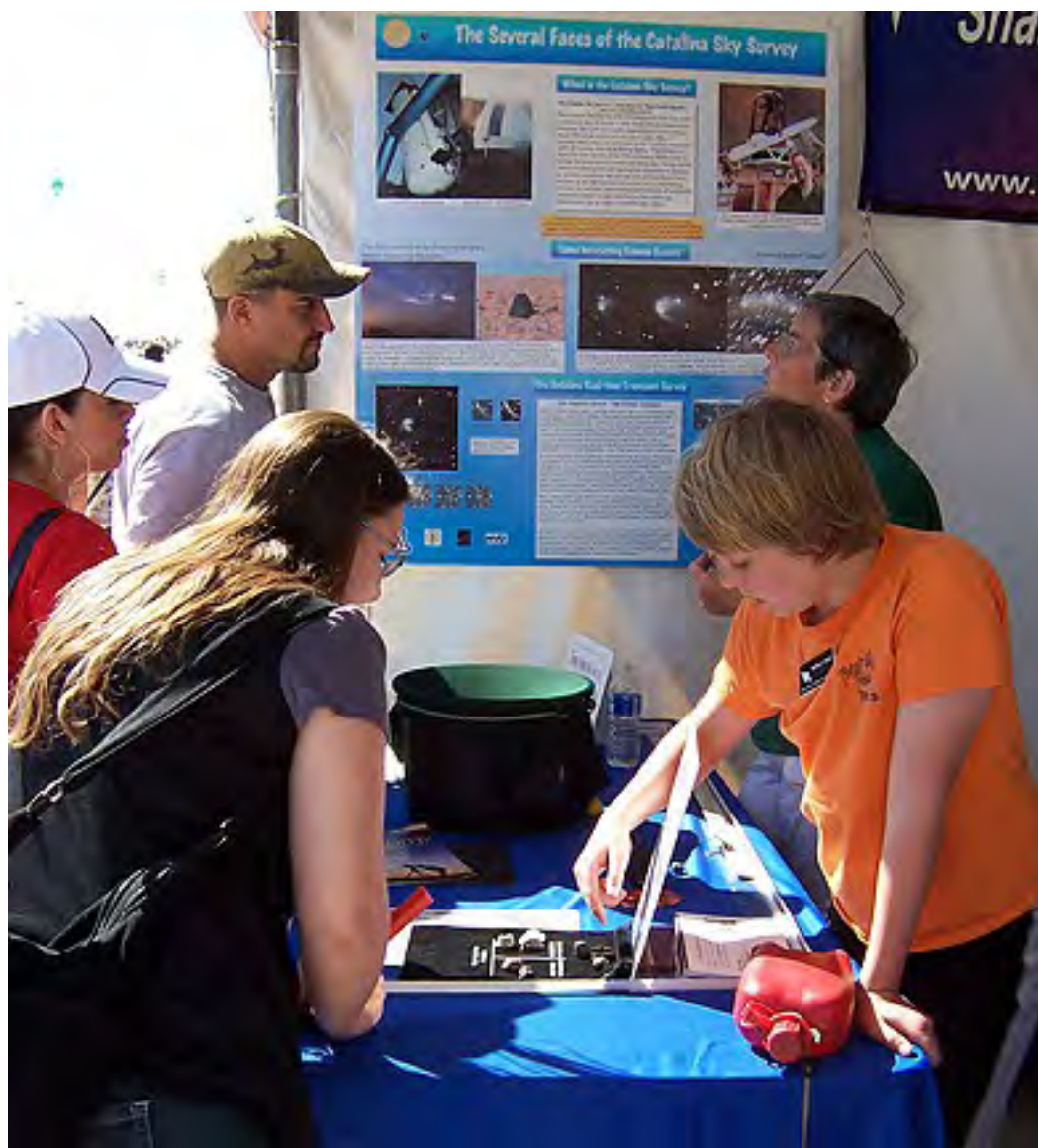


# *Desert Skies*

*Tucson Amateur Astronomy Association*

Volume LVII, Number 4

April, 2011



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**Tucson Festival of Books  
TAAA Welcomed 1000s to Their Booth!**

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Canis Major
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- ♦ Night Sky Network Services

**Cover Photo:** Thousands of people visited the TAAA booth at the 2011 Tucson Festival of Books booth last month. TAAA member Willem Moss explains how to identify meteorites as Cathy Anderson answers questions. Telescopes were also available for looking at the sun. Image taken by Terri Lappin.

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

**TAAA Phone Number:** (520) 792-6414

Office/Position	Name	Phone	E-mail Address
President	Keith Schlottman	250-1560	president[at]tucsonastronomy.org
Vice President	Bill Lofquist	297-6653	vice-president[at]tucsonastronomy.org
Secretary	Luke Scott	749-4867	secretary[at]tucsonastronomy.org
Treasurer	Teresa Plymate	883-9113	treasurer[at]tucsonastronomy.org
Member-at-Large	John Croft		mal1[at]tucsonastronomy.org
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Past President	Ken Shaver	762-5094	past-president[at]tucsonastronomy.org
Chief Observer	Dr. Mary Turner	743-3437	chief-observer[at]tucsonastronomy.org
AL Correspondent (ALCor)	Paul Anderson	625-5035	alcor[at]tucsonastronomy.org
Community Event Scheduler	Bill Lofquist (Temp)	826-2473	school-star-party[at]tucsonastronomy.org
Volunteer Coordinator	Bill Lofquist (Temp)	297-6653	school-sp-volunteers[at]tucsonastronomy.org
TIMPA Gate Card controller	John Kalas	620-6502	timpa[at]tucsonastronomy.org
Chiricahua Astronomy Complex Dir.	John Kalas	620-6502	cac-director[at]tucsonastronomy.org
Newsletter Editor	Cathy Anderson	625-5035	taaa-newsletter[at]tucsonastronomy.org
Web Director	Terri Lappin	977-1290	taaa-webmaster[at]tucsonastronomy.org
Publicist	Liz Kalas	620-6502	publicist[at]tucsonastronomy.org
Astro-Imaging SIG	Steve Peterson	762-8211	astro-photo[at]tucsonastronomy.org
Astronomy Fundamentals SIG	Ben Bailey	903-7925	fundamentals[at]tucsonastronomy.org
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Librarians	Al Dohner	297-7118	elc[at]tucsonastronomy.org
Grand Canyon Star Party Coordinator	Claude & Teresa Plymate	883-9113	librarian[at]tucsonastronomy.org
General Information	Jim O'Connor	546-2961	gcsp[at]tucsonastronomy.org
	Luke Scott	749-4867	taaa-info[at]tucsonastronomy.org

#### Membership in the TAAA

##### Annual Fees

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

##### Discounts (one discount allowed, subtract from above rates)

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

##### Options (add to above membership rates)

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

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

##### Renewal Information

- You'll get an email reminder when it's time to renew.
- 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:

Cathy Anderson  
TAAA/Desert Skies Editor

#### Join our Email Lists on Yahoo Groups

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

Observing is fun in Arizona any time of year, but Spring provides an especially good opportunity for amateur astronomers. Most obvious, of course, is the fact that the nights are warming up. You'll still want to bundle up but the bitter chill that often accompanies Winter nights is gone. Longer days give solar observers more observing time, but for many of us the later sunsets also make it easier to find some set up time after a busy day, before darkness arrives.

Spring is often called "Galaxy Season" by experienced observers, because many of the rising objects in the East in the evening are far-away galaxies. For many of us, the farthest objects we've ever seen are best observed in the Spring. Using your naked eye, you may look to the East and think it looks relatively empty (especially if you are in the city), but a telescope will reveal a treasure trove of spirals, ellipticals, irregulars, and other galaxies. Have you ever seen a grouping of galaxies in a single field of view? Spring is the time to do it, and if you need help, there are plenty of TAAA members who will enjoy sharing the view.

TAAA has an upcoming event that I would like to encourage you to add to your Spring time activity list. The Messier Marathon will be held April 2nd at CAC (see elsewhere in the newsletter for more details). Participants will enjoy a night of searching for objects from the Messier catalog of objects, which includes showcase examples of almost any type of astronomical object you can think of. Although the goal is to observe all 110 objects in a single night (something that you can only achieve in a short window of time during the Spring), this is not a serious competition. Most of us, including me, will be there to have fun and learn more about our night sky. Some members will likely enlist the aid of a "go-to" computerized telescope, while others will attempt to find objects using star charts, and maybe we'll even see a few brave souls who seek them out from memory. Our club spends a great deal of energy on astronomy outreach activities, but this event will be an "inreach" activity - let's get club members together for a night of fun and fellowship!

Keith Schlottman

### Meeting Information and Calendar of Events

**TAAA MEETING DATE:** Friday, April 1st, at the Steward Observatory Auditorium Room N210

**Astronomy Essentials Lecture:** 6:30 pm

Title: *Seasonal Objects*

Speaker: Dr. Mary Turner, TAAA

Our own Mary Turner will present seasonal objects easily found with small telescopes. She'll include some fascinating stories from mythology, so that you may retell these stories to others at an upcoming public event.

**GENERAL MEETING:** 7:30 pm

Invited Lecture

Title: *The Most Unbiased Census of Star Formation in the Milky Way*

Speaker: Yancy Shirley, PhD, Steward Observatory

Dr. Yancy Shirley, assistant professor at Steward Observatory, specializes in stellar formation. He's currently studying 8400 objects in the Milky Way identified by the Bolocam Galactic Plane Survey (BGPS) as stellar nurseries. This represents the most complete census of star forming regions within the Milky Way. This census includes both actively forming stars and regions that are future sites of star formation. The BGPS employs a detector (the Bolocam) on the Caltech Sub-millimeter Telescope located in Hawaii. The Bolocam is sensitive to the 1.1 millimeter energy (between the far infrared and microwaves) emitted by cold dust grains seen in clumps across the Galaxy. Little is known about the physical properties of this new population of star-forming clumps. Fundamental properties such as the size, mass, and luminosity require knowledge of the distance. Dr. Yancy recently received a National Science Foundation grant to lead the spectroscopic follow up of these sources. He'll describe the efforts to determine the distance from observations of molecular gas in the clumps using the Submillimeter Telescope on Mount Graham.

Dr. Shirley was featured in a 365 Days of Astronomy podcast interview which is recommended listening. You'll find it here: <http://365daysofastronomy.org/2009/04/17/april-17th-giant-molecular-clouds/>.

**BOARD OF DIRECTORS MEETING:** Wednesday, April 13th, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

## Calendar of Events

### STAR PARTIES AND PUBLIC EVENTS:

24Mar—6 April Globe at Night  
 2 Apr - Messier Marathon at CAC  
 4 Apr - Astro-Imaging SIG Meeting  
 6 Apr - Immaculate Heart Academy Star Party  
 7 Apr - Coronado K-8 Star Party  
 8 Apr - Rattlesnake Ridge Elementary Star Party  
 13 Apr - TAAA Board Meeting  
 14 Apr - AFSIG Meeting  
 14 Apr - St. Michael's Parish Day School  
 16 Apr - AFsig Solar Observing Group  
 1\* Apr - TAAA Red LED Lamp Workshop  
 20 Apr - Newsletter Article Deadline  
 21 Apr - SESIG The Feasibility of Space-based Solar Power.

30 Apr - TAAA and AFsig Star Party at TIMPA  
 30 Apr - Ora Mae Horn Park, Marana, Family Night  
 7 May - Sharing the Sky Star Party—Astronomy Day

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

### TAAA Apparel

Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have hats, T-shirts, denim shirts, and patches. We take cash and checks.

## Club News

### Member News

We welcome these members who have recently joined the TAAA: Scott and Margy Vaughan, Janet and Lois Connell, Sara Liberty-Laylin, and Frank Hsu. Glad to have all of you join! 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.)

### Astro-Imaging SIG Meeting

Monday, April 4th, 7pm  
 China Rose restaurant, NE corner Speedway/Rosemont

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

### Astronomy Fundamentals Special Interest Group

By Ben Bailey  
 Thursday, April 14, 6:30 pm  
 U.S.G.S. Building - room 253 - Northeast corner of Park Avenue and Sixth Street  
 (Free parking after 5:00 pm behind the building in the parking lot.)

We will hold our regular monthly AFSIG meeting for April with **Rik Hill** presenting the **Heliographic Coordinate System**. Remember, we are successful only if you participate. I am looking forward to seeing you there. The Astronomy Fundamentals special interest group meets on the 2nd Thursday of every month with some stimulating discussions from both the TAAA members and members of the scientific community. In addition, when we launch a new observing program, we have a presentation about that program discussing the history, folklore and the necessary requirements to complete the program.



(M31) Andromeda Galaxy,  
 Keith Schlottman

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[at]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.)

**AF-SIG Solar Observing Group**

Saturday, 16 April

By Dennis Dawson



On Saturday, April 16th, we will meet from 9 am until noon at Fort Lowell Park (Craycroft [at] Glenn) near the southeast corner. Just look for the telescopes. Bring your kids. Bring water and something to nibble on. You don't need to have a telescope; others will have them if you don't. Everyone is invited to join us. If you have your observing log-sheets, please bring them. If you don't have them, I will bring extras for those who need them. Hopefully the sun will oblige us and produce some sun-spots while we're viewing. Hope to see you there.

The Solar Observing Program (like all of our observing programs) is open to all members of TAAA at no charge. It is a guided program which means that at the scheduled observing sessions, there is someone there to guide you in finding the features needed for successful completion of the program. You can join the program at any time and can either attend the guided sessions or work on your own. A certificate is awarded at the completion of all the requirements. The beauty of this observing program is that our Sun offers great flexibility in observing and recording the different features – you don't have to be concerned about light pollution, night vision, or traveling great distances to find dark skies.

If you are interested in participating in the Solar Observing Program or if you just want to be added to our email list to keep posted about our activities and solar news email Dennis Dawson at dennisldawson[at]gmail.com or Bob Gilroy at bobgilroy[at]tucsonastronomy.org for all of the particulars.

**Space Exploration Special Interest Group (SESIG)**

By Al Anzaldúa

SESIG will sponsor a presentation on April 21 by electrical engineer and TAAA member **Avery Davis** titled, **The Feasibility of Space-based Solar Power**. The presentation will take place promptly at 7:00 pm at the Woods

Memorial Branch Library, 3555 N. 1st Ave., just south of Prince Road.

On May 19 at the same venue and time **Jason Cook** will give a slide presentation titled, **Backyard Lessons from Space Agriculture**. Jason is an organic farmer and expert on edible and sustainable landscapes. He will talk about the techniques needed for growing food in outer space and how these techniques relate to home gardens in Tucson.

Those wishing to attend either presentation should contact Al Anzaldúa at 520-409-5797 (cell) or alanzaldúa[at]tucsonastronomy.org. Sign-up sheets for these talks will also be provided at the April 1, 2011 general membership meeting.

**Upcoming Lectures**

Here is the upcoming lecture schedule. The summer schedule of speakers will soon be determined. If you have a suggestion, contact Terri Lappin at terrilappin[at]tucsonastronomy.org

**NOTICE:** Our MAY meeting will not be held in Steward Observatory due to finals taking place that night. We are negotiating for the use of the Lunar & Planetary Lab conference room. We'll announce the location once it's finalized. Watch the newsletter and/or email.

**Note that the May meeting is devoted to those who work in the astronomical field. If that's you, consider giving a short presentation about your work. Contact Terri to get on the list of presenters.**

May 6	<i>Members Night Starts at 6:30pm</i>	Theme: TAAA members who work in the field of Astronomy
Jun 3	<i>Astronomy Essentials</i>	Bob Gilroy Topic TBD
	<i>Invited Lecture</i>	Dr. Marcia Neugebauer Solar Physics



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**Club News (cont. )****Introduction to Fundamentals of Astronomy**

March 12 was the start of our current three day basic astronomy course "Introduction to Fundamentals of Astronomy". Attendees started arriving early and several were deep in discussion by the time I arrived with course materials. Immediately, I put them to work inserting replacement pages in the manuals while needed props were set in place.



As you can see, the first day was well attended and everyone was interested and did their part to insure a successful start to one of our more popular programs. More to follow in next month's newsletter – Stay tuned.

**Messier Marathon at the CAC Site  
Saturday, April 2**

As announced in the last two newsletters, the TAAA will be hosting its inaugural Messier Marathon at the club's new Chiricahua Astronomy Complex (CAC) in Cochise County. For those not familiar with a Messier Marathon, it is a fun and friendly competition between participants to see if you can observe all 110 Messier Objects in a single night; from sunset on Saturday, 4/2, through sunrise on Sunday, 4/3.

Since the marathon is being held a little later this year, it may be quite challenging to observe the first few objects which will be hidden in the western brightness of twilight. The CAC Site will be open at 3:00 pm for those wishing to arrive early and set up. If anyone is interested in meeting for dinner before the event at Margie's Corner Café in Sunsites, let John Kalas know at 620-6502 or [jckalas@cox.net](mailto:jckalas@cox.net).

Bill Lofquist is developing the recording sheets that will contain all of the Messier Objects in the order that you should observe them. He will distribute them at the event. At the end of the event, Bill will collect the recording sheets and generate a personalized certificate for each participant acknowledging their accomplishment.

There will be lots of coffee, tea and hot chocolate to help you get through the evening. We will also have some munchies to help with your energy level. This activity is the ultimate observing challenge and, with a good crowd, it should be tons of fun. Even if you are not interested in participating in the marathon, you are welcome to attend. You may stay as long as you like and leave when you like. Won't you join us? Reservations are required, so contact John Kalas, if you would like to attend.

### Club News (cont.)

TAAA Red LED Lamp Workshop  
Michael & Mary Turner and Ken Shaver  
Saturday, 1\* April

The date has been corrected in this online version of "Desert Skies".

The TAAA will be holding another of the popular Red LED Lamp Workshops in April 2011.

What: TAAA Red LED Lamp Workshop  
When: Saturday, April 1\*, 2011 From 9:00 AM to 3:00 PM (about)  
Where: The home of Bill and Mary Lofquist  
1935 W. Harran Circle, Tucson, AZ, 297-6653  
How Many Students: Maximum of 12 Students  
What's It Going to Cost?



#### Lamp:

There are currently no commercial lamps available for our design. But, I do have 12 of the lamps that were used during the last workshop in Summer of 2009. They are for sale on a first come first served basis when you register for the workshop:

Target PN: 074 14 0016

Price: \$15.00

#### Electronic Parts:

1. Parts only = \$13.00
2. Parts + DC power cord = \$13.00 + 6.00 = \$19.00
3. Parts + DC power cord + DC Power Pack = \$13.00 + 6.00 + 5.00 = \$24.00

#### The whole package:

4. Parts + DC power cord + DC Power Pack + lamp = \$13.00 + 6.00 + 5.00 + 15.00 = \$39.00

I highly recommend the whole package because it allows the lamp to be used with both 120VAC house current and 12VDC from your telescope battery. Payment for the packages will be CASH only, with exact change appreciated.

#### Registration Instructions:

Please send an email to Michael & Mary Turner at [mrmgturner@earthlink.net](mailto:mrmgturner@earthlink.net) and let us know that you want to register for the TAAA Red LED Lamp Workshop. In the email, please let us know which option (1, 2, 3 or 4) that you wish to purchase. The packages will be available for pickup at the workshop on Saturday morning.

OK, for those that are saying "But I have one of the old style lamps that was not built", there are enough parts available to allow for 3 extra students for a maximum of 15 students. For anyone selecting this option, please let us know which parts option 1, 2, or 3 you wish to purchase.

On a technical note: We are using the new printed circuit board (PCB) secured by Ken Shaver from Prototron Circuits. The PCB should make the assembly of the lamp easier and faster.

Lunch can be purchased from Baggins, via delivery, as we have done in the past.

Additional information will be provided via the TAAA Forum and directly to all participants that are registered for the workshop.

Come on out and build the unique TAAA Red LED Lamp and have some fun doing it. At our last workshop in the Summer of 2009, we had exactly ZERO failed projects.

### Spring Kitt Peak Star-B-Cue

Saturday, May 28

Just a quick reminder, the club will be holding its Spring KP Star-B-Cue on Saturday, May 28 of this year. The attendance is limited to 70 total people. Reservations will be accepted starting at the May 6<sup>th</sup> monthly meeting and will continue after the meeting. The event is held at the KP Picnic Area and starts off with a pot luck barbecue beginning at 4:30 pm and ending at 6:30 pm. Evening viewing will commence after sunset. There will be more detailed information in the May newsletter. Mark your calendars!



## Club News (cont.)



Starry Messengers SIG -  
Opening Minds to the Universe

**Upcoming SIG Activities:****Sharing the Sky/Astronomy Day – May 7, 2011**

The Tucson Festival of Books event was very successful. You can read about it elsewhere in the newsletter. Events like the Festival of Books make it apparent that both youth and young adults have an interest in astronomy. They are interested in hearing about the potential for Near Earth Asteroids (NEAs) to impact the Earth and recognize the importance of groups like the Catalina Sky Survey who are discovering and tracking NEAs. Many pondered at the ability to grasp a meteorite from outer space in their hands. The interest is there. However, looking at the demographics of the TAAA, you'll note that we're severely lacking in young members. Where are they and how might we foster their interest in astronomy?

Technology revolutionized astronomy when computerized telescopes came on the market. No longer did you need to learn the sky before you could find anything with your scope - just punch in M3 and away the scope went to relatively blank part of the sky where M3 lies. Changes in technology are again revolutionizing astronomy. Like the advent of the computerized telescope, smart phone apps like Google Sky now puts the night sky into the palm of your hands, literally. The public is discovering the night sky in a new way. Our public events listed on the Night Sky Network are easily found with an app for the iPhone. Social networks are taking a larger role in our culture. The TAAA now has a Facebook page; did you know that?

As an organization, what does the TAAA offer the next generation of amateur astronomers? Is attending a meeting and lecture something they want? Perhaps not. Information on the internet makes the lecture experience blasé to some. The same can be said about observing when you consider that the kids today have always had the Hubble Space Telescope images available. Finding ways to satisfy the curiosity of today's young people is a daunting challenge, but one that needs to be faced by the TAAA. The Starry Messengers SIG needs to consider that our mission includes encouraging young people to take a greater interest in astronomy. If you are interested in this subject, email me at [terrilappin@tucsonastronomy.org](mailto:terrilappin@tucsonastronomy.org). Send me your ideas or thoughts. I might schedule a meeting if there's enough interest among the members, so be sure I know you are interested.

Any TAAA member involved in astronomy outreach is considered a member of the Starry Messenger Special Interest Group. Even if you have never attended a SMSIG workshop or meeting, you are supporting the goals of the Starry Messenger SIG. We value your contribution. The Starry Messenger SIG provides an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts, all with an emphasis on conveying that information to people of all ages.

**Night Sky Network Toolkits**

NASA, through sponsorship of the Night Sky Network, recognizes the essential role amateur astronomers play in public astronomical education. Under contract with NASA, the Night Sky Network team at the Astronomical Society of the Pacific has developed a series of toolkits for amateur astronomers to use in informal settings such as star parties and other outreach events. Below is a list of the Outreach Toolkits received by the TAAA. If your scope is not well-suited for public events, or if you want a change of pace, consider bringing a toolkit to a community event. Toolkits are also great backups for cloudy nights. Each themed toolkit contains several projects; you pick and choose what you want to use. Toolkits are self-contained with nearly all the materials needed for these hands-on projects. You may need to provide fresh batteries, scissors, or a bag of flour, depending on what project you select. A Resources CD and a Training DVD are included. Individual training in their use is available upon request. Please make arrangements with Terri Lappin ([smsig@tucsonastronomy.org](mailto:smsig@tucsonastronomy.org)) to borrow these toolkits. Normally, you can keep a toolkit for a month at a time.

**Night Sky Network Toolkits:**

- Space Rocks – Asteroids, Comets, and Meteorites: meteorite samples, asteroid detection
- Exploring the Solar System: scale model of solar system
- Our Galaxy, Our Universe: scale model of the Milky Way galaxy and the Universe
- Shadows and Silhouettes: lunar phases, eclipses, and transits
- Black Hole Survival Kit: gravity concepts
- Supernova: life cycle of massive stars, earth's protective atmosphere
- Mirrors and Glass – An inside look at telescopes: how telescopes work
- Telescopes – Eyes on the Universe: basic principles of optics, the human eye, and observing
- PlanetQuest: demonstrate planet detection techniques
- 

**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





## Club News (cont. )

**TAAA Begins to use Night Sky Network Online Services**

Due to formatting problems, we did not get all the members into the Night Sky Network last month. However, by the time you get THIS newsletter, we should have all that straightened out and you should receive an email from the NSN with your login information.

If you do not receive login information by email, please contact Terri Lappin and she'll figure out what happened. Your email address needs to be supplied to the Night Sky Network before you can be issued a login account. If you have asked us in the past to not share your email address, then you may not have a login account set up. (Some people gave us specific instructions to share their email address with the NSN so they could receive a login account.)

Be sure to login into your account. Please assume responsibility for keeping your contact information current. Be sure to also check your Profile and Preferences. This is found under "My Member Information" on the main screen. "Update Profile" will allow you to change or customize your contact information. "Change Password", of course, will allow you to change your password. (User name can also be changed after clicking on "My Profile & Preferences".)

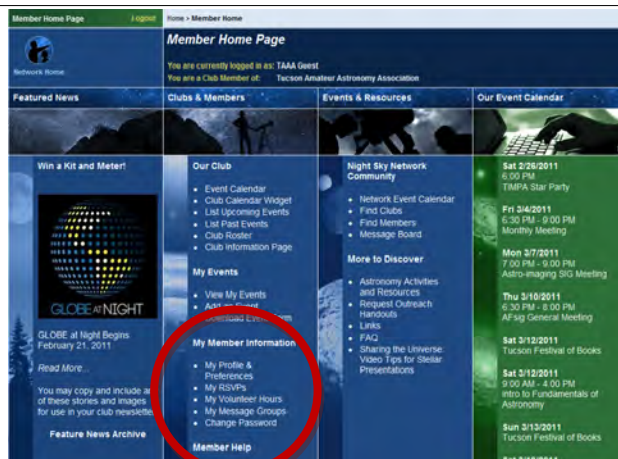
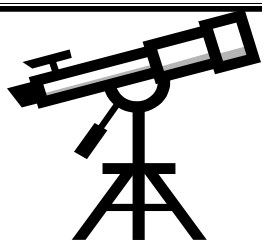
There are two groups who can access your contact information (name, phone number, and email address). The first level is other TAAA members. The second level includes all Night Sky Network members who belong to other astronomy clubs. Be sure to set your preferences to your liking. Your mailing address can only be viewed by the NSN administrators, TAAA NSN Coordinators, as well as yourself.

You can also set your preferences for receiving announcements and newsletters. By default you will receive the Night Sky Network's monthly newsletter, so please set that to No if you don't want to receive it. We will use the Night Sky Network to distribute the Desert Skies newsletter.

If you have questions, check the "Members Help" link from the Members Home Page under the second vertical column. Please check there first if you have a question. If you can't find an answer, then contact either Terri Lappin or Teresa Bippert-Plymate (see page 2 of Desert Skies). Give us a day or so to respond.

**IF YOU DON'T HAVE AN EMAIL ADDRESS:** Unless you specifically requested otherwise, your name and contact information would have been sent to the Night Sky Network and your contact information will appear to TAAA members. If you previously had asked that we not share your phone number, then it is hidden from view. You will not have access to changing this information, so if it needs to be changed, contact Teresa Bippert-Plymate who can modify it. To gain direct access to your contact information you will need to have an email address to that a login account can be established.

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

**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.

## MEMBER EVENTS

**TAAA Volunteers Shine at the Tucson Festival of Books**

By Terri Lappin



The 2011 Tucson Festival of Books was a great experience shared by over 100,000 people. The TAAA participated with a booth located at a perfect spot – right on the corner of University and Cherry. We were hard to miss.

Solar viewing was a hit and the sun cooperated with some nice sunspots and prominences. We gave out “solar pizzas” to the kids that we received from NASA. The sun really does look like a cheesy pizza when imaged by the Transition Region and Coronal Explorer satellite. The back side of the “pizza” had information about the sun and showed the size of Earth for comparison. We also had sun magnets, posters, 3D postcards, bookmarks, and various flyers available for the taking.

The Night Sky Network Space Rocks Meteorite/Meteor Wrong demonstration gave people a chance to learn how to identify iron and stony meteorites from among a sample of Earth rocks. As expected, most people easily identified the iron meteorite. The very common looking stony meteorite was a challenge to identify for most. Topics like Earth impacts and the dedication of groups like the Catalina Sky Survey who identify and track potential impactors were discussed.

On Sunday afternoon we held a drawing for a 1-year subscription to Astronomy magazine. It went to Mr. Aaron Essif of Marana, AZ. This subscription was donated by Kalmbach Publishing who also provided us with cards good for a free issue of the magazine.

It's difficult to count people at an event like this. To get an estimate, a few times during the festival, someone counted how many people were present at our booth or in the telescope lines over a given period. Using these numbers, the best guess is 7500 interactions took place between TAAA members and the public over the two days. It's no wonder that by the end of the weekend, some of our voices were hoarse! Undoubtedly, people were counted twice if they looked through a telescope and spent time at the booth, so we use the term “interactions” rather than “people” in our counting.

It was our mission to give the public an appreciation of our universe and our place in it, as well as tell them about the TAAA. I think we succeeded. Some people provided their email address and we'll be notifying them about our next few meetings. So, remember to greet visitors at our meetings so they will feel welcomed.

We need to thank the 23 members who volunteered a total of 122 hours of their time at the booth. Listed is the number of hours for those who worked over the minimum 2 hours that were requested of volunteers.

Booth helpers: Pat Ackor, Cathy Anderson\* (5 hrs), Paul Anderson (5 hrs), Joe Catalano (7.25 hrs), Bob Gilroy (4 hrs), Mary Hancock, Chuck Hendricks (6.75 hrs), Terri Lappin\* (22 hrs), Loretta McKibben (4 hrs), Willem Moss\* (6 hrs), Twila Peck\* (4 hrs), Gary Rosenbaum (9 hrs), Mae Smith (3 hrs), and Tim Van Devender (2.25 hrs). A “\*” indicates who worked primarily with the Night Sky Network toolkits. Others primarily greeted people and gave out information about the TAAA and all the NASA publications we had on hand.

Telescope operators: Ben Bailey (3 hrs), Vernon Dunlap (5 hrs), Peter Ertman (2.5 hrs), Paul Moss (10 hrs), Jim Knoll (4.5 hrs), Susan Knoll (4.5 hrs), Jim O'Connor (3 hrs), Randy Quiroz, and Ken Shaver (5.25 hrs). We had both white light and Hydrogen-Alpha scopes most of the time. These people did an excellent job. It was pretty warm in the sun over this weekend.

Our next big outreach event will be the Sharing the Sky Astronomy Day event on May 7<sup>th</sup>. Hope to see you there.

**Dark Skies for April 2011**

**DARK SKIES (no twilight, no moonlight) for Tucson in 24-hour MST: 18=6pm, 20=8pm, 22=10pm, 0=12am**  
**APRIL**

Th/Fr	31/01	20:06	-	4:50	Su/Mo	10/11	1:22	-	4:36	Th/Fr	21/22	20:25	-	23:17
Fr/Sa	01/02	20:07	-	4:49	Mo/Tu	11/12	2:04	-	4:34	Fr/Sa	22/23	20:26	-	0:07
Sa/Su	02/03	20:08	-	4:47	Tu/We	12/13	2:43	-	4:33	Sa/Su	23/24	20:27	-	0:50
					We/Th	13/14	3:20	-	4:31					
Su/Mo	03/04	20:09	-	4:46	Th/Fr	14/15	3:57	-	4:30	Su/Mo	24/25	20:28	-	1:27
Mo/Tu	04/05	20:10	-	4:44	Fr/Sa	15/16	-	-	-	Mo/Tu	25/26	20:29	-	2:00
Tu/We	05/06	21:00	-	4:43	Sa/Su	16/17	-	-	-	Tu/We	26/27	20:30	-	2:30
We/Th	06/07	21:57	-	4:41						We/Th	27/28	20:31	-	2:59
Th/Fr	07/08	22:52	-	4:40	Su/Mo	17/18	FULL MOON			Th/Fr	28/29	20:32	-	3:27
Fr/Sa	08/09	23:45	-	4:39	Mo/Tu	18/19	-	-	-	Fr/Sa	29/30	20:33	-	3:56
Sa/Su	09/10	0:35	-	4:37	Tu/We	19/20	20:23	-	21:15	Sa/Su	30/01	20:34	-	4:09
					We/Th	20/21	20:24	-	22:20					

By Erich Karkoschka

## MEMBER EVENTS

**TAAA Star Party \*Messier Marathon\* at CAC**

by John Kalas  
Saturday, April 2

TAAA will be hosting a Messier Marathon at the CAC Site on Saturday, April 2nd. Certificates will be issued to everyone who participates. Bill Lofquist is developing the sheets that will aid participants in identifying and recording the Messier Objects during the marathon. As is the case with all CAC Star Parties, attendance is by reservation. If you would like to participate in the marathon, please contact me directly at jckalas[at]cox.net or 620-6502. If the attendance is large enough and the capacity of the site (30 vehicles/60 people) is exceeded, I will open my property and cottage for the overflow.

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[at]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 AFSIG Star Party at TIMPA**

By Bob Gilroy  
Saturday, April 30

If the weather cooperates, it should be a good observing night for everyone. TIMPA star parties are great for both beginners and experienced observers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don't own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them.

This is a great way to check out different telescope designs before you make that all-important decision to buy. We'll do our best to get you the answers you need. If you have friends or relatives who are curious about amateur astronomy, feel free to bring them along. The TIMPA site features a large parking area, and full restroom facilities. Be prepared for cold temperatures. Directions to the TIMPA site are located on the last page of this newsletter

**Las Cienegas (Empire Ranch)**

Note: The club is no longer scheduling monthly star parties at this site. The site may still be used by members, but it is recommended that members make their interest known via the taaforum e-mail listserver to organize the activity. This will preclude someone going to Las Cienegas, only to find out that no one else went down. Las Cienegas (formerly Empire Ranch) had been the club's dark-sky observing site for many 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. There are restroom facilities at the site.

## WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY – Rik Hill

Not all that glitters.....

The internet has experienced exponential growth since I was asked to start this column in 1999, in both content and volume. Unfortunately, quality too often has suffered. Today it is very easy to get a good education, on line, in astronomy on cutting edge astronomical topics from those doing the research FOR FREE, while sitting on the couch on cloudy nights. Such opportunity at such a cost has never existed in the history of the world!



For example, YouTube is literally bursting with astronomical podcasts (or webcasts). Not all of them are worth listening to, you have to be selective, but you can go to: <http://www.youtube.com/> and search on "astronomy" or narrow your search with a particular topic in astronomy. After you get past the Blue Oyster Cult and Metallica songs "Astronomy" you will find podcasts of astronomical lectures, interviews with astronomers and researchers and news stories.

I searched on "planetary astronomy", my own area of interest, and found a lot of interesting information. Searching on "asteroids" got many videos concerning potential impacting asteroids, effects of collisions and how surveys are searching for the Near Earth Objects (asteroids as well as comets). Just search on any topic in astronomy and there will be something there.

I also recommend searching on individual astronomers and astronomy popularizes. A search on Br. Guy Consolmagno of the Vatican Observatory (and author of TURN LEFT AT ORION), who often speaks here in Tucson, turned up many pages on astronomy and the history of astronomy and the church. You could spend a whole evening just listening to just his lectures and interviews.

Geoff Notkin and Steve Arnold, a.k.a. The Meteorite Men, have a number of pages of videos on YouTube that are fun to watch. Much of it has not been on TV so if you are a fan of this show, there's more to enjoy on that website.

The TAA's own David Levy has numerous video clips on YouTube as well. But in this case, if you want to search for him be sure to add "astronomy" or "comets" to the search string as there are many David Levys on YouTube (a stand-up comic, a "Macro-economist", a "metaphysical" jazz performer, a roboticist and even a Civil War member of the Confederate congress named David Levy Yulee ).

Many colleges and institutes are now putting lecture series podcasts on the web. Use a search engine to ferret out lectures on your favorite subjects. For example the Astronomical Society of the Pacific has an excellent set of such lectures at: <http://www.astrosociety.org/education/podcast/index.html>. Among these is one by Dr. Michael Brown, discoverer of a number of the Kuiper Belt planets and was a visiting astronomer at Lunar & Planetary Lab, Univ. of AZ, back in the mid-1990s. He's a very entertaining speaker and talks about a topic that is near and dear to him, "How I Killed Pluto and Why It had It Coming".

The recent Univ. of Arizona College of Sciences, Cosmic Origins lecture series is also on line as podcasts:

<http://cos.arizona.edu/cosmic/>. This has been an exciting and extremely popular series and. So, if you missed it you can catch up at that with the podcasts. Astronomy magazine has a library of their weekly podcasts at:

<http://www.astronomy.com/en/sitecore/content/Home/Multimedia/Podcasts.aspx> that goes back to 2006. Sky and Telescope has a page of podcasts too but they are not as extensive. While you are surfing, don't pass up Astronomy Cast which has dozens of in depth astronomy podcasts available at: <http://www.astronomycast.com>.

I have just barely scratched the surface here. If I have opened a world to you that has now dragged you indoors on clear nights, well I apologize, but never has so much information been available at no cost! I only could wish such a resource had been available in the late 1950s and 1960s when I was a budding amateur astronomer. I never would have gotten any school work done. It's so much wonderful information. However, you have to select carefully, there's a lot of garbage out there too, not all that glitters, on the web as well as in geology, is gold!

As always, if you have a topic you'd like explored or have some interesting URLs you've turned up, drop me a line at: [rhill\[at\]lpl.arizona.edu](mailto:rhill[at]lpl.arizona.edu)





**Member's Events****ALCON 2011 - Bryce Canyon**

By Robert Taylor

June 29 – July 2

As you may know ALCON 2011 will be happening this year from Wednesday June 29th through the Night of Saturday July 2nd 2011 at Bryce Canyon National Park. This year ALCON will be co-hosted by the Astronomical League, the Salt Lake Astronomical Society and Bryce Canyon National Park. We are very excited about this particular ALCON because of the location and focus on observing at one of the darkest skies in the lower 48. We have an outstanding line-up of speakers, events, sponsors and vendors including John Dobson, Carolyn Shoemaker and others, hands on demonstrations, a live feed remote telescope for imaging and southern hemisphere site viewing, a Star-B-Q dinner and much more. Please see the ALCON page for the latest line-up of speakers.

We also have a commitment from Orion Telescopes to bring one of their Monster Dobs for us to look through, we are all looking forward to getting a view through one of these monsters. So far we have two observing sites secured, one will be a traditional Public Star Party with the park public, often from all around the world, attending in conjunction with Bryce Canyon's Annual Astronomy Festival as well as a separate site dedicated to just observing for ALCON attendees only. Both sites are very dark, the public usually departs the public site by midnight leaving the field for us till sunrise. During the day we will have speakers, a swap meet, vendors and of course Bryce Canyon National Park, one of the most stunningly beautiful spots on Earth and one of the oldest National Parks in the National Parks system.

As you can imagine this is a great location for an ALCON. As such our initial block of 100 reserved hotel rooms at Ruby's Inn has sold out even before we actively advertised the event. We have never seen an ALCON get this level of response this early on, this ALCON is truly going to be special. Ruby's Inn has agreed to open more rooms at our special rate but they will not last long. Please let your club members know that if they are considering attending they should act quickly, I don't know how long these rooms will last at the discounted rate of about \$71.25 per night plus tax. We cannot guarantee our special rate will last. These rooms usually go for quite a bit more. Ruby's Inn will be the center of all our non-observing events and is a full service resort located at the mouth of Bryce Canyon.

There are additional accommodations available in the area if Ruby's completely fills as well as camping and RV sites for those that prefer RV'ing and camping. If you have members interested in attending please act quickly. Registration for ALCON will be open shortly, however we encourage you to get your accommodations set now. Bryce Canyon is a very popular Park and will likely fill.

We hope to see you at this year's ALCON. If you have additional questions please don't hesitate to contact us. Please see the AL ALCON page for additional information regarding the event as well as travel information about getting to Bryce.

If this was sent to by mistake please let us know. If there are other people in your club this should go to we ask that you please let us know and then forward this announcement to them. We do not want to see any interested AL member miss this event for want of accommodations.

<http://alcon.astroleague.org/accommodations>

<http://www.nps.gov/brca/index.htm>

<http://slas.us/>

**Archaeoastronomy Conference**

June 16-18

Albuquerque, NM

Final arrangements for the 2011 Conference on Archaeoastronomy of the American Southwest on June 16-18 in Albuquerque have been made. The conference announcement, with the latest details, can be downloaded from the website at [www.caasw.org](http://www.caasw.org).

The due date for abstracts has been moved to May 14th. The standard paper length is 20 minutes, but other durations may be available if requested. Abstracts should be limited to 300 words or less.

The Registration fee is \$75 for the three days. The address for mailing in your registration fee is on the announcement.

The list of nearby hotels is being finalized and will be on the website shortly. Consult the website as additional details and information is made available.

Conference on Archaeoastronomy of the American Southwest | P.O. Box 20578 | Sedona, AZ 86341



**Grand Canyon Star Party -  
Time For Reservations!**

18-25 June, 2011

By Jim O'Connor



It's about time to lock down plans to attend the 2011 edition of the Grand Canyon Star Party. GCSP 2011 is the 21st annual collaboration between the National Park Service and astronomers from around North America to bring astronomy outreach to Park visitors. The current version of the event, begun by Dean Ketelsen and now beginning its 21st consecutive year, is held concurrently on both the North Rim, coordinated by the Saguaro Astronomy Club, and the South Rim, coordinated by Tucson Amateur Astronomy Association.

**What GCSP Is**

GCSP is not the typical star party where astronomers gather for great viewing and the association with other astronomers. GCSP is an annual collaboration between the National Park Service and astronomers from around North America, to bring astronomy outreach to Park visitors as well as enjoy meeting old and new friends in astronomy. We astronomers act as interpretive rangers, explaining the night sky around the Grand Canyon to the visitors just as the daytime Park Rangers explain the geology of the park.

The level of public interest and involvement, and the opportunity for TAAA to make major contributions to public education and awareness, is profound. Generally, we have about 95 astronomers (nearly two dozen from TAAA) who register to take part for all or part of the week, and as many as 1200 visitors on any night. We put the Party in Star Party! And about 10 percent of the astronomers will set up at random places during the day, showing solar, lunar, and planetary views in daylight for the visitors and make them aware of the spectacular night to come.

**Major Changes This Year**

Those of you familiar with GCSP will notice some major changes beginning this year. The telescopes will most likely be set up in the dark area behind the Grand Canyon Visitor Center, a short walk from the front side parking lots 1 through 4 around the clock, and accessible up until 11 p.m. by the free Village Route shuttle bus which also stops on the front side out of sight. Yavapai Point is no longer on the Village Route. It, and the newly opened Mather Point stop, is on a revised Kaibab/Rim (orange) route, with shuttle service only until an hour after sunset. This appears to pretty well lock us into moving GCSP from Yavapai Observing Station. Last year we began looking into the potential for moving to the Visitor Center. Advantages: a newly constructed indoor auditorium for the nightly talks (216 seats plus wheelchairs), very large, flat, paved setup area with virtually unobstructed horizon views, NO traffic or buses at all, and, at the time we checked, no outside lighting on the back side of the Visitor Center. Until all of the new construction (the auditorium, for example) finishes this spring, Marker Marshall, our Ranger contact, is inclined to include a little wiggle room but she said she's 99% sure we'll need to move GCSP to behind the Visitor Center. When I checked the new location out last year, the views were breathtaking, 7000 foot elevation with a planetarium-like view of the skies. This location is now the Park's primary destination for Park visitors on entry, and the foot traffic should give us a lot of opportunities to make new friends for the Park and astronomy. When the buses stop running at 11PM, the night is still ours to enjoy for our own agendas if we choose to. Again, think 7000 feet, completely dark skies, virtually no obstruction horizon to horizon.

**General information regarding GCSP is found at:**

<http://www.tucsonastronomy.org/gcsp.html>

If you intend to participate this year, email your intentions to me at:

[gcsp\[at\]tucsonastronomy.org](mailto:gcsp[at]tucsonastronomy.org).

Astronomers are responsible for arranging their own lodging. For those astronomers intending to stay 6 or more nights, there are plans for a limited number of complimentary campsites to be available. Requests for a free campsite will be accepted beginning March 1. Campsites will be assigned in order of request received beginning March 1 until none remain. They go fast, so if you intend to participate for six or more nights and wish consideration for a free site, please send an email on or after March 1 to the above email address to be considered for the list. Other lodging at the Grand Canyon fills fast, so make your plans and reservations as soon as possible.

For the North Rim, the veranda is already filled with telescopes for the entire week. For further information and current status on the North Rim, please check at

<http://www.saguaroastro.org/content/2011GrandCanyonStarPartyNorthRim.htm>

Please let me know if you're interested in supporting TAAA in this exciting and extremely rewarding event for one night, eight nights, or anything in between!

Jim O'Connor

South Rim Coordinator [gcsp\[at\]tucsonastronomy.org](mailto:gcsp[at]tucsonastronomy.org)

## Less of Our Light for More Star Light

### Join the 6th worldwide GLOBE at Night 2011 campaign

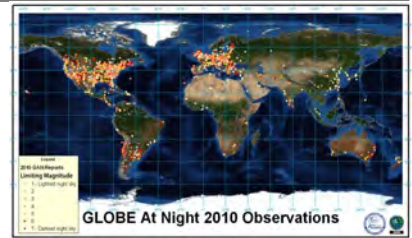
March 24 – April 6

Constance E. Walker, Ph.D. NOAO - 520-318-8535

Participation in the international star-hunting campaign, GLOBE at Night, helps to address the light pollution issue locally as well as globally. The campaign runs from March 22 through April 4 in the Northern Hemisphere. The campaign is easy and fun to do. First, you match the appearance of the constellation Leo with simple star maps of progressively fainter stars found. Then you submit your measurements, including the date, time, and location of your comparison. After all the campaign's observations are submitted, the project's organizers release a map of light-pollution levels worldwide. Over the last five annual 2-week campaigns, volunteers from more than 100 nations contributed 52,000 measurements, one third of which came from last year's campaign.

To learn the five easy steps to participate in the GLOBE at Night program, see the GLOBE at Night website. You can listen to last year's 10-minute audio podcast on light pollution and GLOBE at Night. Or download a 45-minute PowerPoint and accompanying audio. GLOBE at Night is also on Facebook and Twitter. The big news is that children and adults can submit their measurements in real time if they have a smart phone or tablet. To do this, you can use the web application. With smart phones and tablets, the location, date and time are put in automatically. And if you do not have a smart phone or tablet, there are user-friendly tools on the GLOBE at Night report page to find latitude and longitude. Help us exceed the 17,800 observations contributed last year. Your measurements will make a world of difference.

GLOBE at Night: <http://www.globeatnight.org/>



### ADOPT-A-STREET PROGRAM DURING THE GLOBE AT NIGHT 2011 CAMPAIGN

GLOBE at Night offers a "Call to Action" for those who want to take more than one measurement during the campaigns. Children and adults can "Adopt a Street" in their town to take visual and possibly sky-brightness meter measurements during the GLOBE at Night campaigns. (For information on sky brightness meters, see "SQM-L" at [www.uni-hedron.com](http://www.uni-hedron.com).) The Girl Scouts as well as the amateur astronomy association in Tucson will be undertaking the "Adopt a Street" project. The aim is for people to adopt a different major or semi-major street and take measurements every mile or so for the length of the street (or for as long as they can). The grid of measurements will canvas the town, allowing for research later in comparison to wildlife, health, energy consumption and cost, among other things.

To adopt a street, go to <http://www.globeatnight.org/Tucson/> and type your email address into the box next to the street you are adopting. Click the Submit button and you will be signed up. Your email address will not be shared on this site or with any other parties. Once a street has been signed up for, it will be stamped "ADOPTED." Once you have signed up for a particular road:

Try to measure sky brightness every mile along the road you chose.

To measure sky brightness, observe Orion and match what you see to the charts. (charts and overall directions) Make sure to record the chart selected, your location, date, time and cloud cover. Location can be the intersection at which you take the measurement, even though latitude and longitude are preferred. You may also use a Sky Quality Meter (SQM) to measure sky brightness, in addition to observing Orion. To use an SQM, be as far away (as possible) from a light or structure as it is high. Hold the SQM at arm's length straight up above your head. Press the start button once. Record the number on the meter. (SQM instructions). If you need to borrow a Sky Quality Meter during the campaign, you may sign one out with Maria at NOAO Headquarters (950 N. Cherry Ave., across the street from Steward Observatory on the UA campus.) She is there Monday through Friday from 8:15am till 4:15pm except during 12:30-1pm. Her phone number is 318-8000. You must return them to her by April 8. Submit your measurements via the web app. If you have a smart cell phone or tablet, you can submit your measurements as you take them. (Your latitude, longitude, date and time are automatically recorded by the smart cell phone or tablet.) Try to do the entire length of the street as specified (typically 7 miles plus or minus 2 miles).

### Global Astronomy Month

#### One people - one sky

Professional and amateur astronomers, educators and all astronomy enthusiasts worldwide are invited to celebrate the Universe in April 2010, during Global Astronomy Month – an international project that builds on the achievements of The International Year of Astronomy 2009, by combining a wide array of activities with the possibility of sharing experiences in real-time!

### International Dark-Sky Week (NDSW)

April 4 to 10, 2010

From April 4 through April 10, 2010, International Dark Sky Week celebrates the heritage of the nighttime sky by encouraging people to turn off unnecessary lights. The event began in 2003 as National Dark-Sky Week in the United States and officially became international in 2009, the International Year of Astronomy. The key to success is the broadest possible participation.

### THERE IS ANOTHER WAY TO LIGHT UP THE NIGHT SWITCH ON THE STARS!

April 20th 2010 is the date when the **Declaration in Defense of the Night Sky and the Right to Starlight** will be promoted, as every year since 2007, at all levels, by municipalities, governments organizations, NGOs, citizens associations and also individuals. On April 20th, 2007 during the first International Starlight Conference, it was agreed to promote annually the World Night in Defense of the Starlight as part of our cultural, scientific and environmental heritage. Every year on this date we remind ourselves of the need to preserve our right to view a dark night sky full of stars and to take steps to prevent its disappearance. This year, World Night in Defense of the Starlight falls within Astronomy Week 2010.

## SCHOOL AND PUBLIC STAR PARTIES

All members are asked to support the TAAA School and Public Star Party programs and other community events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners, as you 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.

### Immaculate Heart Academy Star Party

Wednesday, April 6

General Area: North - One more scope is needed. Three have already signed up.

Located at 410 McGee Road, take Oracle Road north, turn east on McGee, which is the second traffic signal north of Ina Road. The driveway to the school is about 1/4 mile from Oracle Road on the right (south) side of the street. Viewing will take place on the east side parking area. Viewing is from 7:00 to 9:00, with setup at 6:30.

### Coronado K-8 School Star Party

Thursday, April 7

General Area: North - Three more scopes are needed. Three have already signed up.

This is a large Exploring the Sky event, with 200 people anticipated. Take Oracle Road to the north past Rancho Vistoso to Wilds Road. Turn right, east, on Wilds Road. The school is on the north side of the road, facing Oracle Road. Viewing will take place on the North softball fields. Viewing is from 7:00 to 9:00, with setup at 6:30.

### Rattlesnake Ridge Elementary School

Friday, April 8

General Area: North - No more scopes needed. Three have signed up already.

Take I-10 West to Cortaro Road. Exit at Cortaro Road and at the stop sign on the ramp, turn left (west) and go to Silverbell Road. Turn right (north) on Silverbell Road, and continue past Coyote Trail Elementary, Wade Road and Continental Reserve Urgent Care. Turn left at the traffic light on to Continental Reserve Loop. (Coachline Blvd is the street name to the east.) The school is on the left just past the Quick Mart. Viewing is from 7:00 to 9:00, with setup at 6:30.

### St. Michael's Parish Day School

Thursday, April 14

General Area: East - Five scopes are needed.

The School is located at 602 North Wilmot Road. From the intersection of Wilmot and Speedway Boulevard, go south on Wilmot. Turn east on 5th Street into the school parking lot. The star party will be at the Harold B. Wright Park, which is behind the school. Viewing is from 7:00 to 9:00, with setup at 6:30.

### Ora Mae Horn Park, Marana, Family Night

Saturday, April 30

General Area: Northwest - Four scopes are needed.

Go west on I-10 to exit 240 at Tangerine Road. Go west under the interstate and get onto Tangerine Farms Road. Turn right on Crossroads, a loop road that turns into the Frontage Road, and go northwest on the Frontage Road. Go past Moore Road and the next turn left is Barnett Road. Turn left on to Barnett Road and go past the school bus barn. The next road you come to is Lon Adams Road. You are now at the park on the right. Go to the Visitor Center. Viewing will be from 7:30 until 9:00, with setup at 7:00.



### Desert Skies Classified

FOR SALE	Celestron NexStar 11" GPS (28cm). Like new. Also includes mount, remote control, Pelican 1450 case, Celestron 40mm eyepiece, Tele Vue 18mm and 10mm eyepieces, and SCT Micro Touch Focuser. Telrad guide and instruction manual too. Bargain priced at \$2,400. Contact Lee Paulsel at paulsel[at]comcast.net or phone: 520-577-8966. [04/11]
	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.



## CHIRICAHUA ASTRONOMY COMPLEX



### Facility Update

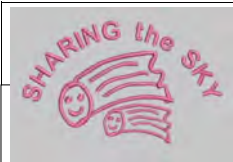
John Kalas – Construction Coordinator/CAC Site Director

The March 5th monthly star party was attended by 12 members in 9 vehicles. The weather was not perfect with some high clouds, but the attendees worked around the minor obstacles. Five folks stayed all night and left Sunday morning. The April CAC Star Party will be our Messier Marathon on Saturday the 2nd.

The activity for Phase 2 construction is in full swing. Peter Ammon has done a splendid job clearing the “public area” and has installed the gravel pads for the two steel storage containers included in the Phase 2 plans. Peter has also opened the deep trench from the electrical switch south of the bathroom facility to a point just east of the RV Area. We are waiting for SSVEC, the local electric company, to install the high-voltage cable in the trench and the additional switch and transformer near the RV Area.

Randy Maddox, our construction contractor has issued a contract which is being reviewed. By the time you read this info, John Kalas will have staked out the locations for the features contained in the “public area”; ten 12'x12' concrete telescope pads with electricity, the amphitheater (8.4 meter diameter concrete pad) with one storage container and the 12'x14' roll-off roof observatory. Randy Maddox should start construction early in the week of 3/28. The “public area” construction is projected to be completed by early May. The completion of the RV Area will depend on additional donations.

John Kalas, Bill Lofquist and his grandson, Robert, completed hanging the “No Trespassing” signs along the western side of the parcel. Robert Crawford and John Kalas have been adjusting the three video security cameras at the site to optimize their nighttime performance. The four video security cameras have been installed on my cottage/observatory adjacent to the site. That means we are ready to advise the Livingston's (nearby neighbors) of the club's intent to submit a lighting complaint with Cochise County to address the two offensive mercury-vapor lights on their property. The lighting complaint submission should take place by April 1st.



## SHARING THE SKY – FLANDRAU SCIENCE CENTER

National Astronomy Day Star Party and Fundraiser  
Saturday, May 7

Mark your calendars for Saturday, May 7, 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 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 both the April and May club meetings or you can call or e-mail John Kalas at 620-6502 or jckalas[at]cox.net.



## Planetary Nebulae of the Month – by Christian Weis

Planetary nebulae (PN) are fascinating objects that come in numerous forms of appearances. Besides the well-known grand four Messiers (M27, M57, M76 and M97), there are hundreds more to explore. This article suggests two PNs, a pretty bright and easy-to-observe one and a harder one for the more ambitious observer who is equipped with a big scope.

NGC 2371/2372 is the so-called Dog Bone nebula in Gemini. Visually, it looks like two individual objects; therefore it has been given two NGC-numbers. Despite the fact that the famous Eskimo nebula is located in the same constellation, NGC 2371/2372 is well worth a look. With an apparent brightness of 11m2, it can be observed with a telescope as small as three inches in aperture. However, it is more fun when you have a big scope and the capability to magnify a lot. I sketched the PN twice, once with an 18" Dobsonian and mediocre observing conditions from Germany in 2005 and once having good conditions at Geology Vista and a 16" Dob. It is quite interesting how much those drawings differ. With the bigger aperture but using lower power, I could only see the two lobes. My description: Easily visible at 100x, separation into two parts is very obvious at 226x, reacts to filters, western part is significantly brighter and smaller than the eastern one (however, the sketch does not show that, I suspect that I did not pay enough attention while blending), in both parts of the nebula a star can be seen, the star in the western part is brighter; 226x, fst 5m6

The description from 2010 on the other hand reads: Central star directly visible, PN is split into two parts, NW part significantly brighter and smaller, SE big and diffuse, a faint nebula connects both parts of the nebula, UHC filter helps; 780x, fst 6m2

As you can see, the difference is enormous. Again, a high magnification makes the difference.

What do you see? Give it a try, the dog bone is a very interesting object.

Despite its apparent integrated magnitude of 12m0, PK 219+31.1 (Abell 31) in Cancer is a huge object – and a tough one on top. Its size is more than half as big as the moon, approximately 16 arcminutes (yes, minutes, not seconds!). Since the intensity is distributed over such a big area, the surface brightness is only 18mag/arcsec<sup>2</sup>. You will need favorable observing conditions in order to be able to detect it. Without a UHC filter I did not have any chance to see it at all, even though the sky was reasonably dark (fst 6m3) and using an 18" Dobsonian. I suggest covering your head with a black cloth in a fashion that all you can see is the FOV of your eyepiece. Only slight distractions from outside can make the difference between seeing the PN and not seeing it. Field sweeping (i.e. moving the scope a little around the spot where the PN stands) also helps. Try not to tense up while looking through the eyepiece as it will negatively influence your capability to detect the faint nebula.

My description reads: Extremely big, weak but definite, no central star, the dimensions in the sketch were determined with field sweeping, no structures or mottling at all; 94x, fst 6m3

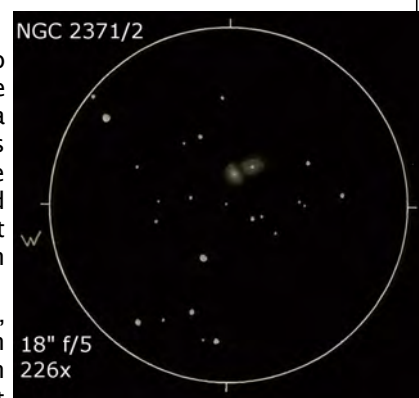
Can you see Abell 31? You will need good observing conditions, but a big aperture is not necessary. Martin Schoenball from Germany was able to see Abell 31 with a 10" telescope.

Both objects can be seen in the early evening hours in April.

### NGC 2371/2372

RA: 07 h 25.6 min  
Dec: 29° 29'  
Constellation: Gemini  
Brightness: 11m2  
Central star: 14m8  
Size: 74x54 arcsec  
Distance: 3900 ly

PK 219+31.1 (Abell 31)  
RA: 08 h 54.2 min  
Dec: 8° 54'  
Constellation: Cancer  
Brightness: 12m0  
Central star: 15m5  
Size: 970x930 arcsec  
Distance: 1000ly





### TAAA Board of Directors Meeting 9 March 2011

**Attending:** Board members present (7): Keith Schlottman (presiding), Bill Lofquist, Luke Scott, Teresa Bippert-Plymate, John Croft, John Kalas, Michael Turner. Members present (5): Bob Gilroy, Claude Plymate, Terri Lappin, Ben Bailey, Liz Kalas

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

**Minutes:** Minutes from the January and February 2011 Board meetings were approved unanimously.

#### Member Feedback

- Some members have questioned the Forum Etiquette message. The Board noted that this message is automatically sent to all Forum subscribers once a month.
- The March Astronomy Fundamentals lecture by Al Anzaldúa received positive comments from several members.

#### Upcoming Meetings

- Terri Lappin reported that the Steward Observatory auditorium will be unavailable for the May general meeting due to final exams. An alternative location is being sought.

#### Announcements for Record

- The TAAA received a Thank You card from the Ritz-Carlton for helping with a promotional photo shoot and providing telescopes through the Astronomy Services Program.

#### Treasurer's Report

- The club has \$53,129.79 in checking. All bills are paid.
- 11 new members joined this month.

#### Special Interest Group Status Reports

##### Astronomy Fundamentals: (Ben Baily)

- The next Fundamentals of Astronomy class will be held on 12, 19, and 26 March.
- Al Anzaldúa will be speaking to the Saddlebrooke Astronomy Club.
- Wally Rogers donated five telescopes to TAAA for use by the Astronomy Fundamentals SIG. The SIG is currently developing a program to best utilize the telescopes.

**Astro-Imaging:** No report..

**Starry Messengers** (Terri Lappin):

- The TAAA booth at the Festival of Books needs telescopes for Saturday and Sunday.

**Cosmology and Space Exploration:** No report.

#### TIMPA Report

- With Pad #1 completed and the donation of the 5 telescopes from Wally Rogers, we are hoping to complete the electrification of the observing pads.
- Michael Turner expects to lead a work party to complete this project no later than the end of March.

#### Web Site

- Bill Lofquist reported that the working group met with a consultant to discuss further development of the TAAA web site. A quote was received from the consultant but rejected due to excessive cost.

#### School Star Party Program

- Bill Lofquist reported that no new school star party requests have been received and that Mark Meanings' procedures for processing star party request information worked well.
- The Board agreed that the teacher's name and contact information will not be published in the newsletter.
- Following discussion of the difficulties of telescope viewing for young children, a motion was entered by the Treasurer and seconded by the President stating that the TAAA School Star Program is intended for 3rd grade and above. The motion was approved by a vote of 6 - 1.
- The Board noted that the policy does not preclude members from working with younger students.

#### Other

- Weed control efforts at CAC will start following the last frost of the season.
- The President created a Facebook page for TAAA.
- John Kalas will post an announcement to the Forum reminding members of the CAC Messier Marathon.

Meeting adjourned at 8:45 pm.

Respectfully submitted,  
Luke Scott  
Secretary

## CONSTELLATION REPORT BY CHRIS LANCASTER

### Canis Major The Great Dog

Before this constellation, southeast of Orion, was known as one of Orion's hunting dogs, it was seen by the ancient Indians as a deer hunter with the stars of Orion representing the prey. The three stars of Orion's belt was an arrow that had pierced the deer's side. In other times, Canis Major has been considered to be a dog in almost all other prominent stories of mythology and antiquity.

Alpha Canis Majoris probably has more legend behind it than the constellation itself, owing to the fact that it stands alone as the brightest star visible from Earth. Its modern name, Sirius, is derived from the Greek word seirios, meaning "scorcher." Since Sirius is behind the Sun during the summer in the northern hemisphere, it was once thought that the combined light and heat of Sirius and the Sun was what led to the hottest part of the year, as well as a more ominous role of bringing evil and sickness to humanity. One of Sirius' nicknames, the "Dog Star", leads to the expression "dog days of summer." Some of the other names that Sirius has held come in part from ancient Hindu writings that refer to Sirius as "Tishtrya," ruler of rain and water, and "Sukra," the rain god. Other names include the Persian "Tir" (arrow), the Babylonian name "Kakkab-lik-ku" (star of the dog), the Assyrian "Kal-bu-sa mas" (dog of the sun), and the Akkadian "Mul-lik-ud" (dog star of the sun.)

The ancient Egyptians celebrated the pairing of Sirius and the sun since it coincided with the annual flooding of the Nile. This revitalized Egyptian agriculture as well as Egyptian life in general. Sirius' "heliacal rising," or rising at dawn, thus marked the Egyptian new year.

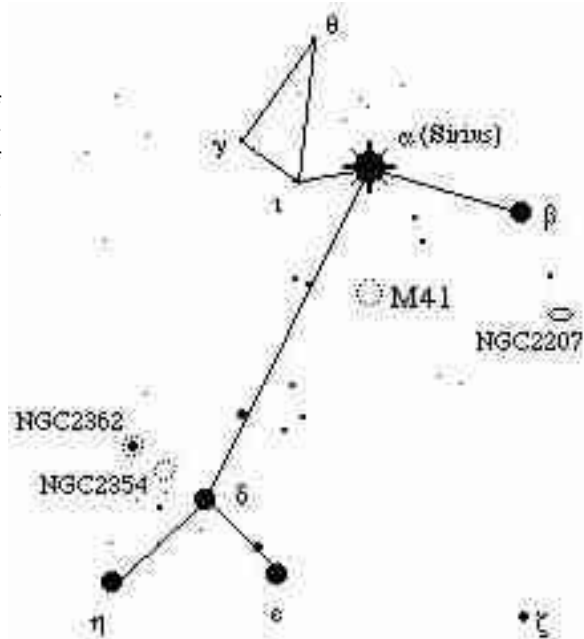
Looking at Sirius through a telescope is by no means necessary since it is so dazzling just to the naked eye, but if you do so you are treated to an impressive sight, reminiscent of looking toward the Sun as an interstellar voyager at the edge of the solar system. There is a companion to Sirius, called Sirius B (or "The Pup"), which is a white dwarf of magnitude 8.6. Periastron of this system occurred in 1994 and currently the separation is about 4" at a P.A. of 151 degrees. Maximum separation of this system will be in about 25 years when the two will be 11" apart, but Sirius B is always extremely difficult to detect due to the glare of Sirius A. Some speculation has been made of the behavior of Sirius B over the last two thousand years. Ancient writings by such notables as Ptolemy, Horace, and Homer describe the light of Sirius as ruddy, coppery, and redder than Mars. One theory suggests that Sirius B could have been in the red giant stage in recent times, which would have reddened the combined light of the system enough to garner such descriptions. Or it could have simply been a result of the Earth's atmosphere, which refracts the light of a bright star such as Sirius so that it appears to twinkle in a spectrum of colors when close to the horizon, and these writers took advantage of this for dramatic effect.

If you drop exactly 4 degrees south of Sirius you will see the star cluster M41 (RA 6h 49.9' Dec -20d 44'). This is a 4.5 magnitude cluster easily seen with the naked eye in dark skies, and when spotted through a telescope reveals close to 100 stars of magnitude 7 and dimmer in a space about 1/2 degree across. The brightest star of the cluster is near the center and is a pinkish star of spectral type K3 II. The other bright members are giants of type K, G, and B.

NGC2354 is another cluster smaller and more subtle than M41 that has about 60 dim stars spread out in an area about 20' wide. Move about 1.5 degrees ENE of Wezen (Delta Canis Majoris) or center your scope at RA 7h 14.3' Dec -25d 44' for this 6.5 magnitude cluster.

A third cluster is the exquisite NGC2362, just 1.3d to the NE of NGC2354 at RA 7h 18.8' Dec -24d 57'. This is a tight cluster of about 40 stars 6' across crowded around the 4th magnitude star Tau Canis Majoris (also designated 30 Canis Majoris), a hot O9-type giant. The cluster roughly assumes the shape of an equilateral triangle with Tau at the center. Studies indicate that this collection of stars is quite young--perhaps only 1 million years old.

Among the few galaxies that can be glimpsed in Canis Major is NGC2207. In terms of size (4.5' X 3') and brightness (mag. 12), this galaxy is typical of those which are found in Canis Major, but it shows a unique structure. It is tear drop shaped with the appearance of a double nucleus, which probably indicates that it is an interacting system of two galaxies. From Mirzam (Beta Canis Majoris), move 3.5d to the SSW or center on RA 6h 16.4' Dec -21d 22.35'.





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

Address Service Requested

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

### Directions to TIMPA and Las Cienegas

#### Directions to TIMPA Site

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

##### **From the North:**

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

##### **From the East:**

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

#### **NOTE**

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

#### Directions to Las Cienegas (Empire Ranch)

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

Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is "wash-boarded" 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.