



Desert Skies

Tucson Amateur Astronomy Association

Volume LV, Number 3

March, 2009



Transfer of the deed for the TAAA Astronomy Complex

Inside this issue

- School and Public star parties
- Constellation of the month
- TAAA Astronomy Complex Update
- GLOBE at Night campaign
- Astronomy Classes in April

Cover Photo: TAAA members participate in the transfer of the deed for the TAAA Astronomy Complex in the office of the club's attorney. President Ken Shaver gives Robert Crawford the one dollar the club is giving for 16 acres of property for the Complex. Robert Crawford, representative for the Perseus Group, receives the dollar and hands the deed of transfer

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)

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Cover Photo (cont.)

to the club. Perseus Group members Crawford, John and Liz Kalas, Sam Rua and Erich Karkoschka have purchased the land and donated it to the club. Bill Lofquist has

worked with the planning process for the Complex from the beginning. The transfer took place on February 11, 2009. Photo by Bill Lofquist

President's Message

Last month I wrote about how much activity there was going to be on several projects within the club. This effort has paid off in a big way for TAAA. I would like to share with everyone that TAAA now is the proud owner of 16 acres of land near Sunsites in Cochise County in which it plans to develop an astronomy dark site. Please join me in offering all our gratitude to all of the Members of the Perseus Group for their generous donation. The plans and proposals for construction along with the permit submittals are moving forward as this newsletter goes to publication. Thank you for the hard work by everyone involved in making this happen.

I also announced at the last General meeting that we were in the process of securing the Astronomical League convention for 2010. We have now formed a joint committee in partnership with the IDA and have signed a letter of commitment to the AL for ALCon2010. The initial dates we have submitted are June 24-26. We are very excited and think that having the convention in Tucson provides an opportunity to showcase the best astronomy location

in the country. If you have ideas on things that may benefit the project, please talk with Keith Schlottman or Bob Gent who will chair the committee. We believe we will be able to host the most memorable ALCon in a long time.

Take a look at the sign up sheets at the General Meeting on Friday March 6th. You will see several activities for Earth Hour on Sat. Mar. 28th as well as information on Globe at Night Mar. 16-28. We will have Connie Walker on hand for the meeting to talk to us about these activities. Please help in making these events a success.

Stay tuned for more on the developments of these many projects in the months to come.

As always, Clear Skies.

Ken Shaver
TAAA President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, March 6, at the Steward Observatory Auditorium - Room N210

ASTRONOMY ESSENTIALS: 6:30 pm
Title: An Introduction to Astrophotography
Speaker: Steve Peterson

Have you ever considered photographing the night sky? Many celestial objects that are too faint to be observed through telescopes of modest aperture can be stunningly photographed. Unlike the human eye, film or electronic sensors are capable of building up images over long periods of time. While the eye cannot perceive most colors at very low light levels, color films and specially filtered Charge Coupled Devices, or "CCDs" can reveal some celestial object's colored splendor. Many nebulae appear as a dim white glow to the eye, which are otherwise vividly colored on film or CCDs. Some amateur's astrophotographs rival those of professional astronomers! Join Steve Peterson in this discussion on this rewarding aspect of Amateur Astronomy!

GENERAL MEETING: 7:30 pm
Title: Celestial Images from Astrophotography SIG
Speaker: Steve Peterson and other members of the AstroPhoto Sig!

You have probably seen this before: the gaunt, vacant, 1000-yard stare of someone who has stayed up all night (maybe over a period of several nights). They may be muttering incoherently about exposure or integration times, binning, blooming, stacking, field of view, or will their spouse divorce them if they buy that STL11000 CCD camera?... Yup! You guessed it! It is probably a member of the AstroPhoto Sig (Astrophotography Special Interest Group); a small but dedicated group of TAAA astrophotographers that hope for clear, dark nights on a New Moon weekend, so they can once again capture photons for a permanent trophy of their efforts. The tangible reward that can be shared with others is a strong driving force among members of TAAA's AstroPhoto SIG. The SIG members use film, CCD, or CMOS imagers of varying types to image the night sky. While most SIG members strive to take "pretty pictures", some members make real scientific contributions. A significant number of supernovae, comets, and asteroids are discovered by a few dedicated amateur astrophotographers in the TAAA. Enjoy the view from the comfort of your auditorium seats (who is he kidding?) as AstroPhoto SIG group members reveal the wonders of the night sky through the images they have captured.

Meeting Information and Calendar of Events (cont.)

BOARD OF DIRECTORS MEETING: Wednesday, March 11, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:

02 March – Astro-Imaging SIG at China Rose
 03 March - Lyons Elementary Star Party
 07 March - ANZA TRAIL SCHOOL Star Party
 08 March - UofA Astronomy Students Star Party
 10 March - Doolen Middle School Star Party
 12 March – Astronomy Fundamentals SIG
 13 March - Lifelong Learning Academy Star Party

21 March - TAAA and AF SIG Star Party at TIMPA
 26 March - Tanque Verde Lutheran Star Party
 27 March - Luz Academy of Tucson Star Party
 28 March - Friends of Sabino Canyon Star Party
 28 March - TAAA Star Party at Las Cienegas
 28/29 March – All Arizona Messier Marathon
 30 March - Rio Vista ES Star Party
 (Note: original publication had incorrect dates for TIMPA and Las Cienegas star parties. These are corrected here.)

NEWSLETTER SCHEDULE: Deadline for articles: Sat, March 21. The newsletter is published at least one week prior to the following month's General Meeting.

Club News

Member News

We welcome these members who have recently joined the TAAA: Al Dohner, Kristy Forrester, Dave Frazno, Robert Gent, Robert C George, Dana Goodell-Sanford and his grandmother Kay Cannon, Warren Hensey, Charles Kelly, and Lawrence Schindler. 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.)

Election of the TAAA Board of Directors

As you think about the activities and direction of TAAA, are you happy? Do you think you would like to help with any (or all) of the ongoing projects? Or, do you see things that you would relish the opportunity to help change? Either way, now is your opportunity. The annual election of officers for TAAA Board of Directors will occur during the May meeting, with the new term starting in June. The Board consists of 7 elected members: President, Vice President, Treasurer, Secretary and 3 Members at Large. Each office is up for voting at this time. Any member of TAAA, who has been a member for at least two years, is eligible to run for any position. Serving on the Board provides you a unique opportunity to help direct TAAA into the future.

A nominating committee has been established to solicit nominations from members for the Board. Any nominated candidate must agree to have his/her name placed in nomination. If you are interested in running for any Board position, please let one of the member of the nominating committee know. If you are not sure what the responsibilities are for any of the Board positions, please talk to any of the Board members. E-mail information for all Board members can be found in the Newsletter. A list of candidates will be published in the April newsletter. Nominations can be accepted prior to the balloting during the May meeting, as long the nominated member is there to accept the nomination. (Self-nominations are

encouraged: if you have been looking for a way to become more involved in the activities of TAAA, here's your chance.)

The Nominating Committee:
 Mary Turner umurf@earthlink.net
 Twila Peck octoberprairie@gmail.com
 Robert Gilroy yorli@cox.net

Astro-Imaging SIG Meeting

Monday, March 2, 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.

Astronomy Fundamentals Special Interest Group AFSIG for March

The Astronomy Fundamentals Special Interest Group (AFSIG) will meet on Thursday, March 12, 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.

As part of the AFSIG Basic Astronomy series, Dennis McMacken will give a talk on Planetary Motion, Seasons, and the Phases of the Moon. Learn how the ideas of planetary motion evolved from Ptolemy to Einstein, why we have seasons, and the development of the calendar. Dennis will also discuss the lunar cycle, phases of the moon, and why we have solar and lunar eclipses, but only occasionally.

Club News (cont.)

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 take cash and checks.

We are looking for a member to take on the club apparel sales program. After 8 years selling apparel and calendars, Ann Scott would like to take a break. The club usually orders apparel twice a year and takes special orders for jackets in the fall. Anyone who can attend meetings regularly and is interested in helping the club with this activity should contact a Board member.

AFSIG Beginner's Class in April

The AFSIG is pleased to announce a new Beginner's Class to be held on the first three Saturdays in April, the 4th, 11th, and 18th. Each Saturday, we will present a different set of topics, all of which are directed to the novice observer. On April 4th, we will cover Basic Astronomy, including celestial motion, the celestial coordinate system, and types of celestial objects. On April 11th, the subject will be Equipment Basics, including telescopes, mounts, eyepieces, filters, and other observing accessories. On April 18th we will discuss Observing Basics, including locating objects, seeing conditions, and hints and tips on observing various types of objects.

The class will be held at the regular AFSIG meeting location, room 253 in the USGS building at 6th and Park on the UA campus.

Each day will consist of several presentations, with frequent breaks and a break for lunch. We expect the class to run from 9:00 AM until mid-afternoon on each day. On April 18, which is the regularly scheduled TIMPA night, we plan to have a pot-luck dinner followed by observing at TIMPA.

Enrollment will be limited to about 20 attendees. You may enroll in one or more of the class days. Sign-up sheets will be available during the March 6 TAAA meeting or you may enroll by emailing novice@tucsonastronomy.org.

Upcoming Lectures

If you have a suggestion for either an Astronomy Essentials or Invited Lecture, or if you want to give one yourself, let Terri Lappin know. See page 2 for contact information.

Apr 3	<i>Astronomy Essentials</i>	Mary Turner Seasonal Objects
	<i>Invited Lecture</i>	OPEN
May 1	<i>Astronomy Essentials</i>	OPEN
	Members Night Presentations by TAAA Members	

Grand Canyon Star Party - Time for Reservations!
13-20 June, 2009

It's about time to lock down 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.

General information regarding GCSP is found at <http://www.tucsonastronomy.org/gcsp.html>
If you intend to participate this year, email your intentions to:
gcsp@tucsonastronomy.org.

For those astronomers intending to stay 6 or more nights, there are plans for a limited number of no-cost campsites to be available. Requests for a free campsite will be accepted beginning March 1. Campsites will be assigned in order of request received beginning March 1 until none remain. They go fast, so if you intend to participate for six or more nights and wish consideration for a free site, please send an email March 1 to the above address to get on the list.



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Club News (cont.)

Other lodging at the Grand Canyon fills fast, so make your plans and reservations as soon as possible. For the North Rim, word is that the veranda is already filled with telescopes for the entire week. However, there is an attempt to man a satellite location at Kaibab Lodge on the North Rim; there are two complementary camp sites available for anyone willing to do the party for the week at that location. For further information and current status on the North Rim, please check at <http://www.saguaroastro.org/content/2009GrandCanyonStarPartyNorthRim.htm> or <http://tinyurl.com/cc8su2> if that long one doesn't work.

Thanks,
 Jim O'Connor
gensp@tucsonastronomy.org
Skylook123@aol.com
James_W_Oconnor@raytheon.com



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.

We appreciate all who have put the toolkits to use in past years. In 2008, we logged 12 public outreach events

where the toolkits were used. This is more events than in any previous year since 2004 when the Night Sky Network began.

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 latest email address in our records. Please contact Terri Lappin who will update your information in our records. This is also how to ensure that you receive the newsletter. 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.



#23178

Basha's Shop & Give

This is the last month for the Basha's Shop & Give program. We will likely not receive funds this year as the purchases by TAAA members didn't meet the minimum amount. We'll try again next year.

Name Badges

Please remember to pick up your name badge if you ordered one. They will be available at all General Meetings. If you didn't order one, the next order will be placed sometime this summer. Watch the newsletter for the announcement.

Club News (cont.)

Members Helping Members:

An outreach program sponsored by the Astronomy Fundamentals SIG

As most of you know, the TAAA Beginners SIG has been transitioning into the Astronomy Fundamentals SIG over the last year. The AFSIG is meant to help new members and beginners learn more about the club and amateur astronomy. The goals of the AFSIG are similar to those of the BSIG: Provide lectures, hands-on activities and planned observing sessions for all interested members of TAAA, especially newcomers to astronomy. For anyone who might want to participate, each month's events are described in the newsletter.

One project that requires help from a larger group of our TAAA members is a project we call Members Helping Members. This project aims to team up experience TAAA members with another member who might need a bit of specialized assistance. In particular, a member with experience using a particular piece of equipment or software program would be available to help a member with questions about that tool. For example, if you have a lot of experience using The Sky, you might offer to help

someone who is just learning it, or even just considering which program to buy.

Your level of participation is entirely up to you. Other possible connections might be between members attempting similar observing goals, such as one of The Astronomical League's Observing Clubs. Names of the Helping Members would be maintained through the AFSIG, your contact information would not be shared without your agreement: We don't want anyone to be getting unexpected 3AM telephone calls. The scope of this project is entirely dependent upon the range of volunteers who come forward. If you are interested in helping your fellow club members get over some of the hurdles that put a crimp in your previous observing sessions, please contact any of the members of the AFSIG:

J.D Metzger: jayhawk68@cox.net

Steve Marten: marten.nightsky@yahoo.com

Dennis McMacken: dkmcmacken@yahoo.com

or Mary Turner: umurf@earthlink.net

We look forward to hearing from you.

Member's Events

TAAA and AF-SIG Star Party at TIMPA

Saturday, March 21

Come on out and enjoy the spring 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. 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. Directions to the TIMPA site are located on the outside flap of this newsletter.

The AFSIG will have the 14" telescope available for supervised observing. The telescope is located about 100 yards south of the restrooms. Just look for the white "outhouse"!

TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, March 28

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 after sunset. 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.

(Note: original publication had these star party dates reversed. They are correct here.)

Items of Interest

TAKE BACK THE NIGHT!

Mark your Calendar to take part in the 2009 GLOBE at Night campaign set for March 16 - 28.

At least 2 out of 5 Americans, 1 out of 6 Europeans and 1 out of 10 people worldwide have never seen 90% of the

stars in our night sky. With half the world's population now living in cities, this problem is only getting worse. Yet you can easily be part of a local solution to a global problem.

Take back the night! Take a few minutes to monitor your local night sky brightness, place your measurement on-

Items of Interest (cont.)

line noting your location, date and time and within a few weeks see a map of light pollution levels worldwide.

Be part of the "GLOBE at Night" citizen-science campaign and make a world of difference! The GLOBE at Night campaign runs March 16-28, 2009. Help preserve our natural heritage for generations to come. Find out more information at www.globe.gov/globeatnight. GLOBE at Night is an official International Year of Astronomy Dark Skies Awareness cornerstone project.

To learn more about other IYA2009 Dark Skies Awareness cornerstone projects and the effects of light pollution, visit www.darks skiesawareness.org.

Here is an opportunity for students, youth, and families to take part in a 2 week world wide citizen science project to record night time light pollution across the world. One needs to merely go outside, look up, observe the stars from your location, and record your star observations at www.globe.gov/gan.

You'll find instructions on how to find your longitude and latitude without a GPS (you may also use a GPS if you have one); there is a family activity packet and a teacher activity packet, and information about observing stars and light pollution in your nighttime sky.

The GLOBE at Night program directs students, families, and the general public how to observe and record the number of stars visible in the constellation Orion, as seen from different locations. Observers report their results online by comparing their view of Orion with a set of template images on the program's Web site, which shows the number of stars in the constellation for a range of visibilities from bright skies to very dark.

2008 marked a monumental shift in human history when the number of people living in cities exceeded half the people on Earth. Because of the ambient light of urban landscapes, many city dwellers have never seen a sky full of stars. The 2008 campaign received measurements

from 62 countries. Just over 4,800 of the measurements came from the United States, followed by 380 measurements from Hungary; and Romania, the Czech Republic, Costa Rica, and Spain each reporting over 100 observations.

The GLOBE at Night campaign set for 16 - 28 March, 2009. Visit www.globe.gov/gan.

Five Easy Star-Hunting Steps:

- 1) Find your [latitude and longitude](#).
- 2) [Find Orion](#) by going outside an hour after sunset (about 7-10pm local time).
- 3) Match your nighttime sky to one of our [magnitude charts](#).
- 4) [Report](#) your observation.
- 5) [Compare](#) your observation to thousands around the world.

Thank you. We hope you and your young citizen scientists enjoy participating in this worldwide event.

The 2009 Globe at Night event is sponsored by:

The National Optical Astronomy Observatory ([NOAO](#))
GLOBE ([Global Learning and Observations to Benefit the Environment](#))

CADIAS ([Centro de Apoyo a la Didáctica de la Astronomía](#))

IDA ([International Dark-Sky Association](#))

ESRI (<http://edcommunity.esri.com> and <http://www.esri.com>)

Constance E. Walker, Ph.D.

NOAO

cwalker@noao.edu

All Arizona Messier Marathon

Once again, the Saguaro Astronomy Club will be sponsoring this annual event. The Marathon is held at the Farnsworth Ranch, south of Arizona City, on March 28 and 29. For more information, visit their website at <http://www.saguaroastro.org/content/messier2009.htm>.

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

Astronomy Fundamentals Beginner's Classes



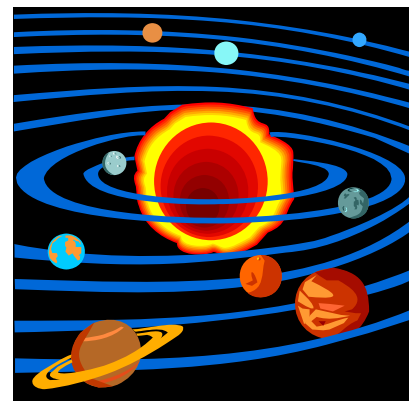
Three Saturdays in April

9am to mid-afternoon
April 4 Basic Astronomy
April 11 Equipment Basics
April 18 Observing Basics

Enrollment is limited. Enroll for one or more classes at the March 6th TAAA meeting or email novice@tucsonastronomy.org. See page 5 for details.

Brought to you by the Astronomy Fundamentals Special Interest Group advisory committee.

If you're new to astronomy, you'll want to check out the Astronomy Fundamentals Special Interest Group. They meet on the second Thursday each month at 6:30pm on the UA campus. See page 4 for details about this month's AFSIG meeting.



Public Star Parties and Community Events

All members 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.

Lyons Elementary Star Party

Tuesday, 3/3/2009

East

No. of Scopes: 5

Lyons Elementary will be hosting Family Science Night for an estimated attendance of 150 students and parents at 7555 E. Dogwood St. From Kolb and Speedway take Kolb Rd. south, past Golf Links to Escalante. Turn left (east) on Escalante and proceed about $\frac{3}{4}$ mile to Evergreen. Turn right (south) on Evergreen and proceed about half a mile to Dogwood, turn right (west) and proceed $\frac{1}{4}$ mile to school. Viewing will be on the playground area behind the school. Contact person Sandy Blitz can be reached at 584-6600 or email sandra.blitz@tusd.k12.az.us. Set-Up Time: 6:45pm. Observing will be from 7:15 pm to 9:15 pm. Sunset: 6:27pm Dark Sky: 7:20pm Moon Phase: near First Quarter.

ANZA TRAIL SCHOOL Star Party

Saturday, 3/7/2009

South

No. of Scopes: 4

ANZA TRAIL SCHOOL will be holding Astro Science Night for an estimated attendance of 125 students and parents at 15490 S. Rancho Sahuarita Bld. 1-19 To Sahuarita Rd Exit Left/East To Rancho Sahuarita Blvd (1st Light) Left To School Down A Mile Or So On The Left (1st Entrance). Viewing area to be arranged. Contact person Mary Lamoreaux can be reached at 520-625-3502 or email mlamoreaux@sahuarita.k12.az.us. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:30pm Dark Sky: 7:23pm Moon Phase: Waxing Gibbous.

UofA Astronomy Students Star Party

Sunday, 3/8/2009

West

No. of Scopes: 6

UofA Astronomy Students will be planning a Star Party for UofA Astronomy Students for an estimated attendance of 75 students at Saguaro Natl Park West. Take Speedway Blvd. west past I-10 and continue about 3.5 mi. where Speedway becomes Gates Pass Road. Go over Gates Pass and continue about 5 mi. west to Kinney Road. Turn right (north) on Kinney Road and continue past the Desert Museum. Observing will be in the parking lot of the Visitor Center. Contact person Tom Fleming can be reached at 621-5049 or email taf@as.arizona.edu. Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:31pm Dark Sky: 7:24pm Moon Phase: near Full Moon.

Doolen Middle School Star Party

Tuesday, 3/10/2009

Central

No. of Scopes: 3

Doolen Middle School will be planning *A Night with the Stars* for an estimated attendance of 50 students and parents at 2400 N Country Club Road. North East corner of Grant and Country Club. Viewing will be in the School Court Yard. Contact person Jim Haley can be reached at 232-6976 or email James.Haley@tusd1.org. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:32pm Dark Sky: 7:25pm Moon Phase: near Full Moon.

Lifelong Learning Academy Star Party Northwest

Friday, 3/13/2009

No. of Scopes: 4

Lifelong Learning Academy will be celebrating *A Night under the Stars* for an estimated attendance of 125 students and parents at 3925 W. Orange Grove Rd. Go north on Oracle, turn west on Orange Grove. We are past Shannon but right before Camino de la Tierra. We are on the South side of the street between Sonic and Circle K. We have a purple awning with our name on it. Viewing will be on our playground, in the back of our school. There is only dirt, there are no sprinklers! Contact person Heather Hilliard can be reached at (520) 219-4383 or email hrmhilliard@yahoo.com. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:35pm Dark Sky: 7:27pm Moon Phase: (no moon during viewing).

Tanque Verde Lutheran Star Party

Thursday, 3/26/2009

East

No. of Scopes: 2

Tanque Verde Lutheran will be hosting *Fun and Learning the Night Sky* for an estimated attendance of 50 students and parents at 8625 E Tanque Verde Road. From Speedway and Kolb go east to Pantano Road. Turn Left. Go north and get into the right hand lane, go over the Tanque Verde Bridge and move into the left hand lane. The school is at Tanque Verde Lutheran Church just across from the fire station. Viewing area is to be arranged. Contact person Vickie Joes can be reached at 749-1606 or email dvja@cox.net. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:44pm Dark Sky: 7:37pm Moon Phase: Crescent after New Moon.

Public Star Parties and Community Events (cont.)

Luz Academy of Tucson Star Party **West**
 Friday, 3/27/2009 No. of Scopes: 4

Luz Academy of Tucson will be holding a Star Party for an estimated attendance of 100 students and parents at 2797 North Introspect Drive. West on Grant Rd. Turn North on Silverbell. Drive .5 to 1 mi north. Introspect Drive will be on the left (west) past last house. Viewing will be on the basketball court. Contact person Steve Beall can be reached at (520) 807-5892 or email beall@luzacademy.com. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 06:44pm Dark Sky: 07:38pm Moon Phase: Crescent.

Friends of Sabino Canyon Star Party **East**
 Saturday, 3/28/2009 No. of Scopes: 6

Friends of Sabino Canyon will be celebrating Music in the Canyon for an estimated attendance of 2000 people at 5700 N. Sabino Canyon Road. Take Speedway east 5 miles to Wilmot. Turn north onto Wilmot and continue 1.7

miles. The road will become Tanque Verde Rd. Turn left onto Sabino Canyon Rd. Take Sabino Canyon Rd north 4.5 miles. The park entrance will be on your right, just after the intersection with Sunrise. Viewing will be at the entrance to the main park area. Contact person Krista Neis can be reached at 520-742-8999 or email krista.neis@comcast.net. Set-Up Time: 4:30pm. Observing will be from 5:00pm to 9:00 pm. Sunset: 6:45pm Dark Sky: 7:38pm Moon Phase: Crescent after New Moon.

Rio Vista ES Star Party **North-Central**
 Monday, 3/30/2009 No. of Scopes: 5

Rio Vista ES will be preparing for Rio Vista Science Night for an estimated attendance of 300 students and parents at 1351 E. Limberlost Dr. Viewing will be on the Play Ground. Contact person Sean Taylor can be reached at 520 696 5282 or email staylor@amphi.com. Set-Up Time: 7:15pm. Observing will be from 7:45 pm to 9:45 pm. Sunset: 6:46pm Dark Sky: 7:40pm Moon Phase: near First Quarter.

Dark Skies for March 2009

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

Sa/Su 28/ 1 22:18 - 5:30	Tu/We 10/11 Full Moon	Sa/Su 21/22 19:59 - 4:07
Su/Mo 1/ 2 23:24 - 5:29	We/Th 11/12 - - -	Su/Mo 22/23 19:59 - 4:38
Mo/Tu 2/ 3 0:32 - 5:28	Th/Fr 12/13 19:52 - 20:32	Mo/Tu 23/24 20:00 - 5:01
Tu/We 3/ 4 1:38 - 5:27	Fr/Sa 13/14 19:52 - 21:34	Tu/We 24/25 20:01 - 4:59
We/Th 4/ 5 2:40 - 5:25	Sa/Su 14/15 19:53 - 22:36	
Th/Fr 5/ 6 3:36 - 5:24	We/Th 25/26 20:02 - 4:58	Th/Fr 26/27 20:02 - 4:56
Fr/Sa 6/ 7 4:23 - 5:23	Su/Mo 15/16 19:54 - 23:36	Fr/Sa 27/28 20:07 - 4:55
Sa/Su 7/ 8 5:04 - 5:22	Mo/Tu 16/17 19:55 - 0:33	Sa/Su 28/29 21:14 - 4:54
Su/Mo 8/ 9 - - -	Tu/We 17/18 19:55 - 1:26	Su/Mo 29/30 22:23 - 4:52
Mo/Tu 9/10 - - -	We/Th 18/19 19:56 - 2:14	Mo/Tu 30/31 23:31 - 4:51
	Th/Fr 19/20 19:57 - 2:56	
	Fr/Sa 20/21 19:58 - 3:34	

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn
Sa/Su	Set	Rise	Rise Vi	Set Vi	Rise Vi	Rise Vi	Rise Vi Vi=Visibility
28/ 1	18:19	6:49	5:52 6	21:02 -4	5:52 7	5:29 2	18:50 1 -3 brilliant
7/ 8	18:24	6:41	5:59 7	20:38 -3	5:41 7	5:06 1	18:20 1 0 conspicuous
14/15	18:29	6:32	6:04 9	20:04 -1	5:29 6	4:43 0	Set: 1 3 moderate
21/22	18:34	6:23	6:10 -	19:21 3	5:17 6	4:20 -1	5:59 1 6 naked eye limit
28/29	18:39	6:14	6:16 -	18:40 5	5:05 6	3:57 -1	5:30 1 9 binoculars
			limit				

By Erich Karkoschka

TAAA DARK SITE NEWS

IMPORTANT DEVELOPMENTS FOR THE TAAA ASTRONOMY COMPLEX

Article by Bill Lofquist

Several important events have taken place as we move toward the construction of the TAAA Astronomy Complex near the Chiricahua Mountains in Cochise County.

On Wednesday, February 11, the deed for the sixteen acres of property where the Complex will be located was transferred from The Perseus Group to club President, Ken Shaver. As many members know, the Perseus Group consists of Sam Rua, Robert Crawford, Liz and John Kalas and Erich Karkoschka. These four members purchased 60 acres of land in October 2007, with a view toward donating a portion of it to TAAA to develop the Complex. The sixteen acres are located within a square 40 acre parcel and buffered by the surrounding property. As a result of this very generous gift, TAAA is able to use the resources which have been donated by many members over the years to develop the Complex.

Now that the property has been transferred and belongs to the club, we are able to obtain our first building permit. Toward that end, the construction plans have been

completed and requests have been made to three candidates for a general contractor to build the restrooms. A volunteer architect, Mr. John Riggs, has prepared the Master Site Plan and the plans for the restrooms. The Strategic Planning Group has overseen the preparation of the building permit, with John Kalas coordinating that effort. We are hoping to have the application for the permit submitted in early March. Construction will begin when we obtain the building permit.

The first phase of building will include installation of electric service, completion of the water system, building of the restrooms and septic system, and improvement of the roads leading to the Complex and the parking area within the Complex. Once this first phase work is completed, we will be able to begin using the site for observing. We hope we will be able to see first light in late spring or



Robert Crawford, for the Perseus Group, signs the legal papers transferring the property for the TAAA Astronomy Complex. The attorney for TAAA, Charles Stirton, is to the left. Ken Shaver, TAAA President, is second from left. Other Perseus Group members (left to right) Liz and John Kalas, Erich Karkoschka, and Sam Rua complete the picture. Photo by Bill Lofquist.

early summer.

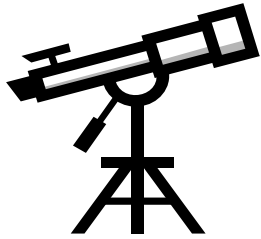
Many members have made significant contributions to bringing us along this far. But no one has contributed more than Robert Crawford. Robert is the chairman of the Perseus Group, but he has also contributed his many skills at project management and his careful approach to planning to the details of purchasing the property, creating the CC&Rs, design of the various parts of the infrastructure, coordinating the legal activities, and otherwise participating in the many decisions that have brought us this far. We are indeed indebted to Robert for his diligence and commitment to seeing us create an excellent Complex.

As we begin the construction of Phase One we will also look toward the future and plan toward additional features of the Complex. This will involve more members helping to plan the clubhouse, the sleeping rooms, the large and small observatories, the landscaping and other amenities. Be on the lookout for announcements of special meetings to focus on these matters.



The property in the Sulphur Springs Valley where the TAAA Astronomy Complex will be constructed. Photo by Terri Lappin.

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 LXD-55

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 - February 11, 2009

Attending: Board members present (7): Ken Shaver (presiding), Terri Lappin, Luke Scott, George Barber, Bill Lofquist, John Kalas, and Teresa Plymate. Members Present (3): Liz Kalas, Claude Plymate, Michael Terenzoni.

The president called the meeting to order at 6:30 pm.

Minutes from the January board meeting were approved unanimously.

Member Feedback

- Richard Dougal has been contacted by Michael Smith who has a Celestron C-14 telescope he is willing to donate to the club. Claude Plymate will inventory and check out the telescope. A Donation Record will be completed upon acceptance.

Announcements for Record

- The transfer of 16 acres of land from the Perseus Group to the TAAA closed at 4:30 pm on 11 February, 2009.
- The club will designate a committee to coordinate club activities in support of Earth Hour 2009 (28 March).

Budget Review

- Terri Lappin presented the proposed 2009 budget for review.
- Terri Lappin motioned and Bill Lofquist seconded that the 2009 budget be approved. The motion was approved unanimously.

Flandrau Planetarium

- The Board will post to the club's forum information on where to express concerns to the University of Arizona regarding the status of Flandrau Science Center.
- The Board will request from Flandrau facts regarding immediate plans for the facility.

Dark Site Land Development

- The club's attorney revised the Certificate of Resolution authorizing Ken Shaver and Bill Lofquist to represent TAAA in transactions pertaining to the Dark Site property transfer from the Perseus Group to TAAA. The Secretary will have the revised Certificate of Resolution notarized and deliver it to the attorney.
- John Kalas reported on the status of the building permit process. The permit application requires a drainage report prepared by a professional civil engineer if more than one acre of land is being cleared. Since Phase 1 construction will clear slightly less than one acre, the club will request a deferment of the drainage report until Phase 2 construction.
- A meeting with representatives from the Cochise County Permits and Planning and Zoning offices to review plans and drawings went well. At this meeting it was learned that Price Ranch Road may need to be widened to 20 feet instead of 24 feet as planned. This represents a potentially significant cost savings to Phase 1 construction and the 20 feet width requirement will be confirmed with Cochise County.

TAAA Board of Directors Meeting - February 11, 2009 (cont.)

Master Calendar

- The board made two revisions to the draft 2009 master calendar. Terri Lappin motioned that the board accept, with revisions, the master calendar. The motion was approved unanimously.

ALCON 2010

- Ken Shaver has sent an official application to the Astronomical league for TAAA to host ALCON 2010. Keith Schlottman will chair the event organizing committee, which will meet on 17 February at IDA.

Newsletter

- George Barber will research whether an open source PDF writer can be used to prepare the newsletter for posting on the club's website.

Grand Canyon Star Party

- The board discussed GCSP shirt sales and a motion was entered by Bill Lofquist and seconded by Terri Lappin that the TAAA, being sponsor of the GCSP, will manage procurement and sale of GCSP shirts through the TAAA apparel program. The motion was approved unanimously.
- The board will contact Joe Bergeron, who has previously designed GCSP shirts, and inquire if he is interested in working with TAAA.

International Year of Astronomy

- An announcement will be placed on the forum requesting volunteers to help organize the club's IYA 100 Hours of Astronomy activities.
- The club received a suggestion to host a telescope workshop event at which the public can bring their telescopes for help in setup and use.

Meeting adjourned at 9:40 pm.

Respectfully submitted,
Luke Scott
Secretary

Desert Skies Classified

FOR SALE	Celestron Ultima 11 with accessories. See http://sites.google.com/site/saleofatelescopenow/ for more information. [06/09]
FOR SALE	Almost new 8"XLT SCT ASGT with "Flash" upgradeable. Excellent condition. Works "dead on". Used about 4 times as "get and go" scope for public events, etc. Purchased this year (2008). Still under warranty. Includes a 2" back and 2" Williams Optics Diagonal. \$1200. List price \$1615. Contact Jerry Farrar 520-731-1104 (C#.520-403-2404).e-mail.jandkfarrar@msn.com [04/09]
FOR SALE	Meade LX 200 12" go to telescope Multi coated, ultra high, Schmidt-Cassegrain catadioptric, D=304.8mm F=3048mm F/10 with a solar filter, Orion superwide 22mm, Meade super Plossi 26 mm, Meade Barlow 2x teleneegative amplifier, planet filters, and of course everything that the scope came with. Works great in excellent condition optics are perfect. Only used scope about 10 to 15 times. Works perfectly. Selling for \$2,500.00 paid \$6,000 including accessories. Moving to china on Jan 20th so please call before the 20 th of Jan. Ask for James. 480-797-3061, jedwards@libertyone.com [04/09]
FOR SALE	12" LX-200GPS. Comes with field tripod, Meade super wedge, 3D counterweight system, Losmondy mounting plate system. Needs focuser if used for imaging. \$3,000.00. Contact Jim Charboneau StellarObservatory@starband.net . [04/09]
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.

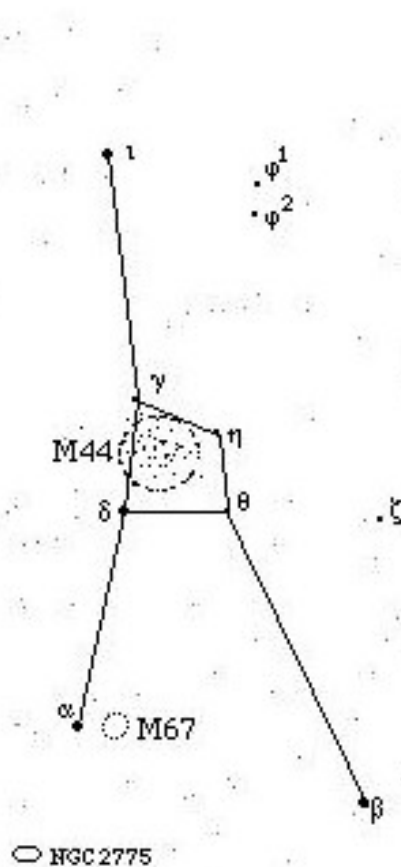
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Constellation Report by Chris Lancaster

Cancer

If it were not for two attributes--its membership among the 12 signs of the zodiac and possession of a premier star cluster--Cancer may otherwise be a little noticed constellation. Its dim stars rise after the winter heavyweights Orion, Gemini, and Auriga, and before those heralding spring like Leo and Bootes.

The legend of the crab goes back several hundred years. A crab was said to have followed Hera's orders to distract Hercules while he was battling Hydra, the sea serpent, but the poor crustacean was killed during the attempt. It nevertheless was awarded a place in the sky, although with dim stars because of its failure to fulfill the assignment. That place it occupies was prominent as it contained the point where the sun reached its most northern spot before moving south again, or backwards like a crab, on the summer solstice. Because of precession, that spot is now near the border of Gemini and Taurus, but we still keep the name of the circle of 23.5 degrees north latitude over which the sun hangs on the solstice as the tropic of Cancer.



In a dark sky, the star cluster M44, also called Praesepe or the Beehive cluster, can be seen with the naked eye as a fuzzy patch of light in the center of the constellation. This is one of the largest and brightest clusters visible from Earth. It glows with a magnitude of 4.5 and covers an area of 80', or almost 3 times the diameter of the moon. It is best viewed with binoculars or a wide field telescope. Ancient stargazers, notably Hipparchus and Aratus in the 2nd and 3rd century BC, made observations of Praesepe which was frequently described as "cloudy" or "misty." Some thought that it was a gateway between Heaven and Earth through which souls descended before being born. It wasn't until Galileo pointed his telescope toward it that this "cloud" was discovered to be a collection of individual stars, which modern observations show to number about 200 with magnitudes ranging from 6.3 to 14.

A second star cluster is M67, magnitude 7.4 and about 25' in diameter. This is a breathtaking cluster of a few hundred stars at RA: 8h 51m Dec: +11d 48' or about 8' west in RA of Alpha Cancri. Unlike most open clusters which are mainly located along the galactic plane, M67 is displaced by almost 1500 light years. Spectra and magnitude studies of M67 show that its stars exhibit characteristics shared by those in many globular clusters and suggest that this cluster may be as old as 10 billion years; however, stars here are richer in metals. This is more typical of sun-like stars than for stars in the average globular cluster.

There are about half a dozen galaxies in Cancer, but most are too dim for most amateur telescopes. The brightest one, which should be within reach of at least

medium sized telescopes, is NGC2775, a magnitude 11.5 spiral located at RA: 9h 10.2' Dec: +7d 01' (or 4.8 degrees south and 12 minutes east of Alpha Cancri.) It's a small oval smudge measuring about 2.2' by 1.5'.

Cancer also offers some pleasing double stars of varying difficulty. The best is Iota Cancri, marking one of the crab's right legs or claw. This star is composed of a yellow G8 and a blue A3 pair separated by 30.5 arc seconds and a nearly fixed PA of 307 degrees. Low power is all that is necessary to split this double. A much closer pair is Phi2 Cancri. This is a closely matched bluish white A3 and A4 pair separated by 5.1", and a PA of 217 degrees

The last double star to mention, or in this case triple star, is Zeta Cancri. The wider pair of yellow-orange stars is separated by 5.8" and a PA of 77 degrees, but if you have the aperture (10 or more inches), the optics, and the steady seeing required, try separating the closer pair at a mere 0.9". At Zeta's distance from Earth, this is similar to the separation of the Sun and Uranus.

Though Cancer is not marked by bright stars, it is well worth looking at the treasures it 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.

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.