

HAC 2008
Membership Renewal
is now due!



HAC MEETING: Friday, January 18, 2008

7 pm, Cochise College, Sierra Vista, Rm. 305A/B

PLUS our monthly Show-N-Tells, upcoming event details, refreshments & NEW Exciting Door Prizes!

Speaker: Glen Minuth Topic: Earth's Energy Balance

Star Party Corner

Keith Mullen, Star Party Coordinator (520) 366-0049 email: repogazer@msn.com

Participation is the Lifeblood of the Club!

December marked the beginning of a new term for the officers and directors and with a mix of some new to compliment those returning we can look forward to an exciting year of fresh ideas to go along with those we found worked well in the past. One of these past policies is the "No More, No Go" policy with respect to the Members Star Party. We still make the call on whether or not the Public Star Party is held or cancelled contingent on the weather because of its involvement with the public. On the other hand the Members Star Party is held regardless of weather conditions. This was the case in December, a clouded out Public Star Party which was cancelled and the Member Star Party held at Glen and Deanna Sanner's Discovery Observatory West that wasn't. Even though the night was a complete washout astronomically speaking, Deanna's chili made up for it and was thicker than the summer Milky Way and a lot warmer. A dozen members showed up for what turned out to be a great social event with conversations on everything from the Myer's trip to Egypt to current economical events, quite stimulating and a lot more fun than sitting home watching it rain. I'm calling on all members to make an effort to get out to these events every month this year. Participation, it's the lifeblood of the club and was evident when several members braved sub freezing temperatures to watch the Geminid Meteor shower hosted by Bob and Barb Kepple on Friday night the 14th of December. Now it was another story on Saturday the 22nd when about 1/2 of the club membership converged on Keith & Teresa Mullen's for the Christmas Party. We had a buffet line featuring ham, turkey with all the fixin's and a dessert line that had a pie for almost every person there. We're going for it again next year on December 13th, 2008, so mark it on your calendar and don't miss the next one!

January Star Party Schedule

Saturday, Jan. 5th Has us out of town at WSO with Jim and Dianne McCaw hosting their second Member Star Party featuring Jim's 25" Obsession and enough deck space for YOUR scope too. Dianne will have an assortment of goodies available but don't hesitate to bring something to throw in too. This event will take place rain or shine so dress warmly and let's see some HAC faces out there.

Friday, Jan. 11th This month's Public Star Party will be held at Patterson Observatory on the U.of A. South campus and will combine the Mars opposition watch with the Public Star Party. We are planning to have some large aperture scopes on hand along with the Patterson 20" equipped with a camera and monitor for some detailed Mars viewing so don't miss it or Mars will slip back out of view for another 2 years.

Astronomy Day Update "They paved paradise and put up a parking lot." The city Parks and Recs. division decided to tear out the ball field we use for Astronomy Day and put up a bike and skate park so we are out of the Veterans Park forever. By the time this newsletter reaches you, I should be finished with negotiations with the Lawley Automotive owner to have our Astronomy Day event at one of his dealerships, most likely the GMC lot; more on this in next month's Nightfall.

STARIZONA
ADVENTURES IN ASTRONOMY & NATURE

Official Donor of the Huachuca Astronomy Club Door Prizes!!!

President's Perspective

Wayne Johnson

Happy New Year to One and All!

We had a wonderfully busy year of 2007: many outreach activities, our monthly public and member star parties held at various members' observatories, and probably the highlight of the year was our 25th Anniversary celebration dinner at the Arizona Folklore Preserve, which featured comet hunter, David Levy, as our guest speaker. Thank you so much to everyone who organized and helped out at these various activities and to our members who attended the events. The club is there to facilitate camaraderie among those who enjoy the stars and we are glad to have you enjoy the activities. As has been said before in our newsletter, participation is the lifeblood of our club, please continue to enjoy and help out when and where you can.

The meetings have been well attended and we've had a good variety of informative speakers, both from within the club and outside. We plan to have quarterly member presentations, one of which will be a "gadget night". Think about something you would like to tell the club about (a new eyepiece or telescope you got from Santa, a trip to an observatory, an astronomical event, your observations, etc.) and please let me know what you have and we'll schedule you. Don't worry about it needing to last an hour, we'll ordinarily have several members talk the same night so that 10-15 minutes is usually long enough for your presentation, unless you have something that requires the full time slot.

The coming year of 2008 promises to be filled with more exciting activities as we look forward to our annual Messier Marathon, Astronomy Day at a new and exciting location, and something new: at least one (and hopefully more) themed public star parties at the UA South's Patterson Observatory. The first one has to do with "Mars Madness", since Mars is currently at its best for the next couple years. I hope we can have more themed activities to attract the public. Since Saturn is coming up, we should think about having a "Sublime Saturn Stare" in a few months and maybe more solar viewing. These type of observing activities are good in that they can be held in areas where we don't necessarily have to worry about it being very dark and remote. Those who come to the public event may eventually want to come to the dark site events. For a first exposure of looking through a telescope these events can be held in areas where there is a lot of public activity like the Sierra Vista Mall and the Walmart Plaza as examples.

I'm also looking into a tour of the Large Binocular Telescope facility up on Mount Graham in early or late summer. More details to follow as they develop.

Clear skies to All, your resident president,
Wayne (aka Mr. Galaxy)

Huachuca Astronomy Club P.O. Box 922 Sierra Vista, AZ 85636 <http://hacastronomy.com> , email: mrgalaxy@juno.com
Yearly Membership: Individual: \$25; Family: \$35; Military: \$20; student:\$10 (with restrictions)
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This issue of Nightfall can also be found on-line at hacastronomy.com. Click 'Newsletter' link. There is much more information about astronomy and our HAC activities on our club web site. *To join the HAC-LIST, send an email to haclist-subscribe@yahoogroups.com .

Outreach Biz

Rich Swanson

On January 11th at 6:30 pm - Public Star Party and Mars watch at the Patterson Observatory at the U of A South Campus.

Dollar\$ & Cent\$

Bob Kepple (Tim Doyle)

The Club has a checkbook balance (mid December) of \$3,793.99, with \$106.64 in petty cash.

Dues 2008

We are now accepting Dues for 2008!

You will be past due as of January 31st. Dues will be the same as last year; \$25 single, \$35 family, \$20 Military, \$10 student.

You can send a check made out to HAC to:

Huachuca Astronomy Club
PO Box 922
Sierra Vista, AZ 85636

By sending in your dues you will help lesson the confusion

About the Speaker:

Glenn Minuth is a Department of Army Civilian employed at Fort Huachuca as a technical integrator for the Network Enterprise Technology Comm and. During the past 26 years, his civil service assignments have been as a: cartographer for the Defense Mapping Agency Aerospace and Hydro-Topographic Centers, instructor of acquisition law and project management in the National Defense University, and US Air Force information management specialist.

His bachelors and graduate degrees are in geography with concentrations in cartography, geomorphology, remote sensing, and geology. Others areas of academic focus were biogeography (flora/fauna), weather/climate, and pedology (soils). His graduate research focused in the area of geomorphology and geology examining mound micro-relief (Mima-type mounds) on volcanic mudflows in the central Sierra Nevada foothills, California.

Glenn was an instructor in geography, geology, physical science, and biology in the Life and Physical Science Department of American River College, Sacramento for seven years. He was an instructor in geography and geology for 10 years at Cochise College for credit and non-credit programs. He now leads field trips and lectures for the City of Sierra Vista Parks and Recreation Department in the areas of--military history, ecology, weather/climate, geography, and geology.

He enjoys canoeing, snowshoeing, downhill skiing as a member of the National Ski Patrol for 38 years performing winter mountain rescue work and is a proficiency instructor in the areas of outdoor emergency care, avalanche rescue, and toboggan handling.

His local academic interests in the greater southeastern Arizona area involve geology (ancient (fossilized) coral reefs, metamorphic core complexes, industrial copper mining, speleology (cave study), volcanic terrains); regional agriculture; forest fire ecology; sky island biogeography; monsoon season dynamics; and military history such as the Apache Campaign).

Backyard Astronomer

Neal Galt

What's UP...

Venus is getting lower in the morning sky and will continue in that lowering direction for a few months. May will be the cross-over month. Starting in June, Venus will be a low evening object and will slowly get higher for many months during the summer and fall 2008.

Jupiter is now a low morning object and will not be well placed for observations for a few months. Jupiter will dance with Venus on 1/31/2008 and 2/1/2008 if you're an early bird dance watcher.

Mars starts 2008 just past its opposition with earth. It will shrink from our view during January and lose a lot of its brilliant red color. This is the last month for a couple of years to get any good telescopic views. See it now...or you wait. On the 19th of January, Mars and Ms Luna do their dance again! Something going on with these two?

Saturn is now rising about mid-evening (10 PM) and the rings will open a little more for us. Saturn will be in opposition with the earth in February.

After the first week of January, the rest of the month is dismal relative to shooting stars. It's "Pot Luck". I guess that means more will be visible from Keith's house due to all of the "pot lucks" from there.

Comet 17P/Holmes is still very visible in Perseus with a pair of bino's. Give it a quick look.....it's bigger than the sun!

Sierra Vista Outdoor Lighting Code Update

Bob Gent

Dark Skies and Bright Stars of Cochise County

Like many of you, my wife and I moved here for a number of reasons. The most important priority for us was having great night skies. These beautiful Cochise County night skies didn't happen by accident.

Years ago in the pre-IDA days, there were two people, Dr. Art Hoag and Mr. Bill Robinson, who were instrumental in pushing for outdoor lighting codes across Arizona. Dr. Hoag, a skilled astronomer and director of many professional observatories, helped push for the first ordinance in Flagstaff, Arizona, which passed back in 1958.

Bill Robinson was another leader in the dark sky effort. After meeting with Dave Crawford at KPNO, Mr. Robinson, a retired petroleum engineer, visited virtually every county in Arizona to push for lighting codes. Sadly, these dark sky pioneers (Hoag and Robinson) passed away nearly ten years ago.

Fortunately for all of us, Cochise County revised its lighting code about two years ago. Many members of the Huachuca Astronomy Club, especially Doug Snyder, helped make this happen. Currently, Sierra Vista is revising its lighting code to add maximum lumen levels (a big improvement), and it will probably be approved later in January.

All of us should strongly support this effort. What can we do to help? I am sure the Sierra Vista City Council would enjoy hearing from you on this subject. There are many reasons for

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controlling light pollution. No single argument is all-encompassing, but when presented together in a logical manner, they make an important point. Here are some issues in brief:

1. Bad lighting is a threat to human health. That's why we have had medical doctors at International Dark-Sky Association (IDA) annual meetings for several years. We know that melatonin production can be suppressed with even brief periods of moderate lighting during the night. This has far reaching implications. Bright days and dark nights are important for good health.

2. Light pollution is a serious threat to many species of wildlife. Migrating birds become disoriented from lights aimed into the sky at night. In Florida, dozens of laws have been enacted just to protect sea turtles, all of which species are threatened or endangered. But as I like to ask sea turtle advocates, "Shouldn't we also be protecting humans and other living creatures, too?" Utility companies in South Carolina and Florida have done much to publish videos, brochures, and warnings to all customers about the threat to sea turtles.

3. Glare is a serious safety problem. Most people recognize this key issue, and it is becoming a bigger factor with the "aging eye." In fact, glare control was one of the driving reasons why the City of Los Angeles converted to fully shielded street lighting years ago. It's no wonder that glare laws were enacted long ago, even before the IDA was formed.

4. Light trespass is a violation of property rights. One could develop an entire thesis on this point alone. Why should anyone permit this form of trespass that can potentially invade one's bedroom, thereby disturbing one's sleep cycle, and so much more?

5. Energy waste is a big problem for all of us. We are importing more foreign oil than ever before, and we have become heavily dependent on it. This is true in the USA and even more so in Europe. If you haven't done so, you should review the IDA newsletter stories about the Premcor Refinery in Texas. They faced energy problems during summer brownouts, and they needed to use every way possible to conserve energy. Shielding lights and using lower power helped them in many ways.

6. Many laypeople are not aware of it, but the "night sky issue" is, in fact, important to many of us. Protecting our heritage of dark skies is important to amateur astronomers, to professional astronomers, and to the general public. How many times have you stood under dark skies filled with thousands of stars? Have you ever pondered the nature of the unbounded and beautiful universe? It ignites one's imagination. This heritage must be protected.

There are many other arguments that can be made, and the more you study the issues, the better you can justify the urgent need to control light pollution. Are there any good reasons to promote bad lighting? I can't imagine one that is justified and that would convince the general public that light pollution is good.

How can we stop the growth of light pollution or even reverse it? It's simple. We control glare and see better. We stop light trespass and conserve energy. All of this improves visibility, and it protects our heritage of dark skies. The time is now to take action. Let's contact city council and let them know we appreciate their support of the revised lighting code.

Wishing you all clear skies, bright stars, and good observing.

Robert L. Gent, HAC Member and
International Dark-Sky Association President, Board of Directors
www.darksky.org

To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting



Space Place Astronomy Club article

Ultraviolet Surprise

by Patrick L. Barry and Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before? Now you can. Just point your web browser to galex.stsci.edu and start exploring. That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky at ultraviolet wavelengths that can't be seen from the ground.

Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer. About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered. "The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy postdoc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example. Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed its secret: Mira possesses a comet-like tail 13 light-years long. "Mira shows us that even well-observed stars can surprise us if we look at them in a different way and at different frequencies," Seibert says.

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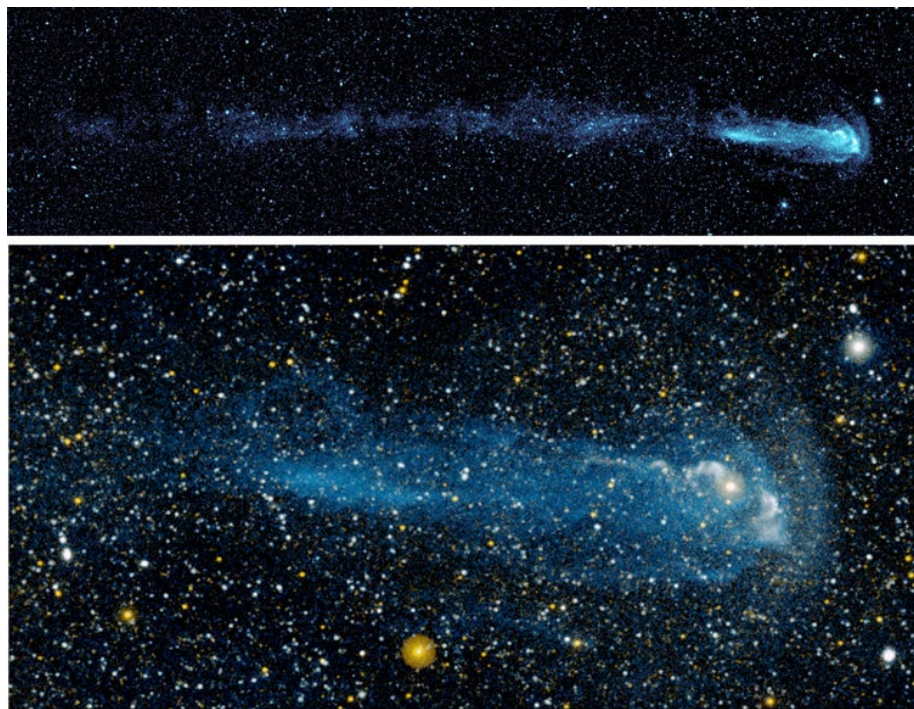
Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought!

The images from the ultraviolet space telescope are ideal for hunting new phenomena. The telescope's small, 20-inch primary mirror (not much bigger than a typical backyard telescope) offers a wide field of view. Each image covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says. So what are you waiting for? Fire up your web browser and let the discoveries begin!

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Caption:
Astronomers looking at new ultraviolet images from the Galaxy Evolution Explorer spacecraft were surprised to discover a 13-light-year long tail on Mira, a star that has been extensively studied for 400 years.





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