



# News from The Society- for Astronomical Sciences

Vol. 4, Number 1

## 2006 Symposium Rapidly Approaching + Expanded Workshops

The organization and schedule of this years Symposium is well along. The schedule of speakers is shown on pages 2 and 3. This is of course always subject to last minute changes.

To give you a flavor of some of this years speakers:

Dr. Yeomans, this years Keynote address speaker is a Senior Research Scientist at JPL and member of the NEAR, Hayabusa, and Deep Impact science teams. His talk will be titled "Finding Near-Earth Objects Before They Find Us" and will include updates on the Deep Impact and Hayabusa missions as well as a look at the ongoing observations of Near-Earth Objects.

Dr. Mikko Kaasalainen – one of the leaders in the work of inverting asteroid lightcurves into shape models. Mikko is a strong supporter of amateur observers and has lots of work for us to do in support of the oncoming large surveys such as PanSTARRS.

Dr. Lance Benner – Lance will be giving another update on radar observations and how amateurs can help. Several recent papers in the Minor Planet Bulletin were the direct result of requests for lightcurve observations from Lance, Steve Ostro, Ellen Howell and others.



Dr. Yeomans



Dr Kaasalainen

On Tuesday, May 23 we will hold a series of concurrent workshops designed to get the beginning photometrist started or the advanced researcher insights to some of the popular software tools being used by amateurs for research. For the three "advanced" workshops, the same workshop will be given in the morning and afternoon session, allowing you to attend another workshop and not miss anything.

Jerry Foote: The Essentials  
In the three 60-90 minute sections of the Essentials workshop, Jerry Foote – SAS

and CBA member – will cover the essentials to get you started in photometry. The first section will cover CCD camera basics; the second will cover turning a raw CCD image into a scientifically

usable image; and the third will show you how to sleep while your robotic telescope takes those images. Each section is stand alone with handouts. All three count as one for registration purposes.

Tonny Vanmunster - PerAnSo

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by Robert Stephens

### Committee:

- Lee Snyder – Co-Chairman
- Robert Stephens – Co-Chairman
- Robert Gill – Audio Visual Webmaster
- Dave Kenyon – Program Co-Chairman
- Dale Mais – Program Co-Chairman, Newsletter editor
- Brian Warner – Program Co-Chairman
- Jerry Foote – Program Co-Chairman

### Advisors:

- Arne Henden
- Dirk Terrell
- Alan Harris

*We thank our 2006 Sponsors whose support makes our meeting possible:*

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## Tentative Speakers for the 2006 Symposium on Telescope Science

### Wednesday 5/24

#### **Coffee/Registration 8:00 8:45**

Welcome	8:45	9:00
Rick Fienberg	9:00	9:30 Pro-Am Collaboration: A New Paradigm
Jeff Hopkins / Robert Stencel	9:30	10:00 Single Channel UBV and JH Band Photometry of Epsilon Aurigae
Gene Lucas et al	10:00	10:30 Long-Period Eclipsing Binary Epsilon Aurigae Eclipse Campaign

#### **Coffee Break 10:30 10:45 15 MINUTES**

Dale Mais/Robert Stencel	10:45	11:15 Three Years of Mira Variable Photometry: What have we learned?
Christopher Watson	11:15	11:45 The International Star Index (VSX)

#### **Lunch 11:45 13:00 75 MINUTES**

#### **CBA Papers**

Joe Patterson	13:00	13:30 About CBA and CVs
Jennie McCormick	13:30	14:00 Trials and Tribulations of an Amateur Astronomer
Berto Monard	14:00	14:30 Faint CV Monitoring at CBA Pretoria

Tom Krajci	14:30	15:00 Cleaning up the GCVS Eclipsing Binary Listings -
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#### **Coffee 15:00 15:15 15 MINUTES**

Matt Wood/Josh Dolence	15:15	16:00 FITDisk: A Cataclysmic Variable Demonstration Tool
Smith/Gennett/Heather	16:00	16:30 A Compact, Off-the-Shelf, Low-Cost Dual Channel Photometer
Sponsor Infomercials	16:30	17:15 Sponsors Infomercials

**Thursday 5/25****Coffee 8:30 8:45**

Welcome	8:45	9:00
Aaron Wolf / OPEN	9:00	9:30 Searching for Exoplanets: The Amateur Connection
Jeff Hopkins/Philip Bennet	9:30	10:00 Single Channel UBV Photometry of LP Eclipsing Binary VV Cephei
Robert Stephens/Brian D. Warner	10:00	10:30 A Study of Two Eclipsing Binaries Found by Serendipity

**Coffee 10:30 10:45 15 MINUTES**

Lance Benner	10:45	11:15 Arecibo and Goldstone Radar Imaging of Near-Earth and Main-Belt Radar images and shape models of asteroids 10115 (1992 SK),
Michael Busch	11:15	11:45 23187 (2000 PN9), and 29075 (1950 DA).

**Group Photo 11:45 12:00  
Lunch 12:00 13:00 ONE HOUR**

E.R Craine/RA Tucker/ A.L. Kraus/ M.S. Giam-papa	13:00	13:30 Collaborative Research Opportunities with the Global Network of
Brian D. Warner	13:30	14:00 Asteroid Lightcurve Results from the Palmer Divide Observatory
Mikko Kaasalainen	14:00	14:45 Amateur Participation in Asteroid Shape Modelling

**Coffee 14:45 15:00 15 MINUTES**

Snyder/Lapham	15:00	15:30 Monitoring Changes in Eclipsing Binary Orbits
Thomas G. Kaye	15:30	16:00 Switching to Infrared! A New Methodology for Amateur Imaging in the Mid-IR
Wharton/Hoot	16:00	16:30 Ground Imaging for Solar Sail Orbit Determination: A Proof of Concept

**Dinner 17:30****Keynote Speaker****Donald K. Yeomans 19:00 20:00 Finding Near-Earth Objects Before They Find Us**

Don't forget this years Riverside Telescope Makers Conference....immediately following the SAS Symposium



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## Membership Information

Membership in your new Society for Astronomical Sciences (SAS).

As was pointed out with the last issue, it was felt that a modest membership fee would greatly help SAS to produce a better product for its members. This fee will be \$25.00 per year. What will this membership fee provide? Well for one thing it WILL NOT go to any committee members as part of their efforts within SAS. We volunteer our time for The Society.

Members will receive a discount for the registration fee each year for the Symposium at Big Bear. It will assure you that you will get a copy of the published proceedings each year, even if you do not attend the Symposium. It will

help defray costs in bringing in outside speakers (professionals) to the symposium.

Membership is annual and runs from July to June of the following year. To become a member, send \$25 to: Society for Astronomical Sciences, 8300 Utica Avenue, Suite 105, Rancho Cucamonga, CA 91730. You may also join online at the registration page of the web site. Membership dues are tax deductible.

We currently have 82 members with many renewals due in by June 1.

The SAS is a 501(c)(3) charitable organization.



Stan Gorodenski's Blue Hills Observatory. (left) Retro fitting with an ME mount and spectrometer, (right) Stan will be at the cutting edge.

## Your Participation Wanted!

As I have mentioned in previous Newsletters, we need your participation in the Newsletter. We don't want this to become a one person or just a couple person show. If you have an article which can cover a variety of topics, please put it together for a future Newsletter. Work in progress is always welcome. In addition, we have started a "letters to the Editor" section where we would like to add 2-3 letters from the members/participants. We had no letters to incorporate into this Newsletter edition. Constructive comments are always welcome as we are always looking for ways to improve not only the quality of the Newsletter but also the quality of the Symposium. We want the SAS to become a year around organization not just a once a year group.

In this issue we have an article entitled "Flight into Darkness" by Bob Stephens on page 5. Please participate and don't forget to get your registrations both for the meeting and the hotel in for the 2006 Sympo-



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Tonny Vanmunster is one of the most well-known members of the CBA and based in Belgium. He's the developer of the popular PerAnSo (Period Analysis Software) that analyzes periods for lightcurves of variable stars and asteroids. Tonny will conduct duplicate sessions, one in the morning and one in the afternoon demonstrating this powerful tool.

David Bradstreet – Binary Maker 3

David Bradstreet returns to give tutorials on his popular Binary Maker 3 program for modeling binary stars based on lightcurves and – if available – radial velocity data. This year he's coming back to give an even more detailed workshop on using BM3.

Brian Warner – MPO PhotoRed (Advanced)

Brian will be covering his MPO Canopus/PhotoRed again this year but in more advanced classes. The morning and afternoon sessions will be the same and cover the use of the PhotoRed utility to reduce raw instrumental magnitudes to standard magnitudes and the

### Important Future dates for 2006 Symposium

February 24, 2006	Last date to submit abstracts
March 3, 2006	Acceptance Information to speakers
April 7, 2006	Final papers submitted based on ac-
May 5, 2006	Anticipated printing run
May 24, 2006	Distribution at conference

Robert Stephens

Solar Eclipse Tours have become a growing part of the travel industry. With a total solar eclipse occurring once every couple years or so, more and more people are using it as an excuse to travel to the far corners of the world. Total solar eclipses are events rich in scientific tradition, although beyond studying the effects on wildlife, the creation of shadow bands, and the shape of the corona, very little scientific study is done these days. The real attraction is in seeing one of the most glorious events a human can witness, traveling to exotic locations, and keeping up with your eclipse traveling friends.

With this in mind, in November 2003, I journeyed to the Southern Hemisphere to attempt to see my seventh total solar eclipse. All of the others were land based trips but this one was unique because we were going to intercept it at 38,000 over the ice pack of Antarctica.

TravelQuest International and Sky & Telescope Magazine conducted our tour. While specifically tailored around our chartered flight out of Punta Arenas, Chili, it had side trips to the observatories at Paranal, Cerro Tololo, and Gemini South, southern skies star gazing, a visit to Santiago, and a tour of the Patagonia region including Torres del Paine. I took advantage of all of the activities.

After being in Chili for almost two weeks, our day of climax, November 23, 2003 arrived. Our flight was a chartered on LanChili Airlines. Over 60 of us flew with a hand picked flight crew brought in from around the world that had trained for months to execute the complicated maneuver required to intercept a moving shadow. The initial part of the flight was uneventful, as clouds covered much of the coast of Antarctica. I was lucky enough to have a seat in business class that was behind the bulkhead, giving two of us 2-1/2 windows through which to view and photograph. Ours was a specially picked brand new aircraft with new and clear windows. Unfortunately, those in the back had their windows fog over despite the best efforts of the crew to turn up the cabin heat.

At the right moment, first contact occurred. As usual, we breathed a sigh of relief and I heard somebody running down the aisle yelling, "I got the right day!" The moon quickly overtook the disk of the sun, covering up a large naked eye sunspot group. Then – magic time.

Second contact and a diamond ring appeared right on schedule. No major prominences were visible, but the pearly glow of the corona had more contrast than I would have believed. Long streamers reminiscent of a solar minimum eclipse were easily seen. Combined with the horizon effect, where objects near the horizon appear larger than they really are, this eclipse produced one of the most memorable naked eye views I can remember.

During totality, Venus and Mercury and a couple of stars could clearly be seen. Our flight path added more than 20 seconds to the duration of totality.

After a champagne toast at 38,000 feet, we headed on to

the South Pole and the Amundsen-Scott Station. As we approached, we had to delay our arrival to allow a LC-130 Hercules to take off from the runway. Watching it lift off was like watching the space shuttle land. We had gained permission to fly low over the pole, and made two passes at about 2,500 feet. Both passes almost flew directly over it, and the plane had to bank to allow us a view. The pictures later showed people on the ground watching us.

During the flight, the captain had an open door policy, and many of us took the opportunity to go up and visit, sit in the jump seat, and take pictures. After visiting the pole, we turned our sights on Vinson Massif, Antarctica's highest mountain range. Arriving at about 11:40 PM in full daylight, the plane was seemingly banking in and out of the canyons in the mountain range. Perhaps the plane was banking because of all the people crowded on the right side of the plane. In reality, we were flying a mere 2,000 feet above the mountain and the captain was trying to give us a good view.

In the end, we flew 7,070 miles in 14 hours and touched down at Punta Arenas just after 3 in the morning. Very few people got any sleep on this exciting trip.



Amundsen-Scott Station

