

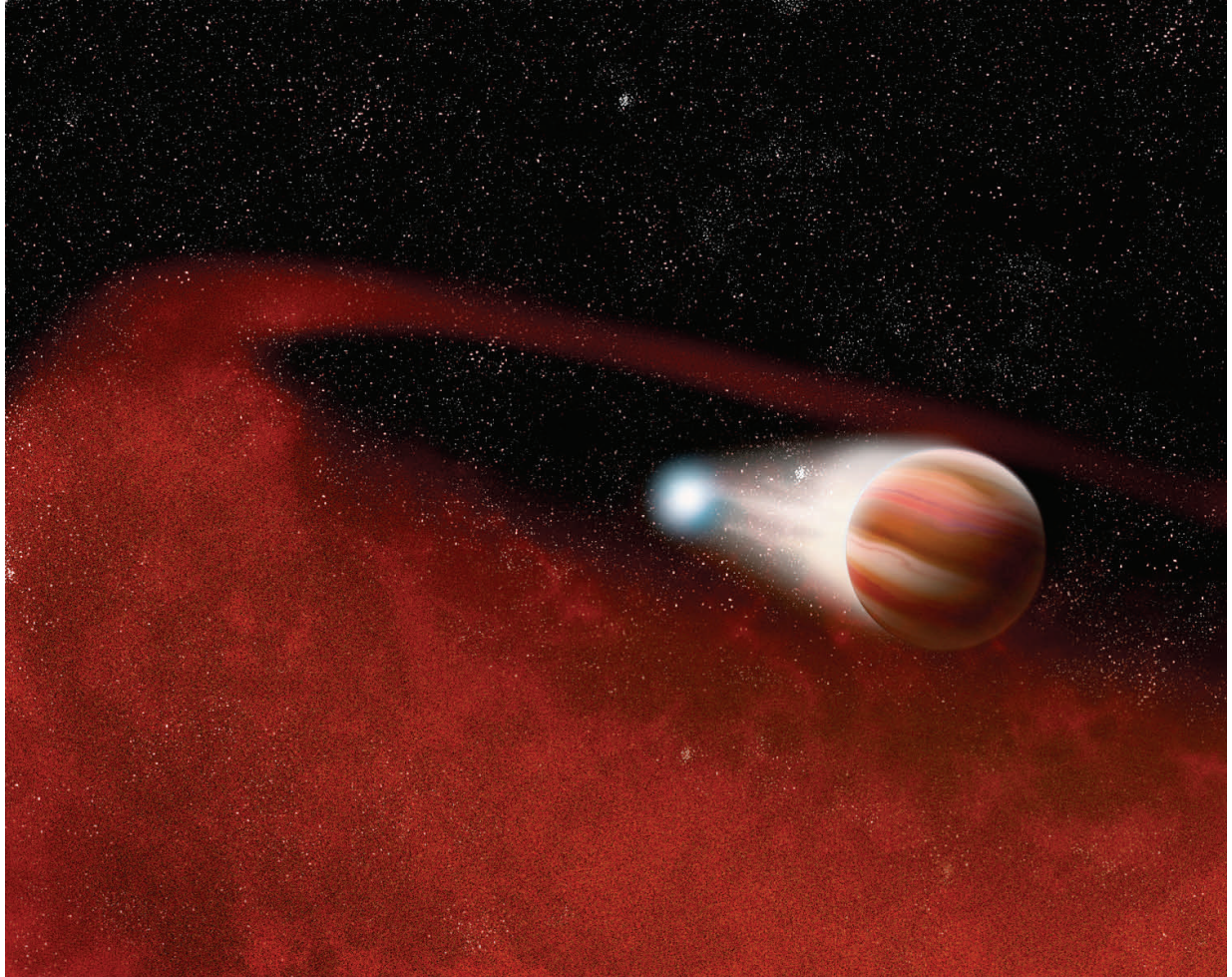


Desert Skies

Tucson Amateur Astronomy Association

Volume LIII, Number 10

October, 2007



Spitzer Space Telescope Studies Binary Stars

Inside this issue

- ♦ Learn about the
- ♦ School star parties
- ♦ Opportunities to Volunteer
- ♦ Constellation of the month
- ♦ All-Arizona Star Party

Cover Photo: [Artist concept](http://www.noao.edu/outreach/press/pr06/pr0604.html) of the circumbinary disk. Credit: P. Marenfeld and NOAO/AURA/NSF, <http://www.noao.edu/outreach/press/pr06/pr0604.html>

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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\$ 5.00
- 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\$ 4.05

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, and General/Undesignated.

Renewal Information

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

subscription amount to the TAAA treasurer. Include your magazine renewal notice.

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

Tucson Amateur Astronomy Association
PO BOX 41254 Tucson, AZ 85717

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

TAAA Mission Statement - The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

Desert Skies Publishing Guidelines - All articles, announcements, news, etc. must be submitted by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. Submissions should be submitted in Word compatible files via e-mail or on a recordable media.. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

George Barber
TAAA/Desert Skies Editor
15940 W Ridgemoor Ave
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President's Message

Hello, fellow TAAA members:

Let's hope we can get back to our usual non-monsoon routines of using our telescopes on a regular basis. A break in the hot weather is always welcome, but clear skies are even more so.

While things continue to move on the two fronts of completing the building of the observatory at TIMPA and securing the permanent dark site near the Chiricahua Mountains in Cochise County, the pace can seem agonizingly slow at times.

We are still waiting for the contractor to put in the road to the pads at TIMPA and do the necessary concrete work on the pad so we can move the observatory to the site and complete its construction. The TIMPA folks have a big event coming up in early October, and we hope the work will begin shortly after that. We will keep you informed. George Barber continues to provide leadership for that project.

On the acquisition of the permanent site in Cochise County, the wheels are turning on getting the land, and we are making good progress on the application to the County for a Special Use Permit. By the time you are reading this issue of Desert Skies we hope to have submitted

the application to the Planning and Zoning Commission. The hearing for that is scheduled for November 14. An article giving an update on where we are with that appears elsewhere in this issue.

Ken Shaver did an excellent job of organizing the backyard observatory tour after the September meeting on that subject. The next day about 30 members took the tour, and we saw some very nice observatories. Needless to say, we have some very clever members who have created great facilities for themselves.

The details have not been completed yet, but look for an announcement about our annual Holiday Party coming up in early December.

Our fall schedule of star parties is getting under way. We always need more members to make themselves and their scopes available for this important and enjoyable contribution to the community. We hope you will take advantage of the opportunity and sign up at the October meeting.

Clear skies,
Bill Lofquist, President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, October 5, at the Steward Observatory Auditorium – Room N210

ASTRONOMY ESSENTIALS: 6:30 pm

To be announced.

GENERAL MEETING: 7:30 pm

Speaker: Dr. Steve B. Howell (WIYN Observatory & NOAO)
Title: Small Stars - Big Dust

The Spitzer space telescope has wowed us all with its images and discoveries. One of the lesser known discoveries is that of circumbinary dust disks encircling interacting binary stars. Dr Steve Howell will review such binaries and summarize the latest findings using Spitzer observations. Dr Howell received his Ph.D. in astrophysics in 1995 from the University of Amsterdam, Netherlands.

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

STAR PARTIES AND EVENTS:

06 Oct - TAAA Star Party at Las Cienegas
06 Oct - Tucson Audubon Society Star Party
07 Oct - UofA Astronomy Students Star Party
09 Oct - Doolen Middle School Star Party
13 Oct - Cub Scout Pack 219 Star Party
13 Oct - TAAA and BSIG Star Party at TIMPA
12, 13 Oct - 2007 All-Arizona Star Party
19 Oct - Robins Elementary Star Party
26 Oct - Desert Willow Elementary Star Party
27 Oct - Midvale Neighborhood Picnic

NEWSLETTER SCHEDULE: Deadline for articles: Sat, 20 Oct. Printing: Mon, 22 Oct. Folding Party: Tues, 23 Oct. Mailing: Wed, 24 Oct. The newsletter is mailed 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: Patricia Ackor, Richard Connet, and Alan Delman. 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 online at either Yahoo Groups email list website under Files, or at most meetings.)

Astro-Imaging SIG Meeting

Monday, October 8, 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.

Beginners' Special Interest Group BSIG for October

The Beginners Special Interest Group will gather for the monthly dinner meeting & TIMPA warm-up at the China Rose restaurant (NE corner of Speedway and Rosemont) on Wednesday, October 10, at 6:00 pm. We will present an observing list for the TIMPA star party the following Saturday, October 13, and discuss topics of interest to beginning observers. Join us at the China Rose for information and good company, and at TIMPA for (we hope!) clear skies!

TAAA Apparel

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

2008 Calendars

Calendars for 2008 will be available for purchase at regular meetings. You'll find them at the same table where you purchase TAAA apparel. This year you have your choice of either the Astronomy magazine "Deep Space Mysteries" calendars or the Vatican Observatory calendar...or get both. The cost for a calendar is \$10 each (\$3 or \$5 off the regular selling price), or \$9 each for more than one. Proceeds from the sale of these calendars will be used appropriately as decided by the board. Thank you to all who support the TAAA through the purchase of the yearly calendars. (Sky and Telescope did not publish a calendar for 2008.)

Basha's Thanks a Million Program

Basha's has an excellent program to support local non-profit groups like the TAAA. It's called the Basha's Thanks a Million for Friends and Neighbors program. This is a no-brainer fundraiser. If you shop at Basha's and have a "Thank you" card, the next time you go through the checkout, give the cashier this number: ID #23178. They can look up the number using our name, too. It's that easy! Just do it once. At the end of the program next spring, Basha's will make a donation to the TAAA based on the total sales of every Thank You card linked to our number. Anyone can participate, so give our number to family and friends. If you participated last year, you need to give our ID number again, or your sales won't count. Thanks to everyone who participates.



ID # 23178

Upcoming Lectures

Below is our upcoming lecture schedule. November 2nd will be Member's Night, so if you want to make a 15 minute presentation, let Bill Lofquist or Ken Shaver know. There will also be a sign up sheet available at the October meeting. Please note that we have an opening in December for the Astronomy Essentials lecture which is typically given by a TAAA member. If you want to give this lecture be sure to Contact Terri Lappin (see page 2).

Nov 2	Member's Night	
Dec 7	<i>Astronomy Essentials</i>	OPEN
	<i>Invited Lecture</i>	Doug Isbell, NOAO IYA 2009
Jan 4	<i>Astronomy Essentials</i>	Mary Turner, Seasonal Objects
	<i>Invited Lecture</i>	Peter Smith, LPL Mars Phoenix Mission
Feb 1	<i>Astronomy Essentials</i>	OPEN
	<i>Invited Lecture</i>	Astrophoto SIG, Tentative

Club News (cont.)

Night Sky Network



New Toolkit!

The newest toolkit, Exploring the Solar System, has arrived! This kit contains a scale model of the solar system (yes, it includes Pluto), as well as a project that explains the current and past NASA missions to explore the solar system. As with all NSN toolkits, it includes a Resources CD, a training DVD, and essentially all the materials you need for the projects. You can request a copy of the CD and DVD at a meeting, or ask to borrow this or any toolkit listed below. Contact Terri Lappin (see page 2) for more information about these kits and their use.

All toolkits contain essentially all the materials needed for the projects. The projects are easy to do and you don't have to use all the projects in your outreach activity. You get to pick and choose the project(s) you demonstrate.

PlanetQuest: materials to explain how planets are detected, why we put telescopes in space, treasure hunt for objects related to stellar evolution, star chart of naked eye stars known to have planets in orbit

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, includes a game that a group or family can play

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

Shadows and Silhouettes: covers lunar phases, eclipses, and transits

Exploring the Solar System: scale model (size and distances) of solar system and NASA explorations of planets

The Night Sky Network has also given us a SolarScope to use in our outreach efforts. It will provide a white light image of the sun suitable for a small group to view together.

Halloween Astronomy Fun

By Terri Lappin

Halloween is a great time to get your scope out for the neighborhood kids. We'll have a dark sky this year with Jupiter low in the western sky. Jupiter will set about 8pm, so depending on your horizon you may or may not see it during "Trick or Treat" time.

If your local lighting situation allows, you can view the Andromeda Galaxy. You'll need to describe to the viewer what they are looking for in the eyepiece. You could mention that it's believed by astronomers that our Milky Way Galaxy and the Andromeda Galaxy are destined to collide in about 3 billion years. If you have a laptop computer available, you could play a simulation of such a collision found at <http://tinyurl.com/yho9ba> (http://www.nasa.gov/audience/forstudents/5-8/features/F_When_Galaxies_Collide.html). Our sun won't likely collide directly with anything, but the two galaxies will certainly change their appearance.

The other deep sky object that you might want to try viewing is the Ring Nebula in Lyra. This object is small, but bright enough for most kids to see. Its easily recognizable doughnut or Cheerio shape is easy to describe to the viewer. The doughnut shape really pops out if the viewer looks off to the side of it (this is "averted vision"). The Ring Nebula is the result of a star, similar in size to the sun that has reached the end of its stable life and has poofed off its outer atmosphere. (Okay, poofed is not the correct scientific term.) The sun will go through a similar event once it's reached the end of its stable life.

Uranus and Neptune are also up this Halloween. Uranus is between the stars Lambda and Phi Aquarius. Neptune will be found above the eastern end of Capricorn. Orientations are just right so that the Earth is passing through Uranus' ring plane. This happens only every 42 years. The rings of Uranus are far too faint to be seen visually, but 4 of its moons are visible with moderate to large amateur scopes. Use this link <http://tinyurl.com/3xwhwa> (<http://www.skyandtelescope.com/observing/objects/planets/3310476.html>) to find a java script that will help you identify Uranus' moons.

Here are a few guidelines to help make your Halloween a success. Set up your telescope near the sidewalk with a



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Club News (cont.)

jack-o-lantern or similar attention getting, but dim, light source nearby. Spooky music gets attention too! Make sure power cords don't become trip hazards. Leave your patio lights off to draw kids away from your front door and towards you and the telescope. Be sure to have a stepladder handy for the little ones. The tendency is for people to support themselves by leaning against the telescope so politely warn them not to touch your telescope, explaining that it's carefully balanced and will not support their weight. It's best to use an eyepiece with some eye relief as they are more comfortable to use; however I also recommend using an eyepiece you didn't pay too much for. Many kids wear makeup, and that stuff can get all over your eyepiece! I put an eyecup on my eyepiece which takes the brunt of the makeup. If you need to clean your eyepiece after the night is over there is information about doing this in the TAAA member's pack, or you can request that information from me.

Have fun and be sure to tell me your experiences. If you enjoy this kind of informal observing you might want to give a school star party a try.



September Backyard Observatory Tour

By Ken Shaver

On Saturday September 8th we held the Backyard Observatory tour. The tour consisted of 5 roll-off roof home observatories. Despite the 100+ temperature the event was very well attended with over 30 members braving the desert heat and despite the conditions, everyone had a good time. All that attended had nothing but praise for the hosts and their projects. All of the facilities were terrific examples of what some ingenuity and determination can produce. Each of the observatories offered different unique and interesting ideas on what it takes to put together a permanent home for your telescope equipment. Ideas on what to do and what not to do were discussed and shown. Pictures of the day's tour can be found throughout this month's newsletter.

The day ended with Pizza, Soda and a light evening of semi-cloudy sky viewing in the foothills of the Santa Rita Mountains. I would like to add my thanks to all that attended and especially to the hosts of each of the home observatories for opening their homes to the membership. Their generosity helped to make this event a great success.

Member's Events

TAAA Star Party at Las Cienegas (Empire Ranch) Saturday, October 6

Las Cienegas (formerly Empire Ranch) has been our normal dark-sky observing site for quite a number of years. Please try to arrive before sunset. Stay as long as you like, but let everyone know when you are ready to leave; someone may be taking astro-images. Bring a telescope if you have one, but you don't need one to attend. Any member would be glad to let you look through their telescope. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cool temperatures. Attendees should park their vehicles either perpendicular to the airstrip facing toward the center of the strip, or parallel to the airstrip along either side facing west. That way, when you are ready to leave, you will not have to back up and turn on your bright white backup lights. See the directions to Las Cienegas on the outside flap of this newsletter.

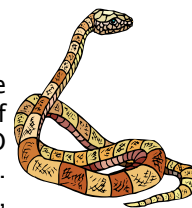
TAAA and BSIG Star Party at TIMPA Saturday, October 13

Come on out and enjoy the summer skies (monsoon willing)! 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. It's also a good idea to bring insect repellent. Directions to the TIMPA site are located on the outside flap of this newsletter.

Rattlesnake Alert!

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://www.friendsofsaquaro.org/rattlesnakes.html>.



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

Finally, the Tucson water department has declared the water at TIMPA is NO LONGER POTABLE. It is strongly advised that you bring your own water.

Items of Interest

2007 All-Arizona Star Party

The monsoon storms are over, the skies are clearing again, it's getting cooler - It must be time for a big star party! East Valley Astronomy Club invites you to attend the **2007 All-Arizona Star Party**, Friday, October 12th and Saturday, October 13th at Farnsworth Ranch, south of Arizona City [N 32° 27' 45.2" W 111° 43' 53.2" 32.46° N 111.72° W Elevation: 1,800 ft. or 548.6 m]

Arizona City is the site of the annual All-Arizona Star Party. The observing field is located midway between Phoenix and Tucson, west of Interstate 10. The sky conditions are reasonably good, almost matching those of the Vekol Road site. The site offers the right combination of dark skies, good visibility and temperate nights that will encourage you to stay up well past your bedtime! There are the predictable glows from Phoenix and Tucson, but not much else to complain about. The nearby cotton fields make this another very dusty place, especially when stirred up by 50 to 100 arriving astronomers. Most of the flora is small creosote bushes, so horizons are very low. It is important to note that this site is on private land. This

is a primitive site - so if you need something you'll have to bring it with you! Porta-Potties will be available on site. Attendees are welcome to camp overnight at AASP.

To get to the site of the All-AZ Star Party: Take I-10 to Exit 200, Sunland Gin Road. Take this road south (a right turn if coming from Phoenix, a left turn if coming from Tucson). Note: this is the closest place for gas and food after leaving the interstate. The paved road continues for 17 miles, then it turns sharply to the west (right). Continue west for 4 miles. The main road turns south (left) just past the "Silverbell Estates" sign. Continue south for 3 miles past the sign, the road veers off to the west (right). Continue on the road for another 5 miles, where it passes through a gate. Take an immediate left after the gate, and continue for 0.7 miles. Take the next right on a road that leads into an open field. Just follow the signs along the road into the observing field. If you must leave early, please park toward the north end of the field. Likewise, if you are spending the night, park to the south.

For more information, go to <http://www.eastvalleyastronomy.org/aasp.htm>.



Public Star Parties and Community Events

All members of 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 valueable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

Tucson Audubon Society Star Party **Northwest**
Saturday, 10/6/2007 No. of Scopes: 2

Tucson Audubon Society and the International Dark-Sky Association will be hosting a Public Tour at 8751 North Thornydale Road. From the UofA: Go North on Euclid, East on River, North on Oracle, East on Cortaro, and North on Thornydale. Building is on the southwest corner of Thornydale and Hardy Rd. Viewing will be arranged at a later time. Contact person Teresa Hudson can be reached at 293-3198 or email teresa@darksky.org. Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 8:30 pm. Sunset: 6:03pm, Dark Sky: 6:55pm Moon Phase: (no moon during viewing).

UofA Astronomy Students Star Party **West**
Sunday, 10/7/2007 No. of Scopes: 10

The TAAA will be supporting a star party for two classes of astronomy students from the UofA. The event will be held at the Saguaro National Park West in the parking lot at the Visitors Center. The activity runs from 7:00 to 9:00 pm. Set-up will start at 6:00 pm and must be completed before 7:00 pm when the students arrive by vans. Approximately 125 students are expected to attend. This is a fun event. The students are very interested and appreciative and will be asking lots of questions to complete their assignments for the evening. John Kalas is the coordinator. There will be a sign-up sheet at the October 5th meeting. If you are interested in helping out but are unable to attend the meeting, please give John a call at 620-6502 or e-mail him at jckalas@cox.net to volunteer.

Public Star Parties and Community Events (cont.)

Doolen Middle School Star Party

Tuesday, 10/9/2007

Central

No. of Scopes: 3

Doolen Middle School will be celebrating Night With the Stars at 2400 N Country Club Road. North East corner of Grant and Country Club. Viewing will be in the School Court Yard. Contact person Jim Haley can be reached at 232-6976 or email James.Haley@tusd1.org. Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 5:59pm, Dark Sky: 6:52pm Moon Phase: (no moon during viewing).

Cub Scout Pack 219 Star Party

Saturday, 10/13/2007

Northwest

No. of Scopes: 4

Cub Scout Pack 219 will be preparing Fun and Learning the Night Sky at Ora Mae Harn Park. At 13250 N. Lon Adams Road, Marana. Take I-10 north to Exit 236. Go South on N. Sandario Rd. Go east on W. Barnet Rd. to N. Lon Adams Rd. Viewing will be at the Overnight Family Camp. Contact person Kristen Rickus can be reached at 744 7923 or email kjrickus@comcast. Set-Up Time: 6:15p m. Observing will be from 6:45pm to 8:45 pm. Sunset: 5:54pm, Dark Sky: 6:47pm Moon Phase: (no moon during viewing).

Robins Elementary Star Party

Friday, 10/19/2007

West

No. of Scopes: 6

Robins Elementary will be hosting Family Science Night at 3939 N. Magnetite Lane. Located just west of Silverbell off of Sweetwater (west of the Pima Animal Control Center). Sweetwater is north of Grant and 1 mile south of Ruthrauff/Camino de Oeste. Viewing will be School playground near basketball courts. Contact person Kim Gessner can be reached at 520-908-4300 or email ckgessner@cox.net. Set-Up Time: 6:15pm. Observing will be from 6:45pm to 8:45 pm. Sunset: 5:50pm, Dark Sky: 6:44pm Moon Phase: Waxing Gibbous.

Desert Willow Elementary Star Party

Friday, 10/26/2007

East

No. of Scopes: 4

Desert Willow Elementary will be holding Family Science Night at 9400 E. Esmond Loop. Take Speedway to Kolb. South on Kolb to Valencia. Turn left at Valencia. Take Valencia to Esmond Loop and turn right. Take the loop around to the school. It is about half way around the loop. Viewing will be on the School Playground. Contact person Paula Kitchen can be reached at 879-2353 or email kitchenp@vail.k12.az.us. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:40pm, Dark Sky: 6:34pm Moon Phase: Full Moon.

Midvale Neighborhood Picnic

Saturday, 10/27/2007

Southwest

No. of Scopes: 2

Midvale Neighborhood will be hosting Picnic Sun Viewing. Viewing is to be arranged. Contact person Wayne Johnson can be reached at 520-538-5223 or email mrgalaxy@juno.com. Set-Up Time is to be arranged. Observing is to be arranged.

SAIDA NEEDS MORE HELP FROM MORE TAAA MEMBERS. AFTER ALL, WE WILL ALL BENEFIT FROM DARK SKIES IN OUR AREA !!!

For more information, go to: www.sa-ida.org
Or feel free to contact:

John Polacheck
President of SAIDA
E-mail: jpolach@dakotacom.net
Telephone: 743-1362

SAIDA meets on the second Wednesday of each month from 5:30 to 7:30 PM in the IDA office located at 3225 N. First Ave, just North of Ft. Lowell. And.....

WE USUALLY HAVE PIZZA !!!

PERMANENT DARK OBSERVING SITE

UPDATE FOR OCTOBER

By Bill Lofquist

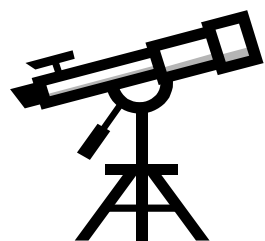
The update is brief for this issue. The things that were reported in the September issue of Desert Skies are still making progress, and October should see some important things happening.

As we described last month and discussed at the September general meeting, four of our members are making plans to purchase the land in the Turkey Creek area of Sulphur Spring Valley in Cochise County and make a gift of 16 acres to TAAA. The plan that is being developed will place the club's parcel in the middle of the larger piece of land to provide a buffer for us. The deadline for closing on the purchase comes up this month, so we hope

to have something positive to report to our members soon.

At the general meeting in September the members present gave a strong vote of support for moving ahead with the plans that have been set in motion. Once the tasks of purchasing the land and obtaining the Special Use Permit are completed we will be ready to move ahead on a number of fronts with planning and beginning to develop the site. We hope many TAAA members will become involved to help create an outstanding observing facility for us and our guests.

Telescopes for Borrowing



Free service



Only for Members

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

These telescopes are in the program

Sears 60mmf/15 on equatorial mount
Unitron 62mmf/14.5 on equatorial mount
Meade 90mm ETX
Coulter Odyssey8 8-inch f/4.5 Dobson
Meade 8-inch f/4 Schmidt-Newtonian LX-D55
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) for details about these telescopes.

Dark Skies for October 2007

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

Su/Mo 30/ 1	19:31 - 20:54	Th/Fr 11/12	19:18 - 5:04	Su/Mo 21/22	2:29 - 5:11
Mo/Tu 1/ 2	19:30 - 21:52	Fr/Sa 12/13	19:16 - 5:04	Mo/Tu 22/23	3:36 - 5:11
Tu/We 2/ 3	19:29 - 22:55	Sa/Su 13/14	19:15 - 5:05	Tu/We 23/24	4:45 - 5:12
We/Th 3/ 4	19:27 - 0:00	We/Th 24/25	- - -	Th/Fr 4/ 5	19:26 - 1:05
Su/Mo 14/15	19:42 - 5:06	Th/Fr 25/26	Full Moon	Fr/Sa 5/ 6	19:25 - 2:08
Mo/Tu 15/16	20:26 - 5:06	Fr/Sa 26/27	- - -	Sa/Su 6/ 7	19:24 - 3:08
Tu/We 16/17	21:17 - 5:07	Sa/Su 27/28	- - -	We/Th 17/18	22:14 - 5:08
Su/Mo 7/ 8	19:22 - 4:05	Th/Fr 18/19	23:15 - 5:09	Su/Mo 28/29	19:00 - 19:39
Mo/Tu 8/ 9	19:21 - 5:01	Fr/Sa 19/20	0:18 - 5:09	Mo/Tu 29/30	18:59 - 20:42
Tu/We 9/10	19:20 - 5:02	Sa/Su 20/21	1:23 - 5:10	Tu/We 30/31	18:58 - 21:49
We/Th 10/11	19:19 - 5:03			We/Th 31/ 1	18:58 - 22:57

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Set Vi	Rise Vi	Rise Vi	Set Vi	Rise Vi	Vi=Visibility
29/30	18:10	6:15	19:09 5	3:00 -4	22:44 0	21:43 -2	3:38 2	-3 brilliant
6/ 7	18:01	6:20	18:55 6	2:55 -4	22:29 0	21:19 -1	3:14 1	0 conspicuous
13/14	17:52	6:25	18:31 9	2:53 -4	22:13 0	20:56 -1	2:50 1	3 moderate
20/21	17:44	6:30	Rise -	2:55 -4	21:55 0	20:34 -1	2:25 1	6 naked eye limit
27/28	17:37	6:35	5:51 -	2:58 -4	21:35-1	20:11 -1	2:01 1	9 binoculars limit

By Erich Karkoschka

TAAA Board of Directors Meeting

TAAA Board of Directors Meeting Minutes

Sep 12, 2007

Attending: TAAA Board Members present: Bill Lofquist presiding, Ken Shaver, Steve Marten, Terri Lappin, George Barber, Teresa Bippert-Plymate and Keith Schlottman. Members present: Larry Brown, John and Liz Kalas, Loretta McKibben, Thom Peck and Claude Plymate.

President's Call to Order: 6:40PM

August Minutes. Accepted. Unanimous.

Member Feedback. -

Why do we no longer have regular get-togethers after general meetings? Bill will coordinate after each meeting.

TAAA Board of Directors Meeting (cont.)

Observatory tour and presentations were well received.

Announcements – None.

Website Upgrade – Loretta McKibben

Loretta announced that work on the website is continuing at a faster pace and that the new web host company switch has been completed. October 1 is the deadline for new web pages and during Oct 1-15 the website will see member login, interactive web calendar, and other upgrades on a trial basis. Old web pages will be updated in parallel until October 31. Discussion held on minimum web costs including website and domain name fees.

TIMPA Observatory – George Barber

George is working with SMR Construction and James Electrical on plans to complete the TIMPA Observatory. Because of his expertise and due diligence George was appointed Project Director by Bill and unanimously approved by the Board; George is now authorized to sign contracts for construction and improvements as previously approved. George moved that the Board accept bids from contractors (SMR \$8605 and James Electrical for \$718); the bids were approved unanimously.

Paid Star Party Donation Fees – John Kalas

John reviewed current fee schedule last approved in 2006. He suggested new 2008 rates. A motion was received recommending revised rates become effective 12.1.08; the board approved the recommendation and effective date unanimously.

Dark Observing Site Search – Bill Lofquist

Bill presented *Sequence of Events for Bumble Site (9/3/07)* and *Responses to Questions asked of TAAA Members at the September 7, 2007 General Meeting* and asked that they be included in the Minutes which were reviewed by the Board (see attachments). Bill reviewed a letter from nearby property owner who is opposed to an astronomy park as she thinks it will attract hunters, ATV enthusiasts and others that would disturb the community. She could be assuming that the facility will draw large crowds as does Kitt Peak or perhaps noisy commercial recreation facilities. Bill is looking to relate positively to our potential neighbors and to inform them about TAAA activities and astronomy. Terri suggested inviting neighbors to a star party so that they could see our activities would not harm their local environment. A nearby middle school teacher and science department head indicated he will write a letter of support; several other nearby landowners have voiced support.

Adjourned at 9:09pm

Respectfully Submitted,

Steve Marten

Secretary

Attachments:

a) *Sequence of Events for Bumble Site (9/3/07)*

b) *Responses to Questions asked of TAAA Members at the September 7, 2007 General Meeting*



Desert Skies Classified

For Sale	Celestron 9.25 Schmidt-Cassegrain Advanced SGT Telescope with: XLT coatings, upgraded 50mm finder, Telrad, 40mm Plossl Eyepiece, and more. \$1100.00. William Optics 80mm Megrez Refractor O.T.A. (original generation, f6). Includes; 2" Crayford focuser with compression clamp, 1.25" adapter with compression clamp, and carrying case. \$300.00. Contact Edward Stramler at 293-0210, 349-1893 (cell), or surroundhound@yahoo.com
For Sale	4.5-inch elliptical secondary mirror and holder. 1/8 wave. Excellent condition \$300. Meade 2-inch, 26mm QX wide angle eyepiece. \$70 or best offer, brand new in box. Gary Vecere, 207-2898 [12/07]
For Sale	Celestron C-14 optical tube assembly with dovetail mounting plate, 50mm finder scope, dust caps and trunk; \$2500.00. SBIG ST-9E parallel port CCD camera with TC-211 guider, CFW-8 filter wheel (no filters), carrying case with cables; \$1800.00. Meade LXD75 10" Schmidt-Newtonian optical tube assembly with mounting rings; \$600.00. Losmandy G-11 german equatorial mount; complete, with adjustable tripod 2-21# and 1-11# counterweights, Losmandy digital setting circles, polar axis alignment scope; \$2000.00 Contact Steve Peterson at 762-8211 or email at ccdcat@msn.com [12/07]
For Sale	8 inch Celestron Nexstar 8 GPS carbon fiber tube in a fork mount. Excellent optics and latest firmware update. Celestron Heavy Duty wedge with alignment accessory kit, Electric focuser, Telrad finder, Counterweight bar and weight. Viewing before purchase can be arranged. \$1500 takes it all; hoping for a local buyer. Steve Coe, 602-789-7786. [10/07]
For Sale	Total custom professional 12.5" f-17 ultra-lightweight cassegrain system. 96% coatings, Zerodur secondary, Cervitt conical primary. Completely diffraction limited with 25% center obstruction. In original cartons, for \$2500. A new in-the-box Astrophysics focuser is also available; price negotiable. Robert Powers, 822-3107. [12/07]
For Sale	1.4 acre dark site in Diamond Bell Ranch. Comes with custom executive 2500 square foot home with rock fireplace, library, 3-bdr. Complete custom woodwork, 3-car garage. \$395,000. Robert Powers, 822-3107. [12/07]

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.



OPPORTUNITIES TO VOLUNTEER

Volunteer Opportunity at Flandrau Science Center

The Flandrau Science Center at The University of Arizona has volunteer positions open for "Astronomy Docents", operating our 16-inch f/11 Cassegrain telescope. The 16-inch telescope is the only free public telescope in Arizona open to the public on a regular weekly schedule. The telescope and observatory have been refurbished and improved over the past 12 years. The mirrors were re-figured by Bob Goff during this time, and the telescope gives impressive images of the planets when conditions allow.

Flandrau needs good people with good people skills who know astronomy, are comfortable around telescopes and in operating them. Advanced knowledge of astronomy is not required, and we love to train beginners. Basic computer skills, a basic knowledge of astronomy and the night sky, a phone with answering machine or voice mail. A working e-mail address is not required but highly desired. Also needed are the abilities to explain basic astronomical concepts to the public and answer questions, along with dependability and punctuality. This is an unpaid volunteer position but provides some University privileges (such as UofA library and Student Recreation Center access).

Benefits to volunteering with us include but are not limited to:

Free membership with Flandrau to you and your family (includes free planetarium shows).

Personal use of the Flandrau 16-inch Cassegrain telescope whenever it is available and not used by the public (Wed-Sat. nights) or another operator (free most of the time after 10 p.m. or before 7 p.m.). This is a good quality telescope and we are working on a new imaging system which should have new, impressive capabilities.

Clothing (Flandrau/UASC polo shirts for starters).

UofA library and Student Recreation Center access.

More benefits TBA as our approved downtown project moves forward. New volunteers will be getting in on the ground level as we move downtown to our new, much larger and new technology based science center, right now tentatively called The University of Arizona Science Center or UASC. Funding and an agreement between the City of Tucson and the University have been approved and approval from the Board of Regents has been secured. This exciting new project has been funded with TIF monies (sales tax-increment financing, from a narrow sales tax district centered downtown, going east down Broadway Blvd., and ending around the Park Mall). Also, a new larger 24-inch telescope/observatory is very possible right now with this project. Open date is scheduled for end of 2011. Construction to begin next year.

For more information on Flandrau Science Center, the observatory, and Flandrau's future as The University of Arizona science center downtown, visit the Flandrau web site: <http://www.flandrau.org> or <http://www.gotuasciencecenter.org>. If interested in volunteering, please contact Michael Terenzoni, Astronomy Coordinator at (520) 621-3646, fax: (520) 621-8451, e-mail: miket@ns.arizona.edu.

Family ASTRO Event Leaders Needed

Family ASTRO event-leader training begins this month on the 28th with Cosmic Decoders. Race to The Planets, Night Sky Adventure, and Moon Mission follow on October 5th, 12th, and 19th respectively. This program brings families together to explore and discover the wonders of astronomy in an atmosphere similar to that of a star party. NOAO is looking for astronomers to train as event leaders and to be available for teachers and others who need support with their events. Family ASTRO events are typically held at schools twice during an academic year, and an event lasts about two hours. Local attractions such as the Desert Museum also feature Family ASTRO activities during special events. The emphasis of the events is on fun. The aim of the program is to inspire families to enjoy astronomy together after attending the events. Early follow up studies showed that the majority of families who attended an event were inspired to do something else educational as a family. Consider Family ASTRO an investment in the future of our hobby. Applications are available at <http://www.noao.edu/education/astro/family/>. The \$25.00 materials fee will be waived for TAAA members, who will not receive a leader kit (but may purchase them if they want them). Teachers and local attractions staff receive a leader kit for their payments. Please consider supporting this fun and effective program. Training takes place at the NOAO offices beginning at 4:30. Apply soon.

Robert Wilson

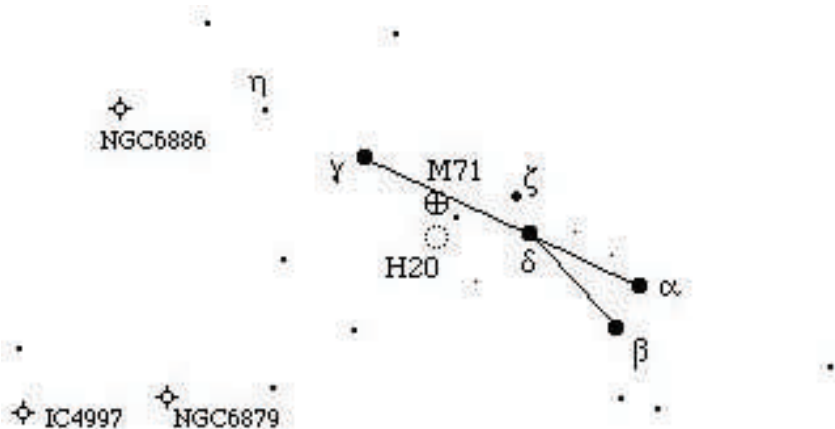


Sagitta

The Arrow

There have been several instances of arrows playing a part in mythical stories. Zeus's eagle was killed by an arrow, Apollo slew the Cyclops with an arrow, and Cupid, of course, uses arrows in his trade. All of these have been associated with Sagitta, a small summer constellation. Sagitta is approaching the meridian after midnight on late June nights near Altair, the most southern star of the Summer Triangle. Since it is immersed in the thick Milky Way, we don't see any galaxies, but there are some interesting galactic objects.

Even though Sagitta is the third smallest constellation in the sky, it does have a Messier object, M71. This is an impressive globular cluster of magnitude 8.3 and a size of 7.2'. It's easy to find 21.5 arc minutes east of 6.2 magnitude 9 Sagittae, or half way between Gamma and Delta Sagittae, or RA 19h 53m 48s Dec +18d 47' 00". You'll find a rich cluster of stars which range from magnitude 11 to 16. When M71 was first being studied, its true classification was in question. Some astronomers considered it a globular cluster, but others thought it to be a rich galactic cluster. When you observe M71 on your own, you'll notice that it does not have the dense central population of stars common among many globulars, but its distance of 18,000 light years and true diameter of 30 light years indicates that it probably is a loose globular.



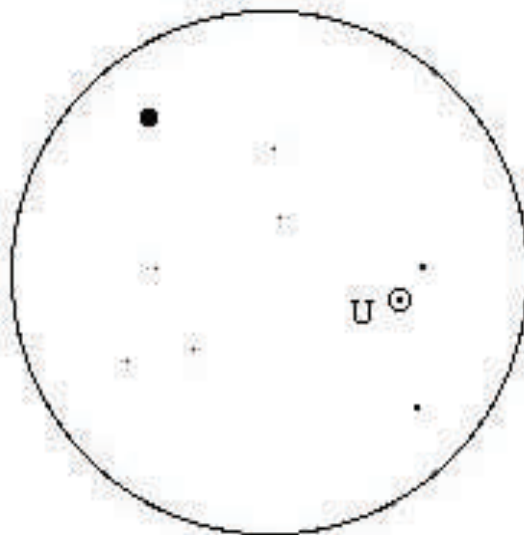
About half a degree south south-west of M71 is a loose scattered collection of stars classified as star cluster H20. It simply appears as a more concentrated portion of the Milky Way with about 20 stars of magnitude 11 in a space about 10 arc minutes wide. H20 is near RA 19h 53m 10s Dec +18d 19'.

Out by itself floating in the rich Milky Way is planetary nebula IC4997. It is close to 6 degrees

southeast of Gamma Sagittae or RA 20h 20m 12s Dec +16d 45'. This is one of three dim planetary nebulae in Sagitta which are small and remote. This one glows at magnitude 12 and appears stellar except at very high magnification. The two other nebulae are NGC6886 (RA 20h 12m 42s Dec +19d 59'), and NGC6879 (RA 20h 10m 30s Dec +16d 55'.) All three of these are difficult to recognize due to their small size, but with enough magnification they stand out from their high surface brightness.

An excellent Algol type eclipsing variable star can be found in U Sagittae. You can find U Sagittae at RA 19h 18m 48s Dec +19d 36' 39", or 1.5 degrees west of 4 Vulpeculae, which is the brightest star in the hook of the asterism called "the coat hanger" in the neighboring constellation of Vulpecula. In the case of U Sagittae, we have a situation where a small, bright star is fully eclipsed by a larger but dimmer companion. Unlike many other variable stars, the behavior of U Sagittae is such that it can be observed in the course of a single evening if you catch it in or near its eclipse phase. Its full period is 80 hours, shining most of the time at magnitude 6.4. But it dims during a span of five hours to magnitude 9.1. Then it stays in eclipse for about two hours before quickly brightening again. The finder chart for U Sagittae spans about 15 arc minutes. North is at the top. A good comparison star of magnitude 8.2 is 11 arc minutes to the northeast.

Sagitta is small and dim, but should not be overlooked among the brighter areas of the summer Milky Way.



Tucson Amateur Astronomy Association
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Directions to TIMPA and Empire Ranch

Directions to TIMPA Site

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

From the North:

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

From the East:

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

NOTE

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

Directions to Las Cienegas (Empire Ranch)

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

Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is "washboarded" so go carefully. At about 2.9 miles, there is a fork in the road. Stay to the right. When the road ends in a "T", take a left. Cross over a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. 0.1 mile ahead will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.