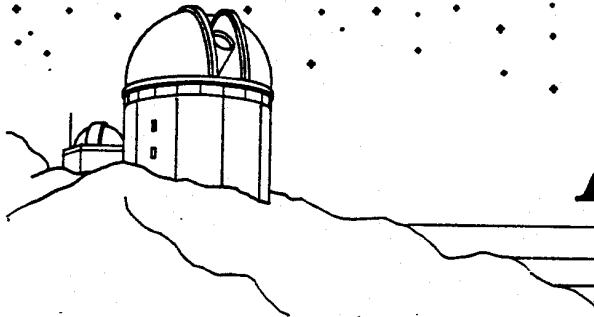


# **EPHEMERIS**

*OF THE SAN JOSE ASTRONOMICAL ASSOCIATION.*



## **FEBRUARY 1988**

\*\*\*\*\*  
FEBRUARY 6TH 8 PM

\* W. J. SHILOH UNRUH \*

\* "EYE ON THE SKY" \*

\* LICK OBSERVATORY'S FIRST CENTURY \*

**FEBRUARY 6 GENERAL MEETING 8 PM. "EYE ON THE SKY" PRESENTED BY W.J. SHILOH UNRUH, LICK OBSERVATORY HISTORIAN. LOS GATOS RED CROSS BUILDING.**

**FEBRUARY 13 FIELD EXPEDITION TO HENRY COE STATE PARK. ANNUAL FREEZE PARTY FROM DUSK TILL DAWN.**

**FEBRUARY 20 FIELD EXPEDITION TO FREMONT PEAK STATE PARK. DUSK TILL DAWN.**

**FEBRUARY 27 SJAA BOARD MEETING AT 7 PM, FOLLOWED BY THE INDOOR ASTRONOMY WORKSHOP CONDUCTED BY JACK ZEIDERS AT 8 PM.**

**MARCH 5 GENERAL MEETING 8 PM. FILTERS FOR OBSERVATION AND ASTROPHOTOGRAPHY. PRESENTED BY DR. JACK MARLING.**

**MARCH 12 FIELD EXPEDITION TO FREMONT PEAK STATE PARK. DUSK TILL DAWN.**

### **FIELD OF VIEW BY: JOHN GLEASON**



#### **FEBRUARY 6TH GENERAL MEETING**

The world's first mountain-top observatory and America's first big-science research center, Lick Observatory exemplifies astronomy's dramatic development in the past century. We are pleased to have as our guest speaker this evening W.J. Shiloh Unruh, who lectures and guides visitors at the Lick Observatory. Mr. Unruh, has devoted years to researching and telling about the history of James Lick, his telescope, and the observatory. "Eye On The Sky" is also the title of a new book co-authored by Mr. Unruh. The book will be available for a 20% discount price of \$20.

#### **36-INCH TELESCOPE TO CLOSE**

April 1, 1988 will be the last opportunity that SJAA members will have to visit the historic Main Building and 36-inch Telescope of Lick Observatory. After that date it will be closed for nearly a year of seriously needed renovations. The 120-inch Telescope will still be open to visitors.

#### **NEW MEMBERSHIP RATES EFFECTIVE THIS MONTH**

It seems as though with all the economies ups and downs nothing can remain the same, and it doesn't. Even the SJAA is not exempt from change. As advertised in the December issue of *Sky & Telescope* the subscription rates were going up after the first of January 1988. So the clubs rates are going to have to be increased to reflect the change. The SJAA is increasing its annual dues for those who subscribe to the magazine as part of their membership. Membership Only, remains at \$10 a year, which includes the Ephemeris each month.

Membership plus Sky & Telescope including the Ephemeris is increasing to \$26 annually. Junior membership (under 18) increases to \$18 annual dues. For most of the club members your membership will expire at the end of June 1988 but you may renew anytime before that. On the April and May issue of the Ephemeris there will be stamped in red a reminder to renew your membership and on the June and July issue it will say that it's the "last chance to renew" your membership. Jack Peterson, club Treasurer is keeping a close eye on the expiration dates so if you don't receive an Ephemeris for a couple of months it's probably because your membership has expired. So to avoid any missing issues remember to renew early, and please be aware of the dues changes.

#### INTRODUCTORY ASTRONOMY CLASS FEB. 27TH.

Don't forget the we have begun the third year of the popular Introductory Astronomy class, conducted by Jack Zeiders. It's not too late to join in the fun as we weave our way through the Spring Constellations and deep sky objects. Class will be held on the 4th saturday of each month, beginning around 8 PM. Several classes are planned to be held at the West Valley College Planetarium.

#### ASTRO ADS

FIRST SCOPE 80 Refractor. 80mm aperture, 910mm focal length (39 inches long). 26mm 1 1/4" ocular with diagonal. Sturdy wooden tripod with alt-azimuth adjustment. Like new! Asking \$299 or best offer. Phone: "Al" 408-267-9432 or leave message. (San Jose, Calif.)

ASTRONOMY COMPUTER CONFERENCE Share your observing experiences, equipment notes, and love of astronomy with other amateurs via the Astronomy Computer Bulletin Board Conference. Complete listings of Bay Area astro events and astronomy clubs. There is no cost to you. Use your personal computer and 1200 baud modem to dial one of these numbers: (408) 251-4926 or 259-2357, (415) 651-4147 or 659-9169 After log-on select "Astronomy Echo Conference".

The Astronomy Computer Conference is a free service provided to SJAA members by a group of computer hobbyists living throughout the Bay Area. For additional information, please feel free to contact Kurt Barnhart, Publicity Coordinator, Astronomy Computer Conference (408) 262-5565.

MINT CONDITION CELESTRON Super C8 Plus with Starbright coatings and all factory accessories, including wedge and field tripod, carrying case, 8 x 50 polar alignment finder scope, two eyepieces, piggyback mount, etc. Additional accessories include: Celestron quartz dual axis drive corrector, declination motor, dew shield, counterweight set, off-axis guider and Jim's Mobile electric motofocus. Asking \$1500. Contact: Bob Mein (408) 373-1965 days, (408) 649-0758 eves, weekends.

CELESTRON RPC5 5-inch Newtonian reflector on regular Polaris mounting. With single-axis drive corrector, built in polar alignment scope, 80 mm finder scope, 26 mm Plossl, 16 mm Erfle. \$400 Contact: Jim 408-374-5491

MEADE 8-inch f/6 reflector in good condition. Accessories include: Motor drive, eyepieces: 40mm, 25MM, 12mm (illuminated w/variable intensity power supply), 9mm. Moon filter, Barlow-2X, Eyepiece extender. Recently culminated, so optical alignment is excellent. \$675 Contact: Jesse Blount (408) 336-5770.

UNIQUE OPPORTUNITY! Long Focus (f=101") 6" f/17 achromatic lens mounted in a machined collimating cell. The lens was made in the 1950's by Witherspoon, and is said to be equal or out perform the refractors at Chabot Observatory. The tube is 7.0" aluminum fitted with anti-reflection diaphragms and has a cork lined dew cap. The focuser is 2" chrome and brass rack and pinion. Also included is a sturdy machined aluminum saddle, finder rings, and very solid (free from play) equatorial mount with ball-bearings on both axes. Tube weight w/o saddle is 60 lbs incl. objective. Only a stand or pier is needed for the equatorial mount to be ready for viewing. \$1900 The refractor is housed at LUMICON. Contact: Jack Marling, 415-447-9570 (day), or 415-443-7579 (evenings), P.O. 495 Livermore, CA. 94550

FOR SALE: 4" Meade Telescope Model 2040A including: Schmidt-Cassegrain assembly, fork mount with motor drive and 6' power cord, manual slow-motion controls, eyepiece holder for 1.25" OD accessories, 5X24mm viewfinder, table tripod of astronomical observing and photography. Also includes the following accessories: Porro prism, T-adapter, Erecting prism, (2) polarizing lenses, Tele extender, T-ring for Olympus 35mm camera, Eyepieces (research grade Erfle) 40mm, 20mm, 10mm and 7mm, Foam lined carrying case, Instructional manual. Sale price: \$900. Contact: George, (415) 941-2681

NEW: Celestron C-90 spotting scope with accessories. Finderscope - 9mm, 6mm and 5mm eyepieces in original boxes - never used. Also Velbon VE3 tripod. \$495. Contact: Marvin Altschuler, (408) 247-2392



## FEBRUARY STARRY NIGHTS BY: RICHARD STANTON

METEORS - The month of February brings us only one meteor shower, the Delta Leonids. This a minor shower/stream that will reach maximum on the 26th according to our Canadian neighbors. According to the A.L.P.O., the maximum will be on the 27th. There is no count rate indicated for this shower but meteors deriving from it travel at a typical speed of 23 kilometers per second (just a tad over 50,000 miles per hour). When John Donne wrote the first verse of the poem Song, "Go and catch a falling star....", he obviously was thinking with his heart and not his head. If any of you monitor the maximum of this shower, we would all be interested in hearing your results ... along with your tale of surviving the temperatures and the feral wolves gnawing on your frozen body.

OCCULTATIONS - On Feb. 23rd at 06:24 UT (Feb. 22nd at 22:24 PST) the star Epsilon Aries, mag. 4.6, will be occulted by the Lunar Dark Limb at Position Angle 53 deg. This event should be well placed for observations in the greater San Francisco Bay area. The circumstances will be a 5 day old moon with 30% illumination, an almost ideal situation. If you're a convenience observer, set your telescope out about an hour before the event to let it cool to ambient temperature, then run outside a few minutes before the event to acclimate yourself and then observe the event ... yes, even in city lights. If weather permits, you now have no excuse.

LUNAR FEATURES - This month we'll find the Lunar Sunset Terminator on the Straight Wall on Feb. 10th at 14:00 hrs. And on the Plato Crater at 18:00 hrs (PST). Try observing these, or any other terminator features, with a Wrattan #25 - Red filter ... Wow!...look at that!!

PLEIADES - On Feb. 24th at 03:00 UT (Feb. 23rd, 19:) PST) the 6 day old moon (45% illumination) will pass through the Seven Sisters, the Pleiads in Taurus. This will be occurring in the final minutes of evening astronomical twilight. Set up around sunset.

MINOR PLANETS - During February two of the brighter asteroids will be reaching opposition. Also, there are two other asteroids that are well placed for observing this month.

10 HYGIEA - diameter 450 km, magnitude 10.5, opp. Feb. 23

FEB 09	R.A. 10:32.7	DEC. +04:39
FEB 19	10:25.3	+05:10
FEB 29	10:17.4	+05:48

28 BELLONA - diameter 126 km, magnitude 10.7, opp. Feb 05

FEB 09	R.A. 09:08.7	DEC. +14:18
FEB 19	09:00.9	+15:43

04 VESTA - diameter 538 km, magnitude 6.5, dialy motion .27°

FEB 09	R.A. 07:57.4	DEC. +25:05
FEB 19	07:49.4	+25:43
FEB 29	07:44.3	+26:07

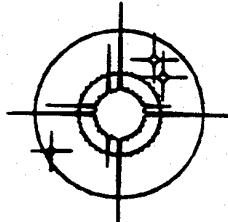
14 IRENE - diamter 158 km, magnitude 9.5, daily motion .23°

FEB 09	R.A. 12:17.4	DEC. +13:53
FEB 19	12:15.7	+15:08
FEB 29	12:10.9	+16:30

This reminds me of a dialogue overheard between two observers out looking for an asteroid .. "You think we have the right star field? I'm pretty sure we do. Which one do you think it is? Hell, I dunno."

GALILEAN SATELLITES - In Pisces, Jupiter is past the meridian at sunset, and sets about 5 hours later. The sun is beginning to stay up later and Jupiter is setting earlier, so you had best get out and do some Jupiter observing while you still have the chance. On Wednesday, Feb. 03 at 18:07 PST Io will ingress into transit of the planetary disk. At 19:23 Io's shadow will ingress into transit. At 20:18 Io will egress from Jupiter's disk and at 21:33 Io's shadow will egress from the transit. On Feb. 04, Thursday, at 18:00 (PST) Europa will disappear in eclipse behind Jupiter's disk. On the same evening at 18:47 Io will reappear from behind the planetary disk after having been eclipsed. At 20:19 Europa will likewise reappear from eclipse. On Saturday, Feb. 20th,

Europa will ingress into transit and will be followed by it's shadow at 20:03. At 19:09 Ganymede will disappear in occultation. On Saturday, Feb. 27th at 18:18 Europa will ingress into transit. At 19:02 Io will reappear from an eclipse followed by Europa's shadow ingressing into transit at 20:22. Europa will egress from the transit at 20:42. If you don't get out and observe some of these events this month you may find yourself having to wait until the next Jupiter season in the fall.



### COMET COMMENTS BY: DON MACHHOLZ

No Comets have been discovered or recovered recently, but we do have a re-naming of Comet 1987g1. Poul Jensen found images of it on a photo taken through an 18" Schmidt in Denmark on Oct. 25. So now it is known as Comet Jensen-Shoemaker.

1987 was a big year for comets. Nine new ones were found by amateurs, this is a record. Two of these finds were made by David Levy. For the second year in a row, two of the amateur discoveries were photographic. Meanwhile, seven new comets were found by professionals, three by the Shoemakers. Seventeen returning comets were recovered, this too is a record. J. Gibson (Palomar), and J. Scotti and T. Gehrels (Kitt Peak) recovered nearly all of them. Also unusual: three comets - one discovery and two recoveries - were first detected in 1986 but not confirmed until 1987.

### EPHEMERIDES

DATE	R.A. (1950)	DEC	ELONG	MAG	NOTES
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#### Comet McNaught (1987b<sub>1</sub>)

01-25	19h 02.0m	+24° 54'	49°	8.1	After perihelion last Dec., this
01-30	19h 19.0m	+30° 02'	53°	8.3	comet now moves through our morn
02-04	19h 37.7m	+35° 07'	56°	8.5	-ing northern sky. Toward the end
02-09	19h 58.3m	+40° 03'	59°	8.7	of Feb. it will be up all night.
02-14	20h 21.1m	+44° 44'	62°	9.0	It travels along the Summer Milky
02-19	20h 46.3m	+49° 04'	64°	9.2	Way. By mid-month the comet is
02-24	21h 14.0m	+52° 52'	65°	9.5	147 million miles from the earth
02-29	21h 44.2m	+56° 12'	66°	9.8	and 131 million miles from the
03-05	22h 16.7m	+58° 51'	66°	10.0	sun, with both distances increasing.

#### Comet Bradfield (1987s)

01-25	01h 35.0m	+25° 06'	88°	8.1	Comet Bradfield moves across northern
01-30	01h 54.4m	+24° 39'	87°	8.5	Aires through-out this month, dimming
02-04	02h 12.0m	+24° 13'	85°	8.8	as it pulls away from both the
02-09	02h 28.1m	+23° 49'	84°	9.1	earth and sun. During December
02-14	02h 42.9m	+23° 27'	82°	9.4	it was a fine naked eye object,
02-19	02h 56.7m	+23° 06'	80°	9.7	and was the best Northern Hemi-
02-24	03h 09.5m	+22° 48'	77°	10.0	sphere comet of the year. At the
02-29	03h 21.6m	+22° 31'	75°	10.2	end of the month it is 190 million
03-05	03h 33.0m	+22° 16'	72°	10.5	miles from both the sun and us.

#### Comet Furuyama (1987f<sub>1</sub>)

01-25	01h 48.8m	-17° 44'	76°	9.9	This comet travels almost due south
01-30	01h 44.8m	-18° 54'	71°	10.0	through Feb., but still well placed
02-04	01h 41.9m	-19° 54'	65°	10.1	to Northern Hemisphere observers.
02-09	01h 39.9m	-20° 48'	60°	10.1	By month's end it will be seen
02-14	01h 38.7m	-21° 36'	56°	10.2	only from south of the equator,
02-19	01h 38.2m	-22° 21'	52°	10.2	moving into the morning sky where
02-24	01h 38.2m	-23° 03'	48°	10.3	it will slowly dim. This is our
02-29	01h 38.7m	-23° 44'	45°	10.3	last chance to observe it.

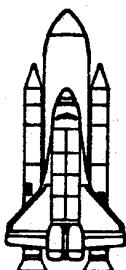
## SEEKING COMETS

What amount of publicity accompanies a comet discovery? Unless the newly-discovered comet is going to become very bright, hit the earth, or mark some milestone in comet history, the Smithsonian Astrophysical Observatory issues no press releases when a comet is found. How then, does the news get around to both the scientific community and to the public at large? Upon confirmation of the comet find, the International Astronomical Union of Cambridge, Mass. issues several forms of communication. First there is a telegram/telex and mailgram message announcing the comet name, discovery time, position, magnitude, and appearance, along with the direction and rate of travel. Only those subscribing to these services will receive this form of message. The domestic telegrams cost \$9.00 each and arrive by phone within a few hours. The domestic mailgrams cost \$4.00 each and arrive 1-3 days after being issued. Secondly, at the same time an identical message is available on their computer service.

Finally, printed Circulars are also issued; these 5.25"x3.5" cards are air mailed and arrive in about a week. They are issued for non-comet events too and a month's subscription (10-20 Circulars) cost \$4.50. For more information you can contact the Central Bureau for Astronomical Telegrams at the Smithsonian Astrophysical Observatory, Cambridge, MA. 02138. If you don't subscribe to Smithsonian's services, your best bet is to call the Sky and Telescope hotline (617) 497-4168 each weekend.

In foreign countries the news of a comet discovery is translated and re-issued in each particular country's form of rapid astronomical communication. I have seen printed "Circulars" in Japanese, Chinese and Russian, and they are similar to the SAO Circulars.

How does the "popular press" hear about new comet finds? Very few newspapers or news services subscribe to the SAO material, so they usually receive the "tip" from an alerted amateur or the local observatory. With my first comet find, a couple members of my club notified the press. The result was moderate coverage from UPI, local newspapers, radio and TV stations, and from a CBS radio network commentator. For my second comet, a Riverside, CA. newspaper picked it up first (the comet was found from near there), then both UPI and the local media picked up on it after a nearby astronomer spread the word. This resulted in extensive coverage. For my third discovery, I didn't want a lot of publicity, so I asked my friends and relatives to refrain from notifying the press. Therefore, coverage was light. In any case, everything returns to "normal" in three to four days. When it is no longer "new", it is no longer news.



## SPACE PROGRAM UPDATE BY: BOB FINGERHUT

### NEXT SHUTTLE LAUNCH DELAYED BY TEST FAILURE

An all up full duration firing of the redesigned shuttle solid rocket booster was conducted on Dec. 23rd. The redesigned joints performed well but part of a ring that anchors a protective boot over the nozzle swiveling joint was missing after the test. The ring had been redesigned and was being tested for the first time. The impact of the failure will not be known until the nozzle is removed in early Jan. and it is determined if the failure was due to a design or manufacturing flaw. The most optimistic launch date for the shuttle is now September.

### BUDGET CUTTERS CHOP SPACE STATION

The House and Senate Appropriations conferees approved only \$425 million in Fy 1988 space station funding, down from NASA's request of \$767 million. \$100 of the 425 million was taken from the shuttle that is to replace Challenger. Only \$200 million will be available until June 1st and the rest will only be provided if Congress is satisfied with a rescoped program. NASA has been ordered to provide a rescoped plan for the space station by Feb. 29th. By rescoping, some NASA officials believe that Congress meant reducing the station design and capabilities (such as eliminating the truss structure and closed-loop environmental control system) and other are defining rescoping as stretching the program out. To compensate the space science community, Congress has ordered NASA to spend \$25 million to begin leasing arrangements for the Industrial Space Facility (ISF). ISF is a shuttle-launched free-flying pressurized module being developed by Space Industries Partnership.

### SPACE STATION POLAR PLATFORM ISSUES RESOLVED

The multinational partners have turned back a move by France to reduce the size of the polar platform that the European Space Agency (ESA) will provide as part

of the space station program. The issue came about because Britain, a chief supporter of the polar platform, has decided to scale back its space participation.

#### SOLID ROCKET BOOSTER FOR TITAN 4 TESTED

A seven segment booster for the USAF's new Titan 4 was tested on Dec. 21st by CSD in south San Jose. The test of the 1.6 million lb. thrust motor was successful. Another test is scheduled for February. The Air Force now has 23 Titan 4 vehicles on order. The Titan 4 is designed to place 10,000 lb. in geosynchronous orbit, the same as the shuttle-centaur was designed for. The first Titan 4 launch is scheduled for late 1988.

#### RECORD SETTING SOVIET COSMONAUTS RETURN TO EARTH

The longest manned space flight in history - 326 days ended Dec. 29th when the Soviets changed crews in their MIR space station. The new crew is expected to remain up for a full year, the time required for a manned Mars mission.

#### USAF PLANS MANNED MILITARY EXERCISES ON SPACE SHUTTLE

The Air Force plans to use 8 of the first 14 shuttle missions following resumption of shuttle flights to evaluate the use of manned crews for strategic reconnaissance, ballistic missile warning, surveillance of Soviet naval forces and other operational military objectives. An Air Force spokesman said he anticipates being able to continue such activities on the space station.

#### AN OVERVIEW OF OBSERVING SITES BY: DON MACHHOLZ AND RICH PAGE



Uvas Reservoir, not far from the Chesbro Reservoir we reviewed last month, provides one of the largest close-in sites we've seen. Rather than going to the County Park, we're going to set up in the parking lot designed for the boaters and fishermen.

From the corner of Blossom Hill Rd. and Camden Ave. it is 20.0 miles and 28 minutes away. Continue south on Camden (3.3 Mi.) until you get to Almaden Expressway. Go right, in 2.5 miles the road ends at Harvey Rd. Go right, one block later go left. You are now on McKean Rd. You'll stay on this road for the next 14.2 miles, although the name changes to Uvas Rd. halfway there. After going 10.5 miles you'll pass Croy Rd., which is to your right. Keep going; in another 3.7 miles you'll find the turnoff, on your left, to the parking lot. This is easy to miss, so watch your odometer.

This large area measures about 200 by 220 feet. It is paved, with a slight slope running down towards the reservoir (N). You can park almost anywhere on the paved area, but don't block the boat ramp on the north end.

Here are the horizon heights. North is 5 degrees high. This rises to 11 degrees in the NE, holds level through the E and drops to 0 degrees in the SE. It rises to 15 degrees in the S., holds steady through the W. and drops to 2 degrees high in the NNW. If you are interested in observing a certain part of the sky, set up on the opposite side of the parking lot to lower your local horizon.

Although the road runs along the south side of the site, car lights are not much of a problem except from those heading west and at some distance away. This is because the lot is lower than the road and has a bank separating the two. Winds from the north may be a problem, although on two different sessions here I encountered no wind. Likewise with mosquitoes. The elevation is about 500 ft.

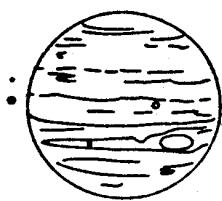
The Milky Way is easily visible overhead. At this elevation, however, low altitude haze overhead will scatter light. With good transparency the sky is darker. Near the horizons the main sources of light pollution are San Jose (NW-N), Morgan Hill (NNE-E) and Gilroy (SE).

In the early evening you might find boaters and fishermen ascending to the parking lot after a day on the lake. As for the legality of setting up here, the ranger at the Uvas Canyon Co. Park, five miles west of here, said the parking lot both here and at Chesbro are under the jurisdiction of the Sheriff (not the Parks Dept.). He added that it should be okay to use these lots for quiet astronomical observations, but the Sheriff, on the scene, would have the final word. In four hours at these sites we saw no Sheriffs.

There is a restroom (Porta-potty) on the dirt area 30 yards north of the paved lot. The few houses in this area cast little light. A couple of domestic cats

prowl around here.

When your favorite spot is muddied over or blowing away this winter, come on out and give this one a try. It may become a favorite site.



## GREAT RED SPOT BY: JIM VAN NULAND

Despite the long evenings and early availability of Jupiter, Spot-watching is tough in December and January -- the same cool, crisp air that gives such pretty winter skies, with all the twinkling stars, also gives us wobbly views of our favorite planet.

Jupiter-set is advancing, darkness is retreating, and so the Spot-watching window is closing! February is the last month that offers frequent views -- note how much shorter is February's list than was January's. March will offer only a few chances for the Spot.

Weather conditions change quickly at this time of year, so watchfulness is the byword. The dark oval surrounding the Spot make it easy to find. Careful watching at moments of best seeing should show some color within the oval -- yellow is most commonly reported.

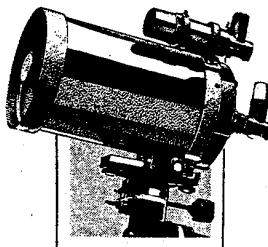
At the tabular times, the Spot faces directly toward Earth, and thus appears central on the apparent disk of the planet. Observations may be made for about an hour before and after that time, darkness and elevation permitting.

### Great Red Spot on Meridian PST

da	mo	d	h	m	da	mo	d	h	m	da	mo	d	h	m
Tu	2	2	9	15 pm	F	2	12	7	43 pm	W	2	24	7	41 pm
F	2	5	6	46 pm	W	2	17	6	55 pm	M	2	29	6	49 pm
Su	2	7	8	28 pm	F	2	19	8	33 pm	M	3	7	7	35 pm
W	2	10	6	3 pm	M	2	22	6	4 pm	Sa	3	12	6	53 pm

Clear Skies! Jim Van Nuland,  
3509 Calico Avenue, San Jose, Cal. 95124

## CHILLS, THRILLS, AND RAINDROPS: A NIGHT ON FREAKY PEAK BY: MIKE O'BRINE



The Scene: Fremont Peak, Saturday, December 26th. Having been shut out in my five previous visits to the Peak by high humidity (how much water can a C-14 collect, anyway?) with not a single successful deep sky photo show for my trouble, I was determined to try some hypered 2415 photos with my 5 1/2 inch Schmidt Camera. The weather seemed OK during the day, so I decided to make one last effort to take some deep sky photos in 1987.

Soon after my arrival at Ranger Rick's house, Tom Parker (a fellow glutton for punishment) showed up to try some photography with his Takahashi Epsilon 160. With good weather and good companionship, things seemed promising for an excellent night ahead.

After sunset and performing all of the usual chores (polar alignment and such) we settled down to a good night of observing and photography. It was wonderfully dry, for a change, and the seeing, while not sub-arc second, was certainly good, as was the transparency. By 7:30, Tom and I were muttering things like "what a magic evening!" It seemed that my long dry spell was about to end. Since the Moon would not set until midnight, we amused ourselves by fiddling with our scopes, observing Jupiter (including a very nice transit of Io), and generally talking about the current state of affairs. Another gentleman there was just starting astrophotography with his C-8, so Tom and I spent some time giving him sage advice, like "Fool! Choose a saner hobby!" Seriously though, we had some good conversation, our scopes were working well, and the conditions were excellent. I even took some photos of the Moon and Jupiter with my C-14.

Except for a few clouds around 10 PM, things continued to look good as Midnight approached. With eager anticipation, I uncorked my hypered film and loaded the Schmidt's roll film holder. As midnight arrived I placed the holder in the camera, acquired a guide star and prepared to start my first exposure. At that very moment, clouds appeared from the southeast and quickly turned into overcast. Tom and I stared in disbelief as dreams of a perfect astrophoto

session quickly disappeared, replaced by thoughts as gloomy as the clouds above.

After 45 minutes of watching, muttering, and shivering (it was 36 degrees), Tom decided he had had enough for the night and packed up his Epsilon. Likewise our companion had departed with his C-8 for a warm bed and sleep (Too smart to be a good astrophotographer?). Since I wasn't planning to take down my C-14 until morning, I was starting to spend a little time practicing film handling with the Schmidt when Tom Exclaimed "It's starting to rain!" How fast can one move at 2 AM? Pretty fast, if your C-14 and Schmidt Camera is getting wet. With Tom's help I got my equipment into Ranger Rick's workshop before anything got too wet, fortunately. Having seen my dream evening turn into instant disaster (it's not called Freaky Peak for nothing), I spent the rest of the night trying to sleep in the workshop to the restful sounds of cast fighting and eating other creatures (snails, as it turned out).

I returned to civilization in the morning, my string of deep sky astrophoto failures intact and musing about the virtues of other hobbies, yet knowing that I will return again to see what Fremont Peak will do to me next. At least there's always Donkey Deli to look forward to. Until we freeze again...

LUMICON just completed its  
8th consecutive year of  
record growth, and plans to  
expand again in 1988!

# EMPLOYMENT OPENINGS AT LUMICON

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# SJAA MEETING AND STAR PARTY LOCATIONS

## GENERAL MEETINGS

Once a month the SJAA holds a General Meeting at the Los Gatos Red Cross building in Los Gatos California. Speakers are invited to give talks on a wide range of astronomical topics which have included equipment and slide presentations. This is also the location for the SJAA's famous "Indoor Star Parties", informal sessions where members gather to share their astronomical interests. Whatever your interest, astrophotography, deep sky observation, telescope making, or just arm chair observing, you'll find a friendly atmosphere at all of our meetings.

The Red Cross building is located at 18011 Los Gatos - Saratoga Rd. From Hwy. 17 take the Hwy. 9 (Saratoga) exit and continue West up the Los Gatos - Saratoga Road for about 1.5 miles. Turn right at Rose Ave. Then turn right immediately into the parking lot of the Post Office and Red Cross building. Doors open at 7:45 PM, with General Meetings usually beginning at 8 PM.

## INDOOR STAR PARTIES

Each month there are several Saturday evenings set aside for informal gatherings of amateur astronomers to share their common interest in astronomy, to "talk shop", or to simply enjoy the company of friends. Members are encouraged to bring in telescopes and accessories to share with the group. Typically there will be several telescopes operating in the parking lot or there will be a slide show of recent astrophotography and star party events in progress in the meeting hall. The SJAA also holds its Board Meetings during this time as well as an Introductory Astronomy workshop that is conducted once a month.

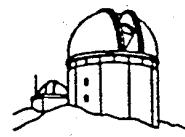
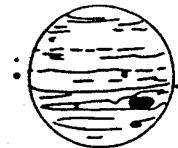
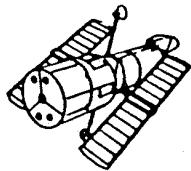
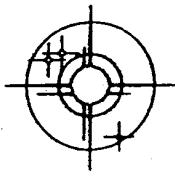
## FIELD EXPEDITIONS

On the Saturdays closest to the New Moon, The SJAA will conduct a "Star Party" for astronomical observation at a designated location. Several times a year these star parties are held close to San Jose while others are held as far away as Yosemite National Park. Watch the EPHEMERIS for directions to these locations.

## FREMONT PEAK STATE PARK

The most popular of locations for bay area amateur astronomers is Fremont Peak State Park. Located 70 miles south near the town of San Juan Bautista, Fremont Peak rises nearly 3000 ft. above the valley. For two decades amateurs have gathered at the "Peak" during New Moon weekends for serious deep sky observing and astrophotography. Fremont Peak is now the home of the Fremont Peak Observatory Association's 30-inch telescope that is open to the public on selected weekends. To get to Fremont Peak from San Jose, take Hwy. 101 South towards Salinas. Then take Hwy. 156 East (San Juan Bautista exit) for two miles to a yellow flashing light. Turn right and go about 1/4 mile to where the road reaches a "Y". Stay left for about 25 yards and then go right. (Watch closely for the Fremont Peak sign). Follow the canyon road for about 11 miles up and into the park. The SJAA sets up in the Coulter Camp area. It's visible on your right as you first drive into the main area of the park. Expect to find a lot of astronomical activity here every clear New Moon weekend. Arrive early if you are setting up equipment. 50 to 100 telescopes are not uncommon at Fremont Peak during the summer months.

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Please bring this form to any SJAA meeting, or send to:

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