



AU AstroNews

The Newsletter of the Astronomical Unit

August 2003

Sponsored by the Santa Barbara Museum of Natural History

Congratulations, Krissie!

Krissie Cook is now the *official* Astronomy Programs Coordinator! There is no longer an "Interim" to be found in her job title. She is now full-time, salaried and legit at the Museum. Her new hours are 8-5 Tuesday through Saturday, though that's flexible depending on events, activities, etc. "Feel free to contact me about anything and everything", says Krissie, "I've been grateful for your support, patience and encouragement for the last few months and I'm thrilled to continue working with all of you through the Astronomy Programs at the Museum." You can phone Krissie at (805) 682-4711 x316, or email kcook@sbnature2.org

Starbecue Report

We had a pretty good turnout for the Starbecue at the Gun Club on a hot, humid, and cloudy Saturday. About 25 AU members and friends gathered for tri-tip and conversation, followed by stargazing. The skies cleared up around 9:30 and we got some great views. Thanks to Paul Winn for charring the cow, and to partymaster Joe Doyle for setting it all up.

Note from AU President Pat McPartlin: Due to the lateness of receiving the approval of the Gun Club for 7/19, we were not able to include the Starbecue information in the July 2003 newsletter. Informally, we sent out emails to anyone we figured was still in town and not on vacation, with a request to forward the invitation to anyone not on the list of email addresses shown. We apologize if anyone was missed. Please forgive us. We promise to be better organized for the Second Annual Starbecue next summer! Thank you.

July Outreach Volunteers

Outreach volunteers since the last Newsletter were Warren Bitters, John Boyd, Dora Drake, Art Harris, June Kelley, Jack Mann, Pat & Chuck McPartlin, Edgar Ocampo, Helen Osenga, and Tim Wittenburg. We showed the summer skies to 345 customers.

If anybody in the club is interested in doing outreach, but is feeling timid about it, we're thinking of scheduling an outreach training class. Learn how to set up your scope and polar align while kids ask "Can we see anything yet???" Learn the answers to the most commonly asked questions. Learn how to give constellation tours. Contact Pat McPartlin, parsnip7@yahoo.com or Chuck McPartlin, macpuzl@west.net for more information.

AU Events for August

Saturday, August 2, setup 8:00 PM – Slide show and scopes for Cachuma Lake Campgrounds. Scopes set up at Dakota Plains.

Thursday, August 7, setup 8:00 PM – Telescopes for Los Padres Family Camp for disadvantaged children. This will probably be at Paradise Campground, but may move to Sage Hill Campground up the road by the Ranger Station. We won't know until the last minute, so if nobody is at Paradise, try Sage Hill.

Saturday, August 9, 6:30 PM – AU Planning Meeting at SBMNH, Krissie's office. All members welcome to help plan future AU activities.

Saturday, August 9, 8:00 PM – Monthly Public Star Party at SBMNH.

Monday, August 11, all day – Happy 75th Birthday to long-time AU member Brother Laurence Harms!

Friday, August 15, 8:00 PM – Monthly Public Observation at Westmont College's Van Kampen Observatory.

Saturday, August 16, setup 8:00 PM – Telescopes for Los Padres Family Camp for disadvantaged children. This will probably be at Paradise Campground, but may move to Sage Hill Campground up the road by the Ranger Station. We

won't know until the last minute, so if nobody is at Paradise, try Sage Hill.

Thursday, August 21, setup 8:00 PM – Telescopes for Los Padres Family Camp for disadvantaged children. This will probably be at Paradise Campground, but may move to Sage Hill Campground up the road by the Ranger Station. We won't know until the last minute, so if nobody is at Paradise, try Sage Hill.

Friday, August 22 and Saturday, August 23, setup 5:30 PM – Santa Barbara Botanic Garden Nature Nights. Telescopes in the meadow from 6:30 to 9:00 PM, dinner provided. Check with Chuck (macpuzl@west.net, 964-8201) as this date approaches for final details.

Wednesday, August 27, setup 7:00 PM – Family Astronomy Night at Elings Park for the closest approach of Mars in 60,000 years.

Saturday, August 30, setup 7:30 PM – Telescopes for Refugio Beach State Campground.

Saturday, August 30, all night – Dark sky observing. Contact Paul Winn (strg8zn@cox.net) to find out where and when.

Scheduled events are subject to change and additions with little notice! For the latest and greatest, contact Edgar Ocampo (eocampo26@earthlink.net) or Chuck McPartlin (macpuzl@west.net) for the latest developments.

September Speaker Rehabbing Well

The next AU meeting is the first Friday in September, Friday, 9/5/03. The speaker will be our own Tony Galvan, who will be giving a presentation on the Yellowstone National Park Caldera and the Yellowstone Ecological System, complete with slides and photos. Tony is recovering well from hip replacement surgery, with help from his friend Ivan. Both are pictured at the top right of this page.



Mars Is Big News

Early in the morning on August 27 (Pacific Time), Mars will make its closest approach to Earth in recorded human history. Mars will be about 34.6 million miles away, as compared to its more usual opposition distance of about 42 million miles, and will be showing a disk just over 25 arcseconds wide. Compare that to the size of Jupiter in June at 33 arcseconds, and you can see that details will be easier to spot. Get out there and take a look at Mars during this great appearance, and don't forget to add your sketches of Mars to the AU Mars Mapping effort. You can download a template with instructions from the AU web page. We'll be having an AU outreach event to look at Mars at Elings Park on Las Positas Road for their Family Astronomy Night on Wednesday, August 27. Bring your scope, join the crowd, and have some fun!

For Sale

Celestron 20x80 Binos, about 5 years old. I do not have the case for them. I do have all the caps for them and the tripod mount. Asking \$250.00 OBO. Contact Paul Winn 685-5646, strg8zn@cox.net

Wanted

I want to buy a used 5" Newtonian or something similar. Contact Paul, psnack@vtext.com



From the Belly of an Airplane: Galaxies
by Dr. Tony Phillips

On April 28th a NASA spacecraft named GALEX left Earth. Its mission: to learn how galaxies are born, how they grow, and how they die. "GALEX—short for Galaxy Evolution Explorer—is like a time machine," says Caltech astronomer Peter Friedman. It can see galaxies as far away as 10 billion light years, which is like looking 10 billion years into the past. The key to the mission is GALEX's ultraviolet (UV) telescope. UV rays are a telltale sign of hot young stars, newly formed, and also of galaxies crashing together. By studying the ultraviolet light emitted by galaxies, Friedman and colleagues hope to trace their evolution spanning billions of years. This kind of work can't be done from the ground because Earth's atmosphere absorbs the most energetic UV rays. GALEX would have to go to space. To get it there, mission planners turned to Orbital Science Corporation's Pegasus rocket. "Pegasus rockets are unusual because of the way they're launched—from the belly of an airplane," says GALEX Project Engineer Frank Surber of JPL. It works like this: a modified L-1011 airliner nicknamed *Stargazer* carries the rocket to an altitude of 39,000 feet. The pilot pushes a button and the Pegasus drops free. For 5 seconds it plunges toward Earth, unpowered, which gives the *Stargazer* time to get away. Then the rocket ignites its engines and surges skyward. The travel time to space: only 11 minutes. "The aircraft eliminates the need for a large first stage on the rocket," explains Surber. "Because *Stargazer* can be used for many missions, it becomes a re-useable first stage and makes the launch system cheaper in the long run." (To take advantage of this inexpensive launch system, GALEX designers had to make their spacecraft weigh less than 1000 lbs—the most a Pegasus can carry.) A Pegasus has three stages—not counting the aircraft. "Its three solid rocket engines are similar to the black powder rockets used by amateurs. The main difference is that the fuel is cast into a solid chunk called a 'grain'—about the consistency of tire rubber. Like black powder rockets, once the grain is lit it burns to completion. There's no turning back." In this case, turning back was not required. The rocket carried GALEX to Earth orbit and deployed the spacecraft flawlessly. On May 22nd, the UV telescope opened its cover and began observing galaxies—"first light" for GALEX and another success story for Pegasus. Find out more about the GALEX mission at <http://www.galex.caltech.edu/>

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