



AU AstroNews

The Newsletter of the Astronomical Unit

November 2001

Sponsored by the Santa Barbara Museum of Natural History

Last Month's Meeting

Thanks to Lee Coombs for his insights on astrophotography and his impressive slide show.

November's Meeting

Our speaker on November 2 will once again be cosmic ambulance chaser Chris Butler (the guy from ² Hydrae), who took us on a guided tour of nearby spring stars last March. This time, he'll conduct another entertaining and artistic visit to the stars of our galactic neighborhood.

Thanks, Volunteers!

The outreach action picked up a little in October. AU volunteers at events from Santa Barbara to Santa Maria were Jim Billig, Dave Bloom, Gretchen & Greg Brinser, Dora Drake, Art Harris, Marv Johnson, June Kelley, Pat McPartlin, Edgar Ocampo, Helen Osenga, Craig Prater, Clem Walsh (+ his friend José), Jim Williams, and Paul Winn. We gave an introduction to the stars to **326** customers.

The outreach schedules are subject to change, so to get the latest information, check the web page bulletin board (under the "Observing" topic), or contact Edgar or Chuck. Try to let one of us know ahead of time if you are planning to show up at an outreach event.

AU Observations for November

Thursday, November 8, setup 5:00 PM – Celebrate Edmond Halley's birthday at a corporate outreach event at La Cumbre Country Club. Contact Chuck for details (like the dress code) if you're coming.

Saturday, November 10, 8:30 PM – SBMNH Monthly Star Party.

Friday, November 16, 7:00 PM – Westmont Public Observation at Van Kampen Observatory. Catch some early Leonids.

Saturday, November 17, all night – Dark Sky and the Leonid Meteor Shower on West Camino Cielo.

Nov 17-18 Meteor Storm

Cover your satellites! The same folks who successfully predicted the peaks of last year's **Leonid Meteor Shower** are forecasting a potential **storm event** this year. Based on their models of filaments of orbiting debris cast off by Comet Tempel-Tuttle over the last 300 years, there will be a peak of activity for Santa Barbara at around 2 o'clock on the morning of Sunday, November 18. The Moon will be out of the picture, and we could see rates of 1,000 to 4,000 meteors per hour.

Too bad for us, but about 8 hours later there may be an even bigger peak with up to 15,000 per hour! We'll have to rely on reports from the AU's perspicacious peregrinator, Laurence Harms, who is planning to watch the storm from the Pacific island of Guam. Maybe he'll let us know how it went on Members' Night.

There may be a bigger storm next year, but the Moon will interfere. After that, the gravitational effects of Jupiter are expected to perturb the debris orbits enough to prevent Leonid storms for the next several decades, so get out there and look! Details are available at: <http://comets.amsmeteors.org/>

AU Calendars

Gretchen has a big supply of Astronomy Calendars, for only \$11.95 each. That's less than a dollar a month for a roomy calendar with lots of glitzy images of your favorite celestial objects. Grab one at AU events before it's too late. Remember, the last 2000 calendar sold for much more than that!

AU Campout Report

We had a good turnout for the AU camping trip to beautiful, but cold and foggy Lopez Lake. We didn't see a lot of stars because of the clouds, but we had fun sitting around the campfire discussing astronomy and watching the deer and gangs of prehistoric looking juvenile delinquent wild turkeys threatening the local chihuahua population. Instead of sows and bucks we saw does and toms.

As is typical for an AU campout, much good food was consumed at the Saturday potluck. One of the more popular dishes was...

Donna's Stellar Apple Crisp

A recipe from new AU members Donna and Dave Bloom of the Ballard Apple Farm: Topping: Mix 3/4 cup bisquick mix, 3/4 cup brown sugar, 1 tsp cinnamon, 1/2 tsp cloves, 1/2 tsp allspice. Cut in: 1/2 stick of butter (or, mix butter with bisquick mix in food processor). Peel, core, and cut up 8-10 apples and place in a baking dish. Sprinkle topping over the apples and bake for about 40 minutes in pre-heated 350 degree oven. You can add 1/2 cup chopped walnuts to the topping, or serve hot with vanilla ice cream. Get your apples fresh from a grower and you can use any variety you like, although the apples we used were sweet (Golden Delicious), farm fresh, and cut thick, all key items according to Dave.

Eight New Extrasolar Planets

A large contingent of AU members descended on the UCSB Institute for Theoretical Physics for the recent presentation by Dr. Geoff Marcy of UC Berkeley on the hunt for extrasolar planets. That evening, he announced the discovery of eight more planets,

bringing the current total up to nearly eighty, with several more in the pipeline. His group, using spectroscopes on some of the largest telescopes (including the Kecks), is finding planets around about 7% of the stars they observe, selected from evolved stars of higher metallicity.

By measuring the doppler displacements of spectral absorption lines, they can measure radial velocities of their target stars, and thus gravitational displacements of the stars by their planets, of as little as 10 meters per second. As their observing program goes on, they are finding planets with longer periods, and more nearly circular orbits. Although they can only detect massive planets (slightly less massive than Saturn, and most likely gas giants), seeing longer periods and circular orbits bodes well for the probability of the existence of smaller rocky bodies like Earth in stable systems.

It's Election Time!

Don't forget that the December meeting is **election night** for AU Officers to serve in 2002. If you're willing to help keep your club running smoothly, let VP Greg Brinser know! Club officers who are elected are the President, Vice President, Treasurer, and Secretary. In addition, the President appoints a webmaster, newsletter editor, outreach coordinator, refreshments coordinator, and other helpers as he sees fit.

Election night means it's also time to tell Greg if you want to make a presentation that evening, because it's also **Members' Night**. We need presentations that are ideally fifteen minutes or less, and we'll accept almost any topic. Here's your chance to tell a friendly audience all about something astronomical that you're excited about.

December is also the time for our annual **Holiday Party**. Bob Michael has arranged for us to celebrate again this year at the Beachside Bar & Grill at Goleta Beach, on Thursday, December 6. More details will be available at the November meeting.

Don't Miss This One

To start the new year with a big bang, Greg has arranged for Dr. Alex Filippenko, Professor of Astronomy at UC Berkeley, to speak at our January meeting about "Einstein's Biggest Blunder? The Case for Cosmic 'Antigravity'."

Recently, observations of very distant exploding stars have provided evidence that the expansion of the Universe is speeding up with time, rather than slowing down as expected. This discovery resurrects the idea of a long-range "antigravity" effect in the Universe, first proposed by Albert Einstein and later renounced as his "biggest blunder." This was voted the "Science Breakthrough of 1998" by Science magazine.

Alex Filippenko received his B.A. in Physics from UC Santa Barbara, and his Ph.D. in Astronomy from the California Institute of Technology. He then became a Miller Postdoctoral Fellow at the University of California at Berkeley. Since 1986 he has been on the faculty at Berkeley. An observational astronomer who makes frequent use of the Hubble Space Telescope and the Keck 10-meter telescopes, his primary areas of research are supernovae, active galaxies, black holes, and cosmology; he has also spearheaded efforts to develop robotic telescopes for CCD imaging. His research accomplishments, documented in over 330 published articles, have been recognized by several major awards. Currently he is President of the Astronomical Society of the Pacific. In 1998 he produced a 40-lecture video course on introductory astronomy with The Teaching Company, and in 2000 he coauthored an introductory astronomy textbook. Besides being an avid tennis player and hiker, he enjoys world travel and is addicted to total solar eclipses, having seen 7 of them (most recently in Zimbabwe). He was a member of the Santa Barbara Astronomy Club (now merged with the AU) from 1973 through the early 1980s.

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Current annual membership rates are:

Single	\$15	Family	\$25
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