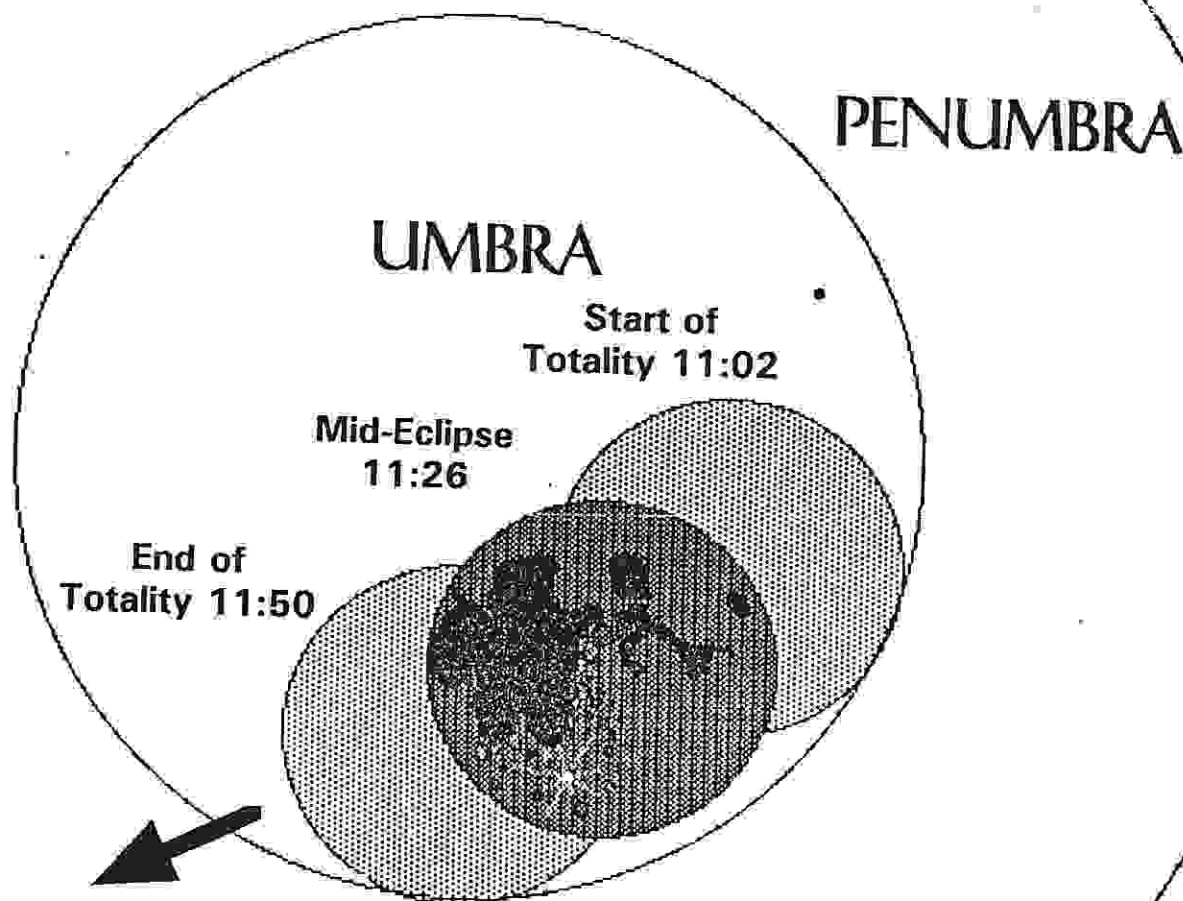


Desert Skies

December, 1993

The Newsletter of the Tucson Amateur Astronomy Association (TAAA)



**THE MOON PASSES THROUGH EARTH'S UMBRA
NOVEMBER 28, 1993**

**(ECLIPSE PARTY AT FLANDRAU SCIENCE CENTER-SEE INSIDE FOR
INFORMATION)**

GENERAL MEETING - Friday, December 3rd, 7:30 pm at the NEW Steward Observatory Auditorium - room N210. TAAA member and NOAO astronomer David Crawford will speak on "My Life in Astronomy."

6:45 pm - pre-meeting "Beginners lecture" by Teresa Lappin will be "Orion the Hunter" All are welcome! ("old" Steward obs. room 204). See enclosed map for directions!

EXECUTIVE MEETING - Thursday, December 9th, 7:30 pm at Flandrau Science Center's Conference Room

30" TELESCOPE DESIGN, LAND & FUNDRAISING MEETING - Wednesday, December 15th, 7:30 pm Location to be announced - call Dean.

STAR PARTIES: November 28 - Eclipse party in front of Flandrau! Don't miss it!
December 4 - Star Party at our Potential new site - see map inside!
December 11 - Star Party at our potential new site.

Next Newsletter Deadline - December 15th

COVER: If the weather holds, we have a chance to see a great lunar eclipse nearly at the zenith! All you need is a pair of binoculars and a reclining chair to have a ringside seat for over an hour of totality. For those of you who want to help with a public event, come on down to campus in front of the Flandrau Science Center, where TAAA and Flandrau are co-sponsoring an "Eclipse Party" starting at 9pm, with setup starting at 8pm. We are negotiating to get the lights on the mall turned out, so it should be a reasonable site. You will be able to drive and park on the mall if a) your vehicle is under 1/2 ton and b) you park your wheels on plywood sheets to distribute weight. Cover art is by Mike Terenzoni.

TAAA EXECUTIVE

President	Dean Ketelsen	293-2855
Vice-President	Terri Lappin	579-0185
Executive Sec.	Rob Nyberg	745-0710
Recording Sec.	Sharon Neihaus	797-4189
Treasurer	Duane Niehaus	797-4189
Member-at-Large	Bob Goff	790-1452
Member-at-Large	Dave Harvey	797-2512
Chief Observer	Mike Terenzoni	887-3226
Mem. Coord.	Gary Rosenbaum	579-0185
Past President	Tim Hunter	299-2972
Newsletter	Dean Ketelsen	293-2855

MEMBERSHIP IN THE TAAA

Individual	\$20.00/year
Family	\$25.00/year
Senior Citizen (over 60)	\$18.00/year

Sky & Telescope subscription (optional) \$20.00 (as of July, 1992)

Rates for membership in the TAAA are given above. Members may subscribe to Sky & Telescope at the time membership renewal, saving more than 25% off the cost of a regular subscription. The subscription term must match your membership period.

Send one check, made payable to: Tucson Amateur Astronomy Association, to cover both membership and subscription to: TAAA, PO Box 41254, Tucson, AZ 85717. It is best to pay your dues 2-3 months before your membership actually expires.

Desert Skies Publishing Guidelines

- * All articles, announcements, news, etc. must be submitted by the newsletter deadline listed 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 on Wordperfect compatible files on a floppy. 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
PO Box 41254
Tucson, AZ 85717

Send ADDRESS CHANGES to:
TAAA
Attention: "address change"
P.O. Box 41254
Tucson, AZ 85717

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. a) Decide if you want Sky & Telescope, then add \$20 to your membership rate.
b) Include Sky & Telescope's renewal notice, if possible.
3. Write one check, payable to TAAA.
4. Send it to TAAA, P.O. Box 41254, Tucson, AZ 85717.

Call the Treasurer if you have any problems.

December's Featured Speaker: David Crawford "My Life in Astronomy"

Through a scheduling error in August, we missed Dr. Crawford's talk. Fortunately, we were able to reschedule him for December. David has been a long-time TAAA member and in fact is one of the few local professionals who attend our meetings. A lot of you know him as that guy who talks about light pollution, but for more than 3 decades, he has been one of the region's eminent observational astronomers.

David Crawford grew up in western Pennsylvania and studied astronomy at the University of Chicago. He worked at Yerkes, McDonald Observatory, and was on the faculty of Vanderbilt University before moving west. On January 1, 1960, he joined the staff of Kitt Peak National Observatory, where he remains today. His most visible position there was serving as project manager for the 4 meter telescopes for Kitt Peak and CTIO. Observationally he has specialized in photometry, with his primary interest in young stars and star clusters.

In 1988, he was the joint founder of the International Dark-Sky Association, where he remains executive director and driving force for that still-growing organization. He is recognized as the world's leading expert in lighting systems and light pollution. He is also currently involved in the formation of GNAT, a Global Network of Automatic Telescopes for computer controlled collection of photometry data.

His talk will contain a potpourri of his experiences as Kitt Peak grew from a bare mountain to one of the foremost observatories in the world. Come Join us!

Beginner's Lecture - "Orion-the Hunter"

With the winter sky comes some rather bright stars, including the stars of Orion. Among the stars of Orion are a number of very interesting objects which will be the subject at this month's Beginner's Lecture. The Great Orion Nebula will be discussed, of course, as well as several other objects. I will also tell of the few times I have seen the Horsehead Nebula and the many more times that I have not seen it! Have you tried seeing it with your telescope?

The Beginner's Lecture starts at 6:45pm, 45 minutes before the start of the regular meeting. See you at 6:45pm on December 3rd in room 204.

The Second Half

If anyone has early photographic returns from the eclipse or other similar presentation, call Terri @ 579-0185.

Meeting Format Change

The Executive is considering a change in format for our meetings. Please read the enclosed article and let us know what you think. Our meetings have been running long lately, and we are considering ways to make them more enjoyable for everyone.

TAAA News

Mirror Lab Casting Delayed

Due to unanticipated problems with some cores in the 6.5 meter Magellan mold, its casting has been delayed for engineers to investigate the problems. Current schedules (19 November) have the casting occurring in the third week of January. Once a firm date has been established (typically 2-3 weeks before the casting) it will be reported here or at a general meeting. Call Dean at 293-2855 or ketelsen@as.arizona.edu for the latest word.

Events and deadlines in 1994

The following items are courtesy Steve Edberg via Mark Trueblood:

The Hubble Space Telescope Amateur Astronomers Working Group announces that 30 April, 1994 is the postmark deadline for amateur proposals to use the HST. Proposers who are US citizens or legal residents may request a proposal package from: HST Package, AAVSO, 25 Birch ST., Cambridge, MA 02138. For the purposes of this program, an amateur is defined as anyone who does not have an advanced degree in astronomy or physics and does not work at an observatory.

The 26th Riverside Telescope Makers Conference will be held 27-30 May, 1994 at Camp Oakes, near Big Bear Lake, California. The theme for this year's conference is "Making and Using Planetary Telescopes" with an eye towards the collision of Comet P/Shoemaker-Levy 9 and Jupiter, and an instructional session on using a CCD camera will be held. Requests for an information and registration package (if not already on their mailing list) should be directed to RTMC, c/o Fox & Stephens, CPA's, 9045 Haven Ave., Suite 109, Rancho Cucamonga, CA 91730. Messages may be left at 909-948-2205.

NIGHTFALL is scheduled for Borrego Springs, CA for the dark-of-the-moon night of 1-2 October 1994 (and possibly Sept. 30-Oct. 1). It will be held at a resort featuring hotel and RV facilities. For registration materials write to NIGHTFALL, c/o Fox & Stephens, address and phone identical to above.

For additional info, contact Steve Edberg at 163 Starlight Crest Dr., La Canada, CA 91011 or at sedberg@gllsvc.span.nasa.gov.

T-Shirts for Sale

Mars Observer Space Probe Found! (on Astronomy Camp T-Shirts)

The U of A Astronomy Camp t-shirts can be ordered at the December meeting for \$8.00 each. This t-shirt features a color image of Mars on the back side with a glow in the dark sketch of the Mars Observer space probe. The front side features a green saguaro which turns black under Good Lights (low pressure sodium). The shirt will be displayed at the meeting. Only Large and X-Large sizes are available.

Also, a limited supply of TAAA t-shirts will be brought to the meeting. These are the 'original' TAAA logo light blue t-shirt which was produced a few years ago. Only one of each of the following sizes are left: adult XXL, XL, L, S and youth sizes M(10-12) and S(6-8). Adult t's are \$8.00 and youth t's are \$5.00 each.

See Terri Lappin if you want to buy either t-shirt.

Land and Fundraising Update

Land

With the deadline to withdraw from purchasing the land south of Three Points set for November 10, the TAAA Executive met on the 9th and decided to withdraw the offer at this time. Fundraising had fallen about \$15,000 short of the \$40,000 required for outright purchase. At the same time, several members had guaranteed loans in excess of that amount, but with only about \$250 per month coming in via the automatic donation program (and \$150 of that from only 2 members), it was decided that we couldn't pay back a loan that large in a reasonable amount of time (5 years). John Zajac agreed to talk to the realtor again and see if the selling price could be lowered into our price range.

In the meantime, we had a number of members contact us as the deadline grew near. All were concerned that we were spending too much for the land. The Executive continues to feel that the premium price was justified in getting land that would continue to remain dark for decades. In any case, two members of the Tucson Soaring Club, which leases 640 acres from the Bureau of Land Management, suggested that we consider their site west of Marana. We could effectively be partners in their lease agreement and use the funds raised to start building immediately. Next dark-of-the-moon some of the Executive will probably check it out. Another member who lives in Cochise county suggested that we obtain land like they have - take possession by paying delinquent taxes. They have a number of plots they were willing to sell to us, unfortunately all are in Cochise and Santa Cruz county and all more than 80 miles from Tucson, save for a plot in the Rio Rico development that may be worth a look from their description.

However, until we are definitely priced out of the running, the primary site under consideration continues to be the Pozo Nuevo site south of Three Points, and the December star parties have been scheduled for there. If you have an interest or opinion, please let us know and get involved in the process. Help us get a site worthy of our great southern Arizona skies.

Fundraising

In 40 days of fundraising within the TAAA, we raised donations and pledges of nearly exactly \$10,000. Unfortunately, it was not a broad-based support, since \$9,000 of that came from only 8 members! Similarly, the automatic donation program has about \$250 per month coming in, with \$150 of that from only two members.

New member George Velasquez has numerous business contacts and is the first TAAA member to volunteer his efforts to raise contributions from companies around town. Way to go, George!

In the binocular raffle, we have so far raised \$122 in two months of ticket sales. Since the TAAA used \$350 to buy them, someone stands to win a great prize for a small investment, and the club will know better than to try to raise money with a raffle. Don't need binoculars, you say? Well Frank Lopez at Stellarvision will take them in trade for \$350 credit at his store.

If you have made a pledge to the land fund, now is the time to honor that pledge with the tax year coming to an end. Even though we are not looking to close on a land deal at the moment, having your contribution on hand is much more efficient than going through another fundraising drive a few months down the road.

Change in Meeting Format?

Meetings are getting too long! That's what we keep hearing from the membership. In an effort to alleviate this problem, the Executive discussed several possibilities including a format change of holding two meetings per month.

We would continue having the main meeting on the first friday of the month, perhaps moved up to 7pm. Such a meeting would have a main speaker and an informal second half after refreshments. Official business as it relates to the club would be discussed at this meeting. Speaker limits would be enforced and the meeting would be adjourned by 9:30 or 10:00.

The second meeting held on the third friday of the month would mostly be addressed to newcomers in astronomy. There would be a beginner's lecture followed by practical telescope instruction, observing hints or viewing with the 20".

What follows are the pros and cons of going to a two meeting format.

Reasons for keeping only one meeting:

- 1) Past surveys have indicated that members do not want an additional meeting on a second night. This should not be ignored by the Executive.
- 2) We should bring more organization to our meetings so that they remain on schedule, allowing us to leave on time. This is true whether we hold one or two meetings...otherwise we may end up with two long meetings.
- 3) We have had unusual circumstances lately...recent meetings have run long due to discussions about land acquisition. We normally do not have this extra topic to discuss.
- 4) We should schedule members with more than 10-15 minutes of material as the main speaker in the first half of the meeting instead of during the second half. This would keep the second half of the meeting shorter and allow more of the general membership present during the first half to hear about their projects.
- 5) Scheduling a second meeting means extra work for the executive.

Reasons for holding two meetings:

- 1) TAAA members cover such a range of knowledge that beginners are deserving of a meeting of their own where topics are treated at an elementary level.
- 2) Beginner's lecture could be held in the large auditorium, alleviating the existing crowded talks in room 204.
- 3) We currently have a three-part meeting and it is difficult to get through a couple speakers, a break, pressing club business and informal reports without a lot of people walking out and missing some very good presentations. If they are currently attending the beginner's lecture, after the main speaker they have already been sitting for two hours and many leave. By splitting the introductory lecture to its own night, more would stay for the second half of the meetings and probably continue on to socialize at JB's afterward.

As always, your ideas or suggestions are welcome. Call Dean or your favorite executive member to voice your opinion, or come to the December meeting where we will bring it up for discussion.

TAAA Education Program Status Report

News is getting out that the TAAA is conducting an after-school astronomy program with the Marana School District because Sharon has received requests about our program from other schools. As a result we are thinking about expanding! Starting next semester we may be working with two other grade schools in the Tucson area. Astronomy needs to be taught in the schools, and the TAAA can do it.

But the expansion of our program depends on getting help from other TAAA members. If you, or someone you know, can commit one afternoon per week to this program Sharon Niehaus would love to talk to you! Individuals must meet certain requirements that are set by the school districts. While a teaching certificate is not required, a background check is conducted and finger prints are taken to assure the school district and the children's parents that you are who you say you are. This is true for most positions which deal closely with young children.

Our program is a hands-on introduction to astronomy and features a number of activities for children. It was developed by Sharon and Duane, both trained teachers, for the elementary school grades. About 15 children and one adult are taking the 9 week course this semester. They meet once per week for about an hour. The students have seen sunspots, observed the phases of the moon, and gone to the planetarium. Soon they will be building a small refracting telescope which they get to take home. If this sounds like fun and you would enjoy teaching astronomy to kids, talk with Sharon.

This program is important to the TAAA because it is through programs like this that the TAAA will be deemed worthy of grants and donations. We are an educational and scientific organization. Education starts with the young and by working with school children in this manner we are going a long way towards accomplishing this task.

An aside: We really appreciated the interest that members had in the TAAA Education Program which was highlighted at the November meeting. Several members talked to us during the break about getting some of the information we picked up from the "Universe in the Classroom" Teacher's Workshop and we soon hope to make some of it available to TAAA members. Thanks!

-Terri Lappin and Sharon Niehaus

This ticket may be the winning ticket! It could be YOURS!

Ticket # 299 792 457

TAAA 1993 RAFFLE

Drawing will be held at the

Dec. 3, 1993 meeting

Swift 8.5 X 44 mm

Binoculars !!

Keep This Stub !!

Ticket # 299 792 457 Tickets cost only \$2 each or 3 for \$5.

TAAA 1993 RAFFLE !!

Swift Audibon 8.5 X 44 mm Binoculars !! 8 degree FOV!

Top of the line!! multi-coated! BAK-4 prisms!

With case, lens caps, & strap. List price \$425.

☺ Your Name _____

☎ Phone # _____

Support Your TAAA!

Buy Lots of Tickets!

Win!

All the proceeds from this raffle go toward land acquisition and the construction of the 30" telescope and observatory. You can buy your tickets at the December meeting, or call or mail your check to Rob Nyberg, 745-0710, 5969 E. Rosewood St., 85711

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Events and Announcements

Eclipse Party at Flandrau Science Center

When: Sun. 28 Nov 8:00p.m.-12a.m..
Where: Flandrau Science Center and Planetarium, U of A campus.

This is the first time in many years that Tucson has an excellent chance to see a total eclipse of the moon high overhead. To celebrate the event and to gain media recognition for the club, the TAAA will set up telescopes in front of Flandrau Science Center. Press releases and public flyers have been sent out notifying the public of the event. In anticipation of a good turn out Bob Goff will have TAAA donation buckets out.

Hopefully the club will receive some nice donations and much needed media coverage. There are also hopes now that we can arrange for the shutting down of streetlights near the Science Center. The Science Center intends on staying open until 11:30p.m. and will have a special showing of Pink Floyd's *Dark Side of the Moon* at 9p.m. If you intend on coming out please call Michael Terenzoni at 621-4515 (9am-5pm) or at home at 887-3226. Flandrau Science Center is located on the University of Arizona campus at Cherry and University and is across the street from our monthly meeting site at Steward Observatory. Call 621-4515 for detailed directions.

Announcement Flandrau Science Center *Saturday Science*

When: Saturdays, 1994.
Where: Flandrau Science Center and Planetarium, U of A campus.
Cost: \$15.00 per child.

The TAAA and Flandrau Science Center wish to work together in some new ways to expand our science education programs for children. In 1994 the science center wishes to use TAAA members to assist in their *Saturday Science* program. *Saturday Science* is a series of "hands-on" educational workshops for children ages 8-13. Each workshop involves teaching

children science through building or creating something they can take home with them. In previous workshops children have made model rockets, moon stations, and rockets. Other activities are similar to ones Exec. Officers Terri Lappin and Sharon Neihaus learned at the recent ASP science education conference in San Diego. If you wish to register your child in one or several workshops or you are interested in volunteering your time to assist in a workshop please call Michael Terenzoni at 621-4515 (9am-5pm) or at home at 887-3226. More about this in future newsletters.

AL RISCHA THE KNOT

South of the "Great Square" of Pegasus lies a faint string of stars which make up the constellation of Pisces the fishes. At the eastern end of Pisces there is a beautiful binary star of 4th magnitude. The name of this star is "Al Rischa" pronounced al-RISH-uh, which means "The Cord" in Arabic. To the Greeks of Ptolemy's day it was known as "The Knot" of the flaxen cord which tied the two fishes together.

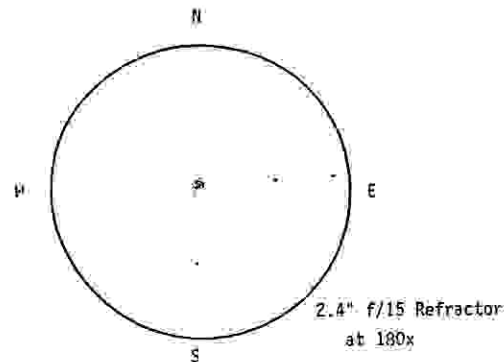
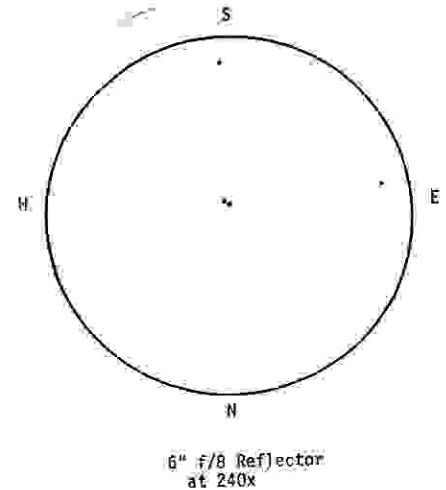
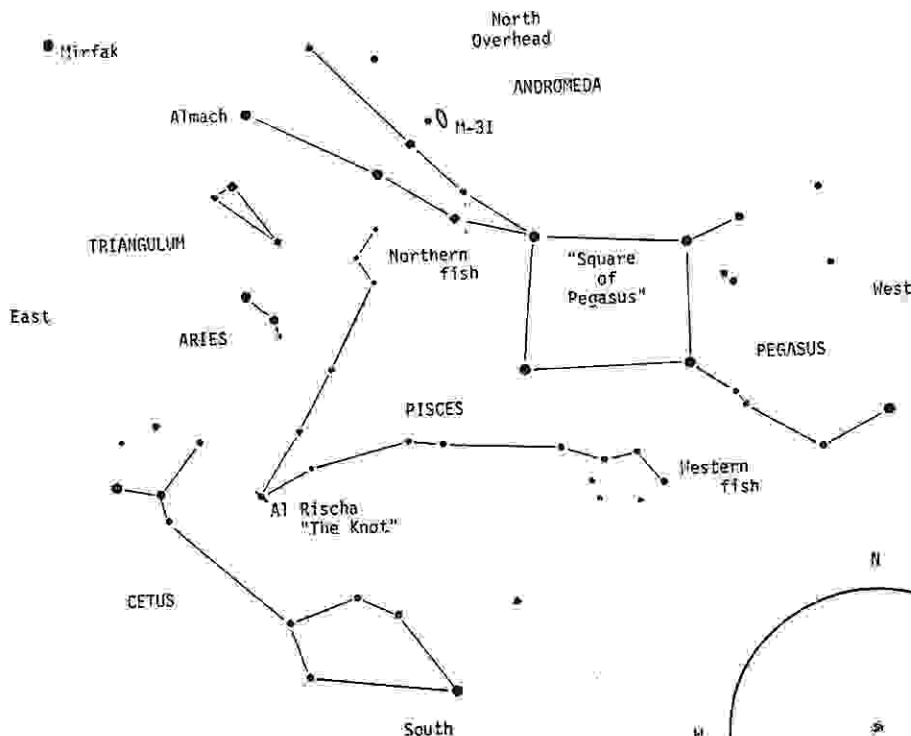
Alpha Piscium was first noticed by William Herschel in 1779 at the time of discovery the companion was about 4" from the primary. Today the separation has decreased to 1.6" and has a P.A. of 266° . The two stars will close to 1.5" by the year 2000 and reach periastron about 2060. The individual magnitudes are 4.3 for the primary and 5.2 for the companion, with spectral types of A2 and A3 respectively. The total luminosity of this

system is 35 times that of the Sun. The distance to Alpha Piscium is about 130 light years and the orbital period is about 720 years.

To resolve Alpha Piscium you will need at least a very good 3" refractor and high power about 150x. My 2.4" Unitron refractor which has a superb objective lens will elongate this pair at 100x and notch it at 180x on very still nights. But the best views come with 6" to 8" telescopes using about 200x to 250x. Both stars appear white in my 6"f/8 reflector at 240x.

This month one cool, still and moonless night set up your telescope and view this fine binary star and imagine what it would be like to live on a world with a double sun.

Jeff Brydges



TAAA Executive Committee Meeting Minutes

11/11/93 7:30 PM to 9:30 PM. Members present: Dean Ketelson, Terri Lapin, Rob Nyberg, Duane & Sharon Niehaus, Bob Goff, John Zajak, Derald Nye, Tom Burden, George Velasquez, Mike Terenzoni.

1. **ECLIPSE:** TAAA is cooperating w/Flandrau Science Center for public education and viewing on the UofA Mall on the evening of Nov. 28. Bob Goff will have 3 "light buckets" for donations to the land/telescope fund. More info will appear in the newsletter.

2. **LAND:** Dean withdrew from the current deal, because we currently have approx. \$25,000 and we can't amortize a \$15,000 loan. Fundraising continues, and Dean and John will continue to negotiate for a lower price on the Pozo Nuevo 20 acres, and we will investigate other sites in the Altar valley which may be available to us.

3. **AD:** Tom Burden put an ad in the money wanted section of the Tucson papers soliciting tax-deductible donations.

4. **FORMAT:** Limiting the time allocated to speakers

at the General meeting was discussed at length. Also proposed was a second monthly meeting combining the Beginner's Talk with Member's presentations. Although the Committee favored having stricter speech time limits, no motions were made. The idea of a second meeting will be further studied.

5. **TREASURER'S REPORT:** Donations totaled \$1,545.00 to date in November. Cash/checks on hand = \$841.00; Checking money market = \$449.07; Savings = \$202.00; Savings money market = \$16,124.30; Checking = \$1,931.24; petty cash = \$0.03; TOTAL = \$20,807.64; Terri recalled that any interest earned in any account goes to the land/telescope fund.

6. **SCIENCE FAIR:** Terri moved and Bob Goff seconded a motion that the TAAA offer an award or several awards for astronomy-related projects at the 40th Annual Southern Arizona Regional Science & Engineering Fair in March, 1994. The motion passed unanimously.

-Rob Nyberg

Desert Skies Classified

For Sale: 3" Unitron Refractor, excellent optics, altazimuth tripod mount with slow motion controls, star diagonal and eyepieces - \$500. Call Jeff Brydges 888-0591.(12-93)

Services Offered: I have a multimeter (volt/ohm/amp meter) and a dual trace oscilloscope and will assist and advise you in debugging your electrical systems at no charge. Ray Wallace - 294-1197.(12-93)

Want to Trade: I am interested in trading my Celestron 11X80 binoculars for a pair of 20X80 binoculars. If interested, call Gilbert Friedman at 571-1662.(1-94)

For Sale: Christmas art work? all are framed and matted by Nova Graphics. "Green Piece" 138/950, by Kim Poor \$75.00, "David and Goliath" 117/950, by Bob Eggleton \$80.00, "Barnards Planet" 45/950, by Joe Tuccarone \$65.00. Call Mike evenings 797-1693.(2-94)

For Sale: Sanyo Model VDC 3800 CCD TV camera, NTSC baseband out, connectors for Iris out, external video sync (BNC), 12 VDC 0.3 A power, video out(BNC, 75 ohm). Standard C-mount. Dimensions 3.73"H x 2.70"W x 2.28"D, weighs 13 oz. With AC adapter and manual. 572 x 485 pixels, 420 lines H x >400 lines V, 2 lux. Used about a dozen times to record lunar and asteroid occultations. \$125 Mark Trueblood, day 322-8519, eve: (602) 455-9263.(2-94)

FOR SALE: Casio fx-7500G Programmable Graphic Calculator, with both manuals; barely used, like new, \$35. Casio fx-7700GB Programmable Graphic Calculator, with manual, barely used, like new, \$45. Rob Nyberg, 745-0710 e-mail: 70541.1027@compuserve.com (3-94)

WANTED - Telescope Builders. If you want to make a wooden tube assembly or mount, but don't have the tools, I have a woodshop, and I'd like to improve my woodworking skills by helping you build your tube and/or mount. I have plans and ideas, too. Rob Nyberg, 745-0710 e-mail: 70541.1027@compuserve.com (3-94)

For Sale: Meade 5" APO refractor w/full computer control and 8,000 object memory. New, \$3,200. Gordon Gower, 749-0398.(3-94)

For Sale: Edmund Scientific Astroscan 2001 4.1" wide field reflector w/ 28 mm eyepiece. \$125 - Gilbert Friedman, 571-1662.(3-94)

For Sale: Warm detachable-hood parkas small, large \$35 each/ extra large \$40. Water-resistant shell, like new. Good for Tucson winter to 20 degrees F and for star parties - lots of pockets. Also, wool gloves, \$5. Brian O'Connell 888-8952.(3-94)

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 Dean, 293-2855.

TAAA E-Mail Directory

The following members have provided their e-mail addresses. Those with computers and modems who subscribe to a BBS or the Internet via work can send messages via the following addresses. We intend to set up a network for late-breaking news and TAAA information, since it is as easy to send 50 messages as it is to send one. If you have an e-mail address and are not listed below, please send me a note at ketelsen@as.arizona.edu.

Anderson, David anderson@as.arizona.edu
 Becker, Brad bradb814@aol.com
 Crawford, David crawford@noao.edu
 Dettmann, Lee ldettmann@aol.com
 Elowitz, Mark elowitz@ursa.tuc.noao.edu

Ketelsen, Dean ketelsen@as.arizona.edu
 Lappin, Terri lappin@egret.sao.arizona.edu
 Nyberg, Rob 70541.1027@compuserve.com
 O'Connell, Brian boc@pir1.lpl.arizona.edu
 Oesper, David fl.dao@isumvs.iastate.edu

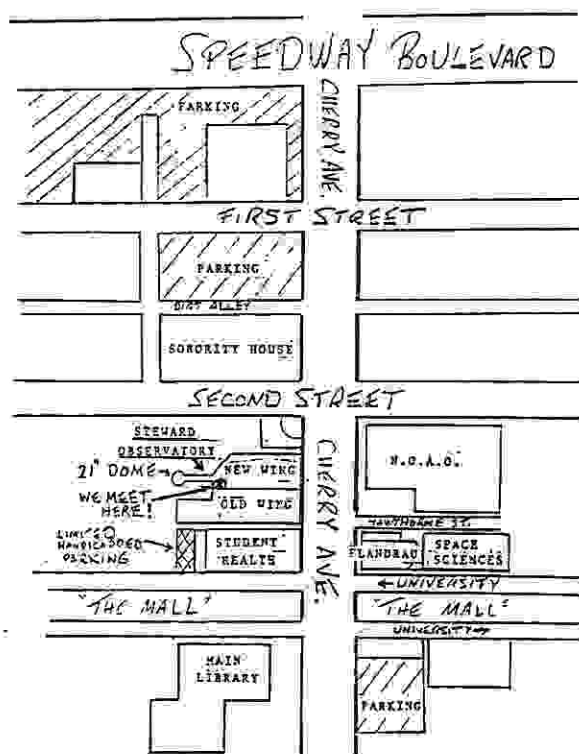
Harvey, David dave@as.arizona.edu
 Hill, Dolores dhill@hindmost.lpl.arizona.edu
 Hill, Rick rhill@hindmost.lpl.arizona.edu
 Hunter, Tim 74016.1444@compuserve.com
 Karkoshka, Eric erich@pir1.lpl.arizona.edu

Rosenbaum, Gary garyr@as.arizona.edu
 Saumon, Didier dsaumon@hindmost.lpl.arizona.edu
 Trueblood, Mark trublood@noao.edu
 Walsh, Bruce jbwalsh@ccit.arizona.edu

Telescope Time Anyone?

The possibility exists for a few TAAA members to use the 16" Schmidt telescope on Mt Bigelow, assuming they are escorted by Steward employees, Dean Ketelsen, Gary Rosenbaum or David Harvey. The telescope is F/3.0 and uses 6" square hypered 2415 (Dean has a box of 8"X10" sheets). We would be limited to about 4 people per visit, though we can probably arrange to do this on a quarterly basis or perhaps more. Call Dean if you are interested 293-2855.

TAAA Meeting Location



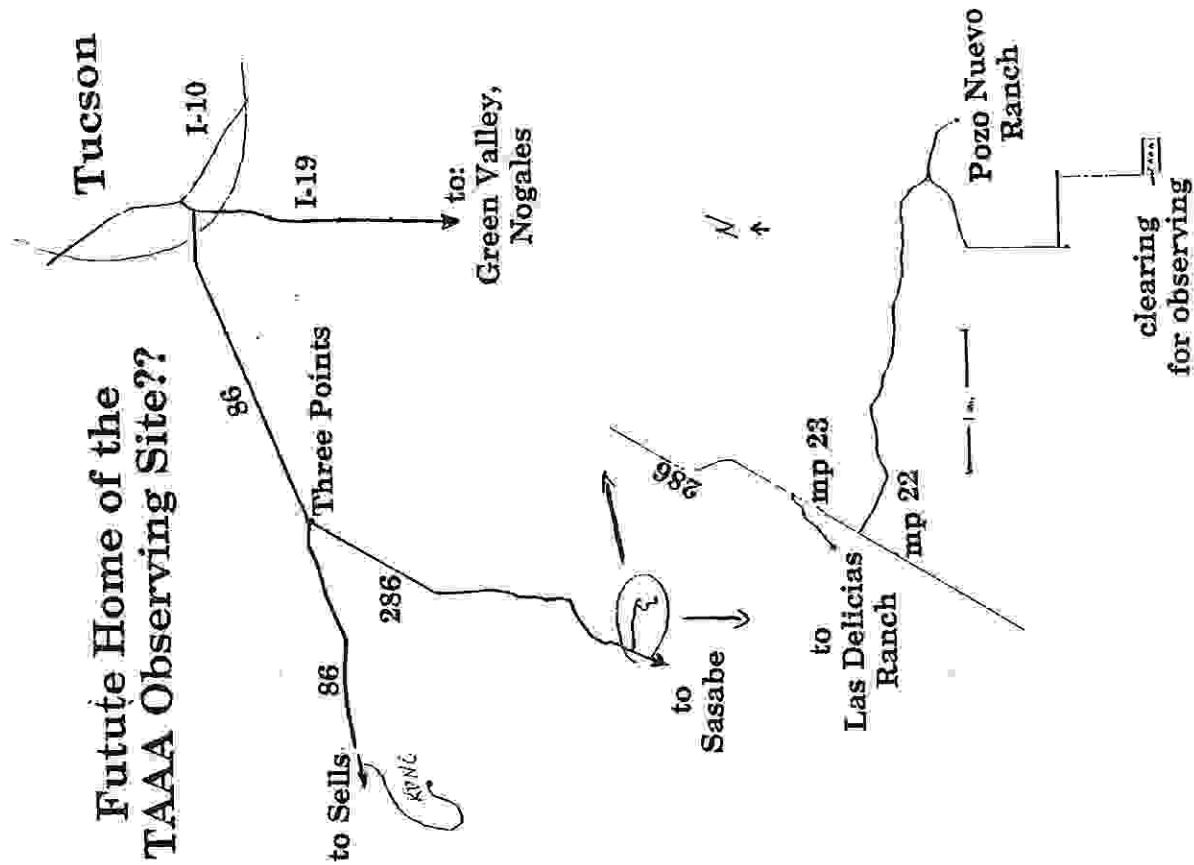
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1993	DECEMBER	no twilight no moonlight
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Th/Fr	2/ 3	6:46pm - 8:45pm
Fr/Sa	3/ 4	6:46pm - 9:47pm
Sa/Su	4/ 5	6:46pm - 10:49pm
Su/Mo	5/ 6	6:46pm - 11:52pm
Mo/Tu	6/ 7	6:46pm - 12:56am
Tu/We	7/ 8	6:46pm - 2:01am
We/Th	8/ 9	6:46pm - 3:08am
Th/Fr	9/10	6:47pm - 4:16am
Fr/Sa	10/11	6:47pm - 5:23am
Sa/Su	11/12	6:47pm - 5:48am
Su/Mo	12/13	6:48pm - 5:49am
Mo/Tu	13/14	6:48pm - 5:49am
Tu/We	14/15	7:01pm - 5:50am
We/Th	15/16	8:03pm - 5:51am
Th/Fr	16/17	9:03pm - 5:51am
Fr/Sa	17/18	10:01pm - 5:52am
Sa/Su	18/19	10:57pm - 5:52am
Su/Mo	19/20	11:51pm - 5:53am
Mo/Tu	20/21	12:44am - 5:53am
Tu/We	21/22	1:38am - 5:54am
We/Th	22/23	2:31am - 5:54am
Th/Fr	23/24	3:26am - 5:55am
Fr/Sa	24/25	4:21am - 5:55am
Sa/Su	25/26	5:16am - 5:56am
Su/Mo	26/27	- -
Mo/Tu	27/28	- -
Tu/We	28/29	- -
We/Th	29/30	- -
Th/Fr	30/31	6:57pm - 7:39pm
Fr/Sa	31/ 1	6:57pm - 8:42pm

Erich Karkoschka

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

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Details inside.