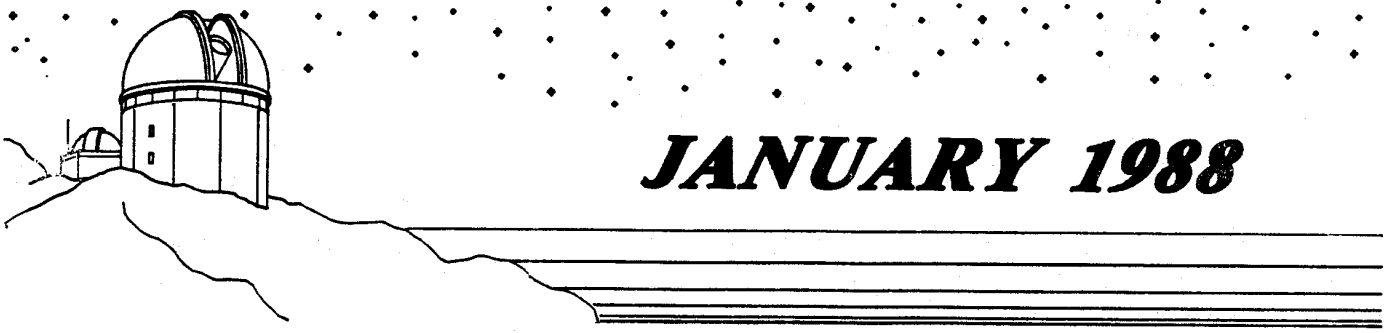
EPHEMERIS

OF THE SAN JOSE ASTRONOMICAL ASSOCIATION.



JANUARY 1988

****
* JANUARY 9TH 8 PM *
* ERNIE PIINI *
* "RETURN TO AYERS ROCK" *
****

JANUARY	9	GENERAL MEETING 8 PM LOS GATOS RED CROSS BUILDING. "R AYERS ROCK" PRESENTED BY ERNIE PIINI.
JANUARY	16	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREM STATE PARK. DUSK TILL DAWN.
JANUARY	23	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREM STATE PARK II. DUSK TILL DAWN.
JANUARY	30	BOARD MEETING 6:30 AT THE LOS GATOS RED CROSS BUILDING.
JANUARY	30	INTRODUCTORY ASTRONOMY CLASS 8 PM. CLASS WILL MEET AT VALLEY PLANETARIUM.
FEBRUARY	6	GENERAL MEETING 8 PM. PROGRAM TO BE ANNOUNCED.
FEBRUARY	13	FIELD EXPEDITION TO HENRY COE STATE PARK. ANNUAL FREE FROM DUSK TILL DAWN.

FIELD OF VIEW
BY: JOHN GLEASON

JANUARY 9TH GENERAL MEETING

Eclipse chaser, astrophotographer Ernie Piini will be our featured speaker this month. Last April, Ernie returned to Ayers Rock, Australia for a week of observing and astrophotography of southern celestial wonders with the staff of Sky & Telescope magazine. Ernie's wit and charming descriptions of his tour, along with outstanding celestial photography will not want to be missed. Come and join us as we throw another Koala on the Bar-B mate!

INTRODUCTORY ASTRONOMY CLASS STARTS THIS MONTH

Have you ever wanted to learn your way around the night sky?

The SJAA will be starting the third year of the Introductory Observational Astronomy Class this month. The format is one meeting per month, usually the fourth Saturday, for 10 months. We will informally weave our way through the heavens by groups of constellations and asterisms as they are available in the current night sky. Typically four to six constellations are introduced each month with a review of the previous months work. Computer generated graphic slides compliment actual star field photos to present each constellation, as well as frequent visits to a local planetarium.

The class also will touch on the major areas of interest in amateur astronomy. Some of the areas covered by guest speakers include: Telescope making, naked eye observing, telescope types, astrophotography, binocular astronomy, use of setting circles, and the coordinate system of Right Ascension and Declination. The first meeting will be on Jan 30th at 8:00 PM in the West Valley College

planetarium. We will cover the circumpolar constellations Ursa Major, Ursa Minor, and Cassiopeia and the winter group around Orion. The second half of the session will cover the different types of objects we can observe.

There is no fee for this class, nor is membership a requirement. It is presented as a public service to our community. Come on out and we can all learn more about what's up.

If you have questions feel free to call Jack Zeiders at (408) 281-0220 Monday-Thursday 8:00 to 10:00 PM.

FREE 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.

ASTRO ADS

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 Newtonion 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 collumating 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 diaphrams 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

TELESCOPE: 8" Tinsley Cassagrain with 2" diagonal, 2" focuser, 2" straight through adapter. $500. Call Bob Maraschin Wkdays: 415-960-0964, Eves: 408-253-5477

FOR SALE: 6" f/4 reflector, "RFT". Coulter mirror, equatorial mount, tripod, finder, $250. Also, 2.4" refractor, eyepiece, alt-azimuth mount, no tripod, $45. Contact: Robert Sheaffer, 408-354-5637.

JANUARY STARRY NIGHTS
BY: RICHARD STANTON

METEORS - Chilly January brings us two meteor showers early in the month. First, we have the minor shower/stream, the coma Berenicids, reaching maximum on January 3rd. Second, there is the major shower, the Quadrantids on January 4th. This shower can show as many as 40 meteors per hour. The bad news for both of these showers is that they occur along with a 99% and 100% lunar disk illumination (full moon). However, if you're a true meteorphile, the illumination and bone freezing temperatures are merely minor nuisances. Good Luck!

LUNA - January will find the lunar sunset terminator on the Straight Wall on the 12th at 04 hours. The sunset terminator will fall on the crater Plato at 02 hours of the same day. The sunrise terminator will hit Plato on the 27th at 02 hours and will shine upon the Straight Wall on the 26th at 18 hours. I still don't understand why more observers don't develop a Lunar observing program to go along with their other observing activities since, by meteorlogical edict, the only clear observing nights are moonlight nights anyway. Why fight it?

MINOR PLANETS - For those who want to get in a little practice at starfield sketching or astrophotography with an eye toward comparing time lapsed frames for stellar motion, the following three asteroids fit the bill.

13 Egeria - diam. 224 km., opposition Jan. 03 , mag 10
Jan 10 - RA 06:41 Dec +47 07
Jan 20 - RA 06:28 Dec +47 20
Jan 30 - RA 06:19 Dec +47 02

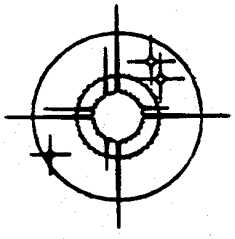
29 Amphitrite - diam. 195 km., opposition Jan. 14, mag. 8.9
Jan 10 - RA 07:45 Dec +30 38
Jan 20 - RA 07:34 Dec +30 48
Jan 30 - RA 07:24 Dec +30 43

04 Vesta - diam. 538 km., opposition, Jan. 22, mag 6.2
Jan 10 - RA 08:28 Dec +22 06
Jan 20 - RA 08:18 Dec +23 12
Jan 30 - RA 08:07 Dec +24 14

Asteroid hunting is a very challenging aspect of amateur observing. If you've never tired tracking one of these babies down, give it a shot.

GALILEAN SATELLITES - The prime dark observing nights of January, the 15th and 16th, offer only one good satellite event before Jupiter sets. On Friday the 15th, Ganymede will disappear in occultation at 22:01 PST. It will reappear some two hours later on Saturday the 16th at 00:38 PST, probably just a few moments after Jupiter has set. However, on the night of Sunday the 17th, also a good observing night, Europa will disappear in occultation at 20:33 PST and reappear at 23:00 PST. That same night Io will enter occultation at 22:28 PST. Europa will disappear in eclipse at 23:21 PST about 45 minutes before Jupiter sets. As always, there are many satellite events throughout the month. I have simply reviewed a few on dark weekend nights.

MARS - Let's all remember that Mars is going to put on one heck of a show this year. Those Mars observers who want to begin their observing program early should bear in mind that shortly before astronomical twilight, Mars will have gained enough altitude to get in a few minutes of good observing during January.



COMET COMMENTS
BY: DON MACHHOLZ

Three comet discoveries and two comet recoveries have occurred recently. Meanwhile, it has been determined that Comet Mueller, mentioned last month, is in a periodic orbit which brings it to within 2.7 AU of the Sun every 8.2 years. This is a favorable passage but it won't be getting brighter than mag. 17.

Several comets are much brighter: Comets Bradfield and Borrelly wind down in our evening western sky while Comet McNaught zips northward in our morning eastern sky. All three of these can be seen in small binoculars.

Newly-discovered Comet Furuyama should remain visible to us for the next few months. Due to the many comets I'll be discussing, our "seeking Comets" section will not be included this month.

Periodic Comet Longmore (1987c1): J. Gibson of Palomar recovered this comet on Nov. 3, confirming a tentative Dec. 29, 1986 observation by J. Scotti of Kitt Peak. With a 7.0 year orbit, this comet never gets closer to the sun than 2.41 AU nor brighter than mag. 17. It was discovered in 1975, has made two trips since then, and will be closest the sun late next year.

Comet Ichimura (1987d1): Yoshimi Ichimura of Japan found this comet on Nov. 22 with 5" binoculars. It was confirmed twelve hours later by Michael Rudenko of the U.S. Then near 4 hr. RA, -20 degrees Dec. and up most of the night, the comet was rapidly moving southward at 2.5 degrees/day. It was then only 0.4 AU from the earth. It should brighten as it nears the sun (0.200 AU on Jan 10, 1988). However, from the beginning of 1988 through mid-March it is positioned so close to the sun that observations will be nearly impossible. When it finally clear out of the solar vicinity, it should be mag. 12 or fainter.

Periodic Comet Temple 1 (1987e1): J. Scotti of Kitt Peak recovered this comet at nuclear mag. 21 Oct. 27. At that time it was not far from M44. This comet has an orbital period of 5.5 years. It was well-placed during its last appearance, this time, however, it will remain fainter than mag. 14. Don't confuse this one with Temple 2, a comet that should be visible to us next year.

Comet Furuyama (1987f1): Sigeru Furuyama of Japan discovered this comet on photographic plates exposed on Nov 23. He was using a 12" f/3.8 reflector. The comet was not far from M1, shining at mag. 11. It was later learned that the Shoemakers has photographed the comet 30 hours before Furuyama, but their mane was not added to the object. This is the ninth comet to be discovered by an amateur astronomer this year, the second such photographic find. Comet Furuyama will be closes the sun on Feb 26, 1988, at a distant 1.7 AU. Out best time to see it is during the next two months. It is already slowly dimming as it pulls away from the earth.

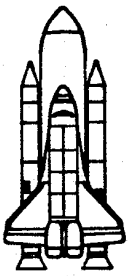
Comet Shoemaker (1987g1): Carolyn and Eugene Shoemaker of Mt. Palomar discovered this comet on plates taken Nov. 24. It was at mag. 17 and little more is known of it at this time. This is the Shoemaker's eleventh named comet.

EPHEMERIDES

DATE	R.A. (1950)	DEC	ELONG	MAG.	NOTES
		Comet McNaught (1987b1):			
12-21	17h 32.9m	-07° 31'	17°	7.0	Observers in the far Northern Hemi-
12-26	17h 43.8m	-03° 17'	21°	7.1	-sphere can be the first to see this
12-31	17h 55.0m	+01° 06'	26°	7.2	comet in over a month as it emerges
01-05	18h 06.9m	+05° 39'	31°	7.3	from the solar glare. At the start
01-10	18h 19.5m	+10° 22'	36°	7.5	of 1988 this comet is 0.9 AU from the
01-15	18h 33.0m	+15° 15'	40°	7.7	sun and 1.7 AU from the earth, moving
01-20	18h 47.6m	+20° 17'	45°	7.9	at 27 miles per second. Now in the
01-25	19h 03.6m	+25° 24'	49°	8.1	morning sky, Comet McNaught travels
01-30	19h 21.0m	+30° 33'	53°	8.3	up the Milky Way, not far from M 56
02-04	19h 40.2m	+35° 40'	56°	8.5	on Jan 30.
		Comet Bradfield (1987s)			
12-21	22h 10.0m	+24° 16'	79°	6.3	Northern observers have had a great
12-26	22h 46.3m	+25° 23'	82°	6.6	opportunity of watch a fine comet
12-31	23h 21.0m	+26° 00'	85°	6.9	from the time of discovery, through
01-05	23h 53.3m	+26° 14'	87°	7.3	perihelion, and on to its eventual
01-10	00h 22.9m	+26° 10'	88°	7.6	fading. Comet Bradfield changes by
01-15	00h 49.5m	+25° 54'	88°	8.0	50 degrees in Right Ascension but
01-20	01h 13.5m	+25° 31'	88°	8.3	only two degrees in Declination. As
01-25	01h 35.0m	+25° 06'	88°	8.6	the new year begins we find it inside
01-30	01h 54.4m	+24° 39'	87°	9.0	the Great Square of Pegasus, travel-
02-04	02h 12.0m	+24° 13'	85°	9.3	at 22 miles per second.

Periodic Comet Borrelly (1987p)

12-21	02h 22.2m	+07° 42'	128°	8.3	This comet stays within 1 AU of us
12-26	02h 22.2m	+13° 22'	125°	8.4	through mid-Feb., so it will probably
12-31	02h 23.7m	+18° 37'	121°	8.5	appear large and diffuse. After be-
01-05	02h 26.8m	+23° 25'	118°	8.7	ing far south for several months,
01-10	02h 31.4m	+27° 45'	115°	8.8	Comet Borrelly passes nearly overhead
01-15	02h 37.5m	+31° 38'	113°	9.0	in the early evening for most of us.
01-20	02h 45.0m	+35° 05'	110°	9.2	This comet comes by every 6.86 years,
01-25	02h 53.9m	+38° 10'	108°	9.4	this is one of its best appearances.
01-30	03h 04.0m	+40° 52'	105°	9.6	try to get out to see this one soon!
02-04	03h 15.2m	+43° 16'	103°	9.8	



SPACE PROGRAM UPDATE
BY: BOB FINGERHUT

SHUTTLE RECOVERY TESTS

Subscale tests of the redesigned shuttle solid booster joint were conducted on Nov 9th, 19th and 24th. One was tested with deliberate flaws and one duplicated the loads applied by the external tank during a launch. The second test of a complete full-up booster is scheduled for mid-December.

SPACE STATION HARDWARE CONTRACTS AWARDED

NASA has awarded contracts for the four major work packages. Boeing will build the stations pressurized modules, McDonnel Douglas the truss structure, Rocketdyne the electrical power system and General Electric the free-flying platforms.

U.S. SPACE GOALS UNDER REVIEW

The White House senior interagency group for space is deadlocked on whether or not U.S. space policy should call for a goal of U.S. pre-eminence in manned orbital flight and a second goal to expand man's presence into deep space beyond Earth orbit. NASA is fighting for approval, while the Office of Management and Budget objects.

MIR CREW TO RETURN TO EARTH DEC 31ST

The Soviet Space Station Crew is planning to return to Earth after its commander has spent 329 days in space. The Soviets are preparing to launch another crew that would remain onboard for a full year.

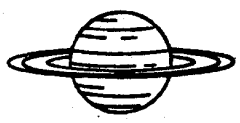
EUROPE APPROVES SPACE DEVELOPMENT PROGRAMS

The European Space Agency (ESA) has approved development of the Hermes manned spaceplane, the Ariane 5 booster and the Columbus space station project.

GEORGE BUSH ON SPACE POLICY

Speaking at NASA's Marshall Space Flight Center on Oct 21st, the Vice President endorsed the Ride Report recommendation to conduct a "Mission to Planet Earth" and develop a heavy-lift launch vehicle. The other Ride report recommendations he said were too expensive. They are: "Exploration of the Solar System", "Outpost on the Moon" and "Humans to Mars".

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



Chesbro Reservoir, southwest of San Jose, is a reasonable close-in observing site for astronomy. It would be especially good as a winter site.

From the corner of Blossom Hill Rd. and Camden Ave. it is 17.3 miles and 26 minutes away. Continue south on Camden (4.3 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 8.8 miles. Along the way you'll pass the more popular Calero Res., but, alas, it is closed after dark. At Oak Glen Rd. take a left. Before we get to our main site (still 2.7 miles away) we'll find three other observing sties, all on your right between the road and the reservoir. One is 0.4 miles past the beginning of Oak Glen Rd., a second is 0.5 miles past this, and a third (and largest) is 0.7 miles further up. These can be used if the main site is unacceptable.

The main site is a parking area for those wishing to fish at the Chesbro Res. It is newly paved, has parking for 30 vehicles and measures 150' x 90'. It is adjucant to the road, so car lights may be a problem with cars come from the west. Park your vehicle to block this. The lot is fairly level, with a slight crowning in the center.

Here are the horizon heights. North is 20 degrees high. Through NE it remains the same, then drops to 10 degrees in the east and 0 degrees in the SE. It rises to 10 Degrees in the south and remains that high through the west, dropping to 9 in the NW. The horizons are distant so they would be the same no matter where you set up on the lot. This location seems to be wind protected. The elevation here is about 500'.

The Milky Way is easily visible overhead. At this elevation, however, weather will affect light pollution-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), Morgan Hill (NNE-E) and Gilroy (ESE).

This parking lot is also used by those fishing at the reservoir. Being at the reservoir is illegal after dark, but using the parking lot seems to be fine, as this is a good hundred yards from the shoreline. "Parkers" stop by once in a while, but everyone seems to leave the astronomers alone.

There are two restrooms: (Porta-potties) on this lot. A few houses are in the hills surrounding this area, but they cast little light. Deer are here but not a problem.

This site reminded me of Saratoga Gap without the elevation and dirt surface. In other respects it is similar to but smaller than Grant Ranch Park. Come on out and give it a try. It may become a favorite site.

GREAT RED SPOT
BY: JIM VAN NULAND

Since Sky & Telescope has been publishing predictions for the Great Red Spot, I've been asked why their times differ from my own. Through we use the same underlying mechanism, we differ in the presumed longitude of the Spot.

My longitudes are predicted from my own observations, and therefore carry my systematic bias. In November, I used 12.8; ALPO used 14.0 (equal to 2 minutes of time). This month, I expect the longitude of the Spot to be 16.7 on January 1st and 17.6 on the 31st. The Spot's motion in irregular enough to vary by several degrees over a month.

Jupiter has no solid surface to which to refer longitude, it is nevertheless necessary to have a means by which particular features can be identified. So an arbitrary instant of time has been taken to define longitude zero; combined with an assumed rotational rate, it is them possible to specify the longitude of the central meridian (the sub-Earth meridian as seen on Jupiter) at any time. Changing light-time and view-angle between Earth and Jupiter must be taken into account. Further, since the equatorial region rotates faster than the temperate zones, two systems of longitude are needed. A third (!) system has been established, using the rotational rate of Jupiter's magnetic field as the basis.

The appearance of the Spot remains much as before, with a distinct dark frame surrounding the yellowish spot. The center of the Spot is not identical to the center of the surrounding dark area.

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.

Great Red Spot on Meridian PST

da	mo	d	h	m		da	mo	d	h	m		da	mo	d	h	m	
Sa	1	2	8	31	pm	Th	1	14	8	30	pm	Tu	1	26	8	27	pm
M	1	4	10	11	pm	Sa	1	16	10	12	pm	F	1	29	6	2	pm
Tu	1	5	6	3	pm	Su	1	17	6	6	pm	Su	1	31	7	41	pm
Th	1	7	7	41	pm	Tu	1	19	7	44	pm	Tu	2	2	9	20	pm
Sa	1	9	9	17	pm	Th	1	21	9	19	pm	F	2	5	6	54	pm
Su	1	10	5	12	pm	F	1	22	5	12	pm	Su	2	7	8	28	pm
M	1	11	11	3	pm	Su	1	24	6	50	pm	W	2	10	6	0	pm
Tu	1	12	6	56	pm												

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.

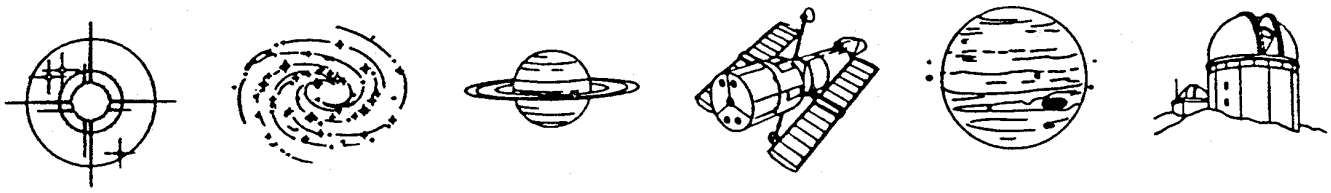
FIELD EXPEDITIONS

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.

EPHEMERIS is published monthly by the San Jose Astronomical Association, 3509 Calico Ave., San Jose California, 95124. Contributors are welcome to submit articles for publication. These should be typed and submitted no later than the 12th day of the month. All submissions should be sent directly to the editor, John Gleason, 5361 Port Sailwood Dr. Newark, CA. 94560.



SAN JOSE ASTRONOMICAL ASSOCIATION MEMBERSHIP APPLICATION

MEMBERSHIP ONLY: $ 10 MEMBERSHIP/S&T: $ 24.00 JUNIOR (UNDER 18): $ 17.00

Name _____

Address _____

_____

Telephone (____) _____

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

Jack Peterson, Treas.
San Jose Astronomical Association
1840 Yosemite Dr.
Milpitas, CA. 95035

[Phone: (408) 262-1457]

Please check type of membership and if new or renewal.

Membership Only____ Membership/S&T____

Junior (Under 18)____

New____ Renewal____

Questionnaire (optional)

What are your astronomical interests (e.g. astro-photography, deep-sky observation, telescope making, etc.)? _____

_____

_____

_____

Do you own a telescope? _____ If so, what kind?

_____

Is there any specific area of astronomy that you feel qualified to help others with? _____

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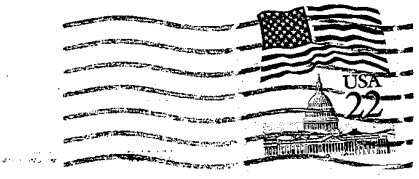

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