

SJAA EPHemeris

Volume 3 Number 8 Official Publication of the San Jose Astronomical Association

August, 1991

The Eyepiece

by Ed

Be sure to attend the SJAA picnic at Fremont Peak State Park this month. It should be as much fun as last year. Remember the park use fee is \$5 per car load. The fee is less for seniors. This year the picnic will be in conjunction with the FPOA picnic. A little advanced warning, tho not serious, is FPOA will be holding a members only raffle. Many FPOA members are also SJAA and Group 70 members, so we should have a grand time.

Hamburgers and buns will be provided at the picnic, but side dishes are needed. Please call Frank Dibble at (408) 974-7319 or Rick Morales at (408) 623-2465 and tell him what you will bring. We are sharing this picnic with the Fremont Peak Observatory Association. It should be a great picnic with a star party afterward and the 30" Chalanger open for viewing. Yes, there will be time for observing after the picnic. Let's hope the weather is good for both observing and food.

Also remember that the September meeting will be a show and tell night. You may bring your favorite gizmo, telescope do-dad, slides and astronomical photographs to share with the membership. I'll be there with slides from Texas (as if anyone cared). I also have a home-made focus adjustment to show off. Some of you folks have made adaptations to your telescopes that will benefit others. So, come and show them off.

Please take time, when you have a change of address, to drop Jack Peterson a note and let him know what the new address is. I have started placing on the address face of the *Ephemeris* "ADDRESS CORRECTION REQUESTED" which is a way to get notification - a dumb way I might add as each costs us a postage stamp. This is a

August 1: SJAA Picnic, General Meeting and Star Party at Fremont Peak State Park. Picnic at 4:00-4:30 P.M. followed with the general meeting and a star party. The 30 inch Chalanger will also be open. This picnic will be held along with the FPOA picnic.

Please Note: There will not be a General Meeting held at the Milpitas Library in August

August 7: Star Party at Hough Park.

August 15: 8:00 p.m. Beginning Astronomy Class at the Milpitas Library.

August 22: Star Party at Grant Ranch w/Halls Valley Group.

August 29: Star party at Glacier Point, Yosemite. Contact Jim Van Nuland for more information and reservation. These summer skies are wonderful at over 7,000 feet. We have a group camping site at Bridal Vail. Also a no host Star Party at Fremont Peak.

Sept 4: Star Party at Hough Park. Moon is 62% - will set 0:46a

Sept 5: Too much moon

Sept 12: General Meeting 8:00p.m., Board of Directors meeting 6:30p.m.. This month is show and tell - bring equipment and slides to talk about. Paul Barton may describe the group's loaner telescopes available to members.

Sept 19: 8:00 p.m. Beginning Astronomy Class at the Milpitas Library. Third quarter moon.

Sept 22: Autumn begins at 11:45p.m.

Sept 26: New moon - 1% - will set 6:53p.m.. Star Party at Fremont Peak or Grant Ranch. Your Choice.

Sept 28: Rosh Hashana - yr 5753

service to you, but it would save us some effort if we could be notified when there is a change of your address. Thanks.

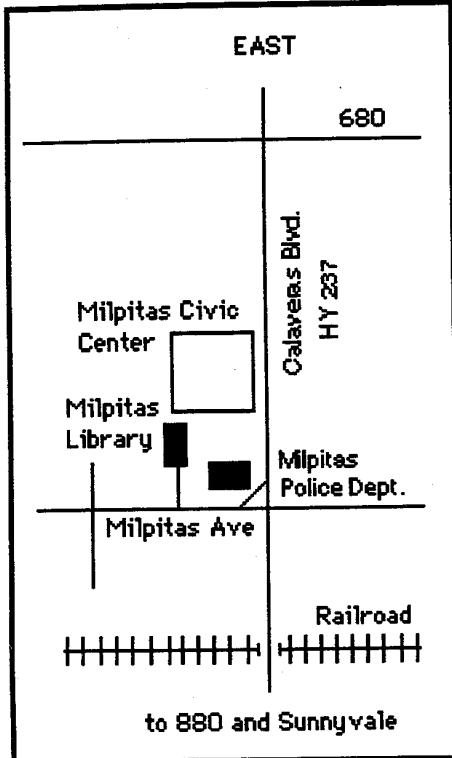
Could we get some feedback from you? Please take time and write a note telling us your feelings about the SJAA building an observatory. Please think in terms of an SJAA only observatory and another one built for public education, by SJAA, for public observing on weekends and special days staffed by Association members. You may send your letters to Jack Peterson or me, the Editor, whose addresses appears on the last page. This isn't a vote, it is just a way to get some feelings about an observatory project.

PLEASE TAKE NOTE: MEMBERSHIPS AND SUBSCRIPTION RATES TO SKY and TELESCOPE HAVE INCREASED EFFECTIVE 1 JULY. PLEASE RESPOND WITH THE CORRECT REMITTANCE.

Livermore Laser Project

by Steve Greenberg

Three weeks ago Livermore Labs received approval from the FAA for their laser test. The tests will cover a span of approximately a year. They will begin with 15 watts and increased in steps to 1500 watts. The artificial star resulting from the laser firings will be about a magnitude of 22, difficult for many to observe, optically aided, or impossible visually. In addition to that difficulty, one will need a special filter, which is next to impossible to get. The Labs opted to purchase only six filters at a cost over \$200 each instead of less expensive filters. Five of the six were immediately checked out for the Tri-valley group. In addition to this, one needs to be within just a couple miles of the laser site. On the surface this looks as though the SJAA won't be able to participate. More later as we'll keep you informed.



REMEMBER THAT AFTER 10:00 PM CAN BE DANGEROUS TO YOUR AUTOMOBILE TIRES. DO NOT GO THROUGH THE EXIT GATE WHEN THE ENTRANCE IS LOCKED!

Directions to our Favorite Places by your Editor

To the left is a map showing directions to the Milpitas Library location for our Board of Directors, General Meeting and Beginning Astronomy Classes. This is the old Milpitas Police Station location. The public and members are welcome to these meetings. There are interesting talks given by professional and amateur astronomers along with lively discussions. Here is a chance to ask someone about your equipment or theory to work out a solution.

The map below shows directions to our public star party site at Hough Park. Star Parties begin at sundown and continue until around 11:00 P.M. As you know the public is invited and so is the membership. Come display your favorite telescope, help another who is less proficient, and get some one else interested in astronomy and the night sky.

On the page 3 is a map showing directions to Fremont Peak State Park. This is the site of some of our star parties and this years summer picnic. From my door to the park it is 57 miles, but I live just off Blossom Hill Ave. Generally it takes about an hour and

fifteen minutes.

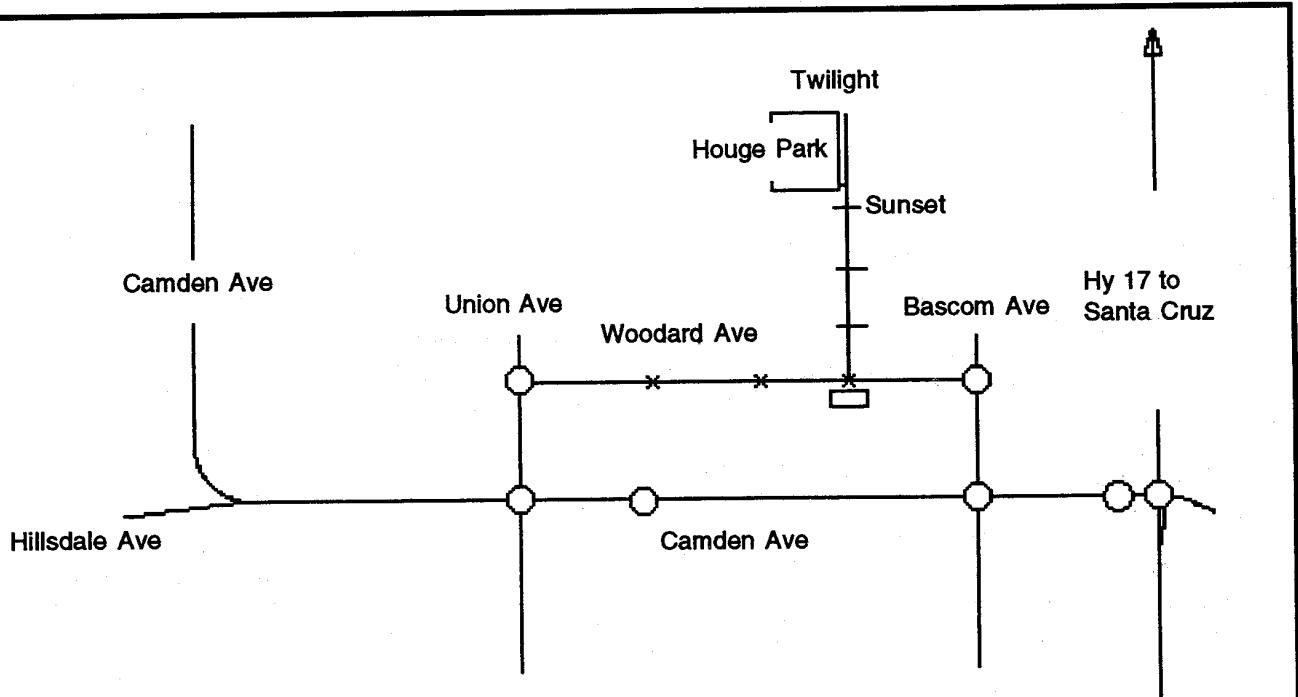
Henry Coe State Park is located east of Morgan Hill in the Hamilton mountain range. To get there go down Hy. 101, past San Jose toward Morgan Hill. Take East Dunne Ave. Follow it east, past Anderson Reservoir, up the mountain for 12 miles. At the overflow parking lot you'll see the sign identifying the Park. Then in a half a mile, you'll see the buildings of the old Coe ranch, now the park headquarters. On the left is a horse trough and a locked gate.

When star parties are scheduled you will pass through the gate and drive up the hill, about 100 yards and set up on the right. Be extremely carefull in the summer as the grass is dry and flammable. Smoking is allowed only inside your vehicle.

You should not let anyone else in to the park who is not attending the star party. If you don't need your car at the site and are not hauling heavy astronomical equipment, consider parking near the camp grounds.

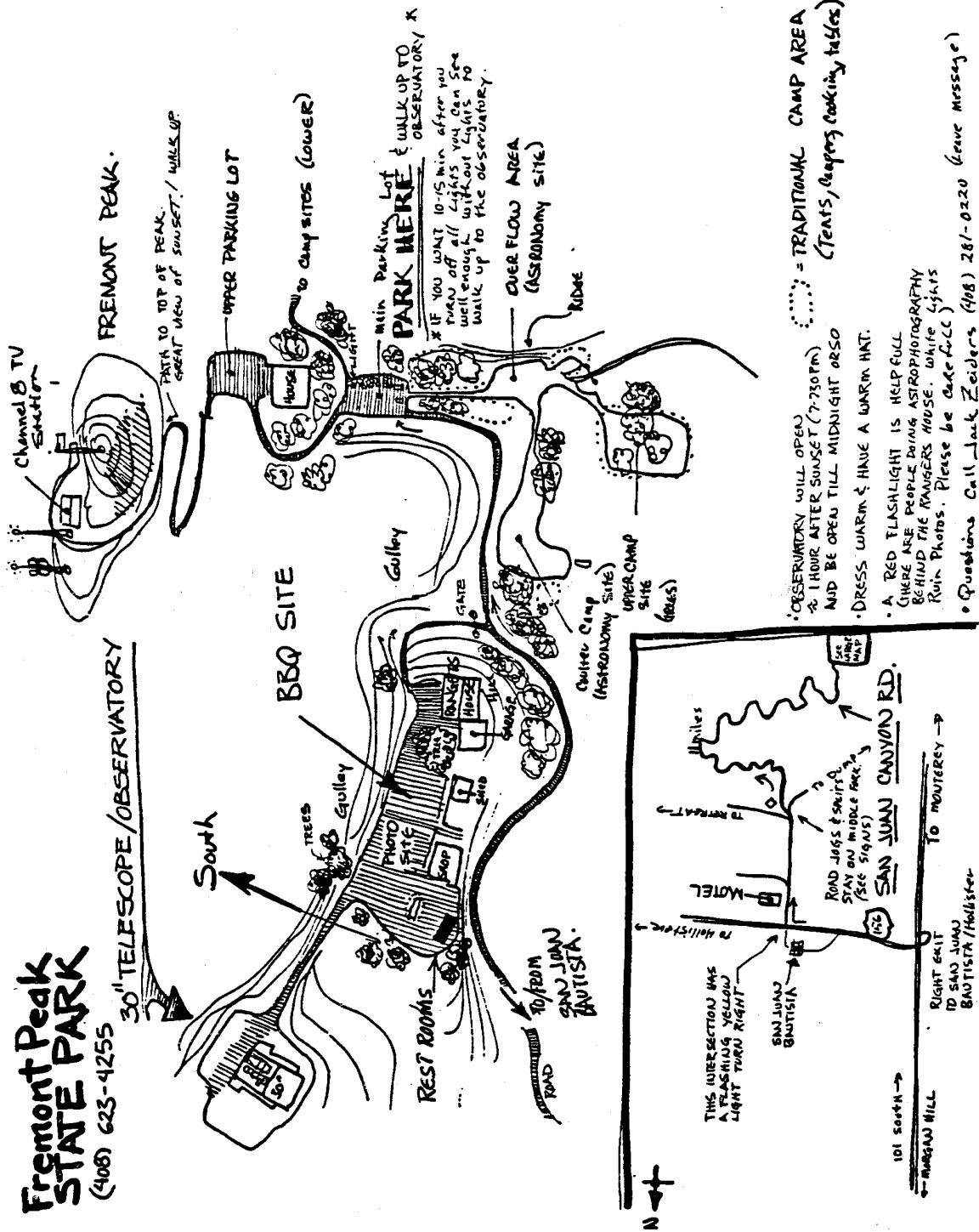
There are restrooms in the Museum building, down the stairs and to the rear [sounds like Van Noodle talking]

I hope this helps more members to attend these outings.



Fremont Peak STATE PARK

(408) 623-4255 30" TELESCOPE/OBSERVATORY



Celestial Calendar

August 1992

| Lunar Phases | Date | Rise | Tran | Set |
|--------------|---------|-------|------|------|
| FQ | 03:58hr | 05-08 | 1418 | 1922 |
| FM | 03:27hr | 14-08 | 1941 | 0115 |
| LQ | 03:01hr | 21-08 | 0007 | 0722 |
| NM | 19:42hr | 27-08 | 0622 | 1242 |
| | | | | 1905 |

Nearer Planets

| | | | | |
|---------------|-------|------|------|------|
| Mercury | 07-08 | 0551 | 1227 | 1907 |
| 0.82 A.U. | 17-08 | 0456 | 1142 | 1832 |
| Mag 0.0 | 27-08 | 0448 | 1146 | 1848 |
| Venus | 07-08 | 0706 | 1354 | 2046 |
| 1.61 A.U. | 17-08 | 0731 | 1142 | 2040 |
| Mag -3.9 | 27-08 | 0758 | 1431 | 2032 |
| Mars | 07-08 | 0113 | 0820 | 1532 |
| 1.40 A.U. | 17-08 | 0055 | 0806 | 1522 |
| Mag +0.7 | 27-08 | 0038 | 0751 | 1511 |
| Jupiter | 07-08 | 0838 | 1458 | 2123 |
| 6.35 A.U. | 17-08 | 0809 | 1427 | 2049 |
| Mag -1.7 | 27-08 | 0741 | 1356 | 2015 |
| Saturn | 07-08 | 1951 | 0055 | 0559 |
| 8.91 A.U. | 17-08 | 1909 | 0012 | 0516 |
| Mag +0.3 | 27-08 | 1828 | 2330 | 0433 |

| | | | | |
|-------------------------------|-------|------|------|------|
| SOL Star Type G2V Mag - 26.72 | | | | |
| 0858+1637 ... | 07-08 | 0601 | 1254 | 1951 |
| 0936+1342 ... | 17-08 | 0610 | 1253 | 1940 |
| 1015+1018 ... | 27-08 | 0621 | 1252 | 1828 |

Astronomical Twilight

| | | | | |
|----------------|-------|------|---|------|
| JD 2,448,842.5 | 07-08 | 0415 | - | 2136 |
| 852.5 | 17-08 | 0428 | - | 2121 |
| 862.5 | 27-08 | 0443 | - | 2105 |

Sidereal Time

| | | | | |
|----------------|-------|------|------------|--|
| Transit Right | 07-08 | 0000 | PST = 1957 | |
| Ascention at | 17-08 | 0000 | PST = 2036 | |
| Local Midnight | 27-08 | 0000 | PST = 2115 | |

| | | | | |
|------------------------------|--------|------|--|--|
| Darkest Saturday Night | Aug 29 | | | |
| Sunset | | 1926 | | |
| Twilight End | | 2103 | | |
| Moon Rise | | 0847 | | |

**TIMES & DATES ARE
PACIFIC DAYLIGHT**

by Richard Stanton

ASTRO ADS

ASTRO ADS are free to all noncommercial advertisers wishing to sell astronomically related products or services. Please send your ad directly to the Editor:

Bob Madden

1616 Inglis Lane

San Jose, Ca. 95118

NO LATER THAN THE 12TH OF EACH MONTH! Your Astro Ad will run approximately 3-months.

Celestron C8 Schmidt - Cassigrain. Drive system with Joy stick with declination and right ascension. Has starbright coating, 28 mm ER eyepiece. Also optional field tripod with wedge and 8X50 finder scope. The optical system is perfect! For \$700 OBO. Call Syd Goldstein (408)-923-6706 (H) 5/92

Meade S/C w/motor drive, Plossl, documentation, case - \$500. Wm Leslie Howard (408) 353-8344 6/92
C-8, S/C w/Byers mount on Meade tripod. Includes drive corrector, Lumicon off-axis guider, illuminated guiding eyepiece, celestron focal resucer, 26 mm Plossl, dew shield, Cannon T-ring and other photo adapters. Excellent condition. \$1000. Day (408) 553-3314 Night (415) 967-4974 ask for Tom. 6/92

Celestron 6-inch F/5 Newtonian tube assembly, 6X30 finder, No eyepieces, Mint cond. \$195 Joel Goodman (415) 292-4381 6/92
Celestron Super C-8 w/Byers drive, 8X50 finder, wedge and tripod. excellent optics. \$795 Joel Goodman (415) 292-4381 6/92

Celestron 750mm S/C F/6 tube assembly w/tripod mounting block, visual back and camera coupler. Joel Goodman (415) 292-4381 6/92

Celestron 14 Very good condition. Proven performance. Previously housed in a University's observatory. Complete with tube, 2 inch diagonal, counterweight bars, finder, fork, drive (electric dual axis slow motion), wedge, field tripod and metal pier. Will sell for under \$5,000 (negotiable). Edward Hillyer, 4900 N. Hwy 99 #238, Stockton, CA 95212 - (209) 931-0486 evenings 6/92

Celestron C8 - Black tube assembly w/ mounting bracket for a Super Polaris, star bright coating, 2 yrs old, 1.25" and 2"

backs, 6X30 finder, 26 mm plossl. \$550. 1 Teleview 7mm Nagler eyepiece - \$140. Celestron 7X50 WA Pro Series binoculars, wide strap and case - \$110. Call Rich Neuschafer. (W) (408) 285-6818 (H) (408) 446-0975 6/92

ESTATE SALE - Owner will accept bid. DS - 10 f/4.5 Newtonian - minor damage to optical flat, telrad, Tasco finder scope, Custom made German EQ mnt, Spotting scope - minus 0.965 ocular, 2 axis drive corrector - disassembled (Meade), 2X Barlow, 2X Telenegative, 9mm guide Reticle, 1.25 extension tubes, Camera Extension Adapter, Eyepieces 5mm, 7mm, 9mm, 12.5mm, 18mm, 25mm, 30mm Ultrascopic (all Orion oculars), Metal Case. FILTERS - Polarizer, 2 ea. Skyglow, Color set, 2 ea. 52mm Skyglow (all 1.25 except as noted). PUBLICATION - Tirion Sky Atlas 2000.0 - delux color edition. Camera body - X7A, winder, Lenses 500mm - f/8, 80-200mm f/3.5, 50mm f/1.7, 2X Teleconverter. Total Approximate Value \$3,575. Call Ms. Judie Hobgood (408) 244-8851 8/92

Celestron 40mm, 2" eyepiece, very good cond \$95. Celestron 25mm and 18mm 2" orthoscopic, \$95 each. Meade 12mm (1.25) Illuminated Reticle eyepiece w/C cell battery box and connecting wire. Never used, mint. \$50. C-8 Piggyback bracket for camera. \$20. Binocular clamp (screw-in type to mount binocs on a tripod) \$5. NIKON T-ring \$5. Porro Prism (1.25), never used \$25. 1/4 - 20 Adapter block for Orion small equatorial mount (for supporting camera or small scope). \$10. Call Bill Dellinges (510) 792-9206 8/92

Bushnell 454 power, 60mm/f=910mm refractor, Equatorial Mount. K21mm, H12, and SR4mm eyepieces. Assorted filters and prisms. \$150. Call Leigh Trowbridge (415) 967-6396 8/92

Dr. Isaac Asimov - Born in Petrovichi, USSR, on January 2, 1920 came to the US, obtained a Ph. D. in Biochemistry at Boston University School of Medicine. In addition to many books, fact and fiction he wrote essays and articles on science and astronomy. His writings are a legacy of insights about what the universe is and mankind's potential future in it. Dying on April 6, 1992. Good bye Doctor.

DOUBLE, TRIPLE, AND MULTIPLE STARS

by Patrick M. Donnelly

It seems strange to be sitting in a motel in Monticello, Minnesota (latitude +45.5°) and reviewing double stars that are visible, generally only from the southern hemisphere. However, that is what I am doing. The reason for this strange behaviour is an impending trip to Mt. John's Observatory at Lake Tekapo, New Zealand (latitude -44.3°). I will spend most of July in New Zealand, and hopefully I will see some of the beautiful southern sky sights. As it stands now, I am reviewing a list of southern sky double stars to choose the best of the list. Here are a couple of the most spectacular examples.

Probably the best double star in the sky is Rigel Centaurus or as you probably know it, Alpha Centauri. Alpha Centauri is located in the far southern skies at approximately -60° declination and 15 hours Right Ascension. The double is not visible in the San Jose area. Alpha Centauri is the closest star system to our solar system; a mere 4.3 light years away. It is a true double star system, and with Proxima Centauri it forms a triple star system. The close pair orbit each other in about 80 years, and proxima takes about 30,000 years to orbit the other two.

The close pair are at magnitudes -0.04 and 1.17 and separated by 8.7" at the present time. Proxima is a 9th magnitude star about 1.5° from the other components and is not in any telescope's field of view, centered on the close pair, that is capable of resolving the close pair.

The primary member of the close pair is a star almost identical to the sun. It has the same spectral type, G2V, but it is a bit more massive than the sun. If the earth were in orbit about Alpha Centauri, the sun would appear as a zero magnitude star somewhere near the Double Cluster in Cassiopeia.

Another Spectacular double is Alpha Crucis or Acrux. This is the brightest star in the Southern Cross. This system consists of two first magnitude stars (1.39 and 1.86) separated by 4.4". The system is located along the southern Milky Way at declination -65°.

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Comet Comments

by Don Machholz

One returning comet has been recovered, and a new one recently discovered. Meanwhile, Comet Shoemaker-Levy swings southward in our evening sky.

Periodic Comet Ashbrook-Jackson (1992j): A. Gilmore and P. Kilmartin recovered this object on May 4, confirming an observation made over one year earlier. This comet has an orbital period of 7.5 years, it might be bright enough for amateurs to observe next summer.

Comet Machholz (1992k) : 1

discovered this comet on July 2, low in the morning sky. The comet was at ninth magnitude, thirty degrees from the sun. During the week following discovery, the comet's small elongation and poor weather prevented accurate positional measurements, so as of this writing no orbit has been computed.

This find came 61 hours since my previous comet discovery three months before. I was using my 5 inch homemade binoculars, sweeping from my backyard in Colfax, Ca.

EPHEMERIDES

| DATE (UT) | RA (2000) | DEC | ELONG | SKY | MAG |
|--|-----------|---------|-------|-----|-----|
| COMET SHOEMAKER-LEVY (1991a ₁) | | | | | |
| 07-22 | 11h47.9m | +35°38' | 51° | E | 6.6 |
| 07-27 | 11h56.9m | +24°58' | 49° | E | 6.8 |
| 08-01 | 12h02.5m | +15°53' | 47° | E | 7.0 |
| 08-06 | 12h06.1m | +08°21' | 45° | E | 7.3 |
| 08-11 | 12h08.4m | +02°06' | 43° | E | 7.7 |
| 08-16 | 12h10.1m | -03°07' | 40° | E | 8.0 |
| 08-21 | 12h11.4m | -07°33' | 38° | E | 8.4 |
| 08-26 | 12h12.4m | -11°22' | 35° | E | 8.7 |
| 08-31 | 12h13.4m | -14°43' | 33° | E | 9.1 |
| 09-05 | 12h14.3m | -17°44' | 31° | E | 9.4 |

Don Machholz (916) 346-8963

The stars are spectral type B, and both components are spectroscopic binaries. The system is about 370 light years away, and the period of revolution is estimated to be 3000 - 4000 years.

If you ever get to the southern

hemisphere, these two double stars are a must to observe.

A Little Night Musing

I'm baaAaaaack, last Friday evening marked my first Friday night public star party in a couple of months. As I don't usually get out of work 'till after 6:30 or so, the later summer twilight is a big help. I creep ed& beeped across town to my home and loaded the Datsun with telescope, tripod, eyepieces and assorted paraphernalia.

A stop at McRoadkill for dinner and then it's across town again to Hogue (sounds like yogi) park. As luck would have it there was a empty parking spot at the end of the grass. There were several scopes set up and in business so I started unpacking and assembling the Sillystron tripod and wedge, I didn't bring the normal 8" SCT tube assembly most people expect when seeing the tripod and wedge, instead I had a 4" Quantum Maksutov. Having just acquired this scope and this was the first time I had an opportunity to use it, I did not realize the short folks would need a ladder, and had to make due with the folding chair or parental skyhook. It has hide and seek with the clouds, Moon, jupiter, and other objects. The weather was warm and sultry and the people were pleasant. Oh, the scope performed quite well. The club has one also that any member may use, if you are interested in borrowing one of our club collection of telescopes, contact Paul Barton, his number is elsewhere in this newsletter.

Coming up on August 1st is our combined picnic/BBQ with the Fremont Peak Observatory Association at Fremont Peak. It will also be a new moonish weekend so bring your scopes, family and a salad, dessert, or something else and have a good time. Contact Rick Morales at (408) 623-2465 and or Frank Dibbell at (408) 974-7319 to volunteer for the supersoaker battle and let them know you're coming. The SJAA and FPOA will supply the burgers and dogs, everything else is pot luck.

The last weekend in August is the Yosemite trip, contact Jim Van Nu land if you want to go. I went last year and had lots of fun. Showing a couple of amateur astronomers from Japan M13 and the Veil through the 17" at Glacier point was great, seems they had never looked through anything bigger than a 8"

before. The sky was clear and dark as usual there.

The general membership meeting this September will be a slide and equipment night. This has been a perennial favorite amongst many members. It is a good opportunity to share that new or not so new piece of hardware. It is also a great venue for those RTMC, Texas Starparty, Stellefane, Yosemite , or other slides. Astrophotos are also very welcome. Come and bring something to share and make this slide and equipment night one of the best yet.

Some of us are new comers to astronomy and others are old hands with years of experience with a vast background of understanding and experience that is often hard won. I am interested in starting a small group of experienced observers, photographers that would like to help newcomers to our hobby avoid some of the pitfalls and start out right in amateur astronomy. If you would be interested in helping a newcomer learn to setup his scope, learn how to use setting circles, how to find some of the neat stuff in the summer sky, how to do a drift alignment, or some other aspect of our chosen hobby let me know. I am willing to put together a list of people willing to share some of their time, pass along some wisdom, and perhaps make a new friend. It would be nice if this group could grow into a practical extension of the SJAA Introductory Observational astronomy class. If this sounds neat to you, give me a call.

A last bit of information for those of you that did not make it to our July 11th meeting. I have placed the order for our T-scanner Hydrogen-Alpha filter. It should be here by the end of summer. I would like to thank everyone of you for making this a reality. We had donations from \$.25 on up. All of you patiently put up with my high pressure tactics and we made it with the generosity of the members of the SJAA, of Del Woods, owner of Daystar, and Del Johnson for donating the 2.4" refractor we will mount it on. Thank you all for making this a reality!

.....JackZ.

More Gleanings by Bob Madden

A discussion heard during the Board meeting disclosed that Bob Brauer has accepted the dubious post of Publicity [Director]. He is the only member of his committee at this time and may be calling on you to help. If you wish to participate call him at (408) 292-7695 and offer him your assistance.

Second, Del Johnson has found a replacement. Del has been accepted for an assignment in the Peace Corps. Good for Del! He is expecting to leave on his assignment some time in November. He is planning to take a telescope with him.

Last, the presentations given to the group last Saturday evening were outstanding! We have provided a contour map of Hally Hill to the park commission. This resulted from our survey team's effort. There will not be parking provided on Hally Hill, but down at its base. It is reported that it is not a difficult walk with your telescope up the hill, however, several trips may be necessary. A low voltage lighting system is contemplated for lighting the path up the hill. Why is it amateur astronomers want to set up right next to their cars?

The structural design team also made an outstanding presentation! Ten meetings have been held to arrive at a proposal. After reviewing many different styles, which included the Friends of Grant Ranch design, clam shell, classic dome, and roll off roof, the criteria used suggested a roll off roof be selected. Many suggestions have been provided by Ethan Clifton. All responses from those attending appear to be complementary and encouraging.

We have come a big step this year with the progress we have made at the Park Commission, surveying, and building concept. We will continue to obtain approval through the Park Commission and document our design.

Also Del Johnson is to be complemented for his personal effort!

On the page 7 is a questionnaire provided by Jerry Dunmire. Please take time to read it carefully, answer the questions you feel comfortable with and return the questionnaire to him. Your responses are valuable to us. Thanks.

OBSERVATORY QUESTIONNAIRE

1. WHICH 5 OF THE FOLLOWING FEATURES DO YOU FEEL ARE THE MOST IMPORTANT FOR OUR OBSERVATORY:

- A, LOW MAINTENANCE
- B, GOOD CONTACT WITH THE PUBLIC CROWD
- C, KEEP IT SIMPLE
- D, LARGE VIEW OF THE SKY
- E, STORAGE AREA AVAILABLE
- F, WIND PROTECTION
- G, MODEST COST
- H, SECURE FROM WEATHER
- I, SECURE FROM VANDALS
- J, EXPANDABLE TO A 2ND SCOPE

2. DO YOU AGREE WITH THE CONCLUSIONS OF THE OBSERVATORY COMMITTEE? _____

IF NOT, WHICH TYPE OF OBSERVATORY DO YOU PREFER? _____

WHY? _____

3. WOULD YOU LIKE TO WORK ON THE CONSTRUCTION OF THE OBSERVATORY? _____

IF YES, DO YOU HAVE EXPERIENCE WITH:

- A, FOUNDATIONS, CONCRETE
- B, FRAMING
- C, ROOFING
- D, FINISH CARPENTRY
- E, ARCHITECTURAL DRAFTING
- F, STRUCTURAL ENGINEERING (LICENSED)
- G, SOILS ENGINEERING (LICENSED)

4. OPTIONAL:

NAME _____

PHONE NUMBER _____

PLEASE RETURN COMPLETED FORM TO:

JERRY DUNMIRE
3720 BENTON STREET
SANTA CLARA, CA 95051
(408)748-1814

OR TO ANY OFFICER OR BOARD MEMBER

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 to the editor, Bob Madden, 1616 Inglis Lane, San Jose, California 95118

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Membership only: \$12 Membership / S&T: \$32 Junior (under 18): \$20

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