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ISSUE NO.46

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WWW.AAVSO.ORG

# AAVSO Newsletter

SINCE 1911...

*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; and to forge strong collaborations and mentoring between amateurs and professionals that promote both scientific research and education on variable sources.*

## FROM THE DIRECTOR'S DESK

ARNE A. HENDEN (HQA)

What a busy summer in Boston! Everyone has seen the release of the new website, something that would not have been possible without the contributions of each and every staff member. I think the new site is excellent. It needs a bit of fine tuning, but the organization and the uniform interface to our major observing tools is very helpful to me personally.

The website is not the only thing that has happened in the past three months. We ran another very successful Citizen Sky workshop, this time at the California Academy of Sciences in San Francisco. What a great venue for a meeting! The planetarium was excellent, and the epsilon Aurigae trailer looks wonderful on the big screen. Rebecca did a great job in coordinating this meeting. We've had contractors working on the exterior of the headquarters building as well as refurbishing the conference center in preparation for our 100th birthday celebration next year. The centenary book manuscript was completed by Tom Williams and Mike Saladyga, and turned in to Cambridge University Press. Elizabeth spent many hours helping with proofreading. We will have the book ready for sale at the October 2011 meeting. Aaron worked hard on his dissertation, and will be defending November 2.

APASS (the AAVSO Photometric All-Sky Survey) is now a reality. We've released the first 4 million stars, and are about ready to begin the second season of observing. The Robert Martin Ayers

Sciences Fund has contributed towards the second year, funding another complete hardware system so that we can observe simultaneously in the north and the south. We've completed negotiations with Dan Reichart (Univ. North Carolina) to host the southern system in one of the PROMPT telescope domes at CTIO. Matt has been helping me over the past few months in developing the relational databases for the APASS measures. The Sequence Team has been very busy, using the first data release to provide calibrated sequence stars for many AAVSO targets.

Kate Davis, our webmaster, moved to another organization to continue her career advancement. Aaron spent considerable time this summer supervising an external contractor to complete the web site development, and in advertising and interviewing applicants to replace Kate. We are happy to announce that Will McCain will be the new Web Developer. His degree is in Computer Science from the University of New Mexico (a school near and dear to my heart) and he will have started work by the time that you read this newsletter. This will take the extra load from Doc and Aaron so that they can get back to their normally scheduled jobs!

The next three months look equally busy. The new APASS systems will be operational; Tom Krajci is donating another C11 to the AAVSONet project; Peter Nelson will have BSM-south working;

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## PRESIDENT'S MESSAGE

JAIME R. GARCIA (GAJ)

Good news! We have a new face for the GAAVSO! The new website was implemented and it is almost fully operational. And most important, it looks so nice! I appreciate the excellent work our staff has done putting the website online right on schedule. Congratulations to all of them who were involved in such a wonderful work!

Another important piece of news regarding our face is the impressive presence of AAVSO in the social networks. While we have a modest number of 258 followers on Twitter, in Facebook we have almost 2300 fans. This number is really big compared with our membership list. The fantastic work of Mike Simonsen in this area (and in many others!) is very significant.

The second Citizen Sky Project Workshop was held September 3–5, 2010, at the California Academy of Sciences in San Francisco. I could not attend due to my academic duties but I have received comments from several participants and they told me that it was awesome. Several talks about interesting tools for data analysis and

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## DIRECTOR'S MESSAGE CONTINUED...

we have many grant proposals to turn in; a neat new campaign on the Orion variables will be announced by Matt; we'll be looking through the RASNZ archival observations to see how to approach their incorporation into the AAVSO International Database; and we'll be preparing for the centennial blowout year. Keep tuned—it is going to be a fun ride! ★

## PRESIDENT'S MESSAGE CONTINUED...

updates on the status of epsilon Aurigae were the main topics. Rebecca Turner and Aaron Price did a great job organizing and coordinating this workshop as well as the entire project, as we can see every time we visit citizensky.org.

We are very excited about the first data release of our AAVSO photometric all-sky system (APASS) that is coming soon. Fifty nights of measurements of Northern skies allow our Director Arne Henden to perform the reductions. Data will be accessible through both a visual display tool (Seqplot) and a query form for larger requests. Matt Templeton is taking care of these tables, tools, and interfaces.

The astronomy world received major news with the publication of the sixth decadal survey by the National Research Council of the National Academy of Sciences, entitled "New Worlds, New Horizons in Astronomy and Astrophysics," which identifies the highest-priority research activities for astronomy and astrophysics in the

next decade that will "set the nation firmly on the path to answering profound questions about the cosmos," according to the authors. The report identifies space- and ground-based research activities in three categories: large, midsize, and small, addressing diverse areas of study such as the search for the first stars, galaxies, and black holes; seeking nearby, habitable planets; and understanding scientific principles, studying dark energy, supernovae, and time-variable phenomena. The set of instruments prioritized are as amazing as their purposes, including the gravitational waves experiment LIGO, a space based Wide-Field Infrared Survey Telescope, and the Large Synoptic Survey Telescope. The priorities sound very nice to us, because the interest in variable star astronomy will not be lost for the next decade. And this is why the AAVSO is thinking about a decadal survey involving amateur-professional collaboration called "The First Survey of Professional and Amateur Collaborations in Astronomy;" it is in the phase of searching for financial support.

The renovations and improvements in the Headquarters building are near completion. I am very excited to take a look and enjoy them during my next stay for almost two weeks at the end of October in the Feibelman Guest Suite.

Finally, I would like to continue hearing about your ideas for how the AAVSO can contribute to the future of variable stars. I am looking forward to see you in the Boston area for our 99th Annual Meeting. Have a nice season! ★

*Ed. note: following is the Spanish language text of Jaime's President's message.*

## MENSAJE DEL PRESIDENTE JAIME R. GARCIA (GAJ)

¡Buenas noticias! ¡La AAVSO tiene nuevo rostro en Internet! Ya está online nuestra nueva página web y ¡luce tan agradable! Agradezco el excelente trabajo que nuestro personal ha hecho implementando el sitio web en tiempo y forma. Felicitaciones a todos los que estuvieron involucrados en una obra tan extraordinaria.

Otra noticia importante acerca de nuestra imagen es la presencia impresionante de AAVSO en las redes sociales. Mientras tenemos un número modesto de 258 seguidores en Twitter, en Facebook tenemos casi 2300 fans. Este número es realmente grande en comparación con nuestro

listado de miembros. El fantástico trabajo de Mike Simonsen en este ámbito (¡y en muchos otros!) es muy significativo.

El segundo taller del proyecto Citizen Sky se llevó a cabo entre el 3 y el 5 de septiembre de 2010, en la Academia de Ciencias de California, en San Francisco. No pude asistir debido a mi actividad académica, pero tengo varios comentarios de los participantes y me dijeron que fue impresionante. Varias charlas acerca de interesantes herramientas para el análisis de datos y actualizaciones sobre el estado Epsilon Aurigae fueron los temas

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## THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS

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The *AAVSO Newsletter* is published in January, April, July, and October. Items of general interest to be considered for the *Newsletter* should be sent to [mike@aaavso.org](mailto:mike@aaavso.org). Photos in this issue courtesy of Sara Beck, Robert Kaufman, Virginia Renehan, Rick Silverman, and Tahiti Cruise & Vacation.

Membership in the AAVSO is open to anyone who is interested in variable stars and in contributing to the support of valuable research. Members include professional astronomers, amateur astronomers, researchers, educators, students, and those who love variable star astronomy.

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## AN AAVSO ECLIPSE EXPEDITION

JOHN G. O'NEILL (ONJ), DUBLIN, IRELAND

AAVSO member/observer John O'Neill of Rush, County Dublin, Ireland, and staff member Sara Beck traveled to the South Pacific for the July 11, 2010, total solar eclipse. They were soon joined by three more AAVSO family members: Gamze and Haldun Menali of Quincy, Massachusetts, and Rob Kaufman of Bright, Victoria, Australia. The majority of their trip was spent aboard the freighter/passenger ship, Aranui 3, cruising around the tropical islands of French Polynesia.

A highlight of our trip was the glorious southern sky with views of the Milky Way from eta Carinae across to the naked-eye clusters M6 and M7 in Scorpius in the evening sky. Before dawn, both Clouds of Magellan were visible. There were frequent green flash watches from deck, one of which was rewarded.



Aranui 3. Photo courtesy of Tahiti Cruise & Vacation, Papeete.

Despite being the dry season, typically, each day there were quite a few clouds bubbling up. On the morning of the eclipse, we had planned to go ashore in Hikueru in the Tuamotu Archipelago, but this was abandoned. There was just too much cloud here and there in the sky for comfort, so we steamed a further 45km southeast. At the start of the eclipse, our location was about 10km north of the island of Marokau. Before totality there was a large clear area overhead with the occasional cloud, but, fortunately, this had little effect on viewing the partial phase. Just before second contact (start of totality) a thin cloud moved across the sun, producing a beautiful atmospheric halo, but it cleared just in time for a spectacular diamond ring. The corona had several beautiful streamers and the polar brushes were prominent. Also visible in binoculars were a number of small prominences. Jupiter, Sirius, and Mercury were easily seen and the shadow bands were clearly visible against a white satellite antenna on the ship. Totality lasted about four and a quarter minutes and another sharp diamond ring signaled the end of the spectacle. ★



A photo of totality by Robert Kaufman using his Canon 400D DSLR on a tripod. This image is a composite of three exposures of 1/2000, 1/500, and 1/40 second on a 200mm focal length lens at ISO 400 and f/9.

The AAVSO group is ready for the eclipse! From left to right: John O'Neill (ONJ), Sara Beck (BSJ), Haldun Menali (MHI), and Gamze Menali (MGQ). Photo by Rick Silverman.



AAVSO observer Rob Kaufman (KBJ) from Bright, Victoria, Australia. Photo by Sara Beck.

## AAVSO ANNUAL MEETING

The 99th Annual Meeting of the AAVSO will be held in the greater Boston area at the Woburn Hilton Hotel, Woburn, MA, on October 29–30, 2010.

Friday, October 29, will feature a morning workshop on the data visualization and analysis program, VStar, led by VStar developer David Benn and AAVSO staff member Sara Beck.

Also scheduled for Friday are a social/interactive afternoon session on roadmapping the future of the AAVSO and an open house at AAVSO Headquarters in the evening. Stop by and have a look at the newest building improvements!

Saturday will include the AAVSO Membership meeting, an invited talk by Dr. Timothy Slater, scientific paper sessions, and an evening awards banquet featuring banquet speaker Dr. Stephanie Slater.

Very reasonable guest room rates of \$92 per night (plus taxes) have been secured at the Hilton. Please make your reservations by October 6th in order to receive this group rate. For more information and to register for the meeting please visit the AAVSO website. Early registration rates are in effect until October 15th. We hope to see you at the meeting!

## SOLAR SECTION

### CHAIRPERSON NEEDED

A volunteer is needed to step forward and lead the combined solar group and be editor of the monthly *Solar Bulletin*. This section has a long history in contributing the monthly American Relative Sunspot Number (Ra) and the Sudden Ionospheric Disturbance (SID) solar flare radio reports. If you can spare four hours per month and wish to take on the leadership of this section, please contact AAVSO Headquarters. The current chairperson, Paul Mortfield, is stepping down after four years of dedicated service, due to increased business responsibilities. We thank Paul and wish him Clear Skies!

## AN AAVSO WEDDING!

**ELIZABETH O. WAAGEN (WEO), AAVSO SENIOR TECHNICAL ASSISTANT**

On Saturday, August 7, 2010, at 11 a.m., 100-plus friends and family (Beck, O'Neill, and AAVSO) members gathered in the St. Rose of Lima church in Topsfield, Massachusetts, to witness an AAVSO marriage made in the stars: Headquarters' own Sara Beck (BSJ) and member-observer John O'Neill (ONJ)!!!

Sara and John are following the AAVSO example of Janet and Mike Mattei and Peter Taylor and AAVSO assistant Josefa Manella—for both of those couples an introduction at AAVSO meetings led to the altar.

John and Sara, too, met at an AAVSO annual meeting; we all very much enjoyed meeting John and appreciated that he had made the long journey from his native Ireland for the meeting. Several years of exchanges of Christmas cards, observing-related emails, another visit from John for an AAVSO meeting (where he definitely had Sara-stars in his eyes), a visit to Ireland by Sara, an engagement announcement, more trips across the Atlantic in both directions...and there we all were, helping them celebrate their special day.

After a moving ceremony, with Sara gorgeous in her stunning gown and John so handsome in his tuxedo, everybody—including everyone from AAVSO headquarters and their families—relocated the three blocks to the backyard of the home of Sara's sister, Martha (Sara and Martha live next door to each other), where a giant white tent-sheltered reception was arranged. All the guests had brought food or flowers or contributed something else to the wedding or reception, as was Sara and John's request in lieu of more traditional wedding gifts. The resulting gourmet feast was very varied and absolutely delicious, and the setting was perfect. Even the weather cooperated by not being too hot or humid, a rare event this past summer in New England. The wedding cake—made by John's brother-in-law, Victor, and brought from Ireland by him and John's sister, Margaret, and their children (there's a real saga about that wedding cake; ask John and Sara to tell it to you sometime)—was so beautiful and tasted so good. John and Sara had to lead off the dancing, of course, and they did so to Frank Sinatra's "Fly Me to the Moon." They left the reception in Sara's car, which was heavily decorated with paintings of telescopes and variable star observers and sailboats and stars and had Guinness cans tied to the rear bumper. They will continue to live in Ireland and Massachusetts, alternating back and forth, and telecommuting when on their non-native side of the Atlantic.

We wish John and Sara much joy and a long, happy, healthy life together—the stars are smiling on them and so are we. ★



*Mr. and Mrs. O'Neill*

## IN MEMORIAM

**MEMBERS, OBSERVERS, COLLEAGUES,  
AND FRIENDS OF THE AAVSO**

**LARRY P. LOVELL** (LL), AAVSO observer since 1966, died June 3, 2010. He contributed 11 observations made between 1966 and 1968. Larry was active in photoelectric photometry, particularly in the 1960s and 1970s, and co-authored numerous papers using PEP data. He also taught the art of PEP observing to many, including Chris Stephan. While not an AAVSO member, he attended several meetings with members Art and Helen Stokes.

**LARRY M. GORSKI** (GLM), AAVSO member and observer since 1979, died of a heart attack on May 12, 2010, at the age of 61. He contributed 572 observations made between 1979 and 2007. A lover of animals as well as astronomy, Larry was an actuary by profession and was very involved in that national society, and following retirement was a teacher of disadvantaged children and a math tutor in adult education.

**JOHN P. HUCHRA**, AAVSO member since 1991, died on October 8, 2010, at the age of 61. John was an astronomer and professor who was a pioneer in studying the large scale structure of the universe, observational cosmology, and galaxies, with projects including the CfA Redshift Survey, 2MASS Redshift Survey, and HST Extragalactic Distance Scale Key Project. He was a past President of the American Astronomical Society and former IAU committee chair; he also served on the most recent Decadal Survey Committee. John was highly esteemed and appreciated by all who knew him not only for his scientific acumen but also for his enthusiasm, patience, and great kindness.

## BONANZA! RASNZ REPORTS ARRIVE AT HEADQUARTERS

**ELIZABETH O. WAAGEN (WEO),  
AAVSO SENIOR TECHNICAL ASSISTANT**

This summer the AAVSO received a large wooden crate containing eight banana boxes filled with paper variable star observation reports from the Royal Astronomical Society of New Zealand (RASNZ).

These reports were sent by RASNZ observers to Frank Bateson, Director of the RASNZ Variable Star Section, over the decades, but he chose not to have them digitized for the RASNZ database. After his death they went into the keeping of Grant Christie at Auckland Observatory, and an

agreement was made between the RASNZ and the AAVSO to send the reports here for digitization and inclusion in the AAVSO International Database.

Now that we have the reports in hand, we will be examining them and making a plan to digitize them and upload them. Thus, the observing efforts of many southern-hemisphere observers—waiting all this time—will be reflected in the extended light curves of numerous stars. ★



AAVSO staffers Ginny Renehan and Mike Saladyga look over the RASNZ reports after bringing them to Headquarters from the U.S. Customs office at the Boston airport.

## THE ARCHIVAL DATA OF PAUL S. YENDELL

**MICHAEL SALADYGA, AAVSO TECHNICAL ASSISTANT AND ARCHIVIST  
AND MATTHEW TEMPLETON (TMT), AAVSO SCIENCE DIRECTOR**

AAVSO Archivist Michael Saladyga has revisited the Association's collection of a large number of pre-AAVSO observations made by the pioneer variable star observer and AAVSO Charter Member Paul S. Yendell. These observations are visual step magnitudes of approximately 200 variable stars spanning the epoch of 1888 to 1922. They were given by Yendell's widow to AAVSO Recorder Leon Campbell around 1924, and although the observations were kept in paper form in the AAVSO Archives, they were never digitized during the archival data digitization project of the 1980s and 1990s. A rough but conservative estimate of the total number of undigitized observations is approximately 10,000. The number could potentially be twice that.

This is an important dataset, both for the scientific content of the data and for the significant role Paul Yendell played in the early history of amateur variable star observing.

The digitization of these data and their insertion into the AAVSO archives will extend the light curves of many stars for a decade or more. Further, since the observations are steps rather than reduced magnitudes, modern comparison star data can be used to reduce them, making them fully consistent with modern data. This alone makes the digitization of these data a worthy project.

The historical aspect is equally important since Paul Yendell arguably devoted more time and

*Paul S. Yendell's backyard  
observatory, Winter Street,  
Dorchester, Massachusetts  
(now part of Boston), sometime  
around 1900.*



effort to the observation of variable stars than any of the other early amateur astronomers in the U.S. Also, between 1894 and 1906, he was one of the first to introduce variable stars to a wide U.S. readership by publishing over 140 pages of articles on variable stars in *Popular Astronomy*.

We suggest that the digitization of these data should be made an important project within the AAVSO, and that time and resources be devoted to its completion. The available data sheets need to be scanned, either by staff or by volunteers, and that the digitization of the data be done by volunteers as well. If possible, the reduction of calendar dates to JD and the reduction of steps to magnitudes must be automated, also by volunteer programmers if possible. Such a project would be incredibly fruitful for the AAVSO and for science, and would be a source of pride for those volunteers who choose to participate. We will assist in this work to the full extent that we are able. ★

## A VISITOR FROM ITALY

Ulisse Munari, an astronomer from Padua University, and our second Janet Mattei Research Fellow, worked at HQ for most of September.

Ulisse is a well-known spectroscopist, working on novae and symbiotic stars. He has a team of Italian amateurs that are contributing both photometric and spectroscopic data. Arne Henden is working



Dr. Munari at the Great Refractor

with him on APASS photometry to support the RAVE spectroscopic program. They are also discussing photometric issues with amateur equipment.

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## THE AAVSO HISTORICAL YEAR

MIKE SIMONSEN (SXN)

As you all know, 2011 is the year we will be celebrating the AAVSO's 100-year anniversary. We have events planned for the entire year, including an AAS/AAVSO joint meeting in Boston in May and our own special centennial celebration in October.

While researching several historical aspects of the organization it occurred to me that 100 years is kind of difficult to visualize. A time scale twice as long as I am old, going back decades before I was born, was not easy to take in at a glance. So I decided to look at it in a more familiar time scale, that of a year.

If we shrink the first 100 years of the AAVSO down into 12 months, each year is 3.65 days, 50 years is six months, and so on. It became a lot easier to see the proportions. So I looked up some historical dates related to the leadership and location of the organization over time and scaled it down to one year.

Two things jumped out at me right away after looking at the entire "year." The first was the fact that we didn't own our own building until we were 75 years old, September 1 of our "historical year." The other thing was how we have had such stability in leadership, with only four Directors (Recorders) in 100 years, Leon Campbell, Margaret Mayall, Janet Mattei, and Arne Henden, and Arne didn't come along until early December of our "year"!

For what it is worth, here is the first 100 years of the AAVSO condensed into a single year.

*Jan. 1, AAVSO*—The AAVSO is founded in October of 1911 by William Tyler Olcott. He single-handedly performs the duties of all officers while the organization is in its infancy. Headquarters is Olcott's house on Church Street in Cambridge. The AAVSO has 13 members.



1916 Annual meeting

*Jan. 11, AAVSO*—The AAVSO holds its third annual meeting on April 8, 1914.

*Jan. 12, AAVSO*—Leon Campbell returns to Harvard Observatory from HCO's Peru station in 1915 to assist Olcott with organizing AAVSO observations for publication in *Popular Astronomy*.

*Jan. 22, AAVSO*—David B. Pickering becomes the first President of the AAVSO in 1917.



1917 Spring meeting

*Jan. 25, AAVSO*—AAVSO is incorporated under Massachusetts state law on November 18, 1918.

*Feb. 10, AAVSO*—In February 1919, HCO Director Edward C. Pickering dies, HCO offers the use of a room for AAVSO Headquarters. On February 10, 1923, Anne C. Young becomes the first woman President of the AAVSO.



1930 Spring meeting

*March 27, AAVSO*—HCO Director Harlow Shapley becomes President of the AAVSO in 1935.

*April 1, AAVSO*—William Tyler Olcott dies July 6, 1936.

*April 21, AAVSO*—The AAVSO database reaches one million observations around 1942.

*May 7, AAVSO*—Margaret Mayall becomes AAVSO Recorder in 1949. Leon Campbell steps down after leading the organization for over 24 years.



1946 Spring meeting

*June 1, AAVSO*—On December 8, 1953, Donald Menzel announces that the AAVSO must vacate HCO by January 1, 1954. AAVSO moves headquarters to a 400 sq. ft. office at 4 Brattle Street in Harvard Square.

*June 4, AAVSO*—Margaret Mayall is now known as the Director of the AAVSO beginning in 1956.

*July 1, AAVSO*—The AAVSO turns 50 years old and Dorrit Hoffleit is elected President of the AAVSO.



1961 50 years old!

*July 16, AAVSO*—In July of 1965 AAVSO moved headquarters to 187 Concord Avenue, where it remained for twelve years.

*July 23, AAVSO*—In 1967, AAVSO takes its first steps into the computer age with data entry on punch cards.

*July 31, AAVSO*—The first *Journal of the AAVSO*, published, Volume 1, Number 1, Spring 1971.

*August 10, AAVSO*—In 1974, Margaret Mayall retires after 28 years of service, and Janet Mattei is elected Director of the AAVSO.

*September 13, AAVSO*—In 1984 the AAVSO International database reaches 5 million observations.

*September 30, AAVSO*—In its 75th year, August 6, 1986, AAVSO dedicates its new headquarters at 25 Birch Street. We finally own our own offices thanks to the generosity of long-time AAVSO Secretary Clinton B. Ford. The building is officially dedicated as the Clinton B. Ford Astronomical Data and Research Center in recognition of Ford's dedication to the AAVSO (we moved in during the last week of January—the Challenger explosion occurred on the 28th.)



1986 75 years old!

*Nov. 9, AAVSO*—AAVSO launches its first website in 1996.

*Nov. 12, AAVSO*—AAVSO publishes *Hands-On Astrophysics* in 1997.

*Nov. 24, AAVSO*—The AAVSO International Database reaches 10.5 million observations in January 2002.

*Nov. 28, AAVSO*—Elizabeth O. Waagen becomes Interim Director on September 6, 2003, when Janet Mattei becomes ill.



2003 Spring meeting

*November 30, AAVSO*—Janet Mattei dies on March 22, 2004.

*December 4, AAVSO*—Arne Henden becomes Director of the AAVSO in March of 2005.

*Dec. 10, AAVSO*—Moved into the current headquarters at 49 Bay State Rd. in February 2007.

*Dec. 26, AAVSO*—The AID reaches 19 million observations in 2010.



2008 Annual meeting

*Dec. 31, AAVSO*—AAVSO holds its Centennial Celebration in the Fall of 2011 and begins the next 100 years of advancing variable star astronomy. ★

## MEET THE STAFF: VIRGINIA RENEHAN (RVMA)

INTERVIEWED BY DOC KINNE (KQR), AAVSO HEADQUARTERS

In the last newsletter we started what is going to be a continuing interview series of HQ Staff in the hopes that our members will be able to get to know us just a bit better. The interview for this newsletter is with Virginia Renehan, our AAVSO Administrative Assistant. I tend to have a lot of respect for Administrative Assistants for everything that they get into and have to keep track of. Ginny is no exception to that rule. It's hard to believe that Ginny has been at HQ for over a year, now!

Q: You have a rather extensive amateur astronomy background that doesn't include variable stars. Can you give us some details on that background?

A: The space program captured my attention as a child. That was the hook that got me interested in astronomy. I've been a member of Amateur Telescope Makers of Boston (ATMoB) for a number of years. I am past president of the club and a current executive board member. I am particularly interested in astronomy education and public outreach. For the last eight years I've been the ATMoB Starparty coordinator, organizing events for schools and community groups in the Boston area. I am also a charter member of Gloucester Area Astronomy Club (GAAC) and a NASA Saturn Ambassador for Eastern Massachusetts. Like many amateurs, I have a collection of telescopes, homemade and commercial, including a 17" restoration project. I haven't been able to park my truck in my garage for years!

Q: What was your first variable star observation?

A: My first variable star observation was eps Aur, but the first observation I submitted using my observer code was u Her. Turns out my observation of u Her was the only one in over 300 days! I remember looking at the plot and thinking, "Oh no! What if I got it totally wrong?" My lonely little data point was so exposed for a first time observation! I was hoping to be buried among others. But it was really exciting to actually record an observation. Thanks to Mike Simonsen and Doc for all their encouragement. They make it fun!

Q: What is your current job at the AAVSO?

A: I am the Administrative Assistant. I handle every-day operations—mail, phones, membership database, the AAVSO email account, supplies, publications management, benefits, bathroom tile installation—whatever comes up!

Q: What is the first thing you usually do when you arrive at HQ in the morning?

A: First thing I do is look in on Doc Kinne and say good morning. Then I fire up my computer, check email and begin the day.

Q: What is the last?

A: Usually, the last thing I do is AAVSONet processing. There are so many interruptions during the day, and I enjoy reviewing images when it's quiet. So after all the animals have gone to sleep, I do processing.

Q: What is the most enjoyable aspect of your job at HQ?

A: The best part is interacting with the staff and membership, both of whom have taught me lots about variable stars. I get a chance to speak with members from all over the globe and get to hear about their involvement with amateur astronomy in their part of the world. Plus, I have a neat collection of stamps from various membership mailings.

Q: What is the least?

A: I don't like taking phone calls from sales people—and we have a really grumpy mailman.



Ginny Renehan

Q: You do some astronomical outreach with schools. Can you describe that a bit?

A: I am part of ITEAMS—Innovative Technology-Enabled Astronomy for Middle Schools. It is an after-school partnership between Harvard-Smithsonian Center for Astrophysics and underserved communities in Lynn, Cambridge, and Fall River, MA. We use astronomy to introduce students to STEM (Science, Technology, Engineering, and Mathematics) careers and hopefully cultivate and interest in math and science. We use the Micro-Observatory, a network of automated telescopes that students control via the internet. It is a hands-on approach. Students select their own targets of opportunity and experiment with imaging. The images they take can be imperfect: over or underexposed, blurry, off color. By making mistakes and correcting them, students learn not only about the objects they're targeting but also about distance, perspective, light and color. They learn to consider weather, exposure time, filters, time of day—essentially learning from their mistakes. Star parties and time at the eyepiece are also important parts of the program. The wow factor at the eyepiece is never replaced by the computer screen. I am also an astronomy merit badge counselor for the Boston Minuteman Council [of the Boy Scouts of America].

Q: Do you have an astronomical role model?

A: Yes. E. Samuel Palmer at the Harvard-Smithsonian Center for Astrophysics' Millimeter Wave Group. I took my first astronomy class with Sam through the Harvard Extension School. He is the best teacher I have ever had! I am now a teaching assistant for two of his classes—"Moons and Planets" and "Stars and Stellar Systems." I learn something new from Sam every semester—both about teaching and astronomy.

Q: The AAVSO staff tends to be famous for the non-astronomical activities they do as well as they're astronomical ones (Kate and Matt run triathalons, for example). What is your favorite non-astronomical activity?

A: I'm sort of an ocean cowgirl. I love sailing, swimming, driving my pickup truck, and watching John Wayne movies. A favorite activity is to take my fishing pole down to the end of my street and surf cast—early morning or late

CONTINUED ON NEXT PAGE

## MEET THE STAFF CONTINUED...

afternoon is nice—quiet, relaxing, smells good. I enjoy walking on Brace Cove collecting sea glass, popping seaweed, bird watching. I live along the coast in Gloucester—it's a migration corridor for all sorts of birds. The arrival of Buffleheads from Canada signal the beginning of winter for me—and their departure means spring!

Q: Living in Gloucester, have you ever been caught in “a Perfect Storm?”

A: Along with reasonably good skies, powerful winter storms and power outages are part of living by the ocean. I recently installed a wood stove for just those occasions. Once I was caught on the water in a bad storm. I was delivering a 52-foot gaff-rigged schooner from Gloucester to Miami

## MENSAJE DEL PRESIDENTE CONTINUED...

principales. Rebecca Turner y Aaron Price realizaron un gran trabajo de organización y coordinación de este taller, así como con toda el proyecto, como podemos verificar cada vez que visitamos [citizensky.org](http://citizensky.org).

Estamos muy entusiasmados con el lanzamiento de nuestros primeros datos fotométricos del sistema de todo el cielo APASS que estará disponible muy pronto. Cincuenta noches de mediciones de los cielos del Norte permitieron a nuestro Director, Arne Henden, realizar las reducciones. Los datos estarán accesibles tanto a través de una herramienta de visualización (Seqplot) como de un formulario de consulta para grandes solicitudes. Matt Templeton está a cargo de ello.

El mundo de la Astronomía ha recibido una importante noticia con la publicación de la sexta encuesta para el decenio del National Academy of Sciences National Research Council (Consejo de Investigación), titulada “Nuevos Mundos, Nuevos horizontes en Astronomía y Astrofísica,” que identifica las actividades de investigación de mayor prioridad para la astronomía y astrofísica para la próxima década que “pondrán a la nación firmemente en el camino para responder a preguntas profundas sobre el cosmos”, según sus autores. El informe identifica las actividades de investigación con base en el espacio y en tierra en tres categorías: grandes, medianas y pequeñas, abordando diversas áreas de estudio tales como la búsqueda de las primeras estrellas,

via Bermuda. It was late October and we got caught in a force 10. The wind was so loud you couldn't hear anything else, and visibility was the length of the boat. It was impossible to stay on deck even with reduced sail. We had to tie off the wheel and retreat below deck leaving only the staysail. The next morning we were able to take the wheel and raise sail but we got knocked down. Water filled the mainsail and when the boat tried to right itself the weight of water broke the boom and tore the main. To make matters worse the storm churned up sediment in the gas tank and we were without an engine. We had lost our electronics and quite literally found Bermuda by dead reckoning. I was so happy to touch solid ground! It was one heck of a trip. Now I don't mind coastal winter storms as long as I'm on land. ★

galaxias y agujeros negros, la búsqueda de planetas cercanos habitables y la comprensión de los principios científicos, incluyendo el estudio de la energía oscura, las supernovas, y los fenómenos variables en el tiempo. El conjunto de instrumentos prioritarios son tan sorprendentes como sus propósitos, incluyendo el experimento de ondas gravitacionales LIGO, un telescopio infrarrojo de gran campo de relevamiento basado en el espacio y el LSST, gran telescopio para relevamientos sinópticos. Las prioridades suenan muy agradables a nuestros oídos, porque el interés por la astronomía de las estrellas variables no se perderá durante la próxima década. Y es por eso que nuestra AAVSO está pensando en una encuesta decenal que implica la colaboración de aficionados con profesionales llamado “Primera Encuesta de Colaboración Profesional y Amateur en Astronomía,” que se encuentra en la fase de búsqueda de apoyo financiero.

Las renovaciones y mejoras en la construcción de nuestra Sede están casi terminadas, estoy muy ansioso por echarles un vistazo y disfrutar de ellas durante mi próxima estada de casi dos semanas en la suite Feibelman para invitados, a finales de octubre.

Por último, me gustaría continuar conociendo sus ideas acerca de cómo la AAVSO puede contribuir al futuro de las estrellas variables. Estoy deseoso de verlos en el área de Boston para la 99a Reunión Anual de AAVSO. ¡Que tengan una buena temporada! ★

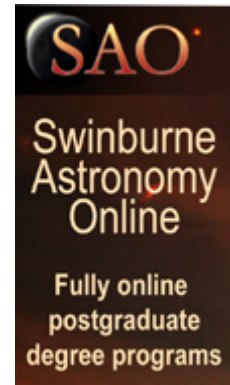
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## CITIZEN SKY HAPPENINGS

REBECCA TURNER, CITIZEN SKY PROJECT MANAGER, AAVSO HEADQUARTERS

### HAPPY BIRTHDAY TO YOU!

Citizen Sky, the AAVSO's citizen science project focusing on the bright variable epsilon Aur, recently had its one-year anniversary. We've accomplished a lot in this short time! There are currently over 3100 registered participants who have submitted over 3000 data points via the Citizen Sky web interface. The project's web site ([www.citizensky.org](http://www.citizensky.org)) has been a source of support for many participants. Downloadable tutorials are available on topics such as visual observing, DSLR observing, and data analysis. The blogs, forums, newsletters, and calendar on the site help to promote staff-participant communication as well as communication among the participants themselves. We've held two Citizen Sky workshops, one in Chicago and one in San Francisco. The first workshop was on the history and current theories surrounding epsilon Aur as well as variable star observing. The second workshop focused on data analysis and scientific paper writing. Each workshop was attended by approximately 50 participants. These participants agreed to do Citizen Sky outreach in their own communities following the workshop. We are very excited about all of the variable star-related outreach that these attendees have taken part in over the last year. Videos of talks from the first workshop are online now and those from the second workshop will be posted on the Citizen Sky website shortly.

During year one of the project Citizen Sky was featured in various blogs, podcasts, and local newspapers as well as in *Sky & Telescope* magazine and the Astronomy.com, Wired.com, and NationalGeographic.com web sites. We also set up a Facebook page and currently have 400 fans. Year one of the project produced the epsilon Aur simulator - an online program that allows the user to alter parameters of the binary system and see how the light curve is affected by those changes. We created a few tongue-in-cheek youtube videos to promote the project. An hour-long, HD documentary on the project has been produced by one of our workshop attendees and will be ready for distribution in the coming months. A fully-produced planetarium show trailer on the project was created by the Science Visualization Lab at the California Academy of Sciences and is currently being shown in planetaria across the country. Last but certainly not least, VStar, a data visualization and analysis tool, was created by one of the Citizen Sky participants. This is a remarkable tool for working with variable star data. The AAVSO Annual meeting will feature a workshop on using this new tool.

Looking forward, years two and three of the project will focus on assembling teams of participants to work on their own analysis and research. Each team will have a professional liaison who will provide guidance when needed. The most crucial piece of the puzzle will be the team leader. Team leaders need to have initiative, drive, and patience. If you are interested in leading or participating in a team, head on over to the Citizen Sky site and take a look at the team section to see how you might be able to get involved. We hope that many Citizen Sky teams will end up publishing papers in the JAAVSO.

We have accomplished quite a bit in the last year but we are far from finished with what we set out to accomplish. If you have yet to participate in Citizen Sky, there is still plenty of time to get involved. There are opportunities for participants with all levels of experience! ★

### FROM THE SECOND CITIZEN SKY WORKSHOP

Hello All! Well, we've had some time to settle back into life after the 2nd Citizen Sky Workshop in San Francisco. I still have some left-over "warm fuzzies" from our time there. Our venue, the California Academy of Sciences, was gorgeous and the staff there were very helpful and friendly. We had a wonderful group of attendees and speakers. I am very excited that everything was caught on video and look forward to posting those on the website soon. I have already started to post the speakers' presentation files (ppt/pdf, <http://www.citizensky.org/content/talks-second-citizen-sky-workshop>) so that you can follow along with the slides as you watch the videos once they are posted.

During this workshop I was especially inspired by the way in which Citizen Sky participants are able to bring their own unique skills to the table and put them to use. Nico Camargo, a very talented artist, has studied up on the ever-changing theories surrounding epsilon Aur in order to create scientifically-informed illustrations of the system. He presented his latest illustration at the recent workshop of what the epsilon Aur system might look like ([http://www.citizensky.org/content/media-room#latest\\_from\\_Nico](http://www.citizensky.org/content/media-room#latest_from_Nico)). David Benn, a software developer by trade, has put his considerable skill set to work creating an amazing (and always improving!) data visualization and analysis tool, VStar (<http://www.citizensky.org/content/vstar>). He led an informative session at the workshop on how to use this piece of software. Bob Miller, a musician and Citizen Sky participant/workshop attendee, shared an astronomical song that he composed for the Citizen Sky project ([http://www.citizensky.org/content/media-room#We\\_Are\\_the\\_Stars](http://www.citizensky.org/content/media-room#We_Are_the_Stars)).

What new theory might Nico's illustrations help someone to grasp? What aspect of the data set might David's program help you explore? What newbie or old-timer might have their attention captured or interest inspired by Bob's song? ...and these are just three examples out of over 3000 registered participants!

We all care about astronomy—that's what bonds us together. I feel that the magic of this project lies in the things that make us different from each other... the unique interests and skills that we can apply to the project. We are lucky to have many resources (website, workshops, etc.) that support the work we are doing. However, I sincerely believe that *you*, our participants, and all of the random things that make you who you are are truly this project's greatest asset. Thank you for giving of yourself. :) ★

## OBSERVING CAMPAIGNS UPDATE

MATTHEW TEMPLETON (TMT), AAVSO SCIENCE DIRECTOR

The months of July, August, and September were quiet ones for AAVSO's Observing Campaign activities, although we had a few notable new campaigns initiated during the season.

Dr. Paula Szkody requested monitoring of the dwarf nova V455 Andromedae in support of Hubble Space Telescope observations in August. Dr. Szkody is using HST's Cosmic Origins Spectrograph to obtain time-series ultraviolet spectra of these stars. The purposes of her observations are to obtain radial velocity curves for V455 And in the ultraviolet, as well to measure the temperature of the white dwarf by fitting model spectra to the observed ultraviolet spectra. Ultimately, she and her collaborators are trying to determine the physical behavior of pulsating white dwarfs in dwarf nova systems. The AAVSO was asked to join in a ground-based monitoring program for V455 And to make sure the star remained in quiescence at the time of the HST observations. As was the case in many previous campaigns, ground-based confirmation of V455 And in quiescence is required before HST can observe, since the brightness of this star at maximum could damage HST's instruments.

AAVSO observers contributed more than 500 observations of V455 And during the campaign and showed that it was indeed in quiescence at  $V \sim 16.0$ . Unfortunately Dr. Szkody received word that HST was temporarily offline due to a system problem at the time of her scheduled observations, and so the observations did not take place as planned. These observations have been rescheduled for the week of October 14, and may in fact be occurring as you read this! A new Alert Notice has been issued.

Earlier this year, the AAVSO was contacted by Dr. Keith Noll from the Hubble Heritage Team at the Space Telescope Science Institute about a unique HST project. They were requesting amateur observations of the very first Cepheid discovered in M31 by Edwin Hubble. This object, M31\_V1, varies between roughly  $V=18.5$  and  $V=19.5$  with a period of about 30.41 days. Surprisingly, the star has been poorly studied since Hubble's time, and astronomers at HST, including Dr. John Grunsfeld, felt that this should be remedied. The AAVSO launched a campaign on July 16, 2010, to change this. Due to the faintness of the target, fewer than half a dozen observers have taken up the challenge of this star, but thus far, the collected data clearly show the Cepheid-like shape of the light curve, and confirm with reasonable precision a period around 30.4 days. HST should be observing this star some time in late 2010 or early 2011.

The eclipse of epsilon Aurigae is continuing and hundreds of variable star observers around the world continue to obtain new observations of this star. The visual light curve is the best-observed to date, and dozens of instrumental observers (including PEP and DSLR photometrists) continue to make precise photometric observations of epsilon Aurigae in nearly all passbands, including the near-infrared! The light curve of epsilon Aurigae is superb, and will be a wonderful resource for researchers of this star for decades to come. To every participant in the campaign—congratulations on a job very well done!

A long-term campaign is coming to an end this October, although we may continue to issue further calls for observations. We first issued a call for long-term monitoring of the star V1412 Aquilae in February of 2009 on behalf of Dr. Arlo Landolt in order to (perhaps) catch an eclipse of this faint and potentially eclipsing white dwarf star. It is suspected that V1412 Aquilae

is being eclipsed by either a very cool brown dwarf or by an exoplanet that survived the star's transition from red giant to planetary nebula and white dwarf. AAVSO observer Michael Bonnardeau performed an in-depth statistical analysis of the two historic observations that led to the claim of variability, which you can read about here: <http://mbond.free.fr/V1412Aql/V1412Aql.htm>. Bonnardeau suggested that observers should concentrate their observations around specific dates in order to catch a fleeting eclipse. There was a predicted window of eclipses on 2010 September 15, but unfortunately there was no clear detection of one; observations showed some scatter, but nothing indicating a deep drop in brightness (perhaps 4 magnitudes or more). Bonnardeau has predictions for several more windows during the 2010 season, but for now, the nature of V1412 Aquilae remains mysterious.

As I write this, the AAVSO has launched a new long-term campaign on two new young stellar objects in Cygnus, HBC 722 and VSXJ205126.1+440523. Both of these stars (the former  $V=13.5$ , the latter  $V=16.5$ ) were found to be undergoing significant activity in August and September of 2010, and we were contacted by Dr. Colin Aspin of the University of Hawaii about conducting long-term monitoring to go hand in hand with his planned program of optical and near-infrared spectroscopy beginning now. This campaign is just getting started as I write, and I look forward to seeing the first fruits of your work by the time the next newsletter comes along!

As always, the AAVSO Observing Campaigns Program exists to serve both the researcher and the observer. If you're a researcher (amateur or professional) with a well-defined and well-justified science plan that would benefit from the observations of the amateur community, please let us know! And if you're an observer looking for new and challenging things to try, please look over our newly-revamped campaigns page to see what interesting new science you can contribute to!

You can learn more about AAVSO Observing Campaigns on our new website:

<http://www.aavso.org/observing-campaigns>

Clear skies, and good observing. ★

## PHOTOELECTRIC PHOTOMETRY PROGRAM UPDATE

MATTHEW TEMPLETON (TMT), AAVSO SCIENCE DIRECTOR

AAVSO PEP observers continued to make observations throughout July, August, and September despite the PEPObs section of the AAVSO website being offline. PEP observers made and submitted 158 observations from July 1 to September 29: OAD, 81 observations; RTH, 50 observations; NHS, 14 observations; and UIS01, 13 observations. RTH continues to observe using the SSP-4 Infrared Photometer, making J- and H-band observations of beta Lyrae, R Lyrae, and epsilon Aurigae. There were 29 different stars observed, with epsilon Aurigae coming in second (with 29 observations) behind P Cygni with 37 observations. The top 10 most-observed stars were P Cyg (37), epsilon Aur (28), beta Lyr (24), R Lyr (15), AC Her (12), V2048 Oph (6), beta Per (4), theta CrB (4), NSV 14213 (3), and rho Cas (2). Several stars had only one or two observations each.

The new AAVSO website is online and serving the observer community, but we still have some work left to do to restore all of our old content and functionality. The PEPObs section of the website has not yet been added to

CONTINUED ON NEXT PAGE

## JULIAN DATE / MOON PHASE CALENDARS

2,450,000 plus the value given for each date

## SEPTEMBER 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 5441	2 5442	3 5443	4 5444
5 5445	6 5446	7 5447	8 5448	9 5449	10 5450	11 5451
12 5452	13 5453	14 5454	15 5455	16 5456	17 5457	18 5458
19 5459	20 5460	21 5461	22 5462	23 5463	24 5464	25 5465
26 5466	27 5467	28 5468	29 5469	30 5470		

## OCTOBER 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 5471	2 5472
3 5473	4 5474	5 5475	6 5476	7 5477	8 5478	9 5479
10 5480	11 5481	12 5482	13 5483	14 5484	15 5485	16 5486
17 5487	18 5488	19 5489	20 5490	21 5491	22 5492	23 5493
24 5494	25 5495	26 5496	27 5497	28 5498	29 5499	30 5500
31 5501						

## NOVEMBER 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 5502	2 5503	3 5504	4 5505	5 5506	6 5507
7 5508	8 5509	9 5510	10 5511	11 5512	12 5513	13 5514
14 5515	15 5516	16 5517	17 5518	18 5519	19 5520	20 5521
21 5522	22 5523	23 5524	24 5525	25 5526	26 5527	27 5528
28 5529	29 5530	30 5531				

Moon calendars courtesy StarDate online  
<http://stardate.org/nightsky/moon/>

## PHOTOELECTRIC PHOTOMETRY UPDATE CONTINUED...

the new WebObs, but is in our queue. Observers who used PEPObs previously may send reports to the AAVSO and Sara Beck or I can process them offline. Alternately, if you have software to reduce your own reports, you can use WebObs as before; that is how the 158 observations we have received so far have been submitted. If you do reduce your own V-band data, please use the comparison star magnitudes found in the current STARPARM file:

<http://www.aavso.org/pep-starparm>

Clear skies. ★

## A VISITOR FROM ITALY CONTINUED...

AAVSO staffer Ginny Renehan took Munari on a visit to HCO where he admired the Great Refractor and explored the plate stacks. He met plate curator Alison Doane and AAVSO member Ed Los who are working to digitally scan the plate collection. Munari was impressed with their operation. He remarked that Padua University has over 40,000 plates, and he knows that so much depends on obtaining high-quality scans.

The staff at Headquarters were delighted to meet Dr. Munari and wish him well on his return to Italy! ★

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Age \_\_\_\_\_ Birth Date \_\_\_\_\_ Vocation \_\_\_\_\_

Telescopic Equipment \_\_\_\_\_

Astronomical Experience(if any) \_\_\_\_\_

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