



# News from the Society for Astronomical Sciences

Vol. 13 No.3 (August, 2015)

## Recap of the SAS 2015 Symposium

The 2015 Symposium of the Society for Astronomical Sciences saw 100 attendees enjoying the research results, collaboration, and fellowship of the small-telescope science community. The technical papers covered small-telescope research results from photometry and spectroscopy observations of planets asteroids and stars; along with a larger-than-normal array of double-star astrometry discussions (video and CCD conventional astrometry, and speckle interferometry using EM-CCD sensors). The second and third days were devoted to technical presentations of research results, instrumentation developments for small-telescope research, and related topics.

**Educational Workshops** In keeping with tradition, the first day of the Symposium was devoted to two educational workshops: Dr. John Bally taught the history, theory, and applications of small-telescope spectroscopy, and Dave Row and Dr. Russ Genet taught about the value and approach to small-telescope speckle interferometry.

**Evening with the Pro's** The second day also included an "Evening with the Pro's". Dr. Stella Kafka (new Director of AAVSO) discussed her interest in cataclysmic variable stars. One value of research into CV's is that they provide a convenient way to study accretion phenomena. In CVs, the accretion disk is nearby and fairly bright (unlike quasars and black holes), in B-V-R, most of the CV's light comes from the accretion disk (rather than associated stars), and their accretion disks are not shrouded by dust (as they usually are during stellar formation). So, CV's can give us a better understanding of the ubiquitous accretion phenomenon.

Dr. Nils Turner described the ultra-high-resolution astrometry done at the



Bob Stephens missed SAS-2015 because he was in Chile. Photo by Bob Stephens.

CHARA array on Mt. Wilson, and presented some of enticing observations that the interferometric array makes possible.

**Highlights and Tidbits** As usual, there was more on the plate than a brief review can do justice to. Here are a few tidbits that this reviewer found especially interesting:

Have you ever wondered just how much energy an *erg* really means? Dr. Bally explained, "Imagine an ant (weight  $\approx 1$  milligram) doing a push up (span  $\approx 1$  millimeter) ... the amount of energy expended is one erg."

It was noted during the speckle interferometry workshop, that very-long-focal-length imaging (say a 14-inch 'scope operating at  $f/50$ ) creates real challenges for pointing, because the sensor's field of view will be very tiny. Dr. Turner put that in some context: the field of view of the CHARA sensors is about 1 arc-second.

Dave Rowe pointed out that for double-star astrometry, the method of speckle interferometry unravels both atmospheric turbulence and telescope aberrations – it doesn't matter whether the aberration is random or constant.

**Observations needed** Several upcoming phenomena that will benefit from small-telescope observing campaigns were discussed during the Symposium. In roughly chronological order, they are:

The long-period eclipsing binary VV Cephei is need of attention from small-telescope photometry and spectroscopy (and, I presume, polarimetry), starting with out-of-eclipse characterization during 2015-16. It is nicely placed for observations right now – see Jeff Hopkins' paper (presented by Wayne Green). The VV Cep eclipse is of special interest to Dr. Peter Bennett, USA and Ernst Pollmann in Germany. This is an exciting target, more-so because we don't have big instruments to aim at

the system. The target is too far north for ALMA. The concentration of amateurs in the northern hemisphere is very high -- we can make a difference. Amateurs made significant contributions to the epsilon Auriga system. Wayne Green has taken a particular interest in the system and will be devoting a significant part of his time over the next two years.

The Orion Project, to maintain photometric and spectroscopic monitoring of the bright stars in Orion needs to be continued this winter – see the paper by Al Stiewing.

Similarly, there appears to be an ongoing need for consistent photometric monitoring of young stellar objects – see the presentation by Michael Cook.

The 2017 USA solar eclipse presents a chance to record a 90-minute time-series of the solar corona – see Matt Penn's presentation for the campaign details. In mid-December, the ham radio operators will have the chance to listen in on an interplanetary probe – see Brian Cudnik's presentation.

All of the technical papers and videos of most of the presentations are freely available on the SAS website.

## Planning for the 2016 SAS Symposium

The SAS Program Committee has begun planning for 2016 SAS Symposium.

**Date & Location:** The 2016 SAS Symposium will be held on Thursday-Friday-Saturday, **June 16-17-18, 2016**, at the Ontario Airport Hotel, Ontario CA.

We hope that this will be convenient for those of you who will attend the AAS 2016 Summer meeting in San Diego (which will be on June 12 through 16).

**Survey & Comments:** We would be delighted to hear your suggestions and comments as we prepare for SAS-2016. If you haven't already done so, you can fill in the attendee survey of the SAS-2015 Symposium at

<https://www.surveymonkey.com/s/TL9ZDB7>

Or, you can send an e-mail to us at [program@SocAstroSci.org](mailto:program@SocAstroSci.org).

## Remembrance of Jeff Hopkins

We are sad to report the passing of Jeff Hopkins.

He was a pioneer in amateur photometry and spectroscopy. The Astronomical Society of the Pacific awarded Jeff its 2012 Amateur Achievement Award, for "Precision photoelectric photometry and high-resolution spectroscopy".

Jeff's enthusiasm was the spark that kindled several of his astronomical acquaintances to begin science projects. He was generous with his time, being a mentor and friend to interested amateurs.

Jeff was a long time member of Saguaro Astronomy Club (Phoenix, AZ) and a frequent contributor at their public star parties. He was an active member of the International Amateur Professional Photometry (IAPPP), Society for Astronomical Sciences (SAS), American Association of Variable Star Observers (AAVSO) and the Association of Lunar and Planetary Observers (ALPO). Jeff presented project reports at most SAS conferences. His activities made him familiar to e-mail acquaintances across the globe.

Jeff authored five books on Photometry, Spectroscopy, and Epsilon Aurigae.

He was very active in the campaign to monitor the 2009-2011 eclipse of Epsilon Aurigae. His work on Epsilon Aurigae was featured in a Sky & Telescope article on "Not so Amateur Astronomy".

Even as cancer began to take a toll on him, he continued to enjoy studying the stars and encouraging others to participate in small-telescope science. He developed the "Orion Project" to initiate long-term photometric and spectroscopic monitoring of the bright stars in Orion. He was scheduled to present a paper about the upcoming (2017-2019) eclipse of VV Cephei, at the 2015 Symposium of the Society for Astronomical Sciences. Unfortunately the rigors of chemotherapy prevented him from travelling to the Symposium, but his paper (co-authored by Jeff, Philip Bennett and Ernst Pollman) was presented by Wayne Green. The paper and video of the presentation are available on the SAS website (SocAstroSci.org).



**Jeff Hopkins at the 2014 SAS Symposium.** Photo by Bob Buchheim.

As word of his passing spread through the community of small-telescope astronomical research, we received many sympathies from his astronomical acquaintances. Olivier Thizy sent, "I remember a guy of passion - this is a sad day for the community!" Jose Ribeiro sent, "A sad day indeed. I enjoyed to collaborate with him on eps Aur. A true enthusiastic 'not-so-amateur' astronomer".

Jeff was a gentle man with a noble spirit. He will be missed.

## Keeping in Touch ...

### SAS Yahoo Group "SocAstroSci"

The SAS Symposium is a premier forum for small-telescope researchers to discuss ideas, observing procedures, and equipment insights; to share project results; and to form collaborations. Since our membership is scattered across the United States and around the world, we're trying an experiment to help people keep in touch between Symposia: a Yahoo Group called SocAstroSci has been set up as a forum for discussion of any topic related to SAS and small-telescope astronomical research. Kevin Hearst volunteered to be the moderator of the group. (Thanks, Kevin!).

You can reach the group at <https://groups.yahoo.com/neo/groups/SocAstroSci/>, or by searching the Ya-

hoo Groups page for SocAstroSci. Check it out and see what's happening.

**Reminders ...**

Membership Renewal: Even if you can't attend the annual Symposium, we value your support of the Society for Astronomical Sciences, and your interest in small-telescope science. You can renew your membership on the SAS website (SocAstroSci.org), by going to the MEMBERSHIP/REGISTRATION tab.

Symposium Proceedings: Published proceedings from all recent Symposia

are freely available in PDF format at the PUBLICATIONS tab of the SAS website (www.SocAstroSci.org).

Symposium Videos: If you missed a recent Symposium, you can still watch the presentations. Videos of most of the technical presentations have been posted on the SAS website at the PUBLICATIONS tab.

Workshop Videos: Video recordings of most of the Workshops from recent years are available from SAS. If you were registered for the Workshop, then the recording is free. If you were not a registered attendee, then the price is \$50 per workshop. Contact Bob

Buchheim ([Bob@RKBuchheim.org](mailto:Bob@RKBuchheim.org)) for the details.

Contact Information: If you haven't been receiving e-mail messages about the Newsletter or the SAS Symposium, perhaps it's because you've changed your e-mail address. You can update your contact information on the MEMBERSHIP/REGISTRATION tab of the SAS website. SAS never sells or shares your name or contact information without your explicit permission.

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**SAS Sponsors:** We are grateful to our Sponsors for their support of the SAS Symposium. Please remember their fine products when it is time to add to your astronomical gear.





Some of the action and participants at SAS-2015. Photos by Earl Wilson



The traditional group photo of the SAS-2015 attendees. Photo by Earl Wilson

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## SAS Leadership

### Corporate Officers:

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Robert Stephens – Treasurer  
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*All SAS Leaders are volunteers, serving without compensation.*

### Advisors:

Dr. Arne Henden  
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Dr. Dirk Terrell

## Membership Information

The Society for Astronomical Sciences welcomes everyone interested in small telescope astronomical research. Our mission is to provide education, foster amateurs' participation in research projects as an aspect of their astronomical hobby, facilitate professional-amateur collaborations, and disseminate new results and methods. The Membership fee is \$25.00 per year.

As a member, you receive:

- Discounted registration fee for the annual Symposium.
- A copy of the published proceedings each year, even if you do not attend the Symposium.

Membership application is available at the REGISTRATION page of the SAS web site: <http://www.SocAstroSci.org>.

The SAS is a 501(c)(3) non-profit educational organization. Your Membership dues and donations may be tax deductible.

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