Desert Skies

Tucson Amateur Astronomy Association

Calendar of Events

BEGINNERS LECTURE- Friday, October 4, 6:30 pm at the Steward Observatory Auditorium - room N210. Topic is **Current Projects and Goals** by Terri Lappin. All are welcome!

GENERAL MEETING - Friday, October 4, 7:30 pm at the Steward Observatory Auditorium -room N210. Topic is Member's Night .

YOUNG ASTRONOMERS CLUB - Friday, October 4, 7:30 pm at Steward Observatory room 202. Aimed at school-age kids and is concurrent with the general meeting.

BOARD OF DIRECTORS MEETING - Thursday, October 10, 7:00 pm at the Conference Room at Flandrau Science Center.

STAR PARTIES & EVENTS:
October 5: Kitt Peak
October 12: All Arizona
October 18: Our Mother of Sorrows
October 19: Whipple Observatory
October 19-20: ALPO Meeting
October 22: Agua Caliente School

Newsletter Schedule: Deadline for articles: Monday, October 14. Printing: Monday, October 21, Folding Party: Tuesday, October 22,. Mailing: Wednesday, October 23. The newsletter is scheduled to be in the mail at least one week prior to the following month's General Meeting.

Cover:

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

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Membership in the TAAA
Individual $23.00/year without Astronomical League Membership
Family $25.00/year with Astronomical League Membership
Senior Citizen (over 60) $23.00/year

Sky & Telescope subscription (optional) $27.00. 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

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. If you want Sky & Telescope:
   a) add $27 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.

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 91316
Tucson, AZ 85752-1316

OR email: ninalehman@aol.com or nlwagner@aol.com

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President's Message

October 4th is Member's Night! We have a few people with something they want to talk about or show us, so I hope you can make it on October 4th. There is still space for a few more presentations. If you've thought about making a presentation but keep putting it off, this is the month! Give me or Larry Wilson a call and we can add you to the list.

This month is going to be a busy one. In addition to the regular events, the Association of Lunar and Planetary Observers will be meeting here. The TAAA is playing host to this one day conference. The A.L.P.O. is a group of mostly amateur observers from the United States. The A.L.P.O. has several sections. For example, there is a Mars Section. Members make observations using standardized forms and techniques and then submit them to Section Coordinators. The coordinator then compiles the observations into a report. Observations are available to professional astronomers to augment their time on large telescopes. If you are interested in solar system observing, you should attend this meeting on October 20th. There is a $30 registration fee to cover costs. This fee does include lunch. See the announcement in this newsletter for more details or give me a call.

Last month I wrote about a possible public star party in October. That isn't going to happen. Instead, we will try for the spring. This will give us more time to find a location. Our goal is to have a suitable location for holding regular public star parties every three to four months. John Polacheck continues to talk to people at the Desert Museum and other sites west of Tucson.

Hope to see everyone at the meeting!
Terri *

Meeting News

Beginner's Lecture: Current Projects and Goals

By Terri Lappin

This month's Beginner's Lecture will be a little different. It is especially for new members, but I hope everyone will feel welcome. I will bring everyone up to date on the current projects and goals that the TAAA has. I will also open the discussion for members to provide input into what they think the TAAA should do or provide. This is a chance for you to give the board of directors some guidance in our future plans. *

October 4th is Member's Night

By Terri Lappin

Here's a list of members and their topics for this month's meeting: Roger Tanner and Andrew Tubillio - Meteor Trail Monitor; Steve Peterson - Moon Photos; Robert Gent - Astronomical League; Robert Majewski - Quantifying Optical Resolution; Rick Koehler - A Dob Setting Circle; Joan Hardaway - Antiodius and the Moon in Leo.

There's room for more! Call Terri Lappin or Larry Wilson to have your name added to the list. *

Volunteers Needed October 23 - 26

The American Astronomical Society Division for Planetary Sciences is holding a meeting at the Tucson Convention Center from October 23 - 26th. Volunteers are needed during this meeting. Duties will include such things as moving displays around, arranging chairs and running projectors. A replica of the "Mars Garden" is going to be built and some help is anticipated. There will be a Volunteers Meeting which hasn't been scheduled yet. One of the convention organizers will be at our October 4th meeting and can answer your questions. If you will miss our October meeting and are interested in volunteering, call Steve Larson at 621-4973, or email slarson@lpl.arizona.edu. *

Club News

1997 Calendars and Other Goodies

There have been several inquiries about 1997 calendars. We will be selling "Astronomy" calendars this year probably beginning in November. These are the kind that hang on a wall. We will not sell the "Astronomy and Space Weekly Calendar" this year.

There was also an interest in Sky & Telescope's "Skywatch '97". After looking into the discount rate and the required quantity, it was decided to not offer this publication to members. There will be a sample of the "Weekly Calendar" and "Skywatch '97" at the next few meetings with instructions on ordering them if you are interested. Sorry about the inconvenience. *

Discovery Park Looking for Speakers

Discovery Park is located in Safford, AZ and serves as the visitor's center for the Mt. Graham International Observatory. This is also home to the Gov Aker Observatory, a 20" Cassegrain telescope that was once located at the Steward Observatory Kitt Peak Station. Discovery Park offers public lectures once or twice a month. Thomas Willmitch, the coordinator of Gov Aker Observatory, is looking for speakers over the next few months. His number is (520) 428-6260. Travel expenses will be covered. *

HELP WANTED !

Gil Friedman is still looking for a ride to Empire Ranch, and will pay $10 toward gas and mileage. He lives on the East side ot Tucson, near 22nd and Wilmot (behind Jim Click). *

A. L. P. O. Tucson Meeting
October 19 - 20, 1996

The Association of Lunar and Planetary Observers, with the support of the Tucson Amateur Astronomy Association, is offering an amateur-professional conference on the weekend immediately prior to the Division for Planetary Sciences Annual Meeting in Tucson, Arizona. The time and place of this special meeting are chosen to foster communication between amateur and professional astronomers. All A.L.P.O. members and interested professionals are invited to attend.

Schedule :
(all events for registrants only)

Saturday, October 19

11:00 AM-Noon: On-Site Registration: Plaza Hotel Lobby.

1:00 PM: Tour of Mirror Casting Facility (optional: no charge); meet at NE corner of the Mirror Casting Facility (under Arizona Stadium).

3:15 PM: Mt. Bigelow 61-inch Observing Workshop (optional: $40 charge); bus leaves from SE parking lot of Plaza Hotel; we will return about midnight.

Sunday, October 20

9:00 - 9:30 AM: On-Site Registration (Lecture Hall [N210], Steward Observatory; use north walkway from 2nd St.).

9:30 AM-Noon*: Paper Session (Lecture Hall).

12:00 - 1:30 PM: Catered lunch.

1:30 - 4:00 PM*: Paper Session (Lecture Hall, Steward Observatory).

4:10 - 6:00 PM: CCD Image Analysis/Processing Workshop (Lecture Hall).

Evening: time to be arranged: Group Dinner - China Rose Restaurant (5101 E. Speedway; optional; no-host).

* Coffee breaks planned.

Monday, October 21

Time to be Arranged: Tour of space Imagery Center, Lunar and Planetary Laboratory (optional, no charge).

Program. We welcome papers by amateurs and professionals dealing with research projects that involve, or could involve, both groups. If you wish to deliver a paper, please give the relevant information on the registration form *. We plan a *Proceedings*, so please furnish a camera-ready copy of your paper no later than December 1, 1996 to the A.L.P.O. Address given on p. 3.

There will be exhibit space available, so you are invited to bring pertinent displays.

Mt. Bigelow 61-inch Observing Workshop.- This is a rare opportunity to use the famous Mt. Bigelow 61-inch reflector for a CCD imaging workshop. This is open to registrants only, and there is a $40.00 additional change to cover bus transportation and a boxed dinner. In addition to event organizers, there is room for only 20 registrants. **This workshop is intended for those involved, or seriously planning to become involved, in CCD imaging; there will be a little time for visual observing and this is not an observatory tour.** Within these constraints, we will accept the first 20 persons who apply (including prepayment; *

We anticipate that Jupiter, Comet Hale-Bopp, the Moon, and Saturn will be "targeted" during the workshop. Please note that the Observatory is at 8300 feet elevation, so you should dress warmly (the observing floor is not heated) and do not overexert yourself.

The Mt. Bigelow observing session is followed up by an Image Analysis/Processing Workshop at 4:10 - 6:00 PM Sunday, Oct 20. Bring preformatted PC-DOS diskettes to obtain your own copies of the images.

Lodging.- Although you can stay elsewhere if you wish, we have booked a set of rooms at the Plaza Note (1900 E. Speedway; Tucson, AZ 85719; telephone 1-520-327-7341) at a rate of $54/night single and $64/night double. For these rates you must call by **October 1st;** mention that you are with the A.L.P.O. meeting. This hotel is within walking distance of the Mirror Casting Facility and the Lecture Hall.

(For more information, telephone 415-566-5786; FAX to 415-731-8242; or send E-Mail to 73737.1102@compuserve.com)

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EDITOR'S NOTE - Registration forms will be at the October 4th meeting or can be acquired from Terri by calling 579-0185. The A.L.P.O. meeting registration fee is $30 and includes lunch. The 61" Workshop is $40. Only those attending the meeting will be eligible to attend the workshop.

Special Interest Groups

Computers In Astronomy Subgroup

BY ROGER TANNER

Contact Roger Tanner at 574-3876 or email:
rtanner@gas.uug.arizona.edu.

The next meeting of the Computers and Electronics in Astonomy Subgroup is scheduled for 7:00 on Sunday the 6th of October. The meeting will be held at Roger Tanner's house near Rita Road and Houghton on the southeast side. Call 621-1218 during the day and night (I live at work lately) for directions.

The meeting will be to look at the meteor trail recording setup at my house. This involves a computer monitoring the signal strength in a clear band In the FM. When a meteor hits our atmosphere, and leaves a conductive trail, it reflects radio station that we can't normally hear, down to our antenna and we recieve a distant station for a few seconds. Andrew Tubillio and I have put together a system to monitor this and we should actually have it running and some data to show by then! We will build a second system for running at his house to have two data sets to compare.

The other topic is Derald Nye will show a graphical calculator which was used to predict where and when a satellite would appear in the sky for him to photograph. This is what was used before computers were so widely available. It is interesting from a historical perpective and also it might help with the understanding of satellite orbits.

See you there,
Roger *

Dark Skies for October

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	30/ 1	19:31 - 20:57	Fr/Sa	11/12	19:17 - 5:04	Mo/Tu	21/22	2:26 - 5:11
Tu/We	1/ 2	19:29 - 21:43	Sa/Su	12/13	19:16 - 5:05	Tu/We	22/23	3:25 - 5:12
We/Th	2/ 3	19:28 - 22:31				We/Th	23/24	4:29 - 5:12
Th/Fr	3/ 4	19:27 - 23:21	Su/Mo	13/14	19:14 - 5:06	Th/Fr	24/25	- - -
Fr/Sa	4/ 5	19:25 - 0:12	Mo/Tu	14/15	19:33 - 5:06	Fr/Sa	25/26	Full Moon
Sa/Su	5/ 6	19:24 - 1:03	Tu/We	15/16	20:20 - 5:07	Sa/Su	26/27	- - -
			We/Th	16/17	21:12 - 5:08			
Su/Mo	6/ 7	19:23 - 1:56	Th/Fr	17/18	22:09 - 5:08	Su/Mo	27/28	- - -
Mo/Tu	7/ 8	19:22 - 2:48	Fr/Sa	18/19	23:09 - 5:09	Mo/Tu	28/29	18:59 - 19:33
Tu/We	8/ 9	19:20 - 3:42	Sa/Su	19/20	0:11 - 5:10	Tu/We	29/30	18:59 - 20:21
We/Th	9/10	19:19 - 4:36				We/Th	30/31	18:58 - 21:11
Th/Fr	10/11	19:18 - 5:04	Su/Mo	20/21	1:16 - 5:10	Th/Fr	31/ 1	18:57 - 22:02

Weekend Sa/Su	Sun Set	Sun Rise	Mercury Rise	Vi	Venus Rise	Vi	Mars Rise	Vi	Jupiter Set	Vi	Saturn Set	Vi
5/ 6	18:01	6:20	4:59	3	3:09	-4	1:49	2	23:03	-2	5:36	1
12/13	17:52	6:25	5:21	4	3:20	-4	1:42	2	22:38	-2	5:06	1
19/20	17:44	6:30	5:50	8	3:31	-4	1:33	1	22:15	-2	4:36	1
26/27	17:37	6:35	6:19	-	3:42	-3	1:25	1	21:52	-2	4:07	1
2/ 3	17:31	6:41	6:48	-	3:54	-3	1:16	1	21:29	-2	3:38	1

-3 brilliant
0 conspicuous
3 moderate
6 naked eye limit
9 binoculars limit

By Erich Karkoschka

Star Parties & Events

Kitt Peak Picnic and Star Party
5 October, 1996

As noted in the last newsletter, we will be holding another pot luck picnic and star party on Saturday the 5th of October. Unfortunately, we have 57 people coming for 50 spots! As we usually have no shows, I felt overbooking a little was ok, but the result is that anyone else interested in going goes on the waiting list. If you are signed up and your plans change, make sure you let me know so others can attend!

The last guided tour of the observatory leaves from the visitor's center at 1:30 pm. Please allow about 90 minutes drive from Tucson to get up there. At 4pm, the observatory grounds closes to the public. At that time you should head to the picnic area, about 1.5 miles down the main road from the top. If arriving after 4pm, make sure you do not go above the picnic area. We have full use of the picnic area, including the pavilion area. I will supply charcoal - bring something to grill and a dish to share. The cooking fires need to go out about sunset, so arrive well before if you plan to cook. The temperatures may be cool, so dress accordingly. This is a bring-your-own telescope operation, though most are quite willing to share the views. We can stay to observe till about moonrise, which is about 1am. The event officially ends at that time. No camping is allowed at the site.

Feel free to call if you have any questions, if you want to be placed on the waiting list, or if you want to cancel your attendance plans. It should be a great time! - D e a n Ketelsen 293-2855 *

Our Mother of Sorrows Church
18 October 1996

On 18 October, Our Mother of Sorrows Church located at 1800 South Kolb Rd in Tucson is having a star party. Setup will be at 6:00 pm. Need scopes. Call Karen Allen at 749-5744 for more information or to sign up. *

Whipple Observatory Star Party
19 October

Smithsonian Institution's Fred Lawrence Whipple Observatory Offices near Amado, Arizona

The Whipple Observatory will present an Open House and Star Party on Saturday, October 19. The Observatory Visitors Center will open at 1 p.m. Observing will begin at 7 p.m. courtesy of telescopes provided by the Tucson Amateur Astronomy Association and Sonora Astronomical Society.

1 p.m. Visitors Center opens
7 p.m. Observing begins (in parking area next to building).
On view: Jupiter, Saturn, galaxies, star clusters, Double stars, and a comet or two.

Dress for cool evening temperatures. Small flashlights and binoculars are useful to bring.

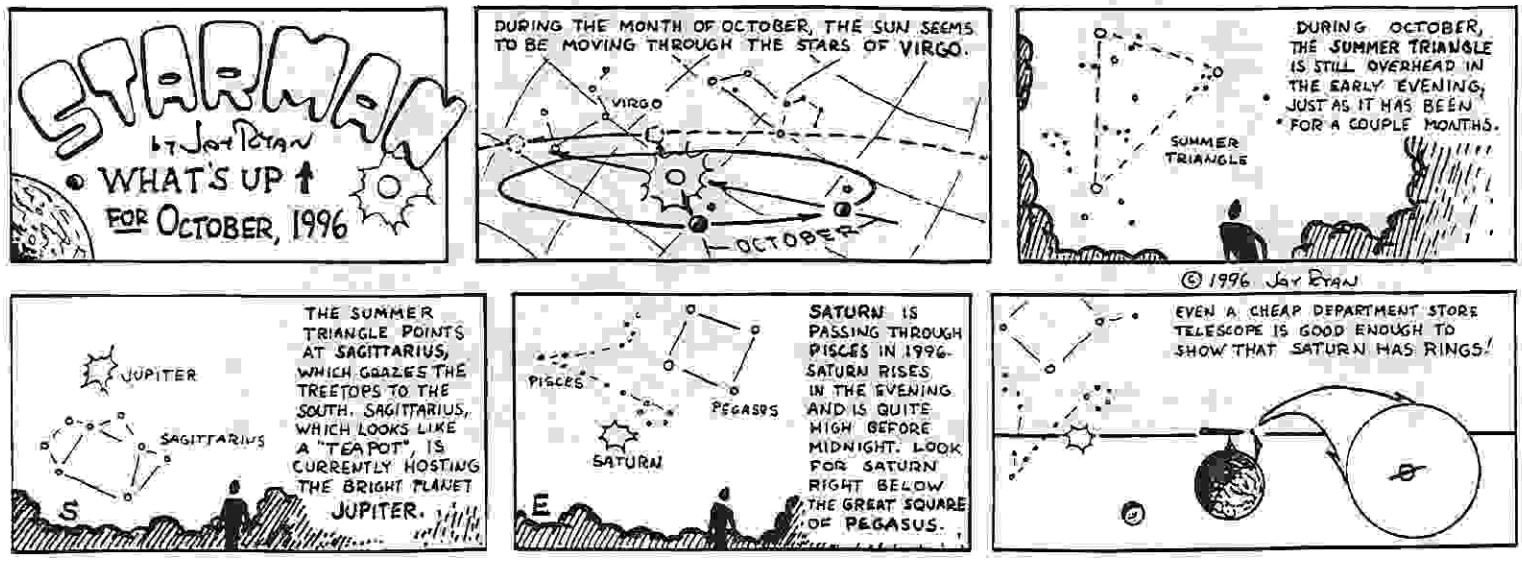
Please cooperate with staff directing parking when you arrive. The parking spaces nearest the building are reserved for TAAA members and their telescopes. Visitors should park along the driveway or in the parking area outside the gate or along the road as directed. (Please note: Visitors will be allowed to park cars next to the building in the space usually reserved for telescopes until 5 p.m. At that time, visitors will have to move their cars to other parking spaces so that telescopes may be set up.)

For more information call 670-5707. In case of threatening weather, call 670-5707 after 2 p.m. on the 19th for information about star party cancellation.

The Fred Lawrence Whipple Observatory and Tucson Amateur Astronomy Association present this opportunity to see the stars under dark Southern Arizona skies.

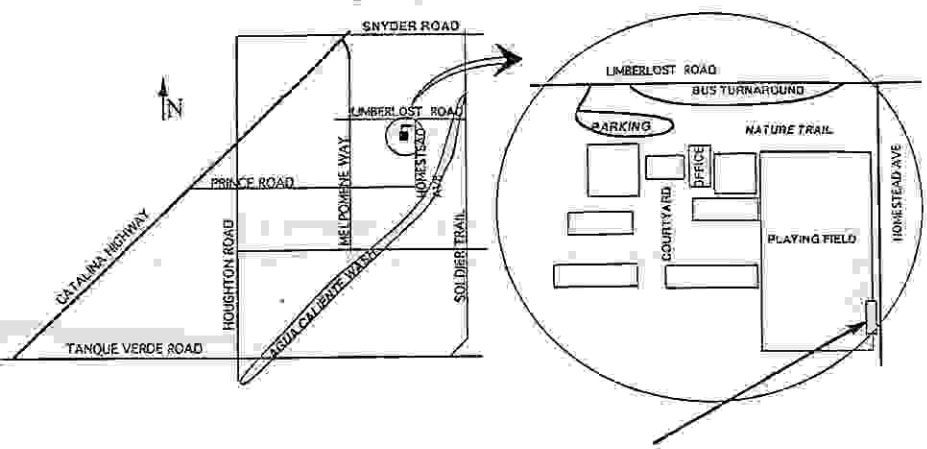
Agua Caliente School
22 October, 1996

Agua Caliente School is hosting another star party again this year. Seventy or more people from the Division of Planetary Science are expected to show, including Larry Lebofsky. In addition, the many students and staff who usually appear. We need 6 to 10 scopes. Come early, pizza will be served. Set up is at 6:00 pm. Call Karen Allen for details and to sign up. *

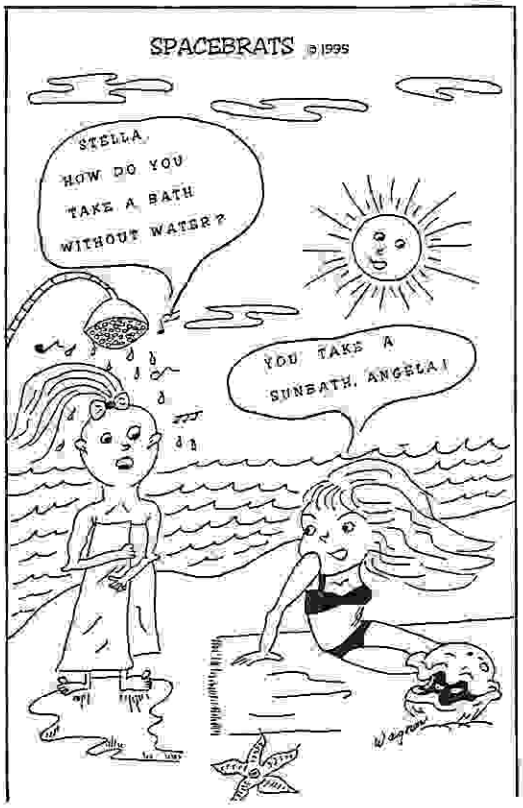


Maps

Agua Caliente Elementary School Star Party



GATE WILL BE UNLOCKED AND OPEN. GUESTS WITH TELESCOPES WILL BE ALLOWED TO DRIVE ONTO THE FIELD TO SET UP.

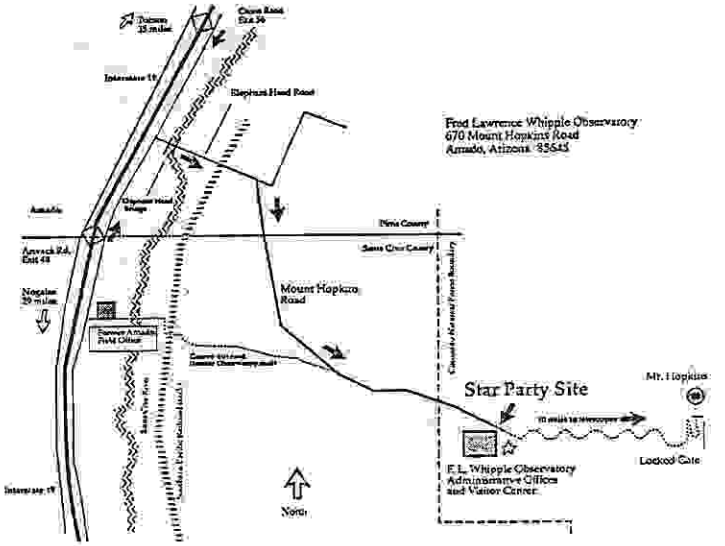


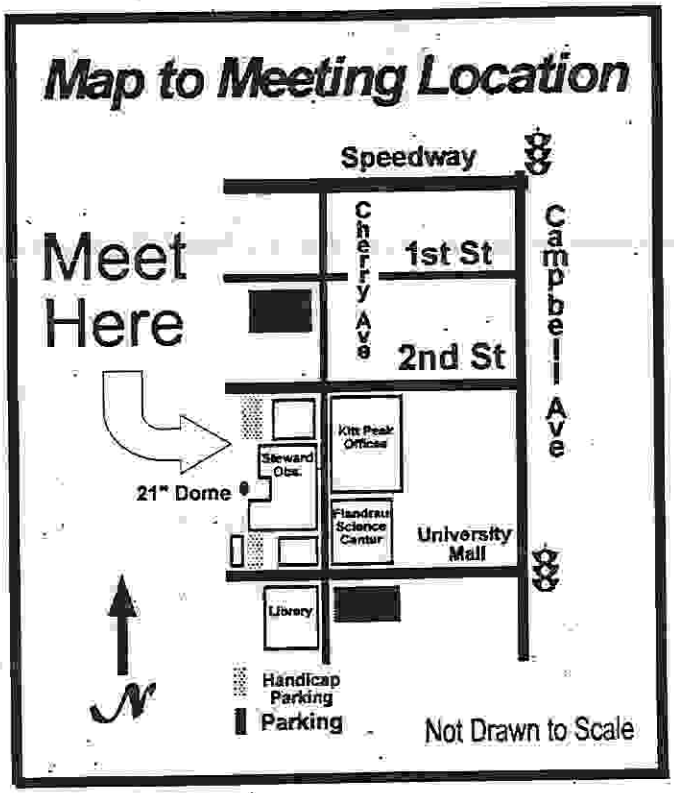
How To Find The Observatory Offices

The new administrative complex for the Fred Lawrence Whipple Observatory is 43 road miles south of Tucson and 38 road miles north of Nogales, Arizona.

From Tucson, drive south on Interstate 19 to exit 56 (Canoa). At the bottom of the exit ramp, turn left and drive under the freeway to the frontage road on the east side. Turn right and drive south three miles to Elephant Head Road. Turn left and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement)

From Nogales, drive north on Interstate 19 to exit 48 (Amado/Arivaca Junction). At the end of the exit ramp, turn right and then left onto the frontage road. Drive north for about two miles to Elephant Head Road. Turn right and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).





The 15th Annual

All Arizona Star Party

11-12 October, 1996

This is the fifteenth annual All-Arizona Star Party. It is a two-night event, held during the new moon of October. This year's event is once again sponsored by the East Valley Astronomy Club (EVAC). In the past, this event has been sponsored by other Arizona clubs.

The star party takes place at a site south of Arizona City, which is almost equally distant (about 55 miles) from Phoenix and Tucson (see the map). The site is remote and very dark. The only facilities available will be a port-a-pottie.

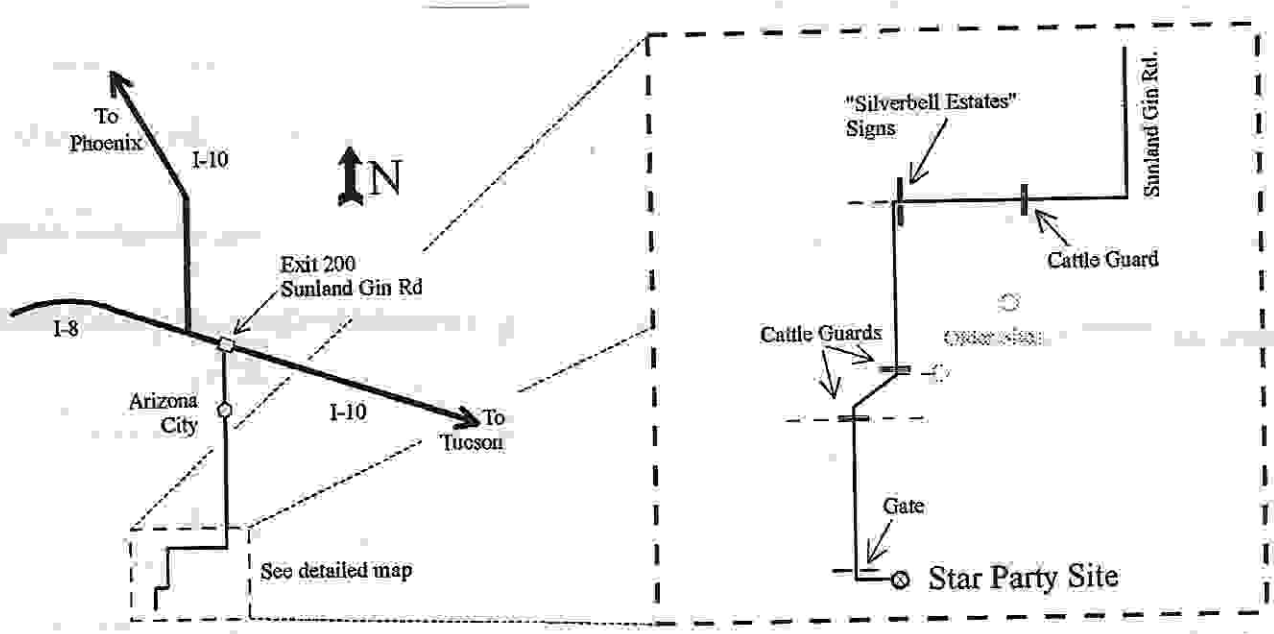
Staying the night means you have to plan ahead. The desert tends to be hot and sunny during the day and cold at night. Plan accordingly. Remember to bring warm clothes, food, and drinks. It is best to bring too many warm clothes than too few.

All Arizona astronomy clubs are invited and it's hoped for a large turn-out. Last year there were 62 vehicles on the observing field on Saturday night. So plan on being there early to see old friends and to make new ones. Last year, both nights were very good nights for observing.

SWAP MEET

On Saturday afternoon, October 12, there will be a swap meeting at the site from 4:00 PM until sunset. Bring money to buy things to sell or trade.

For those staying both nights, here is a list of restaurants at the given I-10 exits: #194 - Dairy Queen, Burger King, Denny's; #198 - Wendy's; #200 - Iron Skillet, Subway, Burger King; #203 - Pizza Hut, McDonald's, Taco Bell, Waffle House, and Mexican Food. *



Take I-10 to exit 200 (Sunland Gin Road.) Turn south after exiting the freeway. After about 15 miles, the pavement ends and about one mile further, the road turns sharply to the west. After another four miles, the main road will turn south just after the "Silverbell Estates" signs. Three miles past the signs, the road will veer off to the west, and five miles further, the road will pass through a gate. Turn left after the gate and continue for a 1/4 mile to the site.

Notes From Other Clubs

1996 Marc Aaronson Memorial lecture.
OCTOBER 17 AND 18

October 18, 1996: A public lecture will be given at Steward Observatory on October 18th. The lecture will be preceeded by refreshments starting at 6:00 pm. At 6:30 pm, there will be an unveiling of the Aaronson Memorial Plaque. Refreshments and unveiling will take place in the lobby of Steward Observatory.

Following the unveiling, a lecture given by Dr. J. Anthony Tyson of Bell Laboratories, Lucent Technologies, is scheduled to take place in Room N210, at 7 pm. It is entitled "The Dark Side of the Universe." [note: The topic has to do with gravity and dark matter, and how to measure the distribution of the dark matter.]

October 17, 1996. For those who are also professional astronomers, there will be a technical colloquium on October 17 at 4:00 pm, in the regular Steward Observatory/National Optical Astronomical Observatories/ Kitt Peak National Observatory/ National Solar Observatory/ National Radio Astronomy Observatories colloquium series entitled "Unlensing the Sky: Explorations of Dark Matter Clumping."

Marc Aaronson:

Marc Aaronson was born in Los Angeles on August 24, 1950. He received his undergraduate degree from the California Institute of Technology in 1972 and his Ph.D. in astronomy from Harvard University in 1977. He joined Steward Observatory as a Postdoctoral Research Associate in 1977 and became an Associate Professor of Astronomy with Tenure at the University of Arizona in 1983. His astronomical research focused on some of the most important problems of observational cosmology; the cosmic distance scale, the age of the universe, and the evolution of stars and galaxies. To all of these subjects he brought an unbiased and relentless search for the true state of affairs. He made many significant contributions to astronomical knowledge in these areas. In recognition or his research achievements, he was awarded the George Van Biesbroeck Award by the University of Arizona in 1981, the Bart J. Bok Prize by Harvard University in 1983, and the Newton Lacy Pierce Prize by the American Astronomical Society in 1984. Above all, Marc displayed a passionate love for astronomy which serves as a lasting inspiration to his many colleagues, students and friends. Marc died in 1987 in an accident while making astronomical observations on Kitt Peak.

In order to create a fitting tribute to the memory of Marc Aaronson, his family, friends, and colleagues have established the Marc Aaronson Memorial Lectureship to promote and recognize excellence in observational astronomical research. This lectureship and accompanying cash prize is awarded to an individual or group who by their passion for research and dedication to excellence, during the ten years preceding the award, has produced a body of work in observational astronomy which has resulted in a significant deepening of our understanding of the universe. The 1996 awardee is Dr. J. Anthony Tyson of Bell Laboratories, Lucent Technologies. The five previous awardees have been Robert Kirshner, Kenneth Freeman, John Huchra, Nicholas Scoville, and Wendy Freedman.

J. Anthony Tyson, 1996 Aaronson Awardee

Dr. Tony Tyson received both his B.S. degree and his Ph.D. in Physics, from Stanford University and the University of Wisconsin, respectively. He has been a Member of the Technical Staff at Bell Labs (now Bell Labs, Lucent Technologies) since 1969, and a Distinguished Member of the Technical Staff since 1985. He is a Fellow of the American Physical Society, and is a member of the Board on Physics and Astronomy of the National Research Council.

Dr. Tyson has, over the past 20 years, consistently advanced observational cosmology by recognizing new technological opportunities and seizing them to make important and innovative astronomical discoveries. He was among the first to apply rapidly advancing computer technology to the interpretation of astronomical images, writing automated star/galaxy classifaction programs still in use today. Dr. Tyson was also among the first to recognize the potential of CCD detectors for astronomy and to produce a working CCD camera for an observatory. His later CCD imaging showed the existence of the class of "faint blue galaxies," which has been a central focus in the study of galaxy evolution over the last decade. More recently he has exploited the phenomenon of gravitational lensing to study the mass distribution in galaxies and clusters of galaxies.

Through technical innovation and his willingness to go off the beaten track, Dr. Tyson has pioneered several areas of observational cosmology. Marc Aaronson and Tony Tyson both quickly embraced the CCD revolution; Dr. Tyson published his first paper with CCD observations in 1979, and Dr. Aaronson did so in 1983. *

Stellafane, 1996

By Roy Diffrient

The following is a review of Stellafane, the oldest telescope making event in the United States. It is written by Roy Diffrient, a friend of ours from this year`s Grand Canyon Star Party. It is forwarded to us by Sam Herchak of Phoenix, another regular from the Canyon. Thanks Guys!

Remember that line "it was the best of times, it was the worst of times"? Once again it applies to Stellafane. Amazing resemblance from year to year, each one different but the same in many ways.

Friday, on the way there, the radio was forecasting "one of the ten best weekends of the year"! Yeah, right. We laughed and cursed at that as we set up camp in a steady drizzle. Cloudy skies continued through the afternoon talks, which were mostly on making large 30"+ optics. But well after Midnight and after most everyone had given up hope and gone to bed, it suddenly cleared. You have to experience this to believe it: All day it's threatening rain, and then within twenty minutes, there's not a cloud in the sky! That's Stellafane weather - or maybe Porter's ghost in action! I spent the next few hours observing various globulars through a "portable" (with a big U-Haul and six guys, maybe) 130 year-old, 13" f12.5 Fitz (refigured by Clark) refractor, courtesy of the Aruna (MA) Astro club. Very impressive for an old steel-tubed monster with no lens coatings. Only at Stellafane.

Saturday was again cloudy, cool and threatening rain all day. Despite that, the attendance swelled to over three thousand, and the gatekeepers had to finally start turning people away. Both Breezy Hill and Stellafane East were packed with campers and day-trippers. The telescope competition had attracted 32 entries, which was much improved from last year's 17. Last year there were zero junior entrants. This year, the kids having heard the call, there were at least six, with four awards including one optics award. In the adult entries, I didn't see anything revolutionary, although there were a few well executed Newtonians and a neat idea or two. The optical judging award was again won by Steve Eldridge of NH. Last year, Steve won the glass-pushing award with his own 16" f6+ truss tube Dob, but this year he had done a truss-tube Dob with a 16" f6.2 mirror for Kent Blackwell of VA, which took top optics honors. He says Kent's new mirror is even better than his, which tests at 1/18th wave on the Foucault. Kent was ecstatic. Last year Kent brought a talking telescope (an eq mount with a voice announcement from a recordable greeting card mechanism saying reset the sector gear). This year he had Stellafane's most powerful dew-zappers on his eyepiece. These heaters were powered by his van, and actually smelled of singed hair! We kidded him that he didn't just evaporate dew, he boiled it off! Kent wrote a letter to Sky & Telescope a few months ago on correcting his old 12" mirror's figure with heat. But Steve Eldridge has now also refigured that mirror as well, so he had to find something else to do with those heaters! Also, John Desbiens of NH won top honors in Craftsmanship for another tall f6+ truss-tube Dob he built based on a mirror by Steve Eldridge. More on awards after I get the pictures back and review the video tape of the Saturday evening awards presentation.

Saturday night John Dobson answered questions at twilight in light rain sprinkles, and we learned about SETI advances (?) or efforts, at least, from Paul Horowitz. Then, when it was time to either observe or give up in disgust, suddenly, miraculously, again, it cleared up completely! If I hadn't seen it I wouldn't have believed it. Of course, the star-hungry crowd immediately flocked to every telescope on Breezy Hill!

For the next five hours or so I showed them the Cocoon Nebula, the Crescent Nebula, Stephen's Quintet, and several other "non-Star Party" objects. The sky was very good, but not quite as transparent as last year. I did not show M13, but I heard about a big Dob which seemed to be stuck on it, unfortunately. At the grandest, oldest Star Party of them all, you have to think that many of these people have seen a bit of the universe. I'd rather not waste their time and the beautiful clear skies on a very familiar object. Some of them had a bit of trouble seeing some of the more challenging objects in my scope, but I heard no complaints and many complements on the selection and the opportunity to see something they hadn't seen before.

During the night the Perseids flashed across the sky, to the crowd's delight. Everyone who did not have an eye to an eyepiece seemed to be looking up, and when a meteor would brighten the sky those who were looking into the eyepiece immediately knew from the shouts of others that they had missed something. That seemed to happen at least once a minute. Also during the night, we witnessed a bizarre triangular formation of three satellites in polar obit. They were within a degree or so of each other, at the same relative speed, and on the same track down through Cygnus. They were naked-eye visible, about mag 4.5 or so I'd guess. Some military or intelligence birds? No one knew.

Finally, an hour or two before dawn's first glow, only the hardcore types were left, and we could finally pick and choose objects as we pleased. This is my favorite time at Stellafane. It was great, but all too brief. That's one of the agonies of Stellafane - it comes down to just a few hours, really. But overall, it was another great year. Call me a masochist, I don't care. I know I'm hooked, I know I'll be back. Next year's event will be held August 1, 2, and 3, 1997. Make your plans now. And check the Stellafane web page at http://www.stellafane.com.

That's all for Stellafane '96, but that's not all. This year there was a small party after the party by the hardcore group. But that's another story, not for publication. *

Eye to Eyepiece
By Barry Hirrell

The prospects for doing any sidewalk astronomy in San Francisco during our fog-bound summer months are not good. The relentless stargazer is apt to wander.

I love to fly. So magical, the sensation of cheating gravity. Soaring off towards brave new worlds of discovery and awareness. More than anything, I love to fly to Ireland. The long arctic flight carries you across frozen seas dotted with icebergs. A plaintive moon hangs in an eerie polar twilight; a night which tries but cannot fall. The frigid North Atlantic below finally succumbs to a dense carpet of endless clouds.

Almost unpalpably at first, the plane begins its slow descent. Dipping through the downy white canopy, when suddenly, she appears. Thrusting out of the storm tossed ocean, her green and gold fields stretch forth like a great undulating quilt. A verdant mirage, speckled in sunshine and shadow. This is Ireland, and she has a certain flair for dramatic entrances. An emerald jewel set upon the slate blue sea, as you gaze over her jagged glacial features the color green is forever redefined by her magnificent countenance.

The aircraft is gripped by a collective hush. The prodigal sons and daughters of Eire watch intently as the ground races up to welcome us back. If not for the damn "fasten seatbelts" sign, a standing ovation would follow our landing. The applause is loud and lengthy, tear-filled eyes stare anxiously out at the place we so fondly refer to simply as "home".

I love to fly; it is my pathway to that enchanted esland, obscured by clouds. Ireland is music to my soul. You owe it to yourself to see her my way, not from the back of a tour bus. Far off her well-worn "tourist tracks" she weaves her subtle spell across your heart. As W.B. Yeats once wrote, "Come dance with me in Ireland".

Well, this is your golden opportunity. You heard it here first, the latest of my big ideas--Euroclipse '99. The Sidewalk Astronomers invade Europe! For the last time in this millennium, the moon's shadow falls on the earth; crossing much of Europe. The Sidewalk Astronomers will be touring the continent, with telescopes in tow.

This world passes by you pretty fast folks, so stop making excuses and put your nose to the grindstone! Don't say I didn't give you enough notice, either. The logistical and financial issues involved are quite complex. Last minute band wagon jumpers and crybabies simply will not be tolerated.

This will be a monumental journey, a star party on a global scale.

Join our intrepid band of Sidewalk Astronomers on this epic quest of enlightenment. A summer odyssey of sightseeing and stargazing awaits you. Come out and play, your idle telescope mocks you! Carpe' nox.

For further details on Euroclipse '99 you may send S.A.S.E. to:

Euroclipse '99 Info.
1775 42nd Avenue
San Francisco, CA 94122-4005

* * You are welcome to join or help us! * *

Editor's note: Barry Hirrell is perhaps the biggest proponent of the TAAA outside the Tucson area. He is a regular at the Grand Canyon Star Party and is one of the reasons it is as popular as it is. *

What's New at Flandrau ?
By Mike Terenzoni

New Exhibits at Flandrau !

If you haven't been to Flandrau in the last few months or so you may be surprised to find several new exhibits to enjoy.

With "Dr. Jekyll's Mirror" you can use a two way mirror, special lighting, and controls to make your head appear on the shoulders of your friend.

If a bell rings in a vacuum does it make a sound? If you turn on a fan in outerspace does it create a breeze? Suck the air out of the bell jar and find out what happens in this new exhibit "Now You Hear, It Now You Don't"

What does Dorothy Hamil & Dorothy from The Wizard of Oz have in common? Take a spin on the rotating disk to find out how Dorothy got the ride of her life in "Dorothy's Dilemma".

"The World Within" Using a special large-viewing microscope you can see organisms in a variety of test tubes. You will be amazed by some of the monstrous looking life found in our aquarium. You'll be glad they are microscopic!

Ever wanted to take apart a computer or slide projector? Don't worry, it's okay to do it on the "disAssembly Line". We supply the tools, you supply the curiousity.

So come on down to enjoy these and other exhibits at Flandrau, the fun place for science!

Michael Terenzoni
Outreach Coordinator
Flandrau Science Center
Phone: 621-3646
Internet: MikeT@ns.arizona.edu *

Australian Looking for a Pen Pal

One of our members received a request a few months ago from a kid in Australia looking for an email pen-pal. It reads:

"My name is Greg Sheehan and I live in Brisbane Australia. I am interested in what goes on in the north and I would like to keep in contact with your club. In return I can tell you what goes on here. I can be reached at my brother Leonard's email address which is lensheehan@msn.com."

Anyone out there intesested? *

HELIX THE NEBULA

The brightest and largest of all the planetary nebulae lies in the dim southern sky constellation of Aquarius representing the Water Carrier. The "Helix" or "Helical" Nebula as it is often called is now placed at it's best in the night time sky for observation by amateur equipment. In southern Aquarius the Helix Nebula is now 37° above the Tucson horizon about 11° northwest of the bright 1st magnitude star Fomalhaut.

Although the Helix Nebula is fairly bright at magnitude 6½ it wasn't seen by Charles Messier. It was discovered later and therefore it was given a New General Catalogue designation instead of an 'M' number. The Helix Nebula is listed as NGC 7293 with the following coordinates for epoch 2000 R.A. 22h 29m, Dec. -20° 48'. Even though the Helix Nebula shines at 6½ magnitude, it's brightness is spread over ¼° making it appear quite dim. Binoculars and low power telescopes work best on this nebula. I like to use no more than 30x at most on this object. Dark moonless nights are a must to see this faint object.

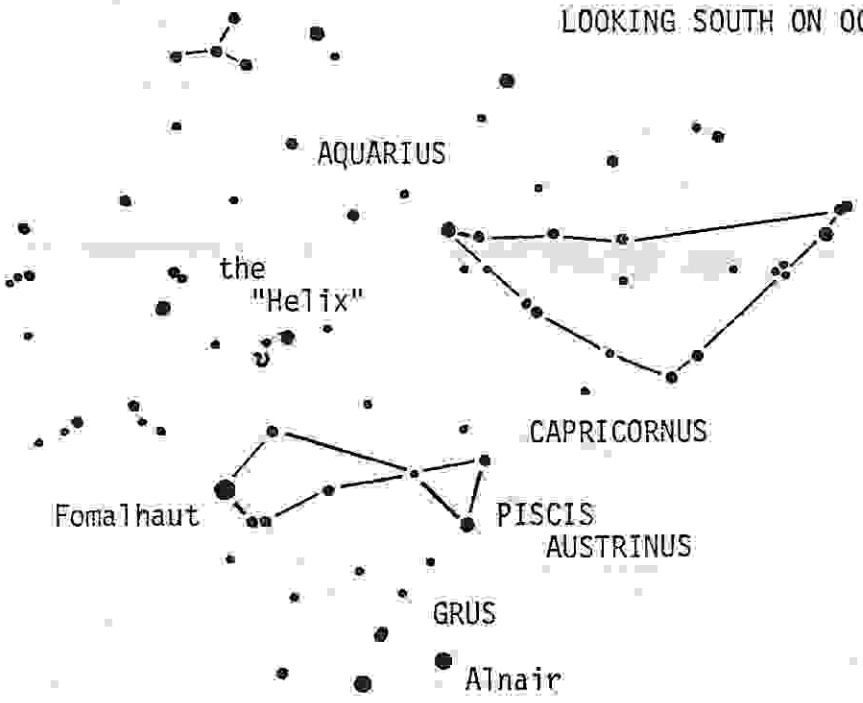
The Helix Nebula lies at a distance of about 325 light years from Earth, which makes the ¼° apparent diameter of the nebula 1 light year across in true diameter.

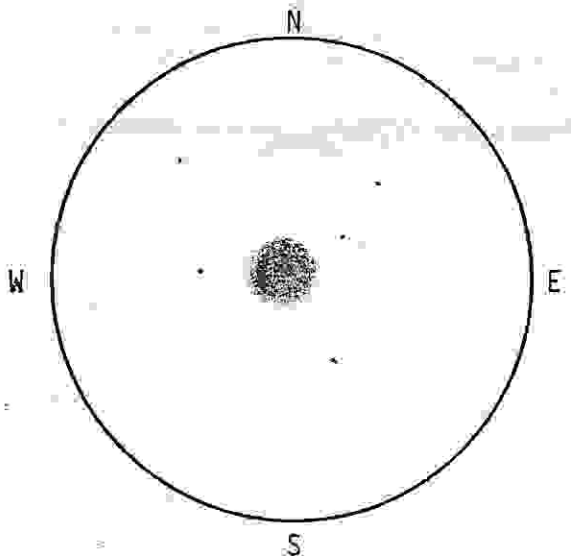
The progenitor star at the center is a faint blue dwarf of magnitude 13½. You will need a 6" to 8" telescope to glimpse it. This hot dwarf has a temperature of about 100,000°K. The central star has a luminosity of 1/15th the Sun's. The Helix Nebula appears to be about 20,000 years old. If you look at photographs of this nebula taken with large telescopes such as the 200" Hale reflector on Mt. Palomar, California you can see why the nebula is called the Helical Nebula. You can notice the spiral structure of the coils of this gas bubble. In my 3" refractor I see a gray smoke ring shaped nebula, kind of what you might imagine if a star blew off it's outer atmosphere leaving exposed a hot stellar core.

To locate the Helix Nebula start at Fomalhaut, Alpha (α) Piscis Austrini and move 11° northwest to the 5th magnitude star Upsilon (υ) Aquarii. The Helix Nebula is 1° to the west of this star.

So sit back this month with a pair of binoculars or a low power telescope and sweep through the southern reaches of Aquarius to find this remarkable example of a planetary nebula.

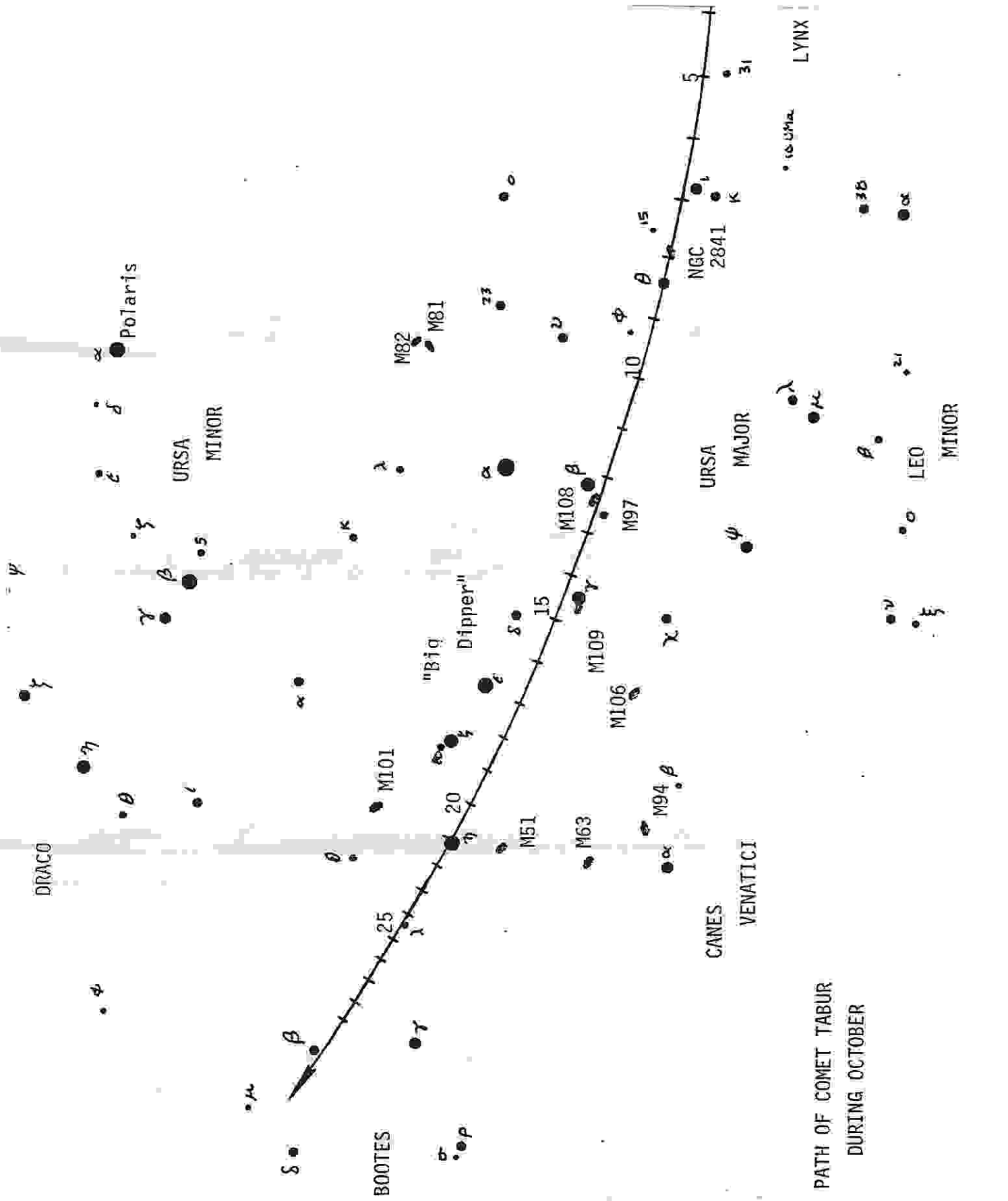
By Jeff Brydges



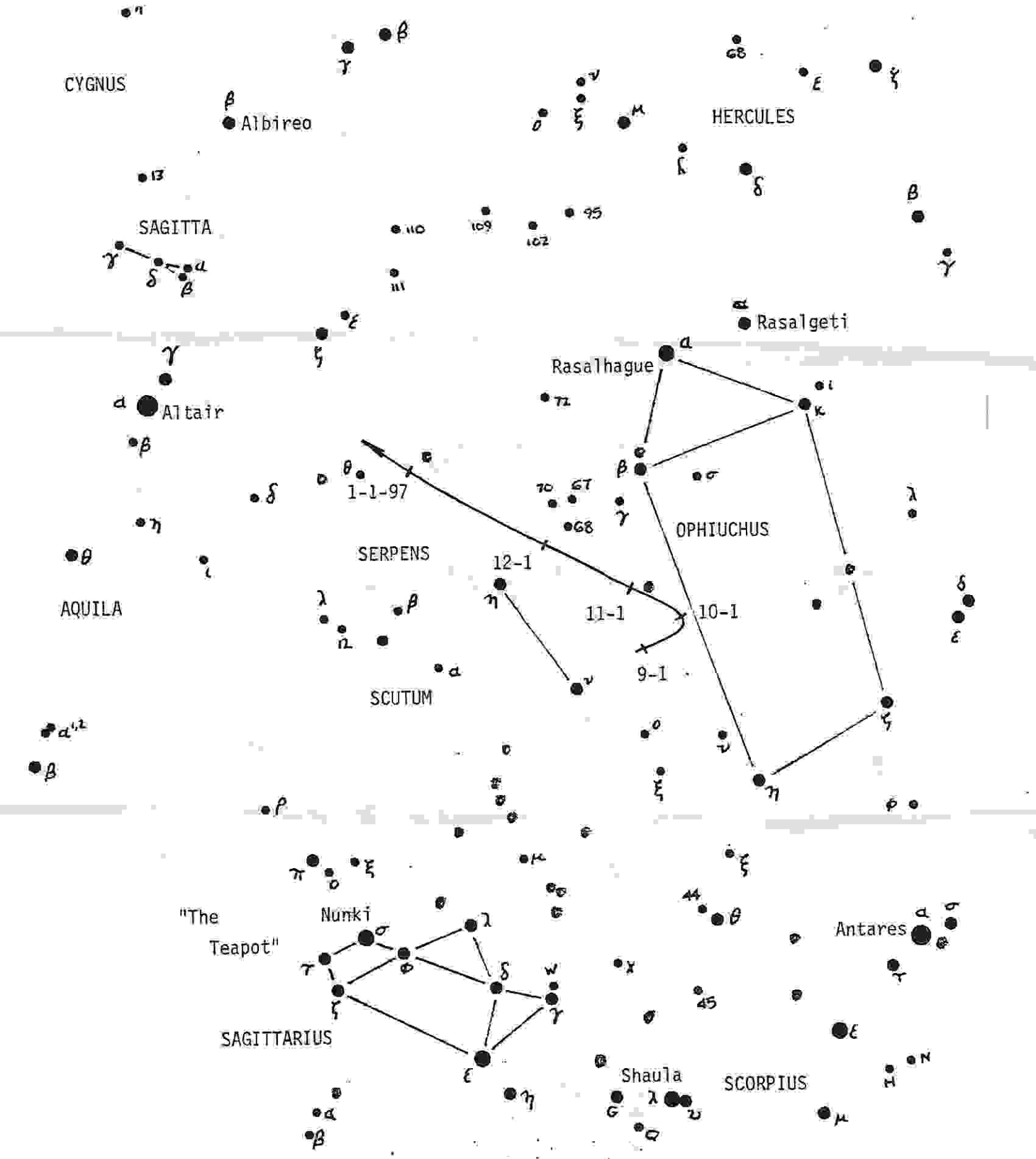


The Helix Nebula in a 3" refractor at 30x.

Path of Comet Tabur by Jeff Brydges
Binocular Object, Early Morning



Path of Comet Hale-Bopp by Jeff Brydges
Binocular Object, Early Evening



TAAA Board of Directors - 12 September, 1996

Location: Flandrau Planetarium Conference Room, University of Arizona

Officers/members in attendance: Teresa Lappin, Larry Wilson, Gary Rosenbaum, Dave Harvey, John Polacheck, Steve Kristmann, Ingrid Saber, Bob Schwartz

Call to Order: 7:07 p.m.

Agenda: Events/meetings:
Star Parties:
October 5 - Kitt Peak (See dean Ketelsen).
October 12 - All AZ Star Party
October 18 - Our Mother of Sorrows Church
October 19 - Whipple Observatory Visitor's Center
October 22 - Aqua Caliente School (Div. of Planetary Sciences)
Meetings: October 4 - General Membership meeting - Members Night Beginners lecture - Open
October 19-20 - ALPO Meeting
November 1 - General Membership - Nick Woolf - detecting life on other planets
December 6 - General Membership - Don Davis (?)

Treasurers Report:

Current total cash Assets:	$39,318.97
Current Fixed Assets:	$35,734.00
Total Liabilities & Equity:	$75,052.97
Net Income for August:	$272.02

John Polacheck moved that John Schwartz and Gary Rosenbaum meet to discuss investment options for the clubs funds and that they report next month on recommendations. Seconded by Harvey and passed unanimously.

Land: Ingrid Saber and John Polacheck re-affirmed that the club specifications for a site should be based on the area having dark skies and equipped with a 30" telescope. Ingrid Saber also asked about the progress of another club membership survey to determine other site qualities - Teresa Lappin explained that the survey is being designed and will be distributed in coming months. John Polacheck and Dave Harvey suggested that observers be asked to do site testing and that a core group to do this work be solicited from the general membership.

Project ASTRO Status Report: Teresa Lappin reported that we now have 14 people who signed up or expressed interest in helping with project ASTRO.

Association Handbook: Discussion of the outline of the handbook with emphasis on treasurer's duties and rules for spending money.

Old Business: Public Star Party Site - John Polacheck agreed to contact several authorities regarding the possibility of having a public star party sometime after February Site for Mirror Grinding facility - Larry Wilson made contact with Steve Bowles about using the facility acquired about a year ago by Mr. Bowles as a mirror grinding laboratory for the club. Mr. Bowles reported that the facilities were no longer available. The club is still looking for a site for these operations. *

Desert Skies Classified

FOR SALE: The Santa Clarita Astro Club. has sweat shirts for sale, XLG, good quality, $15.00 plus postage. Black with pale blue and white design (planets and galaxies). Dean Ketelsen has one if you want to see what it looks like. Call or write: Patty Domay, 22408 3rd St., Newhall, CA 91321, or Phone: (805) 255-3625. (11-96)

FOR SALE: 80mm f11 refractor, ALT-AZ mount, hard maple tripod, star diagonal, terrestrial Porro prism, sun filter, 3 Ploss eyepieces, $500. Call Jeff Brydges at 888-0591. (12-96)

FOR SALE: Celestron 8 with carrying case, tripod, wedge, 1¼" star diagonal, piggy back camera bracket, sturdy sand cast aluminum fork mounting, special coatings on optics, 30mm finder, one University Optics Kenig 24mm eyepiece and one University Optics 10.2mm orthoscopic eyepiece, $495. For more information call Duane Neihaus at 797-4189. (12-96)

FOR SALE: Celestron 8 inch Schmidt camera with attached C5 guide scope; excellent condition, $795. For more information call Duane Niehaus at 797-4189.(12-96)

FOR SALE: Eyepieces: Tele-Vue 13mm Nagler, $185; Tele-Vue 31mm Wide-field, $175; Tele-vue 2.5X Barlow for 1¼ inch diameter eyepieces $50. All in excellent condition. There will be a 5% discount for purchase of two or more items. Call Duane Niehaus at 797-4189. (12-96)

FOR SALE: Meade LX200 HP f/10 10" scope with V3.34 software. Very good condition and ready for deep sky viewing or astrophotography. Includes $1,700 worth of accessories. Asking $3,500 OBO. Phone Jim Waters, Phoenix AZ, EVAC Member at (602) 554-8789, 8:00 to 5:00 pm. (12-96)

FOR SALE: Hurst 1RPM PM Synchronous Reversible motor 250 Oz-In. Clockwise/CounterClockwise switchable $10 Variable Freq. Drive Corrector. input: 12VDC 1.0A output: 115VAC 7W Freq adjustable from 50-65Hz Hand Paddle with Fast/Slow buttons 40/63Hz, and map light 12VDC accessory plug on unit. Low battery indicator. $100 OBO.

(2) Stepper Motors. Manuf: Fuji Electric Co. Ltd. Model: GPF2945-2A (PM type) Step angle: 1.8deg Volts: 1.8DC Current: 4.8A/Phase 6 wires $20 OBO for both.

Battery charger for 12v 6A motorcycle or Gel type batteries Smart charger has full and trickle charge modes. $20, OBO. CONTACT ; Enrique, 520-513-8937, digital pager, Tucson area Email: chavez@noao.edu. (01-97)

FOR TRADE: Three telescopes: (1) - 6-inch f8 reflector, DOBS mount; (2) - 6 inch 44.3 RFT reflector with a 2-degree field of view. DOBS mount; (3) - 60mm Celestron refractor, alt-az. Mount. Want to trade all three for a 4-inch refractor with alt-az mount. Call Gilbert Friedman at 571-1662. (01-97);

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 Nancy or Nina at 579-1382 or email to ninalehman@aol.com or nlwagner@aol.com.