

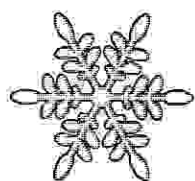


# *Desert Skies*

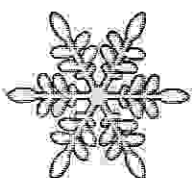
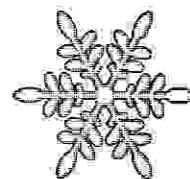
*Tucson Amateur Astronomy Association*

Volume XLVI, Number 12

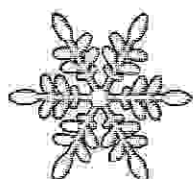
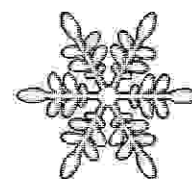
December, 2000



## HOLIDAY PARTY



SATURDAY  
DECEMBER 9<sup>TH</sup>



CHINA ROSE  
RESTAURANT

GREAT FOOD, GREAT FRIENDS, DOOR PRIZES  
& PRESENTATIONS

## Calendar of Events

**BEGINNERS LECTURE:** Dec 1, 6:30 pm at the Steward Observatory Auditorium - Room N210. This month's topic is *Planetary Observing* by Terri Lappin.

**GENERAL MEETING:** Dec 1, 7:30 pm at the Steward Observatory Auditorium - Room N210. Topic is *Deep Sky 101* by Tom Polakis.

**BOARD OF DIRECTORS MEETING:** Monday, Dec 11, 7:00 pm at Steward Observatory Conference room N305.

### STAR PARTIES AND EVENTS:

- Dec. 2 - Donaldson E.S. Star Party
- Dec. 3 - UofA Astronomy Students Star Party
- Dec. 9 - TAAA Holiday Party
- Dec. 9 - Smithsonian Associates at Vega-Bray Observatory
- Dec. 14 - Quail Run E.S. Star Party
- Dec. 16 - TAAA TIMPA Star Party
- Dec. 23 - TAAA Empire Ranch Star Party

**Newsletter Schedule:** Deadline for articles: Sunday, Dec 17. Printing: Tuesday, Dec 26. Folding Party: Wednesday, Dec 27. Mailing: Thursday, Dec 28. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

**Cover:** Be sure to make it to our annual Holiday Party, December 9!

**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	tlappin@as.arizona.edu
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@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.
  4. Write one check, payable to TAAA, and send it to the address given above.
- 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

As we approach the end of the year, we enter into a series of holidays that allow us to celebrate our accomplishments of the past year. When I look back, I see another good year for the TAAA made possible by the continued dedication of a great Board of Directors and the outstanding support of many members within the organization. I have said before that the club is as successful as the membership makes it and that simple fact is as true in 2000 as it has been in the past. The TAAA will help celebrate year 2000 at the Holiday Party on Saturday, December 9<sup>th</sup>, at the China Rose Restaurant. Won't you join us? For information, see the article in the *Club News* section of this newsletter.

Although the election of officers is not until May 2001, the board members are preparing now for the change in administration and the challenges of the coming year.

Each officer is evaluating the tasks they are performing to see if there is a better way to distribute the workload and eliminate the frustrations associated with the often excessive demands of club duties. What we hope will come out of this analysis is a structure of tasks, each of which is a manageable responsibility that can be easily handled by one person or a small committee. Once the list of tasks has been developed, competent members will be sought out to support the activities. By spreading the efforts required to achieve the club's objectives over a broader number of members, the TAAA will realize more progress. I would ask that you consider supporting your organization by volunteering for one of these future positions.

Have a great Holiday Season,  
John Kalas

### Meeting Information

#### Beginners Lecture

Title: Planetary Observing

Speaker: Terri Lappin

For many, the first view through a telescope is of a planet. Do you remember seeing Jupiter, Mars or Saturn for the first time? You were probably surprised to see the bands of Jupiter, the red color of Mars, or those fantastic rings around Saturn. If you are like most, you learned how to operate your telescope using the planets, and then you moved onto deep sky objects and became fully absorbed with seeing those "faint fuzzies". Do you ever turn your telescope back to the planets to observe them with trained eyeballs? Have you monitored the structure in Jupiter's bands or witnessed dust storms on Mars? Saturn (the globe, not the rings) offers subtle features, and there's structure in the rings that a careful observer can see under the right conditions. This month's Beginners

Lecture will explain some of the techniques planetary observers incorporate into their observing toolbox. Maybe it will inspire some of you to take a second, third, fourth... close look at the planets.

#### Main Lecture Title:

Deep Sky 101

Speaker: Tom Polakis

Tom Polakis will be coming all the way from Phoenix to talk to us this month. His talk, entitled "Deep Sky 101", will give us tips on becoming a better visual deep sky observer. Tom has lots of experience with deep sky observing. He's been an amateur astronomer in Arizona for over 15 years. He currently writes a series of constellation observing articles for Astronomy magazine called "Celestial Portraits."

### Club News

#### Holiday Party

This year we return to the China Rose restaurant for our annual Holiday Party. This "event of the year" will be held on Saturday, December 9<sup>th</sup> starting at 7pm. The China Rose, owned by Carol Hunter (the better half of TAAA member Tim Hunter), is located at Speedway and Rosemont. We will hold our event in the "astronomy room" which is fully decorated (year-round) with astrophotos. This is a great place for our party, so come join in on the fun. We are lining up door prizes and will have a short program for those in attendance. If you want take part in the program, contact Steve Peterson (address/phone on page 2). Several Chinese dishes will be served and one non-Chinese dish (chicken fingers) will be on the menu. Tickets will cost \$15 each and must be purchased in advance. The price includes the meal, non-alcoholic drink,

tip, and tax. Barbara Callanan will be selling tickets at the December meeting. We have a limited number of seats, so be sure to buy your tickets soon. If you can't make a meeting, contact Barbara at 818-1315 or [tucsonbac@aol.com](mailto:tucsonbac@aol.com) to arrange for payment. Please make checks payable to TAAA, credit cards are not accepted.

#### Member News

We welcome the most recent members who have joined the TAAA. John E Barnes, Keith Wright, Jim Berger, Gerald Penegor, Danny R Ward, and John and Claire Cocke (John was our speaker last month). 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.

## Club News (cont.)

### Looking for Interesting People

Wanted: Interesting people to represent the TAAA...I am looking for a few willing people who can put together a paragraph about themselves and possibly submit themselves to the interrogation of the general public. The TAAA is in need of a few "ticklers" that we can submit with our press releases as possible human interest stories that reporters (tv, radio, and newspaper) could use to build a story around. This will hopefully increase our chance of getting some good publicity for our public events. It might mean an interview, photos or video taping, and a chance to have your 15 minutes of fame. While you would be "the star", you would represent the TAAA and help get our event publicized. If you are willing to participate, please get me a short paragraph (typed or emailed) about yourself and why you think you're interesting to others. Contact me, Terri Lappin, at any time (other than the middle of our meetings) if you have questions. See the inside cover for contact information.

### 2001 Calendars

This might be your last chance to get the new 2001 Astronomy Calendars! The cost is \$10 each (~\$3 off the regular selling price), or \$9 each for more than one. This calendar, which features a full-color astronomical photo each month, has daily information about astronomical events, both historical and observational, plus space for adding important events you need to remember. This year's photos are stunning! From Hubble and NASA images to a beautiful Tony and Daphne Hallas print of the Orion Nebula, this is the calendar to have!

### Donations to TAAA

Would you like to automatically make small monthly donations to the TAAA? It's easy to do. Each month, the TAAA will automatically deduct an amount you specify from your designated checking account. It appears on your bank statement as an EFT. You need to fill out a form, which authorizes the TAAA to make the EFTs, and we need a voided check. Money can be donated to any of the TAAA funds, including Light Pollution (SA-IDA) and TIMPA. Monthly donations need to be at least \$5/month. The transfers can be stopped at any time with proper notification. Forms will be available at the next meeting. See the treasurer if you have questions.

### Astronomical League Correspondent

by John Kalas

The TAAA is pleased to announce that Doug Smith has volunteered to accept the position of Astronomical League Correspondent (ALCor) for the Tucson society of the Astronomical League (TAL). The TAL is the group of TAAA Members who belong to the Astronomical League; approximately 130 of the 380 members of the club. A.L. Membership is a great value and costs only \$3.00 per year. As ALCor, Doug will be the liaison between the TAL and the national A.L. organization, keeping the club up-

dated on current developments within the A.L. He will also coordinate the observing awards program which is another benefit of A.L. Membership. To find out more about the benefits of A.L. Membership contact Doug at 797-0663 or via e-mail at <dsmith71@netcom.com> or visit the club's website at <www.tucsonastronomy.org> and click on the TAL link. Thanks for your support, Doug.

### Astrophoto SIG Dinner

Thursday, 30 November  
China Rose, 7pm

The astrophotography special interest group will again meet the evening before the general meeting on 30 November. It has been a great opportunity to "talk shop" and get your questions answered about astronomical imaging and have a great meal at the same time. Last month I ended up showing some of my general slides - mostly the show presented to an Optical Sciences group at the Kitt Peak picnic area. This lead into a discussion of the best way to image Jupiter

and Saturn, which are getting high in the sky now. Feel free to join us and bring us any images you've taken recently. This venue is very non-judgemental, so bring some images! See you there!

-Dean Ketelsen

### Computers In Astronomy SIG Tour

We are trying to set up a meeting of the Computers In Astronomy SIG. It will be a tour of the Apogee Instruments facility. This company is owned by Wayne Brown who recently gave a TAAA lecture about CCD Fundamentals. Apogee Instruments builds CCD cameras for the astronomy as well as medical fields. The date has not been confirmed yet, but should be set by the Dec 1st meeting. Details will be given at the December general meeting. Call Gary Rosenbaum at 579-0185 if you can't make the meeting.

### Donation to the TAAA

TAAA Member Rik Hill was kind enough to keep the club in mind when a used tabletop Xerox copier was being decommissioned at the Lunar and Planetary Lab at the UofA. The unit was in working condition but was suffering from a sporadic paper feed problem. The copier will be checked out and hopefully will be available for some of the small copying jobs that the club requires from time to time. Thanks for the donation, Rik.

### Project ASTRO Workshop Successful - Thanks to TAAA

By: Ginny Beal

Led by the National Optical Astronomy Observatory (NOAO), the Project ASTRO Tucson site hosted its fifth annual workshop October 13-14 at the Kitt Peak Visitor Center and the NOAO headquarters in Tucson.

### Club News (cont.)

Twenty-two teachers were paired with seventeen astronomers to form partnerships and teams. Most participants were from the Tucson area, but some traveled from the Tohono O'odham Nation, Casa Grande, Safford, Phoenix and Russellville Arkansas. Workshop presenters included authors Joni Chancer and Gina Rester-Zodrow (Moon Journals, Writing, Art and Inquiry Through Focused Nature Study), LPL Scientist Professor Robert Strom, Tohono O'odham Storyteller Daniel Lopez, and local educators Larry Dunlap, Michael Crawley and Renee Crawley.

The Friday evening session at the Kitt Peak Visitor Center 16" telescope was hosted by Adam Block and Richard Barchfield, observers with the Nightly Observing Program

(NOP). The Visitor Center NOP staff and Project ASTRO astronomers served as knowledgeable resources, providing a rich exchange of astronomy facts.

This year's workshop was funded by a NASA IDEAS grant titled "Did You See the Moon Last Night? Scientific Inquiry through Writing, Art, and Observation". The goals of this workshop are to extend the concepts from the book Moon Journals: Writing, Art and Inquiry through Focused Nature Study into the area of authentic scientific inquiry, and have teachers work in collaboration with trained astronomers to assist with student investigations of the moon.

The NOAO Project ASTRO staff extends sincere appreciation to the TAAA for its support in recruiting participants and to members who volunteered as astronomer partners.

### Items of Interest

#### WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

by Rik Hill

Nothing good on TV, eh? Then get out there and put something on yourself! Video cameras for astronomy have never been cheaper. There are a variety of modes they can be used for astronomy too, from recording to tape to live capture. You can make still frames, co-add frames to make spectacular planetary and lunar (not to mention solar) images, make MPEGs or other digital movies or just enjoy them at video rate.

One of the best places to go on the web to see what's available is VideoAstro at:

<http://www.fortunecity.com/victorian/canterbury/222/astrovid.htm>

This site contains images digital movies from astrovideographers from around the world. You can also subscribe to the VideoAstro mailing list at that site where you can get your questions answered by people like you working with this medium every day. There are also articles on various topics from the most novice 'how do I get started' topics to techniques in making good quality stills. A number of specialized topics have links on this page that cover solar, occultation, satellite, stellar, deep sky, and live cam or robotic video observing.

While you're there, at the top of the page is a link to one of the finest video websites in the world run by Steve Massey in Australia. His work with a 24" is of staggering quality. There are people with still CCD cameras that cannot produce his quality work. He has a full rotation of Jupiter and Mars running there, Saturn doing it's 17 year wobble dance (you'll see what I mean) and a lunar eclipse running through it's cycle in less than 10 sec. Just go to the links by clicking on the images themselves.

Be sure to check out the VideoAstro Directory in the middle of the first page of the website. There are enough links there to keep you busy for a whole evening easily!

Hopefully it will also inspire you to get involved in the fun of video-astronomy.

As always, if you know of a particularly good website you would like mentioned here, drop me a line at

[rhill@lpl.arizona.edu](mailto:rhill@lpl.arizona.edu) or visit my website at:

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

#### EAST VALLEY ASTRONOMY CLUB (EVAC) SPECIAL SLIDE SHOW

WEDNESDAY, DECEMBER 13, 7:30 PM. FREE! ALL ARE WELCOME!

At the December 13 EVAC meeting, Rick Scott and Joe Orman will present a special slide show with two computer-controlled projectors and a synchronized musical soundtrack. This 30-minute show, titled "The Sky We Share," will showcase the photography of club members Rick, Joe, Tom Polakis, Randy Peterson, and Chris Schur. The show features photos of the day and night sky, including rainbows, lightning, sunsets, eclipses, comets, meteors, nebulae and galaxies, as well as observatories, telescopes and star parties.

MEETING LOCATION: AUDITORIUM, SOUTHWEST CORNER OF SCOTTSDALE COMMUNITY COLLEGE CAMPUS, CORNER OF LOOP 101 AND CHAPARRAL ROAD IN SCOTTSDALE, ARIZONA.

For general information on the East Valley Astronomy Club, refer to the EVAC web site: <http://www.eastvalleyastronomy.org>

For further info contact:

Joe Orman (480) 675-2470

[Joe.Orman@motorola.com](mailto:Joe.Orman@motorola.com) <http://pages.prodigy.net/pam.orman/JoeHome.html>

Rick Scott (480) 821-5721

[rmiscott@home.com](mailto:rmiscott@home.com) <http://members.home.net/rmiscott>



### Dark Skies for December 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, set for evening object

Th/Fr 30/ 1	21:27 - 5:41	Su/Mo 10/11	FULL MOON	Th/Fr 21/22	18:51 - 4:31
Fr/Sa 1/ 2	22:21 - 5:41	Mo/Tu 11/12	- - -	Fr/Sa 22/23	18:52 - 5:28
Sa/Su 2/ 3	23:16 - 5:42	Tu/We 12/13	18:48 - 19:01	Sa/Su 23/24	18:52 - 5:55
		We/Th 13/14	18:48 - 20:08		
Su/Mo 3/ 4	0:11 - 5:43	Th/Fr 14/15	18:48 - 21:17	Su/Mo 24/25	18:53 - 5:55
Mo/Tu 4/ 5	1:07 - 5:44	Fr/Sa 15/16	18:49 - 22:25	Mo/Tu 25/26	18:54 - 5:56
Tu/We 5/ 6	2:04 - 5:44	Sa/Su 16/17	18:49 - 23:30	Tu/We 26/27	18:54 - 5:56
We/Th 6/ 7	3:04 - 5:45			We/Th 27/28	19:20 - 5:56
Th/Fr 7/ 8	4:05 - 5:46	Su/Mo 17/18	18:49 - 0:33	Th/Fr 28/29	20:14 - 5:57
Fr/Sa 8/ 9	5:11 - 5:46	Mo/Tu 18/19	18:50 - 1:35	Fr/Sa 29/30	21:08 - 5:57
Sa/Su 9/10	- - -	Tu/We 19/20	18:50 - 2:34	Sa/Su 30/31	22:03 - 5:57
		We/Th 20/21	18:51 - 3:33		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn		
Sa/Su	Set	Rise	Rise Vi	Set Vi	Rise Vi	Set Vi	Set Vi	Vi=Visibility	
2/ 3	17:17	7:07	6:10 6	20:17 -3	2:52 2	6:43 -3	5:57 0	-3 brilliant	
9/10	17:17	7:13	6:35 9	20:29 -4	2:44 2	6:11 -3	5:28 0	0 conspicuous	
16/17	17:19	7:17	7:00 -	20:41 -4	2:36 2	5:39 -3	4:58 0	3 moderate	
23/24	17:23	7:21	7:24 -	20:53 -4	2:28 2	5:08 -3	4:28 0	6 naked eye limit	
30/31	17:27	7:23	7:49 -	21:04 -4	2:20 2	4:38 -3	3:59 0	9 binoculars limit	

By Erich Karkoschka

### Star Parties & Events

#### Donaldson Elem School Star Party Northwest December 2 (Saturday) No. of Scopes: 8-10

This is a rather large school event and a strong showing on our part would be greatly appreciated! The school is located at 2040 W. Omar Drive. Take Ina Road west from Oracle Road to La Cholla Blvd. Turn left (south) and proceed approximately ½ mile. You will see a gate to the school entrance on the left side of La Cholla Blvd. Proceed through the gate and look for an open area on the north side of the school buildings. This is the set up area. Set-up is at 5:30 pm with observing starting at 6:00pm and running until 8:00pm. Refreshments including pizza and beverages will be provided to all TAAA members who support this event! Since this event is just one day after our December meeting, anyone not attending the meeting can call Jeff or Maggie Buzek at 760-4578 to sign up (e-mail: JeffBuzek@aol.com); however a sign up sheet will be available at the December meeting.

#### UofA Astronomy Students Star Party December 3<sup>rd</sup> (Saturday)

Approximately 250 UofA Astronomy Students are expected to attend this activity held in the Redhills Visitor Center parking lot at Saguaro National Park West. The park is located on Kinney Road west of the Desert Museum. Set-up is between 6:00 and 6:30 pm with observing starting at 7:00 pm. Members are to set up their telescopes on the north side of the divided parking lot (close

to the Visitor Center). This event is always enjoyable because of the very interested and appreciative crowd. Please consider volunteering. There will be a sign-up sheet at the December meeting. If you are unable to attend the meeting and would like to volunteer, call John Kalas at 620-6502.

#### Smithsonian Associates Star Party at Vega-Bray Observatory December 9 (Saturday)

Note: The TAAA received this request for help after the TAAA Holiday Party was scheduled. The club advised the Smithsonian that we could not commit to supporting this activity due to its conflict with the party. If any TAAA members are not planning to go to the Holiday Party, they are welcome to attend this event.

The next Smithsonian Associates group star party at Vega-Bray is Saturday, December 9. The group will leave Tucson at 4 p.m., arriving Vega-Bray about 4:45 p.m. [Sunset is about 5:20 p.m.] Dr. Ed Vega says he needs a few extra hands to operate his telescopes for the group. We will provide a box dinner for any TAAA member attending who notifies me by December 7, by email or phone. As always, the Smithsonian will make a donation to the club for your valuable assistance. Thank you. Dan Brocius, Whipple Obs., 670-5706, <brocius@base.sao.arizona.edu>

### Star Parties & Events (cont.)

#### Quail Run Elem School Star Party

December 12, (Thursday)

#### Northwest

No. of Scopes: 6

The school is located at 4600 W. Cortaro Farms Road. Take Interstate 10 West (heading north) to the Cortaro Farms Road exit. Exit here and turn right (east) on to Cortaro Farms Road. Proceed approximately 1 ½ miles and look for the school on your left. Turn into the first driveway and proceed to the back of the school. There is a parking area at the back of the school. The set up area is on the soccer field located at the back of the school. Set up is at 5:30pm with observing running from 6:00pm until 8:00pm. Refreshments will be served from 5:45 to 6:30. A star party leader is needed for this event. A sign up sheet will be available at the December meeting.

#### TAAA Star Party at TIMPA

December 16 (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 4:30 pm for a group question and answer session. It should be dark enough to observe by 5:30 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.

#### TAAA Empire Ranch Star Party

December 23 (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 cold 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 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. 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.

### TIMPA Site News

#### TIMPA Update

by John Kalas

**NOTE:** The next Site Prep Sub-committee meeting is scheduled for Wednesday evening, 12/6, at 7:00 pm in Steward Observatory Conference Room N305.

The TIMPA Organization has received approval from the City of Tucson on the final design of the bathrooms. Several TIMPA Members are coordinating the various construction tasks. They have arranged for discounted materials or outright donations to offset the costs. Work should begin in a month. TIMPA will advise the TAAA when work parties will be required to construct portions of the facility.

Gary Rosenbaum and Duane Neihaus have been completing the design for the improvement to the club's 16-inch telescope to allow the focuser to be rotated to a convenient viewing position. The aluminum metal needed for the modification has been purchased. Dean Ketelsen has ar-

ranged for the machining of the metal to be donated to the club, thereby avoiding a significant expense.

TAAA Member Pat Heimann has offered to donate TAAA signs for the TIMPA site. The club would like to place three 2' x 3' painted metal signs at TIMPA identifying the site as a TAAA observing location. One sign would be placed at the entrance gate on Reservation Road. Another sign would be placed at the start of the drive leading back to the parking area. The third sign would initially be hung on the TAAA security cage inside the TIMPA barn, but would eventually be used to identify the observatory building when completed. Many Thanks to Pat.

The club is still looking for anyone who may have connections for backhoe equipment to perform the excavation required for the observatory building footers and telescope pier. Please contact John Kalas at 620-6502 if you know of someone who would be willing to discount the expense or donate the service.

## TIMPA Site News (cont.)

**Construction Skills Needed**

by John Kalas

As the club proceeds forward with the activities at TIMPA, we need to identify TAAA Members who have some skills required for the tasks and who would be willing to volunteer. The near-term projects include construction of the permanent bathrooms, preparing the observatory site for the dome and support building, and modifying the telescope. The skills or services that will be required include:

1. Concrete worker
2. Mason (cement block layer)
3. Electrician
4. Carpenter
5. Backhoe equipment & operator
6. Telephone pole drill & operator
7. Machine shop services
8. Truck/trailer equipment & operator
9. Donated or discounted construction materials

There will be a sign-up sheet at the December meeting for those members who are willing to volunteer their services to support these exciting club projects. Please come and sign up or call John Kalas at 620-6502 to volunteer.

**Desert Skies Classified**

**FOR SALE:** Celestron NexStar 5, easy one-piece set up including tripod! (compact 5" scope, integrated GOTO computer with many objects, sturdy tripod, 12vDC tracking. Moon or Saturn at 200x + no color fringing.) Includes tripod (was \$199 extra), original box, 25mm Plossl (50x), more. Great condition! \$1150. Contact Randy at 520/795-5720 or <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> (2/01)

**FOR SALE:** Celestron 7x50 Binoculars with case. Asking \$100 \$75. Call Duane Niehaus at 290-1722. (11/00)

**FOR SALE:** Celestron 11" Starhopper Dobsonian telescope with JMI 2" Crayford focuser and Telrad base. Also has handles and eyepiece tray. Mint condition with excellent optics. \$750.00 Great scope but it keeps aggravating my back. Will consider a trade for a 6" Mak or 4" to 5" refractor. Contact Frank Cathell at 520-743-0018 or <fcathell@aol.com>. (12/00)

**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. (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.



# TAAA Meetings and Club Star Parties Schedule - Year 2001

## TAAA Meetings and Club Star Parties Schedule - Year 2001

### STAR PARTIES

MONTH	GEN. MTG.	BOARD MTG.	NEW MOON	EMPIRE RANCH	TIMPA	SPECIAL ACTIVITIES
Jan.	1/5	1/8	1/24	1/20	1/27	
Feb.	2/2	2/12	2/23	2/24	2/17	
Mar.	3/2	3/12	3/24	3/17	3/24	3/31 - Telescopes for Telethon Public Star Party
Apr.	4/6	4/9	4/23	4/21	4/14	4/21 - TAAA Annual Picnic at Vega-Bray Observ.
May	5/4	5/14	5/22	None	5/12	5/19 - Public Star Party at Desert Museum
June	6/1	6/11	6/21	6/16	6/23	6/23 - TAAA/TIMPA Joint Activity
July	7/6	7/9	7/20	7/21	7/14	
Aug.	8/3	8/13	8/18	8/18	8/11	
Sept.	9/7	9/10	9/17	9/15	9/15	9/15 - TAAA/TIMPA Joint Activity
Oct.	10/5	10/8	10/16	10/13	None	10/20 - Public Star Party at Desert Museum
Nov.	11/2	11/12	11/15	11/10	11/17	
Dec.	12/7	12/10	12/14	12/15	12/8	

### MEETINGS

MONTH	GEN. MTG.	BOARD MTG.
Jan.	1/5	1/8
Feb.	2/2	2/12
Mar.	3/2	3/12
Apr.	4/6	4/9
May	5/4	5/14
June	6/1	6/11
July	7/6	7/9
Aug.	8/3	8/13
Sept.	9/7	9/10
Oct.	10/5	10/8
Nov.	11/2	11/12
Dec.	12/7	12/10

11/14/00

**TAAA Board of Directors Meeting - November 13, 2000**

Location: Steward Observatory Conference Room N305 University of Arizona

Call to Order: 7:12 pm

Board Members Present: John Kalas, Andrew Cooper, Terri Lappin, Jane Tongate, Bill Lofquist,  
Robert Callanan, Steve Peterson

Members Present: John Polacheck

Guests Present: J.J. Ruether and Mike Cummins

1. TAAA investment review presented by J.J. Ruether. Mr. Ruether explained that TAAA's account did not drop below the amount deposited despite a down market. This is consistent with the capital preservation stance the club has authorized. Several board members questioned the advisability of maintaining equity investment at this time. J.J. explained that the strong growth market indicators were still present and there was no need to abandon equities. He believes that, as soon as the Presidential election is settled, the market will rebound. After the review, the board unanimously agreed to keep the club's funds in their current accounts until at least the end of the year.
2. TIMPA Bathroom Update: presented by Mike Cummins (TIMPA President) and John Polacheck. The city has approved the plans. The bathroom will be all block construction, steel roof, red lights and designed for low maintenance. The goal is to keep the cost down and most of the labor will be donated by TIMPA/TAAA members or done at a reduced cost by outside contractors. Completion date is scheduled for after the first of the year.
3. SA-IDA Report by John Polacheck: two new chapters in Arizona and the organization is expanding globally. There is increased activity with the city and county, they are beginning to see the significance of good lighting.
4. Treasurer's Report presented by Terri Lappin. Terri met with the Accountant and finalized the Federal Income Tax Forms and the AZ incorporation paperwork. An unusual expense will be reported next month for approx. \$600 for the newsletter copying at LPL (July, August, October and November).
5. Holiday party; approximately 26-30 members have signed up for the club holiday dinner.
6. TAAA E-mail Exploder: Andrew Cooper has not had time to complete the project.
7. 2001 TAAA Officers; Andrew Cooper has agreed to run for President. There is a need to spread out the responsibilities and have more member involvement in activities (planning and execution). Action item to list officers' duties was carried forward to next month's board meeting.
8. TAAA Sponsored Solar Observing Activity; the Board has been approached by an individual, asking that TAAA host a solar observing activity at the Sun Glow Ranch in the Chiricahua's. This activity would be advertised nationally. The tentative date is the first week in October 2001. This is exploratory at this time and the Board authorized further investigation.
9. 2001 Club Calendar; John Kalas presented a draft of a star party schedule for next year. Two TIMPA Star Party dates conflicted with TIMPA activities. The schedule was adjusted to accommodate the conflict. John Kalas has contacted Whipple Observatory to request dates for their public events.
10. TAAA Signs for TIMPA; TAAA Member, Pat Heimann has offered to donate the signs. John Kalas will work with Pat to finalize the design. A proposal to use artwork similar to that used on the new club apparel will be evaluated.
11. Reach for the Stars; Bill Lofquist reported that the star parties held recently were informal and that it was hard to hold the kid's attention. The group would like to rework what they are doing and focus on those kids who have more interest.

The meeting was adjourned at 10:07 pm.

Respectfully submitted,  
Jane Tongate  
TAAA Secretary

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# THANKS

To All TAAA Members Who  
Supported the Club This Year  
From Your Board of Directors

## Constellation Report by Chris Lancaster

## Eridanus

the river

This is the great celestial river that winds its way from the western foot of Orion ( $\alpha$  Orionis) to the southern star Achernar, which translated from Arabic means "the end of the river." This line of stars first heads west, takes a turn to the south, flows back to the east, and finally makes its final journey southwest behind the horizon. To be fair, from Tucson's latitude, Achernar (the 9th brightest star seen from Earth) can theoretically be glimpsed for a couple of hours when it is on the meridian, but since it only climbs half a degree in the sky at most, any hill or shrub will successfully hide it from view, and it can never be seen north of a latitude line connecting such cities as San Diego, Casa Grande, Dallas, and Charleston, SC. This constellation has been seen as a river since ancient times, most often the Nile or Euphrates.

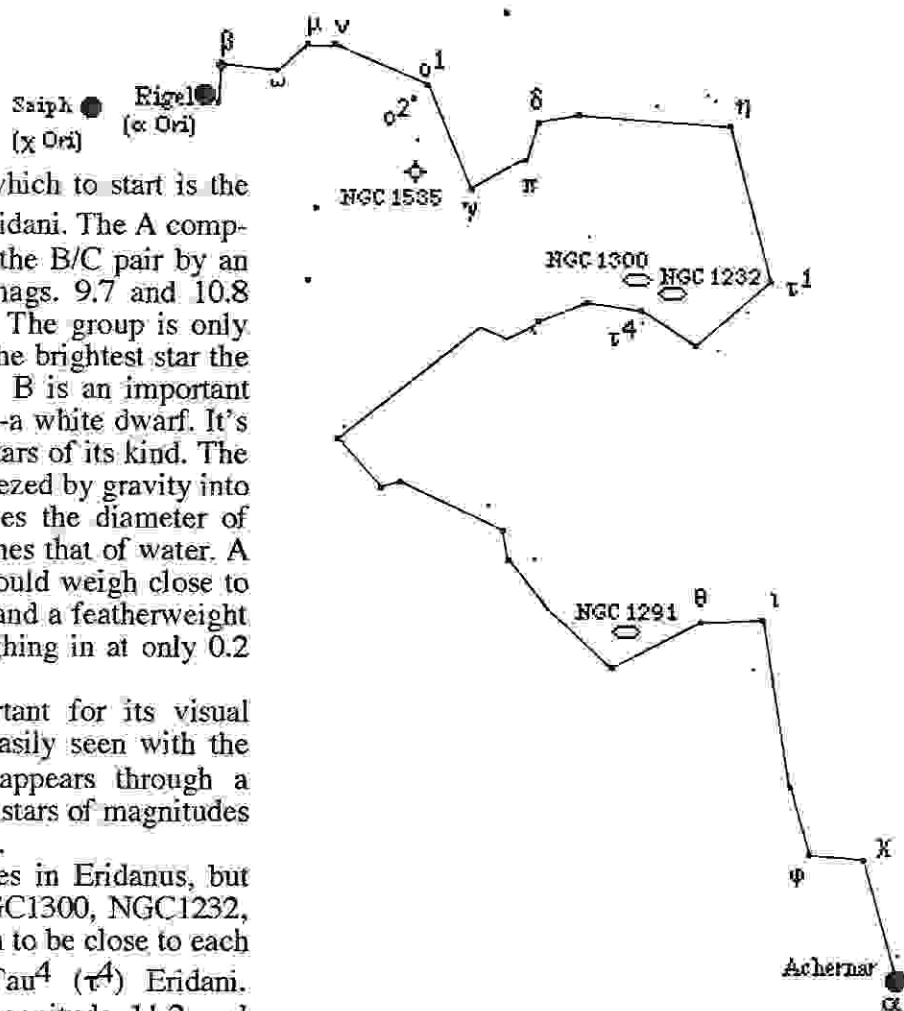
An interesting target with which to start is the triple star system Omicron<sup>2</sup> ( $\omicron^2$ ) Eridani. The A component (mag 4.5) is separated from the B/C pair by an expansive 83", while B and C (mags. 9.7 and 10.8 respectively) stand about 9" apart. The group is only 16 light years from Earth, making the brightest star the 8th nearest of the naked eye stars. B is an important object simply because of what it is—a white dwarf. It's one of the most easily observable stars of its kind. The 0.44 solar masses it contains is squeezed by gravity into a body which is less than 2.5 times the diameter of Earth, making its density 90,000 times that of water. A golf ball sized chunk of this star would weigh close to 3.5 tons. The C star is a red dwarf and a featherweight among its stellar counterparts, weighing in at only 0.2 solar masses.

Another double star important for its visual appearance is Theta ( $\theta$ ) Eridani. Easily seen with the naked eye at magnitude 2.9, it appears through a telescope as a pair of brilliant white stars of magnitudes 3.5 and 4.5 separated by about 8.5".

There are dozens of galaxies in Eridanus, but three that take center stage are NGC1300, NGC1232, and NGC1291. The first two happen to be close to each other, forming a triangle with Tau<sup>4</sup> ( $\tau^4$ ) Eridani. NGC1300 is a barred spiral of magnitude 11.2 and measuring 6.2'x 4.1'. You may not notice the two spiral arms but you should see the nucleus and bar making a thin oval structure. NGC1300 is found 2.4 degrees north of  $\tau^4$ , or RA 3h 19.7m Dec -19° 24.7".

Moving 2.6 degrees to the southwest will reveal NGC1232, a slightly brighter galaxy of magnitude 10.6 and larger than NGC1300, covering 7.4'x 6.4'. This one has closely wrapped multiple arms which seem to merge with each other to give this galaxy the appearance of a soft circle of light. You will find NGC1232 at RA 3h 9.8m Dec -20° 34.9'.

Near the far southern regions of the constellation is NGC1291, another bright spiral galaxy with tightly wound arms. It glows comparatively brightly at magnitude 9.4, and it is significantly larger than the other two galaxies, measuring 9.7'x 8.1'. However, it sits well down in the sky toward the southern horizon 3.7 degrees ESE of our double star Theta Eridani. Any significant dust or haze in the air will compromise your view of this galaxy. Look at RA 3h 17.3' Dec -41° 6.5' for this object.



A fairly easy deep sky object to view is NGC1535. It's a planetary nebula of magnitude 10 and 20" in size. Move 5.5 degrees south of the triple star  $\omicron^2$ , or zoom in to RA 4h 14.2' Dec -12° 44.5'.