



# Desert Skies

*Tucson Amateur Astronomy Association*

Volume LII, Number 2

February, 2006



**Ed Finney 1942—2005**

**Cover Photo:** TAAA recently lost a good friend. Ed Finney, who served as Member-at-Large, passed away on December 29th, 2005. This picture was taken at the last Telescopes for Telethon event on the UA mall. Ed was passionate about astronomy, attending public star parties and was a Project ASTRO partner for several years. Photo taken by Thom Peck.

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

TAAA Phone Number: (520) 792-6414

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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. Partial page submissions should be submitted in Word compatible files via e-mail or on a floppy disk. Full-page articles, artwork, and photos can be submitted camera ready. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

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### President's Message

As you can tell by the cover photo of this month's newsletter, Ed Finney passed away just after this last Christmas. Ed was a truly unique person, in himself and for the TAAA. Ed gave of himself as a Member-at-Large (sometimes as a large member, as he would say). He was active in Project Astro, and at star parties too numerous to count. He was a dear friend and a great kidder. The club could use many more Ed Finneys, but there could never be a replacement. So long, Ed.

Back to business. We must elect a nominating committee for the next May elections for the Board of Directors of the 2006-2007 year. Those interested are urged to contact a current board member, myself excluded. Aside from being a board member, this committee is one of the most important jobs in determining the direction of the TAAA for the coming years. Please do your part and vol-

unteer to be one of the three on the nominating committee.

We have a great meeting lined up for you this month. The AstroImaging SIG will show lots of pretty pictures. Some are very basic astrophotography. And some are of the highest quality digital imaging around. You won't be disappointed.

Thanks to Terri Lappin for editing this month's newsletter.

Finally, I want to make mention of the Ed Finney Memorial picnic/star party we're having on February 18 at TIMPA. There is more information elsewhere in the newsletter.

Thom Peck

### Meeting Information and Calendar of Events

**TAAA MEETING DATE:** Friday, Feb. 3 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. And, while the eye cannot perceive most colors at very low light levels; color films and specially filtered Charge Coupled Devices, or "CCD's" can reveal some celestial object's colored splendor. Many nebulae appear as a dim white glow to the eye, which are otherwise vividly colored on film or CCD's. Some amateur's astrophotographs rival those of professional astronomers! Join Steve Peterson in this discussion on this rewarding aspect of Amateur Astronomy!

**GENERAL MEETING: 7:30 pm**

Title: Celestial Images from Astrophotography SIG

Speaker: Steve Peterson and other members of the AstroPhoto "SIG"!

You've 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). They may be muttering incoherently about exposure or integration times, binning, blooming, stacking, field of view, will their spouse divorce them if they buy that STL1 1000 CCD camera?... Yup! You guessed it! It's probably a member of the AstroPhoto SIG. 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 that dim, elusive, and often sought after, nebula or galaxy. These ministers of the dark seek to 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 Astrophotography Special Interest Group, or "AstroPhoto SIG". 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 T.A.A.A. 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've captured.

This presentation will be dedicated to, and in honor of, Ed Finney.

**BOARD OF DIRECTORS MEETING:** Wednesday, Feb. 8, 6:30 pm at Steward Observatory Conference Room N305

**STAR PARTIES AND EVENTS:**

02 Feb - Doolen Middle School

09 Feb - AstroPhoto SIG at China Rose

14 Feb - Gallego Elementary School

15 Feb - Beginners SIG at China Rose

16 Feb - Estes Elementary School

18 Feb - AIAA Kids Club @ Kuiper Space Sciences Bldg

18 Feb - Ed Finney Memorial Star Party and BSIG at TIMPA

19 Feb - UofA Students at Saguaro Park, West

21 Feb - Hohokam Middle School @ Las Cienegas

25 Feb - TAAA Star Party at Las Cienegas

25 Feb - Whipple Observatory Public Star Party

01 Mar - Tortolita Middle School

**NEWSLETTER SCHEDULE:** Deadline for articles: Sat, Feb. 18. Printing: Mon, Feb. 20. Folding Party: Tues, Feb. 21. Mailing: Wed, Feb. 22. The newsletter is mailed at least one week prior to the following month's General Meeting.

The board of directors meeting is the second Wednesday of the month. The Astrophoto SIG is the first Thursday after the monthly meeting.

## Club News

### Ed Finney Memorial BBQ & Star Party

At TIMPA Saturday, 2/18/2006

A BBQ picnic and memorial star party will be held on Saturday, Feb 18th at TIMPA in memory of Ed Finney, a TAAA member and former Board member who passed away on December 29, 2005. We will celebrate Ed's life and friendship by doing two of the things he loved best ... socializing and observing.

This event will combine February's TIMPA Star Party and Beginner's SIG with a picnic meal starting at 4:00 pm. At 5:30, we will have an opportunity for people to share their memories of Ed, followed by an introductory talk by Mary Turner on objects visible that night. Observing will begin at dark (skies permitting). We expect to have non-member guests who were Ed's family and friends, and we hope some will stay for the observing.

A meal of BBQ beef on buns, various sides & salads, and dessert will be provided; contact Ellen Finney (296-9266) if you wish to help. TAAA members are asked to bring folding chairs for themselves and cold drinks/ice to share with guests. We are expecting a large turnout and need to get an approximate count to plan food. If you think you will attend, please email the number of people in your group to Robert Crawford at [EdStarParty@earthlink.net](mailto:EdStarParty@earthlink.net) (or call 546-1490) by Saturday, Feb 11th. But come anyway, whether you RSVP'd or not.

The TIMPA site features a large parking area and full restroom facilities. Parking near the ramada will be reserved for those bringing food, telescopes, or other equipment for the event. Be prepared for cold temperatures after dark. Directions to the TIMPA site are located on the outside flap of this newsletter.

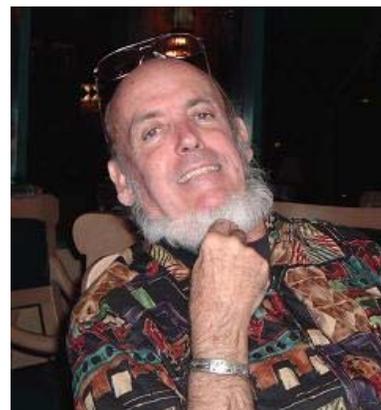


Photo taken by Thom Peck.

### Apparel Logo Contest

The apparel logo needs an update, and we need your help! We are conducting a contest for a new apparel logo. The winner will receive \$50.00 worth of TAAA apparel. Here are the contest rules:

- Only members are allowed to submit entries.
- All entries must be an original design made by the submitter.
- No more than one entry per person.
- Logos must be no larger than 2.5 inches high x 4 inches wide.
- Logos must use the words "TAAA" or "Tucson Amateur Astronomy Association"
- Entries must have the submitter's name, phone number or email address, and an actual size and color copy of the logo (electronic submissions are OK).
- All entries must be submitted to Ann Scott. I will be at the apparel table during the meetings or email your entry to me at [taaa-sales@tucsonastronomy.org](mailto:taaa-sales@tucsonastronomy.org), or you can call me for other arrangements at 749-4867.
- All submissions must be received by 1 March 2006.
- The TAAA Board will select the finalists, and the membership will vote to select the winner from among these during the March meeting.

The TAAA board reserves the right to modify the winning logo to enable its conversion to a usable embroidery pattern.

Please note that the winning entry must be made into an embroidery design. Do not use very small or numerous details in your entry as these cannot be converted into a usable pattern. Good luck!

### 2006 Calendars

Calendars for 2006 are for sale at regular meetings this fall. You'll find them at the same table where you purchase TAAA apparel. This year's calendar is "Celestial Wonders", produced by Sky Publishing. The cost is \$10 each (~\$3 off the regular selling price), or \$9 each for more than one. This calendar has information about astronomical events, both historical and observational... plus illustrations showing positions of the moon and bright planets for the month.

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.

### Basha's Thanks A Million Program

The Basha's Thanks A Million program is underway through March 31st. Basha's will make a donation to the TAAA if we have combined sales of \$2,500. 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. We have combined sales of about \$500 so we have a ways to go. The last two years we easily went over the minimum and received about \$75 donations each year. We can do it again! If you participated last year, you still need to sign up at the register again. So, if you shop Basha's, remember to have your Thank You card linked to the TAAA.

### Position Open: Star Party Volunteer Coordinator

The position of Star Party Volunteer Coordinator is open. This person coordinates our members so that all school star parties are covered. Contact Thom Peck if interested.

Club News (cont.)

**Grand Canyon Star Party**

North and South Rims  
17-24 June, 2006

Just a reminder that before you know it, spring will be upon us and with it the Grand Canyon Star Party. If you are thinking of attending, plan your vacation now! Likewise, it is never too early to make lodging plans and unless you plan on camping, you should make those reservations NOW! And speaking of camping, if you will be staying with us the entire week, I will take names for the free campsites the park service provides starting 1 March. For info about the star party, lodging links, or whatever, check out the website at [www.tucsonastronomy.org/gcsp.html](http://www.tucsonastronomy.org/gcsp.html), or e-mail me at [ketelsen@as.arizona.edu](mailto:ketelsen@as.arizona.edu) for any questions. -Dean Ketelsen

**Members News**

We welcome the most recent members to join the TAAA: Vance J Anthony, William Cassidy, Gerald Geise, James Loughlin, and H Edward Stramler. Glad to have all of you join! New members should be sure to pick up a new members pack at a meeting. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available to any member at most meetings, so pick one up if you need it.)

**Upcoming Lecture Schedule**

Below is our upcoming lecture schedule. We are always looking for Astronomy Essentials speakers. These are given by our own members so please consider presenting a 30 minute lecture about some basic astronomy topic. If you have a suggested topic or speaker in mind for either the Astronomy Essentials or Meeting Lecture send an email to Terri at [treasurer@tucsonastronomy.org](mailto:treasurer@tucsonastronomy.org) or call her at 977-1290.

TAAA Speaker Schedule		
Mar 3	Astronomy Essentials	Terri Lappin—NSN Toolkit: How Telescopes Work
	General Meeting	John Hill Large Binocular Telescope

**Beginners' Special Interest Group Activities for February**

Meeting Feb 15 at China Rose Restaurant  
Star Party Feb 18 at TIMPA

The monthly observing night at TIMPA will be a special event for TAAA. As described above, there is to be a Memorial Star Party to celebrate the life of our fellow TAAA member Ed Finney. A number of people are expected to come to share this important event with us. The potluck dinner and special observance for Ed will be followed by observing the skies, and the BSIG will provide a program for doing so. Mary Turner is preparing an agenda of objects to observe and will give her usual very informative introduction to these objects.

TIMPA night for February is Saturday the 18th. The event will begin at 4:00 PM.

We will also hold our usual meeting of the BSIG at the China Rose Restaurant at the northeast corner of Speedway and Rosemont on Wednesday the 15th. This will begin at 6:00 PM. At that time we will go over the observing agenda and other matters important to the BSIG.

BSIG participants are encouraged to consider doing the Messier Marathon to be held on Saturday, March 25. Information about this exciting event will be forthcoming in the March issue of Desert Skies.

*SINCE 1986*

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**Basha's Thanks a Million  
TAAA number 23178**

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### Club News (cont.)

#### Loaner Scope Upgrade

The 8-inch Dobsonian telescope in the Telescope Loaner Program was recently returned with some nice upgrades. TAAA member Michael Finerty has donated a Telrad sight and two eyepieces, with carrying case, that will remain with the telescope. The TAAA thanks Michael for this donation.

A list of the telescopes in the Loaner Program can be found elsewhere in this newsletter.

#### Nominating Committee

A nominating committee will be elected during the February General Meeting. The nominating committee responsibilities are outlined below. Service on this committee is very important. Strong leadership, combined with the efforts of our members, will ensure success over the next year. If you are interested in helping find those willing to serve on the Board of the TAAA, contact any current board member. The TAAA constitution calls for 3 TAAA members on this committee. If you are interested in running for an office, you can still serve on the nominating committee. Only the current President is prohibited from serving on this committee. Elections for the next TAAA Board of Directors will be held during the May meeting.

##### Nominating Committee Duties:

1. The nominating committee has the following responsibilities. These responsibilities can be divided as the committee sees fit.
2. It is the duty of the nominating committee to find qualified members to hold positions on the Board of Directors. These nominees must be over 18 years of age and have been a member in good standing for at least one year prior to the May election. Nominees must also be current members to hold an office.
3. The constitution includes requirements for holding an office and the official job duties of board members.

4. A current membership list containing membership start dates will be supplied by the Treasurer. If a question arises, contact the treasurer.
5. It is the committee's responsibility to find at least one member to run for each office. If more than one member wishes to run for an office, it is up to the membership (not the committee) to decide through the election process who will hold that position. However, there is no requirement for the committee to find more than one person for each office. The positions that the committee is responsible for finding nominees are: President, Vice President, Treasurer, Secretary, and three Members-at-Large.
6. Contact ALL current members of the Board of Directors and find out if they wish to run or not. They are also a source for possible nominees for other offices.
7. The TAAA has been successful due to the abilities of its board members and their willingness to work together. Nominees do not have to be knowledgeable about astronomy but they should be supportive of TAAA goals and activities and have an interest in seeing them carried out. The nominating committee should find out how serious the prospective board member is in making a commitment to serve on the board. Explain to the prospective nominee that attendance at board meetings is important (at least 4 board members are needed to conduct business). Input from every officer is important to the board's ability to make decisions. Board meetings are held monthly, starting at 6:30pm and usually over by 9pm.
8. If a prospective nominee meets the membership requirement and seems sincere in their commitment, then they should be listed as a nominee. The list of nominees must be in the hands of the newsletter editor(s) by the April newsletter deadline which is in Mid-March.

### Items of Interest

#### Astrobiology and the Sacred

Astrobiology is the study of biological processes on the Earth and beyond. In our search for life beyond the earth, we may question our religious beliefs, or wonder about the purpose of our lives. A series of lectures will be presented over the next few months that will address these issues. All lectures are free and will be held from 7pm to 8pm at the Center for Creative Photography, located at 1030 N. Olive. Parking is available in the Park Ave Garage (NE corner of Speedway and Park). The Center for Creative Photography is located south of Speedway near the underground walkway. For more information, go to <http://scienceandreligion.arizona.edu/index.html>

- Jan 30 Jonathan Lunine, UA Prof. of Planetary Sciences "Lookin' for Life in All the Wrong Places" - The current status of the search for life in the solar system. Book signing to follow talk.
- Feb 9 Chris McKay, Senior Scientist at NASA Ames "Search for a Second Genesis of Life: How and Why" - Upcoming space missions, the prospect of life on Mars and Titan, and analogs of planetary environments on Earth.
- Feb 22 Nick Woolf, UA Professor of Astronomy "Looking for Planets, Looking for Life" - Methods that will be used to discover distant earths and spectral signatures of life.

### Items of Interest (cont.)

#### Steward Observatory Public Evening Lectures

Astronomers at Steward Observatory give popular public series talks in the Steward Observatory Lecture Hall every other Monday at 7:30 PM. Upcoming lectures are listed below. The complete lecture schedule can be found at [http://viking.as.arizona.edu/~taf/pubeve/pub\\_lect.html](http://viking.as.arizona.edu/~taf/pubeve/pub_lect.html).

Feb 6 Dr. Andrew O'Dell (NAU) "A 90primer on Galaxy Evolution"

Feb 20 Dr. Jennifer Lotz (KPNO) "Collisions in the Cosmos"

#### Desert Sunset Star Party

The 2006 Desert Sunset Star Party is scheduled for April 26-30. As in previous years, it will be held at the CABALLO LOCO RANCH RV PARK. Registration is now open. For more information, go to <http://www.chartmarker.com/>.

#### WEBSITES: Trips on the Internet Super-Skyway

By Rik Hill

In the middle of January new sunspots appeared quite suddenly, on the sun. This was a welcome surprise since, generally, we are still seeing activity continuing to head towards solar minimum from a double peaked high back in 2000 and 2001. So when is minimum Cycle 23 and the start of Cycle 24? A year ago we were told it was coming sooner than expected:

[http://science.nasa.gov/headlines/y2004/18oct\\_solarminimum.htm](http://science.nasa.gov/headlines/y2004/18oct_solarminimum.htm)

This was partly predicted based on the early observation of sunspots with the polarity of the next solar cycle showing up at high latitudes a couple years ago, evident in the "butterfly diagram" which is nicely discussed and shown at:

<http://science.nasa.gov/ssl/pad/solar/sunspots.htm>

Then, just before the Coronado conference in October, the sun gave all participants plenty to talk about when it

erupted in a dramatic but short, spurt of activity. See: [http://science.nasa.gov/headlines/y2005/15sep\\_solarminexplodes.htm](http://science.nasa.gov/headlines/y2005/15sep_solarminexplodes.htm)

But plots at Solar Terrestrial Activity Report:

<http://www.dxic.com/solar/solcycle.html>

would indicate that the bottom is still coming. So when is it expected? A Solar Physics page at the NASA Marshall Space Flight Center watches these things (but recently lost funding) at:

<http://science.msfc.nasa.gov/ssl/pad/solar/predict.htm>

When you go there click on the image of the solar activity plot and you will get a nice sized representation of that plot where you can see that their prediction for the minimum is middle to late 2006. This is probably about as accurate a guess as anyone can make. In past Cycles, predicting to the month was always a little dicey but worthy of a pool!

What about the next solar cycle? Will it be stronger or weaker than the current one? An attempt at determining this is posted at:

<http://www.spacew.com/news/05Mar2005/index.php>

If this was interesting, you will enjoy the site:

<http://www.lund.irf.se/rwc/cycle24/index.html>

Here you will find a listing of publications that discuss upcoming activity in the next decade. The predictions, just like long range weather forecasting, range from more activity to less. Go figure.

But the sun is the most dynamic object you can observe. Every day is new on the sun and unpredictable in detail. Predictions are only so good. So you can get out your telescope, armed with the correct filtration, or your PSTs and over the next decade figure out which of these predictions hit the nail on the head!

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)

### Telescopes for Borrowing



Don't own a telescope?

The TAAA Loaner Program is your answer!

There's no cost to you.

We have the following telescopes:

**Sears 60mmf/15 on equatorial mount**

**Unitron 62mmf/14.5 on equatorial mount**

**Meade 90mm ETX**

**Coulter Odyssey8 8-inch f/4.5 Dobson**

**Meade10-inch f/4.5 on equatorial mount**

**Meade 10" LX200 GPS (requires training session)**

New members, here's your chance to begin learning and observing the sky before buying

any equipment.

Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy.

<b>Star Parties &amp; Events</b>
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**Doolen Middle School Star Party** **Central**  
 Thursday, 2/2/2006 No. of Scopes: 3

Doolen Middle School will be hosting Race to the Planets at 2400 N. Country Club. On Country Club just north of Grant Rd. NE corner. Viewing will be in the Court yard. Contact person Sarah M Barrios can be reached at (520) 232-6900 or email [Sarah.Barrios@tusd.k12.az.us](mailto:Sarah.Barrios@tusd.k12.az.us). Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 5:59pm Dark Sky: 6:54pm Moon Phase: Crescent after New Moon.

**Gallego ES Star Party** **South-Central**  
 Tuesday, 2/14/2006 No. of Scopes: 3

Gallego ES will be hosting Exploring the Night Sky at 5102 S. Cherry Ave.. Take Campbell/Kino. After Irvington, look for Wyoming (2-3 blocks south of Irvington) and turn right. Proceed through neighborhood; school is at end of street. Viewing will be on the basketball court. Contact person Tom Costello can be reached at 545-3000 or email [tomc2@susd12.org](mailto:tomc2@susd12.org) Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:10pm Dark Sky: 7:03pm Moon Phase: Waxing Gibbous.

**Estes Elementary School Star Party** **NW**  
 Thursday, 2/16/2006 No. of Scopes: 4

Estes Elementary School will be preparing for 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, Take exit #236 toward Marana - go 0.5 mi, Turn on N Sandario Rd - go 0.1 mi, Turn on N Casa Grande Hwy - go 0.9 mi, Turn on W Grier Rd - go 0.1 mi, Arrive at 11279 W Grier Rd, Marana, on the left. Contact person Rocky Sugameli can be reached at 520-682-4738 or email [R.J.Sugameli@maranausd.org](mailto:R.J.Sugameli@maranausd.org) Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:11pm, Dark Sky: 7:05pm Moon Phase: near Full Moon.

**AIAA Kids Club Star Party** **Central**  
 Saturday, 2/18/2006 No. of Scopes: 3

AIAA Kids Club will be hosting *Solar Power* at the Kuiper Science Building. Going west from Campbell on Speedway, take a left at the next light (Cherry). Park on the street (meters n/a on Saturday), or on the other side of the mall in the parking structure. We meet in the Kuiper Science Building, on the Corner of University and Cherry on the UA campus. Just to the EAST of the Flandrau Science Center. Contact person Sara Falconer can be reached at email: [TucsonKidsClub@aol.com](mailto:TucsonKidsClub@aol.com) Set-Up Time: 8:30am. Observing will be from 9:00am to 11:00am.

**UofA Astronomy Students Star Party** **West**  
 Sunday, 2/19/2006 No. of Scopes: 4

UofA Astronomy Students will be holding a Star Party 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: 6:14pm Dark Sky: 7:07pm Moon Phase: Late Crescent.

**Hohokam Mid. School Star Party @ Las Cienegas**  
 Tuesday, 2/21/2006 No. of Scopes: 3

Hohokam Middle School will be holding a Youth in Wilderness Campout at Las Cienegas. Viewing will be held at a BLM campground. Directions are to be provided at a later time. Contact person David Jones can be reached at 908-3700 or email [dbjones@cox.net](mailto:dbjones@cox.net) Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:15pm Dark Sky: 7:09pm Moon Phase: Last Quarter.

**TAAA Star Party at Las Cienegas (Empire Ranch)**  
 Saturday, 02/25/2006

Study the winter constellations while enjoying the dark skies at Las Cienegas. Las Cienegas 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 astrophotos. 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. There are no restroom facilities at the site, so be prepared. Las Cienegas is at 4000 feet so be prepared for very 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.

**Whipple Observatory Visitor's Center Open House and Star Party**  
 Saturday, February 25

Smithsonian Institution's Fred Lawrence Whipple Observatory Offices near Amado, Arizona  
<http://cfa-www.harvard.edu/flwo/visitcenter.html>

The Whipple Observatory will present an Open House and Star Party on Saturday, February 25. Observing will begin about 7 p.m. courtesy of telescopes provided by the Tucson Amateur Astronomy Association and Sonora Astronomical Society.

3:30 p.m.	Visitors Center opens
6:00 p.m.	Informal lecture on astronomy by Observatory staff
7:00 p.m.	Observing begins (in parking area next to Visitors Center)

[Continued]

Seating is limited, so you may wish to bring a lawn chair. Dress for cool evening temperatures. Small flashlights and binoculars are useful to bring.

Please cooperate with staff directing parking when you arrive. The parking spaces nearest the building are reserved for TAAA/SAS members and their telescopes. Visitors should park along the driveway or in the parking area outside the gate or along the road as directed. (Please note: Visitors will be allowed to park cars next to the building in the space usually reserved for telescopes until 5 p.m. At that time, visitors will have to move their cars to other parking spaces so that telescopes may be set up.)

For more information call 670-5707. In case of threatening weather, call 670-5707 after 3:30 p.m. on the 25th for information about star party cancellation. The Whipple Observatory, Tucson Amateur Astronomy Association, and Sonoran Astronomical Society present this opportunity to see the stars under dark Southern Arizona skies.

The administrative complex for the Fred Lawrence Whipple Observatory is 43 road miles south of Tucson and 38 road miles north of Nogales, Arizona.

From Tucson, drive south on Interstate 19 to exit 56 (Canoa). At the bottom of the exit ramp, turn left and drive under the freeway to the frontage road on the east side. Turn right and drive south three miles to Elephant Head

Road. Turn left and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).

From Nogales, drive north on Interstate 19 to exit 48 (Amado/Arivaca Junction). At the end of the exit ramp, turn right and then left onto the frontage road. Drive north for about two miles to Elephant Head Road. Turn right and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).

**Tortolita Middle School Star Party** **West**  
 Wednesday, 3/1/2006 No. of Scopes: 5

Tortolita Middle School will be planning a Night With the Stars at 4101 West Hardy Road. North on I-10, get off on Cortaro Farms Road—go right (east), go left (north) on Thornydale Rd., turn left (west) on Hardy Rd, go to end of road, school located on south side of street, turn into parking lot and go to the left (east) of school, drive back to the football field. Viewing will be on the football field, we will set up on the north end of the football field. Contact person Ann Zawada can be reached at 579-4600 or email A.S.Zawada@maranausd.org Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:22pm Dark Sky: 7:15pm Moon Phase: Crescent.

**Dark Skies for February 2006**

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

Tu/We 31/ 1	20:42 - 5:54	Sa/Su 11/12	- - -	Tu/We 21/22	19:37 - 2:35
We/Th 1/ 2	21:51 - 5:54	Su/Mo 12/13	Full Moon	We/Th 22/23	19:38 - 3:39
Th/Fr 2/ 3	22:59 - 5:53	Mo/Tu 13/14	- - -	Th/Fr 23/24	19:39 - 4:38
Fr/Sa 3/ 4	0:05 - 5:52	Tu/We 14/15	19:32 - 19:42	Fr/Sa 24/25	19:39 - 5:29
Sa/Su 4/ 5	1:11 - 5:52	We/Th 15/16	19:33 - 20:36	Sa/Su 25/26	19:40 - 5:34
Su/Mo 5/ 6	2:16 - 5:51	Th/Fr 16/17	19:33 - 21:31	Su/Mo 26/27	19:41 - 5:33
Mo/Tu 6/ 7	3:19 - 5:51	Fr/Sa 17/18	19:34 - 22:27	Mo/Tu 27/28	19:42 - 5:31
Tu/We 7/ 8	4:17 - 5:50	Sa/Su 18/19	19:35 - 23:25	Tu/We 28/ 1	19:42 - 5:30
We/Th 8/ 9	5:10 - 5:49	Su/Mo 19/20	19:36 - 0:26	We/Th 1/ 2	20:38 - 5:29
Th/Fr 9/10	- - -	Mo/Tu 20/21	19:36 - 1:30	Th/Fr 2/ 3	21:47 - 5:28
Fr/Sa 10/11	- - -			Fr/Sa 3/ 4	22:56 - 5:27

Weekend	Sun Set	Sun Rise	Mercury Set Vi	Venus Rise Vi	Mars Set Vi	Jupiter Rise Vi	Saturn Set Vi	Vi=Visibility
4/ 5	17:58	7:13	18:27 -	5:04 -3	1:43 0	1:02 -2	6:52 0	-3 brilliant
11/12	18:05	7:07	19:00 5	4:44 -4	1:31 0	0:37 -2	6:23 0	0 conspicuous
18/19	18:11	7:00	19:29 3	4:30 -4	1:20 1	0:11 -2	5:54 0	3 moderate
25/26	18:16	6:53	19:40 4	4:21 -4	1:10 1	23:44 -2	5:25 0	6 naked eye limit
4/ 5	18:22	6:45	19:20 8	4:14 -4	1:00 1	23:17 -2	4:56 0	9 binoculars limit

By Erich Karkoschka

### Object of the Month by Alfredo Garcia

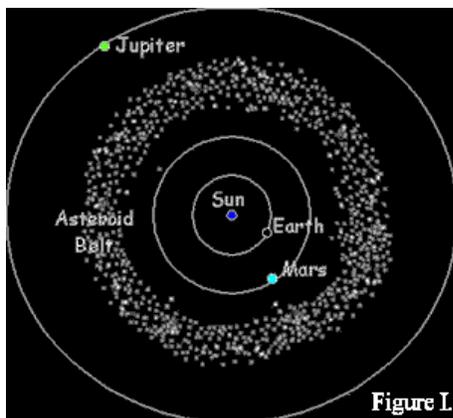
I was searching around for the OTM for this month and came across an interesting article in the February 2006 issue of Astronomy Magazine. As such, I decided to write more about the objects and event the magazine described. The event in particular sounded very interesting and certainly something worth viewing and passing on. As such, I decided to make the objects (and subsequent event) the TAAA Newsletter OTM for February 2006.

This month, the OTM or should I say OTMs are an integral part of our solar system. The Italian astronomer Giuseppe Piazzi discovered the first of these objects in 1801. At first he thought the object he had discovered was a new comet, but it was later determined that it was not a comet, but more like a small planet. Another three of these objects were discovered between 1802 and 1807. Then, 38 years passed before the next of these objects was discovered. Today, of course, astronomers know of thousands and thousands of them.

These "small planets" belong to the class of objects known as asteroids. The word asteroid has its derivation from the ancient Greek word "asteroeid Es", meaning star-like. You can easily see where the name comes from because when you observe asteroids thorough a telescope, they basically look like a star except that these "stars" wander among the background stars.

In reality asteroids are not stars, but rocky and metallic objects that orbit the Sun. They are too small to be considered planets and are often referred to as minor planets or planetoids. They range in size from over 1000 kilometers down to the size of pebbles. Sixteen of these asteroids have a diameter of 240 kilometers or greater. Their orbits bring them inside Earth's orbit to beyond the orbit of Saturn. The majority of them, however, are contained within a main belt that exists between the orbits of Mars and Jupiter known as the Asteroid Belt (Figure I). Both of this month's OTMs are classified as Main Belt Objects.

Without any further introduction, I present to you the February 2006 OTMs, the main belt asteroids known as 11 Parthenope and 16 Psyche. The Italian astronomer Annibale de Gasparis discovered these asteroids on 11 May



1850 and 17 March 1852 respectively. 11 Parthenope was named after one of the sirens of Greek mythology and 16 Psyche after one of the nymphs also from Greek

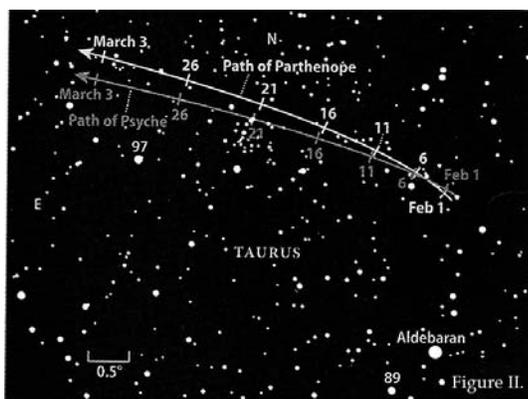
mythology. Incidentally, De Gasparis discovered a total of 9 asteroids during the time period of 1849 to 1865. The other asteroids are: 10 Hygiea, 13 Egeria, 15 Eunomia, 20 Massalia, 24 Themis, 63 Ausonia, and 83 Beatrix. The asteroid 4279 De Gasparis discovered on 19 November 1982 is named in his honor. In addition, he also has a 30-kilometer diameter lunar crater named after him called de Gasparis located in the southwest portion of the Moon. There is also a 93-kilometer long fracture near the crater are named after him known as the Rimae de Gasparis.

Asteroid 11 Parthenope has a maximum size of about 153 kilometers. The asteroid has a rotational period of about 9.4 hours and an orbital period around the Sun of about 1403 days. Its orbit brings it as close as 2.2 astronomical units (AUs; 1 AU = ~93,000,000 miles) to the Sun and as far away as 2.7 AUs. During the month of February (at 2200 MST) 11 Parthenope will be as close as 1.99 AUs on 1 February and far away as 2.4 AUs from Earth on 28 February. Its speed of apparent motion across the sky ranges from about 10.6 arc-seconds/hour at the month's beginning to about 31.9 arc-seconds/hour by month's end. This degree of apparent motion will allow you see it "move" from hour to hour with respect to the background stars.

Asteroid 16 Psyche has a maximum size of about 253 kilometers. The asteroid has a rotational period of about 4.2 hours and an orbital period around the Sun of about 1823 days. Its orbit brings it as close as 2.5 astronomical units (AUs; 1 AU = ~93,000,000 miles) to the Sun and as far away as 3.3 AUs. During the month of February (at 2200 MST) 16 Psyche will be as close as 2.1 AUs on 1 February and as far away as 2.5 AUs from Earth on 28 February. Its speed of apparent motion across the sky ranges from about 10.9 arc-seconds/hour at the month's beginning to about 31.3 arc-seconds/hour by month's end. This degree of apparent motion will allow you see it "move" from hour to hour with respect to the background stars.

Now that we have discussed each asteroid, let's switch to the event related to both of them. Throughout the month, the two asteroids will be in close proximity to each other in the sky. This is not unusual in itself as asteroids do occasionally come close enough to each other so that they can be seen together. It is not very often, however, that two asteroids come within 2 arc minutes of each other at their closest encounter. This is what makes this event rare and special. The pair starts off the month with a separation of about 3.0 arc minutes on 1 February and ends the month with a separation of about 16.3 arc minutes. The interesting part of this rendezvous is that they will be under 2 arc minutes from each other for several days in the early part of the month. Unfortunately during the period of about 4 to 10 Feb and thus during their closest encounters, the light from the nearby moon will most surely "wash" them out visually, but CCD imagers have the capability to image the pair. But, observe from late Jan 06 to very early Feb 06 and keep observing later in the month and you're sure to observe the pair visually as they trek across the star fields of Taurus.

Object of the Month by Alfredo Garcia (cont.)



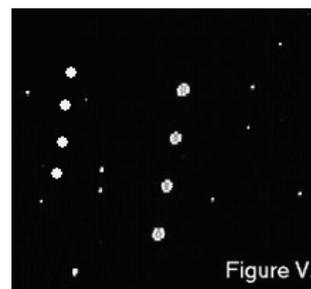
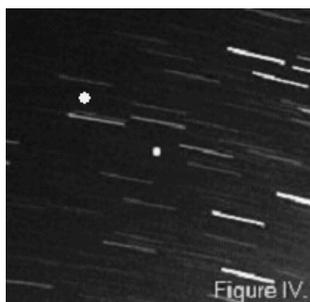
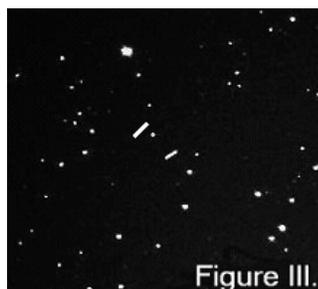
Asteroids 11 Parthenope and 16 Psyche will be well placed for observation during the entire month of February at around 2200 MST from Tucson, AZ. They will be situated from about 65 (1 Feb) to 48 degrees (28 Feb) in altitude above the southwest to west horizons in the constellation of Taurus. As the month progresses, their magnitudes will range from 11.1 to 11.6 for 11 Parthenope and from 10.6 to 11.1 for 16 Psyche. These ranges place them well within the observation capabilities of amateur telescopes. The map at Figure II shows the asteroids' paths in the sky throughout the month and it can be used to star hop to the pair. They are best observed later in the evening when they are highest above the horizon and also during periods when there is no bright moonlight.

For those with setting circles and/or automated GO TO telescopes, see Table I to locate the asteroids using RA and

DEC coordinates. I picked an arbitrary time of 2200 MST from Tucson, AZ, and show the asteroids' position at 5-day increments throughout the month as well as their separation. I also have shown the asteroids' altitude above the horizon and associated magnitude on the respective dates.

Though these asteroids are visible as star-like objects in a telescopic field of view, you can trace their movements from hour to hour against the background stars, though the motion is not always easy to perceive. But, this apparent movement can be easily "captured" in astrophotographs or CCD images over time by employing some asteroid imaging techniques. This author was not able to image the pair prior to the deadline date for the newsletter input. However, I have produced some simulated images of the two (or for that matter any asteroid), as they would look if you employed the imaging techniques that follow. If you track on the background stars during your exposure, then the asteroids' movements will be recorded as trails on the image (Figure III). If you track on the asteroids during exposure, then the stars will be trailed (Figure IV). You can also take shorter exposures over time to minimize star and the asteroids' trails and then combine the images to show the asteroids as a star-like objects moving across the exposure field (Figure V). All of these imaging techniques are good and fun to use and also help you to improve your imaging skills. So all you astrophotographers and CCD'ers, get your cameras ready for what should be an interesting imaging opportunity. Good luck on your imaging endeavors. You can bet I will be imaging the close encounter!

Clear Skies,  
Alfredo



Date (Day)	1	5	10	15	20	25	28
RA (hrs min sec)	04 35 35 04 35 32	04 36 40 04 36 46	04 38 37 04 38 53	04 41 13 04 41 34	04 44 24 04 44 48	04 48 08 04 48 32	04 50 37 04 51 00
Dec (degs min sec)	+18 27 50 +18 30 43	+18 39 49 +18 39 46	+18 55 35 +18 52 00	+19 11 52 +19 04 58	+19 28 41 +19 18 31	+19 45 37 +19 32 04	+19 55 35 +19 40 21
Alt (degs)	65.1 65.2	62.7 62.7	59.6 59.6	56.4 56.4	53.3 53.3	50.2 50.2	48.4 48.4
Magnitude	11.1 10.6	11.2 10.7	11.3 10.8	11.4 10.9	11.4 11.0	11.5 11.1	11.6 11.1
Separation (arcminutes)	3.0	1.46	5.1	8.7	11.6	14.7	16.3

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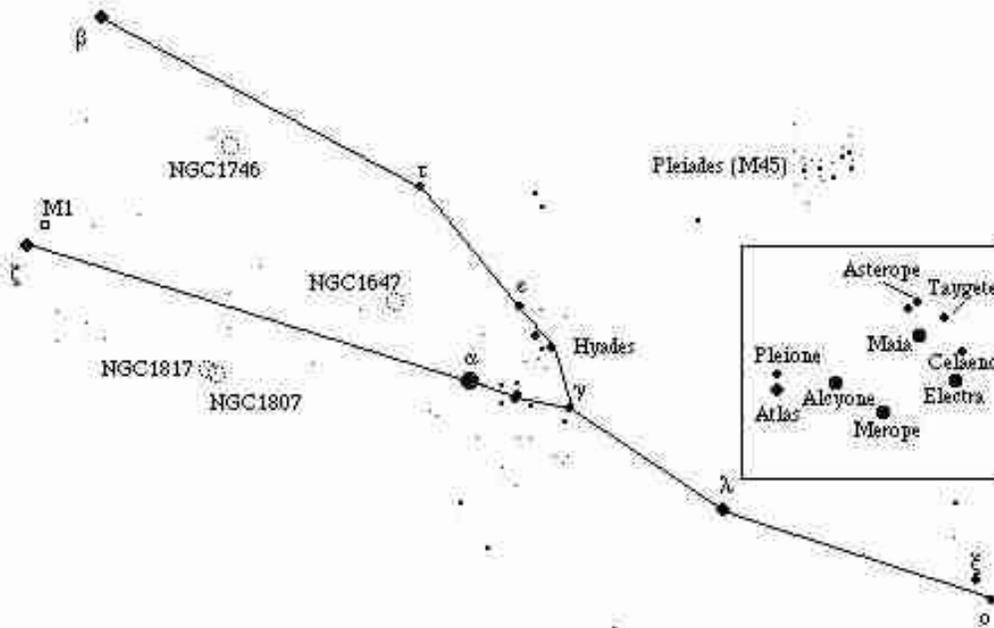
**Constellation Report by Chris Lancaster**


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**Taurus**

The bull

Winter nights bring some of the brightest stars the northern celestial hemisphere has to offer. On any date in January during the early evening Taurus will have reached the meridian and its brightest beacon, red Aldebaran (Alpha Tauri), shines as the eye of the bull while the animal charges across the heavens toward Orion and Auriga. Since ancient times Taurus has been seen as a bull, symbolizing strength and fertility, since at one time it embraced the sun during the spring. This was important to early civilizations since springtime marked the new agricultural period. Aldebaran serves as a marker for the Hyades star cluster, which is a large, naked-eye group of stars covering a patch of sky about 5 degrees across and forming a V-shaped pattern. However, Aldebaran is not a member of the group. It is merely a foreground star which happens to sit in the same line of sight as the cluster members. The Hyades is one of the closest clusters to Earth at about 130 light years. Some of the other stars scattered across the constellation are actually members of the Hyades if one takes into account their common proper motion through space, and as a group they are called the "Taurus moving cluster." The cluster has traveled beyond its closest point to the solar system, and several million years from now as it recedes in the distance, it will be seen as a small run-of-the-mill cluster measuring less than half a degree across located east of Betelgeuse in the constellation of Orion.



Another cluster which is conspicuous to the naked eye is M45, the Pleiades, or "seven sisters." It appears in the northwest part of the constellation initially as a fuzzy spot, but upon direct inspection breaks into six or seven (or more) distinct stars, depending on the visual acuity of the observer and atmospheric conditions. So striking is this cluster that it has its own mythological stories. One describes Zeus changing the sisters into celestial doves to escape Orion. Another says that the Pleiades was once a single star, brighter than any other in the heavens, and it became so boastful that the god Tane flung Aldebaran at it, breaking it up into the fragments that we see

today. All of the brighter stars of the cluster are of spectral type B, which means they are hot and burning ferociously. With superbly dark skies and a large telescope, a wispy nebulosity can be seen surrounding some of the brightest members of the Pleiades, especially Merope. There has recently been some debate on whether the stars themselves are immersed in a dusty envelope or whether the nebula is a foreground feature while the starlight shines through it during its journey to Earth. For those of you wishing to learn the names of the stars of the Pleiades, Atlas and Pleione are the father and mother, and the seven sisters complete the family as labeled on the inset in the chart below.

The placid glow of the Pleiades contrasts with the violent beginnings of an object near the eastern edge of the constellation. On July 4, 1054, a new star blazed in the sky near Zeta Tauri. Its appearance was recorded by Chinese astronomers as well as in native Americans drawings. It slowly faded over the course of several months, and now we see in its spot M1, the Crab Nebula. It is located 1 degree northwest of Zeta Tauri at RA 5h 34.5' Dec +22d 01'. The star that destroyed itself in the supernova explosion is now a type of neutron star called a pulsar only a few miles in diameter spinning 30 times per second. Although the pulsar is too dim to see, the nebula is an intriguing object to view. In small scopes M1 appears as a ghostly oval smudge. Large instruments can capture the filaments of material which are slowly expanding into space. The magnitude 8.4 nebula spans 6' from a distance of 6,300 light years.

Objects of lesser fame are found also in the eastern half of the constellation. Four star clusters are scattered here, and none are particularly rich. The two largest ones, NGC1746 and NGC1647, measure about 40' and contain between 25 and 50 stars collectively shining at magnitude 6 to 6.5. Farther south is a pair of clusters, NGC1817 and NGC1807. These are much smaller, each about 10'. NGC1807 holds about 15 stars of magnitudes 8 to 9. NGC1817, only 22' from 1807, is significantly richer, containing about 50 stars of magnitudes 10 to 14.

<b>TAAA Board of Directors Meeting - 11 January 2006</b>
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Attending: TAAA Board Members present: Thom Peck, presiding; Bill Lofquist, Steve Marten, Terri Lappin, Ken Shaver and Tom Watson. TAAA Members present: Steve Ratts and Robert Crawford.

President's Call to Order: 6:40PM

Review of December Minutes Accepted, Unanimous.

Member Feedback

Members' reaction to survey and its length were discussed. Most comments have been very favorable.

Announcements

Terri announced that we have received the latest Night Sky Network Toolkit "Telescopes: Eyes on the Universe". She will present it at the March Astronomy Essentials lecture.

Ed Finney Memorial Star Party - Robert Crawford

Robert reviewed particulars for a Memorial Star Party for former Board member and Project Astro person Ed Finney who died on December 29, 2005. The Board agreed that Robert will be the coordinator for this event scheduled for February 18 at TIMPA beginning at 4pm. In addition to our usual night sky observing, activities will include a barbecue, remembrance of Ed and night sky presentation.

Status of the 16' Dome Construction - Steve Ratts

The Board reviewed extensive recommendations offered by Steve regarding emergency exit, dome plat orientation, warm room, pier dimensions and platform, outlets and other details. After reviewing many of the details with the Board Steve will revise current plans and forward them to the construction company. Construction is to begin within the next several months.

TAAA Survey

TAAA Survey Committee will meet this month to compile data and report results. Ken Shaver is preparing an Access database for the committee.

30" Telescope - Terri Lappin

Steward Observatory has asked TAAA to suspend 30" Telescope Development as a research astronomer might install a larger scope.

Web Re-Design Dean Salman has provided several website themes and structures for committee review

Treasurer's Report

Terri reviewed an interim report regarding the current Profit and Loss Statement. Star Party contributions for fourth quarter '05 totaled \$1,350.

TIMPA Key Cards - Thom Peck and Terri Lappin

New TIMPA card change date is Feb 4, 2006. Ray Toscano has the new cards and will collect the old cards and distribute the new ones.

Directors and Officers Insurance - Steve Marten

Steve reported on attorney opinions and legal issues surrounding D&O Insurance.

The Board directed Steve to consult with representatives of the Astronomical League and other groups that support astronomy organizations to determine how they have managed D&O Insurance concerns. Steve will report at the February meeting.

Adjourn 9:20pm

Respectfully Submitted,  
Steve Marten, Secretary



***Look Great!  
with TAAA  
Apparel.***

<b>Desert Skies Classified</b>
--------------------------------

<b>For Sale:</b>	5.5" folded f/15 achromat refractor, tube 57" long. Lens refigured by TAAA member Duane Niehaus and won Riverside Merit Award 1984. Tube assembly only: \$1300.00 Call Terri or Gary at 520-579-0185, or email tklappin@yahoo.com. [04/05]
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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.

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### Directions to TIMPA and Las Cienegas 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 entrance to TIMPA will be 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**

Please DO NOT ask the caretakers for access to the TIMPA SITE. Contact a board member 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 and turn off at Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles and watch for the green and white milepost 40 sign along the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and has some "washboarding" so don't go too fast. At about the 2.9 mile point there will be a fork in the road. Stay to the right. When the road ends in a "T", take a left. You will cross a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. Just ahead of you (.1 mile) 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.