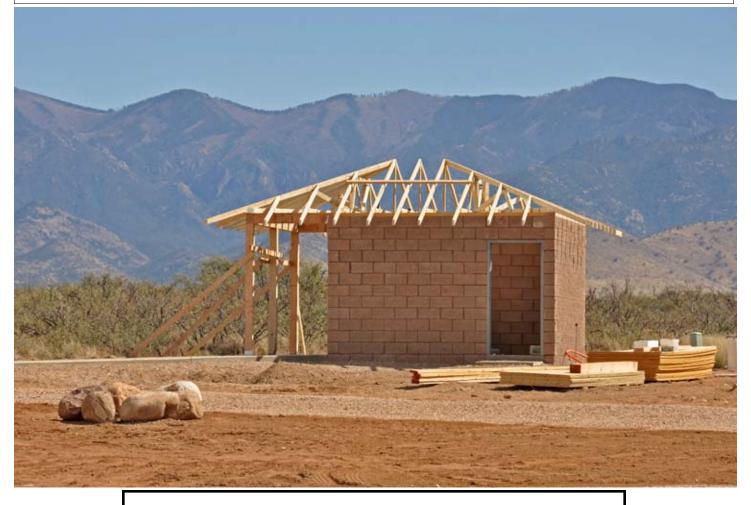


# Desert Skies

Tucson Amateur Astronomy Association

Volume LV, Number 11

November, 2009



## Progress continues at the TAAA Dark Site





TAAA Holiday Party—December 5



Let's Name The New TAAA Astronomy Complex!

- Members' Night
- School star parties
- Constellation of the month
- Websites: Trips On The Internet Super-Skyway
- Member Reports
- New! NASA Space Place Partner's Article

#### Volume LV, Number 11

#### Cover Photo: The roof goes up on the bathroom facility. Photo by Bill Lofquist on 25 October, 2009

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#### Membership in the TAAA

#### Annual Fees

Individual membership	
Family (includes two adults plus minor children)	\$30.00
Youth under 18 years must join as a family upon parenta acknowledgement of participation in TAAA events. Ask t 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)	

Astronomy Magazine 1	1 year (12 issues)	\$34.00	
	2 years (24 issues)	\$60.00	
Postage for New Memb	per 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.

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

> Desert Skies is published monthly by the Tucson Amateur Astronomy Association, Post Office Box 41254, Tucson AZ 85717.

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#### President's Message

Wow, it's hard to believe that the Holiday season is almost here. Welcome back to those members who have returned to Tucson for the winter season. We have a number of activities planned and in the works this winter. These include ideas for the Astronomy Complex, ALCon2010 planning, fundraising, star parties and public outreach projects.

I would like to remind everyone about a couple of important things about our general meetings. First is that the January 2010 meeting will be moved to the second Friday of the month, 1/8/2010, because the First Friday will fall on the New Years Holiday. November's meeting is Members Night and will give us an opportunity to see what exciting projects our fellow astronomers are working on. We will see home observatories, TAAA Astronomy Complex progress, pictures of the night sky, and more. Also, at this meeting we will be naming the TIMPA Observatory after the local "resident" sighted last September. The name will be announced and ratified at the November meeting.

A proposal to select a name for the TAAA Astronomy Complex is presented within this newsletter by Bill Lofquist. I encourage everyone to come up with suggestions, as this property will be a symbol of pride for TAAA for years to come.

If you are trying to decide on a scope purchase, fill in for an instrument you have in the shop for repair, or needing an instrument to use at a star party, TAAA has several scopes in the loaner program to help you out. This program is one of the great club benefits we take pride in that members can utilize to help them enjoy the night sky. We need to keep the program active, and to do that we need a member to take over the TAAA Scope Loaner program. If you have been looking for a way to become more active in club activities and have some extra room to house some of the club's telescopes, we need your help. Please see me or another board member if you are interested.

Dark Skies,

Ken Shaver TAAA President

#### Meeting Information and Calendar of Events

**TAAA MEETING DATE:** Friday, Nov. 6, 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 Ken Shaver to reserve a time slot during the meeting. So far, the following presentations are scheduled:

Nick de Mesa - Presenting ALCON 2009 Jerry Farrar - Changes in solar activity in H-alpha over the last five years using my sketches

Tim Van Devender - Home roll-off observatory as a project

Bill Lofquist- TAAA Astronomy Complex Progress Keith Schlottman - No Topic listed NOTE: The January 2010 meeting will be held on the SECOND FRIDAY, Jan. 8, due to the New Year holiday.

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

#### **STAR PARTIES AND EVENTS:**

- 02 Nov Astro-Imaging SIG at China Rose
- 10 Nov Academy of Tucson Star Party
- 11 Nov Castlehill Country Day School Star Party
- 13 Nov Ft. Lowell Elementary Star Party
- 13 Nov Pima County Natural Resources Star Party
- 14 Nov TAAA Star Party at Las Cienegas
- 14 Nov TAAA and AF-SIG Star Party at TIMPA
- 17 Nov Wheeler ES Star Party
- 20 Nov Prince Elementary School Star Party
- 05 Dec TAAA Holiday Party

### **Club News**

# COME TO THE TAAA HOLIDAY PARTY ON SATURDAY, DECEMBER 5!

The TAAA Holiday Party is a great time to get together with fellow club members. Again this year, we will have a Super Raffle. Members are asked to bring something for the raffle to go along with the contributions that our local stores might provide for us. Each of the past two years we have made the raffle a special part of the event. The party will begin at 5:00, so come early and begin to socialize.

The food will be a potluck and each year we have had an ample amount of great food. So bring some of your favorite dishes. We will need hors d'oeuvres, salads, vegetables, entrees, breads and deserts. We will have coffee, hot chocolate, tea and water, so you might want to

#### Club News (cont.)

bring some sodas to share. For those who would like to cook some meat, we will have a grill ready.

For the raffle, we will have some excitement if you have a good astronomy book you can spare, an extra telescope or accessory, or some kind of surprise that you think members might enjoy.

The Party will be held again this year at the home of Bill and Mary Lofquist. They live at 1935 West Harran Circle, which is in the northwest near the Foothills Mall. To get to their house from the intersection of Ina Road and La Cholla Boulevard from the north, or from Orange Grove and La Cholla from the south: Go to the traffic light at the corner of Omar and La Cholla (Donaldson School is on the northeast corner) and turn to the east. Go a very short block to Amahl and turn right. Go one half mile to Harran Drive and turn left. (You will see a sign that indicates that Amahl changes its name to Sesame.) Go about 200 yards on Harran Drive and turn left on Harran Circle. The house is on the turn-around of the cul-de-sac, the first house on the left. There is one red light (that is our Christmas decoration) in the front of the house. Park in the drive, on the turnaround circle or on the street. PLEASE DO NOT BLOCK THE NEIGHBORS' DRIVEWAYS.

If you have any questions or get lost in the neighborhood, call Bill at 297-6653.

#### Let's Name The New TAAA Astronomy Complex!

Our new Astronomy Complex in the Turkey Creek area of Cochise County needs a name. The plan for picking the name is described below. And the members of TAAA will decide what it is to be!

The Strategic Planning Group has recommended to the TAAA Board how the name will be selected, and the Board has approved the process. Now it is up to the members to be creative and pick the best possible name for this important new development.

Here are the steps we will follow to make this important decision. The plan is for the new name to be announced at the January, 2010 general meeting on January 8, which is the second Friday of January. (The first Friday of the month will be on January 1, so we will meet on the second Friday.)

The procedure for selecting the name is being announced in this issue of *Desert Skies*. The procedure will also be announced via email messages to all members with computers at the time the newsletter is posted and delivered. Members can place names in nomination by email messages and by telephone. Nominations should be in by Tuesday, November 21 so they can be announced in the December newsletter. The procedure for making your nomination is described below.

The nominations will be compiled and made known to the membership in the December newsletter and at the

December general meeting on December 4. There will also be notification of the nominations by email. Then the voting will begin. Members can present their votes by email or telephone call by Wednesday, December 31. The voting will close on December 31! The procedure for voting will be in the December *Desert Skies*.

Come to the January general meeting on January 8 to learn about the new name. Members will also be notified of the new name by email.

To reiterate, nominations for the new name are due by November 21. Final votes are due by December 31.

This selection process will be coordinated by Bill Lofquist. All communications will come from him. And your nominations and your votes will be sent to him.

It is preferred that you communicate with Bill by email at *wlofquist@comcast.net* and by telephone at 297-6653.

The Strategic Planning Group proposes that the Complex should not be named for an individual, but should specify a geographical location in the area or relate to some aspect of astronomy.

If you have questions about this procedure, please contact Bill by email or telephone.

#### **Member News**

We welcome these members who have recently joined the TAAA: Alfred Anzaldua, Ben Coppock (Dr.), Craig S. Bevan, Dan Dufresne, Henry Gonzales, Karen Liptak, Jim Miller, Frank Paulic, Nina Postoway, Conor Quinlan, Jim Schrode, Brad Shankles, Karen Yackell, Bonnie Martinez (from Brooklyn!), and Henry Gonzales. 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, 02 Nov, 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

There will be no AFSIG meeting for the month of November. The AFSIG committee decided to suspend the

#### Club News (cont.)

meeting this month to concentrate on the education classes being presented.

Thank you for your understanding.

Due to the great response we received, we had to close enrollment in these classes. We are sorry to disappoint anyone who may want to sign up – but don't be disheartened! We will be offering this course again, probably within the next year.

If you like, you can email fundamentals@tucsonastronomy.org with your name, email address and phone number and I will reserve a place for you for next time.

Thanks for your interest and support,

Bob Gilroy

#### 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.

#### **Upcoming Lectures**

NOTE: The January 2010 meeting will be held on the SECOND FRIDAY due to the New Year holiday. This will allow everyone to enjoy the New Year's holiday.

The March 2010 meeting will be devoted to amateur backyard observatories. If you built an observatory and want to show it off, you're encouraged to be a presenter at the March 5th meeting.

Tours of the observatories will also be scheduled. In the past we tried to fit all observatory tours into one day. To allow for a more in-depth tour of each observatory, we will schedule tours on multiple days throughout March. Some observatory owners might want to consider scheduling a late afternoon tour and have people stay for observing in the evening.

Astronomy Essentials	Claude Plymate Adaptive Optics for the Beginner				
Invited Lecture	Ed Beshore Catalina Sky Survey				
Astronomy Essentials	Mary Turner Seasonal Objects				
Invited Lecture	Shane Byrne Mars HiRise				
Astronomy Essentials	Connie Walker Globe at Night				
Invited Lecture	Astro-Imaging SIG				
Astronomy Essentials	OPEN				
Invited Lecture	Amateur Backyard Ob- servatories				
	Invited Lecture Astronomy Essentials Invited Lecture Astronomy Essentials Invited Lecture Astronomy Essentials				



#### Night Sky Network Toolkits

Below is a list of our Night Sky Network Outreach Toolkits. The Night Sky Network program recognizes the essential role that amateur astronomers play in public astronomical education. The toolkits, developed by the Astronomical Society of the Pacific under contract with NASA, are meant for use at star parties, either during the early evening hours or after dark. They are also great options for those questionable, cloudy nights. With each use of a toolkit we are closer to qualifying for the next toolkit which has been rumored to be about comets.

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

**Supernoval:** life cycle of massive stars, touches on life cycle of sun-like stars



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#### Club News (cont.)

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.

GLOBE at Night: light pollution principles

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

Each toolkit contains several projects. You pick and choose which part you want to use. They contain all essential materials. Each toolkit includes a Resources CD and a training DVD, which you get to keep. Individual training in their use is available.

Please make arrangements with Terri Lappin to borrow any toolkit.



A group of six members attended the first Starry Messenger Workshop. Loretta McKibben introduced several concepts related to development and education of young people. She also presented ideas for outreach star parties. Participants were then introduced to the Night Sky Network Black Hole Survival Toolkit and had an opportunity to try out the activities for themselves. The 3-hour workshop was a success.

At the workshop, Loretta proposed creating a set of "crib notes" for use at star parties. Also mentioned was the need for a designated Constellation Tour Guide at community star parties. Both are good ideas that will be looked at more closely and possibly will become Starry Messenger SIG projects.

We are in the middle of our fall community star party schedule with several events located at area schools. Please support these events as you are able. They are listed elsewhere in the newsletter. The kids benefit so much from experiencing astronomy first-hand compared to only a text book exposure. If you haven't yet been to a community star party or other TAAA outreach event, attend a few as an observer. When you arrive, introduce yourself to the other astronomers and let them know it's your first school star party. As you begin to feel more comfortable, offer your assistance either with describing the object to people standing in line, pointing out constellations to them, or in some other manner.

The goal of the Starry Messenger Special Interest Group is to provide an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts and to provide the tools and techniques for explaining astronomy to people of all ages. By virtue of involvement in the TAAA's astronomy outreach programs, you are considered a member of the Starry Messenger SIG. The Starry Messenger SIG is currently lead by myself (Terri Lappin) and Loretta McKibben. Let either of us know if you want to assist us in a leadership or project-related role within the Starry Messenger SIG.

## Starry Messenger in our Midst

#### Jim Knoll

At the recent Starry Messenger Workshop, Jim Knoll described his preparation for an outreach event. He studies up on 5 or 6 objects that he might show people during the night using his 8" Meade reflector, and keeps the information handily available. This demonstrates his dedication to conveying the wonders of the universe to others. Jim joined the TAAA about 2 years ago and has assisted at many community events since. Sometimes his wife, Susan, comes along to these events with a pair of binoculars. The binoculars demonstrate how easy it is to take up an interest in astronomy – just look up with a pair of binoculars! The binoculars also give the public a chance to compare the same object through two different instruments.

As a kid, Jim had a small telescope and dabbled in viewing the moon and some planets. He has always been curious and amazed about the evolution of the universe and our solar system, but it wasn't until he came to Tucson that



Jim Knoll and his 8" Meade telescope.

he really took time for indepth exploration of the hobby. He takes part in the Astronomy Fundamentals SIG activities, finding it an exceptional way to learn more about astronomy. His preparation for community star parties is an extension of his desire to learn more and it keeps his interest level high. Jim encourages others to use outreach events

as a motivation to learn more about our great hobby. Pick a few objects, study up on them, make note cards with the facts, and have fun showing the objects to others.

#### Club News (cont.)

Jim also encourages those who feel they don't know enough astronomy to give a school star party a try. His recommendations are:

You know more than you think, so go for it. Remember, you generally have other amateur astronomers with you, so you can reach out to them for help as well. You may even want to attend one or two star parties as an extra without a telescope and buddy up with one of the scheduled volunteers. This will give you an excellent opportunity to experience the event and interact with the participants without the pressure of operating a telescope. Outreach is extremely rewarding and will help maintain your zest for astronomy.



A student at Robbin's Elementary School takes a look through Jim's telescope.

You'll never know which kid you inspire to become a future astronomer. Jim recognizes how instrumental he and his telescope can be in a kid's life. His 8" telescope is great for exploring many astronomical objects the public is interested in, yet small enough to "easily" transport. He loves the interaction with the kids and parents, especially those seeing Jupiter, Saturn, or the Moon through a telescope for the first time. He says, "They are just overwhelmed with the experience that is hopefully locked into their consciousness forever." That excitement and enthusiasm motivates him to learn more himself. He took advantage of the Starry Messenger Workshop last month to sharpen his knowledge. He also lends support to Pima County Natural Resources Parks and Recreation and Agua Caliente Park events, focusing on astronomy. During one of the Agua Caliente Park events, using a laptop, he displayed a Starry Night Pro depiction of the night sky on a projector screen to enhance the discussion about the sky.

Jim was born and raised in Glendive, Montana. He graduated from Montana State University and then spent the next 20 years in the US Air Force. He was stationed in great places like Anchorage (AK), Washington DC, Panama City (FL), and Oklahoma City. He also spent a lot of time overseas. Eventually, courtesy of the USAF, the Knolls found themselves stationed in Tucson. Jim retired in 2001 but he's still working the same job as a civilian.

Jim Knoll, this month's Starry Messenger, is a dedicated volunteer, interested in improving himself so he's better prepared to open minds to the universe, as seen through his telescope. Thank you, Jim, for your dedication.

#### Member's Events

#### TAAA and AF-SIG Star Party at TIMPA Saturday, 14 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 allimportant 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 Las Cienegas (Empire Ranch) Saturday, 14 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. 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.

#### Items of Interest

#### Websites: Trips On The Internet Super-Skyway By Rik Hill

Nostalgia just isn't what it used to be . . .

You who are new to astronomy will have to bear with me in this article. My first observation was in May, 1957, when a substitute teacher brought a Unitron 1.6" to my little two room schoolhouse so we could see a transit of Mercury. No, I did not live in a log cabin! But I am a little long in the tooth in amateur astronomy. I've seen a lot of companies come and go, some good, some not so. But a number of people that have been in astronomy as long or longer have collected together some interesting memorabilia and put it on the web. It makes an evening of fun reading.

Phil Harrington has perhaps the best organized listing of old catalogs from the 1920s to recent at: http://www.philharrington.net/old.htm

What's the oldest one you have in your own collection of catalogs? Have you ever looked through or owned any of these telescopes from the 1920s?

Another great website that will eat up a lot of time is Classic Telescope Catalogs and Manuals:

http://geogdata.csun.edu/~voltaire/classics/

At the end of this webpage is a large collection of other people's vintage telescope collections, as well as a listing of catalogs, manuals and ads. I was fascinated with the old installation manuals for things like the 6" Goto Equatorial.

If this interests you or if you have one of the vintage telescopes and want to share experiences or be a part of a community of people who share and contribute to a pool of maintenance and parts information, Yahoo has a bunch of lists you can join:

Dynascope Cavetelescopes Classictelescopes UnitronTelescopes Questar

If you are rigorous in searching you may find even more on the yahoogroups.com website. I belong to several of

> 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

these and the email traffic is not bad and often very informative and the members helpful.

Lastly, in 2005 the Dynascope list was bristling with rumors and stories about the development and history of the Dynascope telescope line made by Criterion. Since I have a collection of Sky & Telescope going back to V1,N1 I spent a few days doing research, a few days scanning and several months getting permission (from the Sky & Tel. Legal representatives) for an article on the history of Criterion and the Dynascopes as viewed from advertising. That article was posted at:

http://www.lpl.arizona.edu/~rhill/DYNASCOPE/ criterion.html

I have since heard from Bushnell, who bought out Criterion, and they were quite pleased with this article. I hope you are too.

As always, if you know of a particularly good website or can add to the ones above, drop me a line at rhill@lpl.arizona.edu

Space Vision 2009 National Conference Star Party (Note: Date changed from previously published date)

The University of Arizona Students for the Exploration and Development of Space (SEDS) chapter will be hosting the SEDS annual national conference, SpaceVision 2009. It is being held this November 12th - 15th at the University of Arizona.

TAAA members are invited to an informal star party on the University of Arizona Mall on Friday, Nov. 13, from 6 to 10 PM.

Information regarding SpaceVision 2009 may be found at: http://spacevision.seds.org/index.php

- 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

#### **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.

Academy of Tucson Star Party Tuesday, 11/10/2009 East No. of Scopes: 6

Academy of Tucson will be planning a Star Party for an estimated attendance of 350 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 be on the sport field (north end of the property). Contact person Deanna Carlson can be reached at 886-6076 or email dcarlson@ateschool.net. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:30pm Dark Sky: 6:25pm Moon Phase: (no moon during viewing).

Castlehill Country Day School SP	Foothills				
Wednesday, 11/11/2009	No. of Scopes: 3				

**Castlehill Country Day School** will be hosting Exploring the Night Sky for an estimated attendance of 150 students and parents at 3225 N Craycroft Rd. East on Speedway, Left on Craycroft, past Ft. Lowell Park to St Gregory Light, Turn left at light, turn right at first driveway, the Castlehill office is the brick house on the right. Viewing will be on the field or playground. Contact person Michelle Meyer can be reached at 795-0008 or email <u>riegalmeyer@aol.com</u>. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:30pm Dark Sky: 6:25pm Moon Phase: (no moon during viewing).

Ft. Lowell Elementary Star Party	Central
Friday, 11/13/2009	No. of Scopes: 2

**Ft. Lowell Elementary** will be holding Pie in the Sky for an estimated attendance of 50 students and parents at 5151 E. Pima. East on Broadway to Swan Road; turn left. North on Swan to Pima Street; turn right. School is between Swan and Beverly. Viewing will be on the basketball court by activities building. Enter through the gate on Magnolia located on the east side of the school. Contact person Richard Dougall can be reached at 520-245-5441 or email <u>obanbound@aol.com</u>. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:00pm. Sunset: 5:29pm Dark Sky: 6:24pm Moon Phase: (no moon during viewing).

Pima County Natural Resources Star Party West Friday, 11/13/2009 No. of Scopes: 3

**Pima County Natural Resources** will be hosting Night with the Stars for an estimated attendance of 50 people at 1548 S. Kinney Road. Take Speedway, which turns into

Gates Pass Road. Continue on Gates Pass Road, until it dead ends at Kinney Rd. Go left on Kinney Rd, past Old Tucson, then take a right on Hal Gras Rd (keep an eye out for this turn – it's not well marked, but we'll have a sign up for the Star Party event). Follow the road about ¼ mile. Viewing will be near restrooms on left side of road. Contact person Sandy Reith can be reached at 520-615-7855 or email <u>sandy.reith@pima.gov</u>. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:29pm Dark Sky: 6:24pm Moon Phase: (no moon during viewing).

Wheeler ES Star Party	Southeast
Tuesday, 11/17/2009	No. of Scopes: 2

Wheeler Elementary School will be celebrating "Pie in the Sky" family event hosted by the PTA for an estimated attendance of 50 students and parents at 1818 S. Avenida del Sol. Go to 22nd St & Wilmot, head east on 22nd St. Turn right (south) on Avenida Sirio, go down to 4-way stop (Calle Betelgeux). Continue to next stop sign at end of street (Avenida Del Sol). Wheeler Elementary School will be directly in front of you. Parking lot is to your left; you can clearly see the cafeteria to the right. Viewing will be on the school field on south side or courtyard on north side. Contact person Mike Cannon can be reached at 260-4333 or email <u>mike-cannon@cox.net</u>. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:26pm Dark Sky: 6:22pm Moon Phase: Crescent after New Moon.

## Prince Elementary School Star Party North-Central

Friday, 11/20/2009

No. of Scopes: 2

Prince Elementary School will be holding YSEF Star Party for an estimated attendance of 40 students and parents at 125 East Prince Road. Continue to Stone Ave and go right (N) to the first right (King). Take King about 150y until it hooks to the left (N) at the N school parking lot and becomes Estrella. You'll be behind the school and there is an open gate at the E end of the parking lot for you to drive (S) into the center quad of the campus for easy setup and darker conditions. Contact person Doug Hall can be reached at 696-6350 or email youthscienceeducation@yahoo.com. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:25pm Dark Sky: 6:21pm Moon Phase: Crescent after New Moon.

#### MEMBER REPORTS

#### "Walk-Around-the-Night-Sky" By Bob Gilroy

The AFSIG held the second of a series of star parties at Catalina State Park on Thursday, October 8. It was a great success.

Steve Marten was able to lead us on a journey through the autumn sky. While the Big Dipper is now disappearing, it was pointed out that we can still use it to find Bootes and Hercules.

The Summer Triangle is still overhead and we discussed the three stars that form the Summer Triangle and their constellations.

In our tour around the night sky we visited Andromeda, Cassiopeia and Pegasus to name just a few. We discussed deep sky objects visible to the naked eye, like the Andromeda Galaxy, the Double Cluster in Perseus, and much more.

After our journey, telescopes and binoculars were set up and we enjoyed viewing Jupiter, the Ring Nebula, M13, and Albireo among others.

There were 17 participants and a great time was had by all.

We are planning to hold a "Walk-Around-the-Night Sky" every quarter so we cover the entire celestial globe visible to us--- so stay tuned.

#### Impressions from a Trip to TAAA's New TAAA Astronomy Complex By Ron Probst

Although I've participated in planning activities for the new TAAA Astronomy Complex for many months now, I had never actually been there. I'd used paper cutouts and drawings to scale, seen John Kalas's photos, and occasionally paced out some dimension in my yard to get a feel for it. But it remained a bit of an abstraction to me. So it was with some interest that I joined the Strategic Planning Group on a site visit earlier this month (Sept. 15, 2009). Here are my impressions of the trip.

The drive over took two hours nonstop from my home at Prince and Campbell. After leaving the interstate at Dragoon Road, the remaining distance was on good quality two lane highways with little traffic. Signage for turns was clear. The communities of Dragoon and Sunsites provided low-speed intervals for variety. You can even race the train to the crossing outside of Dragoon if you feel sporting. A Border Patrol checkpoint just south of Sunsites is a reminder of the upcoming left turn onto Route 181. The only unpaved part was a half mile of good dirt ranch road (Price Road, which we've heard so much about), and then a few hundred yards down Perseus Way, and the short entrance road to our parking lot. The entrance itself is set off attractively by short stretches of white fence on either side of a wide double gate. It's quite distinctive; don't think I'd drive by that, even in the dark. While the entrance road had to be raised several feet for drainage, this isn't really noticeable—no awkward "hump" to get over. The entrance road and parking lot have been leveled with fill dirt, and were still soft and dusty when we visited. The reason for the County's insistence on gravelling these surfaces was clear! However the undisturbed natural cover in the leach field, and outside the parking area, is good old hardpan. Some gravel, and a little rain to settle fill dirt and disturbed earth, and I expect we won't have a dust problem.

The ground surface around the parking lot, while hard and flat (modulo the overall gentle slope across the entire property), is filled with weeds, grassy clumps, deadwood, and bushy little mesquites. There will be a need for sweat equity to clear paths, tent sites, and informal observing locations in advance of Phase 2 pads. There's a large, and growing, pile of rocks on site for marking the edges of such things. Indications of water sheeting across the ground were clear outside of the disturbed area, so managing this is a Phase 2 necessity.

Speaking of pads, the slab for the well house provides a concrete, on-the-ground feel for just how big a 10 x 10 foot pad is. I've set up my 14-inch Dob at home on a patio space deliberately marked out to be 8 x 8 feet, and my walled observatory is 9 x 9 feet. I've found both adequate in these domestic circumstances. But I quickly decided that 10 x 10 was the minimum size I'd be happy with out there.

I was struck by the intimacy of the site. On paper, it takes on a vast quality. Long treks in the dark between vehicle, tent, telescope, and bathroom loom in the mind. In reality distances are short and getting from place to place won't be time-consuming. I'm sure this will make for a friendly atmosphere at group observing sessions. And until we get to spread out a bit with public pads in Phase 2, and eventually member pads, we'll all have to be conscious of our impact on others, whether observing, relaxing, or resting in whatever quarters we've provided for ourselves. This will set some good social habits in place right from the start.

One of the neighboring compounds, while still a good distance away by city standards, was closer than I had imagined. Other neighbors' residences could be seen. We'll have to be considerate to them, and remember when going about our own business that we are being watched by the people who live there. To them, we're just visitors. So we have to be welcome visitors.

John Kalas secured the gate with a big shiny new lock when we left. Locking the door behind us really did help make it feel like home. The drive back to Tucson was as smooth as the drive out—I beat the train! Margie's Café in Sunsites is a real old-fashioned local café with lots of character. The art on its walls is unusual for a local restaurant. I spent lunch together with Aristotle contemplating the bust of Homer. At the end of Dragoon Road, the

#### **MEMBER REPORTS (cont.)**

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merge back onto I-10 takes place well west of Texas Canyon (so traffic has settled) and there's a good long onramp for getting up to speed. Finally, if the drive back has given you a hankering for a huge slab of pie a-la-mode or a pair of handcuffs, the Triple T Truck Stop is open 24-7.

**TAAA Holiday Party** December 5



TAAA ASTRONOMY COMPLEX

John Kalas was unable to compose the monthly construction update article in time for this newsletter. He will pre-

(Left to right: John Croft, Ron Probst, Teresa-Bippert Ply-

pare and send it out to members via the club's list server.

				[	Dark Sk	ies	for No	vembe	er 200	)9						
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Tu/We	03/04	-	-	-	Sa/Su	1	4/15	18:49	-	5:29	Tu/We		24/25	0:24	-	5:36
We/Th	04/05	18:54	4 –	18:59							We/Th		25/26	1:20	-	5:37
Th/Fr	05/06	18:54	4 –	20:00	Su/Mo	1	5/16	18:48	-	5:29	Th/Fr		26/27	2:16	-	5:38
Fr/Sa	06/07	18:5	3 –	21:07	Mo/Tu	1	6/17	18:48	-	5:30	Fr/Sa		27/28	3:15	-	5:38
Sa/Su	07/08	18:5	2 –	22:16	Tu/We	1	7/18	18:48	-	5:31	Sa/Su		28/29	4:18	-	5:39
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By Erich	Karkosc	hka														

photo)



mate, Claude Plymate, Bill Lofquist with John Kalas taking

 Telescopes for Borrowing

 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

 Unitron 62mmf/15.5 on equatorial mount

 Meade 90mm ETX

 Coulter Odyssey8 8-inch f/4.5 Dobson

 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 - 14 October 2009

Attending: Board members present (5): Ken Shaver (presiding), Luke Scott, Teresa Bippert-Plymate, John Croft, and George Barber. Members present (3): Terri Lappin, Claude Plymate, and Bob Gilroy

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

Minutes from the September Board meeting were approved unanimously.

#### Announcements for Record

The President appointed Terri Lappin as Web Master for the TAAA. The President appointed Liz Kalas as Publicist for the TAAA.

#### Member Feedback

The main lecture needs to start at a regular time. The Board agreed that, going forward, the main lecture will start not later than 7:45 pm (following club announcements).

The club will accept donation of an ETX-125 from Tim Van Devender.

The red LED lamp workshop was a success. A suggestion was made to have the club order lamps and parts in bulk for members to purchase for future workshops. The Board took this under consideration and will follow-up on parts, plans, and cost.

#### Upcoming Meetings

The lecture schedule is filled through March.

#### Treasurer's Report

There were 10 new paid, 3 new unpaid, and 23 renewal memberships during the month of September. The club received payments for 4 paid star parties.

Since the September Board meeting, the club has paid out \$16135.34, mostly related to TAAA Astronomy Complex costs.

#### Telescope Raffle

The drawing for the Meade 10-inch LX200 telescope that is to be raffled by the club will held at the February 2010 general meeting. Ticket prices will be \$5 each or 5 for \$20, and will be sold by Board members, SIG leaders, and members designated by the Board.

#### Special Interest Groups

Terri Lappin reported that 6 members attended the Starry Messenger SIG workshop and that the workshop was very well received.

The Board discussed the need to bring the SIGs in the regular budget cycle, recognizing that the SIGs should have

#### TAAA Board of Directors Meeting - 14 October 2009 (cont.)

approved budgets. A club policy will be established to this effect.

A motion was entered and seconded authorizing payment of printing costs for presentation material for the fall Astronomy Fundamentals SIG workshop. The motion was approved unanimously.

#### **Other**

- A motion was entered and seconded to maintain the current paid star party fee schedule. The motion was approved unanimously.
- A motion was entered and seconded that the Board names the TIMPA observatory the "Gila Monster Observatory" and requesting that the membership affirm the decision at the November meeting.
- The Board discussed training for the TIMPA telescope, and recognized that a backup trainer is needed.

Meeting adjourned at 8:35 pm.

Respectfully submitted, Luke Scott Secretary

	Desert Skies Classified					
FOR SALE	FOR SALE Two books for sale: <i>Telescope Optics</i> by Ruten and van Venrooij, and <i>Small Astronomical Observatories</i> ed. by Patrick Moore. Make offer. Mark Trueblood, 520-455-9263, eves orwiner.obs@gmail.com Mark Trueblood, Director, Winer Observatory, P.O. Box 797 Sonoita, AZ 85637-0797(520) 318-8519 (office)(520) 455-9263(520) 264-8013 (cell) [02/10]					
FOR SALE	Celestron camera tripod with 1/4-20 mounting screw. \$15. Terri Lappin, 579-0185 or tklappin[at] comcast.net. [02/10]					
FOR RENT	The residence at the TIMPA site is available for rent. The house is a 3 bedroom, 1 bath. The rent is \$450/ mo. but will be discounted \$100 if the renter is willing to empty the trash cans for TIMPA. They may have additional credits for other duties at the site. Please contact TIMPA President Mike Cummins at 299-0593. e-mail michael(at)mcummins.com					
FOR RENT	Large concrete telescope pad with electricity. Located in Jack Newton's AZ Sky Village, Portal AZ, on 'the flats' East of Cave Creek Canyon in the Chiricahua mountains. Comes with 3 bedroom/2 bath home. Visit http://www.arizona-dreaming.com. For information. Contact Irene Kitzman, (520) 777-6222 home, (520) 306-0860 cell. [01/10]					
SERVICE	Green laser pointer need repair or tune up? Contact Donald Arndt at (415) 215-2409 or donaldja(at)pacbell.net. Typical repairs cost \$25-50, including return shipping.					
WANTED	I bought a used 2.5" Asian Refractor telescope at a garage sale and refurbished it to be a prize at the local grade school student science fair. It didn't have any eyepieces and uses the small, .956" diameter type. If you have one, or more, of those small eyepiece and would be willing to part with it (sell or donate), please contact Lou Faix (phone 825-7421) or (email <u>ljf747pl@wbhsi.net</u> ) [01/10]					

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.

#### NASA SPACE PLACE PARTNER'S ARTICLE



NATIONAL AERONAUTICS AND SPACE ADMINISTRATIO



#### Staring at Lightning

There's something mesmerizing about watching a thunderstorm. You stare at the dark, dramatic clouds waiting for splitsecond bursts of brilliant light — intricate bolts of lightning spidering across the sky. Look away at the wrong time and (FLASH!) you miss it.

#### NASA SPACE PLACE PARTNER'S ARTICLE (cont.)

Lightning is much more than just a beautiful spectacle, though. It's a window into the heart of the storm, and it could even provide clues about climate change.

Strong vertical motions within a storm cloud help generate the electricity that powers lightning. These updrafts are caused when warm, moist air rises. Because warmth and lightning are inextricably connected, tracking long-term changes in lightning frequency could reveal the progress of climate change.

It's one of many reasons why scientists want to keep an unwavering eye on lightning. The best way to do that? With a satellite 35,800 km overhead.

At that altitude, satellites orbit at just the right speed to remain over one spot on the Earth's surface while the planet rotates around its axis — a "geostationary" orbit. NASA and NOAA scientists are working on an advanced lightning sensor called the Geostationary Lightning Mapper (GLM) that will fly onboard the next generation geostationary operational environmental satellite, called GOES-R, slated to launch around 2015.

"GLM will give us a constant, eye-in-the-sky view of lightning over a wide portion of the Earth," says Steven Goodman, NOAA chief scientist for GOES-R at NASA's Goddard Space Flight Center. Once GLM sensors are flying on GOES-R and its sister GOES-S, that view will extend 18,000 km from New Zealand, east across the Pacific Ocean, across the Americas, and to Africa's western coast.

With this hemisphere-scale view, scientists will gather an unprecedented amount of data on how lightning varies from place to place, year to year, and even decade to decade. Existing lightning sensors are either on the ground — which limits their geographic range — or on satellites that orbit much closer to Earth. These satellites circle the Earth every 90 minutes or so, quickly passing over any one area, which can leave some awkward gaps in the data.



The Geostationary Lightning Mapper (GLM) on the next generation of GOES satellites will detect the very rapid and transient bursts of light produced by lightning at near-infrared wavelengths. This image was taken from the International Space Station and shows the Aurora Australis and lightning.

Goodman explains: "Low-Earth orbit satellites observe a location such as Florida for only a minute at a time. Many of these storms occur in the late afternoon, and if the satellite's not overhead at that time, you're going to miss it."

GLM, on the other hand, won't miss a thing. Indeed, in just two weeks of observations, GLM is expected gather more data than NASA's two low-Earth orbiting research sensors did in 10+ years.

The new data will have many uses beyond understanding climate change. For example, wherever lightning flashes are abundant, scientists can warn aircraft pilots of strong turbulence. The data may also offer new insights into the evolution of storms and prompt improvements in severe weather forecasting.

Staring at (FLASH!) Did you miss another one? The time has come for GLM.

Want to know how to build a weather satellite? Check the "how to" booklet at scijinks. gov/weather/technology/ build\_satellite.

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

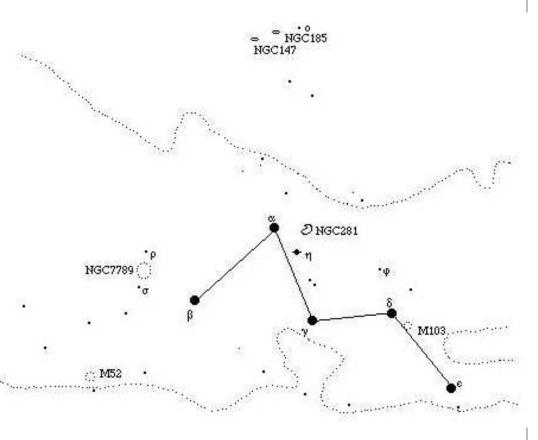
#### **Constellation Report by Chris Lancaster**

#### Cassiopeia

The Queen

Queen Cassiopeia plays a part in a complex story, which involves her daughter Andromeda, as well as other mythological characters such as Perseus, Cetus, the gorgon Medusa, and Pegasus. She ruled an ancient land with her husband, Cepheus, until a character flaw resulted in her downfall. This was her boastfulness, which was regarded with much disdain by the gods. To silence her own rants of how beautiful and talented she was, they sent punishment her way in the form of some tragic events. In the end, her country's coast had been destroyed by a sea monster (Cetus), and Cassiopeia herself was chained to a spot in the heavens to forever spin around the celestial pole as if to serve as a spectacle to all.

Despite Cassiopeia's ignoble status among the stars, her constellation lies along the Milky Way, and therefore it contains some wonderful deep sky treasures. A case be could argued for NGC7789 being as Cassiopeia's best star cluster. It doesn't contain any bright stars, but its richness is striking. It appears as a soft. cloudy area of magnitude 6.7 and 16' in size roughly half wav between Rho and Sigma Cassiopeiae or RA 23h 57m Dec +56d 44'. Through the however, telescope, it resolves into a spray of hundreds of points of light, each shining at magnitude 11 to 18. The northwest corner of the constellation presents M52. lt's comparable to NGC7789 by having over 100 stars of magnitude 9 to 13. You'll find M52 at 23h 24.2' Dec 61.5d, or follow the line formed by Alpha and Beta



Cassiopeiae to the northwest a bit further than the distance separating those two stars. If we zoom to the eastern half of the constellation, we'll see M103, another star cluster located at RA 1h 33.2' Dec +60d 42'. This one is quite a bit leaner in the number of stars 1 degree ENE of 2.6 magnitude Delta Cassiopeiae. It measures about 7' in diameter with stars that appear to spiral outward from the center.

To find any galaxies here requires looking away from the obscuring band of the Milky Way. When we move our gaze southward, you may notice that the Andromeda galaxy (M31) lies in the same direction, and we come across two far removed dwarf satellite galaxies of this great spiral. They are about 7 degrees to the north, which corresponds to a true distance from M31 of close to 250,000 light years. If we start at Omicron (o) Cassiopeiae and move one degree west, we find NGC185 at RA 0h 39' Dec +48d 20.3'. NGC147 lies one more degree west at RA 0h 33.2m Dec +48d 30.5'. Both galaxies are small elliptical systems very similar in size and shape: magnitude 10.1, size 12'x 10' for NGC185; and magnitude 10.4, size 13'x 8' for NGC147. To observe either galaxy requires a fair amount of aperture (such as 8") and a dark sky. You will see just a faint brightening of the background sky.

If you are eager for another challenge, then NGC281 is appealing. This is a faint emission nebula 1.7 degrees east of magnitude 2.2 Alpha Cassiopeiae (RA 0h 52.8' Dec +56d 37'). A nebula filter improves your chances of seeing this diffuse cloud of gas of magnitude 7 and spread out over 35' of the sky.

One of the best double stars in Cassiopeia (or anywhere) is Eta Cass. Shining at magnitudes 3.5 and 7.5, they are near maximum separation, currently about 14". Their colors are contrasting white and gold.

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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..
- 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..
- 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 1/4 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.