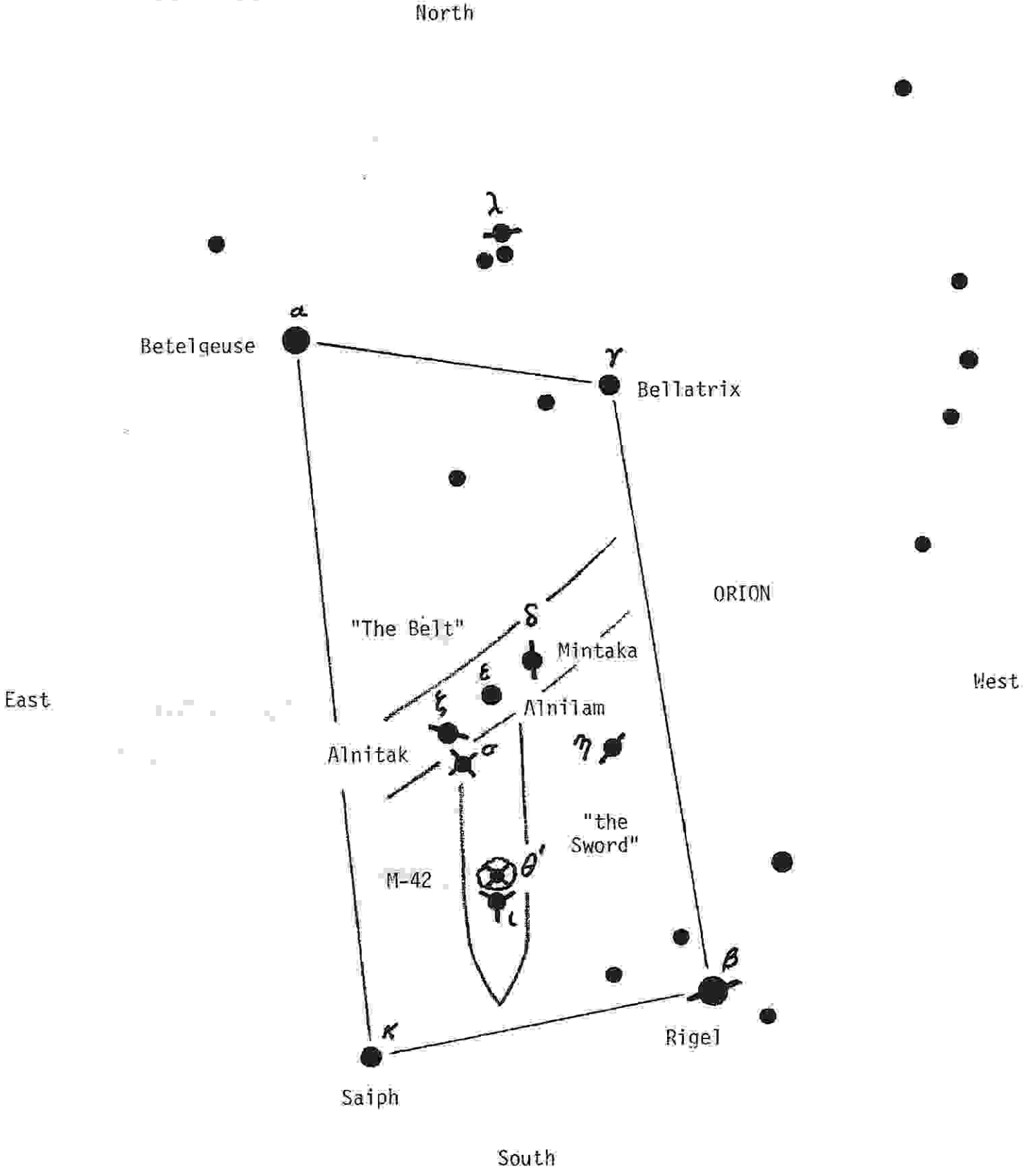
Desert Skies

JANUARY 1993

HAPPY NEW YEAR!!!!



GENERAL MEETING - **Friday, Jan. 8**, 7:30 P.M. at the **NEW** Steward Observatory Auditorium. Mike Lesser will present a talk on "Recent Advances in CCD Technology".

7:00 P.M.- pre-meeting "**Beginners lecture**" by Terri Lappin will be "**CCDs: What are they??**" ALL are welcome! ("old" Steward Obs. room 204)

EXECUTIVE MEETING -**Thursday, Jan. 14**, 7:30 P.M. at Flandrau Science Center.

30" Telescope Design, Land & Fundraising Meeting - Wednesday, Jan. 20, 7:30 at the home of Duane & Sharon Niehaus—call to confirm.

STAR PARTIES - **Saturday, Jan. 23** - Star Party at Smithsonian Astrophysical Observatory.
Saturday, Jan. 30 - Star Party at Sabino Canyon.

TAAA EXECUTIVE
Jan. 1993

President	Dean Ketelsen	293-2855
Vice-President	Terri Lappin	579-0185
Executive Sec.	Dick West	762-9037
Recording Sec.	Sharon Niehaus	299-8541
Treasurer	Duane Niehaus	299-8541
Member-at-Large	Bob Goff	790-1452
Member-at-Large	Ed Vega	747-9323
Chief Observer	Andy Meyer	742-4549
Membership Coord.	Terri Lappin	579-0185
Past President	Tim Hunter	299-2972
Publicist	?????	

MEMBERSHIP IN THE TAAA

Individual Membership	$20.00
Family Membership	$25.00
Senior Citizen (over 60)	$18.00

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

Rates for membership in the TAAA are given above. Members can subscribe to Sky & Telescope at the time of membership renewal, saving over 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, P.O.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 **15th of the month**. Materials received after that date will appear in the NEXT issue.*
* *All submissions are retained by the editor unless prior arrangements are made.*
* *Articles, artwork, and photos should be camera ready. Photos should be screened.*
* *We will not publish slanderous or libelous material!*

Send articles, announcements etc. to:
TAAA - Desert Skies
P.O.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.

BEGINNER'S LECTURE

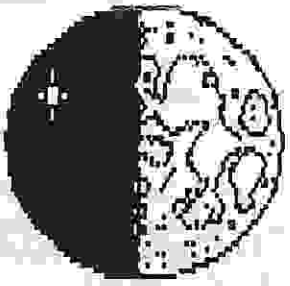
...and JUST WHAT IS A CCD?

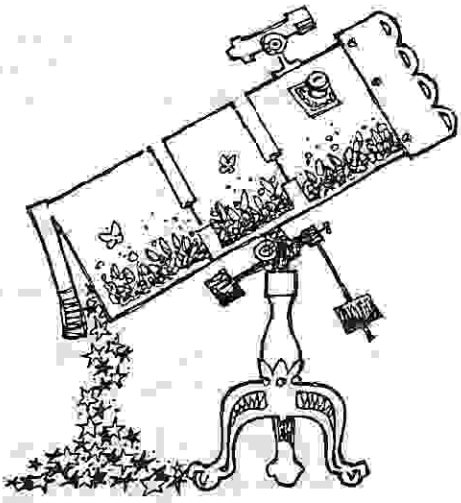
This month's regular lecture will be about CCDs. So that our beginner's can get the most from this lecture, this month's Beginner's Lecture will also be about CCDs. What are these little silicon devices and why are both amateur and professional astronomers so excited about them? Come to the Beginner's Lecture and get some basic information before attending the regular meeting. Some of the terms used when discussing CCDs will be explained, so Mike Lesser's lecture will not be all Greek to you.

See you at 7pm on January 8th (the SECOND Friday of the month)---one half hour before the start of the regular meeting.

Announcement: There has been interest in arranging Telescope Users Sessions for those wanting to learn how their telescope works and how to take care of them. I will have a sign-up sheet at this meeting for those interested. These sessions will be held at a convenient location in Tucson (someone's home most likely), and tailored to some amount to fit your schedule. Two or three people will attend each session to keep the groups small. Topics will be: telescope care and cleaning, optical alignment, equatorial alignment on Polaris, accessories in action, etc.

Teresa 579-0185 (before 10pm)





PUBLIC STAR PARTY

COSPONSORED BY WHIPPLE OBSERVATORY

We will be holding another Santa Cruz Valley Public Star Party at the Whipple Observatory headquarters on Saturday January 23rd. The headquarters are located at the base of Mt. Hopkins in the Santa Rita Mountains south of Tucson. It is about 40 miles from the University of Arizona, most of which is interstate driving and the entire route is paved. The site is reasonably dark and great for public star parties. Facilities are available and AC power can be provided if necessary (call Teresa if you need AC power). Coffee and other hot drinks will be available complements of the observatory.

Arrive by 5:00pm to set up the telescopes. A short talk will be presented by one of the staff astronomers at 5:30pm and observing will start shortly after. A map is provided in this newsletter.
Teresa 579-0185

NEW POSSIBILITY FOR A TAAA OBSERVATORY SITE

and ABOUT THAT ENVELOPE

Duane Niehaus recently found a piece of private land for sale which meets many of our requirements for a permanent observing site but with the conveniences of home. Located about 40 miles south of Tucson and only 7.5 miles from I-19, it is about an hours drive and 20-30 minutes closer than the Arivaca Site which we have been going to.

This site already has **utilities and facilities** which have been nonexistent at the other sites we have looked at. It is thought that being closer to Tucson and having utilities/facilities, the site would be used by more of the general membership than the other sites we have considered. It is not expected to remain on the market for long due to the reasonable asking price and considering the improvements that have been made to the site. For this reason we are asking for **tax deductible donations to be made to the Land and Telescope Fund** to help us purchase this site. We need about $40,000 more in the fund to meet the owner's asking price. **We have provided an addressed envelope for your donation.** We are investigating the possibility of private loans.

ABOUT THE SITE:
Several TAAA members visited the site and compiled this list of good and bad points about it. Anyone interested in details or who would want to see the site should contact Duane or any executive member.

ACCESS: very good, paved to the site, interstate driving except the last 8 miles, about 1 hours drive from most of Tucson, a few washes along the Arivaca Road may present problem in rainy season, muddy entrance (50 ft) into the site-easily fixed

FACILITIES: all utilities on the property (electricity, water--recently certified GOOD water, septic system), 2 wells (one electric, one windmill), no phone--underground phone line along the Arivaca Road

LAND: 20.85 acres--mostly usable, about 3400' elevation, mesquite, fruit trees, some cactus, generally sloping uphill to the north (about a 50 foot elevation gain), established dirt path for vehicles from Arivaca Road to top of hill, one wash on North end of property

BUILDINGS: 10' wide mobile home (2 bedrooms, one bath), 20' X 20' secured storage building, mobile home not insurable in present state (about 20 years old but in generally good condition), fully fenced

LIGHTS: there are some problem lights--

1) Two neighbors (one to the south and one to the east) which have outdoor lights. We would approach these neighbors about shielding their lights if we were to purchase this site.
2) Car headlights on Arivaca Road are aimed at property for approximately 20 seconds as they drive along the road. Planting trees to block these headlights is being investigated. (Arivaca Rd is not heavily traveled, but several cars early in the evening.)

SUMMARY:
Already having utilities, buildings and a fence saves us a lot of work and money. There are some problems with the site but these are outweighed by its advantages. Many members who have complained about dirt roads and no facilities should approve of this site.

In January Orion rises high in the southern sky and is most noteworthy for its Great Nebula M-42 and many bright giant stars, but Orion is also a double star observers paradise, eight bright ones being visible in small telescopes, why not pick a clear and steady night and try these.

Beta Orionis "Rigel": magnitudes 0.1-6.8 separation 10".1 P.A. 203°.7 colors bluewhite and blue, use a 3" to 6" telescope at 100x.

Eta Orionis; magnitudes 3.8-4.8 separation 1".4 P.A. 81°.8 colors white and white, a difficult star to resolve use a 6" or larger telescope at 200x.

Delta Orionis "Mintaka": magnitudes 2.2-6.7 separation 52".2 P.A. 0° colors white and deep blue, nice at 50x in any telescope.

Lambda Orionis: magnitudes 3.7-5.6 separation 4".5 P.A. 45°.8 colors white and white, use 100x in any telescope to resolve this pair.

Theta-one Orionis "Trapezium": magnitudes A6.7, B 7.9, C 5.1, D 6.7 separations A-B 8".8 A-C 12".8 A-D 21".5 P.A.s A-B 31° A-C 132° A-D 96° colors all whites, resolved with any telescope at 50x.

Iota Orionis: magnitudes A 2.8 B 6.9 C 11.0 separations A-B 11".8 A-C 49".7 P.A.s A-B 141°.1 A-C 103° colors white, blue, white, use 70x with 3" to 6" telescopes.

Sigma Orionis: magnitudes A 4.0 C 10.3 D 7.5 E 6.5 separations A-C 11".4 A-D 12".9 A-E 42".6 P.A.s A-C 238° A-D 84° A-E 61° triple in 3" and smaller telescopes at 100x quadruple in 6" and larger telescopes at 100x.

Zeta Orionis "Alnitak": magnitudes 1.9-4.0 separation 2".4 P.A. 162° a pair of whites, use a 3" to 6" telescope at 150x for a clear split.

Jeff Brydges

Lectures in Astronomy

The Fred Lawrence Whipple Observatory takes pleasure in presenting its 23rd series of public lectures on astronomy and astrophysics for the Southern Arizona community. The series presents recent discoveries in astronomy, local research projects and modern methods used to explore the universe.

January 12	**Where Next Columbus? An Exhibit of Exploration**	Mr. William Jacobs, National Air & Space Museum
January 19	**A Year in the Life: 1992 and the 6.5-meter Mirror Project**	Dr. Frederic Chaffee, Multiple Mirror Telescope Observatory
February 2	**The Fate of The Universe**	Dr. Craig Foltz, Multiple Mirror Telescope Observatory
February 9	**Black Holes: Are They Blue?**	Dr. Trevor Weekes, Fred Lawrence Whipple Observatory

All lectures will be held at 3:30 p.m., Tuesdays, in the Green Valley Recreation Center West Auditorium, Green Valley, Ariz. Each 45-minute illustrated lecture is non-technical and intended for the interested layperson. A question-and-answer period will follow each lecture. Admission is free. For further information, call the Whipple Observatory Public Information Office at 670-5707.

(Co-sponsored by the Green Valley Recreation Association)

A New Era in Newsletters

As announced at the last meeting, this is the last TAAA Newsletter put out by Dolores and Rick Hill. They are to be commended for the effort they have put out for the last few years in producing a newsletter that has consistantly increased in quality while going down in cost. A high water mark has been established that will be difficult to equal.

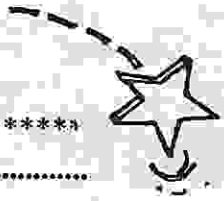
We certainly underestimate the amount of work involved in putting this out, but we will soon see all that is involved as it is placed upon our laps. At the December Executive meeting, it was decided to run the newsletter by committee until someone steps forward to take on the task. What is proposed is to meet somewhere about 2 weeks before the general meetings to paste up the pages, and then proceed to a copy center to print and collate the newsletter and put on mailing labels. To encourage attendance by clubmembers, TAAA will spring for pizza. For the first effort, we will meet at the Mirror Lab under the east end of Arizona Stadium on Saturday 23 January, 1993 at 10am. The lab has 2 computers with Wordperfect on them and hopefully we can get a copying account at Optical Sciences to help keep the operation centrally located. Please check with me before the 23rd to make sure the facilities remain available. If we don't get any volunteers, expect a drop in newsletter quality. Please come if you can help out.

Along the same lines, we are seeking submissions of interest to the Club as far as observing, telescope making, product or book reviews, or artwork suitable for reproduction. Please be sure your submissions meet the established editorial rules of the TAAA. Camera ready text or artwork or disk files of text are most convenient.

-Dean Ketelsen 293-2855

January 30 Mars Party at Sabino Canyon!

The TAAA is holding a public star party on Saturday, 30 January at Sabino Canyon. The event is timed to correspond to observe the planet Mars while it is well placed in the sky. There will also be a quarter Moon to observe as well as Venus and winter Milky Way objects. This event will be well publicised so we need as many volunteers as possible to bring out telescopes. Come out and set up around sunset and be prepared for cold weather. Please help make this another successful event.



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ITEMS WANTED OR FOR SALE.....

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WANTED: Brackets to hold 6 x 30 finder; FOR SALE: Small diagonal for Newtonian telescope; 20th wave, 7/8" minor axis, custom made;OR WILL TRADE FOR 1 1/4" diameter eyepiece with 16-18mm focal length. Call Gilbert Friedman at 571-1662.

STAR PARTY

See The Stars Through A Telescope

Free and open to the public

Saturday, January 23

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

☆☆ ☆☆ ☆☆

On view: The Moon, Venus, Saturn, Mars, the stellar nursery of the Pleiades, double stars, star clusters, galaxies and perhaps meteors.

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

5:30 p.m.	Informal lecture on Astronomy by Observatory staff (in Visitor Center)
6:15 p.m.	Observing begins (on Visitor Center grounds)

Telescopes will be provided by and operated by TAAA members with the support of Observatory staff.

Dress warmly. Small flashlights and binoculars are useful to bring. Please cooperate with staff directing parking when you arrive. For more information call 670-5707. If the sky is cloudy, call 670-5707 anytime January 23 for recorded information about star party cancellation. (Directions to Observatory office and map are printed on reverse.)

☆☆ ☆☆ ☆☆

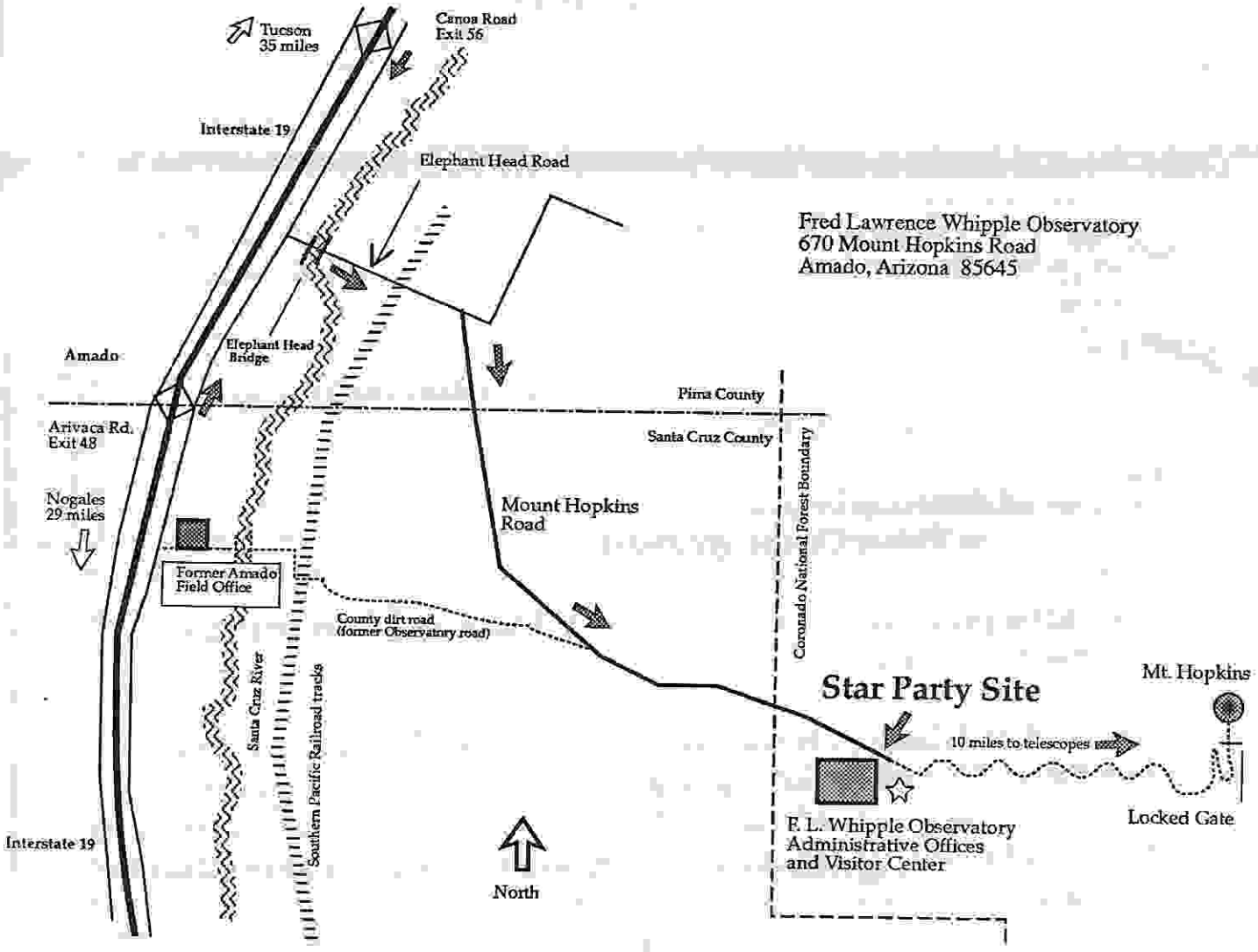
Fred Lawrence Whipple Observatory
P.O. Box 97, Amado, Arizona 85645 602/670-5707

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).

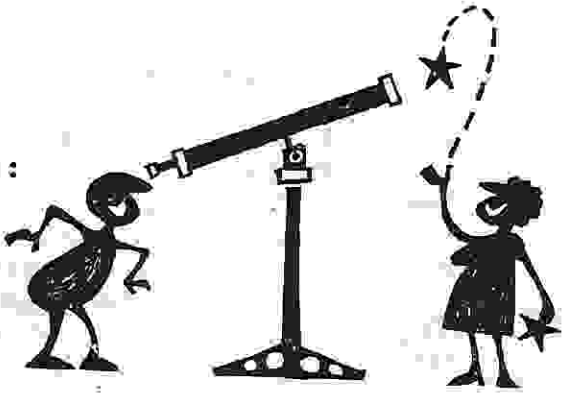


CELESTIAL CALENDAR for January 1993 (all times are in MST):

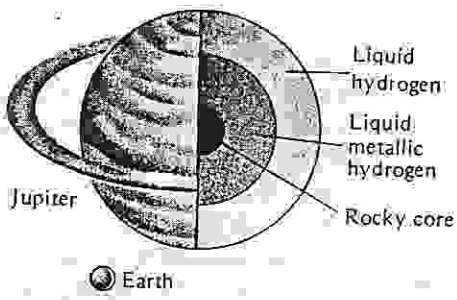
F Jan. 1 Giuseppe Piazzi discovers 1st asteroid, Ceres, 1801
S Jan. 2 Leslie Peltier, American amateur astronomer, born 1900.
S Jan. 3 7am, Mars closest to Earth, 58 megamiles.
8pm, Earth at perihelion, .98323 a.u. (147,103,000 km).
M Jan. 4 11am, **Quadrantid meteor shower**, ZHR 80! peaks about 2am, well placed in a dark sky.
T Jan. 5 1st photograph of an aurora, 1892.
W Jan. 6 Johann Elert Bode discovers a comet which leads to the discovery of eight Messier objects, 1779.
T Jan. 7 4pm, Mars at opposition.
F Jan. 8 6:37am, **FULL MOON.**
7:30pm, **TAAA General Membership Meeting**, Steward Obs. new auditorium.
S Jan. 9 Parallax of alpha Centauri is announced by Henderson, 1839.
S Jan. 10 Robert Wilson, American radio-astronomer, born 1936.
M Jan. 11 The Uranian satellites Oberon and Titania discovered by William Herschel, 1787.
T Jan. 12 M27, the Dumbell Nebula in Vulpecula, discovered by Messier, 176
W Jan. 13 The successor to the acclaimed telescope-making firm of Alvan Clark & Sons, Carl Lundin, born 1851.
T Jan. 14 7:30pm, **TAAA Executive Meeting**, Flandrau Science Center conference room.
F Jan. 15 9:01pm, **LAST QUARTER MOON.**
S Jan. 16 **TAAA Star Party**, Arivaca site.
S Jan. 17 Mechain discovers the short-period comet now known as Encke's, 1786.
M Jan. 18 Warren de la Rue, British astronomer, born 1815 (?).
T Jan. 19 9am, Venus at greatest elongation E. 47° from Sol.
W Jan. 20 7:30pm, **30" Telescope Design, Land and Fundraising Meeting** at Duane Niehaus'.
T Jan. 21 George van Biesbroeck, Belgian/American astronomer, born 1880.
F Jan. 22 4:10pm, **NEW MOON.**
S Jan. 23 Look for very young Moon in the west at sunset.
5pm, Star Party at Smithsonian Basecamp, see map elsewhere.
S Jan. 24 Harold Babcock, American asronomer and physicist, born 1882.
M Jan. 25 **TAAA Star Party**, Arivaca site, see map elsewhere.
T Jan. 26 10pm, Venus 5° S of crecent moon.
W Jan. 27 Fire takes the lives of Apollo 1 crew; Grissom, Chaffee and White, 1967.
T Jan. 28 Space shuttle Challenger explodes off the Florida coast - all aboard killed. 2nd worst disaster in the history of space exploration, 1986.
F Jan. 29 Jupiter stationary.
S Jan. 30 4:20pm, **FIRST QUARTER MOON.**
Sabino Canyon Starparty
S Jan. 31 ?

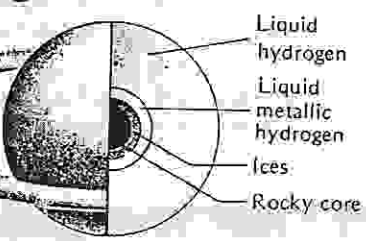
Andrew J. Meyer

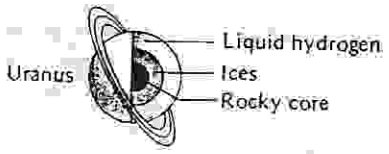
DARK SKIES for January 1993 (in MST):

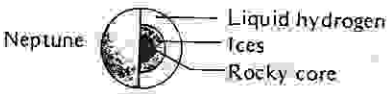


F/S	Jan.	1/2	1:39am - 5:56am
S/S	Jan.	2/3	2:37am - 5:56am
S/M	Jan.	3/4	3:37am - 5:56am
M/T	Jan.	4/5	4:38am - 5:57am
T/W	Jan.	5/6	5:37am - 5:57am
W/T	Jan.	6/7	none
T/F	Jan.	7/8	none
F/S	Jan.	8/9	none
S/S	Jan.	9/10	6:59pm - 7:23pm
S/M	Jan.	10/11	7:00pm - 8:33pm
M/T	Jan.	11/12	7:01pm - 9:41pm
T/W	Jan.	12/13	7:02pm - 10:48pm
W/T	Jan.	13/14	7:02pm - 11:53pm
T/F	Jan.	14/15	7:03pm - 12:58am
F/S	Jan.	15/16	7:04pm - 2:02am
S/S	Jan.	16/17	7:05pm - 3:04am
S/M	Jan.	17/18	7:05pm - 4:03am
M/T	Jan.	18/19	7:06pm - 4:58am
T/W	Jan.	19/20	7:07pm - 5:47am
W/T	Jan.	20/21	7:08pm - 5:59am
T/F	Jan.	21/22	7:08pm - 5:59am
F/S	Jan.	22/23	7:09pm - 5:59am
S/S	Jan.	23/24	7:10pm - 5:58am
S/M	Jan.	24/25	7:55pm - 5:58am
M/T	Jan.	25/26	8:48pm - 5:58am
T/W	Jan.	26/27	9:41pm - 5:58am
W/T	Jan.	27/28	10:34pm - 5:57am
T/F	Jan.	28/29	11:29pm - 5:57am
F/S	Jan.	29/30	12:25am - 5;57am
S/S	Jan.	30/31	1:22am - 5:57am



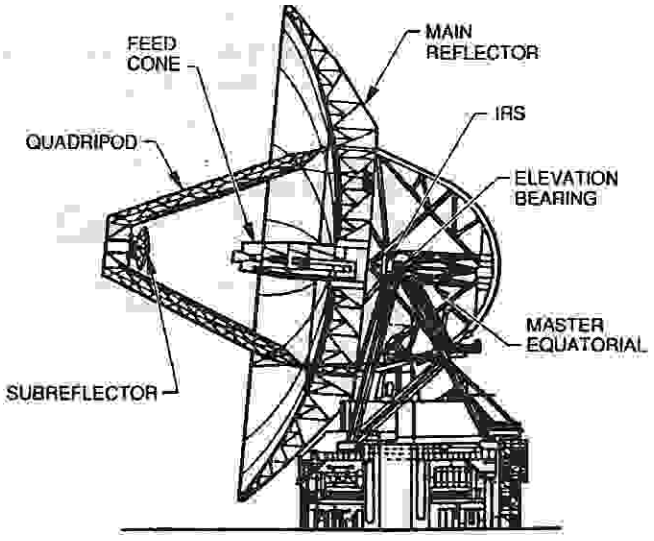






Times listed are for Tucson, Arizona when:
(1) Moon is below the horizon
(2) Sun is >18° below the horizon
(astronomical twilight)

Andrew J. Meyer



FLANDRAU

THE FLANDRAU STAR THEATER

PROGRAM INFORMATION : 621-STAR
PLANETARIUM OFFICES : 621-4515
ASTRONOMY NEWSLINE : 621-4310

PLANETARIUM PARKING-Free evening parking is available directly North of the building. Additional parking is available in the visitor parking lot, south of the building, across University Blvd.

This unique facility provides entertaining, educational programs in our Star Theater for over 100,000 visitors annually. In addition, science exhibits provide challenging and memorable experiences on such subjects as meteorites, the Milky Way, moon rocks, the sun and telescopes.

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