



Desert Skies

Tucson Amateur Astronomy Association

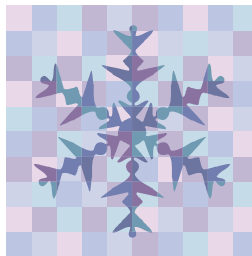
Volume LVI, Number 11

November, 2010



NGC2337 with the Rosette Nebula

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Mark your Calendar!

TAAA Holiday Party

Saturday, December 11

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- ◆ Websites: Trips On The Internet Super-Skyway

Cover Photo: Televue NP101 540mm @ f5.4, Astro Physics 400 GTO, Camera: SBIG STL-2000XM; Luminance: 10 x 900 sec Ha binned 1x1 = 2.5 hours, RGB: none, Camera Control: MaximDL/CCD; Processing: CCD Stack, Date: 1 January 2009, Time: 1037 UTC (0337 MST), Temp: 33 deg F, Location: Tucson, AZ. Imaged by Michael Turner.

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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, TAAA Astronomy Complex, 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.

TAA 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
taaa-newsletter@tucsonastronomy.org

Join our Email Lists on YahooGroups

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)

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President's Message

The fall observing season is now in full swing, and hopefully you have found some time to enjoy the cool autumn air and clear skies. The summer constellations have moved on to make room for the return of the stars of winter. Whether you step out in the back yard or join a group at one of the club's numerous star parties, fall is an excellent time of year to enjoy the night sky. If you observe from your back yard and you live in the city limits, I recommend observing later in the evening or even into early morning; you'll find that the town does become quieter, and the sky glow does dim a bit as the night progresses.

If you really want a dark sky, you'll need to drive away from the city. The TIMPA and Las Cienegas observing sites provide a substantial improvement to one's ability to resolve the "faint fuzzies". Some members have observed from spots on Mt. Lemmon, which places you above some of the dust and light pollution in the city. TAAA members seeking a truly dark site experience can visit the Chiricahua Astronomy Complex, which is perhaps one of the darkest observing sites in North America. Darker skies allow dim objects to resolve much better, but that does not mean you should abandon all hope for observing inside the city. Some of my best observing nights ever have been in my own back yard!

The advantages of back yard observing are many, but I'll just name a few: No gas expense; no travel time; easy access to the luxuries of life (bathrooms and kitchens);

ability to set up and tear down at your convenience; easy telephone and internet access; no stressful packing of gear (and no forgotten gear); and maybe most importantly, it can be done spontaneously! Folks in less weather-advantaged areas understand the need to spontaneously observe - they may not be able to plan an observing trip more than a day or two in advance. Even with our predictable weather, it's still nice to be able to discover your busy life has a calm evening ahead, so you can step outside and start observing. If you are one of those people who have not yet introduced your patio to your telescope, let me encourage you to do so immediately! And if you have recently found yourself making every astronomy outing a major one, why not step back for a simpler night of observing?

So what happens if we all head out for a night of back yard photon collection? Well, we are a club, so please share your experiences with others on the TAAA forum. Also, consider inviting someone else to your home to share your back yard observing adventure.

Speaking of sharing, November's general meeting is Member's Night. We'll hear some outstanding presentations from amateur astronomers in the club. If you have something to share, it's not too late to get on the agenda - just send an e-mail to president@tucsonastronomy.org.

Keith Schlottman

Meeting Information and Calendar of Events

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

MEMBER'S NIGHT: 6:30 pm

Tonight is your night to share the spotlight! If you have an astronomy-related topic you would like to present, contact Keith Schlottman to reserve a time slot during the main meeting.

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

STAR PARTIES AND EVENTS:

01 Nov - Astro-Imaging SIG at China Rose
 06 Nov - TAAA Star Party at Chiricahua Astronomy Complex
 06 Nov - TAAA and AFSIG Star Party at TIMPA
 06 Nov - TAAA Star Party at Las Cienegas (Empire Ranch)
 10 Nov - Academy of Tucson Elementary Star Party
 11 Nov - Astronomy Fundamentals SIG
 12 Nov - Calvary Chapel Christian School Star Party
 16 Nov - Prince Elementary Star Party
 17 Nov - Desert View High School Star Party
 18 Nov - Starry Messenger-SIG Planning Meeting

18 Nov - Cosmology and Space Exploration SIG
 19 Nov - Fort Lowell/Townsend K-8 Star Party
 01 Dec - Wilson K-8 School Star Party
 11 Dec - TAAA Holiday Party

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Nov. 20. The newsletter is published at least one week prior to the following month's General Meeting.

See TAAA Events on Your iPhone

If you use an iPhone, the Night Sky Network has an App for you! "Go StarGaze" will give you a list of astronomy events in your area. You can download it free at <http://itunes.apple.com/us/app/go-stargaze/id380833895?mt=8>. Tell your friends about it, too.

Club News

Member News

We welcome these members who have recently joined the TAAA: Brad Schiller, Ed Foley, Donald Cain, Richard and Claire Foland, and Peter Ertman. 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 at our website after logging in as a member. You can also pick one up at most meetings.)

Astro-Imaging SIG Meeting

Monday, 01 Nov, 7pm

China Rose restaurant, 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.

Astronomy Fundamentals Special Interest Group

The Astronomy Fundamentals special interest group meets on the 2nd Thursday of every month with some stimulating discussions from both the TAAA members and members of the scientific community. In addition, when we launch a new observing program, we have a presentation about that program discussing the history, folklore and the necessary requirements to complete the program.

On November 11 the AFSIG Executive Committee will hold a planning and strategy meeting to which all members are invited. This meeting will be devoted to setting our goals for 2011. This will include reviewing the past year and setting our goals for next year and preparing a strategy on how to achieve them.

If you are a novice beginning this exciting hobby and want some guidance and direction, please join us with your questions and ideas. If you are an experienced astronomer or a seasoned amateur and want to experience the satisfaction of sharing your experience and knowledge, please join us – it can be rewarding.

Remember, we are successful only if you participate.

The Date: November 11, 2010

The Time: 6:30 pm

The Place: U.S.G.S. Building – room 253

Northeast corner of Park Avenue and Sixth

Street

Parking: Free parking after 5:00 pm behind the building in the parking lot

Looking forward to seeing you there,

Bob Gilroy

Official AFSIG Timpa Night

November 6 will be TAAA official TIMPA night. It promises to be a fairly dark night – a one-day-old moon that will set before 6pm. If the weather cooperates, it should be a good observing night for everyone.

The AFSIG will be very active that night at TIMPA. The basic astronomy course "Introduction to Fundamentals of Astronomy" will conclude that afternoon and will celebrate with a Pot Luck Star Party. The Constellation Observing Club will review the 5 constellations discussed so far; and the Solar System Observing club will be observing Jupiter and maybe one or two other objects.

Come and join the festivities – Join one of our activities, or observe on your own – and enjoy the camaraderie.

AFsig will open the gate at 5:00 pm.

Solar System Observing Program

We live in a mini universe that we call our Solar System consisting of eight (or is it nine??) planets. In addition, there are planetesimals, the Asteroid Belt, the Kuiper Belt, the Oort Cloud, plus comets and meteors. Learn firsthand about this interesting place and observe the planets, planetesimals and other interesting objects. For more information, please contact program coordinator, Mike Finerty – fundamentals@tucsonastronomy.com.

Cosmology and Space Exploration SIG

Cosmology and Space Exploration SIG (CSE SIG) meeting last October 21st was fortunate to have Nick DeMesa on hand to show a series of remarkable videos on recent exoplanet discoveries. The videos included information on techniques for spotting extrasolar planets and information on the dramatic discovery of the first Earth-like planet orbiting a red dwarf star in the "Goldilocks" zone, Gliese 581g. Also included in the videos and subsequent discussion was the first exoplanet observed directly in visible light, Fomalhaut b, only 25 light years away in Pisces Astrinis.

At the next CSE SIG meeting on Thursday November 18 at 7:00 pm in room A120 of the UA library, Al Anzaldúa will give a slide-show presentation on the feasibility of human settlements in orbit around solar system bodies.

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 hats, T-shirts, denim shirts, and patches. We take cash and checks.

Club News (cont.)

TAAA Holiday Party

Put the Annual TAAA Holiday Party on your Calendar!

The TAAA Holiday Party will be held on Saturday, December 11. It will begin at 5:30 pm, so come and visit with fellow members and guests before, during and after the meal.

The Holiday Party will be held again this year at the home of Bill and Mary Lofquist. It will be a potluck again this year as well. For the past several years we have had a GRAND RAFFLE with members bringing things related to astronomy.

We all probably have things that we have collected over the years that we don't use much and that might be just the thing that someone else can use and enjoy.

The Holiday Party is a great time for members to visit and enjoy each other's company. We won't have a structured program except for the Grand Raffle.

As for the food, bring some hors d'oeuvres, an entree, a vegetable, or a dessert. Some canned drinks would also be a good contribution. There always is enough to go around. There will be coffee, tea, hot chocolate and water.

Bill and Mary live at 1935 West Harran Circle. That is near the Foothills Mall. If you start at the intersection of Ina Road and La Cholla Boulevard, go south on La Cholla Boulevard to the traffic light at Omar Drive. Turn east (left) at Donaldson School. Go about 100 yards past the tennis courts and turn right (south) on Amahl. Go one half mile and turn left on Harran Drive. The next left is Harran Circle. It is a short cul de sac, and we are the first house on the left at the turnaround circle.

If you get lost, or if you have any questions, give us a call at 297-6653. You can also contact us at wlofquist@comcast.net.

We look forward to seeing you at the Holiday Party!

TAAA Newsletter Editor Position

By George Barber

Since I have relocated to Utah to assume a new engineering position, the TAAA is looking for a new newsletter editor. The newsletter editor assembles all the articles for the newsletter each month. Articles are collected, then organized and proofread. Finally, the electronic version of the newsletter is created and sent to the webmaster. I usually dedicate one Sunday per month to perform this task. Additionally, I send out an email a week in advance to inform everyone of the approaching deadline. The ideal candidate will possess the following:

Proficient in Microsoft Office Word and Publisher, or a similar software package

Strong writing and proofreading skills

Able to perform under a deadline

Good interpersonal skills

Adept at using a PC or MAC

A personal computer, internet connection, and email account is mandatory

TAAA will provide you with MS Word and MS Publisher software

If you are interested in this position, please contact me or a board member.

Festival of Books Planning Meeting

November 18, 6:30pm

Village Inn (Speedway & Columbus)

The Tucson Festival of Books is a 2-day long event held on the UA campus. Last year's attendance was over 50,000; estimates of about 1,400 visitors came by our booth. This first planning meeting is to brainstorm about next year's booth display and activities. If you want to get in on the initial planning stage, or if you helped last year and have suggestions for next year, please attend this meeting. Everyone's ideas are open for consideration. This meeting should take about 90 minutes. We're meeting at Village Inn (Speedway & Columbus) so you can have dinner at the same time!



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Club News (cont.)

Upcoming Lectures

Here is the upcoming lecture schedule. There is an opening for the Astronomy Essentials lecture in March. Contact Terri Lappin at [terrilappin\[at\]tucsonastronomy.org](mailto:terrilappin[at]tucsonastronomy.org) if you want to give this introductory level lecture

Dec 3	<i>Astronomy Essentials</i>	Terri Lappin Tentative
	<i>Invited Lecture</i>	Don McCarthy James Webb Space Telescope
Jan 7	<i>Astronomy Essentials</i>	Mary Turner Seasonal Objects
	<i>Invited Lecture</i>	Thomas Matheson Gamma Ray Bursts
Feb 4	<i>Astronomy Essentials</i>	Astrophotography SIG Presentations
	<i>Invited Lecture</i>	
Mar 4	<i>Astronomy Essentials</i>	<i>OPEN</i>
	<i>Invited Lecture</i>	Ari Spinoza Mars
Apr 1	<i>Astronomy Essentials</i>	Mary Turner Seasonal Objects
	<i>Invited Lecture</i>	Yancy Shirley Topic TBD



Night Sky Network Toolkits

Below is a list of our Night Sky Network Outreach Toolkits and other resources for teaching astronomical concepts. NASA, through its sponsorship of the Night Sky Network, recognizes the essential role that amateur astronomers play in public astronomical education. These toolkits, developed by the Astronomical Society of the Pacific, are available for use in our outreach efforts. If your scope is not well suited for public events, or if you want a change of pace, consider bringing a toolkit to a community star party. Toolkits are also great backups for cloudy nights. Each themed toolkit contains several projects; you pick and choose what you want to use. A Resources CD and a Training DVD is included. Individual training in their use is available upon request. Please make arrangements with Terri Lappin ([smsig\[at\]tucsonastronomy.org](mailto:smsig[at]tucsonastronomy.org)) to borrow these toolkits.

Thanks to previous use of our current toolkits, we should qualify for the next toolkit which is coming out this month.

Night Sky Network Toolkits:

PlanetQuest: demonstrate planet detection techniques

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

Black Hole Survival Kit: gravity concepts

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

Shadows and Silhouettes: lunar phases, eclipses, and transits

Exploring the Solar System: scale model of solar system

Supernova!: life cycle of massive stars, earth's protective atmosphere

Mirrors and Glass – An inside look at telescopes: how telescopes work

Other Resources:

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

Dark Skies Education Kit: light pollution principles, includes a Sky Quality Meter

Comet Chef: an apron (with a comet on it) and chef's hat to wear when mixing up comets



Starry Messengers SIG -
Opening Minds to the Universe

Planning Meeting November 18

The recent Space Missions Workshop was well attended. Loretta McKibben talked about several space missions. There are sooooo many missions to keep track of...a quick check of the JPL website lists about 30 missions! Loretta explained her scheme for keeping track of mission details and assisted us in creating 3x5 note cards for the most popular missions. These cards can be a handy reference at public star parties. Each card answered reporter-like questions such as:

Who? (NASA, ESA, etc.)

What? (orbiter, lander, rover?)

Where? (Mars, Jupiter, Saturn, etc.)

When? (key dates such as launch, orbital placement, decommissioning, etc.)

Is there a local angle? (Example: LPL is ground operations for the Cassini VIMS instrument; the Cassini/Huygens Descent Imager-Spectral Radiometer was built and tested at LPL)

The next SMSIG workshop will be in February or March, so watch the newsletter.

Last March, several TAAA members helped out at our Tucson Festival of Books booth. An estimated 1,400 people visited our display, learned a bit of astronomy, and

Club News (cont.)

took in views of the sun. Planning is getting underway for next year's festival which will take place on March 12 and 13. The TAAA Board has approved our participation and we are in the early planning stages. A meeting on November 18th is set to discuss what we want to do at the festival. We hope to improve on what we learned last March so that next March will be even better. We will meet at the Village Inn located on Speedway just west of Columbus, November 18 at 6:30pm. Your RSVP to terrilappin[at]tucsonastronomy.org (or call 579-0185) is appreciated. Even if you can't attend this meeting, let Terri Lappin know you want to be involved.

The Starry Messenger Special Interest Group provides an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts. We offer tools and techniques for explaining astronomy to people of all ages. Any TAAA member involved in astronomy outreach is supporting the goals of the Starry Messenger SIG. Even if you have never attended a SMSIG workshop or meeting, we consider you a member of the SMSIG and value your contribution.

Night Sky Network Calendar Includes TAAA Events

TAAA events now appear on the Night Sky Network website. It can be reached from our website through the "Public Calendar" page or from the Member's Resources page (after logging in). Details for public events, like our meetings, are visible to the public. Details about events not open to the public (mostly our star parties) require a NSN login account. NSN login accounts are free to club members. (Note that this is different than the TAAA Member's Login.) You can request a NSN login account by filling out this form: http://nightsky.jpl.nasa.gov/club-apply.cfm?Club_ID=0078&ApplicantType=Member.

(Hyphen is required.) Once your membership in the TAAA is confirmed, your request will be approved. (Please allow a day for us to respond to requests.)

We are considering using the many online services offered by the NSN. TAAA members would see the following benefits:

- Your own personal user name and a private password (both are user editable)
- Ability to update your contact information
- Check when your membership dues need to be paid
- Control over your online privacy and communications
- Easy access to up-to-the-minute information about TAAA events (new events, cancellations, how many members have volunteered for events)
- Enter and track your volunteer hours (including mileage for tax purposes) to gain recognition for your service
- One-touch directions to our events as well as time of sunset, moon phase, weather forecast, and a simple sky chart for that evening
- "One-stop shopping" for regional/national amateur events

Best of all, this won't cost the TAAA anything! To learn more about the NSN offerings, watch this short video: <http://www.youtube.com/watch?v=qw5CyNEYHks>

TAAA members who sign up now can help evaluate the NSN services. If all goes well, we could move our records to the NSN as early as Jan 2011. For those who don't have easy internet access, the Treasurer will continue to maintain your contact information. Should you have questions about the NSN online services, contact Terri Lappin at terrilappin[at]tucsonastronomy.org (or call 579-0185).

Items of Interest

Websites: Trips on the Internet Super-Skyway

By Rik Hill

Shadow play

Now that we've passed another equinox, fall is here and we head for the Winter Solstice. It's a time of year for long shadows that mark the passage of each day.

Have you ever considered using these shadows to measure time in your own back yard or on a balcony of an apartment using some form of sundial? It's fun and can be as easy or as complicated as you want.

An excellent place to start is with the website for the North American Sundial Society (NASS) at: <http://sundials.org/construction.php>. This Society is for the rank amateur or and, as you will quickly find out, the professional mathematician and machinist! I, myself, tend towards the rank amateur end of that scale. On their sundial construction page you can find instructions on

making paper/cardboard dials to one that looks like a lawn sprinkler and is as complicated as a good telescope mounting and drive! This website will take hours to explore in detail and is very inspiring and motivating.

For those who do not have a constructive bent, there are many sundials that are available for purchase. Unfortunately most are poorly or inaccurately made. One good company uses your address to custom make a dial for your specific locality: <http://www accuratesundials.com/>. They have them in aluminum, brass, copper and granite, but you will have to call them to get a quote for your dial.

Another that seems well made and would certainly be fun to watch can be found at: <http://www.artisanindustrials.com/spectra.html>. This one uses a spectrum to indicate the time and is also constructed for your locality. There are several styles available.

Items of Interest (cont.)

If you just want to try out making a sundial on your own and don't want the big time and money investment up front try the projects at: <http://www.sundials.co.uk/projects.htm> These projects use simple household items to make the dials. They take you through the simple calculations to customize them for your locality. If you like them you can make them in wood, metal or stone. Some of these are excellent for use in classrooms!

The sundials at: <http://www.sundialstation.com/sundials-all.htm> are exactly the kinds to *avoid*. These are the one-size-fits-all type of sundials and like the free lunch, there is no such thing! The gnomon (the part that casts the

shadow) is supposed to point at the north celestial pole and as you can quickly see with these the gnomons are at a fixed angle to the dial and are not adjustable. One can only suppose that this is only one of other likely problems, like the spacing of the hour marks!

So enjoy some shadow play over the next few months as the sun skims low in the southern skies!

Enjoy these websites and let me know if there are any other topics you'd like to see explored here just drop me a line at rhill@lpl.arizona.edu

Member Events

TAAA and AF-SIG Star Party at TIMPA

Saturday, 06 Nov

Come on out and enjoy the autumn skies! 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. There is no scheduled talk for this activity, just come out and enjoy. 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. Be prepared for cold temperatures after sunset. Directions to the TIMPA site are located on the outside flap of this newsletter.

TAAA Star Party at CAC

Saturday, 06 Nov

The Chiricahua Astronomy Complex (CAC) is the club's newest observing site. Located in Cochise County approximately 100 miles from the center of Tucson, the site includes a full bathroom facility. At an elevation of 4800 feet, be prepared for cold temperatures. Try to arrive before sunset. Unlike the other two club observing sites, TIMPA and Las Cienegas, the CAC site requires that members make reservations for both monthly club star parties and private member use. We are restricted by a 60 person/30 vehicle maximum limitation. If you would like to attend, contact CAC Director John Kalas via e-mail at jckalas@cox.net or by phone at 620-6502. Reservations will be on a first come – first serve basis. Depending on the number of members interested in attending, guests may not be allowed.

Directions to CAC:

The Chiricahua Astronomy Complex is about 90 miles and a 1½ hour drive from the TTT Truck stop at Craycroft Road and Interstate 10.

Take I-10 East from Tucson past Benson.

Exit I-10 at Dragoon Road (Exit #318) – Turn right onto Dragoon Road at bottom of exit ramp.

Travel 13.5 miles southeast to intersection with Route 191 and turn right (south).

Travel 17.9 miles south (past Sunsites and Margie's Corner Café at High St. on the right and Border Patrol checkpoint) to intersection with Route 181 at Sunizona and turn left (east).

Travel 10.9 miles east to intersection with S. Price Ranch Road and turn right (south). S. Price Ranch Rd. is a dirt road just before you reach mile post 49 (cluster of mailboxes on right on Rte. 181).

Travel ½ mile south on S. Price Ranch Rd. to intersection with E. Perseus Way (wide dirt road with E. Perseus Way street sign on left) and turn left (east).

Travel east on E. Perseus Way slightly more than ¼ mile to entrance of Chiricahua Astronomy Complex, address 9315 on right (twin brown gates flanked by white rail fences set back 50 feet from road). Look for TAAA sign on left side of entry road.

TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, 06 Nov

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, and fall is here, so be prepared for cold temperatures after sunset. See the directions to Las Cienegas on the outside flap of this newsletter.

Dark Skies for November 2010

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	31/01	18:57	-	1:39	Th/Fr	11/12	22:36	-	5:26	Su/Mo	21/22	-	-	-
Mo/Tu	01/02	18:57	-	2:46	Fr/Sa	12/13	23:32	-	5:27	Mo/Tu	22/23	-	-	-
Tu/We	02/03	18:56	-	3:54	Sa/Su	13/14	0:27	-	5:28	Tu/We	23/24	18:46	-	19:11
We/Th	03/04	18:55	-	5:03						We/Th	24/25	18:46	-	20:14
Th/Fr	04/05	18:54	-	5:21	Su/Mo	14/15	1:21	-	5:28	Th/Fr	25/26	18:46	-	21:20
Fr/Sa	05/06	18:54	-	5:22	Mo/Tu	15/16	2:14	-	5:29	Fr/Sa	26/27	18:46	-	22:26
Sa/Su	06/07	18:53	-	5:22	Tu/We	16/17	3:08	-	5:30	Sa/Su	27/28	18:46	-	23:32
					We/Th	17/18	4:03	-	5:31					
Su/Mo	07/08	18:52	-	5:23	Th/Fr	18/19	5:01	-	5:31	Su/Mo	28/29	18:46	-	0:37
Mo/Tu	08/09	19:39	-	5:24	Fr/Sa	19/20	-	-	-	Mo/Tu	29/30	18:45	-	1:42
Tu/We	09/10	20:38	-	5:25	Sa/Su	20/21	FULL MOON			Tu/We	30/01	18:45	-	2:48
We/Th	10/11	21:37	-	5:25						We/Th	01/02	18:45	-	3:55

Weekend	Sun	Sun	Mercury		Venus		Mars		Jupiter		Saturn			
Sa/Su	Set	Rise	Rise	Vi	Set	Vi	Set	Vi	Set	Vi	Rise	Vi	Vi=Visibility	
30/31	17:33	6:38	17:57	-	6:25	9	18:51	5	3:17	-3	4:32	2	-3	brilliant
06/07	17:28	6:44	18:02	9	5:37	1	18:42	6	2:48	-3	4:09	2	0	conspicuous
13/14	17:23	6:50	18:10	7	4:58	-2	18:33	6	2:20	-3	3:45	1	3	moderate
20/21	17:19	6:56	18:21	5	4:28	-4	18:26	7	1:52	-3	3:20	1	6	naked eye limit
27/28	17:17	7:02	18:32	4	4:07	-4	18:20	7	1:26	-2	2:56	1	9	binoculars limit

By Erich Karkoschka

Want better observing?
Join the group that's keeping the sky dark
International Dark Sky Association
Southern Arizona section

We get people to use better lighting, so we'll have a dark sky

Some of the things we do:

- Talks to schools and organizations
- Demonstrations at Desert Museum
- PowerPoint presentations on CD

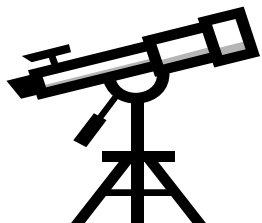
- Work with government agencies
- Identify non-compliant lighting in So AZ

Monthly meetings
2nd Wednesday, 5:30 - 7 pm.
3225 N. First Ave

Contact: Joe Frannea
sky@sa-ida.org
www.sa-ida.org

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

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 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.

A Note of Thanks!

A note of recognition to Gene Smith, Alan Strauss, Paul Trittenbach, and Ron Price for their generous donations to the TAAA Equipment Loaner Program. On behalf of the TAAA, I thank you.

Al Dohner

TAAA Equipment Loan Coordinator

Public Star Parties and Community Events

All members are asked to support our 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.

Academy of Tucson Elementary Star Party East 10 Nov. (Wednesday) Volunteers Requested: 6

Academy of Tucson Elementary will be doing a Exploring the Night Sky for an estimated 270 students and parents at 9209 E. Wrightstown. Drive east on Speedway to Camino Seco. Turn north. Turn east on Wrightstown Road. Academy of Tucson is on the north side of the road just before Tucson Country Day School. turn north into the drive and follow the driveway to the north parking lot. This lot is adjacent to the field.. Viewing will take place at the sport field (north end of the property). Contact person Deanna Carlson can be reached at 886-6076 or dcarlson@ateschool.net. Observing will be from 6:00pm to 8:00pm, with setup 30 minutes prior to start.

Calvary Chapel Christian School Star Party East 12 Nov. (Friday) Volunteers Requested: 6

Calvary Chapel Christian School will be doing a Family Starry Night for an estimated 100 students and parents at 8725 E Speedway Blvd. From mid-town, travel east on Speedway. School is on the northeast corner of Speedway and Camino Seco. Viewing will take place at the parking lot of the school. Contact person Stephanie Rushing can be reached at 520-834-7597 or stephanie@cccswarriors.org. Observing will be from 6:00pm to 8:00pm, with setup 30 minutes prior to start.

Prince Elementary Star Party Central 16 Nov. (Tuesday) Volunteers Requested: 2

Prince Elementary will be doing a Night with the Stars for an estimated 20 students and parents at 125 E. Prince Rd. Take Stone north from Speedway just past First Ave. to a right on King. Follow King 400m (just before it curves left to become Estrella). Drive right through the school's north gate (already open) into the central quad of Prince Elementary School where we will set up. Viewing will take place in the open grassy/cement quad. Contact person Doug Hall can be reached at or youthscienceeducation@yahoo.com. Observing will be from 7:00pm to 9:00pm, with setup 30 minutes prior to start.

Desert View High School Star Party South 17 Nov. (Wednesday) Volunteers Requested: 4

Desert View High School will be doing a Starry Night for an estimated 75 students and parents at 1900 E. Summit St. Head south on Alvernon Way. Pass Valencia Rd ,and Alvernon will begin to veer right and will turn into Hughes Access Road. Continue west on Hughes Access until you read a stoplight at Nogales Hwy. Turn left (south) on Nogales Hwy. Continue until you see a sign for Old Nogales Hwy. Turn left onto Old Nogales Hwy. Continue on Old Nogales Hwy, then turn left onto Summit St. The school is on the right. Viewing will take place on the basketball court on the SE side of the school. Contact person Layne Trinkley can be reached at 545-5128 or laynet@susd12.org. Observing will be from 6:00pm to 8:00pm, with setup 30 minutes prior to start.

Fort Lowell/Townsend K-8 Star Party North 19 Nov. (Friday) Volunteers Requested: 6

Fort Lowell/Townsend K-8 will be doing a Math and Science Family Night for an estimated 250 students and parents at 2120 N Beverly Blvd. East on Broadway to Campbell; turn left. North on Campbell to Grant; turn right. East on Grant Road to Beverly Blvd; turn right to address. Viewing will take place TBD. Contact person Celeste Aho can be reached at 232-7916 or celeste.aho@tusd1.org. Observing will be from 6:00pm to 8:00pm, with setup 30 minutes prior to start.

Wilson K-8 School Star Party North

01 Dec. (Wednesday) Volunteers Requested: 6

Wilson K-8 School will be doing a Exploring the Night Sky for an estimated 100 students and parents at 2330 W. Glover Rd. From Oracle and Ina, go West on Ina to La Cholla Blvd. Go North on La Cholla for about 7 miles to Glover Rd. Turn West on Glover Rd. The school is located about 1/3 of a mile up on the right hand side. Viewing will take place at the Lower Athletic Field behind the school. Contact person Betsy Wilkening can be reached at 696-5873 or ewilkening@amphi.com. Observing will be from 6:00pm to 8:00pm, with setup 30 minutes prior to start.

TAAA Board of Directors Meeting - 13 October 2010

Attending: Board members present (5): Keith Schlottman (presiding), Luke Scott, John Croft, John Kalas, and Michael Turner. Members present (6): Bob Gilroy, Paul Anderson, Liz Kalas, Dean Ketelsen, Thom Peck, and Robert Crawford

Call to Order: The President called the meeting to order at 6:30 pm.

Minutes: Minutes from the September Board meeting were approved unanimously.

Member Feedback

- Several members attending CAC star parties have commented on the high quality of the facility.

Announcements for Record

- The newsletter editor has resigned.

Upcoming Meetings

- November is Members Night. Members wanting to present should contact a Board member.

Treasurer's Report

- The club has \$61264.99 in checking. There were no unusual expenses in the preceding month.

Special Interest Group Status Reports

- Astronomy Fundamentals (Bob Gilroy):
 1. Observing pad repairs at TIMPA were started but not completed. Concrete must be poured to complete the task.
 2. The Solar System Observing program will be started this month.
 3. A new source is needed for halogen lamps that can be converted to red LEDs.
 4. Bob Gilroy is working with Steve Marten to revive the parallelogram binocular mount workshop.
- Cosmology and Space Exploration: No report.
- Astro-Imaging: No report.
- Starry Messengers: No report.

School Star Parties

- The Board noted that more school star party volunteers are needed and will encourage more members to participate.

Web Site

- Board members have an action to review the web site and bring recommendations and needed updates to the next meeting.

Astronomical League Coordinator

- No observing club books were located in TAAA. A motion was entered by John Kalas and seconded by John Croft authorizing expenditure of up to \$150 to purchase one copy of each Astronomical League observing club book. The motion was approved by a unanimous vote.

30-inch Telescope Project

- Dean Ketelsen reported that several club members traveled to New River to assess the 24-inch telescope equatorial mount that was offered to TAAA. The mount is the right size for the club's 30-inch mirror. Logistics and costs associated with transporting and storing the mount are being investigated.
- The Board noted that there is no defined path forward for this project and that the 30-inch working group must develop a schedule and plan for the project.

CAC

- Robert Crawford presented a proposal for a video surveillance system for the CAC facility. The system would provide coverage of the entrance drive, the well-house entry door, and the restroom porch. The estimated cost to the club is approximately \$2100. The Board will review the proposal and conduct a vote by e-mail on whether to purchase the system.
- John Kalas reported that property insurance for the restroom has been added to the CAC liability insurance policy. The Eridanus group has also purchased property and liability insurance for the well site.

Other

- The Secretary will distribute the 2011 master calendar for review prior to the next Board meeting.
- Prior to the Board meeting on 13 October 2010, the Board conducted a vote by e-mail authorizing the expenditure of \$320.00 to add property insurance to the CAC liability insurance policy. \$240.00 of the amount is for the restroom building and \$80 is TAAA's share for the well site. The expenditure was approved by a vote of 7-0.
- Prior to the Board meeting on 13 October 2010, the Board conducted a vote by e-mail authorizing the expenditure of \$616.90 for fees required by the Cochise County Permit Department for periodic inspections during CAC Phase 2 construction. The expenditure was approved by a vote of 6-0.

Meeting adjourned at 8:35 pm.

Respectfully submitted,
Luke Scott
Secretary

Chiricahua Astronomy Complex

Phase 2 Development Update

By Bill Lofquist

The funding picture for Phase 2 brings us some new challenges in light of the actual bids we have gotten from our contractors. Several factors have led to increased costs, so we will need to begin construction with the funds we have, but these will not cover the costs of all that we want to get done.

With the requirements of the permit department, we will need to clear more land and build a road that we did not have in our projections. In the long run, this will be to our advantage, but in the short run we will need to phase in some features as we have the funds to cover them.

We are still negotiating some items in the bids. We have not yet raised enough to complete construction of the Camper/RV sites, and it appears that we will have to delay one storage unit being placed.

TAAA members have been very generous in contributing funds for Phase 2 thus far, but we will need to raise some more funds. We will give a more detailed update on the picture at the Members Night meeting on November 5.

As has been announced, there will be a Special Meeting to begin looking beyond Phase 2 toward the development of Member Pads and Member Observatories.

This meeting will be held on Saturday, October 30, 2010 at 9:30 to 11:30 AM. The meeting place is at 1510 East Grant Road in the City of Tucson Ward #3 Office Building.

It is located at the southeast corner of Grant and Vine, west of Campbell Avenue. Turn south on Vine and left at the back of the building into the parking area. The entrance to the meeting room is at the back of the building. There should be plenty of parking in the parking area and on Vine Street.

All members interested in helping to plan these features of CAC are invited to participate in this meeting.

Facility Update

John Kalas – Construction Coordinator/CAC Site Director

The October monthly star party was held on 10/9 with 13 members in 9 vehicles enjoying the evening. Eight vehicles stayed overnight and left on a beautiful Sunday morning. Several members met at Margie's Café for breakfast before heading home to Tucson on Sunday morning. The weather was fabulous on Saturday evening; not a cloud in the sky. Michael Turner, Jim Militello and I took astro-images.

We received an approved building permit for the Phase 2 development at the site on 10/11. It was delayed by a challenge to our roll-off roof observatory design by Cochise County Permit Dept. The issues were resolved satisfactorily. While we awaited the building permit approval, our contractors were finalizing their quotes for the construction. Unfortunately, those quoted costs have come in higher than our estimates. The problem is two-fold; some of our estimates were too low and some of the construction costs have risen since our Phase 1 project over a year ago. A meeting of the Strategic Planning Group is currently being scheduled to review the Phase 2 costs and to decide how we will proceed. Bill Lofquist will review the situation at the November monthly meeting on 11/5.

With board approval, property insurance has been added to the existing liability insurance policy for the CAC Site. Both property and liability insurance has also been placed on the well site by the Eridanus Group. Another security measure taken by the board of directors was to authorize the purchase of a video surveillance system for the site. The system will have daytime and nighttime recording capabilities and will be installed in November.

Desert Skies Classified

FOR SALE

Collection of 35 years of both Sky & Telescope and Astronomy magazines. Contact Dorinda Crouthers at doriecrouthers@cox.net [11/10]

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 list, call or e-mail the newsletter editor.

Constellation Report by Chris Lancaster

Sculptor

The Sculptor

The French astronomer Nicolas-Louis de Lacaille is given credit for establishing this constellation, which contains only a scattering of dim stars. His original name was L'Atelier du Sculpteur, the Sculptor's Workshop. Currently, only the sculptor remains. The constellation's southern boundary is about 19 degrees above the horizon, and it reaches the meridian close to midnight during the middle days of September. You can find Sculptor east of Piscis Austrinus (marked by the bright 1st magnitude star Fomalhaut), and southwest of Cetus, the whale.

Constellation Report by Chris Lancaster (cont.)

Although Sculptor does not set itself apart by having bright stars, it contains a wealth of very exciting deep sky objects. A good one to start with is NGC253. This edge-on galaxy sits high in the constellation near its border with Cetus. So impressive is this system that it is often referred to as simply the Sculptor Galaxy and the 19th century Danish astronomer J. L. E. Dreyer effusively described it as "very remarkable! Very, very bright, very, very large. . ." Indeed, when you point your telescope, no matter what size, at this bright galaxy, you'll see a magnitude 7.1 giant measuring 25'x 5', which is nearly half a full moon in length. Large telescopes will have no difficulty seeing some of the clumps of dust littering its tight spiral arms and bright knots of dense stars. To find NGC253, you can start with magnitude 2 Diphda (Beta Ceti) which is the southernmost bright star in the tail of Cetus, and move 7.5 degrees south and then 1.5 degrees east, or dial up coordinates RA 00h 47.6m Dec -25d 17' 00". Either way, this galaxy should be readily apparent in either your finder scope or binoculars. There are few examples of a better, more easy to see edge on galaxy than NGC253. It is also one of the nearest galaxies at about 9 million light years.

A mere 1.7 degrees southeast of the Sculptor Galaxy is what could be called the Sculptor Globular Cluster because this cluster, NGC288, is very bright and impressive as well. Measuring a wide 14' in diameter and glowing at magnitude 8.1, this globular is also within the grasp of any backyard scope. Small instruments will show a soft glow, and large scopes will have no trouble resolving many of the stars of this loose cluster, which range from magnitude 12 to 16. Look to RA 00h 52.8m Dec -26d 35' 00" for this cluster. As a side note, the south galactic pole (SGP) is less than a degree southwest of this globular cluster.

On par with NGC253 is another edge-on galaxy, but it is very low in the sky. It makes its transit across the meridian exactly at 1 am on September 1st, midnight on September 15th, and 11 pm at the end of the month, and these would be the best times to observe this galaxy since it will be the highest in the sky and away from the dust and atmospheric turbulence that will hamper the view. This galaxy is irregular in nature. It shows a mottled structure with uneven brightness across its length. Its western half is brighter than its eastern part, and in fact is sometimes given two designations--NGC55 for the western clump, and IC1537 for the dimmer, eastern clump. Dimmer clouds of stars intervene between these two bright features. This is also a very nearby galaxy, a member of the Sculptor group, residing only about 8 million light years away. NGC55 is 4 degrees south of magnitude 5.2 Theta Sculptoris, or RA 00h 14.9m Dec -39d 11' 00".

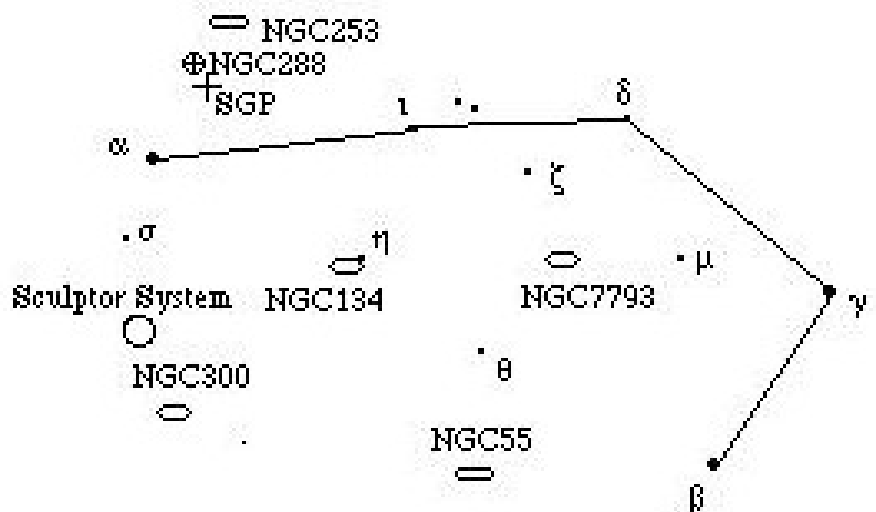
Another galaxy well within small backyard scopes is NGC300, which sits at RA 00h 54.9m Dec -37d 41' 00". This one is a face-on spiral, which means that its magnitude 9.0 light is spread out across a large area of about 20' in diameter, making its surface brightness low. Most telescopes will show only its brighter nucleus, but large scopes will begin to bring out some of the brighter knots of stars in its arms. NGC300 is 1.7 degrees northwest of Zeta Sculptoris.

NGC134 is a worthy target due to its being easy to find. It sits about half a degree east southeast of a magnitude 4.6 star, Eta Sculptoris. It's a rather bright magnitude 11.1 galaxy of an 8.4'x 2.0' size. This is another galaxy nearly edge-on to our view also with mottled features in its spiral arms. NGC134 is situated at RA 00h 30.3m Dec -33d 14.7s.

Another in the long list of galaxies in Sculptor is NGC7793, a magnitude 9.6 face-on spiral with many tight spiral arms. It's a decent size at 9.4'x 6.3' located 3.7 degrees east of magnitude 5.3 Mu Sculptoris, or RA 23h 57.8m Dec -32d 35.4s.

An intriguing object, though beyond the grasp of most equipment other than long exposure images through large telescopes, lies halfway between Sigma Sculptoris and NGC300. It is identified as the Sculptor system, and is an extremely faint, sparsely populated dwarf elliptical galaxy that is a member of the local group. There are several other examples of this type of galaxy, such as the Fornax system and other systems in Leo, Draco, and Ursa Minor. All are nearby and would be invisible at much farther distances. This particular collection of stars covers a vast area of the sky--about 75', and is one of the intrinsically faintest galaxies in the heavens. It shines with a total luminosity of only 3 million suns. The earliest photographs of the Sculptor System showed such an elusive image of the galaxy that it was thought to be a photographic anomaly. Later, more modern images began to show stars within the galaxy.

For a dim constellation, Sculptor contains many fantastic objects. The skies should be reliably clear toward the end of September to allow study of what Sculptor has to offer.



Tucson Amateur Astronomy Association
P.O. Box 41254
Tucson, AZ 85717

Address Service Requested

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.

Directions to Las Cienegas (Empire Ranch)

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.

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.