

Desert Skies

Tucson Amateur Astronomy Association

Volume LVI, Number 4

April, 2010



TAAA at the Tucson Book Festival

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Cover Photo: TAAA members provided solar viewing and astronomy education at the Tucson Festival of Books.

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Membership in the TAAA

Annual Fees

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

Discounts (one discount allowed, subtract from above rates)

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

Options (add to above membership rates)

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

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, TAAA Astronomy Complex, and General/Undesignated.

Renewal Information

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

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

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

Tucson Amateur Astronomy Association
PO BOX 41254 Tucson, AZ 85717

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

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:

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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)

President's Message

It's hard to believe that April is upon us. This month we are looking forward to a very active Star Party agenda. The big annual event is the Sharing the Sky Star Party hosted by David and Wendee Levy. This year's event will be held on Astronomy Day, which falls on April 24th this year. We look forward again this year for all of the club members to bring our wonderful love of the night skies to the public. As usual the proceeds from this year's event will go to the great outreach programs of the Levy's Sharing the Sky Foundation.

April is typically one of our busiest School Star Party months and we look to the dedicated volunteers within the club to help out with providing the scopes for these events. As part of our School Star Party Program, I would like everyone to join me in thanking and welcoming Mark Meanings as our new School Star Party Coordinator. Mark will be taking the place of Paul Moss, who has served in this capacity for the past 5 years. I would also like to send Paul our sincerest thanks for all of his dedication and time. Thank you again Paul and Mark.

Please keep in mind that we are in the process of accepting nominations for the next Board of Directors elections coming up in May. If you are interested or know someone

who is interested in serving on the board, please make sure you contact a member of the nomination committee. The members of the committee are Mary Turner, Carter Smith, and Lawrence Schindler.

I am very grateful to all of the TAAA Volunteers and invite you to read more about this group of generous people that make TAAA run as the successful organization it is.

Lastly, I would like to remind everyone that the AL-Con2010 Expo is coming up this summer and is looking to be a huge event for Tucson and its Astronomy community. We have many great speakers, sponsors, and other activities surrounding this event so get your reservations in soon. We also have a few openings for people who would like to volunteer to help out with the event. Volunteers who give a minimum of 4 hours of their time at the event will receive a complementary admission to the event. Please see Keith Schlottman for more information.

As Always, Clear Skies,

Ken Shaver
TAAA President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, April 2, at the Steward Observatory Auditorium – Room N210

ASTRONOMY ESSENTIALS: 6:30 pm
Title: Seasonal Objects
Speaker: Dr. Mary Turner

Dr. Turner will give her quarterly update on the best objects for observing during the spring and early summer season.

GENERAL MEETING: 7:30 pm
Title: Native American Concepts of Sky Beings
Speaker: Dr Carol Locust

Native American tribes have concepts of the sky, all the objects in it, activities among the objects, and the relationships of Sky Beings and Earth people. Many of the concepts are ancient knowledge passed from each generation to the next, knowledge that tribal members had long before modern scientist discovered them. Night Sky Beings are very important for Native cultural ceremonies, most of which are conducted according to Night Sky Being's positions in the sky.

Our lecture will be presented by Dr Carol Locust, Ed.D. Dr Locust works through Indian Health Service, providing traditional services for tribal members who are at the UMC cardiac unit. Before her work at UMC, Dr Locust worked with tribal groups to improve services for persons with disabilities. Though she is officially retired, Dr Locust continues her work at UMC. She shares cultural and spiritual concepts, beliefs, and mental and physical health in-

formation in lectures and through publications. Dr Locust is affiliated with the Eastern Band Cherokees.

BOARD OF DIRECTORS MEETING: Wednesday, April 14, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

- STAR PARTIES AND EVENTS:**
- 01 April - Rio Vista ES Star Party
 - 05 April - Astro-Imaging SIG at China Rose
 - 07 April - Sabino High School Star Party
 - 08 April - Tucson Country Day School Star Party
 - 08 April - Astronomy Fundamentals SIG
 - 10 April - Pima County Natural Resources Star Party
 - 10 April - TAAA Star Party at Las Cienegas
 - 10 April - TAAA Star Party Chiricahua Astronomy Complex
 - 15 April - Castlehill Country Day School Star Party
 - 16 April - UofA Astronomy Students Star Party
 - 17 April - TAAA and AF-SIG Star Party at TIMPA
 - 20 April - Agua Caliente ES Star Party
 - 21 April - Pima Community College, Northwest Campus
 - 22 April - Hohokam MS/ Las Cienegas
 - 23 April - Prince Elementary School Star Party
 - 23 April - UofA Astronomy Students Star Party
 - 24 April - Sharing The Sky Public Star Party

NEWSLETTER SCHEDULE: Deadline for articles: Sat, April 24. 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: Randy Taylor, Eddie Adler, Richard Mattner, Tiffany Pepper, George De Gon, Patrick and Vickie Marron, Sheldon Danielson, Edward Eastburn, Richard Jiroudek, Michael Dahl, Arthur Kotz, John Skillicorn, Eric Palmer and Kaye Bullock. Whew! (But that was the last two months...) 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.)

Report of the TAAA Nominating Committee

The TAAA Nominating Committee has compiled a list of candidates for the election of TAAA Board Members to be held during the May 7th general meeting. The current list of nominated and confirmed candidates standing for the TAAA Board of Directors Election, to be held as part of the May General Meeting include:

President - Keith Schlottman
 Vice President - Bill Lofquist
 Secretary - Luke Scott
 Treasurer - Teresa Bippert-Plymate
 Member-at-Large - George Barber
 Member-at-Large - John Croft
 Member-at-Large - John Kalas

Nominations can be entered at any time preceding the election. Nominations for write-in candidates shall be accepted from the floor at the May 7th general meeting. Write-in candidates must accept their nomination in person or in writing before the vote is taken. Any member who has been a member for one year, and is a member in good standing, may be nominated for office. All members of the Board of Directors must be at least 18 years of age.

Submitted by the Nominating Committee:
 Mary Turner
 Larry Scherer
 Carter Smith

Astro-Imaging SIG Meeting

Monday, April 5, 7pm
 China Rose, NE corner Speedway/Rosemont

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

TAAA 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.

Astronomy Fundamentals Special Interest Group AFSig Lunar Observing Program

April 8

In our April Meeting (April 8th), we will launch the AFSig Lunar Observing Program. Mary Turner has volunteered to direct this observing program. Although we astronomers often decry the Moon as "light pollution", deep down most of us enjoy observing it, showing it to others and trying to understand its history, which has much in common with that of our Earth. We will discuss a series of lunar features, some of which can be seen naked eye, others requiring either telescope or binoculars. A list of 25 features, which can be seen at different stages of the month-long lunar cycle, will be presented on Thursday, April 8th. Saturday night April 17 at TIMPA, all interested can get a start on finding the designated targets.

Over the next several months, we can get together for real or virtual observing sessions to complete the hunt. After completing the requirements for observing all the targets, the observer will receive an AFSIG Observing Certificate. Additionally, each of the required features is also part of the Astronomical League's Lunar Club, so you can be well on your way to fulfilling that goal as well. There will be a sign-up sheet at TAAA regular meeting on April 2... or you can sign up by emailing Mary Turner - umurf@earthlink.net or Bob Gilroy - fundamentals@tucsonastronomy.org. Please include your name, email address and phone number so we can contact you with all the details.

SHARING THE SKY - FLANDRAU SCIENCE CENTER

National Astronomy Day Star Party and Fundraiser
 Saturday, April 24

Mark your calendars for Saturday, April 24, from 3:00 to 10:00 PM. This year Sharing the Sky and Flandrau Science Center will be celebrating National Astronomy Day on the University of Arizona Mall across from Flandrau Science Center.

As in years past, we will have telescopes set up for solar viewing in the afternoon and for night sky viewing in the evening. There will also be some special hands-on activities utilizing the Night Sky Network Toolkits for children and adults. We will need members to help with these activities so, if you don't have a telescope and would like to help, we would appreciate your assistance with these activities and collecting donations. We would like to request that members supporting the event who have canopies bring them and set them up to enhance the

Club News (cont.)

early-afternoon sun protection of the donation tables and hands-on activities.

David and Wendee Levy would like to thank all of you for supporting this worthwhile event. Support from the TAAA is essential for the success of this activity. There will be sign-up sheets at the April club meeting or you can call or e-mail Liz Kalas at 620-6502 or lizkalas@cox.net.

TAAA Volunteers Needed for April 24th

We will be supporting the Sharing the Sky Foundation and Astronomy Day with fun activities on the U of A mall on April 24th. In addition to solar and night time observing, we'll have a tent set up with our Night Sky Network toolkits. Terri Lappin will be coordinating the tent



haven't yet tried out these toolkits, this is an excellent time to learn. It takes only a few minutes to learn the basics for most of the projects we'll have at the event.



activities. She is looking for TAAA members who can assist with these great hands-on activities. Kids and adults enjoy them. We'll likely have components from the newest Dark Skies Education Kit, the Black Hole Survival Toolkit, the Supernova Toolkit, the Exploring the Solar System Toolkit, the Telescopes - Eyes on the Universe Toolkit, and Our Galaxy, Our Universe Toolkit all on hand. If you

Please contact Terri at smsig[at]tucsonastronomy.org, or call 520-977-1290 to help out.



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Club News (cont.)

Upcoming Lectures

Our May meeting is Member's Night. Please consider making a presentation at the May 7th meeting. There will be a sign up sheet at the April 2nd meeting. We'd like to know who is giving lectures at Member's Night so we can let the membership know in our next newsletter. Please sign up in advance at this month's meeting.

Our May meeting is also our election night. All offices are open. Anyone wanting to run for an office is encouraged to talk to Dr. Mary Turner, Nominating Committee chair. See page 2 for contact information. Nominations from the floor will be accepted as write-in candidates only after acceptance by the nominee in writing or in person.

Absentee ballots may be requested by contacting Teresa Plymate. They must be presented to the President prior to the May meeting. Absentee ballots may not contain the name of late nominees.

New Solar Observing Group Meets

By Dennis Dawson

On Saturday, March 21, the members of the new Solar Observing Program, which is part of the Astronomy Fundamentals - SIG, met for a workshop led by George Barber to make inexpensive but effective solar filters for our telescopes. After making the filters, we took our telescopes outside to take a look at the sun. Although there were no large sunspots to see that day, we were able to use Dennis Dawson's hydrogen alpha telescope to look at the prominences and filaments that were observable.

This was a follow-up to the interesting Sun presentation at the regular AF-SIG meeting on March 11 given by George Barber and Dennis Dawson. Future meetings will be held for observing the Sun and learning how to use the various tools used to make observation notes.

If you would like to receive an email about future events, please email Dennis Dawson at [dennisldawson\[at\]gmail.com](mailto:dennisldawson[at]gmail.com) and request to be added to our mailing list.



Night Sky Network Toolkits

We received a new addition to our set of outreach toolkits. Connie Walker presented the Dark Skies Education Kit to the TAAA after her lecture at our Feb 2010 meeting. This toolkit will be managed through our Night Sky Network program. The toolkit is very effective at demonstrating

the problem of light pollution and control methods to reduce light pollution. Maybe your neighborhood has nasty outdoor lighting. Consider demonstrating the effectiveness of proper shielding using the materials in this toolkit. It's not only educational, but it may help them save energy by switching to lower wattage bulbs.

Below is a list of our Night Sky Network Outreach Toolkits and other resources for teaching astronomical concepts. The Night Sky Network program recognizes the essential role that amateur astronomers play in public astronomical education by providing us with these toolkits well suited for use at star parties. They were developed by the Astronomical Society of the Pacific under contract with NASA. If your scope is not well suited for public viewing, or if you want a change in pace, consider bringing a toolkit to one of our community, school, or church star parties. They are also great options for those questionable, cloudy nights. With each use of a NSN toolkit we are closer to qualifying for the next toolkit which has been rumored to be about comets.

Night Sky Network Toolkits:

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

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

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

Other Resources:

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

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

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

Each NSN toolkit contains several projects. You pick and choose which part you want to use. They contain all essential materials. A Resources CD and a Training DVD is also included. Individual training in their use is available.

Please make arrangements with Terri Lappin ([tk-lappin\[at\]comcast.net](mailto:tk-lappin[at]comcast.net) or 579-0185) to borrow any toolkit.

Starry Messengers in Action at Festival of Books

We had an amazing time at the Tucson Festival of Books on March 13 and 14. It's difficult to estimate how many people visited our exhibit. We had a steady flow of people

Club News (cont.)

during both days, 8 hours each day. During most of the event, there were never fewer than 4 people visiting at a time, with a maximum of 20 or so during the peak of the event. An educated guess would be at least 800 people visited our booth. About half were kids. Let's hope we inspired some to consider science as a possible lifetime pursuit.

Saturday morning and afternoon were the busiest. Jim Knoll and Terri Lappin managed to entertain at least 100 or more people in the first 3 hours of the event. About noon, both were wondering when reinforcements were going to arrive. Soon, Twila Peck and John Croft showed up. Keith Schlottman and his son Jason also arrived. Keith and Jason took over the Black Hole demonstration for most of the afternoon. Early in the day, the TAAA SolarScope was set on the corner of a table so people could see a projected image of the sun. Low and behold, the Sun was cooperating! Two nicely positioned, large, sunspots were easy to see. Later in the day, our exhibit area was in the shade. When Loretta McKibben arrived, the Solarscope was moved outside the exhibit area and she gave a complete solar astronomy presentation. The crowds continued through to the end of the day. Gary



Jim Knoll demonstrates the NSN Black Hole Survival Toolkit early on Saturday morning.

Rosenbaum assisted in solar observing, giving Loretta a break. At 5:30pm we covered everything up with tarps and went home for a good rest.

Sunday's volunteers were very helpful. Paul Moss and Ken Shaver arrived early in the day for observing and stayed all day long! Between the two, there were two Coronado PSTs, one projected white light image, and one white light telescope image. A lot of people got to see the Sun that day. Loretta McKibben, John and Elaine Croft, Dick and Lois Hanson, and Willem Moss did wonderful jobs talking to the public. Terri Lappin got a welcomed break at lunch time on Sunday. Things were well under control, allowing her to wander off for lunch and spend some time visiting other booths. Terri Lappin had not only prepared all the exhibits during the weeks before the festival, but she also set up the booth (with the help of Jim Knoll and Brian



A busy crowd at the exhibit on Saturday afternoon. TAAA members Brian O'Connell, Jim Knoll, and Jason Schlottman are easily visible. John Croft and Keith Schlottman are hidden from full view.

O'Connell) early Saturday morning, and was present at the booth during the entire 2-day event, with the exception of her well deserved break.

Our Night Sky Network Black Hole Survival Toolkit was a huge hit. One person said he'd wished that gravity had been explained that way when he was taking college courses. The kids enjoyed it the most. They had no trouble playing with the marbles and weights. Why are adults reluctant to experiment with marbles and weights the way kids do? They were once kids. On Sunday, Willem Moss, son of Paul Moss, did an excellent job

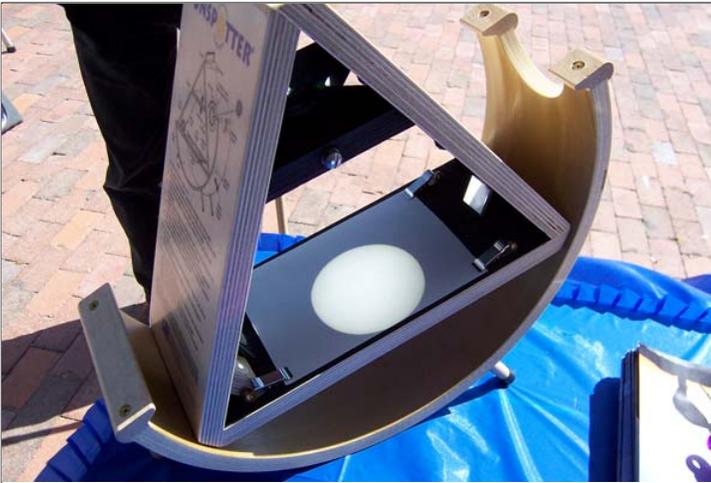


Keith Schlottman lets some young people experiment with the Black Hole Survival Toolkit.

teaching about black holes. Others who explained gravity to the public that weekend were Jim Knoll, Bob Gilroy, Keith Schlottman, Loretta McKibben, and Terri Lappin.

A table was devoted to a model of the solar system, the galaxy, and the universe. Did you know, if we use a

Club News (cont.)



An image of the sun is projected by Paul Moss's SunSpotter scope. Two sunspots were easily visible.



Ken Shaver explains to the crowds what they will see through his telescope fitted with a white light solar filter. Ken had a Coronado PST mounted on the opposite side of this scope, so two people could look at the same time.

normal size CD to represent the Milky Way Galaxy, the visible universe is only 10 miles in radius? However, if the Sun were a meter across, the earth would be about 1/3 of an inch across and 120 yards away. One young person saw Willem teaching the crowds about black holes and wanted to teach something, too. He hung around at least an hour telling people about the scale of the solar system.

Lots of educational handouts were available, including a planisphere that could be made at home, a list of books and websites to learn more, and Night Sky Network handouts about stellar evolution, the solar system, and the moon. IYA stickers and bookmarks were given away. (Bookmarks are very popular at book festivals!) TAAA information and membership information was available, so hopefully we'll see new faces at future meetings. Other NASA and Astronomy Magazine publications were also available for the taking.

Here's a list (hopefully complete) of the TAAA members who volunteered at the booth. Please accept our apologies if you volunteered at the booth but are not listed. We want to have accurate records, so please email your name to smisig@tucsonastronomy.org so you can be recognized.

Elaine Croft	John Croft
Bob Gilroy	Dick Hanson
Lois Hanson	Jim Knoll
Terri Lappin	Willem Moss
Loretta McKibben (and telescope)	
Paul Moss (and telescope)	
Brian O'Connell	Twila Peck
Gary Rosenbaum	Keith Schlottman
Jason Schlottman	
Ken Shaver (and telescope)	



John Croft monitors the information table while Paul Moss explains the projected solar image to a young person. At the same time, someone is peering at the sun in H-alpha light using Paul's Coronado PST.



Willem Moss guides young visitors in finding hidden black holes in one of the Black Hole Survival Toolkit projects.

Club News (cont.)

Several other TAAA members came by the exhibit to visit while they were at the Festival of Books. All the support was greatly appreciated. Thank you, all.

The Tucson Festival of Books was a wonderful outreach opportunity for the TAAA. We were granted non-profit status by the IRS based on our educational outreach efforts. This event allowed us to fulfill that mission. Maybe we inspired a few future astronomers in the process. For sure, we had fun doing it.



Paul Moss and his Coronado PST for H-alpha solar observing.



Loretta McKibben talks to two women about gravity and black holes.



Our Starry Messengers did a wonderful job at the Tucson Festival of Books last month. This month, we continue our outreach efforts with the Sharing the Sky star party. This event on April 24th coincides with the National Astronomy Day. Please see the announcement elsewhere about the need for volunteers.

On May 22nd, we will hold another Starry Messenger workshop. The Milky Way Galaxy will be the workshop topic. As with all Starry Messenger Workshops, our goal is to assist our members in feeling comfortable with their understanding of astronomical topics and concepts and help them pass that knowledge onto the public. How do you describe something as immense as a galaxy to someone who doesn't understand what a galaxy is? Using common items, you can help the public get a good grasp on what a galaxy is and where we fit into the scheme of things.

April is usually a fairly active month for star parties at schools, so check out the list of school star parties elsewhere in the newsletter and sign up for at least one event that's in your part of town.

The Starry Messenger Special Interest Group provides an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts. We offer tools and techniques for explaining astronomy to people of all ages. 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 Terri Lappin and Loretta McKibben. If you are interested in becoming a Starry Messenger leader, talk to Terri or Loretta. The SIG leaders write newsletter articles, plan workshop and meeting activities, and contribute to the planning of outreach events.

2010 Marc Aaronson Memorial Lecture

April 9, 7:30pm, Steward Obs Lecture Hall (N120)

Title: Searching for the Coldest Brown Dwarfs: Breaking the Distinction between Stars and Planets

Aaronson Recipient: Dr. J. Davy Kirkpatrick, California Institute of Technology

The 2010 Marc Aaronson Memorial Lecture will take place on April 9 at 7:30 pm in Steward Observatory in room N210. This year's honored lecturer is J. Davy Kirkpatrick, who invented a classification scheme for low-mass stars and brown dwarfs. In a lecture entitled "Searching for the Coldest Brown Dwarfs: Breaking the Distinction between Stars and Planets," Dr. Kirkpatrick will discuss brown dwarfs and other low-mass objects and the role that the WISE spacecraft (Wide-field Infrared Survey Explorer) is expected to play in detecting them.

Club News (cont.)

The Aaronson lecture series was established in honor of the late Marc Aaronson to promote and recognize individuals or groups whose body of work has resulted in a significant deepening of our understanding of the universe. Dr. Kirkpatrick, who received his Ph.D. in 1992, is the first former Steward Observatory graduate student to be honored with the Aaronson lectureship.

News about David and Wendee Levy

By Thom Peck

Congratulations to David Levy for multiple accomplishments since the last newsletter. Near the end of February, Dr. David H. Levy, TAAA past president, and until now Doctor only in honorarium (5 times), is now Doctor of Philosophy (PhD) from the Hebrew University in Jerusalem, Israel. David and wife Wendee will attend graduating ceremonies in Israel in early June.

If that wasn't enough, as part of the Jarnac team to hunt for asteroids and comets, David, along with Wendee and Tom Glinos, have discovered Comet P/2010 E2 (JARNAC), a periodic comet in the 18.5 magnitude range. After reporting that the 25 inch Ritchey-Chrétien telescope at Jarnac Observatory had found an asteroid, it was determined several days later that the asteroid was indeed a comet. It will come back around in a bit over 25 years. Incidentally, we think that makes David the first, and only, person to have credit for discovering comets visually, photographically, and digitally. This makes comet number 23 for him.

Printed Newsletters for Members

Our program to switch from using a printed newsletter to an electronic version has been very successful. Use of electronic medium has allowed our newsletters to give you even more information, include color photographs, and has kept your dues from increasing. Even though the vast majority of members participate in the electronic version, there are still some members who receive a printed version. Due to rising printing and mailing costs, the board has resolved that any member who wishes to

receive a paper copy of the newsletter will need to pay an additional fee for this service, starting at the point of their next membership renewal. This additional cost has not yet been established, but will be based on the cost of producing and mailing the March 2010 newsletter.

What makes TAAA run?

By Ken Shaver
TAAA President

I would like to say a big thank you for all of the wonderful contributions we get from our membership. I am not talking about the financial kind of contributions, although they are greatly needed and appreciated. I am referring to the countless hours members give toward all of the activities within the club. Just take a look at the list of office positions on page two and the vast array of activities going on throughout this newsletter. Behind every Title, activity, article, special interest group, meeting, and program you will find a host of volunteers that make this club run. Along with all of the recognizable contributions we can see, there are countless things members do every month that go unmentioned. Since taking on an active roll on the Board of Directors I have come to realize how much really goes into making TAAA a world-class organization. It all takes a huge effort and I am very proud to be associated with this fantastic group of people.

As TAAA takes on projects with our Dark Site and ALCon2010, as well as a host of programs associated with last year's International Year of Astronomy, we will again be looking for those members with ideas and enthusiasm for making these types of programs a success. You will see that this month and in the months that follow, there are going to be sign-ups for such programs as ALCon2010, Starry Messenger, and Sharing the Sky.

Have you ever marveled at the look in someone's eyes when they look through a telescope for the first time? Have you wondered what you can do to communicate the importance of saving our dark skies for the future? The programs that I just mentioned are for you. If you would like to help showcase the variety of things that make Tucson the astronomy capital of the world, then ALCon2010 can use you. If you have a desire to see TAAA

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

Club News (cont.)

have a top-notch place to take your telescope for dark viewing or astro-imaging, then talk to someone on the Strategic Planning Group for the CAC site, or look into joining one of the TAAA Special Interest Groups. I am sure they would love to hear from you. If you have something to share that you believe will benefit your fellow astronomers, consider sharing it in a workshop.

As you can see, there are a great many things that TAAA can offer its membership, and it all comes from the

members themselves. Thanks again to all of you give so freely to TAAA.

Website Password to Change Next Month

The password for accessing the Member's Area of the TAAA website will be changing with the release of the May issue of Desert Skies. Please be sure your dues are paid up so you will receive the updated password.

Items of Interest

Websites: Trips On The Internet Super-Skyway

By Rik Hill

Did you go to the Arizona Meteorite Exhibition? It was held on the first weekend of the Tucson Rock, Gem, Mineral & Fossil show, or the "Tucson Show" at Lunar & Planetary Lab. next to the Flandrau Planetarium. That was the kick-off to the 50th Anniversary of the Lunar and Planetary Lab., one of the preeminent planetary research institutions in the world. There are many events planned over the next year and most (maybe all) will be open to the public with information available on the web about them and the history of LPL.

A good place to start exploring this event is at the LPL site for this:

<http://lpl50.arizona.edu/>

Here you will find some personal insights on the founding, evolution and history of this world famous lab from people who have worked there over the decades. The latest information on upcoming talks about work that has been done at the LPL over the years will also be found on this page.

Some more information on the history and future of LPL can be found at:

<http://www.lpl.arizona.edu/history/>

While current research and missions are linked at:

<http://www.lpl.arizona.edu/research/>

Also keep an eye on the website for the Mt. Lemmon Sky Center at:

<http://skycenter.arizona.edu/>

for a special "open day". It will be Saturday, May 22 from noon to 6 PM. Attendance will be limited to 75 cars (which could mean around 250 people). Promotion and reservations are being handled by the LPL business office. There will be meteorite displays, exhibits discussing the history of LPL in the Catalina's, solar viewing, tours of the 60 inch (one of the telescopes used by Catalina Sky Survey in finding near earth asteroids), walking tours of the mountain with someone who was stationed at the Air Force station when it was active, and we are hoping to have dem-

onstrations from the tree ring lab, and some research studies being run up there over the summer. We may also have the portable planetarium from Flandrau and any other related programs that we can muster. It has not been "officially" announced and some of these details and arrangements could change so watch the above website.

Hope to see you there!

As always, if you know of a particularly good website, or silly ad (I'm collecting bad astro-ads), you would like mentioned here, drop me a line at: rhill@lpl.arizona.edu

LPL 50th Anniversary Lecture

Wednesday, April 21, 2010, 7 pm
UofA Kuiper Space Sciences Building
Room 308

"Chicken Little's Reservoir: LPL's Legacy and Current Advancements in Near-Earth Asteroid Population Detection and Mitigation Efforts."

By Faith Vilas, Lunar and Planetary Laboratory alumna and director of the Multiple Mirror Telescope Observatory.

The transient population of near-Earth asteroids, or NEAs, represents the largest fraction of the solar system objects that can impact the Earth. For the first time in its history, humankind has the capacity to consider how to prevent a catastrophic collision of a near-Earth object with the Earth, and the audacity to imagine that it can do so. In pursuit of this goal, scientists from the Lunar and Planetary Laboratory have played a major role in shaping our understanding of the local to global catastrophic damage threat to humankind from the impact of solar system objects on the Earth's surface. The first concerted effort to detect NEAs was pioneered at the LPL; telescopic detection and characterization of NEAs – including the first detection of an imminent impactor, 2008 TC3, on its final approach to the Earth – continue at LPL to this day. The scars of earlier encounters of NEAs with the Earth are studied to understand their effects on the planet's history and evolution. Two robotic spacecraft have visited the NEAs 433 Eros and 25143 Itokawa. Large diameter telescopes now actively engage in observational studies of

NEAs in order to expand our characterization of these objects. And, in a move to direct further detection and mitigation efforts in the United States (and encourage international efforts), the National Research Council has just released a study on defending planet Earth.

Vilas will review past, present and possible future NEA studies and the LPL's involvement in saving humankind from mass destruction.

Member's Events

Rattlesnake Alert!

It's spring again, and our reptilian friends have come out of hibernation. Be alert for rattlesnakes! Rattlesnakes are generally aggressive only if disturbed. If you see one, keep a safe distance and DO NOT try to interact with it in any way. Snakes are much faster than our reflexes, and should be handled only by professionals. Wear boots and long jeans. For more information, go to <http://en.wikipedia.org/wiki/Rattlesnake>



Along with rattlesnakes, other desert critters, such as gophers and ground squirrels, make their home wherever they want. These residents can leave holes and other potential tripping hazards, so be careful when walking.

TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, 10 April

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. Plan to 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. See the directions to Las Cienegas on the outside flap of this newsletter.

TAAA Star Party at CAC

Saturday, April 10

The Chiricahua Astronomy Complex (CAC) is the club's newest observing site. Located in Cochise County approximately 100 miles from the center of Tucson, the site includes a full bathroom facility. At an elevation of 4800 feet, be prepared for cold temperatures. Try to arrive before sunset. Unlike the other two club observing sites, TIMPA and Las Cienegas, the CAC site requires that members make reservations for both monthly club star parties and private member use. We are restricted by a 60 person/30 vehicle maximum limitation. If you would like to attend, contact CAC Director John Kalas via e-mail at jckalas@cox.net or by phone at 620-6502. Reservations will be on a first come - first serve basis. Depending on

the number of members interested in attending, guests may not be allowed.

Directions to CAC:

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

- Take I-10 East from Tucson past Benson.
- Exit I-10 at Dragoon Road (Exit #318) – Turn right onto Dragoon Road at bottom of exit ramp.
- Travel 13.5 miles southeast to intersection with Route 191 and turn right (south).
- Travel 17.9 miles south (past Sunsites and Margie's Corner Café at High St. on the right and Border Patrol checkpoint) to intersection with Route 181 at Sunizona and turn left (east).
- Travel 10.9 miles east to intersection with S. Price Ranch Road and turn right (south). S. Price Ranch Rd. is a dirt road just before you reach mile post 49 (cluster of mailboxes on right on Rte. 181).
- Travel ½ mile south on S. Price Ranch Rd. to intersection with E. Perseus Way (wide dirt road with E. Perseus Way street sign on left) and turn left (east).
- Travel east on E. Perseus Way slightly more than ¼ mile to entrance of Chiricahua Astronomy Complex, address 9315 on right (twin brown gates flanked by white rail fences set back 50 feet from road). Look for TAAA sign on left side of entry road.

TAAA and AF-SIG Star Party at TIMPA

Saturday, 17 April

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. 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 cool temperatures. Directions to the TIMPA site are located on the outside flap of this newsletter.

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.

Rio Vista ES Star Party **North-Central**
 Thursday, 4/1/2010 No. of Scopes: 6

Rio Vista ES will be holding 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: 6:48pm Dark Sky: 7:41pm Moon Phase: (no moon during viewing).

Sabino High School Star Party **East**
 Wednesday, 4/7/2010 No. of Scopes: 3

Sabino High School will be planning Night Sky Adventure for an estimated attendance of 50 students and parents at 5000 North Bowes Rd.. Speedway east to Wilmot-north to Tanque Verde-east on Tanque Verde to Bear Canyon-north on Bear Canyon to Snyder-east on Snyder to Bowes Rd.-north on Bowes to High School. Viewing will be Baseball fields. Contact person Maryanne Carpenter can be reached at 584-7753 or email Mary-Ann.Carpenter@tusd1.org. Alt. contact person David Carpenter can be reached at 404-5253 or email carpenter520@gmail.com Set-Up Time: 7:15pm. Observing will be from 7:45 pm to 9:45 pm. Sunset: 6:52pm Dark Sky: 7:46pm Moon Phase: (no moon during viewing).

Tucson Country Day School Star Party **East**
 Thursday, 4/8/2010 No. of Scopes: 5

Tucson Country Day School will be hosting Astronomy Night for an estimated attendance of 150 students and parents at 9239 E. Wrightstown. Speedway to Kolb, North on Kolb, East on Tanque Verde, continue on to Wrightstown, will be 2 miles down on left. Viewing will be on the field. Contact person Tara Rayan can be reached at 296-0883 or email trayan@tcdcharterschool.com. Alt. Contact: Brian Kievit, cell 623-1868, bkievit@tcdcharterschool.com. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:52pm Dark Sky: 7:47pm Moon Phase: (no moon during viewing).

Pima County Natural Resources Star Party **West**
 Saturday, 4/10/2010 No. of Scopes: 3

Pima County Natural Resources will be holding Night With the Stars for an estimated attendance of 35 students and parents 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. We’ll set up near the restrooms. (Map included). Viewing will be near restrooms on left side of road. Contact person Sandy Reith can be reached at 520-615-7855 or email sandy.reith@pima.gov. Set-Up Time: 7:15pm. Observing will be from 7:45 pm to 9:45 pm. Sunset: 6:54pm Dark Sky: 7:48pm Moon Phase: (no moon during viewing).

Castlehill Country Day School Star Party Foothills
 Thursday, 4/15/2010 No. of Scopes: 3

Castlehill Country Day School will be preparing for Exploring the Night Sky, for an estimated attendance of 75 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 Hilary Peterson can be reached at 795-0008 or email imahillabeans@yahoo.com. Alt. contact Carolyn Lane, cell 991-0180, email Lane825@cox.net. Set-Up Time: 7:30pm. Observing will be from 8:00 pm to 9:00 pm. Sunset: 6:57pm Dark Sky: 7:52pm Moon Phase: Crescent after New Moon.

UofA Astronomy Students Star Party **West**
 Friday, 4/16/2010 No. of Scopes: 8

UofA Astronomy Students will be hosting Star Party for UofA Students for an estimated attendance of 100 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. Viewing will be in the parking lot of the Visitor Center. Contact person John Kalas can be reached at 620-6502 or email jckalas@cox.net Set-Up Time: 6:30pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:58pm Dark Sky: 7:53pm Moon Phase: (no moon during viewing).

Agua Caliente ES Star Party **East**
 Tuesday, 4/20/2010 No. of Scopes: 6

Agua Caliente ES will be planning Agua Caliente Community-Wide Star party for an estimated attendance of 250 students and parents at 11420 E. Limberlost Rd. Go east on Tanque Verde turn left (north) on Catalina Hwy. Turn right (east) on Prince, past Houghton, then Melpomene, go to end (Homestead), take left (north). Less than a block on left side. Viewing will be Playing field east of

Public Star Parties and Community Events (cont.)

school building. Pass school, take right onto Homestead. Access gate to field/setup is on right. Drive onto field. Contact person Dan Beach can be reached at 520-749-2235 or email dbeach14@cox.net. Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:00 pm. Sunset: 7:01pm Dark Sky: 7:57pm Moon Phase: near First Quarter.

Pima CC, Northwest Campus

Wednesday, 4/21/2010

Northwest

No. of Scopes: 2

Pima Community College, Northwest Campus will be hosting Earth Science Day for an estimated attendance of 500 students and parents at 7600 North Shannon Road. At the intersection of Ina & Shannon, head north on Shannon, down the hill. On the right, you'll see our first driveway before you get to the bottom of the hill, far before the traffic light, just a bit past the MVD sign. If you turn right into that driveway, you can then turn right onto the service road, drive up that road and it curves around to the left. Viewing will be in the Main Courtyard. Contact person Denise Meeks can be reached at 206-2247 or email dmeeks@pima.edu. Lunch will be available for TAAA volunteers! Set-Up Time: 8:30am. Observing will be from 9:00am to 1:00pm. Sunset: 5:52pm Dark Sky: 7:02pm Moon Phase: (no moon during viewing).

Hohokam MS/ Las Cienegas Star Party Southwest

Thursday, 4/22/2010

No. of Scopes: 3

Hohokam MS/ Las Cienegas will be celebrating Youth in Wilderness at Las Cienegas for an estimated attendance of 75 students and parents at Las Cienegas. East on I-10 to Sonoita exit - 83 South. Turn east ~ 1/2 mile past mile marker 39 on the dirt road to Las Cienegas Conservation Area. Follow the flags for 10 miles on EC901. (Past the Empire Ranch HQ.) Stay left at forks. Camp grounds are in the agriculture fields. Contact person Stacia Reeves can be reached at 908-3700 or email Stacia.Reeves@tusd1.org.

Alt. contact name: Ralph Lim, Cell Phone: 400-2523. Set-Up Time: 7:30pm. Observing will be from 8:00 pm to 10:00 pm. Sunset: 7:02pm Dark Sky: 7:58pm Moon Phase: Last Quarter.

Prince Elementary School Star Party North-Central

Friday, 4/23/2010

No. of Scopes: 3

Prince Elementary School will be planning 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 North school parking lot and becomes Estrella. You'll be behind the school and there is an open gate at the East 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: 7:30pm. Observing will be from 8:00 pm to 10:00 pm. Sunset: 7:03pm Dark Sky: 7:59pm Moon Phase: near First Quarter.

UofA Astronomy Students Star Party

Friday, 4/23/2010

West

No. of Scopes: 8

UofA Astronomy Students will be hosting Star Party for UofA Students for an estimated attendance of 100 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. Viewing will be in the parking lot of the Visitor Center. Contact person John Kalas can be reached at 620-6502 or email jckalas@cox.net Set-Up Time: 6:30pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 7:03pm Dark Sky: 7:59pm Moon Phase: Last Quarter.

TAAA Board of Directors Meeting - 10 March 2010

Attending: Board members present (6): Ken Shaver (presiding), Keith Schlottman, George Barber, John Kalas, Teresa Plymate, and John Croft. Members present (5): Terri Lappin, Liz Kalas, Bill Lofquist, Mark Meanings, and Claude Plymate

Call to Order: The President called the meeting to order at 6:35 pm.

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

Member Feedback

A member requested removal from Gmail announcements list

Announcements for Record

- Mark Meanings has volunteered to coordinate school star parties and work on club website.
- Newsletters exceeding 14 pages in length require additional postage

TAAA Board of Directors Meeting - 10 March 2010 (cont.)**Upcoming Meetings**

- Keith will put together a sign up for member's night.
- No information available for June meeting

Treasurer's Report

- Total club balance is \$45,258.60. We are up to date on utilities, insurance, newsletter, all bills.
- Within this balance, the CAC Phase 2 donations total is \$27,045.60
- Current paid star party income far exceeds CAC utility payments
- John Kalas reported the following:
 - Utility bills should decrease now that major construction efforts are completed
 - With winter ending, water heater can be shut off except when shower is required.
 - We should receive a final bill of \$175 for drainage report

Web Team

- No items

Starry messenger SIG

- The last workshop had 13 people

Tucson Festival of Books

- Minor expenditures were approved by the President in preparation for the festival.
- A 10 x 20 tarp will be needed.
- Terri Lappin and John Kalas plan to scout the setup area to prepare for setup.
- Festival administrators authorized Terri Lappin to accept donations and membership applications and payments on behalf of the TAAA.

Chiricahua Astronomy Complex

- Bill Lofquist reported the following:
 - ◆ For Phase 2 planning, the Strategic Planning Group will meet and create a presentation for the board.
 - ◆ We need \$3,000 to reach the amount required to complete the planned construction (top 3 features in Phase 2).
 - ◆ Bill's son is willing to conduct the architectural plans for a roll-off observatory.
 - ◆ The fundraising committee has scheduled another meeting
 - ◆ Bill is coordinating with the local electrical cooperative for potential donations of funds, materials, and labor associated with Phase 2 electric power extension.
 - ◆ A 7-inch Maksutov-Cassegrain with Losmandy mount was donated to the club by Wally Rogers. This could be sold or raffled to raise additional Phase 2 funds.
- Keith Schlottman moved to allocate the February 2010 telescope raffle funds for use in Phase 2 construction. Motion passed unanimously.
- Keith Schlottman reported that Astronomy Magazine and other vendors are anxious to tour our new CAC site.
- John Kalas reported the following:
 - ◆ The club sign has been erected. Final inspection should be completed within a week.
 - ◆ \$820 was spent for various finishing items, completing Phase 1.
 - ◆ The CAC usage policy will be placed on the club website

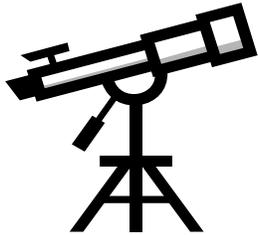
ALCON 2010

- Keith Schlottman reported that 8 members have volunteered so far
- Keith will coordinate volunteer assignment and schedules
- Numerous vendors have signed up to attend
- Friday evening, June 25, will feature a star party at TIMPA

Newsletter

- The March edition required 22 pages.

Telescopes for Borrowing



Free service



Only for Members

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

These telescopes are in the program

Sears 60mmf/15 on equatorial mount
Unitron 62mmf/14.5 on equatorial mount

Meade 90mm ETX

Coulter Odyssey8 8-inch f/4.5 Dobson

Meade 10-inch f/4.5 on equatorial mount

Meade 10" LX200 GPS (requires training session)

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

TAAA Board of Directors Meeting - 10 March 2010 (cont.)

- ♦ It was moved that in order for any member to continue receiving a paper newsletter, an additional amount will be assessed (based on March 2010) as of the date of their next membership renewal. Motion passed with 5 yes and 1 no vote.

Meeting adjourned at 8:31 pm

Respectfully submitted (for Luke Scott),
George Barber
Member-at-Large

Dark Skies for April 2010

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

We/Th	31/01	20:06	-	20:57	Su/Mo	11/12	20:16	-	4:34	Th/Fr	22/23	2:28	-	4:19
Th/Fr	01/02	20:07	-	22:03	Mo/Tu	12/13	20:17	-	4:33	Fr/Sa	23/24	3:02	-	4:17
Fr/Sa	02/03	20:08	-	23:05	Tu/We	13/14	20:18	-	4:31	Sa/Su	24/25	3:36	-	4:16
Sa/Su	03/04	20:09	-	0:02	We/Th	14/15	20:19	-	4:30					
					Th/Fr	15/16	20:28	-	4:28	Su/Mo	25/26	4:10	-	4:15
Su/Mo	04/05	20:10	-	0:53	Fr/Sa	16/17	21:30	-	4:27	Mo/Tu	26/27	-	-	-
Mo/Tu	05/06	20:11	-	1:36	Sa/Su	17/18	22:31	-	4:26	Tu/We	27/28	FULL MOON		
Tu/We	06/07	20:11	-	2:14						We/Th	28/29	-	-	-
We/Th	07/08	20:12	-	2:48	Su/Mo	18/19	23:29	-	4:24	Th/Fr	29/30	20:33	-	20:48
Th/Fr	08/09	20:13	-	3:18	Mo/Tu	19/20	0:22	-	4:23	Fr/Sa	30/01	20:34	-	21:48
Fr/Sa	09/10	20:14	-	3:46	Tu/We	20/21	1:09	-	4:21	Sa/Su	01/02	20:35	-	22:42
Sa/Su	10/11	20:15	-	4:13	We/Th	21/22	1:50	-	4:20					

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn							
	Set	Rise	Rise	Vi	Set	Vi	Set	Vi	Set	Vi	Rise	Vi		Vi=Visibility
03/04	18:43	6:06	20:10	3	20:16	-1	3:00	0	5:00	3	5:45	1	-3	brilliant
10/11	18:48	5:58	20:20	4	20:30	-1	2:38	0	4:37	1	5:16	1	0	conspicuous
17/18	18:53	5:49	20:06	7	20:44	-2	2:18	1	4:14	0	4:47	1	3	moderate
24/25	18:58	5:42	19:26	-	20:58	-2	1:58	1	3:50	0	4:18	1	6	naked eye limit
01/02	19:03	5:35	18:50	-	21:12	-2	1:39	1	3:27	-1	3:50	1	9	binoculars limit

By Erich Karkoschka

CHIRICAHUA ASTRONOMY COMPLEX

Phase 1 Construction Update

John Kalas – Construction Coordinator

The only major change completed since last month’s report is the installation of the club sign at the entrance to the complex. This task was performed by Bill Lofquist and me on 3/10 and it completes the building permit requirements for Phase 1 development. The TAAA should receive an official letter in the near future from the Cochise County Permit Dept. confirming that we have met all requirements of the building permit and the Special Use Permit. Based on a suggestion that was made during the opening star party in February, a bench has been added to each bathroom making it easier to change clothes.

Two tasks remain for the completion of our Phase 1 development; finishing the shower room and installing a new, simpler key system for the complex. Currently, key sets have to be picked up from me by members who want to use the site at times other than monthly club star parties. Soon I will be installing a new system which includes a combination padlock on the gate and a combination key safe at the bathroom facility. Two sets of keys will be secured in the key safe. Members who desire to use the facility will simply contact me and receive two combinations either by e-mail or phone; one for the gate padlock and one for the key safe. This system eliminates the need to keep track of multiple key sets loaned out to members and also eliminates the need for members to pick up the keys from me. Both combination locks have the ability to

have their combination codes changed easily which I will do periodically. This improvement will help reduce my site coordination responsibilities.

The following tasks will be performed next:

1. TAAA (J. Kalas) will install the accessories in the shower room including; a floor water dam, shower curtain, clothing hook and shower caddy.
2. TAAA (J. Kalas) will install the new key system.



Club Sign Installed at Entrance

Desert Skies Classified

FOR SALE	<u>Eyepieces for Sale:</u> Televue Binovue in Case (BVP204) (\$600) with Two Televue 22mm Panoptic Eyepieces (\$200 each) and Two Meade Super Plossl 32mm Multicoated Eyepieces (\$200 each). Parks Illuminated Cross Hair Eyepiece OR, 12.5mm (\$40), Lumicon 25mm Cross Hair Kellner Eyepiece (\$40), Televue Eyepiece Adapter, 1.25" to 2" (\$10), 2" Televue Eyepiece, 55mm Plossl (\$200), 2" Televue Eyepiece, 32 mm Wide Field (\$200), 2" Televue Eyepiece Nagler, 13mm (\$200), 1.25" Celestron Eyepiece, 18mm, Fully Coated (\$30), 1.25" Celestron Eyepiece, 40mm, Multicoated (\$30), Call Bill Silvey at 825-6927 [07/10].
For Rent	Beautiful New 3 Bedroom 2 Bath home in Arizona Sky Village, Portal AZ (sleeps 6). Bring your own telescope! Call Irene 520 777 6222 or ikitzman@yahoo.com [06/10]
FOR SALE	Coronado P.S.T (Personal Solar Telescope). Includes eyepiece, very nice case, and Orion equatorial tripod with manual slow motion controls. Asking \$450. Contact Lyle Kolze, (608) 346-5957, lkolze@yahoo.com [05/10]
FOR SALE	Classic criterion dynascope 6" f8 telescope with German eq mount \$200. Celestron 8" wedge \$100. Steve, 975-0098. [05/10]
FOR SALE	ETX-80 beginners 80 mm go-to refractor used twice. Includes tripod, two eyepieces, erecting prism, two books, star chart, planisphere, and backpack. \$220. Byron 520-647-7836. [03/10]
FOR SALE	Coulter 13.1 inch mirror blank in original box /w receipt. \$70. Sky and Telescope mag. 1979 to 1999, complete \$50. obo contact Scott.henning@326-7039 . [03/10]
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.

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.

ALConExpo 2010

Pete Marsheid of NRCO/ALRA/NSF



When

25 – 27 June 2010

Where

Tucson Hilton East*
7600 East Broadway, Tucson, Arizona 85710

**Featured
Speakers**

With

Saturday Night Banquet

Dr. Roger Angel
Director of the University of Arizona Mirror Lab

Solar Luncheon

David Levy
Astronomer and Comet Discoverer

**International Dark-Sky Association's Annual General Meeting 2010
on Sunday 27 June 2010**

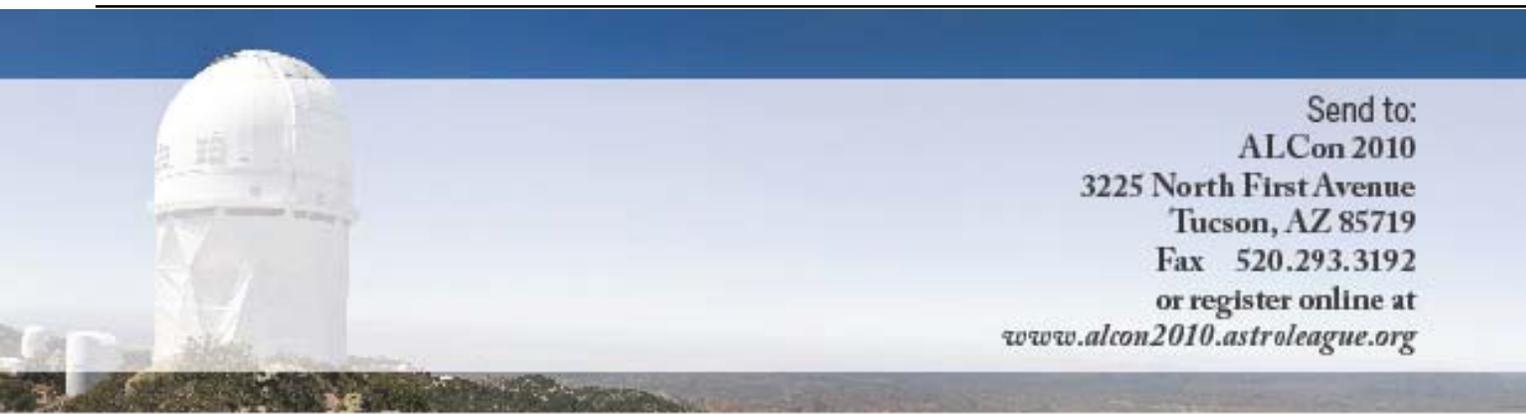
Don't miss... the Dark Sky Giveaway winner announcement at the IDA AGM.
Visit www.darksky.org to learn more.

For more information visit www.alcon2010.astroleague.org or
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* 24 May 2010 is the deadline for Hilton rooms at the discounted rate.



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Astronomical League Convention and Exposition 2010

www.alcon2010.astroleague.org | ALCon2010Expo@gmail.com

25–27 June 2010 at the Tucson Hilton East*

7600 East Broadway, Tucson, Arizona 85710

Astronomical League annual Council meeting and Thursday Evening Jarnac Observatory tour on 24 June 2010

International Dark-Sky Association's Annual General Meeting Sunday 27 June 2010

- \$60** 2 days; After 1 June 2010 (**\$75**)
Fri & Sat ALCon
- \$30** per person—Fri. Solar Luncheon with David Levy
- \$60** 3 days; After 1 June 2010 (**\$75**)
Fri & Sat ALCon with Sun. IDA AGM
- \$50** per person—Sat. Banquet at the Hilton
- \$30** 1 day; After 1 June 2010 (**\$40**)
 Fri/ALcon Sat/ALcon Sun/IDA AGM
- \$30** per person—Sun. IDA AGM Luncheon
- \$15** Thursday Evening Jarnac Observatory Tour;
24 June 2010 (*Limited number of spaces*)
- \$20** ALCon T-shirt—XXL XL L M S

Total \$ _____

** 24 May 2010 is the deadline for Hilton rooms at the discounted rate.*

Check(check #____) payable to ALCon 2010 VISA MasterCard American Express Discover

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Payment must be received by 1 June 2010 in order to receive the early-registration rate. Whereas we request one registration sheet per attendee, you may put all payments onto one check. Conference registration is not required to attend the Luncheon or Banquet. A limited number of room reservations are

available at the Tucson Hilton East at a special rate of \$72.00 per night, plus taxes. 24 May 2010 is the deadline for Hilton rooms at the discounted rate. You may make your room reservations at the Hilton by calling 1-800-HILTONS. Be sure to tell them you are with the Astronomical League for this special rate.

ASTEROID OCCULTATION REPORT BY MARK MEANINGS

Observing and recording asteroid occultations is fun and easy, and unlike most other aspects of observational astronomy, something actually HAPPENS while you watch! All you need is a means of telling time (by way of the WWV on shortwave radio, for example), a recording device (like an MP3 player with a microphone), and the ability to see stars down to about 11th magnitude and oftentimes fainter (which means you'll need at least an 8" telescope and a pretty dark sky).

One thing that I'd like to see happen in the near future is to set up a series of synchronized observations in the Tucson area. This would allow us to collect some very useful data not only on the path of the occultation shadow (which will help in making orbital parameters more precise), but also direction, velocity, size, and shape of the asteroid. Plus, if you report your observation with IOTA, you'll be part of history!

Most occultation observers record their observations on video, with very accurate timestamps for each video frame. There are a number of inexpensive devices on the internet. Here's a pretty useful link for the beginner: <http://www.weblore.com/richard/AsteroidPage.htm>.

A little skimpy on the occultations this month. The exciting one by far will be 52 Europa on 29 March. This is a very large asteroid (346km), which means the event will last quite a long time -- 15.2 seconds is the estimate. Look for the extra challenge of a pretty small magnitude drop (the magnitude of the asteroid and the star are nearly the same).

Likely Occultations for Tucson -- April 2010

UT Date	UT Time	Asteroid	Star	Star Mag
2010 Mar 29	3:41:20	52 Europa	2UCAC 39108118	11.3
2010 Apr 19	5:27:12	1315 Bronislaw	TYC 1307-01144-1	10.7
2010 Apr 25	2:51:36	19 Fortuna	2UCAC 39462003	11.8

If you'd like to participate in a synchronized observation of any of these occultation events, please contact me at [cosmiclettuce AT yahoo DOT com](mailto:cosmiclettuce@yaho DOT com). Also, if you'd like more detailed occultation information for a specific location, just send me your latitude, longitude, and altitude to the same email address.

Desert Skies Classified

FOR SALE	Astronomical Books: Handbook of Astronomical Image processing by Berry and Burnhill including AIP/WIN Software, 2001 Edition (\$10), The New CCD Astronomy by R. Wodaski, 2002 Edition (\$10), CCD Astronomy by C. Buil, 1991 Edition (\$10), Sidgwich Amateur Astronomers Handbook (\$10), Burnham Celestial Handbook, Vols 1-3, 1971 Edition (\$20), Deep Sky Observers Handbook, Vols 1-5 (\$30), Real Sky- The Palomar Observatory (Northern) Sky Survey on 9 CCDs (\$100), Real Sky South- The Digitized Southern Sky Survey on 11 CCDs (\$100), Uranometria 2000, Vol 1, Northern Hemisphere, 1987 (\$20), Sky Atlas 2000, Laminated Field Edition, 1987 (\$30). Call Bill Silvey at 825-6927 [07/10].
FOR SALE	Celestron Nexstar 11 GPS, modified to mount on Celestron 14 telescope mount. Wedge is mounted on vernier rotation system which allows it to rotate and lock down independently from tripod. Tripod is on wheely bar with 1/2" leveling and stability bolts. The Nexstar can be remounted on Celestron 11 GPS wedge and mount, which is included. (\$2900 total). Equipment mounted on the Nexstar (and which will be removed if not desired) includes: Fastar Interface Lens (\$25), Astrozap Dew Shield (\$80), Cap for Astrozap (\$20), Stellarvue 80mm f-9.4 Achromatic Reflector autotrack Sytem (\$260), SBIG ST-237 CCD Camera mounted on Stellarvue (\$1800), CFW-5C Color Filter Wheel for SBIG ST-237 Camera (\$300), Microtouch Wireless Autofocuser (\$250), Spectro Sure Sharp Astrophotography Focusing Device with right angle viewer (\$50), Telrad with base, hinged deluxe dewcap, and Pulsar Unit (\$40), Vixen Illuminated Guiding Adapter GA-4, 31.7 mm (\$150), Lumicon superfinder, 82mm aperture, f=305mm with cross hair focusing star diagonal (\$150), Celestron 7x50mm Finderscope with quick release bracket and illuminated cross hair eyepiece (\$100), Polaris Finderscope with setting plate (\$25), Losmandy DC-11 Dovetail (\$50), Losmandy DR108 Ring Set (\$80), Losmandy Cradle Ring Set (\$80), Losmandy three point centering set for two rings (\$80), Outdoor Nylon 16"SCT Cover (\$20). Unmounted available equipment for the system includes: Hyperstar Lens (\$400), Starlight Express SXV-H9C CCD Camera (\$1800), Celestron Vibration Suppression Pads (\$75), Miscellaneous weight sets for Nexstar 11 GPS (\$50). Call Bill Silvey at 825-6927 [07/10].
FOR SALE	Astro Film Camera: Olympus OM-1N Astro Film Camera (\$200) includes Case, Electronic Flash T32 with case, Varimangi Finder with case, 50mm f1.4 Auto-S Lens, 50-250mm lens with case, Focussing Screens (1-1 * 1500, 1-8 * 1500, 1-11 * 1500), Accessory Shoe 4, One foot length plunge push button flexible attachment, RPS (R-05321) 27"X30" Changing Bag. Call Bill Silvey at 825-6927 [07/10].
FOR SALE	Miscellaneous Astronomical Equipment: Celestron 9x50mm Finderscope with bracket (\$35), Celestron 10x40mm Finderscope with bracket (\$35), Tuthill Precision Polar Axis Finder (\$40), Lumicon Skylight Filter Model #2 (\$50), Lumicon UHC Filter Ultra High Contrast Type (\$50), Lumicon Deep Sky Filter for Nebulae and Galaxies (\$50), Lumicon Giant Easy Guider (\$200), Lumicon Duo View for Giant Easy Guider (\$50). Call Bill Silvey at 825-6927 [07/10].

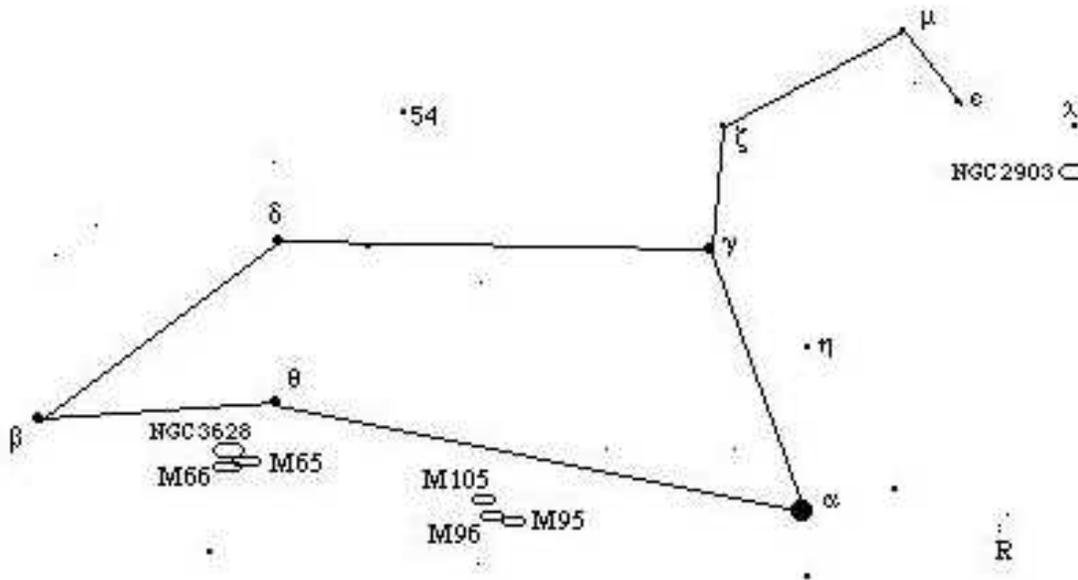
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Constellation Report by Chris Lancaster

Leo

Lying on the ecliptic and making its appearance just above the horizon as the sun sets in March is one of the more recognizable constellations of the zodiac, Leo the Lion. The vast majority of ancient civilizations indeed saw a lion in this collection of stars. The exceptions include the Chinese, who saw a horse, and the Incas, who thought the stars outlined the figure of a puma. Other than its regal shape, one reason for a lion being connected with the constellation is the observation that lions came to the Nile to cool themselves when the sun was passing through Leo during the hot days of late summer. The Greeks considered that Leo specifically represented the mythological Nemean Lion which terrified Corinth until Heracles came to the rescue.

Leo contains several bright stars, so finding it in the sky is simple. If you are familiar with the pointer stars of the Big Dipper which lead you to Polaris, the North Star, just follow that line formed by those pointers in the opposite direction and your eyes will land firmly on Leo's back.



Gamma Leonis (named Algieba) provides a good first target to view. It is an excellent double star whose components shine at magnitudes of 3.3 and 3.5 with an identical yellow-orange color. It will take high magnification to overcome its close separation of 4.5", which is slowly increasing toward about 5" during the next 100 years. Gamma is the brightest star in the curve of stars forming Leo's head and shoulder, often seen as a sickle.

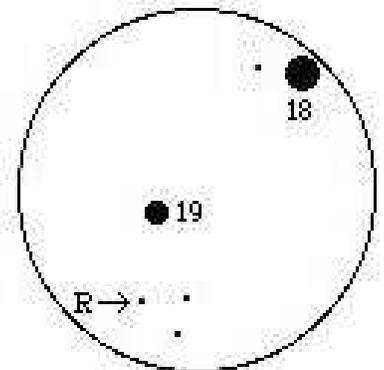
Sitting 9.5 degrees north-east of Algieba is 54 Leonis. This double star is a close copy of Algieba in

that it has an almost identical PA and a similar difference of magnitudes between the two (4.5 and 6.5), but they have a slightly wider separation of 6.5" and a color of white or slightly blue.

One of the best variable stars to observe is R Leonis. It is easily found 21' in RA (or just over 5 degrees) west of Regulus near 5.6 magnitude 18 Leonis and 6.3 magnitude 19 Leonis. R is a long period variable of the Mira class, pulsating from minimum near 10th magnitude to a maximum of about 5.5 magnitudes in a span of about 156 days. It forms one point of a triangle south of 19 Leonis with two other 9th magnitude stars, and it's easy to determine which one it is by its red color. The finder chart which shows R Leonis spans 1/2 degree.

Galaxies in Leo are too numerous to mention in detail. There are several, however, that deserve special attention. Starting 2.5 degrees southeast of Theta Leonis is the trio of galaxies M65, M66, and NGC3628. M65 and M66 both measure 8'x 4' and so appear as parallel stripes south of the more distended NGC3628. All are in the neighborhood of 10th magnitude and can be framed in the same field of view in a low power eyepiece centered at RA 11h 20m Dec +13d 15.5'. Half the distance between these and Alpha Leonis (Regulus), is another trio of bright Messier galaxies--M95, M96, and M105. M95 is the dimmest of these three at magnitude 11.5, but, being a barred spiral, perhaps the most photogenic. M96 is a tight spiral with a bright central bulge, while M105 is a bright elliptical of magnitude 10.1.

An isolated galaxy, NGC2903, can be found 1.5 degrees south of Lambda Leonis. Its bright 9.6 magnitude glow and fairly large size of 12.5'x 6' make it an easy target. NGC2903 is located at RA 9h 32.2' Dec +21d 30'.



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

Address Service Requested

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

Directions to TIMPA and Las Cienegas

Directions to TIMPA Site

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

From the North:

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

From the East:

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

Directions to Las Cienegas (Empire Ranch)

NOTE

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

GPS coordinates: 31 deg 47.356' N, 110 deg 37.913' W
Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is "washboarded" so go carefully. At about 2.9 miles, there is a fork in the road. Stay to the right. When the road ends in a "T", take a left. Cross over a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. 0.1 mile ahead will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.