



# Desert Skies

Tucson Amateur Astronomy Association

Volume LIII, Number 2

February, 2007



## Astro Imaging

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**Cover Photo:** Deep-sky nebula image of the Gum 1 Nebula, imaged by Steven Peterson in his backyard "Vail View Observatory" on 30 Dec 2006 with a Takahashi Epsilon-200 Hyperbolic Astrograph and a Santa Barbara Instrument Group ST-2000XM CCD camera. It is the sum of 12-15minute integrations through a Custom Scientific H-Alpha (4.5nm bandwidth) filter. The other photo was taken by Steve of the equipment setup for this nebula.

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

TAAA Phone Number: (520) 792-6414

Office/Position	Name	Phone	E-mail Address
President	Bill Lofquist	297-6653	president@tucsonastronomy.org
Vice President	Ken Shaver	762-5094	vice-president@tucsonastronomy.org
Secretary	Steve Marten	307-5237	secretary@tucsonastronomy.org
Treasurer	Terri Lappin	977-1290	treasurer@tucsonastronomy.org
Member-at-Large	George Barber	822-2392	mal1@tucsonastronomy.org
Member-at-Large	JD Metzger	760-8248	mal2@tucsonastronomy.org
Member-at-Large	Teresa Plymate	883-9113	mal3@tucsonastronomy.org
Chief Observer	Wayne Johnson	586-2244	chief-observer@tucsonastronomy.org
AL Correspondent (ALCor)	Nick de Mesa	797-6614	alcor@tucsonastronomy.org
Astro-Imaging SIG	Steve Peterson	762-8211	astro-photo@tucsonastronomy.org
Computers in Astronomy SIG	Roger Tanner	574-3876	astro-comp@tucsonastronomy.org
Beginners SIG	Bill Lofquist	297-6653	novice@tucsonastronomy.org
Newsletter Editor	George Barber	822-2392	taaa-newsletter@tucsonastronomy.org
School Star Party Scheduling Coordinator	Paul Moss	722-2704	School-star-party@tucsonastronomy.org
School Star Party Volunteer Coordinator	Claude Plymate	883-9113	school-sp-volunteers@tucsonastronomy.org
Webmaster	Loretta McKibben		taaa-webmaster@tucsonastronomy.org
Club Sales	Ann Scott	749-4867	taaa-sales@tucsonastronomy.org
TIMPA Gate Card controller	Ray Toscano	529-3074	Ray_toscano@earthlink.net
Equipment Loan Coordinator	Richard Dougall	245-5441	elc@tucsonastronomy.org
Librarians	Claude Plymate Teresa Plymate	883-9113	librarian@tucsonastronomy.org
Grand Canyon Star Party Coordinator	Dean Ketelsen	293-2855	gcsp@tucsonastronomy.org
General Information	Terri Lappin	977-1290	Taaa-info@tucsonastronomy.org
TAAA Board Of Directors	All Board Members		taaabod@tucsonastronomy.org

### Membership in the TAAA

#### Annual Fees

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

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

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

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

Tucson society of the Astronomical League (TAL) fees\$ 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  
 Tucson AZ 85736

### President's Message

The month of January has not been very good to us as far as observing on our scheduled nights has been concerned. We do hope you were able to get in some good viewing, however. I am sure that our more dedicated observers and astrophotographers found some clear skies. Comet McNaught has been the highlight, and the recent pictures from the southern hemisphere were spectacular.

We hope as many TAAA members as possible will be able to make it to the Grand Canyon Star Party this year. It will be June 9 through 16. If you can't make it for the whole week, even a day or two is worth the trip north. A week of immersion in astronomy along with others from around the state and country is a special treat.

If you do your grocery shopping at Basha's, we hope you will remember to use the "Thanks A Million" program that provides a contribution back to TAAA. Just use our ID #23178, and you will be added to their computer for each time you shop. More information is in the newsletter.

When you are in the local astronomy shops, please remember to thank them for their contributions to TAAA and their support of amateur astronomy in southern Arizona. We are fortunate to have such ready access to good equipment at reasonable prices.

Our star party program is running smoothly. If you are not participating in these events, you are missing a lot of fun. We hope more TAAA members will become involved in the pursuit of our educational purpose.

Though the nights can be cold in February, the observing can be great. We hope to see you at one of our observing sites this month.

Clear skies,  
Bill Lofquist

### Meeting Information and Calendar of Events

**TAAA MEETING DATE:** Friday, February 2, at the Steward Observatory Auditorium - Room N210

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

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

**Note: If the number of Astrophotography SIG members that present their images is sufficient, Steve's discussion will be replaced by their presentation so don't miss the 6:30 time slot!**

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

You have probably seen this before: the gaunt, vacant, 1000-yard stare of someone who has stayed up all night (maybe over a period of several nights). He or she may be

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

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

**STAR PARTIES AND EVENTS:**  
10 Feb - TAAA and BSIG Star Party at TIMPA  
09, 10 Feb - "Saturn at Opposition", Flandrau Science Ctr  
15 Feb - Estes ES Star Party  
16, 17 Feb - "Saturn at Opposition", Flandrau Science Ctr  
17 Feb - TAAA Star Party at Las Cienegas (Empire Ranch)  
18 Feb - UofA Astronomy Students Star Party

## Meeting Information and Calendar of Events (cont.)

**NEWSLETTER SCHEDULE:** Deadline for articles: Sat, Feb. 17. Printing: Mon, Feb. 19. Folding Party: Tues, Feb. 20. Mailing: Wed, Feb. 21. 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: Paul Barby, John Dwyer, David & Lupe Ferree, Kurt Lindsay, Robert & Audrey Olson, Eileen Sykora, Joe Wilkins, and Chalmer & Paula Williams. 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 YahooGroups email list website under Files, or at most meetings.)

### Nominating Committee

A nominating committee is being chosen to select candidates for the May 2007 Board of Directors Elections. Contact a board member if you are interested in serving on the committee. The committee will be approved at the February 2007 meeting.

### Astro-Imaging SIG Meeting

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

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

### TAAA Apparel

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

### Basha's "Thanks A Million" Program

The Basha's "Thanks A Million" for Friends and Neighbors program is underway now through March 31, 2006. If you shop at Basha's, ask the cashier to link your Thank You card to the Tucson Amateur Astronomy Association. Our ID # is 23178. (Basha's customer service also has a list of ID numbers if you forget this number.) If you participated last year, you still need to sign up at the register again. At the end of the program, provided we meet their minimum of \$2500 in combined sales, the TAAA will re-

ceive a donation equal to 1% of the total purchases made by our members. So, if you shop Basha's, remember to have your Thank You card linked to the TAAA (ID #23178).

### Beginners' Special Interest Group

The BSIG dates for February will be 2/7 for dinner at the China Rose Restaurant (6pm, the northeast corner of Speedway and Rosemont) and 2/10 (the following Saturday) for observing out at TIMPA. With luck we will have conditions suitable for observing this time around, out at TIMPA, but it would seem El Nino has decided to show up this year after all. Hope for the best!

The China Rose gathering will include discussion of objects suited for viewing during the month in question. Additional content for the meeting has not yet been determined... But don't worry, we'll think of something! All kidding aside, come to the meeting and see what develops. We always have a good time, no matter what topics we cover.

For more information about the Beginners' Special Interest Group, send an email to: [novice@tucsonastronomy.org](mailto:novice@tucsonastronomy.org) .

Hope to see you in February!  
The BSIG Committee

### Constitutional Amendment

Vote to take place at March 2nd meeting

Our constitution currently states that the official ballot for the Board of Directors is set in the April newsletter, which has a deadline near the middle of March. Any nominee that the Nomination Committee identifies after the mid-March newsletter deadline currently is not included on the ballot but is added through the write-in process at the May meeting. This amendment will require the Nomination Committee to give a status report in the April newsletter but leaves the official ballot open to nominee names until 3 days before the election. This should reduce the need for write-in candidates as we've needed for the last few years. The write-in process at the May election meeting remains in place.

This amendment will be voted on at the March 2nd General Meeting.

### Club News (cont.)

The TAAA Board of Directors approved the following amendment to our constitution at the January 10, 2007 BOD meeting (deletions are underlined and additions are in **bold**):

ARTICLE III.  
Section 5.

General Elections: At the February General Meeting, the General Membership shall elect a Nominating Committee of three members. At the May General Meeting, the Nominating Committee shall propose candidates for election to the Board of Directors. The President of the Association shall not be a member of the Nominating Committee. **The Nominating Committee shall provide a written report to the editor of the Association Newsletter for inclusion in the April issue. No later than 3 days before the May General Meeting, the Nominating Committee shall provide the slate of all candidates to the President, or his designated representative, so the ballots can be printed.** Members of the Nominating Committee shall hold office from the date of their election until the May General Meeting.

The Board of Directors shall be elected annually at the May General Meeting. Nominees' names shall be published in the Association Newsletter at least thirty days prior to the election meeting. Nominations for elective offices must be submitted prior to the publishing deadline to be officially included on the ballot; however, n Nominations for write-in candidates shall be accepted from the floor at the May General Meeting. Write-in candidates must accept their nomination in person or in writing before the vote is taken. Any member who has been a member for one year, and is a member in good standing, may be nominated for office. All members of the Board of Directors must be at least 18 years of age. No member shall simultaneously hold two or more elected positions on the Board of Directors, and no member of the Board shall have more than one vote. Newly

elected members of the Board of Directors shall take office on the first day of June following their election at the May General Meeting. At the General Meeting in June, the newly elected Board Members shall be introduced to the General Membership.

#### Aaronson Lecture

Feb 23rd 7:30pm  
Steward Observatory Lecture Hall

Title: Unveiling a Supermassive Black Hole at the Center of Our Galaxy

More than a quarter century ago, it was suggested that galaxies such as our own Milky Way may harbor massive, though possibly dormant, central black holes. Definitive proof for or against the existence of a massive central black hole lies in the assessment of the distribution of matter in the center of the Galaxy. The motion of the stars in the vicinity of a black hole offers a way to determine this distribution. Based on 10 years of high resolution imaging, Dr. Ghez's team has moved the case for a supermassive black hole at the Galactic Center from a possibility to a certainty.

Dr. Andrea Ghez, will accept the Aaronson Lectureship award at this public lecture. Ghez, professor of physics and astronomy at UCLA, was named in Discover magazine's 20th anniversary issue (October 2000) as one of the top 20 scientists in the country under 40, who "have demonstrated once-in-a-generation insight" and "will likely change our fundamental understanding of the world and our place in it." Her research focuses on the origin and early life of stars and planets, and the distribution and nature of the matter at the center of our galaxy. She has demonstrated the existence of a supermassive black hole at the center of our galaxy, with a mass 3 million times that of our sun. Her honors and awards include the Amelia Earhart Award, a National Science Foundation Young Investigator Award, the Annie Jump Cannon Award, a Sloan Fellowship, a Packard Fellowship, the Newton Lacy Pierce Prize from the American Astronomical Society, the Maria Goeppert-Mayer Award from the American Physical Society, and, most recently, election to the National Academy of Sciences as well as the American Academy of Arts



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### Club News (cont.)

& Sciences. Ghez earned her Ph.D. from Caltech, her B.S. from MIT, and was a Hubble Postdoctoral Research Fellow at University of Arizona's Steward Observatory. She joined UCLA's faculty in 1994.

#### Grand Canyon Star Party 2007

9-16 June

South and North Rims

Hello all and welcome to another edition of the Grand Canyon Star Party News! It is already getting late to be making plans if you want a hotel room at the rim, so think hard and come join us.

A bit of background for those of you just learning about this event. It was started way back in '91, and has turned into one of the largest public star parties at one of the darkest sites in the US. Mostly I talk amateur astronomers (like you) into setting up their telescopes at the Yavapai Point parking lot for the thousands of park visitors that flow thru that area around sunset. It is such an amazing place for a star party - the Canyon, of course, is an incredible location by day, and the unspoiled dark skies at night are fantastic as well. The rewards are varied - a great family vacation destination, the gratitude of an adoring public for showing them the sky, and that black sky is reward enough for some too. If it is your first time and just want to check us out without bringing a scope, we'll have plenty - just show up during the above dates. Yes, the star party is held in a public parking lot and yes, we do get headlights as well as shuttle buses coming thru at night, but they are really only a minor annoyance.

It is never too early to book a room at one of the Canyon lodges, so plan now if you would like one. And of course, don't forget that the North Rim is included in the star party, and a great place to visit if you have never been to that side. As is usual, the Park Service gives us a few campsites to use and if you would like one of those (you will likely be sharing it with another astronomer as these have very high demand) I will be taking names for them

on 1 March. Note that these campsites are for those staying at least 6 nights of the 8-night star party. Please make your own campsite reservations if you are only coming for a few days.

The website is the repository of reservation information and it is currently under renovation, but make your plans and let me know if you have any questions. The webpage is at [www.tucsonastronomy.org/gcsp.html](http://www.tucsonastronomy.org/gcsp.html). Hopefully, by the next newsletter, it will be rewritten and up to date.

This event has been so much fun over the years; I can hardly believe I've organized it for 17 years now! It is hard to convey that GCSP feeling you get, but if you have a fast internet hookup, check out the following GIF:

[http://alice.as.arizona.edu/~ketelsen/Milky\\_Way\\_2\\_slow.gif](http://alice.as.arizona.edu/~ketelsen/Milky_Way_2_slow.gif)

You can see the long lines you get when it first gets dark, then mostly the serious observers and latecomers stay around for the shorter lines. Most of the scopes close up by midnight, but a core of observers keep at it till dawn - those dark skies are not easily ignored!

So come join us - I'll bet we see you there again! Let me know if you have any questions - [ketelsen@as.arizona.edu](mailto:ketelsen@as.arizona.edu), Dean Ketelsen.

#### Beginner's SIG Eyepiece Loaner Kit Available

The Beginner's Special Interest Group has a loaner kit consisting of several quality eyepieces, a barlow, and a star mirror diagonal. This kit is available for short-term loan to any member, but it is especially meant to assist beginners by providing a no-cost way to evaluate basic eyepiece alternatives for a new telescope and learn more about eyepiece types, characteristics, and terminology. If you are interested in borrowing this kit, contact the Beginner's SIG by sending an email to: [novice@tucsonastronomy.org](mailto:novice@tucsonastronomy.org).

### Items of Interest

#### Websites: Trips On The Internet Super-Skyway

By Rik Hill

Rob McNaught's comet, C/2006 P1 McNaught, has revived lagging interest in this field of observing for many amateur astronomers. A lot of websites and blogs have been covering it's apparition with great dramatic photos taken by these observers.

Sky and Telescope has a good webpage of observations at:

<http://skytonight.com/news/home/5231826.html>

I do not know how long this page will be posted but it is there at the moment. The ephemeral nature of these kinds of pages is always a problem.

Space Weather website also has been following the comet and offers charts and a large gallery of photos at:

<http://www.spaceweather.com/>

If you are not on their email announcement list you might want to consider it. They announce rocket launches, aurorae, solar activity, comets and many more time critical astronomical/space events.

More detailed information and an ephemeris is available from the Siding Spring Survey itself through their website at:

<http://msowwww.anu.edu.au/~rmn/C2006P1.htm>

Gary Kronk's "Cometography" page offers a good history of this body from the time it was discovered as a result of Near Earth Asteroid surveying with the Siding Spring

### Items of Interest (cont.)

Survey (in collaboration with the Catalina Sky Survey here in Tucson) in August:

<http://cometography.com/lcomets/2006p1.html>

Gary also is the Association of Lunar & Planetary Observer's coordinator for the Comet Section and his ALPO webpage has forms and further information for comet observing:

<http://www.lpl.arizona.edu/~rhill/alpo/comet.html>

The British Astronomical Association (BAA) also has a Comet Section run by Jonathan Shanklin:

<http://britastro.org/baa/content/view/32/70/>

They do accept memberships from Americans, as I have been a member for many years.

If this comet has charged you in this field of observing then you might want to see what it takes to make scientific reports on comet observations. This information is available on the Central Bureau for Astronomical Telegrams (CBAT) website:

<http://cfa-www.harvard.edu/icq/cometobs.html>

There you will also find a number of very useful links to sites that will take you very deeply into the world of cometary astronomy.

As always, if you know of a particularly good website you would like mentioned here, or some web topic you like covered, drop me a line at: [rhill@lpl.arizona.edu](mailto:rhill@lpl.arizona.edu)

### Imaging with Web Cams and Digital Astrophotography

A workshop hosted by NOAO and presented by Robert Reeves on March 24 and 25. Attend either day or both days and learn how to produce great images with a web cam or digital SLR. Visit <http://www.noao.edu/outreach/kpvc/events.html> for details including outlines and lists of freeware/shareware. Attend imaging sessions with Reeves on Friday and Saturday evenings to produce the raw data for the following day's workshop. Call (520) 318-8726 to register. Registration deadline for the March workshop is Friday, March 16.

### Member's Events

#### TAAA and BSIG Star Party at TIMPA

Saturday, Feb. 10

Come on out and enjoy the winter skies! TIMPA star parties are great for both beginners and experienced observers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don't own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them. This is a great way to check out different telescope designs before you make that all-important decision to buy. We'll do our best to get you the answers you need. If you have friends or relatives who are curious about amateur astronomy, feel free to bring them along. The TIMPA site features a large parking area, and full restroom facilities. Be prepared for cold temperatures. Directions to the TIMPA site are located on the outside flap of this newsletter.

#### TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, Feb. 17

Las Cienegas (formerly Empire Ranch) has been our normal dark-sky observing site for quite a number of years. Please try to arrive before sunset. Stay as long as you like, but let everyone know when you are ready to leave; someone may be taking astro-images. Bring a telescope if you have one, but you don't need one to attend. Any member would be glad to let you look through their telescope. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cold temperatures. 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.

### Desert Skies Classified

For Sale	Meade 10" LX200 R w/UHTC Coatings - New - \$ 3200 OBO. Comes with all standard accessories - GPS, Primary Mirror Lock, Zero Image-Shift Microfocuser, Heavy Duty Tripod, Power Cable for car or battery, many others. It does not come standard with a separate power supply for household current. Original warranty still in effect until Oct. 2007. Reasonable offers considered. 480-981-1295 reaches me here in Mesa, AZ. Charles Crawford [04/07]
For Sale	CELESTRON NEXTAR 8i, 2002, Mint condition, 25 mm Plossl 1.25 inch eyepiece. Computerized hand control gives GOTO slewing to over 40,000 objects. \$975. I also have Tele Vue® Nagler 4.8 mm 1.25 inch eyepiece \$90; as well as University Optics 9 mm, and Meade 12 mm, 1.25 inch eyepieces with illuminated reticules \$40 ea. and Celestron Star Diagonal, 1.25 inch \$35. Jim Jondrow, 529-0933 or <a href="mailto:jjondrow@dakotacom.net">jjondrow@dakotacom.net</a> [03/07]
For Sale	Meade ETX-70AT w/883 heavy duty tripod, 495 Autostar handbox; PL4, PL6, MA9, MA25, 124-2X Barlow lenses, LPR filter, 670 dewshield, 827-8 x 25mm right angle view finder, 07379-T mount for Olympus OM 35mm camera, 2 flexible shutter release cables, extra battery pack. OM Olympus camera, 9 vdc adapter mounted on 883 tripod frame w/ 100 ft 3-wire outdoor power cord (to substitute for use of a battery pack, where 110 V power is available), (used 3 evenings) - valued over \$1500, asking \$750. Harland Beckman, 520-722-5070. [02/07]

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.

## Public Star Parties and Community Events

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

### Flandrau Planetarium Star Party

Friday, 2/9/2007 and Saturday, 2/10/2007

Flandrau Planetarium will be hosting "Saturn at Opposition" on the UA Mall. Contact person Michael Terenzoni can be reached at 621-4515 or email [miket@ns.arizona.edu](mailto:miket@ns.arizona.edu). Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 10:00 pm. Sunset: 6:05pm Dark Sky: 6:59pm Moon Phase: (no moon during viewing).

### Flandrau Planetarium Star Party

Friday, 2/16/2007 and Saturday, 2/17/2007

Flandrau Planetarium will be hosting "Saturn at Opposition" on the UA Mall. Contact person Michael Terenzoni can be reached at 621-4515 or email [miket@ns.arizona.edu](mailto:miket@ns.arizona.edu). Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 10:00 pm. Sunset: 6:11pm Dark Sky: 7:05pm Moon Phase: (no moon during viewing).

### Estes ES Star Party

Thursday, 2/15/2007

### Northwest

No. of Scopes: 4

ESTES ELEMENTARY SCHOOL will be planning Family Science Night at 11279 W. Grier Road, Suite 100. Start on I-10 (at W SPEEDWAY BLVD & I-10 in TUCSON), Take ramp onto I-10 WEST - go 20.4 mi North (toward Phoenix), Take exit #236 toward MARANA - go 0.5 mi, Turn left onto N SANDARIO RD and go under the highway. Then turn left onto the frontage road (N CASA GRANDE HWY) - go South 0.9 mi, Turn right on W GRIER RD - go 0.1 mi to arrive at 11279 W GRIER RD, MARANA, on the left. Viewing will be held on the playground. Contact person Colline Fredrick can be reached at 520-682-4738 or email [C.B.Frederick@maranausd.org](mailto:C.B.Frederick@maranausd.org). Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:10pm Dark Sky: 7:04pm Moon Phase: (no moon during viewing).

### UofA Astronomy Students Star Party

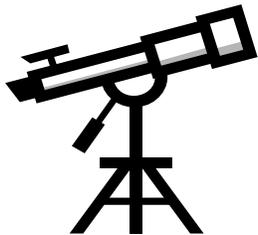
Sunday, 2/18/2007

### West

No. of Scopes: 6

A Star Party will be held for UofA Students at Saguaro Natl Park West. Take Speedway Blvd. west past I-10 and continue about 3.5 mi. where Speedway becomes Gates Pass Road. Go over Gates Pass and continue about 5 mi. west to Kinney Road. Turn right (north) on Kinney Road and continue past the Desert Museum. Observing will be in the parking lot of the Visitor Center. Contact person Tom Fleming can be reached at 621-5049 or email [taf@viking.as.arizona.edu](mailto:taf@viking.as.arizona.edu). Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:13pm Dark Sky: 7:06pm Moon Phase: Crescent.

## Telescopes for Borrowing



Free service



Only for Members

Don't own a telescope?

Our Loaner Program is your answer!

These telescopes are in the program

Sears 60mmf/15 on equatorial mount

Unitron 62mmf/14.5 on equatorial mount

Meade 90mm ETX

Coulter Odyssey8 8-inch f/4.5 Dobson

Meade 8-inch f/4 Schmidt-Newtonian LXD-55

Meade 10-inch f/4.5 on equatorial mount

Meade 10" LX200 GPS (requires training session)

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

### Dark Skies for February 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

We/Th 31/ 1	- - -	Su/Mo 11/12	19:29 - 3:12	Th/Fr 22/23	0:22 - 5:37
Th/Fr 1/ 2	Full Moon	Mo/Tu 12/13	19:30 - 4:11	Fr/Sa 23/24	1:32 - 5:36
Fr/Sa 2/ 3	- - -	Tu/We 13/14	19:31 - 5:06	Sa/Su 24/25	2:37 - 5:35
Sa/Su 3/ 4	19:23 - 19:36	We/Th 14/15	19:32 - 5:45		
Th/Fr 15/16	19:32 - 5:44	Su/Mo 25/26	3:36 - 5:34		
Su/Mo 4/ 5	19:24 - 20:32	Fr/Sa 16/17	19:33 - 5:43	Mo/Tu 26/27	4:27 - 5:33
Mo/Tu 5/ 6	19:25 - 21:27	Sa/Su 17/18	19:34 - 5:42	Tu/We 27/28	5:10 - 5:32
Tu/We 6/ 7	19:25 - 22:21			We/Th 28/1	- - -
We/Th 7/ 8	19:26 - 23:16	Su/Mo 18/19	19:41 - 5:41	Th/Fr 1/2	- - -
Th/Fr 8/ 9	19:27 - 0:12	Mo/Tu 19/20	20:51 - 5:40	Fr/Sa 2/3	- - -
Fr/Sa 9/10	19:28 - 1:11	Tu/We 20/21	22:01 - 5:39	Sa/Su 3/4	Full Moon
Sa/Su 10/11	19:29 - 2:11	We/Th 21/22	23:11 - 5:38		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Set Vi	Set Vi	Rise Vi	Rise Vi	Set Vi	Vi=Visibility
3/ 4	17:57	7:14	19:19 3	19:48 -2	5:25 4	3:14 -2	6:48 0	-3 brilliant
10/11	18:04	7:08	19:26 4	20:01 -2	5:19 4	2:51 -2	7:18 0	0 conspicuous
17/18	18:10	7:02	18:58 -	20:15 -2	5:11 3	2:28 -2	6:49 0	3 moderate
24/25	18:15	6:54	Rise -	20:27 -3	5:03 3	2:05 -2	6:19 0	6 naked eye limit
3/ 4	18:21	6:46	5:49 8	20:40 -3	4:55 3	1:41 -2	5:50 0	9 binoculars limit

By Erich Karkoschka

### The TAAA List Servers - Announcements and Forum

The TAAA has two email distribution lists hosted by Yahoo(r)!Groups. Members of the "TAAA Announcement List Server" receive reminders and information about TAAA events. The "TAAA Forum" is available for any TAAA member wanting to communicate with other members on the forum (currently 117 members). Your message will be seen by all other Forum members. TAAA members can join either or both of these lists. Since Yahoo(r)!Groups hosts these list servers, they insert ads into the email messages. The TAAA has no control over the content of these ads; however, your email program or internet security software may be configurable to block the ads so you won't see them.

There are two levels of joining each list: Email only (Yahoo membership not required) and Email plus website access (requires Yahoo membership). Members of Yahoo will have access to the websites for these lists where they will find information, such as TIMPA access rules, and locations where files and images can be uploaded for others to see. Before joining Yahoo, you should visit the Yahoo (r)!Groups website (<http://groups.yahoo.com/>) to learn of their privacy policy if such things are of concern to you.

TAAA Announcements (about 30 messages per month): For emails only send an email to [tucsonastronomy-subscribe@yahoogroups.com](mailto:tucsonastronomy-subscribe@yahoogroups.com) from the email address where you want to receive messages. For website access, join by clicking the "Join this Group" button at <http://groups.yahoo.com/group/tucsonastronomy>. You will be asked your Yahoo ID and password.

TAAA Forum (about 50 messages per month): For emails only, send an email to:

[taaaforum-subscribe@yahoogroups.com](mailto:taaaforum-subscribe@yahoogroups.com) from the email address where you want to receive messages. For website access, join if you want website access, join by clicking the "Join this Group" button at <http://groups.yahoo.com/group/taaaforum> <<http://groups.yahoo.com/group/tucsonastronomy>> . You will be asked your Yahoo ID and password.

NOTE: The TAAA website ([www.tucsonastronomy.org](http://www.tucsonastronomy.org)) is unrelated to the list servers. Anyone with internet access can reach the TAAA website.

Your TAAA membership must be verified before your membership on these list servers will be granted. If your name can't be guessed based solely on your email address, please send an email to Terri Lappin ([tklappin@earthlink.net](mailto:tklappin@earthlink.net)) giving your name and email address so she can verify your membership status.

### TAAA Board of Directors Meeting - 10 January 2007

Attending: TAAA Board Members present: Bill Lofquist, presiding, Ken Shaver, Steve Marten, Terri Lappin, George Barber, and Teresa Plymate. Members present: Loretta McKibben and Claude Plymate. President's Call to Order: 6:35PM

**December Minutes.** Accepted. Unanimous.

**Member Feedback** - Feedback on the Holiday Party at Bill Lofquist's home was generally very favorable.

**Announcements**

Terri Lappin announced that LX200 10" scope has been offered for donation to TAAA. Terri will make arrangements to accept the scope.

Steve Marten reported that several astronomy organizations (including the astronomical League) have responded that almost all astronomy organization with which they have working relationships do not carry Board of Directors D&O Liability Insurance.

**Treasurer's Report**- Terri Lappin

Terri reviewed TAAA Income Statement and Balance Sheet for 2006. While the club spends more than it takes in by regular income (dues and fundraising) donation and investment income, investment gains and star party contributions yielded net income of over \$19,000. Board discussion followed regarding ways to reduce expenses closer to regular income as we cannot depend on investment income, gains and star party contributions as certain income. Terri and Loretta will investigate methods to reduce newsletter costs. Terri also reviewed proposed 2007 TAAA Budget which was unanimously approved.

**Website Redesign** - Loretta McKibben

Loretta reviewed proposed Website site map; the site will employ tabs for Home (Intro, background officers), Calendar, Observing (sky guide, upcoming celestial events), News (recent events), Educators (star parties and other events) and Members Only (newsletter, SIGs, "Gallery of Images"). Tabs will include links to additional information or sign-up areas (e.g., star parties) and websites of interest. Board approved \$50 purchase of month-at-a-time calendar format with links. A Grand Canyon area business person has approached TAAA to advertise on TAAA website. The Board discussed a new website advertising policy. Loretta and Steve Marten will offer a policy draft for Board review at the February meeting.

**TIMPA 14" Scope** - George Barber

George reviewed updated design details for roll-on roll-off observatory pier, roller mechanism and security. Bill asked George to confirm expected completion date.

**Constitutional Amendment Update** - Terri Lappin

Terri proposed constitutional changes to permit nomination of officers after posting them in the April newsletter. The proposed amendment was accepted unanimously. Terri will write an article for the February newsletter. The proposed amendment will be announced at the February General Meeting and the ratifying vote will take place at the March General Meeting.

**Equipment Storage** - Teresa Plymate

Board approved purchase of \$2095 mini-mobile storage unit for TIMPA proposed by Teresa. Terri will check if TAAA needs approval by City of Tucson before the storage unit is purchased.

Adjourned at 9:30p.m.  
Respectfully Submitted,  
Steve Marten, Secretary

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](http://www.sa-ida.org)

Or feel free to contact:

John Polacheck  
President of SAIDA  
E-mail: [jpolach@dakotacom.net](mailto: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.....

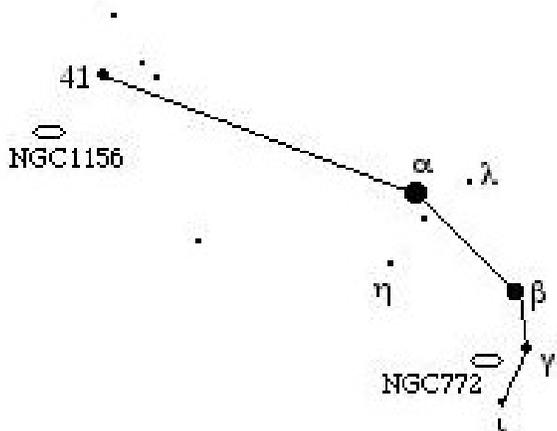
WE USUALLY HAVE PIZZA !!!

Constellation Report by Chris Lancaster

**Aries**

The Ram

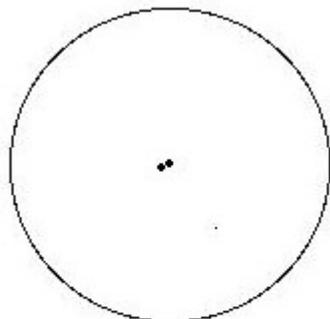
Many ancient civilizations have viewed this inconspicuous group of stars as a ram. Its pattern suggests the curved shape of ram's horns and is a fitting tribute to an animal revered by both nomadic peoples and agricultural settlers alike. Specifically, Egyptians of 16 century BC considered this constellation to be the ram connected with their god Amon Ra. In Greece, it was the golden fleeced ram created by the god Hermes to take the son and daughter of King Athamas of Thessaly away from their abusive stepmother. The ram's final destination was a region near the Black Sea where the animal was sacrificed. Its golden fleece was placed in the branches of a tree and guarded by a dragon, but nevertheless it was later stolen by Jason and his Argonauts.



Looking high in the west, you'll find Aries tucked between the tall V shape of Pisces and the soft glow of the Pleiades star cluster of Taurus. Its brightest stars range from magnitude 2 to 4.

An excellent starting point for your exploration of Aries is the magnificent double star Gamma Arietis. To the naked eye it glows softly at magnitude 3.8. Through the telescope you will see two white points of light oriented due north-south and separated by 8 arc seconds. The two stars are twins in most respects. Each are magnitude 4.8 and of similar spectral types--A0 and B9. In the year 1664, Robert Hooke discovered this double star accidentally while comet hunting. It was one of the first double stars to be discovered, and since then, while hardly any change in PA has been observed, its separation has decreased slightly. This indicates that the orbital plane must be turned flat with respect to the Earth and in a few more centuries the two stars may appear to meet each other with very little or no

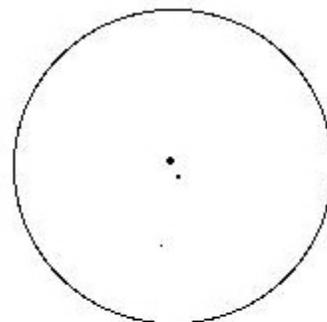
separation at all.



γ  
182X

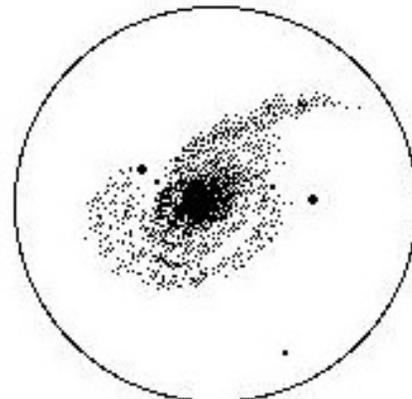
Another double star which is nearby and one easier to split from its 37" separation, is Lambda Arietis. The primary glows at magnitude 4.9, and the secondary at 7.7, making its overall brightness 4.8.

Since Aries is far from the Milky Way's spiral arms, the deep sky objects here are all in the form of galaxies. But they suffer from remoteness. However, well worth tracking down is NGC772, Aries' brightest galaxy. Comparatively strong at magnitude 11 and measuring 7.3'x 4.3', this galaxy shows a distinct core, and in CCD or photographic images, it reveals an assortment of spiral arms. One arm is elongated dramatically as if being pulled by some unseen attractor. NGC772 is 1.4 degrees east south-east of Gamma Arietis at RA 1h 59.4m Dec +19d 00.4'.



λ  
91X

NGC1156 is an irregular galaxy measuring a small 3.3'x 2.4' and a little dimmer at magnitude 12. Large telescopes may see a mottled, rectangular object, or otherwise simply an undefined patch of light of roughly oval shape between two dim stars. You'll have to look to the northeast part of the constellation 3 degrees southeast of 41 Arietis, or RA 2h 59.6m Dec +25d 14.3'.



NGC772

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

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PERMIT NO 1488

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 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.
- 7.

#### **NOTE**

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. Contact a board member or the TIMPA Gate Card Controller to arrange access to TIMPA. 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.