

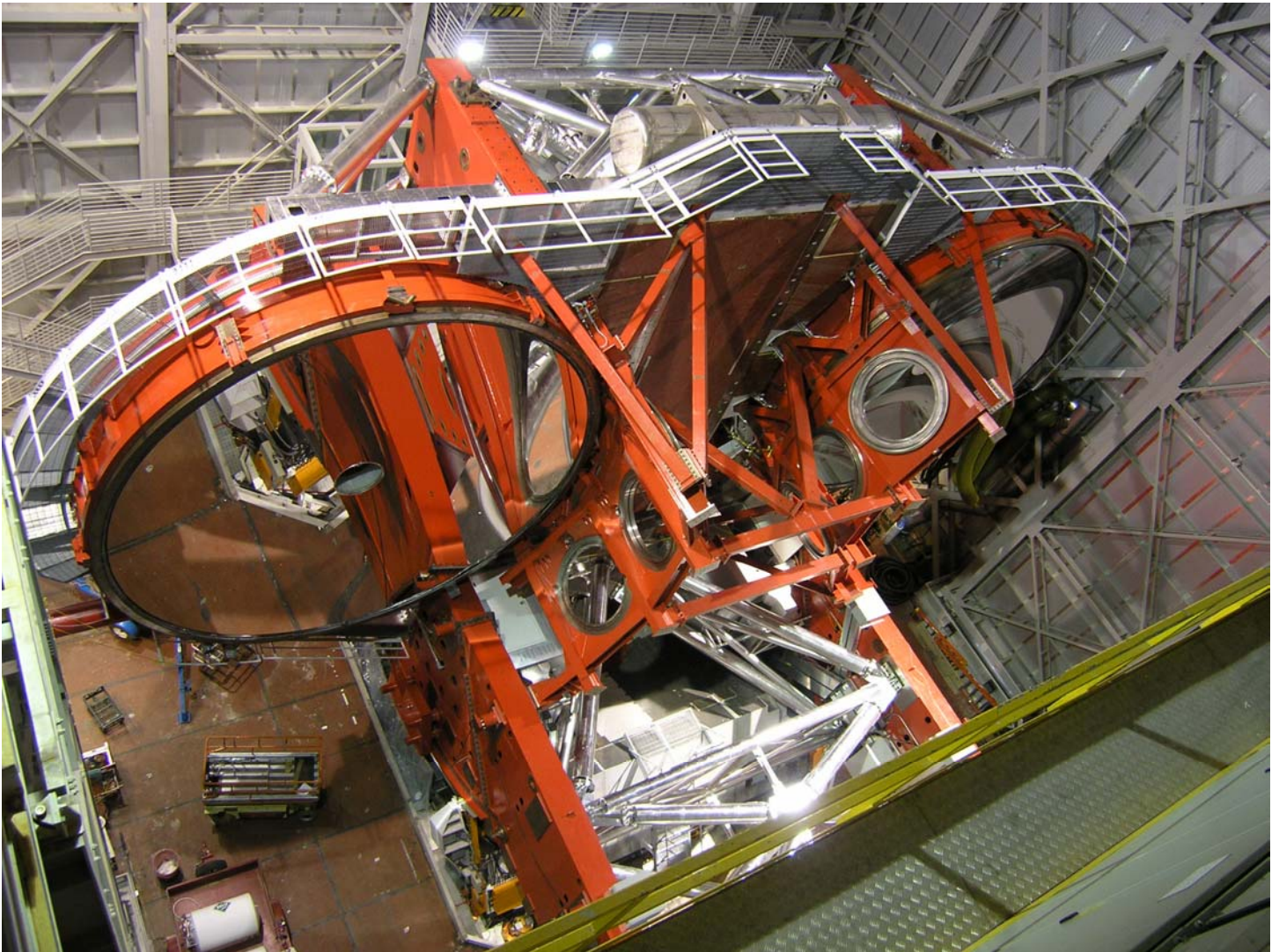


Desert Skies

Tucson Amateur Astronomy Association

Volume LII, Number 3

March, 2006



Large Binocular Telescope

Cover Photo: With both mirrors now installed, the LBT is ready to add to our knowledge of the Universe. Photo credit R. Bertram, <http://medusa.as.arizona.edu/lbto/january06>

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

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	Terri Lappin	977-1290	
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:

George Barber
TAAA/Desert Skies Editor
15940 W Ridgemoor Ave Tucson AZ 85736

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President's Message

We sure had a great time at the TIMPA star party on February 18. Ed Finney's spirit was with us as numerous accounts of Ed's escapades and achievements were given. We had club members, old friends, neighbors, classmates from the 1961 Tucson High School graduating class, and fellow workers all telling stories about Ed and his uniqueness. We are all so very fortunate to have known Ed. Ellen Finney supplied a terrific barbeque meal, and we went away full. Thanks to all who made the picnic/memorial star party such a special evening.

This meeting, we are fortunate to have John Hill from the Steward Observatory give us the skinny on the Large Binocular Telescope. The optics for the scope were made here at the University of Arizona, and the telescope lives on Mt. Graham to our east. It's quite an impressive sight even from the Interstate Highway as you drive by to the south. The science that will be done from this mega scope should prove to be enlightening on a grand scale.

School star parties are abundant, so please help out at any you can. Enrich your life along with the lives of count-

less students who are eager to learn.

The Telescopes for Telethon campaign kicks off next month. Bring your scope to a Wal-Mart and to the University Mall to show off Saturn, Jupiter, and deep sky wonders in our effort to raise money to send Jerry's Kids to camp where they will get to look through telescopes, too. We need \$600 or so for each kid, so do your best to solicit donations from the public and corporate world. Sign up sheets will be at the table in back of the lecture hall at the March meeting.

The TIMPA Dome project is about to start construction. By late spring, we should have an observatory with a 14-inch computer controlled telescope and impressive control room. If you have any electrical, painting, or other construction skills, let a board member or Steve Ratts know so we can move the project along.

Clear skies

Thom Peck

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, March 3 at the Steward Observatory Auditorium - Room N210

ASTRONOMY ESSENTIALS: 6:30 pm

Title: Telescopes: Eyes on the Universe Toolkit

Speaker: Terri Lappin

The Night Sky Network has sent us the newly released "Telescopes: Eyes on the Universe Toolkit". As anyone who has participated in a public star party will tell you, the most often asked questions pertain to the telescope and optics. "Why does the moon look backwards?" is very high on the list. And, how about, "Why doesn't it look like the picture?" This toolkit covers these questions as well as others with brief, hands-on explanations. Terri will show how to use the toolkit in a star party setting. Training materials (a CD and a DVD) will be made available to those involved in outreach activities.

This toolkit was developed by the Night Sky Network at the Astronomical Society of the Pacific (ASP) and funded by NASA. Both the ASP and NASA recognize the valuable resource inherent in amateur astronomers - especially those in a club with a strong outreach program like the TAAA. Continued use of the toolkits we've received will make us eligible for the next toolkit. In addition to this toolkit, we also have the "PlanetQuest", the "Our Galaxy, Our Universe", and the "Black Hole Survival" toolkits. More information about these toolkits and how to borrow them can be learned by contacting Terri at 520-977-1290, or treasurer@tucsonastronomy.org.

GENERAL MEETING: 7:30 pm

Title: Large Binocular Telescope -- Really a Binocular Now

Speaker: Dr. John Hill, Steward Observatory

Dr. John Hill, Technical Director of the LBT Project, will present the current status of the Large Binocular Telescope. Now, with two 8.4m primary mirrors installed and coated, LBT is the largest optical infrared telescope in the world on a single mounting. The lecture will describe some of the adventures getting the mirrors up Mt. Graham, achieving First Light, and coating the primary mirrors.

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

STAR PARTIES AND EVENTS:

- 01 March - Tortolita Middle School Star Party
- 02 March - Collier ES Star Party
- 09 March - AstroPhoto SIG at China Rose
- 09 March - Vesey Elementary Star Party
- 10 March - Patagonia Elementary School Star Party
- 14 March - Lineweaver Elementary School Star Party
- 15 March - Beginner's SIG at China Rose
- 18 March - Beginner's SIG Star Party at Catalina State Park
- 22-24 March - Tucson Math Science Technology Funfest
- 24-25 March - All Arizona Messier Marathon
- 25 March - TAAA Star Party at Las Cienegas
- 31 March - Our Mother of Sorrows
- 04 April - Dunham Elementary Star Party

NEWSLETTER SCHEDULE: Deadline for articles: Wed, March 22. Printing: Mon, March 27. Folding Party: Tues, March 28. Mailing: Wed, March 29. The newsletter is mailed at least one week prior to the following month's General Meeting

Club News

Member News

We welcome the most recent members to join the TAAA: Carmen Brooks (a Project ASTRO teacher), Ken Pryor (returning member), Neal Scofield, and Gary Van Meter. 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.)

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've got hats, T-shirts, denim shirts, and patches. We take cash and checks.

Basha's Thanks A Million Program

The Basha's Thanks A Million program will end March 31, 2006. We've made significant progress towards the minimum combined sales of \$2500 but we're not quite there yet. I think we can do it! Thank you to those who signed up last month because you have made a difference. If you shop at Basha's, you can still sign up. Just ask the cashier to link your Thank You card to the Tucson Amateur Astronomy Association. Our ID # is 23178.

Equipment Loan Officer Needed

TAAA is in need of a new equipment loan officer. Jerry Penegor has handled this position for some time now, and he would like to step aside. Someone who lives in a location fairly central to Tucson would be preferable, but anyone interested, who has room to store a few telescopes and has a little knowledge of how each works, would be okay. Please contact a board member if you are so inclined.

Nominations for TAAA Board of Directors Officers

For the May 2006 meeting of TAAA, we need to have finalized all the candidates for TAAA Board of Directors. Offices include president, vice president, secretary, treasurer, and 3 members-at-large. If you would like to run for office, or have someone in mind who would make a good officer, please contact one of the nominating committee persons. The committee consists of Steve Ratts [sdratts@cox.net], Steve Marten [secretary@tucsonastronomy.org], and Andrew Cooper [http://www.siowl.com]. Or contact one of the current board members, excluding the president, to get on the ballot in May.

Astro-photo SIG Meeting

March 9, 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!

TIMPA News-Jet Rally March 17-19, No Observing

TIMPA, in association with the Tucson Warbird Association, will hold its annual Jet Rally on March 17 - 19. TIMPA will not be available for observing on these dates. It will not be available several days before this event as TIMPA will be preparing the field for the rally.

BSIG Activities for March 2006

The Beginner's SIG will hold its usual meetings in March, starting with dinner at the China Rose restaurant (NE corner of Speedway and Rosemont) at 6pm on March 15. There will be three presentations for this meeting covering aspects of astronomy techniques and objects to observe. JD Metzger, who is responsible for the very popular BSIG eyepiece loaner kit, will discuss eyepiece basics. Mary Turner will have the latest in our ongoing series of recommended objects to view, a sort of 'heads up' for March. I will briefly discuss how to survive a night of viewing at Farnsworth Ranch for those of you interested in attending the All Arizona Messier Marathon to be held there the nights of March 24th and 25th.

Our observing session for March will not be held at TIMPA, due to the jet rally occurring there during that weekend. Instead, we will once again make use of Catalina State Park as an alternative. The date for the BSIG star party is March 18. Sunset will be at 6:38pm, so arriving at the park by 6pm should allow for plenty of set up time. We will be setting up in the parking area near the trailheads. Bring your telescope and your questions in anticipation of an enjoyable and informative observing session.

We hope you can join us.

Tom Watson
BSIG Committee Member

TAAA Science Fair Awards

Tuesday, March 21

The Southern Arizona Regional Science and Engineering Fair will take place March 21 - 25 at the Tucson Community Center. The TAAA will present awards to promising young people who have an interest in astronomy and related sciences. If you want to help select the recipients please contact Terri Lappin,

Club News (cont.)

treasurer@tucsonastronomy.org, or 579-0185. Judges are also needed at the regional level, mostly at the elementary grade levels but also at middle and high school grades. You can do both TAAA and SARSEF judging jobs at the same time although we don't like to recommend it. Judging will take place on Tuesday, March 21st, beginning at 7:30am with a very nice breakfast. Lunch is also provided. We usually stick around long enough to talk to the senior high students who arrive at 1pm.

Messier Marathon

Arizona City

March 25th

Submitted by Andrew Cooper

It is time for the madness of the All Arizona Messier Marathon! It promises to be a good year, the timing of both the weekend and the New Moon being almost ideal with a possible 110 perfect score for participants. This event hosted by the organizers from SAC is a fun event. The rules are simple: visually spot all the possible Messier objects in a single night. If you plan carefully it is possible. There are no judges looking over your shoulder, this is run on an honor system. GOTO telescopes are allowed (but should be noted on your score sheet). Certificates will be awarded for any observer recording more than 50 objects. Even if you don't intend to marathon join members of the TAAA, EVAC, SAC and beyond for a great star party!

My personal suggestions... Use a smaller scope; a six to eight inch scope is nearly ideal. A larger scope tends to pick up a lot of dimmer objects increasing the confusion in areas like the Virgo Cluster; smaller scopes will have difficulty with some of the dimmer objects. My favorite Messier hunter is a 6" f/5 RFT with which I have achieved a perfect 110 before. Use higher magnification for objects in the twilight or nearer the horizon to pick an object out of the haze. If you expect to have trouble with

M74 or M77 in the evening you might practice a weekend before and memorize the star field while they are a little higher in the sky. Set up a plan ahead of time, possibly reading one of several books on the Marathon (I recommend Don Macholtz's book) or checking out websites like Bill Ferris' <http://members.aol.com/billferris/marathon.html> or SEDS at <http://www.seds.org/messier/Xtra/marathon/marathon.html>

More information and directions at <http://www.saguaroastro.org/content/messier.htm>

Telescopes for Telethon 2006

by John Kalas

The TAAA will be supporting the Muscular Dystrophy T4T activity again this year on Friday and Saturday, April 28th and 29th. The activity on Friday, April 28th involves two-telescope teams at each of six different Wal-Mart stores around Tucson and Green Valley from 6:00 to 9:00 pm. Saturday's activity will have solar viewing taking place from 3:00 to 6:00 pm with evening observing running from 6:00 to 10:00 pm at the University of Arizona Mall across from the Flandrau Science Center. David and Wendee Levy will be hosting the event. It is anticipated that Starizona, Sky Works, Stellar Vision and Flandrau Science Center will also be participating.

John Kalas is the TAAA coordinator for the event. There will be signup sheets at the March and April meetings. Many volunteers will be needed to operate telescopes (solar and evening), staff donation areas and assist in general public support. Please consider supporting this worthwhile event. If you are unable to attend the meetings to sign up, please contact John at 620-6502 or via e-mail at jckalas@cox.net.

The last two years, the T4T committee instituted corporate sponsorship as a means of increasing donations

SINCE 1986

Stellar-Vision Astronomy Shop
 1835 S. Alvernon #206
 Tucson, AZ 85711
 (520) 571-0877
 Credit Cards accepted.



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

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 Tucson, AZ 85704 292-5010

Sky Works

7401 E. 22nd Street. Tucson. AZ 85710
 520-751-6752 fax: 520-751-6758
info@sky-works.com www.sky-works.com



Club News (cont.)

and it was very successful. Sponsor forms will be available at the March and April meetings. If you know of a company that would be interested in supporting this great event, please pick up a sponsor form or contact John Kalas.

From the Editor

I would like to thank Terri Lappin for editing the February

newsletter while I was away on company business. I have another opportunity to travel - but on this trip I will be watching the March 29th total solar eclipse from on board the *Costa Classica*! Since I will be out of town again, Terri will be editing the April newsletter. Thank you, Terri! Be sure to send your submissions to taaa-newsletter@tucsonastronomy.org Finally, the revised schedule for TAAA activities for the 2006 calendar year should be available on our website about the time you receive this newsletter.

Items of Interest

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.

Mar 6	Dr. Faith Vilas	The Hayabusa Mission to Near-Earth Asteroid 25143 Itokawa
Mar 20	Dr. John Hill	Large Binocular Telescope: Two Eyes Opening
Apr 3	Dr. Bashar Rizk	Postcards from Titan: Wish You were Here!

Astronomy Programs. The position requires knowledge of astronomy, skill in the area of public speaking and proficiency with computers and amateur telescopes. Candidates must be able to work without close supervision while maintaining the highest level of awareness in terms of both public safety and non-interference with scientific research programs at Kitt Peak. Knowledge in the area of telescopes maintenance, CCD imagery is highly desirable. This is a part-time, seasonal position.

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 Cabello Loco Ranch RV Park. Registration is now open. For more information, go to <http://www.chartmarker.com>.

Observing Technician

Kitt Peak National Observatory (KPNO) is looking for an enthusiastic individual to help conduct its Night

Star Parties & Events

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

Tortolita Middle School will be hosting 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, 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.

Collier ES Star Party East Thursday, 3/2/2006 No. of Scopes: 3

Collier ES will be planning A Night With the Stars at 3900 N. Bear Canyon Rd.. Speedway to Wilmot Rd. East onto Tanque Verde Rd. Take Tanque Verde Rd. to Bear Canyon Rd. North on Bear Canyon Rd. School is a few miles up on the right hand side of street. Viewing will be on the school playground. Contact person Ann Mcgriff can be reached at 520 584 4857 or email admccgriff@earthlink.net Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 06:23pm, Dark Sky: 07:15pm Moon Phase: Last Quarter.

Vesey Elementary Star Party Southwest Thursday, 3/9/2006 No. of Scopes: 4

Vesey Elementary will be planning Vesey Family Science Night at 5005 S Butts Rd. Take I-10 to I-19 and continue to Irvington exit and turn right at stop sign (go west-bound) . Continue west on Irvington for several miles, past stop sign at Camino De Oeste, for about ½ mile. Viewing will be on the east side of the building outside of

Star Parties & Events (cont.)

the cafeteria (dark parking lot and easy access to the astronomers to set up equipment). Contact person Claire Dunham can be reached at 908-4600 or email Claire.Dunham@tusd.k12.az.us Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:28pm, Dark Sky: 7:21pm Moon Phase: First Quarter.

Patagonia Elementary School Star Party Far South Friday, 3/10/2006 No. of Scopes: 4

Patagonia Elementary School will be holding A Walk Around the Night Sky at 100 School St. Take I-10 East to exit 281, take Hwy 83 south 25 miles to Sonoita. Take a right onto Hwy 82. Go 12 miles to Patagonia. Once into Patagonia take a left onto 4thAve. (Patagonia Market is on the right, you turn left) Go two stop signs and make a left onto Duquesne Ave. (Fire Station will be on your right) Go up hill and make your first right. School is on the top of the hill. Contact person Patty Cooper can be reached at 520-394-3070 or email pattycooper@excite.com Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:29pm, Dark Sky: 7:21pm Moon Phase: near Full Moon.

Lineweaver Elementary School Star Party Central Tuesday, 3/14/2006 No. of Scopes: 3

Lineweaver Elementary School will be holding a Solar System Slumber Party at 461 S. Bryant Ave. Head East on Broadway and make a right (south) on Columbus. Make a right turn onto Brown Ave (just after the church). Proceed to Bryant, turn left (south) and you will be right in front of the south playground viewing site. Viewing will be on the playground. Contact person Shannon Turnage can be reached at 232-7755 or email SHS2312@aol.com Set-Up Time: 7:00 pm. Observing will be from 7:30 pm to 8:30 pm. Sunset: 6:31pm, Dark Sky: 7:24pm Moon Phase: Full Moon.

Tucson Math Science Technology Funfest March 22-24, 2006

Funfest - It's a hands-on math and science expo for Tucson's students with an all-volunteer group of scientists, engineers, technologists and interested volunteers from Raytheon, IBM, Honeywell, Pima Air and Space Museum and University of Arizona, as well as science volunteers and educators. These experts come together to share their love and excitement about math and science with students. Our sponsors help provide school buses to bring the students to the TCC for the event. The Funfest will be at the TCC on March 22-24 from 9 am to 1 pm.

TAAA will again be participating with sun scopes and educational materials for three days. Interested TAAA volunteers please email Paul Moss at dasswerkes@cox.net or call him at 520.240.2084

TAAA Star Party at Las Cienegas (Empire Ranch) Saturday, 03/25/2006

Study the winter constellations while enjoying the dark skies at Las Cienegas. 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 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 now restroom facilities at the site. 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.

Our Mother of Sorrows Star Party **East** Friday, 3/31/2006 No. of Scopes: 4

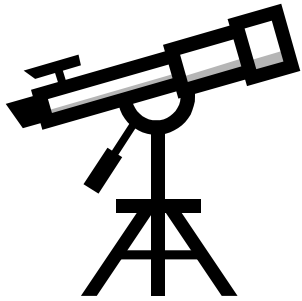
Our Mother of Sorrows will be planning a Night Sky With the Planets at 1800 S. Kolb Road. Go East on Speedway to Kolb. Going south on Kolb, you will cross 22nd St. Turn right at the next light, onto Calle Ileo. The basketball court is almost immediately on the right. The gates will be open, so astronomers can drive on and set up. Contact person Susan Tek can be reached at 747-1027 or email suetek@cox.net Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00 pm. Sunset: 6:43pm, Dark Sky: 7:37pm Moon Phase: Crescent after New Moon.

Dunham Elementary Star Party **East** Tuesday, 4/4/2006 No. of Scopes: 4

Dunham Elementary will be planning a Star Party at 9850 E. 29th. St.. Contact person Tamatha Sauber can be reached at 731-4200 or email tamatha.sauber@tusd.k12.az.us Set-Up Time: 7:00pm. Observing will be from 7:30 pm to 9:00 pm. Sunset: 6:46pm, Dark Sky: 7:40pm Moon Phase: First Quarter.

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

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
- Meade 10-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. Contact the Equipment Loan Coordinator listed in the "Desert Skies" for details about the telescopes.

Desert Skies Classified

For Sale	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]
For Sale	7" Maksutov LX200 GPS UHTC coatings for sale. This is BRAND NEW still in the box NEVER USED. Call Joe, 520-908-3393 [06/05]
For Sale	AstroDon H-Alpha 6nm filter 1.25 inch size. This is a new filter never used that I got back in late December. I have to use for this so I am selling it for \$245. A new filter cost \$275 plus shipping. This is used for CCD imaging only. Dean, 250-0407 or e-mail info@galaxies.com [06/06]

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.

Dark Skies for March 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 28/ 1	19:42 - 5:30	Sa/Su 11/12	- - -	Tu/We 21/22	19:58 - 1:28
We/Th 1/ 2	20:38 - 5:29	Su/Mo 12/13	- - -	We/Th 22/23	19:59 - 2:27
Th/Fr 2/ 3	21:47 - 5:28	Mo/Tu 13/14	- - -	Th/Fr 23/24	20:00 - 3:20
Fr/Sa 3/ 4	22:56 - 5:27	Tu/We 14/15	Full Moon	Fr/Sa 24/25	20:01 - 4:05
Sa/Su 4/ 5	0:04 - 5:26	We/Th 15/16	- - -	Sa/Su 25/26	20:01 - 4:45
Su/Mo 5/ 6	1:10 - 5:25	Th/Fr 16/17	19:54 - 20:21	Su/Mo 26/27	20:02 - 4:57
Mo/Tu 6/ 7	2:11 - 5:23	Fr/Sa 17/18	19:55 - 21:19	Mo/Tu 27/28	20:03 - 4:55
Tu/We 7/ 8	3:07 - 5:22	Sa/Su 18/19	19:56 - 22:19	Tu/We 28/29	20:04 - 4:54
We/Th 8/ 9	3:55 - 5:21	Su/Mo 19/20	19:57 - 23:21	We/Th 29/30	20:05 - 4:52
Th/Fr 9/10	4:35 - 5:20	Mo/Tu 20/21	19:58 - 0:25	Th/Fr 30/31	20:32 - 4:51
Fr/Sa 10/11	5:10 - 5:18			Fr/Sa 31/ 1	21:43 - 4:50

Weekend	Sun Set	Sun Rise	Mercury Set Vi	Venus Rise Vi	Mars Set Vi	Jupiter Rise Vi	Saturn Set Vi	Vi=Visibility
4/ 5	18:22	6:45	19:20 8	4:14 -4	1:00 1	23:17 -2	4:56 0	-3 brilliant
11/12	18:27	6:36	Rise -	4:10 -4	0:50 1	22:49 -2	4:27 0	0 conspicuous
18/19	18:32	6:27	5:43 -	4:06 -3	0:41 1	22:20 -2	3:59 0	3 moderate
25/26	18:37	6:18	5:17 6	4:03 -3	0:31 1	21:51 -2	3:31 0	6 naked eye limit
1/ 2	18:42	6:09	5:03 5	4:00 -3	0:22 1	21:21 -2	3:03 0	9 binoculars limit

By Erich Karkoschka

Object of the Month by Alfredo Garcia

Welcome to the 60th issue of the OTM. Hard to believe five whole years have gone by since my first OTM article, but they have. I have enjoyed composing the past articles and hope you have enjoyed reading them as well. If you have any comments and/or suggestions, you may e-mail me at alfredogarciajr@cox.net. I was reading the March 2006 issue of Astronomy Magazine and found an article on an object in their "The Sky This Month" section that caught my attention. As such, I decided to write about that object since it may prove to be a very interesting celestial treat to observe. This month, the OTM is a visitor to our solar system. The ancient Greeks referred to such visitors as "aster kometes" or longhaired stars.

These longhaired stars are referring to the class of objects we know as comets. There have been very many fine examples of comets in recent times as well as in the distant past. Who can forget the simply awesome views that Comets Hyakutake and Hale-Bopp offered us in the recent past! Though this month's OTM will not be of that majestic quality, it promises (if current predictions hold up) to be a good view in telescopes as well as binoculars and perhaps even to the unaided eye!

Without any further introduction, I present to you the March 2006 OTM, Comet 73P/Schwassmann-Wachmann 3 and in particular 73P/Schwassmann-Wachmann 3, Component C. Arnold Schwassmann and Arno Arthur Wachmann (Hamburg Observatory, Bergedorf, Germany) co-discovered the original comet on 2 May 1930. The comet was found on photographs they exposed during a minor planet survey. At the time of discovery, the comet was described as a diffuse object of about magnitude 9.5. This comet also goes by "SW-3". The comet has an approximate 5-year orbital period.



SW-3 has had an interesting history since its discovery. You can read all about its early history on the Internet at Gary Kronk's Comet Homepage at cometography.com, but its more recent trips through the solar system in 1995 and 2001 are worthy of discussion in my article. In 1995, the parent comet 73P/Schwassmann-Wachmann 3 visited our solar system. As it rounded the Sun just inside the Earth's orbit, the nucleus underwent a split into several fragments (or components). The largest of these components were labeled B, C, and E. Upon the comet's return in 2001, astronomers mainly observed Components B, C, and E. As it turned out, these three components were much brighter than predicted. This was most likely due to the split exposing fresh new ice to the sunlight and therefore increasing the brightness of each component.

How bright the components will get depends on many factors such as the amount and type of newly exposed material, flare-ups, etc. Comets are composed mostly of dust and gas, which is primarily carbon dioxide, ammonia, and methane. As a matter of fact, astronomers often refer to them as dirty snowballs. Predicting exactly how bright these dirty snowballs will get as they approach the inner solar system has proven very tricky. For this year's return, astronomers expect Component C to be the only survivor of the three components. Comet experts disagree on just how bright 73P/Schwassmann-Wachmann 3-C will get as it passes through our solar system. Some think this component will flare up and reach the 1 to 2-magnitude range, which will make it easily visible to the naked eye from just about any lighting conditions. Others believe that the component may make magnitude 7 at best. So let's hope we get at least in the naked eye limit of magnitude 5 to 6 and anything above that will be "icing on the cake"! Of course, there is strong possibility that this component will not brighten at all and remain a faint diffuse blob somewhere in the 9 to 13-magnitude range.

Like all comets, 73P/Schwassmann-Wachmann 3-C will loop around the Sun. As it approaches the Sun, gas and dust will burn off at an increasing rate. Sunlight reflecting from this material will make the comet's coma, grow brighter. The gas and dust will be pushed away by charged particles known as the solar wind, forming tails. Dust particles form a yellowish tail and ionized gas makes a bluish ion tail. The diagram at Figure I above shows these various phenomena and features. SW3-C will reach perihelion date on 7 June 2006 and the comet will pass within 0.0735 AU from Earth on 13 May 2006. As a point of interest, this distance from Earth will be only slightly farther away than that from the original discovery in 1930.

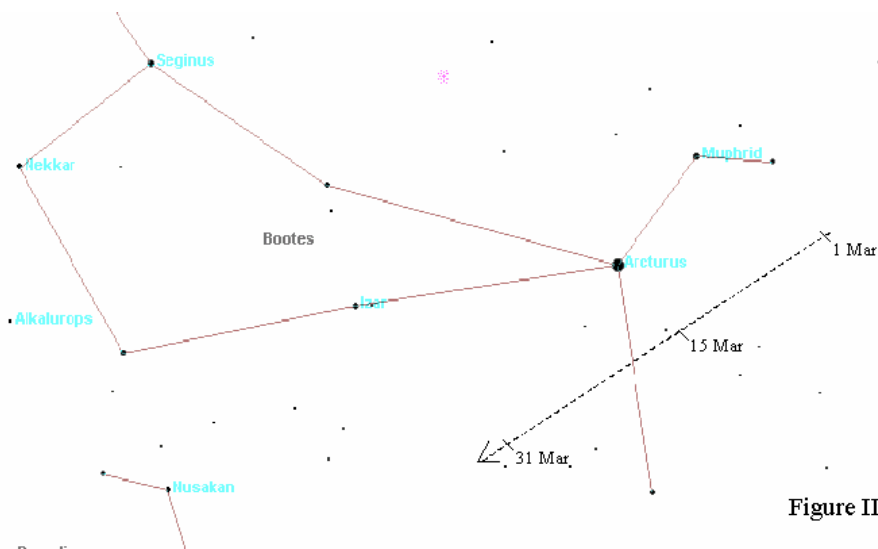


Figure II.

TAAA Board of Directors Meeting - February 6, 2006

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 Jerry Penegor.

President's Call to Order: 6:40PM

Review of January Minutes Accepted, Unanimous.

Announcements

- On February 3, 2006 TAAA learned that the Arizona Sonora Desert Museum (ASDM) has decided it can no longer continue star party events on their parking lot due to risk and liability factors. The ASDM Risk Committee has evaluated a number of (non-TAAA) accidents and noted that an activity on their premises with little or no lighting presents a serious hazard. Bill Lofquist and Ken Shaver are working on alternatives including an event supported by ASDM at a nearby location such as Saguaro National Park West.
- Thom has a Meade wedge for the 14" scope to be placed in the new 16' Dome; Ken noted that the bottom surface of wedge needs to be resurfaced and will assist in making arrangements to correct that problem. The 14" scope is being assembled at this time.
- Jerry Penegor, TAAA Telescope Loan Coordinator, will resign no later than April 30 as he is moving to Berkeley, CA. The Board is looking for an interested volunteer(s).

Master Schedule - The TAAA Master Schedule was approved unanimously with the following updates:

- Move 7.29.06 TIMPA date to 7.15.06
- Remove both ASDM dates (they may be substituted later)

TAAA Survey - TAAA Survey Committee tabulation continues as more surveys are being sent in. Ken Shaver continues to compile the surveys and reports there are early indication of strong interest in observatory tours and the Astro Photography Special Interest Group.

TIMPA Site Improvements

- George will gather materials required to make repairs to the TAAA sign with Thom this Saturday and also pull circuit breaker on 6' dome circuit as requested by TIMPA.
- Terri reported that TIMPA personnel are warning that 16' Dome should be protected from ranging cows. She will ask TIMPA what specific cow damage has occurred to determine how the dome should be fenced or otherwise protected.

Gate Cards - Terri suggested that President should authorize members who may need cards but current TIMPA gate policy requires board action. Ray Toscano, through Terri, has offered to make changes to TIMPA policy and Board accepted his offer. When completed by Ray, Board will vote electronically.

TAAA Monthly Meeting Guest Book

- Several members have suggested guest book for guests to sign in.
- Terri will draft form that will be in binder near star party sign up sheets and distribute draft by email to Board for electronic vote; deadline March BOD meeting.

Status of the 16' Dome Construction - Steve Ratts

The Board reviewed extensive recommendations offered by Steve regarding details of dome construction that emerged after modifications at last month's Board meetings. The Board spent several hours revising details. The priority is to complete planning details adequately to allow TAAA to obtain building permit to start work. Construction is expected to begin in the next 1 or 2 months.

Adjourn 9:40pm

Respectfully Submitted,
Steve Marten, Secretary

Object of the Month by Alfredo Garcia (cont.)

Comet 73p/schwassmann-Wachmann 3-C will be well placed for observation during this month. Finding it may not be so easy particularly if it does not achieve the brighter magnitude estimates. However, if it brightens as predicted it will be easy to find using star hopping techniques. Look for the comet in the constellation of Bootes as the month progresses. The map (Figure II.) shows the comet's approximate path in the sky during the month. It is best to observe the comet when it is high above the horizon and when there is no moonlight.

Though 73P/Schwassmann-Wachmann 3-C will hopefully present itself as a great view in a telescopic field of view, it will be an even greater view in an astrophotograph or CCD image. I do not have any images of the 1995 pass nor the one in 2001, but there are plenty of images on the Internet. I was able to find images of 73P/Schwassmann-Wachmann 3 from 1995 and also some of the comet's components from the 2001 pass just by image "Googling" or "Yahooing" the comet. One of the better sites can be found at: http://www.astronomysight.com/as/info/comet_dia.html. I was even able to find some late 2005 to early 2006 images at this web site: comet@aerith.net. You can also pull up an ephemeris on SW-3C by going to the NASA Ephemeris Generator on the Internet at: <http://ssd.jpl.nasa.gov/cgi-bin/eph>. It is easy to use and provides you with a wealth of data on the comet to include positions, brightness estimates, etc. Give it a try! We may need the positional data particularly if the comet does not brighten up as much as predicted.

If 73P/Schwassmann-Wachmann 3-C brightens to magnitude 1 or 2, all of you astrophotographers and CCDers get your cameras ready for what should be a great imaging opportunity. Let's hope it gets as bright as predicted so we can once again be privileged to a sky treat! Who knows what surprises this long-hired star holds in store for us! Get out under the sky, view the comet, and imagine what the ancient Greek astronomers thought of the "aster kometes" they observed!

Constellation Report by Chris Lancaster

Orion

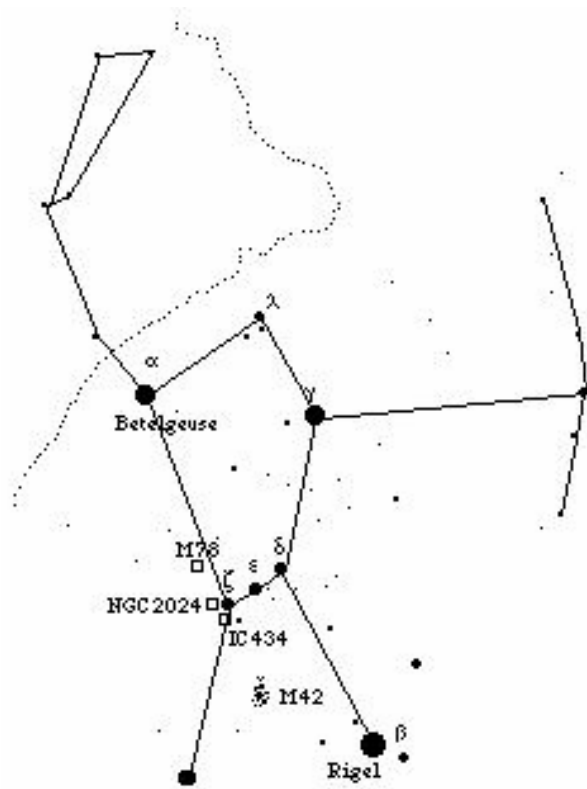
The Hunter

We could call Orion the heavyweight among all the constellations. Probably the most well known group of stars with, perhaps, the exception of the part of Ursa Major called the Big Dipper. On the celestial equator is a line of three stars forming the very recognizable "belt" of Orion. The faint stars and nebulosity below this represents his "sword", and other faint stars on each side of Orion's body show one arm raising a club and the other holding a shield against Taurus, the bull charging out of the northwest.

Mythology portrays Orion as a strong hunter. He claimed that no living thing could kill him, so to prove him wrong, the goddess Hera sent a scorpion to attack him. After falling victim to the scorpion's sting, Orion squashed the pest, but soon died from the venom. We now see this relationship between the scorpion (the constellation Scorpius) and Orion on fall and spring nights. The two characters are placed on opposite sides of the sky, so when one rises, the other is defeated and sets below the horizon.

You can begin observing Orion before it is fully dark. Use high power to see Rigel and its magnitude 6.7 companion 9" away and holding a PA of 202 degrees. Diagonally across the body of Orion from Rigel is Betelgeuse. This is an M2 supergiant of a striking orange color. Betelgeuse puts out an enormous amount of energy, only a fraction of which is in visible light. As a result, its outer atmosphere has inflated to make the star a truly bloated behemoth. Estimates of its size put its diameter matching the orbit of Mars or more, which also creates a stellar density of an exceedingly small nature--millions of times less than the sun.

Dark skies bring Orion's many deep-sky objects into view. His sword is home to the best region of nebulosity in the sky, M42. So prominent is this misty glow even to the naked eye that it is mentioned in some examples of 19th century literature, namely Tennyson's Merlin and Vivien and Poe's The Murders in the Rue Morgue. Binoculars show a wispy fog surrounding its central stars, 3-inch telescopes will bring out a fan shaped nebula, and 8-inch and larger scopes will show detailed knots and tendrils extending away from the main glow. The entire complex of gas is made to fluoresce by Theta1 Orionis, called the Trapezium. Most views of this group of stars will show 4 members of magnitude 5.4 to 6.7 about 30" in expanse, but high power and large aperture will bring the total to 6. Adjacent to the main mass of M42 is M43, a roughly comma shaped object separated from M42 by a dark rift. To the north is a dusty reflection nebula with the designations of NGC1975, 1973, and 1977. It's curiously named the "Running Man Nebula" from the shape that is traced out by the dark lanes that separate distinct sections of the

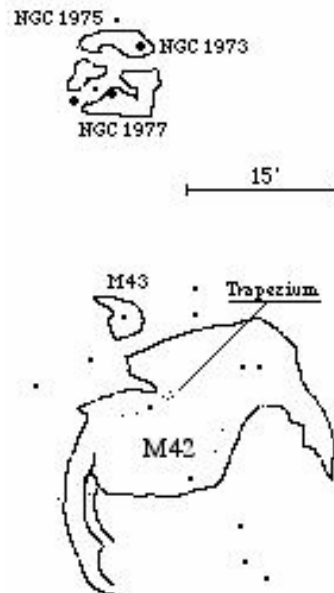


nebula. 10-inch apertures and larger are best for the dim glow of the "Running Man".

Another well known nebular region surrounds Zeta Orionis. This one, however, is notorious for its difficulty to observe. NGC2024, the "flame" or "flaming tree" nebula, is not too elusive about 15' east of Zeta. Seen with a 6-inch or larger telescope, it's a circular emission nebula with branching dark lanes crossing it toward the north. Below this is the famous "Horsehead Nebula." The glowing region, IC434, is a 1 degree long spike of nebulosity pointing south from Zeta. Intruding into this is the dark nebula B33 forming the shape of the horse's head. While some claim to have seen it on dark nights with plenty of aperture, most will only capture it on film or CCD images.

2.5 degrees northeast of Zeta is M78, one of the more challenging Messier objects to find, but unmistakable when you do. It is cometary in appearance with a dusty glow surrounding a double star of magnitude 8.2. The nebula shines at magnitude 8 and covers 8.0'. Hunt down M78 at RA 5h 46m 42s Dec +00d 3'.

With all that Orion has to offer, it is easy to brave the cold temperatures of winter to spend some time with his treasures.



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Directions to TIMPA and Empire Ranch

Directions to TIMPA Site

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

From the North:

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