

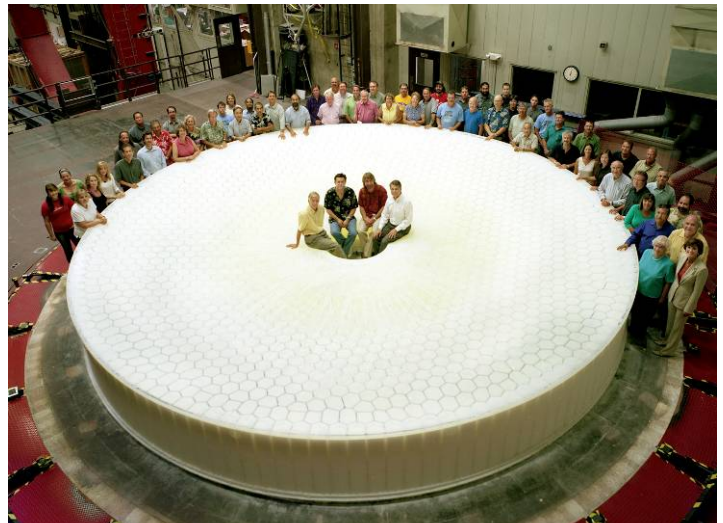
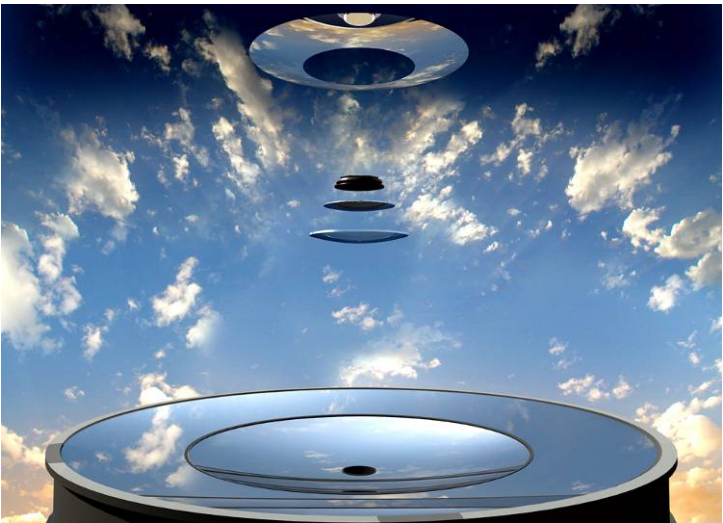
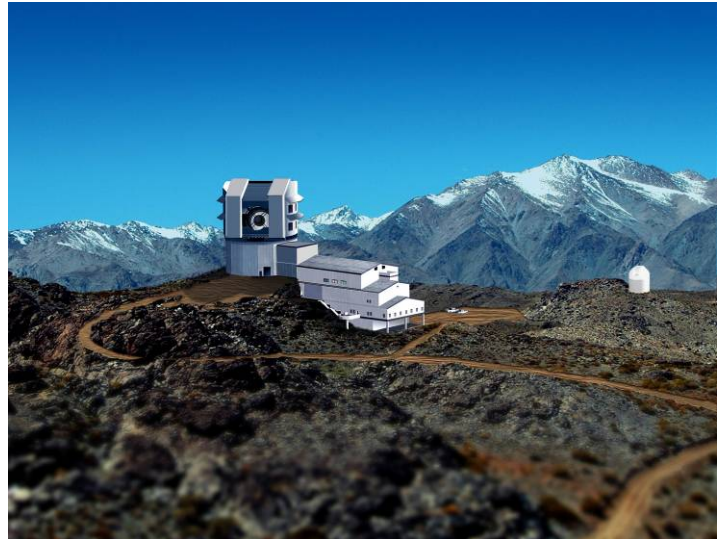
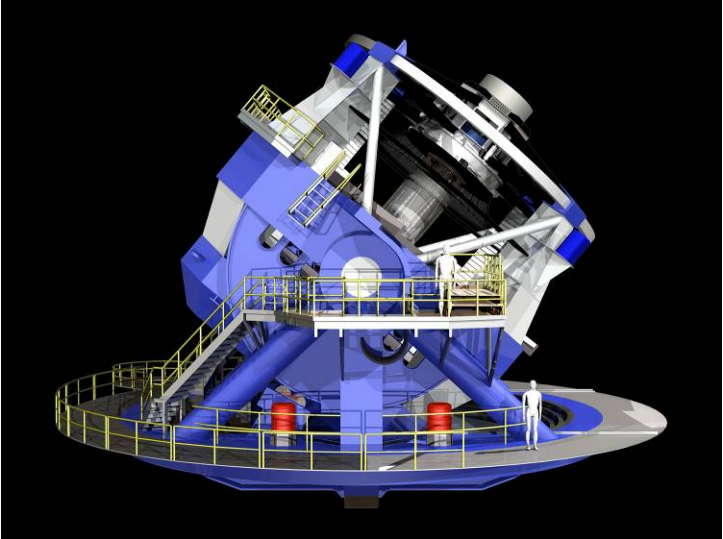


Desert Skies

Tucson Amateur Astronomy Association

Volume LIV, Number 12

December, 2008



The Large Synoptic Survey Telescope

Inside this issue

- ◆ School star parties
- ◆ Constellation of the month
- ◆ TAAA Holiday Party
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Cover Photo: Clockwise from top left:

- The 8.4-meter LSST will use a special three-mirror design, creating an exceptionally wide field of view and will have the ability to survey the entire sky in only three nights. (Image credit: LSST Corporation)

TAAA Web Page: <http://www.tucsonastronomy.org>

TAAA Phone Number: (520) 792-6414

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TAAA Board Of Directors	All Board Members		taaabod@tucsonastronomy.org

Membership in the TAAA

Annual Fees

- Individual membership \$25.00
 Family (includes two adults plus minor children) \$30.00
 Youth under 18 years must join as a family upon parental or guardian acknowledgement of participation in TAAA events. Ask the Treasurer for the required form.

Discounts (one discount allowed, subtract from above rates)

- Seniors (over 60 years) \$2.00
 College Students, Teachers (K - 12) \$8.00
 Youth under 18 yrs (form required, contact the treasurer)..... \$13.00

Options (add to above membership rates)

- Tucson society of the Astronomical League (TAL) fees \$ 7.50
 Sky & Telescope Magazine 1 year (12 issues) \$32.95
 Astronomy Magazine 1 year (12 issues) \$34.00
 2 years (24 issues) \$60.00
 Postage for New Member Pack \$ 4.80

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, and General/Undesignated.

Renewal Information

- Your membership expires as indicated on your mailing label.
- TAAA members may join the Tucson society of the Astronomical League (TAL) at the time they join or renew.
- Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Rates are given above. Allow 3 months for processing. Subscriptions must be sent through the TAAA. *Do not send money directly to the*

magazines. To change an individual subscription to the group rate, pay the subscription amount to the TAAA treasurer. Include your magazine renewal notice.

- Please include a note explaining what you are paying for. Credit cards are not accepted. Write one check or money order for fees plus any options or donations. Make it payable to TAAA and send to:

Tucson Amateur Astronomy Association
 PO BOX 41254 Tucson, AZ 85717

Mailing Address or Email Changes - Send to address above or email the treasurer.

TAAA Mission Statement - The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

Desert Skies Publishing Guidelines - All articles, announcements, news, etc. must be submitted by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. Submissions should be submitted in Word compatible files via e-mail or on a recordable media.. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

George Barber
 TAAA/Desert Skies Editor
 15940 W Ridgemoor Ave
 Tucson AZ 85736

Join our Email Lists on YahooGroups

Announcements: <http://tinyurl.com/e7o3y> (TAAA news, no posting allowed, 15/month)
 TAAA Forum: <http://tinyurl.com/hwoau> (general astronomy discussion, posting allowed, 75/month)
 TAAA Dark Site: <http://tinyurl.com/3d8ts9> (discussion of dark site issues, posting allowed)

Cover Photo (cont.)

- Artist rendering of LSST on Cerro Pachon, Chili. (Image Credit: Michael Mullen Design, LSST Corporation)
- Members of the team building the LSST, a large survey telescope being built in Northern Chile, gather to celebrate the successful casting of the telescope's 27.5-foot-diameter mirror blank, August 2008. (Image credit: Howard Lester / LSST Corporation)
- The optical elements of LSST: 3 mirrors, 3 lenses. (Image credit: Todd Mason, Mason Productions Inc. / LSST Corporation)

President's Message

I hope that everyone had a good Thanksgiving and was able to get out and enjoy the night sky during your time off.

This month brings us to the Holiday season and we will be starting it off with our annual Holiday Party on the thirteenth of December. I would like to thank the Lofquists' for once again opening their home for this event. I hope everyone has set aside that date and plans to attend. I always enjoy getting together with one another and sharing our stories, food, and meeting the families.

I would like to remind everyone that the newsletter distribution will be changing in January of the new year. Starting next month everyone will get an e-mail notification that the newsletter is available on the website unless you have made arrangements with Terri to receive a paper copy. We still have some members that have not provided us with e-mail contact information. We will make every attempt to contact or notify you if you fall into this category because we do not wish for anyone to have his or her newsletter interrupted. The Board is very aware of the importance that members get the newsletter as this is our primary means of getting club information and schedules to you.

I hope that many of you were able to attend the dedication of the new TIMPA observing facility. I apologize for missing this event but would like to thank everyone that helped to put it together. If you were able to see the video that George put together for members night in November, you can see how many people came together to make this happen. A special thanks to George Barber for organizing and working so hard to make this a reality. Also a big thank you to David and Wendee Levy and Meade for their generous donation. I hope everyone gets a chance to go out to TIMPA and enjoy the 14" telescope. We are truly lucky to have such an instrument available for members to use.

I want to extend my family's warmest Holiday wishes to everyone in the club. May you all be happy and healthy and please stay safe.

Clear Skies.

Ken Shaver
TAAA President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, Dec. 5, at the Steward Observatory Auditorium - Room N210

ASTRONOMY ESSENTIALS: 6:30 pm

Title: What Kind of Star?

Speaker: George Barber

Did you know that stars come in all kinds of colors and sizes? This month's essentials will cover the different types of stars and their life cycles.

GENERAL MEETING: 7:30 pm

Title: Large Synoptic Survey Telescope

Speaker: Victor Krabbendam

The Large Synoptic Survey Telescope will be an 8.4m telescope, made by the Steward Observatory Mirror Lab, coupled to a 3-billion pixel CCD camera. It will produce 30 terabytes of data each night (that's over 2000 CDs or almost 60 DVDs). The telescope will be located in Chile and is scheduled for completion in 2014 with science operations starting in 2015. This month's speaker is Victor

Krabbendam, who is the senior manager in the LSST project. He manages all the telescope and site work for the LSST. Come learn more about this telescope which has been described as the first of the large survey telescopes that will soon dominate the field of astronomy and will open our eyes to the small timescale changes that take place in the night sky.

BOARD OF DIRECTORS MEETING: Wednesday, Dec. 10, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:

- 11 Dec - Astronomy Fundamentals SIG
- 12 Dec - Lifelong Learning Academy Star Party
- 13 Dec - TAAA Holiday Party
- 20 Dec - TAAA and AF-SIG Star Party at TIMPA
- 27 Dec - TAAA Star Party at Las Cienegas

Meeting Information and Calendar of Events (cont.)

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Dec. 13. Printing: Mon, Dec. 15. Folding Party: Wed, Dec. 17. Mailing: Thu, Dec. 18. The newsletter is mailed at

least one week prior to the following month's General Meeting. Note that the deadlines have been advanced one week so that everyone can enjoy the December holidays!

Club News

Member News

We welcome these members who have recently joined the TAAA: John Barr, Jim Hart, Greg Leonard, Valerie Seabre, and Tim Van Devender. Glad to have all of you join! New members can pick up a members pack at a meeting if they didn't request it by mail. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available online at either Yahoo Groups email list website under Files, or at most meetings.)

Astro-Imaging SIG Meeting

Monday, Dec. 1, 7pm

China Rose, NE corner Speedway/Rosemont

Our presentations feature CCD images, planetary webcams, and film. Come see some of the state of the imaging art over some Chinese food. Just show up and enjoy the show! For more information, contact Steve Peterson.

TAAA HOLIDAY PARTY ON DECEMBER 13TH!

Bill Lofquist

The TAAA Holiday Party will be on Saturday, December 13th this year. That is the night following the full moon, so it shouldn't interfere with our observing schedule too much. Let's begin to gather at 5:00 PM.

The party will be held in the backyard of Bill and Mary Lofquist again this year. That means there will be no hassle for anyone, and that it will have no cost beyond what each person brings for the potluck. The club will rent portable heaters for warmth if we need it, and some tables for us to put the food on.

We will have another drawing this year for prizes that we all bring to put into the mix. We may even have a drawing for a nice piece of astronomy equipment, if someone donates such a prize. So look around your astronomy storage room and bookshelf to see if you have something you can contribute to the fun of the evening. George Barber has promised to provide some appropriate music for the occasion.

The meal will be a potluck as it has been the past couple years. Please bring some hors d'oeuvres, salads, breads, entrees, vegetables or deserts. We will have coffee, tea and hot chocolate. The club will provide some soft drinks and, of course, there will be ice water. We will have a gas

grill if you would like to cook some meat, and you can use the oven and microwave in the kitchen.

The Lofquist's home is located at 1935 West Harran Circle, which is near the Foothills Mall. From the corner of Ina Road and La Cholla Boulevard, go south on La Cholla to the traffic light at Omar Drive. Turn to the east (left) and go a very short block and turn right on Amahl. Go one half mile and turn left on Harran Drive, and then take the next left on Harran Circle. We will be the first house on the left when you get to the turn-around circle. There is plenty of room to park on the circle and in our driveway. We will let the neighbors know you are coming. Please just try not to block their driveways. They are nice people who won't shoot at anyone.

If you get lost in the curvy streets, give us a call at 297-6653.

We look forward to seeing you at the TAAA Holiday Party!

IMPORTANT NOTICE! THIS IS THE LAST MAILED NEWSLETTER

This December edition of the TAAA's Desert Skies newsletter will be the final paper copy that members will be receiving by mail, unless you have given specific instructions to the club. Obviously, members who do not have internet access or have some special need can continue to receive a mailed copy.

For the past several months, the TAAA has planned for the conversion to an e-newsletter with full page announcements in past newsletters. All members with e-mail addresses on record with the club have also been receiving a special monthly e-mail message stating that the newsletter is available on the Member's Page of the club's website www.tucsonastronomy.org by selecting the MEMBERS LOGIN button. All members should have received via e-mail the login information to access the Member's Page where the newsletter resides.

This conversion will yield significant benefits to the club. The e-newsletter conserves paper resources, allows for full color photos, permits much larger content than a paper copy, allows quicker access to the newsletter (eliminates the mailing delay) and saves the club and therefore the members money. The TAAA is very appreciative of member acceptance of this change.

As a suggestion for easy access to your monthly e-newsletter (assuming you do not need to print it out), simply open the e-newsletter on the Member's Page each month and save it to a directory for club newsletters

Club News (cont.)

within your computer. Using your computer's data management application (i.e. Windows Explorer) create a shortcut to the e-newsletter file and transfer the shortcut to your desktop. Each month you can delete the previous month's shortcut and create a new one for the latest e-newsletter.

Astronomy Fundamentals Special Interest Group AFSIG for December

The Astronomy Fundamentals Special Interest Group (AFSIG) will meet on Thursday, December 11, at 6:30 pm in room 253 of the Environmental and Natural Resources Building (USGS and Weather Service) on the northeast corner of Sixth Street and Park Avenue on the campus of the University of Arizona.

Lou Faix will present Part One of a two-part talk entitled "But Where Is It?" The presentation is intended to help beginners find their way around the night sky and locate objects of interest. Lou will describe how to use a planisphere for identifying constellations, prominent stars, and major Deep Sky Objects, and finding the path of the planets. He will also explain monthly sky charts and the annual almanac chart, both of which can help determine when the best time for viewing the Moon and the planets. The Almanac also displays the rising and setting times for the Sun and the Moon for the entire year. If you have a planisphere, please bring it.

TAAA Apparel

Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have got hats, T-shirts, denim shirts, and patches. We will have new apparel items available at the meeting, including long sleeve denim shirts, long sleeve t-shirts, and knit caps. We take cash and checks.

2009 Calendars

Calendars for 2009 are still available but they are going fast. Be sure to pick one up at the December meeting. You'll find them at the same table where you purchase TAAA apparel. This year we have chosen the Astronomy

Magazine "Deep Space Mysteries" calendars. The cost for a calendar is \$10 each (nearly \$3 off the regular selling price), or \$9 each for more than one. Proceeds from the sale of these calendars will be used appropriately as decided by the board. Thank you to all who support the TAAA through the purchase of the yearly calendars.

Fri/Sat. November 28/29 Public Viewing with TAAA & Flandrau: VENUS and JUPITER

Start: Around 5:30 p.m. (time flexible) End: Around 9:30 p.m.
Sunset: 5:19 p.m.

Venus and Jupiter, the two normally brightest planets in our sky (Mars can be brighter than Jupiter for a few weeks about every 15 years or so) group in the most spectacular conjunction of two planets seen in several years at the end of November. The two reach just over 2 degrees apart in our sky on Saturday November 29, and are slightly closer on Sunday November 30.

The public is invited on November 28/29 to join Flandrau and the Tucson Amateur Astronomy Association (TAAA mentioned on our news release) for special free telescope viewing of this planetary duo starting around 5:30 p.m. (time flexible), along with other celestial objects at **Flandrau: The UA Science Center**. The public is also invited to attend a special talk by Patrick Woida, Phoenix Mars Scout Mission Senior Engineer, Surface Ops & Payload Interoperability Test bed, at The University of Arizona. Patrick will talk on the recent Mars exploration with the Mars Phoenix mission, detailing what we've learned and still have yet to understand, but will also describe and tie in to this spectacular planetary grouping (or conjunction) of Venus and Jupiter. Patrick's presentation on Friday and Saturday nights, November 28 and Saturday November 29 will start at 8:00 p.m., last about 45 minutes and costs \$7.50 per person (includes a 6:30 p.m. planetarium show and exhibit entry as well) for adults and children 4 and older. **For more information about Flandrau: The UA Science Center, this event and the night sky go to Flandrau's Web site at** <http://www.gotuasiencecenter.org/astronomy/>.

Those TAAA volunteers who wish to volunteer should please contact Michael Terenzoni (<miket@ns.arizona.edu>, or phone 621-3646)



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Club News (cont.)

for coordination due to weather concerns, and with parking/mall parking permits. If permits are not needed, or cannot be used due to soft grass/mud due to rain, or re-sodding on Saturday night, then general parking (as on most Saturdays and after 5 p.m. weekdays) will be open and free of charge in any metered spaces ("Service Vehicle Only" spaces free Saturdays/Sundays). Because of possible strong news media coverage due to the Thanksgiving weekend and no football/basketball conflict, large numbers of the public could turn out. Many thanks to TAAA for their help for this event!

Field Trip Astronomy!

17 or 24 December

By Dean Ketelsen

Last year, a number of us went up the Mount Lemmon Highway a couple days before Christmas to document the sun setting behind Kitt Peak. I was asked to do it again this year. Unfortunately, the best dates this year are mid-week, either the 17th or 24th of December, but either work for me. If interested, please e-mail me to get on the distribution list.

I can think of other group activities or field trips that would be great fun. Among them would be an afternoon trip to Whitewater Draw - absolutely THE BEST location for watching upwards of 30,000 sandhill cranes at their winter vacation spot. We might stay over into the evening for some dark sky observing as well (about a dozen or so miles south of the new TAAA dark sky site). Another activity might be a G-11 clean-lube-adjust day for those of us with those mounts that need some attention. I'm also open to other field trips that we can plan, so let me know what your ideas are! Send a note to ketelsen@as.arizona.edu.



Night Sky Network Toolkits

The TAAA has a wonderful resource available for outreach events. Below is a list of the Night Sky Network Outreach Toolkits developed by the Astronomical Society of the Pacific under contract with NASA. These toolkits are specifically developed for amateur astronomers and are perfect for those early hours at a star party before its dark enough to observe. Some projects are well suited for use when it's dark. They are best when used in a small group as you might have around your telescope at a school star party.

Here's a complete list of the NSN Outreach Toolkits we have:

PlanetQuest: explains planet detection techniques

Our Galaxy, Our Universe: scale model of the Milky Way galaxy and the Universe

Black Hole Survival Kit: what is a black hole and how does it affect objects nearby

Telescopes - Eyes on the Universe: explains basic principles of optics, the human eye, and observing

Shadows and Silhouettes: covers lunar phases, eclipses, and transits

Exploring the Solar System: scale model of solar system and NASA exploration of planets

GLOBE at Night: light pollution principles

Supernova! life cycle of massive stars, touches on life cycle of sun-like stars

SolarScope: provides a white light image of the sun suitable for small group viewing.

These toolkits come to us free of charge. Using them as part of our outreach activities qualifies us to receive future toolkits. We appreciate those who have put the toolkits to use this year. Six activities have been logged so far - and we still have the fall months to go. This is better than we've done in the last couple of years.

Each toolkit contains several projects. You pick and choose which part you want to demonstrate. They contain essentially all the materials needed. All NSN toolkits include a Resources CD and a training DVD. You can request a copy of the CD and DVD set from Terri Lappin (give her a week or so to make them up). The CDs contain PowerPoint presentations, along with scripts and background information should you be presenting to a larger audience.

Anyone can borrow the toolkits, TAAA membership is not required. Contact Terri Lappin (see page 2) to make arrangements. Terri can also provide one-on-one training for all toolkits.

TAAA Website - Login/Password Required

The TAAA website now has more resources for members viewing. Members must login using the user name and password that has been distributed by email. If you haven't received the email message, it may mean we do not have your email address in our records. Please contact Terri Lappin who will update your information in our records. This will also ensure that you continue to receive the newsletter when it becomes available only online in December (January edition). (YOU MUST REQUEST A PAPER VERSION NEWSLETTER SHOULD YOU NOT HAVE INTERNET SERVICE.) We currently have a common user and single password that everyone uses. You do not enter your email address or any other personal information to gain access to the member's pages. Should you not have email and want the user name\password, contact any board member.

Club News (cont.)

Basha's Shop & Give



#23178

Basha's has an excellent program to support local non-profit groups like the TAAA. It's called Shop & Give. This is a no-brainer fundraiser for the TAAA. If you shop at Basha's and have a "Thank you" card, the next time you go through the checkout, give the cashier our ID number: #23178 for the Shop & Give program. They can look up the number using our name, too. It's that easy! Just do it once. At the end of the program next spring, Basha's will make a donation to the TAAA based on the total sales of every Thank You card linked to our number. We can receive up to \$5000, but that will require lots of people to sign up. Anyone can participate, so give our number to family and friends. We could use a few more participants to assure that we receive a donation from Basha's. If you participated last year, you need to give our ID number again, or your sales won't count. Thanks to everyone who participates.



Grand Canyon Star Party

13-20 June, 2009

TAAA will again organize the South Rim edition, at Yavapai Point. North Rim activities will be handled by Saguaro Astronomy Club.

It's not too early to make plans to attend the 2009 edition of the Grand Canyon Star Party. GCSP '09 is the 19th annual collaboration between the National Park Service and astronomers from around North America to bring astronomy outreach to Park visitors. NPS informal estimates were over 50,000 visitor contacts in 2007, and 70,000 in 2008.

Bring a telescope or binoculars and love of the sky to share. Experience exceptional observing conditions under dark, high altitude skies. The dates, late in the lunar cycle, offer optimal dark skies for visitor interaction in the early evening, leaving the rest of the night for personal observing goals. A park entrance fee waiver will be provided.

More information for both South and North Rim events is on the TAAA web site; follow the GCSP link on the home page.

Items of Interest

Websites: Trips On The Internet Super-Skyway

By Rik Hill

Getting phased....

I recently got an email from a community college student that needed the phases of the moon for the last month and wondered if I had such a list. This was obviously a homework project and I was not about to do the work for that student so I pointed her to some websites. Then it occurred to me that these might be of use to some of our TAAA members.

One of my favorite websites where lunar phases are graphically shown is:

<http://www.briancasey.org/artifacts/astro/moon.cgi>

This site has been in existence for over 12 years now so I expect it will be around quite a while longer.

The U.S. Naval Observatory has another website that does the same at:

<http://tycho.usno.navy.mil/vphase.html>

This one has a larger date range (19th century through the 22nd century). Moon phases from 1861 to 2020 are also tabulated at:

<http://www.life-cycles-destiny.com/dw/moon-phases-eclipse-2002-2003-2004-2005.htm>

With these you could look up the moon phase on the day you were born, or your grandma was born!

You can add to the above information and calculate the moon's position for any date at:

http://www.geocities.com/s_perona/ingles/poslun.htm

I was not able to find the limits of this calculation so you'll have to experiment and let me know.

The NASA/JPL Solar System Generator will allow you to generate a view of the moon from the earth (or any solar system body from any other body) for any date/time:

<http://space.jpl.nasa.gov/>

I really recommend playing with this site for an evening. See what the earth looks like from Pluto or watch an eclipse of the sun by Mars as seen from Phobos.

If all this interests you and you want to get more serious about observing the moon, you will want this piece of freeware in your computer. I have it and love it. It's called Virtual Moon Atlas. It will not only show phases but will also allow you to zoom into features, find Apollo/Ranger/Surveyor/Luna landing sites and much, much more.

<http://sourceforge.net/projects/virtualmoon/>

SourceForge is a very safe site to download from. I've used it for years.

A good resource for over 10 years on all things lunar is the LunaScan Project Homepage:

<http://www.astrosurf.com/lunascan/>

Items of Interest (cont.)

Their front page has an image of the moon phase for the time you log in. There is so much information on this website that you could spend several evenings exploring it...during new moon!

Now you can be un-phased by all this!

Do you have some favorite software, or a website not mentioned here? Drop me a line at: rhill@lpl.arizona.edu

Member Events

TAAA and AFSIG Star Party at TIMPA

Saturday, December 20

Come on out and enjoy the Winter Solstice eve! TIMPA star parties are great for both beginners and experienced observers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don't own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them. This is a great way to check out different telescope designs before you make that all important decision to buy. We'll do our best to get you the answers you need. If you have friends or relatives who are curious about amateur astronomy, feel free to bring them along. The TIMPA site features a large parking area, and full restroom facilities. The new observatory at TIMPA, featuring a 14-inch telescope, should also be open for use. Directions to the TIMPA site are located on the outside flap of this newsletter. Be sure to dress warmly!

TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, December 27

Las Cienegas (formerly Empire Ranch) has been our normal dark-sky observing site for quite a number of years. Please try to arrive before sunset. Stay as long as you like, but let everyone know when you are ready to leave; someone may be taking astro-images. Bring a telescope if you have one, but you don't need one to attend. Any member would be glad to let you look through their telescope. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cold temperatures. Attendees should park their vehicles either perpendicular to the airstrip facing toward the center of the strip, or parallel to the airstrip along either side facing west. That way, when you are ready to leave, you will not have to back up and turn on your bright white backup lights. See the directions to Las Cienegas on the outside flap of this newsletter.

Public Star Parties and Community Events

All members of are asked to support the TAAA School Star Party program and other community events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners as you may only need to know a few objects in the sky. Even without a telescope, you can be valuable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

Lifelong Learning Academy Star Party Northwest

Friday, 12/12/2008

No. of Scopes: 5

Lifelong Learning Academy will be hosting *Mad Science* with an estimated attendance of 200 students and parents at 7770 N Shannon Rd. Take I-10 to Ina. Go east to Shannon Rd. North on Shannon to the NW YMCA. Viewing will be in the YMCA parking lot. Contact person Heather Hilliard can be reached at (520) 219-4383 or email hrmhilliard@yahoo.com. Eegees sandwiches will be available for TAAA volunteers! Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:24pm Dark Sky: 6:21pm Moon Phase: near Full Moon.



SAIDA NEEDS MORE HELP FROM MORE TAAA MEMBERS. AFTER ALL, WE WILL ALL BENEFIT FROM DARK SKIES IN OUR AREA !!!

For more information, go to: www.sa-ida.org

Or feel free to contact:

John Polacheck
President of SAIDA
E-mail: jpolach@dakotacom.net
Telephone: 743-1362

SAIDA meets on the second Wednesday of each month from 5:30 to 7:30 PM in the IDA office located at 3225 N. First Ave, just North of Ft. Lowell. And.....

WE USUALLY HAVE PIZZA !!!

Dark Skies for December 2008

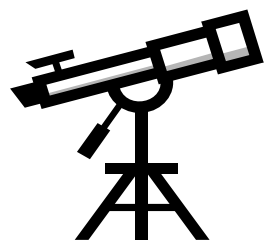
DARK SKIES (no twilight, no moonlight) for Tucson in 24-hour MST: 18=6pm, 20=8pm, 22=10pm, 0=12am
 RISE, SET, VISIBILITY for sun and bright planets: rise for morning object, set for evening object

Su/Mo 30/ 1	19:47 - 5:41	Th/Fr 11/12	Full Moon	Su/Mo 21/22	18:51 - 3:12
Mo/Tu 1/ 2	20:44 - 5:41	Fr/Sa 12/13	- - -	Mo/Tu 22/23	18:52 - 4:10
Tu/We 2/ 3	21:42 - 5:42	Sa/Su 13/14	- - -	Tu/We 23/24	18:52 - 5:08
We/Th 3/ 4	22:39 - 5:43			We/Th 24/25	18:53 - 5:55
Th/Fr 4/ 5	23:37 - 5:44	Su/Mo 14/15	18:48 - 19:51	Th/Fr 25/26	18:54 - 5:56
Fr/Sa 5/ 6	0:35 - 5:44	Mo/Tu 15/16	18:49 - 21:03	Fr/Sa 26/27	18:54 - 5:56
Sa/Su 6/ 7	1:36 - 5:45	Tu/We 16/17	18:49 - 22:11	Sa/Su 27/28	18:55 - 5:57
		We/Th 17/18	18:50 - 23:15		
Su/Mo 7/ 8	2:39 - 5:46	Th/Fr 18/19	18:50 - 0:16	Su/Mo 28/29	18:55 - 5:57
Mo/Tu 8/ 9	3:47 - 5:46	Fr/Sa 19/20	18:50 - 1:15	Mo/Tu 29/30	19:36 - 5:57
Tu/We 9/10	4:59 - 5:47	Sa/Su 20/21	18:51 - 2:14	Tu/We 30/31	20:33 - 5:58
We/Th 10/11	- - -			We/Th 31/ 1	21:30 - 5:58

Weekend	Sun Set	Sun Rise	Mercury Set Vi	Venus Set Vi	Mars RiseVi	Jupiter Set Vi	Saturn Rise Vi Vi=Visibility
29/30	17:17	7:05	17:21 -	20:13 -3	7:15 -	20:24 -1	0:57 1 -3 brilliant
6/ 7	17:17	7:10	17:35 -	20:26 -4	7:11 -	20:03 -1	0:31 1 0 conspicuous
13/14	17:18	7:15	17:54 9	20:38 -4	7:07 -	19:43 -1	0:05 1 3 moderate
20/21	17:21	7:19	18:16 6	20:50 -4	7:03 -	19:22 0	23:38 1 6 naked eye limit
27/28	17:25	7:22	18:40 4	21:00 -4	6:59 -	19:02 1	23:11 1 9 binoculars limit

By Erich Karkoschka

Telescopes for Borrowing



Free service

Only for Members

Don't own a telescope?
 Our Loaner Program is your answer!

These telescopes are in the program

- Sears 60mmf/15 on equatorial mount
- Unitron 62mmf/14.5 on equatorial mount
- Meade 90mm ETX
- Coulter Odyssey8 8-inch f/4.5 Dobson
- Meade 8-inch f/4 Schmidt-Newtonian LX-D55
- Meade 10-inch f/4.5 on equatorial mount
- Meade 10" LX200 GPS (requires training session)

Beginners, here's your chance to learn and observe the sky before buying any equipment. The Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy. Contact the Equipment Loan Coordinator (see page 2) or any club officer for details about these telescopes.

TAAA Board of Directors Meeting - 12 November 2008

Attending: Board members present (6): Ken Shaver (presiding), Keith Schlottman, Terri Lappin, Luke Scott, George Barber, and Bill Lofquist. Members Present (1): Robert Crawford. Guests (2): Stephen Pompea, Doug Isbell.

The president called the meeting to order at 6:30 pm.
 Minutes from the October board meeting were approved unanimously.

Announcements

- Newsletters from IDA and Saguaro Astronomy Club will be sent to the TAAA Board of Director e-mail address.

TAAA Board of Directors Meeting - 12 November 2008

- A request for a public star party has been received from the Sunsites Community Library. The Board agreed to the request, setting a tentative date of 17 January.

Treasurer's Report – Terri Lappin

The club had no non-routine expenditures during the month.

International Year of Astronomy – Doug Isbell and Stephen Pompea

Doug Isbell and Stephen Pompea described IYA activities including the Galileoscope project and 100 Hours of Astronomy. (The Galileoscope is a 50mm achromatic refractor that will be available in kit form and is designed to be assembled by students in grades 5 and up. More information is available at www.astronomy2009.us.)

The Board discussed how TAAA can participate in IYA activities.

Dark Site Land Development – Robert Crawford, Bill Lofquist

- The Strategic Planning Group (SPG) presented a document outlining the scope of Phase I construction. This includes:
 - Extension of electrical power to the site
 - Development of the shared well
 - Exterior road construction
 - Interior road construction
 - Parking area and 28 parking spaces
 - 2 hard surface, handicap accessible parking spaces
 - Hard surface pedestrian walkways connecting handicap parking to main restrooms
 - Restrooms and septic system
 - Fencing and gating
- A draft floor plan for restrooms and a draft master site plan were provided to the Board. The restroom plan exceeded fixture requirements and will be revised.
- A draft Well Partnership agreement between the Perseus Group and TAAA has been received from the attorney and will be circulated to the Board for comments and questions.
- A special meeting of the SPG and Board will be held to begin developing club policies with respect to the Astronomy Complex.
- Club insurance needs for the Astronomy Complex will be discussed with the club's insurance agent.

Newsletter

The club is transitioning to an electronic newsletter in January. The Board discussed policy with respect to distributing paper newsletters to members unable to receive electronic newsletters.

Meeting adjourned at 9:15 pm.

Respectfully submitted,
Luke Scott, Secretary

Desert Skies Classified

FOR SALE	Vixen GP-D2 German Equatorial Mount with tripod. Made in Japan, this is Vixen's latest version of their famous GP line. White, excellent condition, must see. List price \$1,169, asking \$799, neg. Call J.D. At 760-8248. [02/09]
FOR SALE	Meade 8 inch LX90 (in original box) including heavy duty tripod, 3 eyepieces, 2 diagonals, optical and Telrad finder scopes, Barlow lens, filter. Purchased from Sky works in 2002 for \$2,335. Sale price of \$1,300 includes your choice of several astronomy or viewing books. Jim Smith at sawtell1190@q.com or 572-1221 [02/09]
FOR SALE	REDUCED PRICE!! Orion Megaview 15X80 binoculars with hard case, and Sunpack Platinum Plus 7500 Pro tripod with soft case. Like new, \$300 for both (list price is \$479 for the binocs alone). These are LARGE binoculars with 20mm of eye relief for eyeglass wearers. Tim 398-6590 hm, 663-9350 wk. Re-view at: http://excelsis.com/1.0/entry.php?sectionid=21&entryid=150 [12/08]
SERVICE	Green laser pointer need repair or tune up? Contact Donald Arndt at (415) 215-2409 or donaldja@pacbell.net . Typical repairs cost \$25-50, including return shipping.

Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this

Constellation Report by Chris Lancaster

Gemini

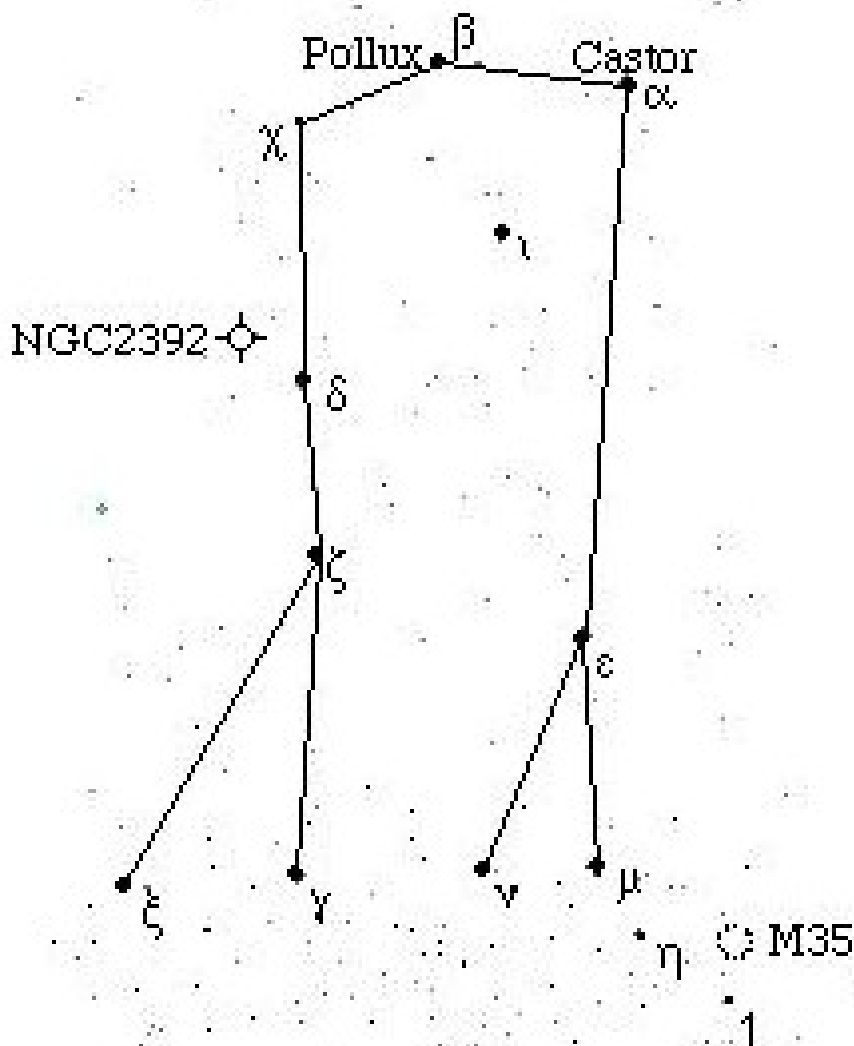
To the Chinese, they were yin and yang, the dual forces of nature. In ancient Rome, the pair was sometimes seen as Romulus and Remus, the founders of that city. Classical mythology gives us the traditional names of the two bright stars that represent the twins Castor and Pollux, who were hatched from an egg created by the seduction of Leda by Zeus while he was in the form of a swan. After Castor and Pollux were raised by Chiron, a centaur, they joined Jason and the crew of the Argo on his journey to find the Golden Fleece. The twins helped to calm a terrible storm that they encountered while at sea, and, as a result, became known as protectors of sailing vessels.

Gemini stands above Orion's left shoulder with the twin's feet within the winter Milky Way. If you ever confuse the two stars of Castor and Pollux (Alpha and Beta Geminorum, respectively), just remember that Castor is nearer to Capella (in Auriga), and Pollux is nearer to Procyon (in Canis Minor), or that Pollux has a Pinkish tint since it is a K type star while Castor is of a bluish white type A. At first glance, Castor may appear as a single star, but it is actually a system of six stars, divided into three pairs which can be split with just about any telescope. The closest pair is 2" apart, and so requires magnification of perhaps 180X or more, and appears like two brilliantly white beacons of magnitudes 2 and 3. The third pair appears as a 9th magnitude star 73" from the main quartet. None of these can be resolved individually.

Due to Gemini's proximity to the Milky Way, the constellation is rich in star clusters and nebulae but lacks any significant galaxies. The most impressive star cluster is the 5th magnitude open cluster M35. Located at RA 6h 08.8' Dec +24d 20', or approximately 2.5 degrees to the northwest of Eta Geminorum, this cluster, about 2,800 light years distant, contains about 120 stars in an area spanning half of a degree. Just on the edge of M35 is a small open cluster, NGC2158, that is easy to overlook if you become lost in the splendor of M35, but you will see a separate fuzzy patch of less than 10' in size that just overlaps M35 on its southwestern limb. Two other similarly sized open clusters are nearby. IC2157 is about 2' west of NGC2158, and NGC2129 is about 3' west of 1 Geminorum. These small clusters are a nice challenge even under dark skies.

An interesting planetary nebula resides in Gemini one degree south and 9' east of Delta Geminorum. Designated NGC2392, the popular name of this object is the Eskimo Nebula because of the way it resembles a face wrapped in a fur lined hood in photographs. Through a telescope, however, don't expect to see much more than a faint 8th magnitude fuzziness about 45" wide at RA 7h 29.2' Dec +20d 55'.

If you find yourself observing Gemini in December, remember that the Geminid meteor shower peaks on the 13th, with the radiant very near Castor. These 22 mile-per-second meteors may produce 15-20 bright meteors and up to 40 additional fainter ones per hour.



Tucson Amateur Astronomy Association
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Tucson, AZ 85717

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Please consider renewing your membership on time. Renewal month and dollar amount appears on your address label. Magazine subscriptions are not included. TAL fee is included if participating in TAL. See details on page 2.

Directions to TIMPA and Las Cienegas

Directions to TIMPA Site

GPS coordinates: 32 deg 15.868' N, 111 deg 16.390' W

From the North:

1. Take Ina Rd. west about three miles past I-10.
2. Turn left (south) on Wade Rd.. Wade Rd. becomes Picture Rocks Rd. when the Rd. bends to the right (west).
3. Take Picture Rocks Rd. west to Sandario Rd..
4. Turn left (south) on Sandario Rd. to Manville Rd..
5. Turn right (west) on Manville Rd. to Reservation Rd..
6. Turn left (south) on Reservation Rd. (dirt Rd.) and go about two miles. The TIMPA entrance is on the left.

From the East:

1. Take Speedway Blvd. west and it turns into Gates Pass Rd..
2. Go over Gates Pass and continue west to Kinney Rd..
3. Turn right (north) on Kinney Rd. and continue past the Desert Museum.
4. Kinney Rd. bends left at the entrance to Saguaro National Park West and becomes Mile Wide Rd..
5. Take Mile Wide Rd. west about five miles to Reservation Rd.. Mile Wide Rd. ends at Reservation Rd. and you must turn right (north) onto Reservation Rd..
6. Take Reservation Rd. north about one mile. The entrance to TIMPA will be on the right.

NOTE

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. A list of TIMPA key keepers is available on the TAAA website, or by contacting a board member. For scheduled TIMPA star parties, a designated TAAA representative will provide access to the site.

Directions to Las Cienegas (Empire Ranch)

GPS coordinates: 31 deg 47.356' N, 110 deg 37.913' W

Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is "washboarded" so go carefully. At about 2.9 miles, there is a fork in the road. Stay to the right. When the road ends in a "T", take a left. Cross over a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. 0.1 mile ahead will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.