

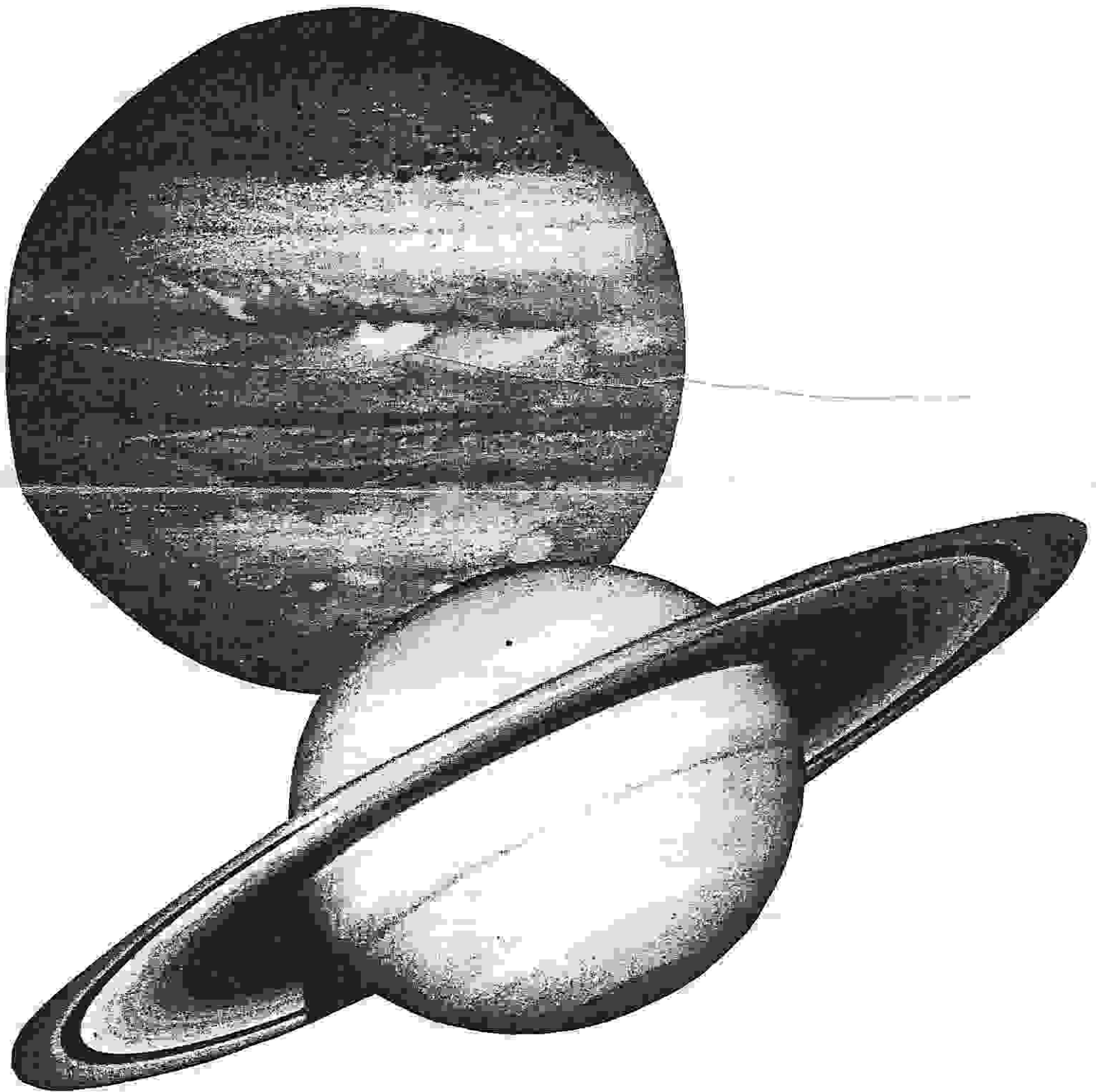


# *Desert Skies*

*Tucson Amateur Astronomy Association*

Volume XLIV, Number 9

September, 1998



## **They're Baaaack**

## Calendar of Events

**BEGINNERS LECTURE:** Friday, September 4, 6:30 pm at the Steward Observatory Auditorium - room N210. This month's topic is *Jupiter & Saturn* by Terri Lappin.

**GENERAL MEETING:** Friday, September 4, 7:30 pm at the Steward Observatory Auditorium - room N210. Topic is *Visitors From Another World: Searching for Meteorites in Antarctica* by Guy Consolmagno.

**BOARD OF DIRECTORS MEETING:** Thursday, September 10, 7:00 pm at Steward Observatory Conference Room N305.

### STAR PARTIES & EVENTS:

Sept. 14 - TIMPA Site Committee Meeting (see article in *Club News*)

Sept. 19 - Joint TAAA & TIMPA Star Party

**Newsletter Schedule:** Deadline for articles: Monday, Sept. 14. Printing: Tuesday, Sept. 22. Folding Party: Wednesday, Sept. 23. Mailing: Thursday, Sept. 24. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

**Cover:** Just a reminder that Jupiter and Saturn are working their way into our evening sky. These planets are spectacular through any size telescope.

**TAAA Home Page:** <http://www.primenet.com/~lwilson/taaa/taaa.html>

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President	John Kalas	620-6502	jckalas@aol.com
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Newsletter Editor	John Kalas	620-6502	jckalas@aol.com
Star Parties	Karen Allen	749-5744	tildenkall@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.

Call the Treasurer if you have any problems.

Send address changes to the above address.

### Membership in the TAAA:

Regular membership	\$ 23
Senior (over 60) membership	\$ 21
Add for Family membership	\$ 5
Add for Astronomical League (optional)	\$ 3
Add for contribution to Southern Arizona Section of I.D.A. (optional)	\$ 5 (recommended minimum)
Add for Sky & Telescope	\$ 27
Add for Astronomy Magazine	\$ 24

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

### 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 John Kalas  
3470 W. Red Bird Court  
Tucson, AZ 85745

or e-mail: jckalas@aol.com

### 4 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.

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

## President's Message

On Monday, 8/17, Karen Allen and twelve of the volunteers for the school star party program met to improve the activity. Some great ideas and suggestions were discussed. See the article under **Club News**.

Although we're having a relatively active "monsoon" season this year, our star party dates this summer have come through unscathed. An activity report from Deborah Cooper indicated that the Kitt Peak star party for the UofA Optical Sciences incoming students was a great success. About 12 to 15 TAAA members took a chance on the weather and lucked out. Permission was obtained to allow the TAAA to stay at the picnic area as late as they wanted. Per Deborah, many members took advantage of it and stayed until after 1:30 a.m. Dean's presentation to the students was very

well received. Dave Reynolds, who works at Kitt Peak on the weekends, didn't have far to go after the star party. He had arranged for a dorm room at Kitt Peak. Pretty nifty, Dave! Two Australian amateur astronomers, who were visiting Tucson and Kitt Peak for the day, enjoyed the observing session. The Empire Ranch star party, held on the same evening as Kitt Peak, was attended by about seven members. Insect repellent was the order of the evening for the second straight month. I had my new 5" refractor out for the first time and, after some initial wailing and gnashing of teeth, I finally got the hang of it and we had a good time.

John Kalas

## Meeting Information

### Beginner's Lecture

"Jupiter and Saturn"

Terri Lappin

Both Jupiter and Saturn have returned to the night sky. This month's beginner's lecture will describe what you should be able to see on Jupiter and Saturn.

### Main Lecture

"Visitors From Another World: Searching for Meteorites in Antarctica"

Guy Consolmagno

Last year, Guy Consolmagno joined 5 other people on the continent of Antarctica. They were there to collect meteorites. This month's featured lecture will be about those meteorites. Guy, who is with the Vatican Observatory, has studied the moons of the outer solar system and asteroids to better understand their early formation. He has co-authored two astronomy books: a popular telescope guide, *Turn Left at Orion* (with Dan M. Davis; Cambridge University Press, 1995) and a planetary sciences textbook, *Worlds Apart* (with Martha W. Schaefer; Prentice Hall, 1993).

## Club News

### School Star Party Project

For about four years, Karen Allen has coordinated this activity with little assistance. She has done an outstanding job. But, as the requests for this service increases year after year, the responsibility and time requirement has grown as well. The system obviously needed an overhaul. A recent meeting between Karen and many of the volunteers who support the activity generated a streamlined procedure for a more efficient operation.

Attendees at the meeting included Karen Allen, Nick Applegate, Don Breckenfeld, Andrew Cooper, George and Cindy Cormier, John Kalas, Andy Keefer, Terri Lappin, Bill Lofquist, Ken and Sennin Pryor and Michael and Mary Turner. The current number of volunteers is approximately twenty people but more would be better. If anyone is interested in supporting this worthwhile and rewarding community activity, please contact Karen Allen at 749-5744.

The following information summarizes the decisions made at the meeting:

#### 1. Grade levels

- Rule of thumb: 3<sup>rd</sup> grade or higher.
- Exceptions may be considered for lower grades if astronomy study is involved.

#### 2. Number of star parties per month

- Six maximum.
- No more than one large (7 or more scopes) star party per month.

#### 3. Restrictions for organizations

- None specifically excluded.

#### 4. Star party rules and regulations

- A document stating the requirements of the TAAA for the school or organization will be generated.

#### 5. Name tags

- Terri Lappin will make up pin-on name tags similar to those used at last year's 4<sup>th</sup> Avenue Street Fair.

#### 6. Star party scheduling

- Rule of thumb: up to first quarter moon or after waning gibbous moon unless several bright planets are available.
- No star parties will be scheduled on monthly meeting nights.
- Star parties may be scheduled on board meeting nights.
- Will try to avoid scheduling star parties on club observing session nights.

#### 7. Changes to coordination responsibilities

- A specific star party "champion" will be selected from the volunteer ranks prior to the publication of the newsletter. The individual's name will be published with the star party announcement in the newsletter.

## Club News (cont.)

### School Star Party Project (cont.)

- The "champion" takes control of the coordination of the specific star party after the monthly meeting. Signup sheets at the meeting will be given to the respective "champions".
  - The "champion" is responsible for getting additional volunteers (if necessary), reminding "his/her" volunteers of the star party and calling the volunteers in case of cancellation.
  - The "champion" will be responsible to bring TAAA membership pamphlets to the star party.
8. Cancellation policy
    - If at all possible, err on the "go" side.
  9. Directions/maps
    - Most will be published in the newsletter.
    - Information about the school/organization contact person's name, where to meet them, where to set-up, etc. will be included on the signup sheet for the "champion".
    - The scope site should be available at least one hour before observing is scheduled to begin.
  10. Incentives/recognition
    - Several ideas were presented. A proposal will be developed in the near future.
  11. Star party On-Call listing
    - A comprehensive listing of all volunteers will be developed and supplied to all volunteers.
    - The listing will include home and work phone numbers, e-mail addresses and regional preferences for all volunteers.

A great idea was presented at the meeting to develop a group of members who would be "storytellers" at star parties. These individuals would not be required to bring a telescope but would simply talk to the star party attendees about such things as the constellations in the evening sky and interesting folklore or legends about those constellations. This feature would be a great enhancement to the star party observational services which the club offers. Knowledge of astronomy would not be required, just an interest in sharing stories about the night sky to children and their parents. Preparation for this activity would be a little reading. If anyone would be interested in becoming a star party "storyteller", please contact Karen Allen at 749-5744.

### Member News

We welcome the most recent members who have joined the TAAA: Christine, William & Teresa McCarvey, Dan & Connie Nelson, Chuck Penson and Kathryn Bevacqua and Luke, Ann, & Rhiannon Scott. Let's introduce ourselves and get to know each other.

After a long wait, John Kalas has received his new Astro-Physics 5" Refractor! We'll all be looking for it to appear at a future star party!

### Reminder about Parking

Cherry Avenue is closed just south of University Blvd. Access to the Visitor's Center parking lot is from Campbell, down University and then South on Cherry. There's a bit of

construction at the corner of University and Cherry, so be careful where you walk.

### TIMPA Site Project

There will be a meeting of the TIMPA Site Committee and any other interested persons on Monday, Sept. 14<sup>th</sup>, at 7:00 pm in the Steward Observatory Conference Room N305. The meeting will be to review the activities-to-date of the committee.

The committee, led by chairperson John Polachek, has been very busy meeting with TIMPA officials and county agencies, developing site proposals (size of the observatory building), investigating optimum construction techniques and obtaining construction estimates. The TIMPA organization is very interested in developing a long-term partnership with the TAAA to enhance the utilization of the TIMPA site. As evidence of that enthusiasm, there will be a joint activity between the TAAA and TIMPA on Saturday, Sept. 19, at the TIMPA site. See details under the **Star Parties & Events** section of this newsletter.

### Astronomical League News

National officer elections were held during ALCON in French Lick, Indiana this July. The new President is Chuck Allen. Our own Bob Gent, has been elected vice-president of the Astronomical League. Bob sends his warm regards to the TAAA/TAL, and writes:

"We had quite a time at the Astronomical League's convention. There is much big news breaking. We have some new observing programs including a new Asteroid Program. It's being run by Paul Comba of the Prescott (Arizona) Astronomy Club. As of ALCON, Paul had discovered 408 asteroids. There are a couple other new programs that will be described in more detail in the *Reflector*.

We have been invited to a new partnership with the Astronomical Society of the Pacific. Among many other activities, ASP runs Project Astro, and they would like to work with us on expanding the program. We are looking forward to a bright future in cooperating with ASP."

Congratulations to both Chuck and Bob, on behalf of the TAAA/TAL!

There are many observing clubs supported by the League. They provide certification to members, upon completion of the requirements for each observational club. Observing clubs may be viewed at the following web site: [www.mcs.net/~bstevens/al/obsclub.html](http://www.mcs.net/~bstevens/al/obsclub.html)

The Astronomical League is dedicated to the enhancement of communication between member clubs, and provides opportunity to its members, to submit club related news articles, or photos. As AL correspondent, I am glad to assist with any questions regarding the Astronomical League.

Sincerely,  
Laurel Dunlap  
ALCor for TAAA/TAL



## Club News (cont.)

### The TAAA Land Committee

Tim Hunter - Chairperson

The TAAA has initiated a land search for a dark sky site for the TAAA's proposed 30-inch telescope facility. The site we are seeking should be worthy of a large telescope and be amenable for occasional public star parties. It is also envisioned that the site would be suitable for individual TAAA members to have their own private pads for telescope set up or small observatories. Ideally, the site would be no more than an hour's drive from Tucson (University of Arizona Campus) and have power and water available at the site. It should also be easily accessible to the average automobile and have good horizons, good seeing, and little light pollution.

Needless to say, land meeting all these requirements within an hour of Tucson and not in the path of urban growth is hard to find at a reasonable price. I envision the TAAA needing a site no smaller than 5 acres, but, preferably having one at least 10 acres. Twenty acres would be ideal. The cost of land varies considerably, but we would probably have to spend at least \$30,000 to find a good site. We have already examined a site east of Sonoita next the Grasslands Observatory. This piece of land consists of 20 acres of grasslands and suffers from a high price (\$70,000). It also is near some new houses and is not totally usable due to gentle sloping, making a small potential floodplain on part of it. It does have power available, good roads to it, dark skies, and excellent horizons. If it remains on the market and if its price can be substantially reduced, then it is a possibility.

Sites north of Tucson suffer from Tucson's skyglow hindering observation of southern objects. Sites southeast of Tucson in the direction of Sonoita are expensive. Sites southwest of Tucson, sufficiently far from Tucson's skyglow, are often not available in the small acreage we want to purchase. Sites near Arivaca are sometimes hard to reach within an hour's drive on easily accessible roads.

It may be possible to get a long-term lease on a county, state, or federal government site for a small cost. However, we have not been able to identify a site we would like that some government entity would be willing to let us have. For example, we are allowed to have star parties on the Empire Ranch and on the Buenos Aires Reserve, but we have been told that we could not erect any permanent structures on either site. Also, I personally feel it is best to completely own a site. That way the TAAA has complete control over it. Should the site become unsuitable due to light pollution someday, we could presumably sell it for a good profit and move elsewhere.

As you can see, the search is not an easy one. If you would like to be on the Land Committee and have not already contacted me, please give me a call or send me an e-mail message (phone: 299-2972; e-mail: 74016.1444@compuserve.com). If you have suggestions as to how we should proceed or have recommendations for appropriate sites, please let me know.

### Another (Yawn) Mirror Lab Casting

Dean Ketelsen

The Mirror Lab is scheduled to cast another 6.5 meter mirror in mid-September, this one for the Magellan II telescope for the Carnegie Institute. With a successful casting of an 8.4 meter, the amount of effort to be extended in making this a public event is still unknown. Currently, the high temperature point is scheduled for the evening of the 17th of September. If you are interested in attending, please call Dean's Mirror Lab number at 621-8764 for the latest information, AFTER Labor Day. You will likely have to have your name on a list for admission, but check Dean's message. There will likely also be an update at the September meeting.

### The Russians are Coming!

Dean Ketelsen

The following is the most recent letter I have received from Sergey Karpov, an amateur astronomer from Russia who is organizing a trip to the United States for a group of seven. They will be spending a full week in Arizona since we have many sights of high astronomical interest. I will let you read their letter and return to make some comments afterwards.

Date: Fri, 31 Jul 1998

From: S.V.Karpov, Krasnoyarsk, Russia

Greetings Dean,

I hope you have returned to Tucson already and I'd like to inform you about the current situation. First of all John Kalas sent us the invitation when you were out and it has been faxed 07/28 to the USA embassy to Moscow applied to the letter signed by our First Vice-Governor. We availed ourselves of the belonging to the system of the Department of Education. In this letter he asks the ambassador to provide our group with visas or to make this process easier. This letter was signed formerly by 3 vice-Governors before final signature (this bureaucratic process took whole the week). The list of participants was thoroughly checked (to be sure in our trustworthiness). But if even in this case we won't be granted by visas that will mean that your country will be closed for us for ever.

Second, we decided to shift to September our trip because we have lost too much time when solving our current problems. And the air-company we were going to use canceled flights on Wednesdays. So we can go only on Sundays September 6-27 (it would be better 9-27). On September 6 we arrive to Tucson about midnight from Los Angeles. It would be good to get to a hotel easy. We can reserve any hotel in USA from Krasnoyarsk via travel agency. If you can recommend us such hotel in Tucson where we can stay we would be very much thankful to you.

It might be an inexpressive hotel with charges within \$20 (without breakfast) per person a day. We need rooms only with standard elementary conveniences without unnecessary luxury (we will use hotel only to sleep off). We need three rooms for 7 people: 2 ones for two persons, 1 (better double room) for three persons. It would be nice if a cars rent station would be not far from this hotel. This information might help us also to fill a questionnaire to the embassy with the point "Where are you going to stay in USA?"

## Club News (cont.)

### The Russians are Coming! (cont.)

On Monday we could drive to MMT, next day to Vega-Bray. By the way could be the program there of interest for us if we spend there the night? Are observations possible there with telescope? Though full moon will spoil partially the program of observations.

On Wednesday the excursion to University and to Mirror Lab. I don't know about Thursday program yet. I think about so called presentation of our Club in the TAAA. I don't know how to do it and when perhaps it would be better after our joint program (Flagstaff, Kitt Peak...) when we would check and train our spoken English. It would be easier to be speakers after this. We are going to prepare some slides, video, comments to them and so on. We'd like to find a day when we could see an equipment of amateur astronomers and to ask some questions about it.

Best regards,  
Sergey

As you are likely aware, it would be hard to find motel rooms for these guys for less than \$20 per day, and I was going to propose to see if any TAAA members were willing to step forward and offer to host any of the group. I have a mother-in-law visiting the week after Labor Day, so it would be difficult for me, but I have offered the use of my van for their transportation, and I'm also escorting them up to northern Arizona for tours of Lowell, Meteor Crater and the Grand Canyon the weekend after Labor Day. The group has offered to make a presentation to the TAAA both as a means of promoting good will and also to help them get visas to enter the country. Sergey has suggested Thursday the 10th - we'll make plans once their travels are more certain and make the appropriate announcements at the September meeting. So what do you say guys - any volunteers to host a couple Russians? If time permits, I'd like to host a little get together, perhaps a small cookout - again, check in at the meeting, or give me a call or e-mail if you have space and motivation to host a couple guests.

-Dean Ketelsen 293-2855

### From the Mailbag

Here are some things that recently landed in our PO Box. These items will be at the next meeting, so ask Terri about anything that catches your eye. Bold items are new this month. It's your last chance for items in italics. They will be tossed out after the general meeting. Mention of an item does not indicate an endorsement by the TAAA.

#### \* Trips/Conventions

- Solar eclipse trip information (always new stuff coming in)
- *Astrofest 1998 (Kankakee, IL - Sept 11-13)*
- *Northern Arizona Star Party (near Prescott - Sept 18-19)*

#### \* Miscellaneous

- Hubble Library of Electronic Picturebooks CD-ROM (see note below)
- CD/DVD: Impact: Ground Zero
- Abrams Planetarium Sky Calendar subscription information (only \$9 a year)

#### \* Reports

Minutes from the recent meeting of the Sonoita Valley Planning Partnership. Decisions at these meetings can impact Empire Ranch.

#### \* Catalogs

We always have a selection of catalogs including Meade, ASP Conference Series, Novagraphics, Edmund Scientific, Swift Binoculars, Sky Publishing, Kaimbach Publishing, two Meteor Catalogs. There are many others.

#### \* Newsletters

International Dark-Sky Association, Saguro Astronomy Club (PHX), East Valley Astronomy Club (PHX), Phoenix Astronomical Society, Astronomy Club of Sun City West (PHX), Albuquerque Astronomical Society (NM), Salt Lake Astronomical Society (UT), Denver Astronomical Society (CO), Peoria Astronomical Society (IL), Warren Astronomical Society (MI), Milwaukee Astronomical Society, Von Braun Astronomical Society (Huntsville, AL), The Universe in the Classroom (ASP).

#### \* Hubble Library of Electronic Picturebooks CD-Rom

The order for the Hubble CD-ROM has been placed. Terri will have them at the meeting provided they arrive in time. For those who have not paid for them yet, the price is \$24. We ordered one extra copy, so it goes to the first person with \$24.

## Star Parties & Events

### TIMPA Site Committee Meeting

September 14 (Monday)

7:00 pm in Steward Observatory Conference Room N305  
All interested parties are invited.

### TIMPA Site Star Party

September 19 (Saturday)

Mark your calendars!!! This is going to be a fun star party. John Polachek, Chairperson of our TIMPA Site Committee, has arranged for a joint activity between the TAAA and the TIMPA organization. The event is designed to be entertaining and beneficial to both organizations. The TIMPA group has offered to give TAAA members hands-on instruction for

radio-control flying of model airplanes. This activity will take place between 3:00 & 5:00 pm in the afternoon. At 5:00 pm there will be a barbecue/pot luck dinner. Attendees are requested to bring their own main dish (i.e. meats, buns, condiments, etc.), drink, plates, utensils and a side dish to share with other attendees. The side dish may be a vegetable, salad (garden, fruit, pasta, etc.), bread/buns, desert or snacks. After the dinner, TAAA members will set up telescopes for an evening of viewing for both organizations. This event will help to unite both organizations as we pursue a partnership with the TIMPA group to allow the TAAA to construct an observatory at the site. Be there or be square! Directions are on the outer back page of this newsletter.

P.S. Bring insect repellent.

## Observing Reports

## THE EAGLE'S STAR

Aquila the eagle is flying high up in the south on these late summer evenings. Celestial cartographers usually depict the eagle flying toward the northeast with the three brightest stars of Altair, Alpha ( $\alpha$ ), Tarazed, Gamma ( $\gamma$ ), and Alshain, Beta ( $\beta$ ) Aquilae marking the bird of prey's head and shoulders. I visualize the eagle and the swan, Cygnus both flying southward down along the luminous band of the Milky Way in some sort of celestial migration. To me, I see Lambda ( $\lambda$ ) Aquilae as the eagle's beak, with the stars Zeta ( $\zeta$ ), and Theta ( $\theta$ ) Aquilae marking the wing tips of the soaring bird. Finally the three stars of Altair, Tarazed, and Alshain forming the tail feathers. When I draw it all out Aquila looks like some supersonic jet or a cosmic boomerang.

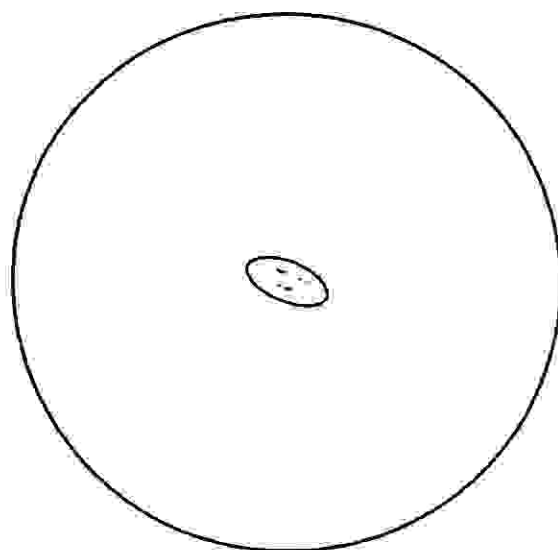
Altair pronounced (al-TAIR) is the brightest star of Aquila, and it marks the southernmost point of the "Summer Triangle". The other two stars being Vega and Deneb. Altair is the second brightest star of the Summer Triangle with a magnitude of 0.77. It ranks as the 12th brightest star overall in the heavens. Altair glows pure white in the night sky having a spectrum of A7V. This star is a Sirian type star with a diameter  $1\frac{1}{2}$  times greater than our Sun,

and it has a luminosity of 10 suns. As a solar neighbor it lies only  $16\frac{1}{2}$  light years from us. An interesting fact about Altair's shape is it's ellipsoidal or egg-shaped. This is due to Altair's rapid rotation. Altair makes one complete turn in just  $6\frac{1}{2}$  hours compared to our Sun which rotates once every  $25\frac{1}{2}$  days. This rapid rotation distorts Altair at it's equator causing the equatorial diameter to be twice the polar diameter. If we could use a powerful enough telescope, Altair would then appear as if it was squashed in our eyepiece.

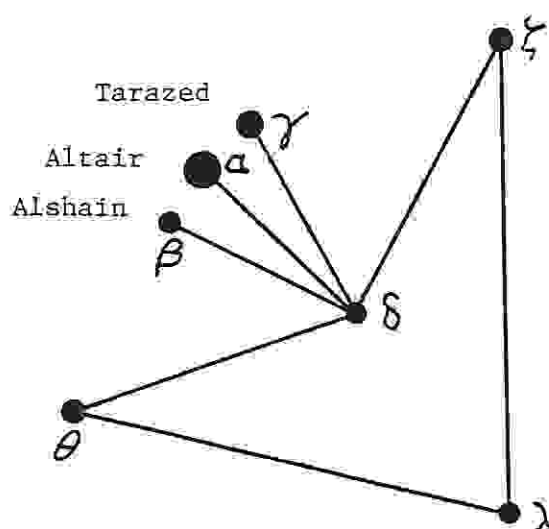
In a low power telescope Altair appears as a pure white diamond. A beautiful sight against the inky black background of space. One field star of 10th magnitude forms an optical double with Altair. This optical companion can be found  $165''$  away at a P.A. of  $301^\circ$ . Since this star is quite faint you'll need at least a 3" or larger telescope to pick it up.

Some early autumn night why not focus in on this near solar neighbor and see if you can spot Altair's dim companion with your eagle eyes.

by Jeff Brydges



Altair in our imaginary  
1,000,000x telescope



AQUILA

## Items of Interest

### Volunteer Docents Needed at Kitt Peak National Observatory

Docents are being recruited by the National Optical Astronomy Observatories (NOAO), the organization which operates the Kitt Peak National Observatory. This is an unpaid, volunteer position. Docents are needed for a number of duties: escorting and guiding visitors through the telescopes and facilities that are open to the public; acting as 'greeters' to visitors at the Kitt Peak Visitor Center; working with school groups; helping in the Visitor Center Gift Shop. Docents are needed at Kitt Peak from 10:00 AM to 4:00 PM each weekday and on weekends. A time commitment of one six-hour shift per month is requested of docents. Transportation to and from Kitt Peak is provided. The next formal training session is scheduled for October 1998, or inquire about informal training.

For further information, contact: Ginny Beal, NOAO Outreach Coordinator, Phone: 318-8535, email: [gbeal@noao.edu](mailto:gbeal@noao.edu).

### Starry Nights Festival

October 16-18, 1998

Greetings Folks!

We're nearing the start of another great western star party. Last year, we had a great time with outstanding speakers, workshops, and clear skies. Please join us (the Western Region of the Astronomical League) for another exciting Starry Nights Festival, October 16-18, 1998, in Yucca Valley, California.

Below is the latest on our program and speakers. I'd greatly appreciate it if you would pass this notice to astronomy club newsletter editors and e-mail listservers. If you have any questions, please contact me. Thanks for the help and we all look forward to seeing you at the Starry Nights Festival!

Wishing you all clear skies and bright stars,  
Bob Gent  
Co-chair and Registrar, Starry Nights Festival  
Vice-president elect, Astronomical League

Announcing the 2nd Annual Starry Nights Festival  
October 16-18, 1998

Presented by the Town of Yucca Valley and the Western Region of the Astronomical League (WRAL).

The Starry Nights Festival will take place on October 16-18, 1998. The convention with speakers, workshops, and demonstration booths will be held during the days at the Yucca Valley Community Center, and the observing sessions will be held in the nearby Joshua Tree National Park. Come to learn about the universe we live in and the different ways we can see it, and take advantage of the dark skies of Yucca Valley and the Joshua Tree National Park.

There will be a wide variety of exciting speakers including David Levy, noted comet discoverer and astronomer. We also have Gene Hanson, who last year set the national pace with over 10,000 variable star estimates, and he won the AAVSO director's award.

Tim Hunter has agreed to give two talks. One on CCD imaging and another as an IDA (International Dark Sky Association) update. This will also include another regional meeting for IDA California. Congratulations to the Town of Yucca Valley for revising their outdoor lighting ordinance last year. We also have Dr. Ed Krupp, Director of the Griffith Observatory, as one of our superb speakers. Back by popular demand are Ashley McDermott and Leo Connolly.

More speaker additions will be announced as they are finalized. The Starry Nights Festival web page will be updated constantly as changes are made and new developments occur, so check back regularly and tell all your friends! Registration and Speaker update information can be accessed at the following web site:

[www.cogent.net/~pyrrho/snf.htm](http://www.cogent.net/~pyrrho/snf.htm).

### Steward Observatory Public Evening Lectures

Steward Observatory has been hosting public evening lectures in astronomy for 70 years. The lectures for the Fall 98 semester will be held on Monday nights at 7:30pm in room N210 of Steward Observatory. Following talks, there will be opportunities for viewing the night sky (weather permitting) with the use of the 21-inch telescope at the Campus Station of the Observatory operated by undergraduate majors in astronomy and related sciences. All of the lectures and the use of the telescope are free of charge and open to the public.

Fall 98 Schedule:

- Aug. 31 Dr. John Hill The Large Binocular Telescope Project
- Sept. 14 Dr. Neville Woolf An Earlier Look at Earth-Like Planets
- Sept. 28 Dr. John Cocke Gamma-ray Bursters, Gravitation Theory, and the Nature of the Redshift

### 1998 Grand Canyon Star Party - North Rim

by Karen and Deloy Pierce

OUR MOTTO IS: "Come to the Grand Canyon and see the Grand Universe!!!"

The North Rim Grand Canyon Star Party was a great success! It went from Saturday, June 13th, through Saturday, June 20th. The seeing conditions were very steady and clear except for Tuesday which was too windy for scopes. That day the only successful activity was the evening slide show.

Each day started with mid-day solar viewing (from about 10:30 am to about 1:00 p.m.) with our new 1000 Oaks Optical type 2 glass filter on an Astroscan and the Estes Award winning dedicated solar scope belonging to Scott Crosby. Sun, Light Pollution and other astronomy related posters were taped to a nearby wall. Free handouts were available to be picked up including a June Sky Calendar, Light Pollution of North America and Light Pollution of Europe. This year we also had a Guest Book for people to sign along with StarLight Mints and Star Burst candy found in an Alien Head. This activity's participation by the public varied from 100 to 270 per day.



## Items of Interest (cont.)

## 1998 Grand Canyon Star Party - North Rim (cont.)

At 7 p.m. each evening a slide show was presented in the Lodge's 150 seat auditorium. There were four different people who shared their slide shows with the public. Two slide shows were on basic astronomy, one concentrated on solar eclipses and stellar chemistry, and one on star clusters. The one on stellar chemistry was way too advanced for the general public who were there to learn about astronomy. These slide shows were about 30 to 45 minutes long. During the slide show we had from 50 to 90 people in attendance. Several of the people mentioned that they had read about the star party in the magazines and planned their vacation to be at the Grand Canyon while the star party was going on. They were fun to share the universe with.

Later the scopes and binoculars were set up on the back patio of the Lodge. On some evenings when we had several scopes, other scopes were also set up east of the lodge. Public participation went as high as 450 per evening. The public was usually looking through our scopes until about 11:30 after which the astronomers sometimes did viewing for 4 or 5 more hours. It was common for the astronomers to see Jupiter, Venus and Saturn coming up in the East before the scopes were covered for the next night.

For the week, overall participation for the 8 days at all of our activities was approximately 4000; a significant increase over 1996's 2500. Volunteer man-hours by participants exceeded 250. Astronomers came from all over the country.

3 from California, 1 from Illinois, 1 from Georgia, 1 from Colorado, 6 from Arizona, and of course Utah (7 SLAS members and 5 from OAS). One of the participants flew into Phoenix, rented a car, drove to the North Rim and shared his knowledge and his scope for one night. He was not on our list so did not receive the fee waiver. We hope that he had other plans in the area.

Siegfried Jachmann's 9" Clark refractor on the last 3 nights added greatly to our success. Total volunteers for the 8 days were 25 to 40. Total scopes each night ranged from 5 to 12. Sizes of scopes ranged from 80 mm to 17". At the end of each of the participant's stay we felt like we were saying good-bye to a long-time friend. We are hoping to keep in touch with them and to see each other at other North Rim Star Parties in the future.

We had a great relationship with the park rangers. We met some of the rangers from two years ago as well as making new ranger friends. They really appreciated us, told us several times what a great program we had and seemed to go out of their way to make us feel welcome from the first day. They advertised our activities at each of the information boards. They are looking forward to seeing us again next year. Deloy and I even mentioned having a "Junior Astronomer" program such as their "Junior Ranger" program for those who would like to participate. We will be working with the Rangers at the Grand Canyon on this activity.

## Dark Skies for September 1998

**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

Mo/Tu 31/ 1	1:05 - 4:34	Fr/Sa 11/12	19:58 - 22:47	Mo/Tu 21/22	19:44 - 4:50
Tu/We 1/ 2	1:58 - 4:35	Sa/Su 12/13	19:56 - 23:38	Tu/We 22/23	19:45 - 4:51
We/Th 2/ 3	2:56 - 4:36			We/Th 23/24	20:18 - 4:52
Th/Fr 3/ 4	3:58 - 4:37	Su/Mo 13/14	19:55 - 0:31	Th/Fr 24/25	20:53 - 4:52
Fr/Sa 4/ 5	- - -	Mo/Tu 14/15	19:54 - 1:27	Fr/Sa 25/26	21:31 - 4:53
Sa/Su 5/ 6	Lunar Eclipse	Tu/We 15/16	19:52 - 2:23	Sa/Su 26/27	22:12 - 4:54
		We/Th 16/17	19:51 - 3:20		
Su/Mo 6/ 7	- - -	Th/Fr 17/18	19:49 - 4:16	Su/Mo 27/28	22:57 - 4:54
Mo/Tu 7/ 8	- - -	Fr/Sa 18/19	19:48 - 4:48	Mo/Tu 28/29	23:47 - 4:55
Tu/We 8/ 9	20:02 - 20:32	Sa/Su 19/20	19:46 - 4:49	Tu/We 29/30	0:41 - 4:56
We/Th 9/10	20:01 - 21:15			We/Th 30/ 1	1:39 - 4:56
Th/Fr 10/11	19:59 - 22:00	Su/Mo 20/21	19:45 - 4:49	Th/Fr 1/ 2	2:41 - 4:57

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Rise Vi	Rise Vi	Rise Vi	Rise Vi	Rise Vi	Vi=Visibility
5/ 6	18:41	6:00	4:43 3	4:54 1	3:22 3	19:10 -3	21:01 0	-3 brilliant
12/13	18:32	6:05	5:13 6	5:07 2	3:16 2	18:41 -3	20:33 0	0 conspicuous
19/20	18:23	6:09	5:48 -	5:21 3	3:10 2	Set -3	20:04 0	3 moderate
26/27	18:13	6:13	Set -	5:34 5	3:03 2	5:20 -3	19:36 0	6 naked eye limit
3/ 4	18:04	6:18	18:22 -	5:47 6	2:56 2	4:48 -3	19:07 0	9 binoculars limit

By Erich Karkoschka

## Constellation Report

### Aquila, the Eagle

The constellation of Aquila dates back to about 1200 BC. It was then that early astronomers began seeing it as a bird or, more specifically, the eagle which was something of a companion or servant to the ruler of the gods, Zeus. Aquila held Zeus's thunderbolts until he decided to use them, and the eagle went to Mount Ida on Zeus's orders to kidnap a young shepherd called Ganymede and bring him to Olympus so he could serve as the gods' cupbearer. In the far east, Altair, the brightest star of the constellation, represented a royal herdsman who began to neglect his duties when he fell in love with a young maiden, herself preserved in the sky as the star Vega. The sun god, who was the maiden's father, took displeasure in this and separated the two by placing them on opposite sides of a mighty river, and this was the reason given to explain why Altair and Vega appear on opposite edges of the "river" which we call the Milky Way. In addition, Indian folklore describes some of Aquila's stars as the footprints of the god Vishnu. It's not surprising that Aquila's distinctive shape and bright stars have produced such stories among these widely separated cultures.

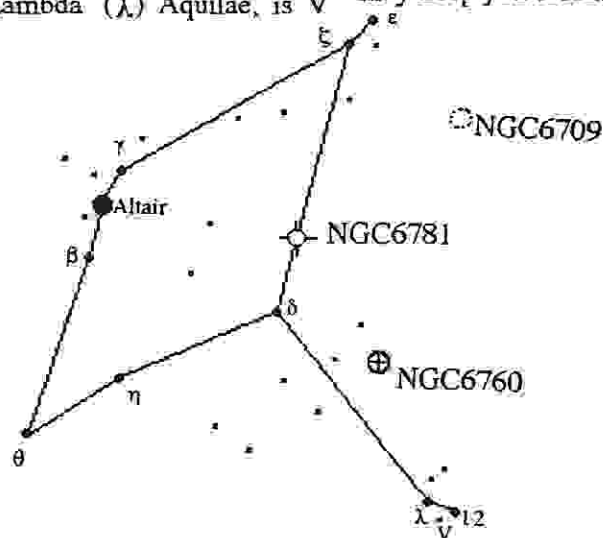
The individual stars which shine among the star fields of the Milky Way, along which Aquila flies, include Altair, of spectral type A7 IV-V, magnitude 0.8, and a mere 17 light years away. Altair forms one corner of the pattern called the Summer Triangle. (Deneb in Cygnus and Vega in Lyra comprise the other two corners of the triangle.) To the south lies Eta ( $\eta$ ) Aquilae which is a member of the class of giant variable stars called Cepheid variables. Its magnitude changes from 3.7 to 4.5 every 7 days and 4 hours, and in the process undergoes a change in spectral type from G2 to F6. Near the tail of the eagle, approximately one degree to the southwest of Lambda ( $\lambda$ ) Aquilae, is V

Aquilae. This is another variable star ranging between magnitudes 6.6 and 8.4, but what sets this star apart from the others is its deep red color. Its surface temperature is less than 2000° K which classifies it as a star of spectral type M. Point your telescope in its direction and you should be able to easily distinguish it by its color. It lies at the end of an arc of 7th and 8th magnitude stars curving away from 4th magnitude 12 Aquilae.

Although Aquila does not contain any bright Messier objects, it is, however, host to some deep sky targets which are observable through small telescopes provided you have dark skies. One of these is NGC6709, a magnitude 7.5 open cluster located 3.5° south and 14' west of Zeta ( $\zeta$ ) Aquilae (RA: 18h 51' 29" Dec: +10° 21' 01"). About 30 to 40 stars reside in this modest cluster. NGC6781, one of the 11 planetary nebulae within Aquila, is more of a challenge and can be found about 3/4 of the way along a line drawn from Zeta ( $\zeta$ ) to Delta ( $\delta$ ) Aquilae (RA: 19h 18' 20" Dec: +6° 30' 00"). This is one of the larger and brighter planetary nebulae in this region, but still no brighter than 11th magnitude. It appears as a neatly circular smudge of light about 4 minutes of arc in size. A 6" or larger scope is required to make this dim nebula obvious, although it can just be discerned in instruments as small as 80mm.

Another 11th magnitude object nearby is NGC6760, a globular cluster 2° south and 15' west of Delta ( $\delta$ ) Aquilae (RA: 19h 11' 10" Dec: +01° 01' 42"). Use magnification of 80x or more to bring this small globular into view.

There is much more to discover within the boundaries of Aquila. Arming yourself with a medium sized telescope and a good star chart may keep you scrutinizing Aquila for hours.



Chris Lancaster

### TAAA Board of Directors Meeting - Date 00, 1998

Location: Steward Observatory Conference Room N305, University of Arizona

Call to Order: 7:08 pm

Board Members Present: John Kalas, Andrew Cooper, Ingrid Saber, Terri Lappin, Bill Lofquist, Dave Reynolds

Board Members Absent: John Polacheck

Members Present: Robert and Barbara Callanan and Gary Rosenbaum

1. **TIMPA Site Committee** - Andrew Cooper presented a concept drawing of a 20' x 32' frame structure elevated three feet off of the ground on a cinderblock foundation with concrete footings, 7 1/2 foot internal walls, a roll-off roof, steel security door, concrete piers and a wooden floor. The materials for this design would cost about \$14,000 retail. Storage and warm room accommodations would add \$5,000 - \$6,000 to the material costs. He reported that John Polacheck's contractor gave an estimate of \$30,000 for the structure alone (fully contracted). John Kalas suggested that a planning phase of two to three months should be the goal, even if it requires several meetings per month to resolve the design. John Polacheck will schedule the meetings.
2. **Treasurer's Report** - Terri Lappin developed new financial statements with an additional category - Fund Balances. With the current General Fund and Land & Telescope Fund, Terri has added an Education Fund, Light Pollution Fund, Fundraising category, Grand Canyon Star Party Fund and a TIMPA Fund. The monthly financial report from Buehler Capital Management had not been received as of the meeting.
3. **Steward Observatory Lecture Hall Computer Upgrade** - Terri Lappin reported that the U of A will not allow the TAAA to purchase and install a ZIP drive in the hall computer. The only alternative is to have the CCD images delivered by ZIP disk several days before the meeting so that the files can be conveniently transferred to the computer prior to the meeting.
4. **30" Mirror Project** - Gary Rosenbaum, together with a group of TAAA members, visited the 40" Telescope at Mt. Lemmon in July. Roger Tanner took measurements of the existing telescope structure and performed several design evaluations. Gary has asked Dean Ketelsen to review Roger's analysis.
5. **Youth Programs** - Bill Lofquist presented a written proposal entitled "A Study and Description of the Work of TAAA to Interest Young People in Astronomy". He commended the association for its work with young people and expressed a desire to compile data from various club sources to assist in the development of future programs directed at youth involvement in the study and enjoyment of astronomy. Bill will write an article for a future newsletter about this topic. A committee may be formed.
6. **Raffle Fundraiser** - Terri Lappin described some of the methods which the Audubon Society uses to raise funds. They included large-prize raffles, paid field trips and birdathons. The society has raised as much as \$20,000 in one fundraising effort. Raffle prizes are donated and are of general appeal. Typical prizes include stays at bed and breakfasts, restaurant meals and cruises. She advised that the raffle project is extremely labor intensive. John Kalas felt that the TIMPA Site and the 30" Mirror projects need not require brutal efforts but all types of fundraising should be considered. Dave Reynolds offered a fundraising idea: integrate storytelling into star parties. He suggested that we contact a person in the Tohono O'odham community who is renowned for his Native American constellation storytelling.
7. **Polishing Machine** - John Kalas mentioned that he had received a nice e-mail message from Bob Goff stating that the machine is very close to being operational. John will contact Bob about the 30" mirror cell support design analysis which was performed many years ago and is still in Bob's possession.
8. **Club Shirts and Caps** - Dave Reynolds plans to bring samples of the proposed design to the September board meeting. He has received quotes from Infinities Co. and will research Sunrise Silkscreen. Dave prefers a collared shirt, embroidered emblem and a magnetic identification tag.
9. **A.U.R.A. 40<sup>th</sup> Anniversary** - Signup sheets will be available at the September meeting for the Oct. 3<sup>rd</sup> and Oct. 17<sup>th</sup> activities, both are Saturdays. A star party coordinator is needed.

Meeting Adjournment: 9:29 pm

Respectfully submitted, Ingrid Saber, TAAA Secretary

### Desert Skies Classified

- FOR SALE:** Nearly complete set of Sky & Telescope magazines from 1958 - 1984, bound in 24 volumes with a few loose issues. Make an offer. Contact Jim De Veny at 318-8390 (W) or 323-0936 (H) or e-mail: [deveny@uic.edu](mailto:deveny@uic.edu). (10/98)
- FOR SALE:** Besseler Dichroic Enlarger with Gray Lab timer and power supply. Includes two lenses and 35mm slide holder. All for \$450. Also other darkroom items. Call Duane Niehaus at 529-7767 for details. (12/98)
- FOR SALE:** C5+, tripod, acc'y tray, Telrad, Dec motor, hand controller, JMI Moto-Focus, Celestron Advanced AstroMaster computer, 26 mm Plossl. Like new, used twice. \$1850. On display at Starizona - 201 N. Oracle Rd 292-5010 or call Dave Reynolds 579-7337 evenings. (11/98)
- FOR SALE:** 6" f/8 Newtonian reflector tube assembly with finder, \$350. WWII vintage Elbow telescope (M75C) with crosshair reticle and dial-in filters (neutral, red and amber). Easily adapted to a camera tripod. Excellent condition, \$150. Celestron 11x80 giant binoculars with case. Mounts on camera tripod. Little used, \$175. Call Duane Niehaus at 529-7767. (12/98)
- FOR SALE:** Omega D5XL 4x5 enlarger, condenser and Arista cold light heads, 4- negative carriers, reduction gear microfocuser \$700.00; Bowens Illumitran 35mm slide duplicator \$300.00 obo; Rodenstock Rodagon 150mm enlarging lens \$250.00, Schneider 80mm and 50mm enlarging lenses \$150.00 ea. Omega and Saunders easels, Digital and Analog Galab timers, trays, etc. Call Steve Peterson @ 794-2323 (W), 326-5303 (H), digital pager: 446-2731, or e-mail: [swpeterson@theriver.com](mailto:swpeterson@theriver.com)

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