

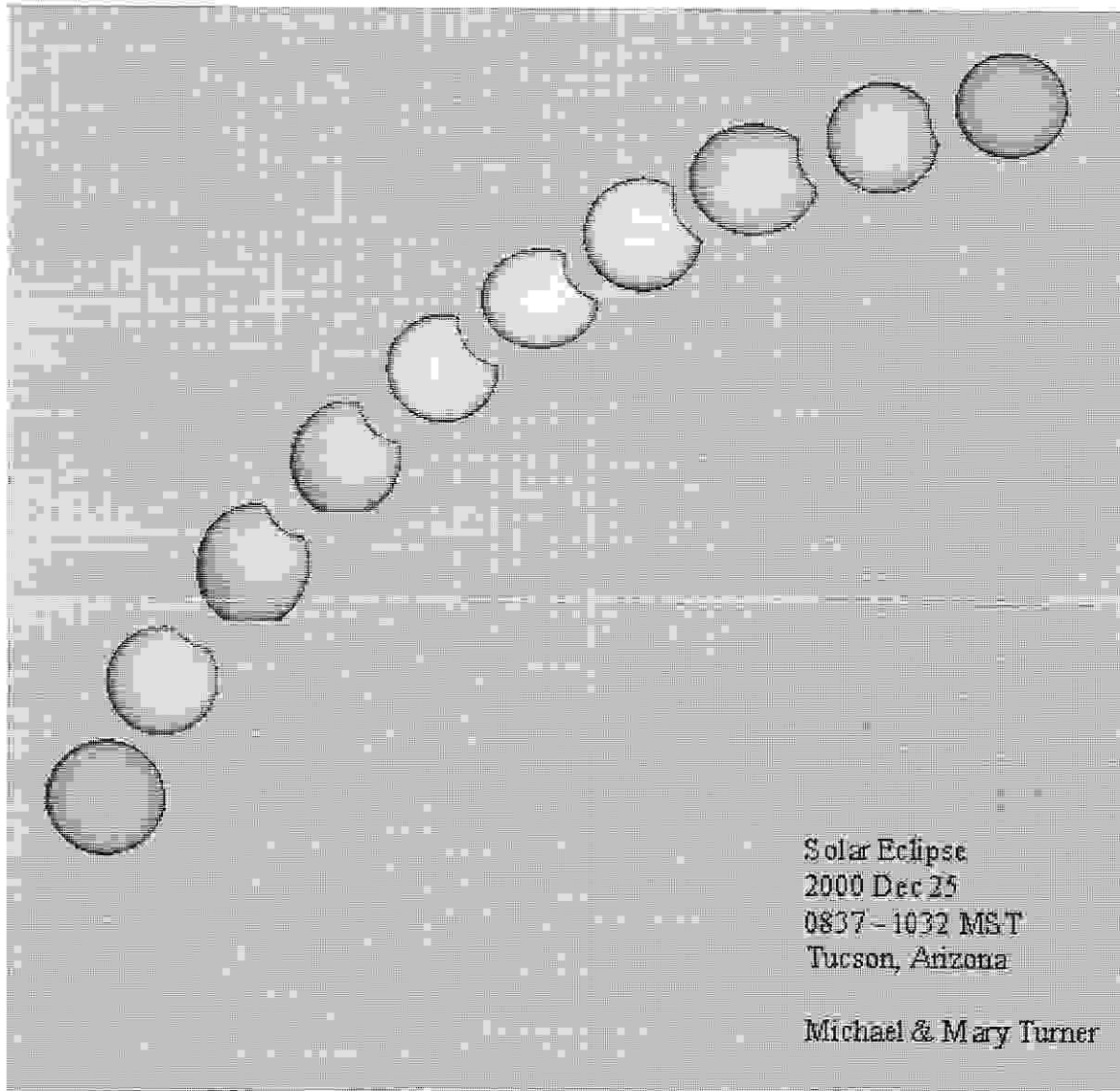


# *Desert Skies*

*Tucson Amateur Astronomy Association*

Volume XLVII, Number 2

February, 2001



Solar Eclipse  
2000 Dec 25  
0837 - 1032 MST  
Tucson, Arizona

Michael & Mary Turner

Equipment: Meade LX-2000-8 with a Televue 55mm Plossl eyepiece, coupled to an Olympus OM-2 35mm camera via a Telescope Technologies Adapta-View adapter and an OM T-ring. The solar filter used was a Thousand Oaks Type II+ full aperture filter.

Setup: Kodak Max 800 color print film. Effective focal length 954mm at f/4. All exposures were 1/1000th second.

The composite image was made in Photoshop from every fourth exposure of the original 36 exposures. The 36 exposures were taken at intervals of 3 minutes and 17 seconds, so these 10 frames represent a time lapse of approximately 13 minutes between each frame.

## Calendar of Events

**BEGINNERS LECTURE:** Feb 2, 6:30 pm at the Steward Observatory Auditorium – Room N210. This month's topic is *Image Processing for Beginners* by Andrew Cooper.

**GENERAL MEETING:** Feb 2, 7:30 pm at the Steward Observatory Auditorium – Room N210. Topic is *Members Night* by various TAAA members.

**BOARD OF DIRECTORS MEETING:** Monday, Feb 12, 7:00 pm at Steward Observatory Conference room N305.

- Feb. 1 – Astrophoto SIG
- Feb. 16 – Girl Scouts Star Party
- Feb. 13 – TIMPA Site Prep Sub-committee Mtg.
- Feb. 17 – TAAA TIMPA Star Party
- Feb. 20 – Ironwood E.S. Star Party
- Feb. 21 – Rincon Country West RV Resort S.P. (paid)
- Feb. 24 – TAAA Empire Ranch Star Party
- Feb. 27 – Esperero Canyon Middle School S.P.

**Newsletter Schedule:** Deadline for articles: Monday, Feb 12. Printing: Monday, Feb 19. Folding Party: Tuesday, Feb 20. Mailing: Wednesday, Feb 21. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

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

TAAA Phone Number: (520) 882-1950

Office/Position	Name	Phone	E-mail Address
President	John Kalas	620-6502	jckalas@aol.com
Vice-President	Andrew Cooper	795-3585	acooper@pobox.com
Secretary	Jane Tongate	623-4056	triton@dakotacom.net
Treasurer	Terri Lappin	579-0185	tklappin@earthlink.net
Member-at-Large	Robert Callanan	818-1315	tucsonbac@aol.com
Member-at-Large	Steve Peterson	326-5303	swpeterson@theriver.com
Member-at-Large	Bill Lofquist	297-6653	wlofquist@aol.com
Chief Observer	Wayne Johnson		
AL Correspondent (ALCor)	Doug Smith	797-0663	Dsmith71@ix.netcom.com
Astrophotography SIG	Dean Ketelsen	293-2855	ketelsen@as.arizona.edu
Computers in Astronomy SIG	Roger Tanner	574-3876	rtanner@seds.lpl.arizona.edu
Newsletter Editor	George Barber	822-2392	barbergj@flash.net
Star Party Coordinators	Maggie & Jeff Buzek	760-4578	jeffbuzek@aol.com

### TAAA Mission Statement:

We are a resource for anyone interested in astronomy. It is our mission to nurture a person's natural curiosity about the night sky. By giving people a knowledge and understanding of astronomy, we enhance their enjoyment of the solar system and beyond. Through our public activities and school evening observing sessions, we bring astronomy to persons of all ages. Our regular meetings and observing sessions offer members a forum to meet others with similar interests and experiences and to learn from one another.

### Annual Membership in the TAAA:

Regular membership	\$ 23
Senior membership (over 60)	\$ 21
Student membership	\$ 15
Add for Family membership	\$ 5
Add for Astronomical League (optional)	\$ 3
Add for contribution to Southern Arizona Section of I.D.A. (optional)	\$ 3 (recommended minimum)
Add for Sky & Telescope Magazine Subscription	\$ 29.95
Add for Astronomy Magazine Subscription	\$ 29

Rates for membership are given above. Family Membership includes two adults plus minor children. Members may subscribe to Sky & Telescope or Astronomy magazine (or both) at the time of membership renewal, saving substantially over the regular subscription rates. To assure we understand what you are paying for, please identify which class of membership and what options you want. Send one check made payable to TAAA to cover membership dues; magazine subscription(s) and any contributions to:

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

### Four Easy Steps to Membership Renewal:

1. Pay your dues 2-3 months early. Your month of membership expiration is listed on your newsletter mailing label.
  2. Find your membership class and its rate. Add the Family Membership rate to this, if applicable.
  3. If you desire membership in the Astronomical League or magazine subscription, (s) or wish to make a donation, add the appropriate amounts to your membership rate. If a magazine subscription renewal is desired, include the magazine renewal notice, if possible. Be sure to identify which options you are paying for. Write one check, payable to TAAA, and send it to the address given above.
  4. Call the Treasurer if you have any problems.
- Send address changes to the above address.

### Desert Skies Publishing Guidelines:

All articles, announcements, news, etc. must be submitted by the newsletter deadline noted above. Materials received after that date will appear in the next issue. All submissions are retained by the editor unless prior arrangements are made. Partial page article submissions should be submitted in Word compatible files via e-mail or on a floppy disk. Full page articles, artwork, and photos should be camera ready. We will not publish slanderous or libelous material! Send articles, announcements, etc. to:

TAAA - Desert Skies  
c/o George Barber  
15940 W. Ridgemoor Ave  
Tucson, AZ 85736  
or e-mail: [barbergj@flash.net](mailto:barbergj@flash.net)

Desert Skies is published monthly by the Tucson Amateur Astronomy Association, PO Box 41254 Tucson, Arizona 85717

## President's Message

Unfortunately, snow on Kitt Peak required the club to cancel the work party that had been scheduled for Sunday, 1/21. We had intended to transfer the 16' diameter observatory support structure from Kitt Peak to the TIMPA Site. This activity was going to initiate the slow and steady progress that has been planned over the next several months for the construction of the observatory building to house the club's 16" telescope. This disappointment will not deter the schedule. Excavation of the ring footer for the observatory will proceed in February, as planned. The permanent bathrooms at TIMPA are nearly completed with the possibility of "first flush" in February. For all of the details, see the article in the **TIMPA Site News** section.

As I mentioned last month, to achieve success with the increased number of projects being undertaken by the club, it is imperative to identify the tasks that are cur-

rently burdening the club officers and seek to assign these jobs to volunteering members of the club. A listing of the needed resources with brief descriptions of the responsibilities is contained in an article in the **Club News** section of this newsletter. Please consider supporting the club and helping to maintain the many beneficial activities so many of us enjoy. This is a great way to get more involved with this super organization.

The February meeting is a Members Night; so get your presentations ready. There's still room on the agenda. Call me at 620-6502 to reserve a spot.

John Kalas

## Meeting Information

### Beginners Lecture

"Image Processing for Beginners" by Andrew Cooper

### Main Lecture

"Members Night"

Every three to four months, the TAAA reserves a meeting for members to make astronomy-related presentations. This February's meeting is just such an event. It is always fascinating to hear members share topics of interest, successes with equipment or facilities construction projects,

product reviews, demonstrations, or astrophotography presentations. This Members Night is shaping up to be just as interesting as those in the past. The following members have already requested presentation time:

1. Andrew Cooper - Progress toward construction of his 18" dia. Dobsonian telescope.
2. Bill Ball - The latest in infra-red detectors.
3. Terry Gilmartin - Fermilab
4. John Kalas - Astrophoto slides

## Club News

### Member News

We welcome the most recent members who have joined the TAAA: Robert Blackett, Leslie Bodnar, Eric Christensen, Sydney Degon, Paul Landrum, Peg Price, and Paul Ransey. Glad to have you join! If you haven't already, 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.

### Nominating Committee

It's that time of the year again when the club must select three members to serve on the nominating committee. The responsibility of the committee is to find capable candidates for the offices of President, Vice-President, Treasurer, Secretary, and Members-at-Large (3) for the next elections in May. Three TAAA Members have volunteered to serve on the committee: Michael Turner, Steve Peterson, and Sheila Conrad. Anyone interested in being considered for the Nominating Committee may contact John Kalas at 620-6502 or via e-mail at <jckalas@aol.com>.

### New ASTRO-Tucson Coordinator

by: Suzanne H. Jacoby

Director, Project ASTRO-Tucson & RBSE

Yesterday I reluctantly accepted Ginny Beal's resignation - she will be leaving NOAO as of January 31 to pursue opportunities in education consulting. As you know, Ginny has been an integral part of the Educational Outreach efforts at NOAO since 1996. She has helped with all aspects of our program, including RBSE, ASTRO, REU, RET, information requests, image requests, and "everything else". Her work with Project ASTRO-Tucson has resulted in NOAO being a leader in the National Network of ASTRO sites, and helped hundreds of ASTRO partners and thousands of students in the Tucson area. I value her contribution to our EO program and will miss her tremendously.

Please join me in wishing Ginny well as she continues on life's journey. Thank you Ginny for all the wonderful work you have done. (We will be recruiting for a new Project ASTRO-Tucson Coordinator. Meanwhile, you can contact me with any Project ASTRO concerns.)

## Club News (cont.)

### Beginners Lectures Speakers Needed

Speakers for the Beginners Lectures are being sought after. These lectures are generally given by our members, but recently very few members are stepping up to give them. If speakers do not come forth, we may have to cancel the Beginners Lectures...a prospect we would hate to see happen. These lectures are about 30 minutes long and cover any astronomical subject of interest to Beginners. Contrary to most Beginners beliefs, they can be given by a Beginner...after all they are your lectures. It does take a little research...easy to do these days with the Internet at your fingertips. If you want to give it a try, please contact Terri Lappin.

### Astrophotos Wanted

by John Kalas

Wouldn't it be great to logon to the TAAA Website and click on a link that would take you to an Astrophotography Gallery containing members' photos. There are so many club members taking fantastic astrophotos. Several neat shots have been artistically interspersed around the website by TAAA Webmaster, Andrew Cooper, but many more could be displayed in a gallery. I am challenging members to submit their work to be included in such a gallery. With permission, we will start by placing the five "club photos", copies of which we have sold over the past several years, in the gallery. Digital images can be submitted in .jpg format via e-mail to Andrew Cooper. Prints can be scanned into a .jpg file by John Kalas. This would be a great way to showcase the impressive astrophotography talent within club. Let's do it.

### Newsletter Articles Wanted

by George Barber

Have you ever thought of contributing an article to the newsletter? Perhaps you have a handy astronomy tip you've learned and want to pass on, or maybe an interesting project or subject you'd like to write about. The newsletter is the perfect place to pass on what you know. Anyone in the club is welcome to contribute astronomy related articles or astrophotos. Submit your articles to me, the newsletter editor, before the article deadline, and you'll "make some ink"!

### Astrophoto SIG Dinner

1 February, 7pm

by: Dean Ketelsen

We will be holding our normal (night before regular meetings) astrophoto Special Interest Group meeting at the China Rose restaurant on Speedway and Rosemont. It is a great place to hold an informal meeting to show your astrophotos, both good and bad. That way we can all learn from other's successes and failures. Last month we had a couple very nice slide shows, one of the December partial

solar eclipse, and planet shots, the other of general sky shots of moon, planets and deep sky objects. It was a great time and our best attended dinner to date (13!). There is a projector on site, and of course, prints are easy. If you need anything else to display images, please provide it. Hope to see you there.

### Support Your Club

Please consider volunteering for one of the following activities to support the TAAA. Currently, most of these tasks are being performed by a few officers of the club and they are placing a significant burden on them. By spreading the individual task responsibilities around to more members, the activities will be achieved in a more efficient and timely manner.

1. **Publicity Chairperson** - Currently, little publicizing is done so this position could grow according to ones abilities and time. The responsibilities are as follows: act as the official contact person between the TAAA and the media, maintain our database of media contacts, write news releases (a boilerplate news release does exist for public star parties), mail out news release (at least one month before event), follow-up phone calls to media contacts. Sometimes a news release is requested by email, so the chairperson should have an email account. Currently we publicize our public star parties but we would like to also publicize our meetings.
2. **School Star Party Volunteer Coordinator** - Coordinate school star parties from monthly meeting on. Collect signup sheets after meeting, arrange for star party leaders (if no one volunteered to be leader), contact volunteers to fill scope requirements (if necessary), follow-up with leaders to ensure successful events.
3. **Webmaster**
4. **Club Apparel Coordinator** - Keep track of the inventory of apparel, order new supplies (with authorization of the board), suggest different types of apparel items, bring the inventory to monthly meetings, and sell items at the meeting.
5. **Holiday Party Coordinator** - The responsibilities are as follows: locate restaurant for party which includes checking out new facilities in person, act as contact person between restaurant and TAAA, choose menu/decorations/etc, set ticket price (with board approval), print tickets, sell tickets, arrange for door prizes, coordinate the evening presentations, arrange for AV equipment, make name tags for attendees, give final count to restaurant. Many of these jobs are usually delegated to others.
6. **Beginners Lecture Coordinator** - Solicit presentations of basic astronomy topics from members or outside resources, schedule presentations, ensure that presenters submit titles and brief explanation of the talk to newsletter editor.
7. **TIMPA Site Prep Sub-Committee Coordinator** - Take a leadership role to coordinate the construction activities planned for the 16-foot diameter observatory; call meetings, facilitate planning, coordinate work parties,



### Club News (cont.)

- etc.
8. **TIMPA Long Range Planning Sub-Committee Coordinator** - Coordinate the activities (meetings) of the sub-committee to address the long range development of the TIMPA Site, i.e. locations for future telescope buildings, observing pads, utilities, etc.
  9. **Newsletter Folding/Mailing Coordinator** - Secure newsletter copy from the editor, paste up the copy, deliver copy to copy person, schedule folding parties, secure mailing labels from treasurer, attend folding parties, coordinate folding and labeling of newsletters, and take newsletters to post office.
  10. **Insurance Researcher** - We need someone to investigate property insurance for us and to review our current liability policy. Ideally, this person would review our insurance coverage and rates every few years and make recommendations to the board.
  11. **Lecture Hall Prep Assistant** - We need 2 or 3 reliable people who can arrive at our meetings early (about 6pm) to help prepare the lecture hall for our meetings. This means setting up tables, making the room look presentable and seeing that the AV equipment is in working condition. As people arrive, we need to hand out door prize tickets. We would also like to designate someone at each meeting to assist our speaker and see that his or her needs are met. If you can help with this, contact Terri Lappin or Gary Rosenbaum.
  12. **Club Sales Coordinator** - Sell club articles such as calendars, holiday party tickets, and perhaps club apparel at monthly meetings

### Grand Canyon Star Party

16-23 June  
North and South Rims

As I mentioned in last month's newsletter, it is never too early to make plans to attend the Grand Canyon Star Party, especially if you need motel reservations. Likely even now in February, there are not many rooms available for June. So, do make your plans now. I've been told that the Park Service will again make something like a dozen campsites available for us. I'll be taking names for those sites on March 1st ((520)293-2855 or ketelsen@as.arizona.edu). It is, of course, first come, first served and those staying the entire week will be given priority. We've already gotten interest in the star party - there will be a large contingent of amateurs from Kentucky coming down for the second half of the week. There are other requests for info coming in weekly, and that was well before any publicity was in place in any of the magazines. I've also heard second hand that our friends in Utah, Karen and Deloy Pierce will be organizing the north rim version, so consider that location if you have never been there. In the meantime, if you need information, check out the TAAA website (tucsonastronomy.org) and if you need arm twisting, call or e-mail me at the locations above. Don't miss out!

Dean Ketelsen

### Star Parties & Events

**Girl Scout Troop #744 Star Party**      **Northwest**  
Feb 16, (Friday)      No. of Scopes: 2

This star party is being hosted by Phil Marsh, a TAAA member at his home. His address is 325 E. Morning Sun Court. Take Oracle Rd north from downtown to Orange Grove Road. Turn right (east) and proceed 0.2 miles to Shadow Run Drive. Turn left (north) onto Shadow Run Drive and continue north for 0.2 miles to Morning Sun Court. Turn right and look for the first house on your left. Volunteers may arrive anytime after 5:00 pm for set up and DINNER will be provided at 6:00 pm. Viewing will run from 6:30 pm to 8:00 pm. A sign up sheet will be available at the February meeting.

**TAAA Star Party at TIMPA**  
Feb 17 (Saturday)

What makes this event special is that our novice members can get help with observing issues or equipment problems. There will be experienced members present who would be more than happy to help. If you don't own a telescope, don't worry. There will be lots of scopes set up and everyone is invited to look through them. This is a great way to check out the different telescope designs before you make that all-important decision to buy. There is no scheduled talk for this activity. Just come out with lots

of questions and we'll do our best to get you the answers you need. Arrive at about 5:30 pm for a group question and answer session. It should be dark enough to observe by 6:30 pm. If you have friends who might be interested in amateur astronomy, bring them along. Be prepared for cold weather and dress warmly. Directions to the TIMPA site are located on the outside flap of this newsletter.

**Ironwood Elem. School Star Party**      **Northwest**  
Feb 20, (Tuesday)      No. of Scopes: 8

The 3<sup>rd</sup> grade classes (120 maximum plus families) will be partaking of the evening of observing after their music program. Set up will be approximately at 6:30 pm with observing starting at 7:00 pm and ending at 8:30 pm. The school is located at 3300 W. Freer Drive. To get to the school from Ina and Thornydale Road, head north on Thornydale for 2.5 miles. Take a right onto Overton Heights Drive (across from Arthur Pack Park). Proceed east for just under 0.5 mile. Turn north (left) on Camino De La Tierra to the end (about 0.25 mile). The school is located on the north side of Freer Drive. On the west side of the school there is a gate. Enter and head north along the driveway. The playground will be on the left. A star party leader is needed for this event, and a sign up sheet will be available at the February meeting.

### Star Parties & Events (cont.)

#### **Rincon Country West RV Resort Star Party (Paid)**

February 21 (Wednesday)

No. of Scopes: 10

Our January date was snowed out, so Rincon Resort has re-scheduled for February. Last March this activity was a huge success. About 175 people showed up and we were caught shorthanded. The resort is located at 4555 S. Mission Road, about midway between Ajo and Irvington on the east side of Mission. Take I-10 to I-19 and exit at Irvington Road. Turn right (north) at Mission Road. Look for Rincon Country RV Resort sign on the right. Turn right and then turn right again into the resort entrance. As you approach the entry gates, stay in the left lane. Tell the gate attendant that you are there for the star party. When you pass through the gate, turn right at "B" Street. Set-up will be just past the park models on the right at 6:30 pm. Observing starts at 7:00 pm and ends at 9:00pm. The TAAA will receive a donation for this activity. There will be a sign-up sheet at the February meeting. Bill Lofquist will be the Star Party Leader.

#### **TAAA Star Party at Empire Ranch**

February 24 (Saturday)

The Empire Ranch has been our normal dark-sky observing site for quite a number of years. Empire Ranch is about 4000 feet in elevation, so be prepared for freezing temperatures and 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 tele-

scope 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. 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 backup and turn on your bright white backup lights. One nice advantage of belonging to the TAAA is the opportunity to observe among friends. Help in finding an object or the sharing of equipment always goes on at our star parties. If you haven't attended a star party yet, you're missing the best part of belonging to the TAAA. See the directions to Empire Ranch on the outside flap of this newsletter.

#### **Esperero Canyon Middle School Star Party Northern Foothills**

Feb 27 (Tuesday)

No. of Scopes: 8

The school is located at 5801 N. Sabino Canyon Rd which approximately 1/3 mile north of Sunrise Dr. and Sabino Canyon Rd. Proceed north from this intersection. You will pass Canyon View Elementary School (on your left). The next series of buildings is Esperero Canyon Middle School. Turn left into the school parking lot. The set-up area will be at the soccer field, which is northwest of the parking lot. Set-up will be between at 5:30 pm and observing will run from 6:00 pm to 8:00 pm. A Star Party leader is needed for this event. A sign up sheet will be available at the February meeting.

### Items of Interest

#### **Here's a Strange One**

by John Kalas

I received an e-mail message from a gentleman who found a telescope out in the desert in southern Arizona on 12/23/00. He is looking to return it to its rightful owner. If you, or anyone you know, left a telescope out in the desert, call me at 620-6502 and I'll give you the info to contact this fellow. You must be able to accurately describe the equipment in order to claim it.

## Dark Skies for 2000

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, s=et for evening object

We/Th 31/ 1	0:36 - 5:54	Su/Mo 11/12	19:30 - 22:13	Th/Fr 22/23	19:38 - 5:37
Th/Fr 1/ 2	1:37 - 5:54	Mo/Tu 12/13	19:31 - 23:16	Fr/Sa 23/24	19:39 - 5:36
Fr/Sa 2/ 3	2:41 - 5:53	Tu/We 13/14	19:31 - 0:17	Sa/Su 24/25	19:42 - 5:35
Sa/Su 3/ 4	3:47 - 5:52	We/Th 14/15	19:32 - 1:16	Su/Mo 25/26	20:37 - 5:33
Su/Mo 4/ 5	4:52 - 5:52	Th/Fr 15/16	19:33 - 2:14	Mo/Tu 26/27	21:33 - 5:32
Mo/Tu 5/ 6	- - -	Fr/Sa 16/17	19:34 - 3:09	Tu/We 27/28	22:30 - 5:31
Tu/We 6/ 7	- - -	Sa/Su 17/18	19:34 - 4:01	We/Th 28/ 1	23:30 - 5:30
We/Th 7/ 8	FULL MOON	Su/Mo 18/19	19:35 - 4:50	Th/Fr 1/ 2	0:31 - 5:29
Th/Fr 8/ 9	- - -	Mo/Tu 19/20	19:36 - 5:35	Fr/Sa 2/ 3	1:34 - 5:28
Fr/Sa 9/10	19:28 - 20:00	Tu/We 20/21	19:37 - 5:39	Sa/Su 3/ 4	2:37 - 5:27
Sa/Su 10/11	19:29 - 21:08	We/Th 21/22	19:37 - 5:38		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Set Vi	Set Vi	Rise Vi	Set Vi	Set Vi	Vi=Visibility
3/ 4	17:58	7:14	19:12 5	21:34 -4	1:37 1	2:16 -2	1:40 0	-3 brilliant
10/11	18:04	7:08	18:26 -	21:33 -4	1:27 1	1:50 -2	1:13 0	0 conspicuous
17/18	18:10	7:01	Rise -	21:29 -4	1:17 1	1:25 -2	0:47 0	3 moderate
24/25	18:16	6:54	5:43 5	21:19 -4	1:06 1	1:01 -2	0:21 0	6 naked eye limit
3/ 4	18:21	6:46	5:29 4	21:03 -4	0:55 1	0:37 -2	23:56 0	9 binoculars limit

By Erich Karkoschka

## Desert Skies Classified

- FOR SALE: 8-inch, f/6, Meade Starfinder Dob w/ 6x30 finder. 1995 vintage. \$225. Call Kevin at 520-206-9178 or e-mail [bayskevin@mindspring.com](mailto:bayskevin@mindspring.com) (4/01)
- FOR SALE: 1999 Celestron Celestar 8 SCT telescope with following accessories: 25mm 1-1/4" SMA ocular, 6x30 finderscope, standard wedgpod, two 1-1/4" polarizer filters, 9mm 1-1/4" LV eyepiece/lens, 42 mm 1-1/4" Ultima eyepiece, Telstar finderscope, Deluxe adjustable observing chair. Like new—all for \$1250 \$1050. Call 297-4802 or email: [nanandstan@msn.com](mailto:nanandstan@msn.com) (4/01)
- FOR SALE: Eyepieces (1 1/4"): Celestron 25mm SMA wide angle \$25; Orion Explorer II 25mm (2) \$20; Orion Explorer II 17mm (1) \$20; Orion Explorer II 10mm (2) \$20. Other accessories: Orion 45-degree erecting prism \$25; Burnham's Celestial Handbook, paperback edition in three volumes \$25. Call Chris at 750-9463 or e-mail [ctlancaaster@earthlink.net](mailto:ctlancaaster@earthlink.net) (5/01)
- FOR SALE: Standard Questar, S/N 2-1229 with coated lens and sun filters, 16mm Brandon eyepiece, Diopter adapter, Camera coupling, Porro prism, Leather carrying case, all brochures and instruction books. \$3,000. Call Howard Baxter in Green Valley at 625-7127 or contact via e-mail at [kb1jt@juno.com](mailto:kb1jt@juno.com) (5/01)
- FOR SALE: Celestron NexStar 5. Spend your time observing (not searching). Reduced to \$850 (firm). Light weight but solid! Compact 5" scope, no counter-weight required, 12vDC alt-az tracking, integrated GO TO computer with many objects. Includes original box, etc. Great condition! (Tripod \$125) Contact Randy at 795-5720 or [randystars@aol.com](mailto:randystars@aol.com) (2/01)
- FOR SALE: Celestron Advanced Astromaster, 1 year old, excellent condition, used for one month, \$225. Encoders and hardware for C14, \$50. Bill Dellings (480) 983 6651, [mrcomet@uswest.net](mailto:mrcomet@uswest.net) (2/01)
- FOR SALE: ISIS 1600 CCD Camera for Sale. Like New - Bought for Client that never paid. Comes complete with Maxim DL/CCD Software. Can be controlled from either lap Top or Desktop PC. Built-in six position filter wheel. KAF 1602E sensor (1536 x 1024 - 9 micron pixels). All serious offers will be considered. Contact Dave Harvey (520) 360-2078 or [dharvey@comsoft-telescope.com](mailto:dharvey@comsoft-telescope.com) (2/01)
- SERVICE: Custom machine shop work - design and manufacture of telescopes and mountings. Fabrication of small parts or repair of existing hardware. For consultation and price quotes, call Duane Niehaus at 290-1722.

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 John Kalas at 620-6502 or e-mail at [jckalas@aol.com](mailto:jckalas@aol.com).

**TIMPA Site News****TIMPA Update**

by John Kalas

NOTE: The next Site Prep Sub-committee meeting is tentatively scheduled for Tuesday evening, 2/13, at 7:00 pm in Steward Observatory Conference Room N305. Call John Kalas at 620-6502 to confirm.

Snow on Kitt Peak caused hazardous conditions on the steep dirt road leading down to the meadow where the 16' diameter observatory support structure is stored. We could not jeopardize the safety of the borrowed truck we were planning to use to transport the support structure to TIMPA. Therefore, the workparty scheduled for Sunday, 1/21, was canceled. Another attempt to move the structure will be scheduled in February. Construction activities at TIMPA will continue with the excavation of the ring footer for the observatory planned for February.

The permanent bathroom facility at TIMPA is well along in its construction process. By the time we visit the site on Saturday, 1/27, for our monthly star party, the progress will be remarkable. The septic system has been installed, so the bathrooms may be available for use at our 2/17 star party.

**What is TIMPA, Anyway?**

We forget that not all TAAA members know about the TIMPA project. For our new members, this explanation will appear in all future newsletters.

TIMPA stands for, Tucson International Modelplex Park Association. It is a parcel of land (approx. 160 acres) located about seven miles west of the Saguaro National Park West. The property is leased from the City of Tucson by the TIMPA organization and is to be used as a specialty park. The TIMPA organization flies radio-controlled model airplanes at the site. The Southern Arizona Rocketry Association (SARA) also uses the site to launch model rockets.

About three years ago, TAAA member, John Polacheck, heard about the site and inquired if the TIMPA organization would be interested in acquiring another partner, the TAAA. The TIMPA group was very interested because the relationship would be non-competing. TIMPA and SARA use the site during the day and the TAAA would utilize the facility at night. The TAAA used the site, by permission, for about a year for scheduled star parties, such as Beginners Star Parties. On July 14<sup>th</sup>, 1999 the TAAA and the TIMPA organization signed a letter of agreement allowing the TAAA unlimited use of the site for scheduled star parties as well as member use at other times. Ultimately, the TAAA intends to develop an observing area on the site

that will include an observatory for the club's 16" reflector telescope. Many club and joint benefit projects will be undertaken in the next several months to improve the facilities at the site.

1. Run electricity and telephone line to our observing area and on to TIMPA's ramada. Also, run a water line to our site. (Completed - 10/9/99)
2. Construct a secure storage cage in the TIMPA Barn. (Completed - 12/11/99)
3. Move the TAAA property from the mini-storage unit to the new security cage in the TIMPA Barn. (Completed 12/12/99)
4. Construct permanent bathroom facilities. (Tentative schedule 1<sup>st</sup> quarter 2001)
5. Construct observatory to house club's 16" telescope. (Tentative schedule 2<sup>nd</sup> quarter 2001)
6. Upgrade club's 16" telescope. (Tentative schedule 2<sup>nd</sup> quarter 2001)
7. Construct additional site improvements. (Schedule to be determined)

Watch the newsletter for announcements about TIMPA activities and how you can help.

**TAAA Board of Directors Meeting- January 8, 2001**

NOTE: The minutes of the January 8, 2001 board meeting were not available for publication in this edition of the newsletter.



## Constellation Report by Chris Lancaster

## Puppis

the poop deck

The southern sky holds the giant ship Argo, which is divided into several individual constellations. Puppis is the poop deck, or stern, of the ship which has its bow pointing below the horizon and its stern standing vertically. The stars of Puppis are 2nd magnitude and dimmer and sit east of a line formed by the two most conspicuous winter stars, Sirius and Canopus. You'll notice that the Greek lettering of this constellation, a system that was established by the German astronomer Johann Bayer, is incomplete. When Bayer distributed the letters, the stars of Puppis did not yet make a constellation of its own, but instead served to form part of the giant constellation Argo Navis.

We have seen quite often that constellations which lie along the Milky Way are rich in star clusters, and Puppis is no different with its clusters outnumbering all other deep sky objects by a wide margin. Since Puppis is so close to the horizon, those objects which are near the northern areas of the constellation are the best targets. Two of these are M46 and M47. They can be mentioned together since they are only 1.3 degrees apart from each other. Even though they share the same neighborhood, they have much different personalities. M47's stars are a mixture of almost a dozen bright stars (the brightest being mag. 5.7) and another 30 or so dim stars which give the cluster a total magnitude of 4.4. M47 is located at RA 7h 36.6m Dec -14° 30'. M46 contrasts nicely, being a magnitude 6.1 cluster made of over one hundred noticeable stars of mostly magnitudes 9, 10, and dimmer. One interesting feature of this constellation is the magnitude 10.1 planetary nebula on the northern edge of the cluster. This is NGC2438, a round halo measuring about 1' in diameter. Both M46 and M47 are close to 30' in size.

Stay in the neighborhood and you will see another cluster, NGC2423, about 0.6° north of M47. This magnitude 6.7 cluster packs about 60 dim stars in an area 19' in diameter.

Moving south, we find M93. This cluster has a magnitude of 6.2, a size of 22', and a location of 7h 44.6m Dec -23° 52', or 1.5 degrees northwest of Xi (ξ) Puppis. It appears elongated along the southeast-northwest axis with lanes comparatively empty of stars which make it appear divided into 4 sections.

As a change of pace, let's move southeast, past Xi Puppis, about the same distance as M93, but on the opposite side. Here is a challenging diffuse nebula designated NGC2467. It could be described as masquerading as a planetary nebula since its overall shape is round with noticeable mottling to the edges. It even has an 8th magnitude star sitting in the middle of the nebula to add to the disguise. The size of this magnitude 7 nebula is respectable at 16', making for medium surface brightness. Crowding it is another star cluster, H2. This modest cluster has about 20 11th magnitude stars covering 9'.

A considerable distance away near the western boundary of the constellation is NGC2298. Fairly easy to find, but hard to resolve into stars, this is a globular cluster of magnitude 9.4 and

measuring a small 6.8'. It is well down in the sky, so it's beneficial to wait until it's as close to the meridian as possible before observing it. You'll mostly see a imperfectly round smudge at RA 6h 49m Dec -36° 00'.

Fans of variable stars will want to seek L<sup>2</sup>. As a member of the long period variable class, this star ranges in brightness from approximately 3 down to less than 6, and during the process passes through the narrow range in spectral type from M5 to M6. It stays above the horizon only for 7 hours, but that is not a problem since its period is a leisurely 141 days, and both sides of its light curve are equal. Even if you are not measuring its variability, you might still want to do an appraisal of its unique red color.

