and we have been actively addressing reported errors and requests for sequence revision and additions ever since. CHET can be accessed on the website at: <http://www.aavso.org/chet>

The Website

The sequence team has its own website, created and maintained by Simonsen, where team members and especially new team members can find instructions on how to use SeqPlot, guidelines for sequence creation and revisions, photometric resources outside SeqPlot, a tutorial on how to use ASAS data, and a list of current projects and priorities. The team site can be viewed online at: <https://sites.google.com/site/aavsosequenceteam/Home>

Photometry

Photometry available in SeqPlot includes the Tycho database, Bright Star Monitor data, Henden 1M USNO calibrations, new releases of APASS data as they become available, and several sources from AAVSONet, including SRO and the Wright telescopes.

The latest data release from APASS has shown the astronomical community what a fantastic, one-of-a-kind catalog, this is. An all-sky photometric catalog from 10th to 17th magnitude has been the Holy Grail of AAVSO chart makers since the dawn of VSO. It is a prestigious AAVSO asset, and a priceless legacy from our Director, Arne Henden.

Results

The results speak for themselves in the improved quality of the sequences available to observers and the speed and efficiency with which revisions and new sequences can

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be implemented with the system in place now. The team has revised or created 655 sequences used on AAVSO charts in the 2011 calendar year.

Data Mining

The Data Mining Section is not active at this time.

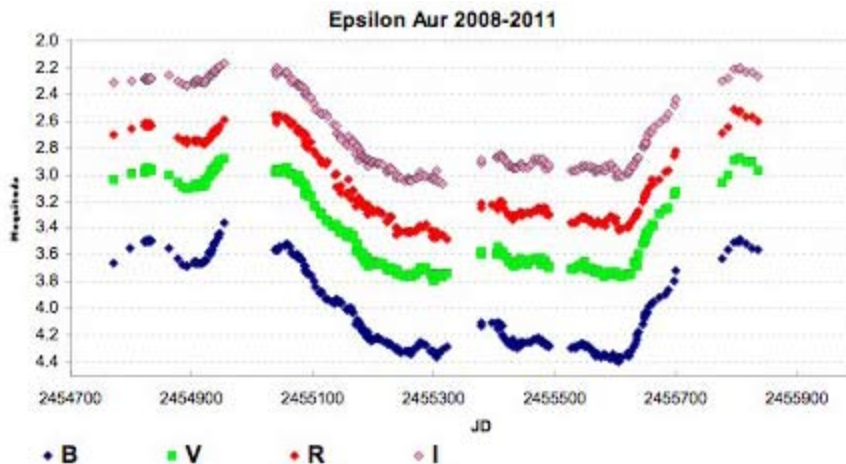
Eclipsing Binary

Section Leaders: *Gerard Samolyk, P.O. Box 20677, Greenfield, WI 53220*
Gary Billings, P.O. Box 263, Rockyford, Alberta T0J 2R0, Canada

A paper containing a total of 267 times of minima of 146 stars has been submitted to JAAVSO for publication. This paper contained data from fourteen observers. Times of minima published by the AAVSO continue to be added to the Lichtenknecker Database maintained by the BAV. An English language interface to this database can be found at: <http://www.bav-astro.de/LkDB/index.php?lang=en>.

An ephemeris to predict times of minimum for the 200 stars on the AAVSO program is available on the AAVSO website is available at <http://www.aavso.org/eclipsing-binary-ephemerides>. The 2012 ephemeris is now available. This ephemeris is intended for use by observers in North America. The light elements used have been updated based on recent observations made by AAVSO observers.

The eclipse of ϵ Aur ended this past summer, however, observations of the pulsations of the primary star continue. The light curve of the eclipse in four filters is shown below. In November and December, nearby ζ Aur went through its eclipse. This eclipse is best observed with a U or B filter.



Long Period Variable (LPV)

Interim Section Leader: Mike Simonsen, 2615 S. Summers Road, Imlay City, MI 48444

The primary goals of the section are to continue the long-term observation, both visually and electronically, of the Legacy LPVs in the program as well as to determine other scientifically significant LPV targets for observers to follow. We are particularly interested in encouraging and guiding visual observers to include LPVs in their target selection and in building their own observing programs.

We plan to coordinate several interesting campaigns or initiatives involving LPVs in 2012. We have also established an AAVSO Binocular Program for the coming year. The stars have been included in the program based on scientific interest and potential, and will have specific paper charts created for observing these targets, since the Variable Star Plotter (VSP) is not optimized for creating useful binocular charts.

While we look back on the first one hundred years of the AAVSO and the important part LPVs have played in amateurs' contribution to science, we are even more excited about the next one hundred years of observation and monitoring of these astrophysically interesting stars.

Nova Search

Section Leader: *Reverend Kenneth C. Beckmann, 2004 Salter Place, Kirksville, MO 63501*

During the 2010–2011 observing period, five novae were discovered and one recurrent nova was observed in outburst. On 2011 January 25.86 UT, Hideo Nishimura discovered Nova Sagittarii 2011 No. 1 (V5587 Sgr) at CCD magnitude 11.2. On 2011 March 27.832 UT, Koichi Nishiyama and Fujio Kabashina of Japan discovered Nova Sagittarii 2011 No. 2 (V5588 Sgr) at unfiltered CCD magnitude 11.7. On 2011 June 1.40 UT, John Seach of Australia discovered Nova Scorpii 2011 No. 1 (V1312 Sco) at photographic magnitude 9.5. On 2011 August 4.73 UT, Nicholas Brown of Australia discovered Nova Lupi 2011 (PR Lup) at photographic magnitude 10.2. There were two independent discoverers of N Sco 2011 No. 2. On 2011 September 6.37 UT, John Seach of Australia discovered Nova Scorpii 2011 No. 2 (V1313 Sco) at photographic magnitude 9.8. On 2011 September 6.431 UT, Yuji Nakamura of Japan discovered Nova Scorpii 2011 No. 2 (V1313 Sco) at unfiltered CCD magnitude 9.7. After being overdue for several years, the recurrent nova T Pyxidis finally went into outburst during 2011. AAVSO member Michael Linnolt of Hawaii observed it at visual magnitude 13.0 on Apr. 14.2931 UT.

We congratulate all discoverers!

Three observers participated in the AAVSO Nova Search program for the period September 1, 2010 through August 31, 2011. Manfred Durkefalden of Germany, a long time contributor since the early 1970's, contributed 511 minutes to a dome search or free nova search. He also made 29 observations. Gary Nowak of the United States, also a long time observer since the early 1990s contributed 828 observations. Ken Beckmann also of the United States contributed 248 observations. We thank our contributors who have and continue to search visually for novae.

2. The Year in Review

Photoelectric Photometry

Section Leader: *James H. Fox, P.O. Box 135, Mayhill, NM 88339*

Although photoelectric photometry submissions showed a drastic decline in 2011, I hope that the main reason was the non-availability of the AAVSO data-upload utility for people to submit their raw observations on-line. Nearly 600 observations were submitted by observers who did their own reductions and reported the results via WEBObs. Rest assured, we still want and need your PEP observations. PEPObs is now back up and running for your submissions.

PEP observers contributed to the ϵ Aurigae campaign, and are continuing to contribute to campaigns for ζ Aurigae, P Cygni, and V442 Andromedae. Much useful work still needs PEP observations.

Heartfelt thanks to each observer for their contribution! Sincere thanks also go to Dr. Matthew Templeton for his assistance in coordinating the PEP work at AAVSO Headquarters.

AAVSO International Database PEP data contributors 2010–2011

<i>Name</i>	<i>Location</i>	<i>Observer Initials</i>	<i>Total</i>
Charles Calia	CT	CCB	41
James Fox	NM	FXJ	170
Brian Fraser	South Africa	FBN	18
Gianni Galli	Italy	GGL	33
Erik Hoeg	Denmark	HEK	24
John Martin	IL	UIS01	20
Brian McCandless	MD	MBE	14
Hans Nielsen	Denmark	NHS	4
Adrian Ormsby	MI	OAD	128
Kevin Paxson	TX	PKV	1
Eigil Pedersen	Denmark	PEI	1
Thomas Rutherford	TN	RTH	92
Henri Van Bommel	Canada	VBR	22
TOTAL			568

Short Period Pulsator

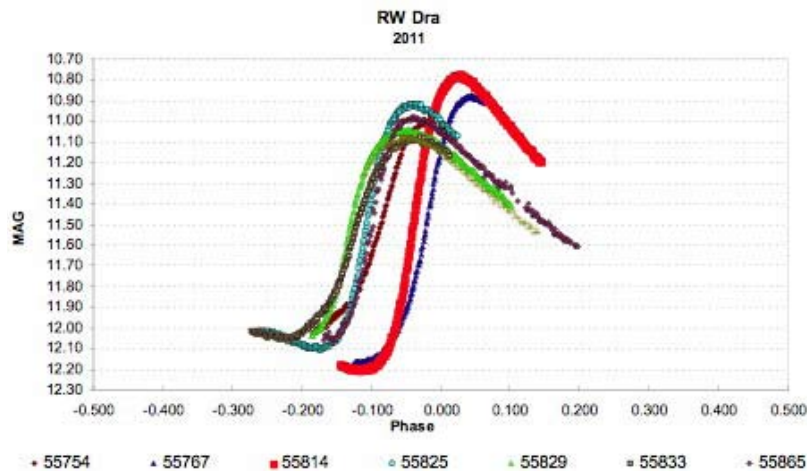
Section Leaders: *David A. Hurdis, 76 Harbour Island Road, Narragansett, RI 02882*
Gerard Samolyk, P.O. Box 20677, Greenfield, WI 53220

A paper containing a total of 275 times of maxima of 56 stars has been submitted to JAAVSO for publication. This paper contained data from nineteen observers. David Hurdis and Tom Krajci published a paper in JAAVSO on the double-mode RR Lyr star, NSVS 5222076.

This past summer, Dave Hurdis resigned as co-chair of the AAVSO SPP section. We wish to thank Dave for his help in getting this section started.

The 2012 ephemeris for the 40 stars on the AAVSO legacy program has been posted. The light elements used have been updated based on recent observations sent to the section chair. This ephemeris is best used by observers in North America.

This year, multiple nights of observations were made on several legacy stars on our program. This was done to monitor the Blazhko period of these stars. RW Dra (shown below) shows how the shape of the light curve as well as the amplitude and phase of the maximum can vary. It should also be noted that the brightness at minimum also varies. Observations at all phases are useful when calculating the Blazhko period of these stars.



Solar

Section Leader: *Rodney Howe, 3343 Rivaridge Drive, Fort Collins, CO 80526*

The sun has finally pulled out of the quiet time and is now becoming active. Kim Hay from Yarker, Ontario, Canada, is doing an excellent job of collecting, cleaning, and creating the monthly American Relative Sunspot numbers for the *Solar Bulletin*. There were a total of 77 sunspot observers who contributed 9,508 observations (October 2010–September 2011). Their efforts should be applauded as they continue to monitor our nearest star. We also have many awards to be given for our sunspot observers based on past certificates, and running numbers from 2006 onward (see tables below).

The report of the Sudden Ionospheric Disturbance (SID) group that monitors solar flares with radio equipment follows below. We hope over the next few months to work with AAVSO HQ in developing an online sunspot data entry system. This would help with data submissions, analysis, and real time information for current and future sunspot observers.

The chair acknowledges with thanks the work of headquarters volunteer Arthur Ritchie and the AAVSO staff, especially Richard “Doc” Kinne, for their continued assistance and support of our efforts.

Solar Ionospheric Disturbance (SID) Group

For the last twelve months overall SID Activity has gone from four months of quiet solar activity to eight months of active solar cycle increase. The year started off with a low activity of SIDs in October 2010 through January 2011, but then in February through September 2011 we began seeing X-class flaring. Our observer ranks have increased by two and we still have on average twelve to thirteen vigilant in their watch for the next solar flare events coming up in solar cycle 24.

There were a total of twenty-one observers submitting reports this last year and a total of 224 reports were sent in. I want to thank all the observers for their efforts in monitoring the sun as it begins a new solar cycle.

One observer is eligible for an award this year. SID Observer awards are given to observers after having submitted 40 reports to the group. This year I’d like to give an award to the longest standing observer, Pete King (A80). Pete has submitted 105 monthly reports since January 1999, and is eligible for the 80-month submission award.

Solar Section Observer Awards for 2010–2011

<i>Category</i>	<i>Name</i>	<i>Observer Initials</i>	<i>Category</i>	<i>Name</i>	<i>Observer Initials</i>
<i>1000 Observations</i>					
	Javier Alonso	AVJ		Richard Giovanoni	GIOR
	Roberto Battaiola	BATR		David W. James	JAMD
	Jose Berdejo	BERJ		Michel Lerman	LERM
	Ray Berg	BEB		Jose Lirriba	LARJ
	David Branchett	BRAD		Jay Miller	MILJ
	Alan Buck	BVC		Susan Oatney	OATS
	Jim Carlson	CARJ		Clyde Simpson	SIMC
	Thomas Compton	COMT		Javier Temprano	TVJ
	Laurent Corp	CLZ		Jacques van Delft	DEJV
	Jean Dragesco	DRAJ		Daniel Vidican	VIDD
<i>1500 Observations</i>					
	Biswajit Bose	BOSB		IPS Observatory	OBSO
	Gerald Dyck	DGP		Hitoshi Takuma	TAKH
	Kim Hay	HAYK			
<i>2000 Observations</i>					
	Thomas Cragg	CR		Arthur Ritchie	RITA
	Javier Ruiz Fernandez	FERJ		Gerhard Stemmler	STEM
	Monty Leventhal	LEVM			
<i>2500 Observations</i>					
	Robert Branch	BRAR		Michael Moeller	MMI
	Franky Dubois	DUBF		E.C. Richardson	RICE
	Kenichi Fujimori	FUJK		Gerd-Lutz Schott	SCGL
	John Kaplan	KAPJ		Nick Stoikidis	STQ
	James and Shirley Knight	KNJS		A. Gonzalo Vargas	VARG
	Javier Jarboles Maranon	MARJ		William M. Wilson	WILW
	Etsuiku Mochizuki	MCE		Hulya Yesilyaprak	YESH

continued on next page

2. The Year in Review

Solar Section awards, cont.

3000 Observations

Gema Araujo	ARAG	Miyoshi Suzuki	SUZM
Robert Brown	BROB	David Teske	TESD
Brian Cudnik	CKB		

3500 Observations

Brenda Branchett	BRAB	German Chavas Morales	CHAG
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5000 Observations

Piotr Urbanski	URBP
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SID Observer Award

80 Observations

Pete King	A80
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Supernova Search

Section Leader: AAVSO Headquarters

The AAVSO Supernova Search Section is being discontinued. Most individuals participating in supernova searching have joined search teams using CCD equipment for image-gathering. Any visual supernova searchers are reporting directly to AAVSO Headquarters. Individuals interested in supernova searching will find material on the AAVSO website and are welcome to contact AAVSO Headquarters.

Treasurer's Report **October 1, 2010–September 30, 2011**

Gary W. Billings, Treasurer, AAVSO, 49 Bay State Road, Cambridge, MA 02138

The financial figures provided herein are prepared in the same way as 2009 and 2010, to provide a statement of income and expenses in what is hopefully a logical manner. The AAVSO also has its finances audited yearly by an external auditor, that report is available on request.

The "Income" section does not just list monies that are new to the AAVSO. Most importantly, it includes money transferred from our "endowment" accounts. \$82,976 more than budgeted for FY2011 operations was transferred from the endowments in the year. Of this, \$60,908 was to make up for grant monies budgeted to be received in the fiscal year, but which will not be received until FY2012. That money will be "repaid" by a smaller withdrawal when received. The remainder was temporarily restricted funds received in an earlier year and carried in the endowment until being spent this year.

Included as a separate "income" line item is the \$261,190 "Dusa bequest" (actually from the estate of James Molnar, Jr.). It was transferred into the endowment (and so recorded as an "expense" line item as well) where it will yield long term income for operations.

We gratefully received numerous other donations, and the final portion of Dorrit Hoffleit's bequest; those are detailed elsewhere in this *Annual Report*.

In 2009 we obtained a significant multi-year grant from the National Science Foundation to execute the Citizen Sky outreach project. The amount received from that grant in FY2011 was \$152,843. That grant continues through FY 2012, at a lower level of funding.

The "Expenses" section also needs more explanation. Most significantly, it does not include spending towards the purchase or upgrading of capital assets. In this case, it omits approximately \$47,701 of renovations that increase the value of our headquarters building, and \$99,518 of equipment, including AAVSONet hardware, software, and computers at headquarters.

Diligent readers might be concerned by the large expenditures on Meetings and Travel. However, the Meetings category includes costs associated with grant-funded activities (so the costs were reimbursed to the AAVSO via grant income) and the larger 100th

2. The Year in Review

Anniversary meeting of Fall 2011 (costs offsets by greater Meetings income). Similarly for Travel, it includes travel associated with executing grant-funded activities—those travel costs were reimbursed via grant income.

Some further items that must be considered when comparing Income to Expenses are changes in cash on hand at year end and changes in the amount of receivables and prepaid expenses (mostly insurance). Thus, while one might look at Income, which exceeds Expenses by a large sum, and conclude we generate a large surplus every year, in fact we do not! See the section below, “Disposition of Income.”

This report ends with a statement of the balance of our endowments, and the amounts attributed to “temporarily restricted funds,” that is, monies held for specific purposes. The amount net of such purpose-restricted funds is \$11.4 million. Of that, \$3.3 million has a restriction that only the income from it may be withdrawn. For the remaining \$8.1 million, any of principal, capital appreciation, and income may be spent.

In FY2011, investment returns were disappointing. The balance in our endowment was \$11,623,124 at year end (including the addition of the Dusa bequest), versus \$12,413,833 at the start of the fiscal year. Our investment returns (before withdrawals) roughly track a benchmark of major market indices. Council continues to monitor this performance, and exercises discipline in its withdrawals from the endowment.

2011 Income

Dues income	\$61,753
Sales	31,230
Meetings	31,531
Grants	333,890
Bequests and Donations	48,719
Dusa bequest	261,190
Transfers from endowments	799,976
Bank interest and royalties	607
Total Income	\$1,660,259

2011 Expenses

Staff salary costs	\$731,462
Contract/temp salaries	82,353
Payroll tax, benefits, and other costs	186,826
Building maintenance	12,888
Utilities, cleaning, insurance	21,401
General office expenses	14,801
Postage	15,924
Legal and accounting	15,186
Publications	11,434
Technical operations (including AAVSONet)	31,831
Internet	9,243
Meetings	42,270
Travel	38,298
Miscellaneous	26,264
Transfer to endowments	261,190
Total Expenses	\$1,501,371

2011 Disposition of Net Income

Total Income	\$1,660,259
Total Expenses	(1,501,371)
Additions to buildings	(47,701)
Purchases of equipment	(99,518)
Change in prepaid expenses	(973)
Change in payables/liabilities	5,523
Change in cash (current account)	(16,218)
Discrepancy	\$1

2. The Year in Review

2011 Year End Endowment Balance

Overall balance	\$11,623,124
Mayall Fund	(63,589)
Mattei Fund	(62,822)
Other (Incl. AAVSONet, 2GSS, grants)	(96,649)
	<hr/>
Endowment net of purpose-restricted funds	\$11,400,064



3. Officers, Staff, and Volunteers

AAVSO Officers, Council Members, and Section Leaders for Fiscal Year 2011–2012

You may contact these persons through AAVSO Headquarters.

Officers

Director	Arne A. Henden	(term of office: 2005–2012)
President	Mario E. Motta	(2011–2012)
Past President	Jaime R. Garcia	(2011–2012)
1st Vice President	Jennifer Sokoloski	(2011–2012)
2nd Vice President	Michael Koppelman	(2011–2012)
Secretary	Gary Walker	(2009–2012)
Treasurer	Gary W. Billings	(2009–2012)
Clerk	Arne A. Henden	(2009–2012)

Council Members

Edward F. Guinan	(2008–2012)
Roger S. Kolman	(2011–2013)
Chryssa Kouveliotou	(2011–2013)
Arlo U. Landolt	(2008–2012)
John Martin	(2011–2012)
Robert J. Stine	(2010–2013)
Donn R. Starkey	(2010–2012)
David G. Turner	(2009–2013)

3. Officers, Staff, and Volunteers

Section Leaders

Cataclysmic Variable	Mike Simonsen, Gary Poyner
Eclipsing Binary	Gerard Samolyk, Gary W. Billings
Long Period Variable	Mike Simonsen
Nova Search	Rev. Kenneth C. Beckmann
Photoelectric Photometry	James H. Fox
Short Period Pulsator	Gerard Samolyk
Solar	
Section Chair	Rodney Howe
Sunspot Group Leader	Kim Hay
Solar Flare/SID Observing Group	Rodney H. Howe
Solar Bulletin Editor	Rodney H. Howe
Supernova Search	AAVSO Headquarters
<i>Journal of the AAVSO</i> Editor	John R. Percy, Ph.D.
Charts and Sequences	Mike Simonsen

AAVSO Headquarters Staff

Sara Beck	Technical Assistant, Special Projects
Gloria Ortiz Cruz	Data Entry Technician
Arne Henden, Ph.D.	Director
Linda Henden	Accounting Clerk
Richard Kinne	Astronomical Technical Assistant, Information Technology
Will McMain	Web Developer
Aaron Price, Ph.D.	Assistant Director
Lauren Rosenbaum	Administrative Assistant
Arthur Ritchie	Headquarters Volunteer
Michael Saladyga, Ph.D.	Technical Assistant, <i>JAAVSO</i> and <i>Newsletter</i> Production Editor, Archives, Library
Mike Simonsen	Membership Director and Development Officer
Matthew Templeton, Ph.D.	Science Director, <i>JAAVSO</i> Assistant Editor
Rebecca Turner	Astronomical Technical Assistant, Project Manager, Sponsored Research Officer, Meeting Coordinator
Elizabeth O. Waagen	Senior Technical Assistant, <i>JAAVSO</i> Associate Editor, <i>AAVSO Newsletter</i> Editor
Donna Young	Lead Educator, Chandra Education/Public Outreach Office, SAO/NASA

AAVSO Volunteers

AAVSO members are very generous with their time and talents. Many of the programs and services we offer would not be possible without the participation of member volunteers. They are regularly involved in teaching new observers, writing articles for our publications, vetting submissions to the *Variable Star Index*, and the creation of charts and comparison star sequences.

We take this opportunity to recognize these special people, and to say *thank you* for another year of valuable contributions of time and expertise.

Mentor Program Volunteers

Patrick Abbott	Geoff Gaherty	Peter Nelson
John A. Blackwell	Bill Goff	Chuck Pullen
Thom Bretl	Keith Graham	Steve Robinson
Glenn Chaple Jr.	Kate Hutton	Guido E. Santacana
Tim Crawford	Michael Koppelman	Donn Starkey
Bill Dillon	Tom Krajci	Ray Tomlin
Robert Fidrich	Michael Linnolt	
Jim Fox	Mike Mattei	

Variable Star Index (VSX) Moderators

Wolfgang Renz	Christopher Watson	Patrick Wils
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Charts and Sequences

Thom Bretl	Keith Graham	Mati Morel
Tim Crawford	Michael Koppelman	
Robert Fidrich	Jim Jones	

Speakers Bureau

Raymond Bengé	Roger S. Kolman, Ph. D.	Michael Richmond
Tom Bretl	Tom Krajci	Michael Rupen
Tim Crawford	Doug Lombardi	Arif Solmaz
Pamela Gay	Alex McConahay	Chris Stephan
Keith Graham	Mario Motta	Bob Stine
Albert Holm	Gordon Myers	Paul Temple
Kate Hutton	Chuck Pullen	

3. Officers, Staff, and Volunteers

Solar Section

William Michael Hill
Paul Mortfield

Arthur Ritchie
Dan Williams

AAVSO Headquarters Volunteers

David Benn
Ben Davies
Jaime García
Bill Goff
John Gross
Tom Krajci

Stephen Levine
Muazzez Lohmiller
Gary Myers
Peter Nelson
Kevin Paxson
Arthur Ritchie

Tom Smith
Chris Stockdale
Dirk Terrell
Chris Watson

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Thilo Bauer
Mark Bradbury
Thomas Bretl
Rodney Howe

Paul Mortfield
Susan Oatney
Kevin Paxson
John Percy

Ernst Pollmann
Bob Stine
Lee Anne Willson



4. Word From the Astronomical Community

Nirav Shah, an active member of the Amateur Astronomers Inc (AAI) astronomy club located in Cranford, NJ, has asked the AAVSO Mentoring Program for assistance in variable star CCD Photometry. The AAI has a membership of 215. The club had asked Nirav to lead a project on variable stars, so Nirav and three other club members have taken responsibility for moving the club into the realm of variable star observing using CCD photometry.

Nirav and his colleagues first wrote us having absolutely no experience in photometry, although they did have CCD imaging experience. The first step was to provide them with a paper I wrote especially for those just starting out in CCD photometry. After perusing this paper, Nirav started asking the right questions to get the group on its way. Those questions pertained to equipment, charts, comp stars, imaging, calibration, & software. With two observatories, four telescopes ranging from 8" to 24", and an SBIG ST8MXe camera, the club already had excellent equipment for making CCD variable star observations. To round out the equipment list, the club recently purchased a V filter, MaximDL, and AIP4WIN.

With the necessary equipment at hand, Nirav asked for some guidance with making flat and dark frames. He also asked for assistance in creating charts and selecting appropriate comp stars. Next came image acquisition with the V filter and image calibration. Nirav plans to use AIP4Win for magnitude determination. Should he need assistance in the use of this program and with submitting observations to AAVSO, we remain ready and eager to help.

Nirav tells me that he hopes to inspire others in their club to take an interest in variable star observing. He has also asked me to convey his deep gratitude to the mentoring program for the guidance and assistance in their endeavor. With the enthusiasm, quest for knowledge, ability for quick understanding, and desire for accurate observations displayed by Nirav, AAVSO can look forward to some quality data from Nirav and the AAI.

—Keith Graham
Manhattan, Illinois

This is a short note to tell you that I have been working with Bill Goff in Sutter Creek California, since meeting him last week at the Amador Amateur Radio Club meeting. My name is James G Cottle and I am a long-time VS enthusiast and astronomer since I was 14 years old. I am

4. Word From the Astronomical Community

interested in gearing up for some serious work in addition to astro imagery at my new Fiddletown, California observatory. I am presently mid-way thru construction on this 9' x 14' roll off roof structure with an isolated telescope/warm room at 2,500 feet on one of the foothill ridges of Gold Country in the Sierras. Bill has been very helpful in suggesting more expenditures (such as a V-filter to contribute data, several books on cataclysmic and variable stars in general, and so forth). I appreciate the comradeship of Bill and his long expertise in the observational CV area as well as VS's in general. I have been a member of the Florida group at Hickory Hill, Chiefland and am reminded of the encouragement and warmth that I received from several members down there before I moved (1994) to the San Francisco Bay area. Now, constructing this new permanent observing site in Fiddletown is a long term dream of mine but, as you probably know, the work is difficult and a good friend can help drive things forward. Now, with my permanent site, I am looking toward organizations such as the AAVSO and CBAstro for some more structure to my work. Bill has been very tolerant of my novice inquiries. I hope to join AAVSO in the next few days. In the meantime, please consider my renewed interest due to Bill's encouragement and help. Thank you for your time and THANKS BILL!

—James G Cottle, Ph. D.
San Francisco

If you make a report to the Variable Star Index (VSX) all this information is vital, as to have your discovery reported and confirmed it needs to be verifiable by others, and available for peer review. Thus the onus is on the discoverer to present the data that needs to be reviewed.

As this was the first time I had been through the process, and being very much in the AMATEUR Astronomy camp, I was very nervous about the process. Its always important to follow the process and accept the feedback that comes from those with much more experience than one's self.

I received back a very helpful email that rejected my submission (for now) due to the fact that I didn't have enough data to produce a full phase diagram and I had suggested that it may be a Cepheid Variable due to the short period and hadn't considered that it was a bit too blue to be a Cepheid and that it was more likely a RRab. The VSX person made some very helpful suggestions about what I should do next—get some more data and produce a full phase diagram and re-submit.

—Peter Lake
AAVSO member
Australia

4. Word From the Astronomical Community

My master thesis was about to fail because our telescope broke down. I had only three months to finish it and the telescope was not going to be ready by that date. So I REALLY needed data for doing my eclipse mapping.

Thanks to your help and the excellent AAVSO data, I won a scholarship to do my PhD in England. I'm so happy!! Thanks again for all your help with my thesis.

—Penelope Longa
Graduate student
Chile

The AAVSO provides invaluable services to astronomy, first in collecting and maintaining very long-term light curves for a huge number of stars, and second in motivating a global network of amateurs to track and report observations of individual objects in support of multi-wavelength observations. Further, the AAVSO has set the standard for the immediate public availability of data which is essential to time-variable astronomy. In my own case, the AAVSO has been critical to several X-ray/radio/infrared campaigns, including the first clear demonstration that cataclysmic variable (CV) outbursts lead to strong radio emission. More generally, the professional community is finally beginning to realize the importance of the time domain, with major instruments like Swift, LSST, and SKA making the exploration of this last astronomical frontier one of their major objectives. The AAVSO will play an ever more critical role, providing consistent, reliable, and global optical coverage for the sources these instruments discover and study.

—Michael Rupen
Scientist, National Radio
Astronomy Observatory,
Socorro, NM

I have downloaded AAVSO data for a few [Cataclysmic Variable Stars], most of the times for use in public talks, or in teaching.... I would like to express my sincere acknowledgement of the resources that the AAVSO provides. The online database is extremely good, there is not much that could be improved.

—Boris Gaensicke
Dept. Physics, Univ. Warwick,
Coventry, England

I am pleased to say that my experience with the AAVSO [International Database] was a

4. Word From the Astronomical Community

good one. The web-based system was straightforward to use and the download was fast. I used the AAVSO observations of Betelgeuse in my research concerning the nature of the star's variability. Although these data were a relatively small part of my investigation, being combined with my own spectroscopic data from the Elginfield Observatory here at the University of Western Ontario, it was still very valuable and helped fill out the scientific picture. The long time base was particularly useful.

—David F. Gray

I am a young astronomer from Sri Lanka.... Although [our institute] has the facility to do photometry, our site is very bad for such observation. In such a case, it is very important to have a data archive for variable star observations. As a less-privileged astronomer, I very much appreciate your service in the development of astronomy in my country.

—Janaka Adassuriya

*During this past year we have published two papers in which we used AAVSO data: Gromadzki, M.; Mikolajewska, J.; Whitelock, P. A.; Marang, F., 2007, "On the nature of the cool component of MWC 560", *Astronomy and Astrophysics*, 463, 703; and Gromadzki, M., Mikolajewska, J., Lachowicz, P., 2008, "Post-outburst variations in the optical light curve of RS Oph", in "RS Oph 2006 and the Recurrent Nova Phenomenon", eds. N. Evans, M. Bode, T. O'Brien, *Astron. Soc. of the Pacific Conf. Ser.*, in press. This data helped us very much. Thank you very much for your efforts.*

—Mariusz Gromadzki
N. Copernicus Astronomical
Center, Warsaw, Poland

...I was aiming to look at some data from SS Cyg to see if it would be appropriate for a laboratory exercise. I didn't have any trouble getting the data. I appreciate the service.

—Tom Maccarone

[AAVSO support] was especially critical, as many of the Southwestern U.S. observatories were clouded-out, and it was the AAVSO measurements that saved the day. For cataclysmic variable work on the Hubble Space Telescope, the AAVSO observations are fundamental to the project as HST needs confirmation that the objects are not in an outburst state within twenty-four hours of the start, and if this is not received, the observation is cancelled and it cannot be done later. With the vagaries of weather, multiple sites are a must, and this is where the AAVSO shines. I have been awed by the continued response of AAVSO observers

4. Word From the Astronomical Community

to my requests.... [on AAVSO support for her Hubble Space telescope observing campaign on the cataclysmic variable SDSS133948 (<http://www.aavso.org/news/sdss133948.shtml>)]

*—Dr. Paula Szkody
University of Washington,
Seattle*

For my dissertation research I studied water masers around evolved stars, like Miras. Masers are the microwave equivalent of lasers, and amplify ambient background microwave emission through stimulated emission of radiation and very long path lengths (~1AU) through velocity coherent water vapor that is in an inverted energy state. By studying the motions of these point-like bright spots of microwave light, I measured the distance to the stars more accurately than was possible before. In order to gain insight into the physical environment around the stars at the time of my observation I used AAVSO observations. The light curves of these stars are important for understanding how much of the gas might be in an excited state and picking the best time to observe the stars (the more light from the star, the more molecules are typically in an inverted state and the brighter the masers are). The work of the AAVSO community in providing these observations added significantly to my ability to understand my target objects and ensure that my observations with the VLBA would be successful.

*—Kevin Marvel
Executive Officer, American
Astronomical Society*

4. Word From the Astronomical Community



5. Support for the AAVSO

The Argelander Society

Named for Friedrich Argelander, who is considered to be "the father of variable star astronomy," **The Argelander Society** offers membership benefits to those individuals who have given substantial financial support to the AAVSO over many years. Once a benefactor has donated a cumulative total of \$35,000.00 to the AAVSO, they are eligible for a lifetime membership in the organization, free registration to annual meetings, invitations to special events, special awards, and tokens of the association's appreciation.



Friedrich Wilhelm August Argelander
(1799–1875)

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