

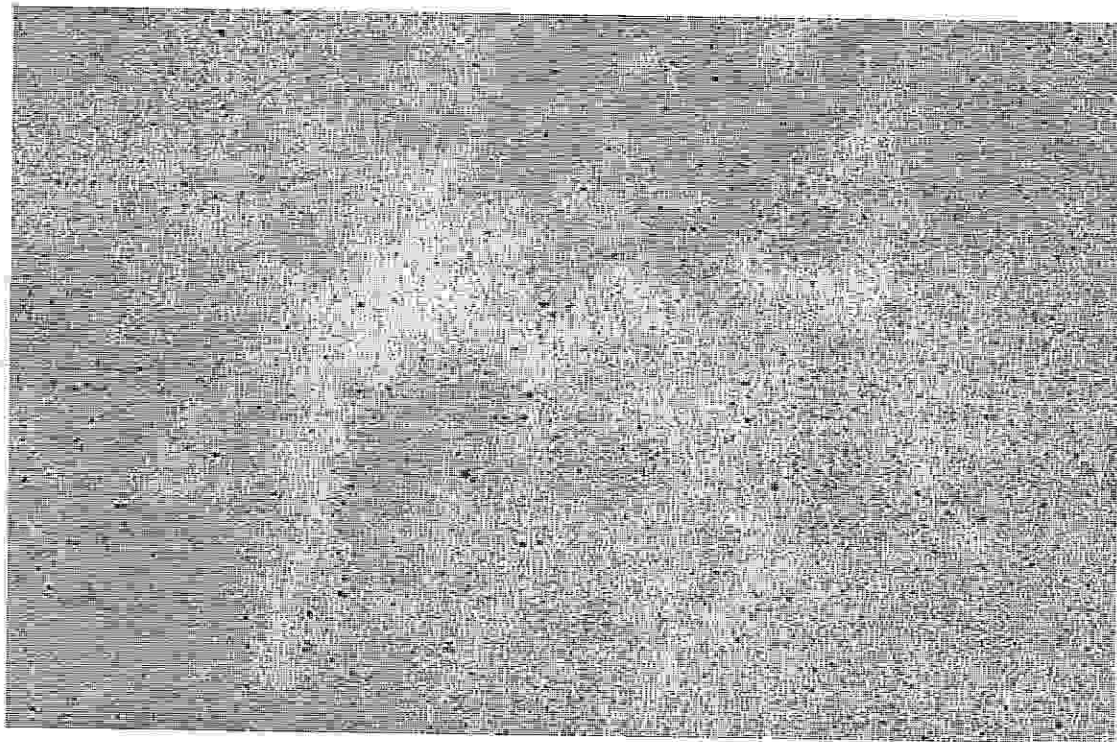


Desert Skies

Tucson Amateur Astronomy Association

Volume XLVII, Number 1

January, 2001



Dark Nebulosity

Calendar of Events

BEGINNERS LECTURE: Jan 5, 6:30 pm at the Steward Observatory Auditorium - Room N210. This month's topic is *Getting Started in Astrophotography* by Steve Coe.

GENERAL MEETING: Jan 5, 7:30 pm at the Steward Observatory Auditorium - Room N210. Topic is *Dark Nebulosity* by Steve Coe.

BOARD OF DIRECTORS MEETING: Monday, Jan 8, 7:00 pm at Steward Observatory Conference room N305.

STAR PARTIES AND EVENTS:

- Jan. 04 - Astrophotography SIG
- Jan. 12 - Rincon Country West RV Resort S.P. (Paid)
- Jan. 17 - TIMPA Site Prep Sub-committee Meeting
- Jan. 20 - TAAA Empire Ranch Star Party
- Jan. 25 - TIMPA long-range planning sub-committee
- Jan. 27 - TAAA TIMPA Star Party
- Jan. 30 - Grijalva Elementary School Star Party
- Jan. 31 - Holladay Intermediate School S.P.

Newsletter Schedule: Deadline for articles: Monday, Jan 15. Printing: Monday, Jan 22. Folding Party: Tuesday, Jan 23. Mailing: Wednesday, Jan 24. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

Cover: Reversed image of the Dark Horse Nebula in Ophiuchus. Stars are black dots and the dark nebulosity is the whiter regions. Photo by January's Main Lecturer Steve Coe, downloaded from the Saguaro Astronomy Club's website <saguaroastro.org>.

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

TAAA Phone Number: (520) 882-1950

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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

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President's Message

WOW! What a month! December was a very fruitful and busy month. The first TIMPA Site Prep Sub-committee Meeting in several months was held on 12/6. Significant progress was made toward establishing a schedule for continued development of the site. See the article in the *TIMPA Site News* section later in this newsletter.

The Holiday Party on 12/9 was an outstanding success; a great turnout, delicious food, great presentations, and fantastic raffle prizes. See the recap in the *Club News* section later in this newsletter.

More activities at the TIMPA Site took place during the weekend of 12/9 and 12/10. A donated dome was transferred to TIMPA on 12/9 and donated cement blocks for the permanent bathrooms were moved to TIMPA on 12/10. All these activities were accomplished because of another donation of a truck. You won't believe the pro-

gress that has been made on the permanent bathrooms at the site. For all of the details, see the articles in the *TIMPA Site News* section.

Good progress was made at the 12/11 board meeting to identify tasks that are currently burdening the club officers. It is essential that these tasks be assigned to volunteering members to support the many activities that require attention. A concise listing of the tasks with a brief description of responsibilities will be published in the February newsletter.

Lastly, February will be a Members Night so get your presentations ready.

Have a Safe and Prosperous New Year,

John Kalas

Meeting Information

Beginners Lecture

Title: Getting Started in Astrophotography
Speaker: Steve Coe

If you would like to know about simple ways to start photographing the sky and getting results, then this is the talk for you. Nothing difficult or complex, only the easy methods will be discussed.

The talk will cover using an inexpensive camera to take photos while just sitting on a tripod, then while using the telescope motor drive to track the camera along with the stars. Lastly, using a "barndoor" mount as a separate method for following the stars.

So, if you are a novice who would like to capture the night sky on film and have your own photos to show off at our next Member's Night in February, then please attend.

We greatly appreciate Steve's willingness to give both lectures this evening.

Main Lecture

Title: Dark Nebulosity
Speaker: Steve Coe

This month's lecture will be about dark nebulae. There are many places along the Milky Way where the stars seem to disappear. Observers of the sky spent many decades wondering about the composition of these dark markings. The talk will provide information about dark nebulae as well as the people who were fascinated with them. Steve Coe from Phoenix will show us slides of his photos of these fascinating dark areas as well as a few professional images.

Steve Coe is an avid sky observer and has lived in Arizona for 25 years. As a day job he teaches electronics at DeVry Institute of Technology in Phoenix. He has a 13 inch Newtonian on a Bigfoot mount from Pierre Schwaar. There is also a 7-inch Maksutov in a backyard, roll-off roof observatory.

You may have seen Steve's recently completed book entitled "Deep Sky Observing: The Astronomical Tourist". It includes tips and techniques for observers and notes, drawings and images of a variety of deep sky objects. After the lecture, copies of the book will be available (\$30) and Steve will be happy to autograph them.

Club News

Member News

We welcome the most recent members who have joined the TAA: Jerry Bialozynski, Mac Starr Clark, Bob Donohue, Jane Erin, Jim Fritz, Ken and Joan Gard, James H Glasgow, Robert Mumme, James and Mary St Clair, Dave Start, Harold T Staves, and returning member Philip C Marsh. 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.)

Smithsonian Thank-You

The following e-mail message was received thanking the club for the participation of TAAA Members Rich and David Watson, JohnPaul Sosville, Kevin Bays, and Jeff Brydges.

Date: 12/13/00 From: Amy Ritchie To: John Kalas
Hello. On behalf of the Smithsonian Associates on the recent Astronomy seminar in Tucson, thank you for organizing the members of the Tucson Amateur Association to meet our group. The participants had a wonderful time and really learned a great deal from their participation. I know that the evening was a major highlight of the program. Please know how much we appreciate your hospitality and support of our program. You helped to make the tour very rewarding for our members.

Amy Ritchie
Seminar Coordinator
Smithsonian Study Tours
Washington DC 20560-0702

Donation to the TAAA

TAAA Member Chuck Greenberg has made a very generous donation to the club of a six-foot diameter Pro-Dome. It is a fiberglass structure complete with an automatic dome control system. The dome can house a small to medium sized telescope and will make a great addition to the TIMPA Site. Thanks, Chuck.

Another Donation to the TAAA

A gentleman by the name of Rick Gould from Tubac contacted the club about donating a number of astronomy-related items. Included are an 8" dia. Coulter Dobsonian reflector telescope, a military surplus aerial photography lens system that can be built up into a refracting telescope, a slide projector and screen, and a tube (less optics) and base from a 16" Meade Starfinder Dobsonian telescope. The 8" Dobsonian telescope will make a super loaner telescope. John Kalas picked up the items and transported them to the club's storage cage in the TIMPA barn on 12/17.

TAAA Holiday Party Recap

This year's Holiday Party was another resounding success. Thanks to Terri Lappin, Barb Callanan, and Steve Petersen, the arrangements were great. About 67 people attended and the banquet room at the China Rose Restaurant was beautifully decorated. Carol Hunter and her dedicated crew provided a delicious array of food including; appetizers, cashew chicken, Mongolian shrimp, sweet and sour pork, sesame chicken, beef and broccoli, barbeque pork lo mein, vegetable fried rice, and beverages. For dessert there were almond cookies and fortune cookies. No one

went home hungry.

After the meal, Steve introduced the three presentations; James McGaha's entertaining analysis of various Christmas legends and myths, Dean Ketelsen's display of amazing photographic plates taken with the Kitt Peak 4-meter telescope, and John Kalas' slide show of solar prominences and a recent Ganymede transit of Jupiter.

The door prize drawing was held next. A fantastic array of gifts from five donors had everyone anticipating the drawing. Starizona donated a number of gifts including a 10mm Televue Radian eyepiece. Sky Works gave the club many neat prizes including a large aluminum eyepiece case. Stellar Vision donated five nice gift certificates. TAAA Member, Pat Heimann, donated several packages of his Telrad targets and a laminated version of the Sky Atlas 2000. TAAA Member, Ed Erbeck, Jr. of Crazy Ed's Optical, gave the club a super star atlas, as well. Many attendees went home with some nifty gifts. Thanks again to our generous donors.

John Kalas wrapped up the activity with a review of the events and accomplishments of the TAAA in 2000. He acknowledged the support of many members and thanked everyone for helping make the year 2000 another incredible year for the club. The evening was an enjoyable gathering for the attendees.

Beginners Lecturer 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.

Astrophoto SIG Dinner

Thursday, 4 January, 2001
China Rose, 7pm

We continue the tradition into the New Year! This is a chance to learn and see what other members are doing in astronomical imaging. Bring some prints, slides, or electronic media; we don't discriminate though for the latter, you need a printer output or your own laptop. It is a nice informal place to meet, talk shop and get inspired to get out there and brave those winter temperatures. Questions, call me at 293-2855 or email at ketelsen@as.arizona.edu. See you there!

Dean Ketelsen

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 needs 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 be representing the TAAA and helping us to get our event publicized. If you are willing to participate, please get me a short paragraph (typed or emailed) about yourself and why you might be interesting to others. I might need a photo of you with your telescope, or taking part in whatever makes your story interesting to the general public, but that will be requested later. Contact me, Terri Lappin, at any time (other than the middle of our meetings) if you have questions. See page 2 for contact information.

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 shows 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.

TIMPA Long Range Planning Meeting

With the generous donation of a 6' observatory dome for TIMPA, it falls upon the Long Range Planning Committee to decide what to do with it. A meeting of this loosely knit committee has been scheduled for January 25th at 7pm, location TBD (either Steward Conference room or over dinner someplace). If you are interested in how/where this dome is to be used or other TIMPA long range plans, please contact Terri Lappin by email or phone (see page 2) to learn where we will meet (or eat!).

Grand Canyon Star Party '01
16-23 June

We have finally had final approval of the dates for this year's event, so make your vacation and observing plans now. The star party this year falls right over new moon, which for some means an African trip for the solar eclipse, but we'll have a great time too. For those who have not been there, you might want to check out the TAAA website (tucsonastronomy.org) and go to the Grand Canyon page for reviews of past star parties and additional info. There will be more info forthcoming in future newsletters, but wanted to confirm this year's dates so you could all make plans. As before, we likely will be getting some campsites to distribute, and also, as before, I'll be taking names on March 1. If you have any questions not addressed on the website, you can e-mail me at ketelsen@as.arizona.edu or call me at 293-2855.

Dean Ketelsen

Items of Interest

WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

By Rik Hill

[My call for websites at the end of these articles has produced quite a few responses in the last month. This will result in future articles but it will take a few issues to get to all of them. So if you don't see your suggestion developed into an article right away, be patient, it's coming.]

We live in a wonderful part of the world where the skies are spectacularly clear and there is an abundance of equipment and observatories, both professional and amateur. But many who visit or live here have access to neither, though their interest in astronomy is high. Well, Kitt Peak has a public program that makes a 16" telescope on the mountain that is available to anyone. It is called the

Nightly Observing Program. That's right...NIGHTLY! This is greatly expanded from the old program of years past. It is a program for the public, in which participants visit Kitt Peak and have access to Visitor Center resources for a night of orientation and observation. It is detailed at:

<http://www.noao.edu/outreach/nop/>

This program is largely aimed at the novice amateur astronomer and the public in general. For the more experienced observer they have the Advanced Observing Program. This program is "geared towards the amateur astronomer interested in using a large telescope with state-of-the-art instruments. No previous experience in astronomy is necessary." You get to use a CCD camera (SBIG ST8) on the 16" telescope to take images of objects of your choosing. Further you get to "dine with other astronomers" before beginning the night. Now that's got to

Items of Interest (cont.)

be an exciting opportunity. Details for this can be found at:

<http://www.noao.edu/outreach/aop/>

You can get a good idea of what can be done by seeing images taken by other observers at:

<http://www.noao.edu/outreach/aop/observers/bestof.html>

The most spectacular sub page of this URL is at:

<http://www.noao.edu/outreach/aop/observers/galaxy.html>

There is a large library of galaxies taken with the telescope in the clear, dark skies of Kitt Peak. It is instructive for any critics of these images to go and look at 1-meter telescope images from just 25 years ago. Things have certainly come a LONG way since then!

As you might expect, there is a waiting list for time in these programs. Currently it is about 3 months long. But clearly worth it! With careful planning you could make quite a night of it up there.

As always, if you know of a particularly good website you would like mentioned here, drop me a line at rhill@lpl.arizona.edu or visit my website at:

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

New Vistas In Astronomy

The Whipple Observatory is pleased to present its 31st series of public lectures on astronomy and astrophysics to the people of the Santa Cruz Valley.

January 9 ***The Lure of Black Holes***
Dr. Trevor Weekes, Fred Lawrence Whipple Observatory

January 16 ***Asteroids: Friends and Foes***
Dr. Nelson Caldwell, Fred Lawrence Whipple Observatory

January 23 ***The View From Above: News From the Hubble Space Telescope***
Dr. Emilio Falco, Harvard-Smithsonian Center for Astrophysics

February 6 ***Lights Down for the New MMT***
Dr. Craig Foltz, MMT Observatory

All lectures are held at 3 p.m., Tuesdays, in the Green Valley Recreation Center West Auditorium, Green Valley, Ariz. Each 45-minute illustrated lecture is non-technical and intended for the interested layperson. A question-and-answer period follows each lecture. Admission is free.

For more information, call the Whipple Observatory Visitor Center at 670-5707. Co-sponsored by the Green Valley Recreation Association Inc.

Coyote Development Defeated

At the December meeting, John Kalas announced that he had been contacted by Mike Newberry, developer of the MIRA Image Processing program, who lives in the Three Points area. Mike was mobilizing several groups to fight a proposed major housing development in the area. The owner of the Buckalew Pumpkin Farm attempted to persuade the Pima County Supervisors to approve rezoning of a 500 acre parcel adjacent to the pumpkin farm to allow 700+ homes to be built in a gated golf community. The proposal included a 67-acre commercial zone that would contain a supermarket, gas station, driving range, and a hotel. John Kalas quickly developed a petition against the rezoning proposal and asked for member support at the December meeting. About 75 members signed the petition and John presented it to all five Pima County Supervisors on 12/11, one day before the hearing. Mike Newberry advised John several days after the hearing that the request was soundly defeated by a 4 to 0 vote. One supervisor abstained from voting due to a conflict of interest. We would like to think that our petition had an effect on the supervisor's vote. Thanks to all who signed the petition.

Help Wanted

Looking for someone to help me get my Meade LX200-12" set up in my dome with remote control for CCD imaging and I also could use some help in refining the pier and mount for the telescope to prepare for astrophotography. The scope is mounted on an equatorial wedge and there is much more vibration that I think is acceptable for photography. I am located in Tubac on the west side of I-19 opposite Mt. Hopkins. I can be reached by phone at 398-8473. I will be away during the holidays, so e-mail me at ddgrinder@aol.com

Dave Divine

Dark Skies for January 2001

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

Su/Mo 31/ 1	22:57 - 5:58	Th/Fr 11/12	19:05 - 20:05	Su/Mo 21/22	19:13 - 5:58
Mo/Tu 1/ 2	23:53 - 5:58	Fr/Sa 12/13	19:06 - 21:15	Mo/Tu 22/23	19:14 - 5:58
Tu/We 2/ 3	0:49 - 5:58	Sa/Su 13/14	19:07 - 22:22	Tu/We 23/24	19:15 - 5:57
We/Th 3/ 4	1:48 - 5:59	Su/Mo 14/15	19:08 - 23:26	We/Th 24/25	19:15 - 5:57
Th/Fr 4/ 5	2:49 - 5:59	Mo/Tu 15/16	19:08 - 0:27	Th/Fr 25/26	19:16 - 5:57
Fr/Sa 5/ 6	3:54 - 5:59	Tu/We 16/17	19:09 - 1:27	Fr/Sa 26/27	19:57 - 5:56
Sa/Su 6/ 7	5:01 - 5:59	We/Th 17/18	19:10 - 2:26	Sa/Su 27/28	20:52 - 5:56
Su/Mo 7/ 8	- - -	Th/Fr 18/19	19:11 - 3:23	Su/Mo 28/29	21:46 - 5:56
Mo/Tu 8/ 9	- - -	Fr/Sa 19/20	19:11 - 4:19	Mo/Tu 29/30	22:41 - 5:55
Tu/We 9/10	FULL MOON	Sa/Su 20/21	19:12 - 5:14	Tu/We 30/31	23:38 - 5:55
We/Th 10/11	- - -			We/Th 31/ 1	0:36 - 5:54

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Set Vi	Set Vi	Rise Vi	Set Vi	Set Vi	Vi=Visibility
30/31	17:27	7:23	17:35 -	21:04 -4	2:20 2	4:38 -3	3:59 0	-3 brilliant
6/ 7	17:32	7:24	18:01 -	21:13 -4	2:12 1	4:08 -3	3:31 0	0 conspicuous
13/14	17:38	7:23	18:30 6	21:21 -4	2:04 1	3:39 -3	3:02 0	3 moderate
20/21	17:45	7:22	18:59 4	21:27 -4	1:55 1	3:11 -3	2:34 0	6 naked eye limit
27/28	17:51	7:18	19:18 3	21:32 -4	1:46 1	2:43 -3	2:07 0	9 binoculars limit

By Erich Karkoschka

Star Parties & Events

Rincon Country West RV Resort Star Party (Paid)

January 12 (Friday)

No. of Scopes: 10

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. Follow "B" Street around to the left to the picnic area for set-up 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 January meeting. Bill Lofquist will be the Star Party Leader and can be contacted at [H] 297-6653 or e-mail at wlofquist@aol.com.

TAAA Star Party at Empire Ranch

January 20 (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.

TAAA Star Party at TIMPA

January 27 (Saturday)

TIMPA and TAAA will have another joint activity. Starting at noon, TIMPA will offer FREE flying instruction to TAAA members and their friends. Their radio-controlled trainers have dual controls; so learning to fly is easy, fun and safe!!! Their instructors are most skilled, and more importantly, very patient teachers. From noon until sunset there will be lots and lots of 50 cent grilled hot-dogs, with

Star Parties & Events (cont.)

all the fixings, for sale. Also, a variety of 50-cent cold soda pop. Or, you can bring your own picnic snacks. At sunset, 5:53 PM that evening, the usual TAAA beginners star party will begin. In the early evening, the beautiful three-day-old crescent moon will be visible in the western sky, setting at 8:51 PM. Don't be surprised if a few of the more skilled TIMPA pilots do a little night flying that night also !!! DRESS VERY WARMLY!!! This is a great place for new members to get help with observing issues or equipment questions. 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 will be a fun star party. Come on out and join us!

Grijalva Elementary School Star Part Southwest

Jan 30. (Tuesday) No. of Scopes: 3

The school is located at 1795 W. Drexel Road. If you are going south on I-10, take the Nogales exit (I-19) to the right. Continue south to the Irvington Road exit. Turn right at Irvington Road and proceed approximately ½ mile to the stop light at Midvale Park Road. Turn left and proceed south approximately 1 mile to Drexel Road where there is a four-way stop sign. Turn right and proceed ½ mile. The school will be on your left. The parking area is on the opposite side of the school. The set up area is located on the soccer field that is in the middle of the playground. Set up is at 5:30pm with observing from 6:00pm until 8:00pm. A star party leader is needed for this event. A sign up sheet will be available at the January meeting.

Holladay Intermediate School

Jan 31 (Wednesday)

South-Central

No. of Scopes: 8-10

This will be a large star party held in conjunction with the school's science fair. The school is located at 1110 E. 33rd St. Take 22nd St. west to Park Ave. Turn left (south) on Park and proceed approx. 0.8 mile to 34th St. Turn left on 34th St. and cross over Fremont. On the north side of 34th St. there will be a back entrance gate to the school's field and basketball court. This is the set up area. Set up is at 6:00pm with observing from 6:30pm and to 8:30pm. A star party leader is needed for this event, and a sign up sheet will be available at the January meeting. A good turn out by TAAA members would be greatly appreciated considering the rather light school star party schedule for January. Thanks for your support!

TIMPA Site News

TIMPA Update

By John Kalas

The next Site Prep Sub-committee meeting is scheduled for Wednesday evening, 1/17, at 7:00 pm in Steward Observatory Conference Room N305.

The next long range planning Sub-committee meeting is scheduled for Thursday evening, 1/25, at 7:00 pm. Contact Terri Lappin by email or phone (see page 2) for location.

Gary Rosenbaum and Duane Neihaus completed 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 was received. Machining of the metal should take place in early January.

The design for the TAAA signs to be placed at the TIMPA Site has been finalized. It will be transmitted to TAAA Member Pat Heimann who has offered to donate the signs for the TIMPA site.

A very fruitful TIMPA Site Prep Meeting was held on Wednesday, 12/6, with Bob Schwartz, John Polachack,

Gary Rosenbaum, Terri Lappin, Andrew Cooper, and John Kalas in attendance. Andrew's observatory footer design was reviewed and approved. The most important outcome of the meeting was establishing a tentative schedule for completing the work required to install the 16-foot observatory from Kitt Peak. The lower support structure will be cut in half and transported to TIMPA in January. Excavation of the ring footer and pouring of the concrete is targeted for February. If possible, the laying of the two courses of cement blocks on top of the ring footer will be completed in February, also. In March, we will trench, form, and pour the pier and install the lower support structure onto the footer. In April, the dome will be disassembled on Kitt Peak and transported to TIMPA. The dome will be reassembled onto the lower support structure in May. If all goes well, we will install the club's 16" telescope into the observatory in June. This is an aggressive plan, but an achievable one if enough members pitch in to help. The next TIMPA Site Prep Meeting is scheduled for January 17th at 7:00 pm in the Steward Observatory Conference Room N305.

On Saturday morning, 12/9, TAAA Members Dean Ketelsen, Steve Ratts, Rich and David Watson, and John Kalas visited the home of TAAA Member, Chuck Greenberg, to transfer a donated dome to the TIMPA Site. Rich Watson

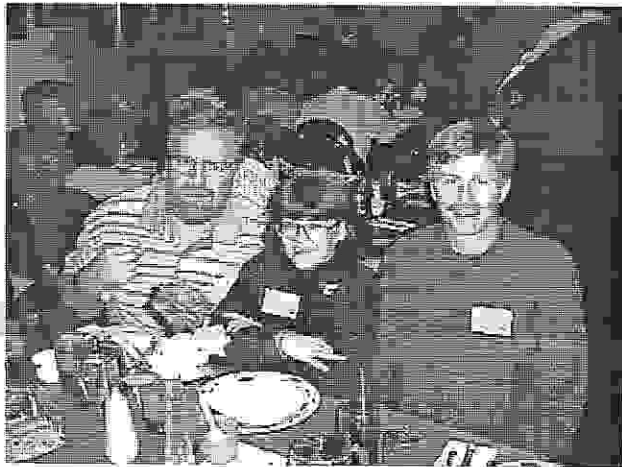
TIMPA Site News (cont.)

arranged to borrow a nifty flatbed truck from his friend Ron Gerson, owner of Gerson's Used Building Materials for the entire weekend. The 6 foot diameter fiberglass Pro-Dome was hoisted over a 7 foot high block wall in two pieces. The dome is in great condition and will serve as a home for a TAAA telescope in the near future at the TIMPA Site.

On the next day, Sunday, 12/10, eight TAAA Members and one TIMPA Member used the flatbed truck again to move about 700 large cement blocks from John Polacheck's residence to the TIMPA Site. The blocks were donated by John and Faye Polacheck for use on the perma-

nent bathrooms currently under construction at the TIMPA Site as well as the footer for the club's 16-foot observatory. The crew included; Patrick Price, Randy Rightmire, Kevin Bays, Gary Rosenbaum, Rich and David Watson, George Barber, and John Kalas. Gary Ellingson from the TIMPA organization assisted by identifying the block that should be moved. Two large loads of block were transported that day. The second load had to be unloaded at TIMPA in the dark with the help of several sets of car headlights. A lot of very hard work, but it was worth it.

Holiday Party Photos by Steve Peterson



TAAA Board of Directors Meeting-December 11, 2000
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Location: Steward Observatory Conference Room N305, University of Arizona

Call to Order: 7:00 pm

Board Members Present: John Kalas, Terri Lappin, Jane Tongate, Robert Callanan, Steve Peterson

Board Members Absent: Bill Lofquist, Andrew Cooper

Member Present: Rich Watson

1. Events - John Kalas presented upcoming events through Jan 31.
2. Treasurer's Report - Terri gave a brief review of the financial statement.
3. TIMPA Update - presented by John Kalas; there has been a lot of activity out at the site. On Dec 10 volunteers moved cement block donated by John and Faye Polacheck to TIMPA and on Dec. 9 a 6 ft diameter Pro-Dome donated by Chuck Greenberg was also delivered to TIMPA. The restroom pad is complete and roofing materials are on site.
4. TAAA Sponsored Solar Observing Activity - The Board put together a list of concerns. John Kalas will present the questions and solicit responses.
5. Officer Workload Reduction - Committees for 2001 - The Board went over a list of duties and who is presently executing them. Additional duties were added and possible members were named to assist with these duties. This listing will be presented to the membership in the near future.
6. 2001 Club Calendar - Kitt Peak dates - Proposed dates of April 14 and September 8. Two events are scheduled to allow for members to attend who have not yet attended a Kitt Peak Star Party due to the limit imposed by Kitt Peak.
7. TAAA E-mail Exploder - Tabled.
8. Signs for TIMPA Site - John Kalas presented a sign for Board approval, it was critiqued and John will make a few adjustments.
9. New donations - John Kalas reported that an individual in Tubac wants to make a contribution of items to the club. Included is an 8" Coulter Dobsonian telescope.
10. SA-IDA - Rich Watson attended the board meeting as a representative of the Southern Arizona Chapter of the International Dark Sky Association.

Meeting adjourned 9:50 pm.

Respectfully submitted,
Jane Tongate
Secretary

Desert Skies Classified

FOR SALE:	8-inch, f/6, Mead Starfinder Dob w/ 6x30 finder. 1995 vintage. Call Kevin at 520-206-9178 or e-mail bay-skevin@mindspring.com (4/01)
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FOR SALE:	1999 Celestron Celestar 8 SCT telescope with following accessories: 25mm 1-1/4" SMA ocular, 6x30 finderscope, standard wedged pod, 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. Call 297-4802 or e-mail nanandstan@msn.com (4/01)
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FOR SALE:	Celestron Advanced Astromaster, 1 year old, excellent condition, used for one month, \$225. Encoders and hardware for CT4, \$50. Bill Dellinges (480) 983-6651, <mrcomet@uswest.net> (2/01)
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FOR SALE:	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> (2/01)
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FOR SALE:	Celestron Advanced Astromaster, 1 year old, excellent condition, used for one month, \$225. Encoders and hardware for CT4, \$50. Bill Dellinges (480) 983 6651, <mrcomet@uswest.net> (2/01)
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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)
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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.
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Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this list, call John Kalas at 620-6502 or e-mail at jckalas@aol.com.

Constellation Report by Chris Lancaster

Taurus

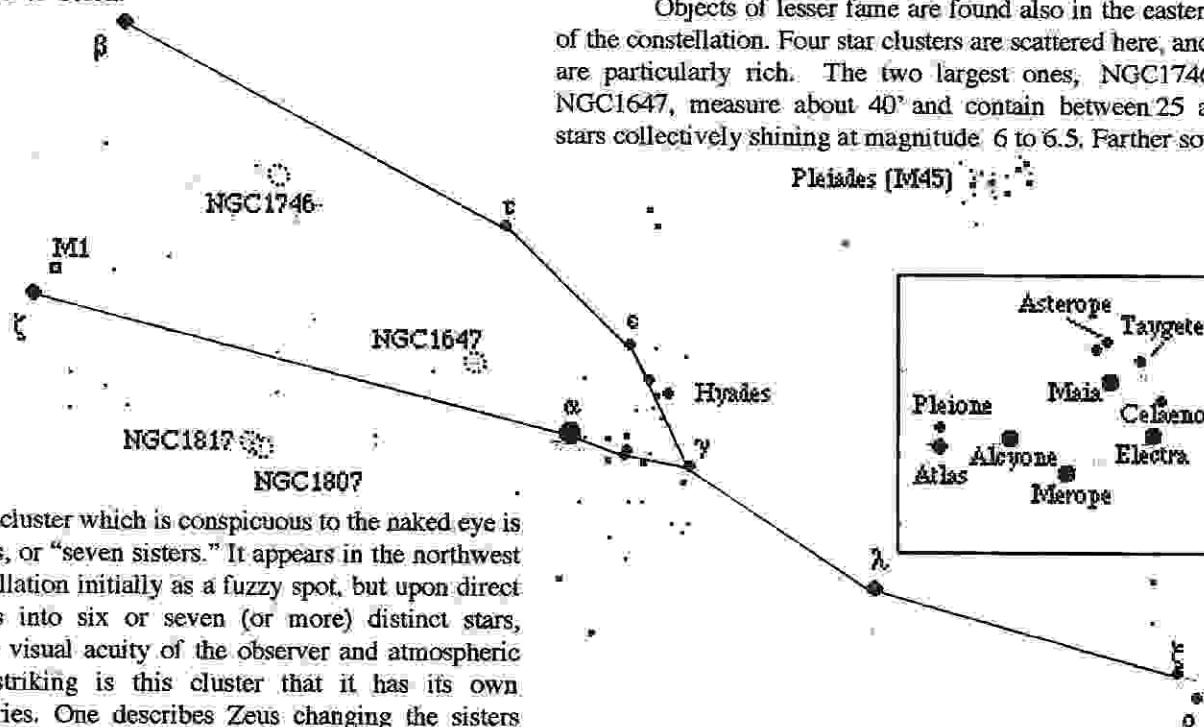
the bull

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

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

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

Objects of lesser fame are found also in the eastern half of the constellation. Four star clusters are scattered here, and none are particularly rich. The two largest ones, NGC1746 and NGC1647, measure about 40' and contain between 25 and 50 stars collectively shining at magnitude 6 to 6.5. Farther south is



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

a pair of clusters, NGC1817 and NGC1807. These are much smaller, each about 10'. NGC1807 holds about 15 stars of magnitudes 8 to 9. NGC1817, only 22' from 1807, is significantly richer, containing about 50 stars of magnitudes 10 to 14.