THE SAN JOSE ASTRONOMICAL ASSOCIATION

SJAA

EPHEMERIS

JANUARY 1985

****
* JANUARY 26TH GENERAL MEETING *
* BOB FINGERHUT AND RON WALTON PRESENT: *
SOUTH PACIFIC TOTAL SOLAR ECLIPSE EXPEDITION
****

JANUARY 5 Indoor star party at the Los Gatos Red Cross Building. Doors open at 8 p.m.

JANUARY 12 Board Meeting at the Los Gatos Red Cross building. Doors open at 8 p.m.

JANUARY 19 Field Expedition for Astronomical Observation (FEAO) at Grant Ranch Dusk till Dawn.

JANUARY 26 General Meeting 8 p.m. at the University of Santa Clara. Nominations for the Board of Directors will be entertained.

Bob Fingerhut and Ron Walton will give a presentation on their recent total solar eclipse trip. Bob promises many pictures of head hunters and wild native wahine's. And, rare photos of the elusive solar corona. Be there, Aloha!

FEBRUARY 2 Los Gatos Red Cross build. Indoor star party. Doors open at 8 p.m.

FEBRUARY 9 Los Gatos Red Cross build. Indoor star party and board meeting.Doors open at 8 p.m.

FEBRUARY 16 Annual field expedition for astro-observation at Henry Coe State Park. See enclosed map. Use the clubs lock and combination 4565 to enter gate. Please close and lock gate behind you. Thx. Jim Van Nuland promises to have plenty of RC Cola on hand to celebrate the re-opening of the park since last springs earthquake.

ASTROPHOTOGRAPHY SEMINAR IN MARCH

ASTROPHOTO VI SEMINAR for amateur astrophotographers will be held on Saturday, March 2, 1985, at California State University at Fullerton, California. This will be the sixth seminar in a series begun in 1975 and sponsored by the Orange County Astronomers, Ventura County Astronomical Society and the Physics Club at the university. In addition to a day of papers and displays there will be an international astrophotography exhibition with cash prizes in four catagories. Papers on astrophotography are now being called for with a February 1 deadline. As usual, a book of Proceedings will be included with the seminar cost of $15.00, as well as being available after the seminar for $10.ppd. (U.S.) More information is available from the OCA at 2215 Martha Ave., Orange, CA. 92667 (714) 639-8446

COMET COMMENTS

BY: DON MACHHOLZ

A new comet has been discovered by amateur astronomers and two more by professionals during the past month. One will be visible in our northern sky for the next three months. I'll include its positions, along with those of two other comets brighter than mag. 10. One more object, Comet Arend-Rigaux, is now near M67 and M44, at mag: 11.3, and in the morning sky. Due to space limitations I'll not include its positions this month, but if you phone me I'll have them available.

Following the ephemerides this month is a new feature. Let me briefly review what we've covered in the past in Comet Comments. This column began in June 1978. In Sept. of that year I began adding comet trivia at the end of each article and called that section "Comet Tails." Next, from Jan. 1980 through Dec. 1982 I featured comet discoverers, past and present and that section was called "Comets in Their Eyes." Finally, from Jan. 1983 through last month we covered the amateur comet discoveries in the section called "Past Discoveries." Now, beginning this month and continuing for the next two years, will be a special section on Halley's Comet entitled "What Goes Around Comes Around"

Comet Levy-Rudenko (1984t): The first comet to be discovered by an American amateur in six years was found by David Levy of Tucson, Arizona on Tuesday night, Nov. 13 and by Michael Rudenko of Amherst, Mass. some 23 hours later. The comet was Mag. 9.7 60 deg. from the Sun in the evening sky. Its position was RA: 18h 47m, Dec: +10, in the constellation Aquila. It is moving north, was closest the Sun (0.92 AU) in mid-Dec., and will be visible in our evening sky, enter the morning sky, then pass near the Northern Polar region. Following discovery it was learned that H. Mori of Japan had spotted it on Nov. 13.

David Levy had searched for 917 hours in about 850 sessions, over 19 years, to find this, his first named comet. For the discovery he was using a 16-inch, f/5 reflector. Michael Rudenko was searching with a 6-inch, f/8 refractor at 30 power when he discovered Comet 1984t. He was searching from his backyard using a Lumicon Deep Sky filter. Michael had swept some 246 hours since Jan. 1981 for this, his first find. This was the first comet to be discovered by an amateur in Massachusetts in over 120 years.

Comet Hartley (1984v): Malcom Hartley from Australia found this comet on Nov. 17, when it was about 2 deg. south of the star Rigel in Orion. At mag. 15 when discovered, it will be closest the Sun in Oct 1985, but at a distant 4.0 AU and it is not expected to get any brighter.

EPHEMERIDES

DATE	R. A. (1950)	Dec.	Elong.	Mag.
Comet Levy-Rudenko (1984t)				
12-26	18h 26.1m	+32°43′	56°	9.1
12-31	18h 21.6m	+35°54′	59°	9.1
01-05	18h 16.2m	+39°21′	63°	9.1
01-10	18h 09.5m	+43°12′	67°	9.1
01-15	18h 00.7m	+47°35′	73°	9.2
01-20	17h 48.3m	+52°38′	79°	9.2
01-25	17h 29.1m	+58°25′	86°	9.3
01-30	16h 56.4m	+64°52′	94°	9.3
02-04	15h 53.0m	+71°18′	102	9.4

This newly-discovered comet moves under the North Star and into the morning sky as it approaches the Earth but receeds from the Sun. It will appear diffuse and about 5′ in diameter. It will be near the star Vega in early Jan.

Comet Shoemaker (1984s)				
12-26	03h 16.6m	-13°43′	123°	9.6
12-31	03h 33.9m	-15°33′	121°	9.6
01-05	03h 52.6m	-16°57′	119°	9.6
01-10	04h 12.3m	-17°53′	118°	9.7
01-15	04h 32.6m	-18°22′	118°	9.8
01-20	04h 53.1m	-18°25′	119°	9.9
01-25	05h 13.3m	-18°03′	119°	10.1
01-30	05h 33.4m	-17°21′	120°	10.3
02-04	05h 52.8m	-16°22′	121°	10.5

This comet is brighter than I had suggested it would be last month. It may appear diffuse and about 4′ in dia. It's in the morning sky, and holding a constant 1.19 AU from the Earth as it slowly moves away from the Sun.

Periodic Comet Schaumasse (1984m)				
12-26	13h 50.5m	+01°34′	69°	9.3
12-31	14h 06.6m	+00°24′	70°	9.6
01-05	14h 21.8m	-00°42′	71°	9.4
01-10	14h 36.3m	-01°42′	72°	9.5
01-15	14h 50.1m	-02°37′	74°	9.6
01-20	15h 03.0m	-03°27′	76°	9.7
01-25	15h 15.1m	-04°12′	77°	9.8
01-30	15h 26.3m	-04°52′	79°	9.8
02-04	15h 36.7m	-05°27′	82°	9.9

This comet holds steady with the Earth at roughly 0.4 AU while it reaches Perihelion in early Jan. It should be visible for nearly all night. Be sure to get out and see this one!

WHAT GOES AROUND COMES AROUND--HALLEY'S COMET

For the next two years we will highlight one single comet. This comet is not the brightest comet to ever grace our skies. It has never displayed the longest tail, or shown the largest coma (head). It has not been the most colorful comet, nor the first comet to be observed by an Earth-orbiting satellite. And it is not even the first comet to have a spacecraft sent to it.

Its orbit is not the most consistent, the shortest, nor the longest. It never gets closer to the Sun than Mercury, and the nucleus is so small that it vanished completely when it transited the Sun on its previous visit. Its absoulute magnitude is very ordinary, the comet has never been seen to split and it causes only minor meteor showers. The last time it appeared, it was out-shone by an unexpected comet several months previous. and this time around, Northern Hemisphere observers will have to observe it through the rainy season.

This comet was not named after its discoverer, as most comets are. It was named after someone who observed it one year and then predicted its return. This was the third comet for which he predicted a return, he was way off on the first two. But when this comet did return, 53 years after the prediction was made, and 16 years after the death of the person, the comet was given this Englishman's name. and even today, people are unsure about the exact pronunciation of his name.

And yet, despite all this, Halley's Comet is the most famous comet of them all. Every science textbook lists it and students are raised on it. The last time it appeared, in 1910, our technology was refined enough to predict, observe and photograph the celestial wanderer, but not extensive enough to ruin the view with artificial lights.

It has been observed since 240 BC and on every return since 87 BC. We can even say that a lifetime is measured by its 75 to 79 year orbital period. And as it nears the Sun, the interest is warming up as sure as the coma of Halley's Comet.

Halley's Comet is also known as Comet 1982i. It was recovered by a team of astronomers at Palomar Observatory more than two years ago-on Oct. 16, 1982. They used the 200" reflector telescope with a device to enhance the feeble light from the comet. At that time the comet was about 11 astronomical units (or just over 1 billion miles) from both the Earth and the Sun. At that distance the comet looked like a faint star-merely a point of light. In our Comet Comments we have been watching Halley's progress, last January it was 8.1 astronomical units (AU) from the Sun and magnitude 22. Now it is 5.2 A.U. from the Sun and mag. 19. There is no stopping this comet, before the year is out you will have observed it. Next month we'll discuss its motions across the sky, and the best time for observations.

Don Machholz (408)448-7077

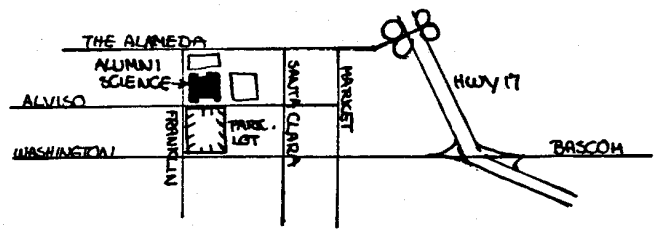
DEEP SKY NOTES - JANUARY

BY: STEVE GOTTLIEB

The New General Catalogue (NGC) by J.L.E. Dryer, published in 1866, is compliation of 7,840 deep-sky objects previously recorded by a number of visual observers, principally William and John Herschel. Since the publication of this catalogue, the literature of astronomy has used the NGC numbering scheme as the principal designation for those galaxies, clusters and nebulae that Dreyer included. However, many of the objects were not independently checked and verified, so a number of nonexistent objects, duplicate entries and positional errors exist. Dreyer caught some of the mistakes and published the correct information as appendices to his two Index Catalogues (IC I and IC II) which followed in 1895 and 1908.

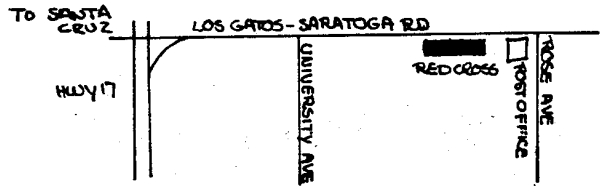
GENERAL MEETINGS:

University of Santa Clara, Alumni Science Hall, room 102. Heading north on Hwy 17, exit at Bascom/Washington Ave (north), proceed to Franklin, then turn right. Heading south on Hwy 17, exit at the Alameda (north), proceed to Franklin, then turn left. Go two blocks and turn left into the parking lot. Alumni Science Hall is the 3 story building that borders the east end of the parking lot. Room 102 is on the ground floor and is best gotten to by entering the first door on the right side of the building when walking in from the parking lot. MEETINGS BEGIN AT 8 PM.



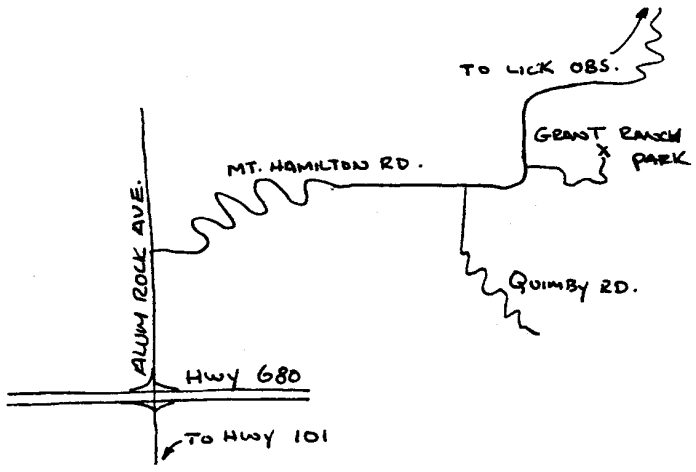
INDOOR STAR PARTIES:

Los Gatos Red Cross Building, 18011 Los GatosSaratoga Rd., Los Gatos. From Hwy 17 south take the Hwy 9 (Saratoga) exit and continue up Los Gatos Saratoga road for about 1.5 miles. Turn right at Rose Ave., and turn right immediately into the parking lot of the Red Cross Building. OPEN AT 8 PM.



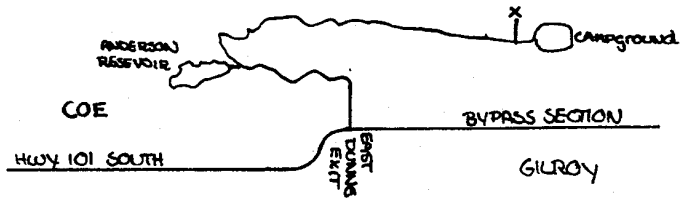
GRANT RANCH COUNTY PARK:

This site is a new one for the SJAA so come and try it out. Located on Mt. Hamilton Road, halfway between San Jose and Lick Observatory. To get to Mt. Hamilton Road, take Hwy 101 (either direction) to Alum Rock Rd. Go east up Alum Rock Road to Mt. Hamilton Road and follow it. Grant ranch is just past the Quimby road intersection. After sunset the park front gate will be locked with the SJAA's combination lock. Use the sequence 4565 to open, but be sure to lock the gate behind you, coming or going. There are two gates, the lock may be on the exit gate, if so enter the park from this gate.



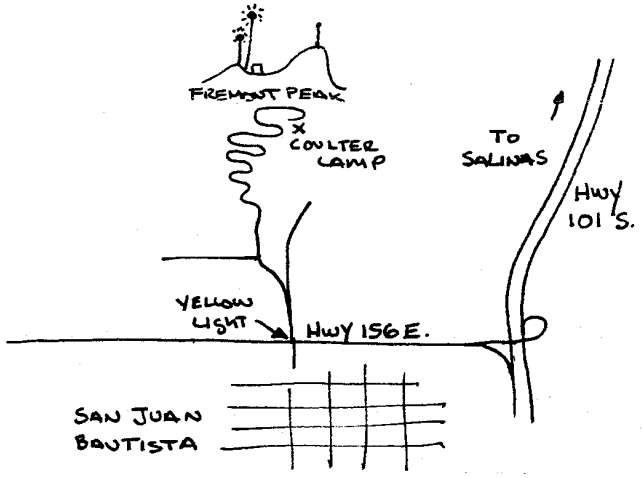
HENRY COE STATE PARK:

Take Hwy 101 south towards Gilroy and take the East Dunne exit. Continue east towards the hills (past Anderson Reservior) for about 12 miles to the park. Past the park entrance you will see old ranch buildings on the right and a horse trough. The gate is locked but the club combination is 4565. Always lock the gate after yourself. If arriving after dark, please park outside the gate and hike in first to find an observing site before driving in. Parking lights only after dark, please.



FREMONT PEAK STATE PARK:

Take Hwy 101 south towards Salinas. Take Hwy 156 east (San Juan Bautista) for two miles to a yellow flashing light. Turn right and go about .25 miles to where road curves slightly to the left and splits. Stay left for about 50 yards and then bear right when road splits again Follow road for about 11 miles up into the park. SJAA sets up at Coulter Camp overflow area, it's visible as you drive up into main area of camp. Parking lights only after dark, please.



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THE SAN JOSE ASTRONOMICAL ASSOCIATION

Deep-sky observing, Astrophotography, Telescope making, Eclipses, Computerized astronomy. Whatever your astronomical interests, you'll find people in the San Jose Astronomical Association who will enjoy sharing their knowledge with you.

ACTIVITIES

The SJAA sponsors an activity every Saturday night (except around certain holidays):

General Meetings, featuring programs on various astronomical topics, are held once a month a the Alumni Science building at the University of Santa Clara.

Star Parties-group observing sessions-are held at several different locations, some close to the San Jose area, and some in the adjacent mountains.

Indoor "Star Parties" provide an informal opportunity to show slides, work on equipment, exchange ideas, etc. They are held in the Los Gatos Red Cross building.

MEMBERSHIP BENEFITS

You need not be a member of the San Jose Astronomical Association to participate in our activities, but membership does grant certain advantages:

Twelve months of Sky and Telescope magazine, and reduced rates on products from Sky Publishing Corporation.

The SJAA EPHEMERIS, our monthly newsletter, containing a calendar of events and activities and other interesting articles. Use of club telescopes. (Both reflectors and refractors are available.) Access to the SJAA's library of books, magazines, and pamphlets.

The San Jose Astronomical Association, founded in 1954, is a non-profit group devoted to expanding the general public's interest in astronomy, conducting research within the capabilities of amateurs, and promoting the science of astronomy.

MEMBERSHIP ONLY: $8.00 MEMBERSHIP/S&T: $21.00 JUNIOR (UNDER 12): $15.00

SAN JOSE ASTRONOMICAL ASSOCIATION MEMBERSHIP APPLICATION

Name _____

Address _____

_____

Telephone (____) _____

Please bring this form to any SJAA meeting, or send to:
Robert Fingerhut, Treas.
San Jose Astronomical Association
340 Rio Verde Pl. #4, Milpitas, CA 95035

[Phone: (408) 263-4455]

Membership: Adult ___ Junior (under 18) ___
Bulletin Subscription only: ___

Questionnaire (optional)

What are your astronomical interests (e.g. astrophotography, 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? _____

_____

_____

Photographic surveys such as the Palomar Observatory Sky Survey (POSS) compiled from 1950-1956 under sponsorship of the National Geographic Society using the 48" Palomar Schmidt camera, provided a more reliable check on the accuracy of the NGC entries. The Revised New General Catalogue (RNGC) by J. Sulentic and W. Tifft in 1973 used the POSS prints to photographically identify the NGC objects, provide accurate coordinates (epoch 1975.0) and give modern descriptions based on their photographic appearance. In cases where no identifiable object was located within a 5' radius of the originally published NGC coordinates, the object was labeled as "nonexistent" and placed in their Class 7. Unfortunately, the RNGC and other modern catalogues have sometimes been misled in their identifications by previous NGC errors in description and position. In these cases, it is necessary to refer to the original sources to attempt to discern the correct identities.

I recently ran across a disagreement in the modern catalogues on the identities of the members of a small group of galaxies in Aquarius whose brightest member is NGC 6962, with a photographic magnitude of 13.5. I observed this field on the morning of July 28th, 1984 in the California Sierras with my 13.1" f/4.5 reflector at 166x. Using a 9mm Nagler eyepiece, the 30' filed (see figure 1) showed six galaxies. I noted the following brief description of their visual appearance

"A" -- the fourth brightest of six galaxies is fairly faint, very small and appears nearly edge-on. The elongation is NE-SW and an arc of 3 stars of similar brightness is located SW.

"B" -- the most difficult in the field. It is extremely faint and requires averted vision to view. No details are visible other than the very small size of the galaxy (about 20") and its roundness -- just a faint nebulous knot found 10' north of "D"

"C" -- the third brightest of six galaxies is an elongated spiral with an east-west orientation. A magnitude 10.5 star less than 1' off the east end interferes with viewing, though I detect a slight brightening in the central region.

"D" -- the brightest and largest in the group. This galaxy is fairly bright, slightly extended and has a noticeably brighter core. a wide pair of stars collinear with "D" is 3 minutes of arc west. "D" is flankes by the fainter galaxies "E" and "F" on either end.

"E" -- just 2' SE of "D" is the second brightest galaxy in the field. It appears moderately bright, small, slightly elongated NNW_SSE and has a slightly brighter nuclear region. A mag. 13.5 star is located less than 1' SE.

"F" -- similar to object "B", though possibly slightly easier to view. It is located about 3' NW of "D". With averted vision, it appears as a round, hazy spot only 15"-20" in size. As is the case with "B", I cannot detect structural details due to its faintness.

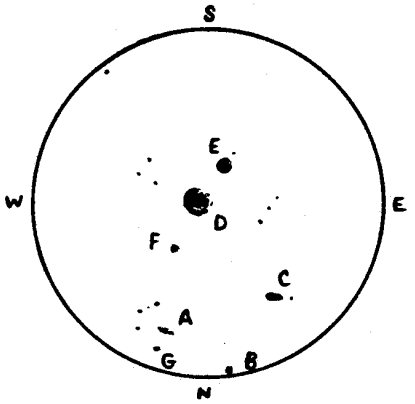

Figure 1.

To identify the members of this group I referred to the RNGC, Uppsala General refered e of Galaxies (UGC), Catalogue of Galaxies and Clusters of Galaxies (CGCG) and the appropriate POSS print (0-305). The following 4 identities were verified in all sources : "B"= NGC 6963, "D"= NGC 6962, "E"= NGC 6964, and "F"= NGC 6961. However, the identities of nearby NGC 6959, 6965 and 6967 were disputed in the catalogues.

The cooridinates given in the RNGC identified "C" as NGC 6967, "A" as NGC 6965 and "G" as NGC 6959. This last galaxy is a faint, extremely small object which I could not see, but which is located 1' NW of "A". On the other hand, the UGC listed "C" as NGC 6965, "A" as NGC 6959 and gave no entry for NGC 6967. Finally, the CGCG agreed with the UGC that "A" was NGC 6959 but gave coordinates which indicated that "C" was NGC 6967. The CGCG (complete to Mp 15.5) does not have a listing for NGC 6965. Table 1 summarizes these identifications.

When the POSS print itself did not provide a solution to the dispute, I wrote to Malcom Thomson concerning my observations and the inconsistencies uncovered. He responded that he felt the original entry for NGC 6965 was erroneous. He was confident that only the CGCG described the other identities in the field correctly.

To pin down the cause of the erroneous NGC entry, I corresponded with Dr. Harold Corwin, co-author of the Second Reference Catalogue of Bright Galaxies who provided a copy of the Earl of Rosse's observations and sketch of the field made in 1857 (See Figure 2).

1857, Aug. 27. Group of 5 neb, very many st among them. a is l E, bM; b is S, nearly R, bM; c is l E, bM and has a conspicuous * closely nf; d is about 7' or 8' dist. from a, and is p F, R, bM; e is S, R, bM, * sf [d= h 2087, e=2089].

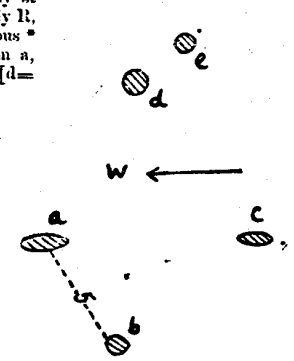

Figure 2.

In my sketch of the field, I followed Lord Rosse's lettering, so a=A, b=B, etc. (object "F", NGC 6961, does not appear on his sketch). When the NGC was compiled, Dreyer entered Lord Rosse's object "B" as NGC 6965, but with the incorrect coordinates. This probably occurred since Lord Rosse gave relative positions for the members of the group rather than absolute coordinates. The correct coordinates for object "b" were later given by M.G. Bigourdan of the Paris Observatoary and were entered into Dreyer's catalogue as NGC 6963. So, NGC 6965 was simply an erroneous duplicate entry for NGC 6963 and should be deleted from the NGC entirely and reassigned to Class 7 in the RNGC.

Apparently, in an attempt to identify some galaxy on the POSS print for NGC 6959, Sulentic and Tifft picked "A" (in actuality NGC 6959) and then reassigned NGC 6959 to its companion galaxy "G". In a similar vein, the UGC chose object "C" (in actuality NGC 6967). The correct identities, 1950 coordinates provided by Dr. Corwin, and photographic magnitudes from the CGCG are given in Table 2 for the six main galaxies.

In a recent letter, Malcolm Thomson pointed out, "If errors of cataloguing for northern hemisphere objects can still be found today, considering the vastly larger amount of observations carried out as opposed to the southern hemisphere objects, then clearly those objects located in the southern skies must present an even greater probability of possible errors regarding the published data."

FROM THE EDITORS DESK

BY: JOHN GLEASON

Nominations for board membership are to be held at the January General Meeting. Members of the nominating committee are Dave Ambrose, (415) 524-0869, Steve Greenberg, (415) 443-6638. and Gene Cisneros, (408) 923-6800. Please contact these individuals if you are interested in being nominated for a position on the SJAA Board of Directors.

There seems to be a little bit of misunderstanding on the part of some of the membership concerning last months article I wrote on the Fremont Peak Observatory Association. The F.P.O.A. does not intend in any way to pull membership away from the SJAA. The F.P.O.A's Board of Directors is composed of amateurs from two bay area organizations the SJAA and EAS and they intend to stay members of the SJAA.

The Fremont Peak observatory project is designed to benefit all Bay Area amateur astronomers and to provide to the general public access to two very large telescopes through a regularly scheduled observing program. The F.P.O.A. is a seperate organization and will not interfere with the SJAA's plans to construct an observing site at Grant Ranch. (see last months article by Dave Ambrose). Most importantly, as I said earlier those of us involved in the Fremont Peak project are long standing members of the SJAA. And we will to continue to be in the future.

The SJAA Board of Directors is currently considering the positive and negative aspects of the Grant Ranch project and then it will be brought before the general membership for a vote. If you are concerned about the direction the SJAA is following towards the Grant Ranch site proposal, the SJAA board encourages your feedback. Board members telephone numbers are listed in the map section of this bulletin.

A special thanks from me to last months Ephemeris contributors; Bill Dellinges, Steve Gottlieb, Jay Freeman, Don Machholz, Dave Ambrose , Bob Fingerhut and Jim Van Nuland. I received a lot of good comments on the contents. I still need contributors however. Several people have indicated to me that they would like to have star party reports. So if you attend one of our monthly star parties please send a few lines about it to me, I'll see it gets into the bulletin.

Jim Van Nuland reports that Henry Coe park has re-opened. It has been closed since last springs earthquake. So we have scheduled a February 16th field expedition there. "Bring your portable nuclear heating unit!"

Paul Mancuso reports that the November 24th star party at Fremont Peak was not well attended despite the clear skies. He was the only one there. I seem to recall that it was raining that weekend. Oh well, that's why we call it "Freeky Peak".
November 84' found several members of the SJAA in the South Pacific to observe a total solar eclipse. This is another in a series of trips with an eclipse or is it an eclipse with a trip. Anyway, Bob Fingerhut and Ron Walton will give a visual presentation at the January 26th general meeting. Plan to be there.

ASTRO ADS

80mm REFRACTOR of 1200mm focal length. Equitorial mounting, diagonal prism, Sun glass (Moon Glass), finder, Sun Projection Screen, Erecting Prism. Asking $350. Contact: Margaret Gault, 175 Chateau LaSalle Dr., San Jose, CA. 95111.

WANTED: Program Chairperson. This individual would seek out and find interesting speekers for our monthly general meetings. If you can dial a telephone number you qualify. Seriously, the SJAA is looking for an individual who could spend a few minutes a month lining up potential speekers for our general meetings. This is also a call to anyone in the membership who would like to give a talk at one of our (your) general meetings. Otherwise your editor, that's me, is going to have to give another talk on cold camera astrophotography! And I do have several dozen shots of M42 that I'm just dieing to show! If interested, please contact any of the SJAA officers or board members.

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