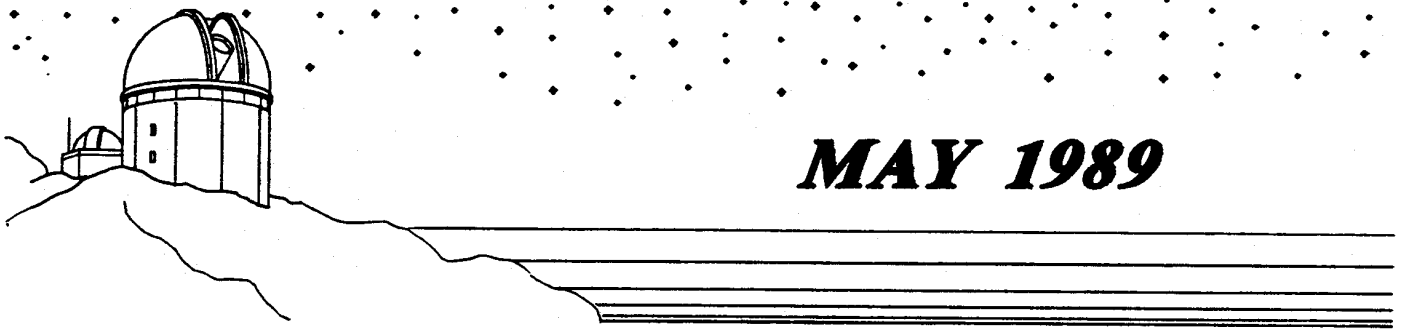
EPHEMERIS

OF THE SAN JOSE ASTRONOMICAL ASSOCIATION.



MAY 1989

MAY 13TH 8 PM
BOB FINGERHUT
ASTROPHOTOGRAPHY FROM NEW ZEALAND

MAY 6 STAR PARTY AT HENRY COE STATE PARK. DUSK TILL DAWN. 3% MOON SETS AT 10 PM. ALTERNATE: GRANT RANCH COUNTY PARK, PUBLIC OBSERVING SESSION CONDUCTED BY THE HALLS VALLEY ASTRONOMICAL GROUP. THERE IS ALSO A FREMONT PEAK OBSERVATORY OPEN HOUSE THIS EVENING FOR THOSE WISHING TO DRIVE DOWN TO FREMONT PEAK.

MAY 13 GENERAL MEETING AT THE RED CROSS BUILDING. OUR OWN BOB FINGERHUT WILL REPORT ON HIS NEW ZEALAND ASTROPHOTOGRAPHY TOUR. THIS IS ALSO NATIONAL ASTRONOMY DAY.

MAY 20 SJAA BOARD MEETING AT THE RED CROSS, 6:30 PM. INTRODUCTORY OBSERVATIONAL ASTRONOMY CLASS AT 8:00 PM.

MAY 27 NO SJAA ACTIVITY. THE RIVERSIDE TELESCOPE-MAKER'S CONFERENCE RUNS MAY 26 THROUGH MAY 29. 60% MOON RISES ABOUT 1:30 AM.

JUNE 3 STAR PARTY AT GRANT RANCH COUNTY PARK. SUNSET, 8:23 PM; ASTRONOMICAL TWILIGHT, 10:14 PM. MORNING TWILIGHT, 3:56 AM; SUNRISE, 5:47 AM. THE SESSION WILL BE HELD IN THE USUAL PARKING LOT, IN CONJUNCTION WITH THE HALLS VALLEY ASTRONIMICAL GROUP. PUBLIC SESSION; INVITE YOUR MIGHT-BE-INTERESTED FRIENDS.

JUNE 10 GENERAL MEETING AT THE RED CROSS BUILDING. NORM SPERLING WILL TRACE THE HISTORY OF ASTRONOMY AS PRESENTED IN TEXTBOOKS DOWN THROUGH THE YEARS.

JUNE 17 SJAA BOARD MEETING AT THE RED CROSS, 6:30 PM. INTRODUCTORY OBSERVATIONAL ASTRONOMY CLASS AT 8 PM.

JUNE 24 INDOOR STAR PARTY AT THE RED CROSS BUILDING. COME DOWN FOR AN ASTRO-SOCIAL. BRING SOMETHING TO SHARE OR TO EAT. THE 64% MOON RISES AT 12:47 AM, SO WE SHOULD BE ABLE TO DO A LITTLE OBSERVING FROM THE PARKING LOT.

FIELD OF VIEW
BY: JOHN GLEASON & JIM VAN NULAND

ANNUAL AUCTION AND SWAP MEET

The 9th Annual SJAA/Bay Area Astronomical Auction and Swap Meet was as to be expected, another big success. There will be a complete story in the June issue of the Ephemeris.

YOSEMITE STAR PARTY RESERVATIONS

In an attempt to provide equitable access for all, reservations for the June 30 - July 1 Yosemite Star Party will be taken starting at 10:00 am on May 13, a Saturday. Some priority will be given to those who did not make last year's list. As Before, there is a limit of only 30 persons (not 30 cars).

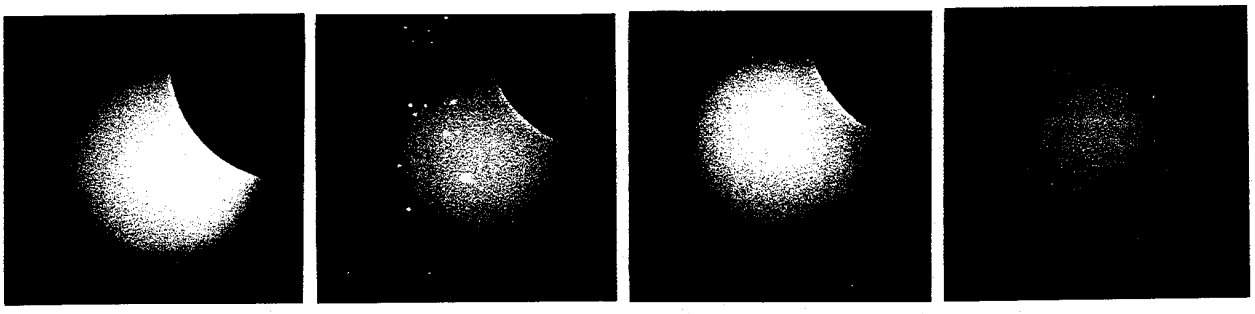
Each night will provide 5 1/2 hours of darkness. No moon. Friday evening is optional, but all will be expected to set up for the public on Saturday evening. At this writing, it is not known whether we'll be able to drive into the setup area. Please call Jim Van Nuland for more information and reservations. (408) 371-1307.

MT. DIABLO INVITATIONAL

The Mt. Diablo Astronomical Society will hold its first annual Invitational Star Party on Saturday, June 3. You must contact them in advance: Elmer Bricca, 709 W. Boyd Rd., Pleasant Hill, CA 94523. (415) 944-0821 evenings. Fees, $5. Since the gates will be closed, there will be no cruisers, and no coming or going except at preset times.

WIDELY OBSERVED PARTIAL ECLIPSE OF THE SUN

Who got out to observe the partial eclipse of the sun March 7th? From the few reports that I received, a good number of observers and non-observers alike were up to view the early morning eclipse. Many people reported viewing the eclipse at their work places. The morning fog provided an ideal "filter" that allowed many to observe the eclipse without any optical filter. I'm not sure if that's a very good idea. Denise Hutson provided this sequence of the last "hour's worth". All were done at the prime focus of a 1000mm C90 at f/11 for 1/500 on Panatomic-X. A full aperture solar filter was used as well.



OPEN HOUSE AT FREMONT PEAK OBSERVATORY

On Saturday, May 6, the Fremont Peak Observatory Association (FPOA) will be conducting a open house for all Bay Area amateur astronomers. The 30" telescope mirror is freshly coated, and there have been number of enhancements to the observatory to make observing more enjoyable. The FPOA is also using this occasion as a pre-celebration to Astronomy Day, May 13.

OUTSTANDING APRIL STAR PARTY AT THE PEAK

Nearly 200 observers descended upon Fremont Peak State Park on April 8. What was the special event? Well, it just happened to be one of the warmest Spring days on record, and I think that many amateurs had been suffering from cabin fever all winter. Highlighting the evening observing was a wonderful lunar conjunction with the Pleiades star cluster. Low power finderscopes and binoculars provided the best views of the crescent moon, earthshine, and the star cluster together in this marvelous celestial vista.

While most observers were tracking down the spring galaxies, a number of individuals observed V Hydrae. V Hydrae is a carbon star (stellar type N, very cold) that is notable for its unusual redness. Visually stunning, the star was more red-orange than red, and looking very much like a bright LED in a field of otherwise colorless stars. Its color also varied from telescope to telescope. Appearing very red-orange in a Celestron 8 to very orange in a 17.5" Newtonian. A 5" f/8 fluorite refractor presented no color at all! Ha! I am constantly amazed by the number of obscure celestial objects that are overlooked, yet provide some of the more inspirational views. Whenever I view something totally new like V Hydrae, my interest in amateur astronomy gets a full battery charge. Astrophotographers! V Hydrae might make an interesting photographic subject.

MAY STARRY NIGHTS
BY; RICHARD STANTON

METEORS - May starts right off with a couple of little known minor showers. On May 1st the Phi Bootids achieve maximum, if there still is one. This shower runs from April 16 through May 12 with meteors

running at some 12kms. The Zenith Hourly Rate is less than 5 emanating from the coordinates 16hr +51 deg. The biggy for the month is the Eta Aquarids at Maximum on May 4th near the New Moon. This shower is major and can show meteors at a ZHR from 20 to 40 (or more?). These are among the fastest meteors at 65kms and the shower will hold at 1/4 strength of maximum for 3 days. The radiant is 22h +00 deg., very near the Water Jar asterism. This will be the Friday night just before the May Prime Saturday Observing Night, give anybody any ideas? There are two other showers this month for the radio astronomers among us. The Nu Piscids on May 13th at 17h +26 deg., ZHR 16 and the Omicron Cetids on May 15th. Radiant 26h -03deg, ZHR 25. These are daytime radio events and could make for a crackling good time. In summary;

01-May - Phi Bootids - minor
03-May - Alpha Scorpiids - minor
04-May - Eta Aquarids - Major
13-May - Nu Piscids - Radio
15-May - Omicron Cetids - Radio

Gather up your loved ones and get out and catch a few falling "stars".

LUNAR OCCULTATION - This month the Moon will show an occultation in our locale of a star brighter than 5th magnitude. On May the 15th at 09:19 UT (deduct 7 hours for PDT) the moon will occult Upsilon Leonis, ZC 1685. This star is magnitude 4.5 and will disappear on the Lunar Dark limb at Position Angle 172. Check it out and see if the predicted time is correct.

MINOR PLANETS - A few of the brighter asteroids are listed in the table below for May. Perhaps some of our members who are into asteroid tracking will help some of our other members who have never seen one.

(4) VESTA- 04 MAY R.A. 18:42 Dec. -18:15 Mag. +6.7
14 MAY 18:43 -18:29
24 MAY 18:42 -18:52

(29) AMPHITRITE
04 MAY R.A. 14:31 Dec. -22:18 Mag +9.6
14 MAY 14:21 -21:45
24 MAY 14:13 -21:08

(10) HYGIEA
11 MAY R.A. 17:12 DEC. -25:15 Mag +9.0
21 MAY 17:06 -26:01
31 MAY 16:58 -25:41

DEEP SKY CHALLENGE - May's challenge takes us to Coma Berenices to discover why Decon has failed to capture "The Mice". These are two tidally interacting galaxies, one type S0 and the other type SB0. No wonder they're so elusive, they're hiding at magnitude 14.1. You'll need a minimum aperture of 25 cm to catch these little devils, or so they say. This pair can be found at 12:46 +30:44. Webb's describes them as, "a strange pair, the brighter component is like a mouse or tadpole with a long tail. The head is quite diffuse and shows no nucleus while the tail is straight and long. The second component is smaller and slightly extended and shows weak enhancements, including a stellar nucleus." A minor detail is that this description was obtained from an observation using a 107-inch! If you want to push your 8" SCT this is one heck of a chance.

:::CELESTIAL CALENDAR - MAY 1989::::

by Richard Stanton

LUNAR PHASES	Date	Rise	Tran	Set
NM 04:46hr	05-05	0618	1331	2048
FQ 01:19hr	12-05	1233	1917	0202
FM 11:16hr	20-05	2028	0107	0546
LQ 21:01hr	27-05	0123	0654	1223

NEARER PLANETS				
Mercury.....	07-05	0705	1431	2200
0.56 A.U.	17-05	0634	1343	2056
Mag +5.0	27-05	0546	1244	1942
Venus.....	07-05	0641	1338	2039
1.68 A.U.	17-05	0638	1348	2101
Mag -3.9	27-05	0639	1358	2120
Mars.....	07-05	0757	1619	2344
2.20 A.U.	17-05	0844	1604	2328
Mag +1.7	27-05	0831	1550	2311
Jupiter.....	07-05	0632	1440	2152
6.05 A.U.	17-05	0700	1410	2122
Mag -1.9	27-05	0629	1339	2053
Saturn.....	07-05	0003	0454	0943
9.35 A.U.	17-05	2323	0413	0902
Mag +0.2	27-05	2242	0332	0821

SOL				
0255+16.75	07-05	0613	1305	2001
0335+19.27	17-05	0604	1304	2008
0415+21.25	27-05	0556	1303	2014

ASTRONOMICAL TWILIGHT			
JD 2,447,653.5	07-05	0423	- 2140
663.5	17-05	0400	- 2153
673.5	27-05	0350	- 2204

SIDEREAL TIME			
Transit Right	07-05	0000 PDT=	1353
Ascension at	17-05	0000 PDT=	1432
Local Midnight	27-05	0000 PDT=	1512

TIMES & DATES ARE PACIFIC DAYLIGHT

Better yet, go to the FPOA open house on Saturday, May 6th, and give them something to do. Good Observing Until Next Time!

ASTRO ADS

ASTRO ADS are free to all non-commercial advertisers wishing to sell astronomically related products or services. Please send your ad directly to the Editor, John P. Gleason, 5361 Port Sailwood Dr. Newark, CA 94560 no later than the 15th of each month. Your Astro Ad will run approximately 3-months.

CELESTRON C8 with special coatings, tripod, telescope carrying case, equatorial wedge, star diagonal, 40mm ocular, 25mm ocular, illuminated reticle ocular assembly, off-axis guider body, tele-extender and camera adapters, home-made counter weights, astrophotography basics guide. Price $1050 (Sorry, but not personal checks) Contact: Steven M. Cohn (415) 272-7464, 655-6807

CELESTRON 8, complete with various eyepieces, Barlow lens, wedge, tripod, DOAA drive corrector, and carrying case. For more information call: Ralph Jacobson, 1-415-454-1185. Leave message if not at home. 4/89

MEADE QUARTZ MOTOR DRIVE SYSTEM for GEM, 6600, and 8800 reflectors and model 320 refractor. $100. Dennis Mueller (408) 447-0690. 4/89

FOR SALE: Mint condition Celestron Super C8 plus with Starbrite. Optical tube made in late '88, illuminated 8 x 50 right angle finder, camera bracket, dew zapper, Jim's Mobile Motofocus, multicoated right angle prism, Byers drive, Meade Tripod, new style Samnsonite type carrying case. $1,190. Edward Hillyer, P.O. Box 6065, Salinas, CA. 93912. (408) 424-0460 3/89

8-INCH f/12 3-ELEMENT APOCHROMATIC REFRACTOR! A once in a lifetime opportunity to own a true "observatory quality" telescope. Complete with massive Astro Works German equatorial mounting and pier. Optical performance is superb. This is the same telescope that thrilled hundreds of observers during the Fremont Peak Observatory Assn's. Mars watch program. $12,000. For additional information Contact: Kevin Medlock (415) 654-6796 or (415) 784-0391 3/89

SKY SENSOR COMPUTER CONTROL for Super Polaris mount - works perfectly. Includes instructions, charts, and is in original box. $175. Celestron photographic LPR filter (fits T-threads, off-axis guider). New condition, $35. Contact: Jim Molinari (408) 298-7557 (W), (408) 255-7030 (H) 3/89

WANTED: Used Astroscan. Call Don or Laura (408) 448-7077 3/89

MOVING SALE: Back issues of Sky and Telescope, Mercury, and Scientific American. For S&T: April 1971, April-July 1973, July-June 1974, Nov.-Dec. 1975, All of 1976 (except Nov. and Dec.), Jan. 1977, Jan.-June 1979, April-Dec. 1980, All copies 1981-1987. For Mercury: All copies from 1979-1988, excepting Jan/Feb 1979, Sept/Oct and Nov/Dec 1983, and the first 3 of the 4 1984 issues. For Scientific American: June, July 1968, Aug.-Dec. 1979, all of 1980-1987 with these exceptions - Sept. '83, March '84, Aug. '86. Offers sought on all or part. I may be able to deliver locally. Contact: Dave Goodwin, (408) 247-9163. 3/89

CELESTRON SUPER POLARIS MOUNT with single axis stepper motor drive corrector, tripod, accessory tray, and Polaris finder with illuminator. Ideal for small refractors, or can be used as a camera tracking platform. Mint condition. Best Offer. Call: John Gleason, 415-792-8248 2/89

ENDING THE SHAKES
BY: JOHN GLEASON

Shake-Enders, foot pads
Epoch Instruments
2331 American Ave.
Hayward, CA 94545
(415) 784-0391
$59.95

Once in a great while a telescope accessory comes along that demands attention. The last product evaluation I did was the Celestron Compustar computer control which at the time was a pretty impressive unit. But regardless of how much "high tech" telescope manufactures push on us a fact still remains; you are still left with a lack of rigidity and stability in the portable telescope mounting.

Portable telescopes like the Celestron and Meade Schmidt Cassegrains all suffer to a greater or lesser degree from image vibration. Images literally dance in the field of view with only the slightest touch of the telescope after repositioning or focusing. The fork mounting is inherently unstable and when combined with a poorly designed drive base and tripod the instability problem is only magnified. You can add an electric focus to these instruments to provide "hands-free" operation. However, just let a slight breeze come through your observing site and its back to the ol' celestial "Pong" game.

One solution to the whole problem of instability and vibration is to scrap the lightweight mounting and tripod, pass by the bank, pick up $3000, and spend it on a custom made equatorial mounting of heavy duty design. This probably makes sense for certain serious astrophotographers I know, but is not necessarily a cost effective move for the casual observer or beginning astrophotographer. What if I told you there was a 70% solution to the elimination of image vibrations for a paltry $60?

4-months ago Kevin Medlock and Dennis Merrill of Epoch Instruments introduced me to a remarkable space-age, "Silly Putty" like dampening material. The dampening properties of this proprietary material were readily apparent as Kevin performed a number of impressive product demonstrations. I have to admit that I viewed this new product pessimistically as Kevin described how a small cast aluminum disk would be suspended in the dampening material and then encased in a cast aluminum cup. Each telescope tripod foot would rest on the suspended disks resulting in the entire instrument literally floating on the dampening material. Vibrations traveling down the tripod legs would be absorbed and prevented from returning to the telescope.

Last month I had an opportunity to try for myself the final product. A simple demonstration is all that was necessary to see the dramatic difference this product called Shake-Enders made.

A Celestron 11 Compustar was set up in front of Kevin's shop. The C11 was loaded with extra counterweights and drive motors adding up to an extra 25 pounds of weight on the forks and mounting. A standard C14 tripod and wedge were supporting the C11. Pointing at a nearby telephone pole we each took turns taping the side of the telescope and made note of the dampening time; around 5 seconds average. (please note that this is purely subjective data. Employing test equipment with accelerometers placed on the instrument would have given us quantitative results, but this simple test was convincing enough.) A Shake-Ender foot pad was then placed under each tripod foot. Again we took turns taping the side of the telescope and agreed that dampening time had been reduced to an average of 2-seconds. That's a 60% reduction in dampening time! I stood there in disbelief. No this can't be! Nothing this simple could make this big of a difference.

With the Shake-Enders at Fremont Peak, C8 owners are claiming 10-fold decreases in the dampening time of their instruments. And they work with other telescope too! Imagine placing a 65 lb German equatorial mount plus 18 lbs of counter weight and another 32 lbs of 5-inch f/8 refractor atop a standard Meade tripod. Then extend the tripod legs all the way. Now what do you have? Arnold Schwarzenegger dancing with Barishnikov? It would seem so. Without the Shake-Enders dampening time seemed to go on forever; about 7-seconds of wonderful stellar oscillations. With the Shake-Enders in place, vibrations were dropped to 2-seconds, a 71% reduction! With the tripod dropped to it's lowest level, the same instrument and mounting combination achieves 1-second dampening. The amazing thing is that I have been using this same system on my second-story patio for photographic testing. The Shake-Enders have suddenly made it practical to observe and photograph from this location. Without the Shake-Enders in place the building vibrations are terrible. Late one evening my wife came home and opened the electric garage door while I was in the middle of an important test exposure. Even though the garage was directly below me, hardly a vibration was noticed. I have even encountered moderate wind at this location which normally would have played havoc with photographic guiding. Not any more!

Much more experimentation needs to be done with different types of telescopes and mounting arrangements. But this much is certain, Shake-Enders are an effective way to reduce annoying image vibration at a fraction of the cost of a heavy duty equatorial mounting. Like the advertising says; "They work!"

COMET COMMENTS
BY: DON MACHHOLZ

Two faint comets have been discovered recently, both are periodic. Northern Hemisphere observers have no bright comets to observe at this time.

Periodic Comet Parker-Hartley (1989i): Quentin Parker and Malcolm Hartley of Siding Spring Observatory in Australia found this comet on plates taken March 2. The object was then at magnitude 16. Later it was identified on a plate taken in Oct. 1986 and at that time identified as a minor planet, designated 1986 TF. IT had passed to within 16 million miles of Jupiter in 1984, changing its orbit from nearly circular with a perihelion distance of 4.4 AU, to its present oval orbit of 8.9 years and a perihelion distance of 3.0 AU. It was closest the sun in August 1987 and is now dimming.

Periodic Comet Shoemaker-Holt 2 (1989j): Carolyn and Eugene Shoemaker, and Henry Holt found this comet on plates taken march 9. They were using the 18" Schmidt at Mt. Palomar. Then at magnitude 13, it has since dimmed. It has an orbital period of 7.8 years, and was closest the sun at 2.70 AU last September.

SEEKING COMETS

How does the comet discovery time compare with the perihelion time-that moment when the comet is closest the sun? If the comet is found long before it reaches perihelion, there is time for planning observations and generally the comet is within reach for a longer period of time. If it is found long after perihelion, it is at least pulling away from the sun, and if earth-comet geometry indicates it is also receding from the earth, then it is most certainly dimming.

I have examined data for the 45 comets found visually between Jan 1975 and the end of 1988. There were 18 comets found in the evening sky, 27 in the morning sky. If we subtract the high and low value, then take the average, we find that morning comets are found 5.4 days before perihelion, while evening comets are found 27.8 days. Incidentally, when I conducted a similar survey of comets found during 1975-84 (33 comets), these figures were 11.8 and 36.2 days respectively.

Why are evening sky comets found longer before perihelion? While every comet behaves differently, generally comets reach perihelion in the vicinity of the sun, as seen from earth. The westward movement of comets brings them from this area into the morning sky. Evening sky comets have yet to reach the solar vicinity, and generally, perihelion.

Because 13 (72%) of the 18 evening comets, and 15 (56%) of the 27 morning comets are in direct orbits around the sun, I conducted a similar study of these two groups. It shows very little difference, the average direct orbit comet is found 12.9 days before perihelion, while for retrograde orbit-comets this figure is 15.6 days.

OBSERVING FROM THE PINNACLES
BY: EDWARD L. HILLYER

It hasn't been long since I became a member of the SJAA (I lived in another area until recently) so I'm not sure this article might be the only one about the Pinnacles as an observing site.

I've been to Fremont Peak a few times, at the Coulter camp (2,700 ft. elevation), and there's no doubt that sky-glow from surrounding cities is noticeable. A lot more than it must have been a few years ago. Furthermore, summer fog is sometimes a problem up there.

I conducted a few exploratory trips to West Pinnacles, and I believe such a site offers much. On moonless nights I've seen stars to the naked eye limit. The Milky Way on Summer nights is so bright it almost casts a shadow. With a C8, along with M65 and M66 I've seen easily in the same field a third galaxy, NGC 3628. The Owl Nebula is quite easy, and many deep-sky objects difficult at Fremont Peak are slightly easier at the Pinnacles. About Seeing, I did not collect enough data to give an accurate opinion, but it seem comparable to Fremont Peak. Pinnacles site is more of a plateau than Fremont, so planetary viewing should be a bit better, although the site I prefer is at 1,700 ft. The only problem at this nice site is an occasional car, but the headlights are visible only for a few moments.

On a map, West Pinnacles is located South-East of Salinas, between HWY 101 and HWY 25. Take 101 South to Soledad, which is about 25 miles south of Salinas: there you'll start seeing signs for West Pinnacles. From there take HWY 146, and after 9 or 10 miles (you will gradually be going uphill) you will see on your right a large sign; Pinnacles National Monument, Entrance. The road is a pleasant drive, paved, with beautiful scenery. The area around the entrance is at 1,700 ft. elevation, with almost a unobstructed view of horizons, no lights from towns, and no summer fog. About 2 miles past the entrance sign, there's the Ranger Station and Camping area (no trailers in campground). The elevation

there is 1,200 ft. with partly obstructed horizons. Any spot around the entrance sign is good, especially just before the sign, where a few feet before it you'll see a road on the left, unpaved with a sign about a winery. (this spot is about 9-miles past Soledad, on 146).

THINKING BIG: THE GROUP 70 TELESCOPE PROJECT
BY: JOHN W. BRIGGS

For a private observatory to raise $30,000 in six months is encouraging. For an amateur astronomy organization to do so -- in relatively small, individual contributions -- is remarkable. But such was the case with newly formed Group 70, which is based in the San Francisco Bay Area. Group 70 has embraced the task of building and operating a 72-inch telescope. The ambitious nature of the project has stimulated the interest of many telescope makers. And the initial fund-raising success, which represents a gamble for the contributing members, reflects the optimism and determination of the group.

The optical design calls for an f/10 classical Cassegrain with an f/3 primary. The mounting will be a computer-controlled altazimuth, with main foci at the Nasmyth points. Several other instrument ports will be located around the circumference of the tube, and a computer-controlled rotating tertiary flat will allow a quick change between any semi-permanently mounted instruments. A possibility also remains for access to the f/3 prime focus.

While the actual construction of the telescope will be born mainly by local people, Group 70 plans an instrument that will be available for use by both amateur and professional astronomers across the country. Paramount to the realization of this ideal is the concept of remote-access observing. We're now soliciting design suggestions from people likely to use this telescope when it is completed and housed -- which we guess will be about 1995. Particularly helpful will be input from those workers pioneering remote-access technology.

Also of great interest to Group 70 are the software standards like the Automatic Telescope Instruction Set (ATIS) now being established for Automatic Photoelectric Telescopes. Through such software, the planned telescope could operate like the standard APT's already being used by the professional community. While the amateur demand for the 72-inch is expected to be high, it seems possible that some observing time -- like week-night, early-morning hours, and also bright-moon hours -- might generally go unused. These hours can be exploited if the Group 70 telescope defaults into an automatic photoelectric or spectrophotometric mode. It's not hard to think of secular research programs that could use these irregular hours, but Group 70 will welcome the collaboration of professional astronomers who can exploit the instrument for their own long-term goals. Another exciting possibility is that the planned telescope will participate a future Global Network of Automatic Telescopes.

The first steps of Group 70 were reported in "The Top 10 Telescope Ideas of 1988" (Sky & Telescope, 1988). Basically, the organization formed to take advantage of a surplus Corning Pyrex mirror blank, which was offered for sale by FAR, the Fund for Astrophysical Research. The blank has been acquired by FAR in 1939, and it was the dream of FAR Scientific Director Theodore Dunham, Jr., to grind and figure the disk for use with a proposed Southern Hemisphere coude' spectrograph (Dunham, 1969). To this end, the blank was shipped to the FAR optical Shop in Tasmania, but the large disk remained untouched when Dunham died in 1984.

Bay Area telescope maker Denni Ferichs noted the availability of the disk when FAR offered it for sale in July of 1988. Quickly she and Kevin Medlock called a meeting of a few dozen potentially interested people, and immediately about $25,000 was pledged to purchase the blank, given that it was in satisfactory condition, (The money came mainly in individual $1,000 pledges.) It was also agreed to incorporate as "Group 70" with non-profit status.

Thanks to the donation of an airline ticket, Medlock was promptly sent to Tasmania to inspect the disk, which proved to be in excellent condition (and 72 rather than the expected 70 inches in diameter). Thus, the organization went ahead and bought the glass for $25,000. By the time of the purchase, the treasury had grown to over $30,000. The disk is expected to arrive in the States by the summer of 1989.

Group 70's confidence stems much from the success of the 30-inch Fremont Peak telescope and observatory, which were completed several years ago by Bay Area amateurs. In the case of the 30-inch, Medlock made the optics and equatorial mounting nearly single-handedly. The construction of the observatory, however, was a collaborative effort that drew widely from the amateur community. The facility's management has been born by the Fremont Peak Observatory

Association, an amateur group created for the task. Many of the individuals involved with the Fremont Peak project are now also involved with Group 70. Thus, the new project has exploited a well-developed local amateur infrastructure.

The new telescope is planned mainly for amateur research -- it will allow for general amateur access to a moderately large telescope for the first time. In the event that observing time becomes over-subscribed on the 72-inch, the founding members have firmly resolved that an amateur's membership category will not effect the time allocation process. In other words, a $25 general member will have as much access to the telescope as a $1,000 life member.

There are currently about 100 individual Group 70 members. Local astronomy clubs are considering the lead of the San Jose Astronomical Association, which joined as a group. A number of members hold graduate degrees in physics and astronomy, and most others are engineers. But almost all are amateur telescope makers. And as was implied in Sky & Telescope, one should not underestimate the zealous determination of telescope makers, who can take such pleasure in the engineering for its own sake! Also, with the majority of engineers and scientists in the Group 70 membership, the players are imposing their work-place methodologies on the project. The serious attitude will help assure success.

The membership is divided into working groups as follows: Administrative/Legal: Public Relations/Fund-Raising; Mechanical Design and Fabrication; Optical Design and Fabrication; Architectural; Computer Sciences Control/Instrumentation: Site Selection and Acquisition. Other working groups may be added as the project develops and as human resources grow. From the start, the Group 70 philosophy has been to break the project into relatively manageable bits and to tackle them each with a working group. Paralleling this strategy is a pay-as-you-go attitude. Presently, the fabrication of the primary mirror is considered the "critical path" in the project's top-level PERT chart.

Please feel free to contact Group 70 for additional information. Group 70's mission statement is presently being prepared and will clarify the opportunities we expect the telescope to offer. We've hardly begun, and we welcome your input and participation!

SJAA MEETING AND STAR PARTY LOCATIONS

GENERAL MEETINGS

Once a month the SJAA holds a General Meeting at the Red Cross building in Los Gatos California. Guest 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 "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 0.6 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 beginning at 8 PM. General Meetings are currently held on the 1st Saturday of each month.

INDOOR STAR PARTIES

Occasionally there are a few 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 it board meetings during this time as well as an introductory astronomy workshop that is conducted once a month.

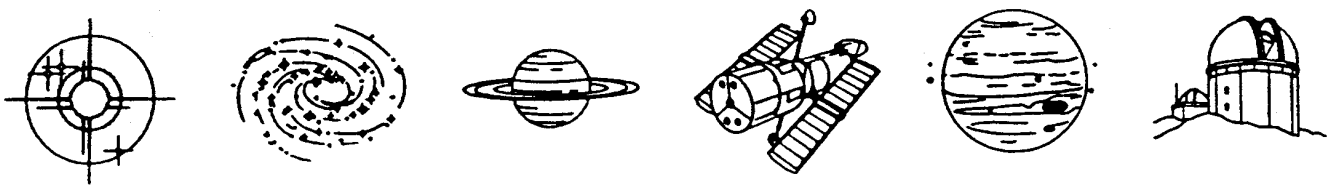
FIELD EXPEDITIONS

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 star party locations.

FREMONT PEAK STATE PARK

The most popular of locations for bay area amateur astronomers is Fremont Peak State Park. Located 70 miles south of San Jose near the town of San Juan Bautista, Fremont Peak rises nearly 3000 ft. above the valley floor. For two decades amateurs have gathered at the "Peak" during New Moon weekends for serious deep sky observing and astrophotography. To get to Fremont Peak for San Jose, take Hwy 101 south towards Salinas. Then take Hwy 156 east (San Juan Bautista exit) for 3 miles to a yellow flashing light. Turn right and go about 1/4 mile to where the road reaches a "Y". Veer 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 into the park. The SJAA sets up in Coulter Camp. It's visible on your right as you first drive onto 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. Members are encouraged to submit articles for publication. These should be typed and submitted no later than the 12th of the previous 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: $26 JUNIOR (UNDER 18): $18

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MAKE CHECKS PAYABLE TO **"SJAA"**

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

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

Telephone: (408) 262-1457

Please check type of membership and if New or Renewal

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