

SJAA *EPHEMERIS*

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MAY, 1991

CALENDAR NOTES

On May 3 there will be a board meeting at the Red Cross building at 8 pm. This is a one time change due to the auction slated for the following afternoon.

There will be a public star party hosted by the Halls Valley Group on May 11th.

This is also the outdoor session of the Introductory Observational Astronomy Class (weather permitting).

Volunteers are needed to help out at the May 17th (Friday) public star party at Branham lane park. The introductory Observational Astronomy class is at the Red Cross on May 18th. Please note the weekend change due to the auction. It will resume on the 4th Saturday next month. No Activity is planned for May 25 (Full Moon). However the Riverside Telescope Maker's Convention runs from May 24 to the 27th, for those interested in getting a good moon tan.

"RIVERSIDE" LIKE CONFERENCE FOR THE BAY AREA?

The Astronomical Association of Northern California (AANC) is looking into the possibility of putting together a telescope makers conference and star party on the first weekend of September. This would be an amateur gathering similar to the annual event at Camp Oaks for the Riverside Telescope Makers Conference. The AANC is looking at holding the conference either at Grant Ranch county park or at Fremont Peak State Park. Participant liability insurance has been a real stumbling block. The SJAA is currently looking to any members who may have insurance knowledge to help in this matter. If you qualify, please give either Tom Ahl or Jim Van Nuland a call. You can find their numbers in the officer box elsewhere in this issue.

MAY 4TH 11TH ANNUAL BAY AREA ASTRONOMICAL AUCTION

May 3: (Friday) Board Meeting at the Los Gatos Red Cross. 8 pm.

May 4: Auction XI replaces the General Meeting this month. 2 pm until who knows how late. Milpitas Public Library.

May 11: Halls Valley Group public Star Party at Grant Ranch. SJAA invited. This is also the outdoor session of the astronomy class.

May 17: (Friday) Public star party at Branham Lane Park. New volunteers welcome and needed!

May 18: Introductory Observational Astronomy Class. Red Cross, 8 pm.

May 25: No SJAA activity scheduled.

June 1: General Meeting at 8 pm. Big lens astrophotography featured by Chuck Vaughan. Board of Directors meets at 6:30 pm before the meeting.

June 8: Halls Valley Group public star party at Grant Ranch.

June 15: Star Party at Henry Coe State Park. Sunset until dawn.

June 21: (Friday) public star party at Branham Lane Park. Volunteers welcome and needed.

SJAA HOTLINE

24 HOUR INFORMATION
408-997-3347

AUCTION XI

Planning for the Auction is underway. We are seeking donations for the snack table: homemade and store-bought cookies, doughnuts, chips, cake, etc. Sodas will be available for purchase, like last year. Please see the special auction page in this month's issue for more information and directions to the Milpitas public library. It would be a shame to have many members show up at the Los Gatos Red Cross building.

A. B. GREGORY AWARD

Nominations are being sought for the 1991 Dr. A. B. Gregory Award, given in recognition for outstanding contributions of time and effort to others in amateur astronomy. There are other awards given for amateur research, public service, and other worthy endeavors; The SJAA presents this award for "people helping people". Dr. Gregory never met a problem that he didn't help solve -- how to set up a telescope, finding some information, suggesting new techniques, loaning a book, and endless encouragement.

The nominating committee is Bob Fingerhut (Chair), Steve Greenberg, and Jim Richardson. Phone numbers inside. Call and write a short letter giving reasons why the candidate should be recognized. The award, given only once to an individual, is awarded at the Annual Picnic in July.

YOSEMITE STAR PARTY

Our session under the incomparable skies of Glacier point will be on July 12 and 13, immediately following the solar eclipse. We will have nearly six hours of full darkness each night. A few members will be going up on Thursday to show the 50% eclipsed Sun.

Reservations are being accepted; contact Jim Van Nuland, 408-371-1307 10 am to 11 pm. The limit for free admission is 30 people (not cars). We are expected to have at least one scope per two people. PLEASE, do not sign up unless you are reasonably sure you can be there. Last year Jim had so many cancellations at the last minute that we sent only 28 people, out of 45 who'd signed up and many who he had not added to the waiting list. This isn't fair to the Park, and it isn't fair to people on the waiting list who made other plans.

MAY STARRY NIGHTS

- *Richard Stanton*

The evening of Sunday, May 19th will show a delightful example of why some of us call our telescopes "time-machines." During the evening in question Jupiter and its moons will pass just South of M44, the Beehive Star cluster, in Cancer. The First Quarter Moon will pass just South of Jupiter. The light from the stars of the Beehive will have started on their journey to you five hundred years ago while Leonardo Da Vinci was formulating his concepts for his drawing of a "flying machine." The light from Jupiter will have been traveling toward you for about forty-seven minutes, close to the amount of time we spend commuting to work. The light from the Moon will reach you from the last blink of your eye, about one and a quarter seconds. It should be a both beautiful and thoughtful view in a pair of binoculars.

On the same evening, the 19th, there is an interesting opportunity to see the asteroid (9) Metis but you will have to stay up till midnight. According to Jean Meeus the 11th magnitude asteroid will have its closest approach to the 6th magnitude star 79 Cancri around 11:30 PM. The asteroid should come within 50 arc-seconds of the star. Metis will be traveling at about 55 arc-seconds per hour in a east-southeasterly direction so you should be able to watch it become a temporary double star.

As Saturday, May 11th, will be the prime observing night for the month,
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here's a couple of Jovian events to call to Polyphemus' attention. At 8:12 PM the shadow of Io will egress from the face of Jupiter and at 9:30 PM the Great Red Spot should be on the Central Meridian. If the monoliths should congregate these events may be cancelled.

SPACE PROGRAM UPDATE

- *BOB FINGERHUT*

THE VALUE OF MAN IN SPACE IS PROVEN AGAIN - Astronauts unstuck the high gain antenna on the \$557 million Gamma Ray Observatory during the space walk saving the mission. The antenna had failed to deploy when commanded or when shook by firing rocket thrusters.

FIRST SHUTTLE MISSION OF 1991 A SUCCESS - The Atlantis was launched on April 5 carrying the Gamma Ray Observatory (GRO), the second of NASA's Great Observatories. The GRO is designed to study the hottest objects in the universe such as quasars, supernovae, and black holes. GRO will spend its first 15 months creating the first full-sky map of gamma ray sources. Later, GRO will turn its four science instruments on specific targets. After deploying GRO, shuttle astronauts performed a space walk in which they evaluated mobility systems for use on the exterior of the space station Freedom. Atlantis also carried a new biological processing experiment for drug research into treatments for AIDS and other diseases.

CRACKS FOUND IN SHUTTLE DOOR HINGES - Cracks were found in the umbilical door hinge lugs on the orbiters Discovery and Columbia. As a result Discovery was rolled back from the launch pad for repairs and its mission delayed from March to May. The launch of Discovery (STS-39) with the unclassified Department of Defense Infrared Background Signature Survey payload is now scheduled for early May. Columbia (STS-40) is scheduled for launch in late May with the Space-lab Space Life Sciences Laboratory.

MAGELLAN REORIENTED TO KEEP ELECTRONICS COOL - The mapping period around Venus was reduced by 10 minutes every other orbit in order to reorientate the spacecraft. By March the Sun's angle became less severe and reorientating was no longer required.

LAUNCH OF CRAF AND CASSINI REVERSED - The change will buy the comet mission more cost, schedule and weight margins. Under the new plan, Cassini is to be launched toward Saturn in November 1995, followed by the launch of CRAF in February 1996. As part of the change, the CRAF mission must also be sent on a gravity assist trajectory around Venus. The detour to Venus will add eight months to the flight, sent to arrive at Comet Kopf in 2001.

JAPAN APPROVES TWO MISSIONS - Japan's Space Activities Commission has approved initiation of Comets, a research satellite for testing advanced communications technologies and Lunar-A to orbit the Moon and drop three penetrators into the Moon's surface.

MOTOROLA SELECTS SATELLITE BUILDER FOR IRIDIUM PROJECT - Lockheed was selected to develop and build the 77 satellites that will form the Iridium system. Iridium will provide "worldwide", portable hand-held, mobile and fixed telecommunications coverage. Satellite launches will begin in 1994, and the system is scheduled to be fully operational in 1996.

COMET COMMENTS

- *DON MACHHOLZ*

A few faint comets have been found recently.

Periodic Comet Hartley 1 (1911j): This object was discovered on a photographic plate taken by Carolyn and Eugene Shoemaker and David Levy at Palomar on March 12. Calculations show, however, that this is the first return of a comet found in 1985 by Malcolm Hartley. In 1988 it passed 0.36 AU from Jupiter, this shifted the orbit slightly and increased the orbital period to 6.0 years. It will remain near magnitude 17.

Periodic Comet Mrkos (1991k): Antonin Mrkos of Czechoslovakia photographed this, his thirteenth comet discovery, on Mar. 16. The comet was closest the Sun last month at 1.41 AU and takes 5.8 years to complete an orbit. Although favorably placed, it will get no brighter than magnitude 13.

Comet Helin-Lawrence (1991l): Eleanor Helin, Kenneth Lawrence and P. Rose used the 18" Palomar Schmidt to discover this comet on March 17. It will be closest the Sun next Feb., when it should be visible in amateur-sized scopes. Presently it is magnitude 14.

Periodic Comet Giacobini-Zinner (1991m): K. Meech and W. Weller recovered this comet at magnitude 22. It is still one year away from perihelion - which will occur when it is behind the Sun - therefore it will remain faint.

Eclipse Notes:

It is unlikely that any comet from the Kreutz Sun-grazing group would be near the Sun during the July 11 eclipse, but the table below lists predicted locations if one is in the area. The positions are all for July 11.8 UT, (when the Sun will be at RA: 07hr 25m, Dec: +22.1) While the variable factor is the perihelion dates for a comet on the Sun-grazing orbit. An absolute magnitude of 10 is used.

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.

'91 Eclipse! - Four total eclipse cruise tickets are available @ \$850 per person. Contact Roger Hassen, 408-299-2401.

Celestron SPC - 80 refractor including single-axis quartz motor drive, polar-axis finder, 10mm Plossl eyepiece, and 7.5mm Orion Ultrascopic eyepiece - \$700. Also, Orion 8X56 binoculars -

\$100 o.b.o.. Contact Eric Kopit 408-459-8257. 5/91

Schaefer Mount - AT-12 with Byers Gear, custom lapped. Digi-Star drive corrector. Includes Computer Aided Telescope System (CATS). Hardly used, \$5000 firm. Celestron 14" w/ Starbright coatings. One of three originally made for Perkin-Elmer. Purchased from a Celestron VP, \$4250. 6" Starfire Refractor - f/7, includes guide-scope, case and accessories, \$2750. Questar 3.5" - used twice. Includes accessories and extras. \$2750. For more information contact Steve Mandel, 408-475-8201. 4/91

Astronomy Magazine, complete collection, 1973 to present. All in fine condition. \$200 or best offer. Genoa Super EGA HiRes+ video card (Model 4850-7), including software and manual. \$50. Call Craig Congdon, 404-448-1329. 4/91

Celestron f/6.3 focal reducer/coma corrector - \$100. Also ... Celestron 17mm and 30mm 1 1/4" eyepieces - \$40 ea. University Konig II 8mm and 12mm 1 1/4" eyepieces - \$45 ea. And 1 1/4" Mark V visual nebula filter (narrow band - 480-506 nm) \$40. Orion Skyglow 1 1/4" broadband filter - \$30. Everything in new condition. Call Mike Schartman at 209-544-8828 (eves) or 415-455-6012, ext. 353 (Days) 4/91

Dobsonian 10" f/6, sharp Cave mirror, Telrad, 2" focuser, Serrier-truss mount. Compact - \$500. Dobsonian 13.1 f/4.5 Coulter mirror, Telrad, 2" focuser, Serrier-truss mount - \$650. Cassegrain, 8" f/20, homemade, equatorial mount. Finished except for optical alignment. Enterprise optics mirror. Should outperform Meade/Celestron - \$400. Also University Optics 28mm Pretoria, \$100. Rick Decker 415-956-7070 or 415-383-6339. 4/91

Celestron 10 X 40 orange finder with Bracket for C14. \$35. Celestron 10 X 70 orange finder with bracket for C14 - \$125. Orion DEC motor for Sandcast C8 - \$20. Celestron T-Adapter for camera - \$15. Meade #603 DC cord, 25', with cigarette plug for use with #784 motor - \$15. Meade #604 AC converter with 25' cord for use with #784 motor

- \$20. Televue 40mm Plossl (1.25x) in excellent condition - \$65. Swift Stereo microscope (Dissecting) model M85-80BH, 10X and 30X, dioptric eyepiece, built-in top and bottom illuminator, camera adapter, dust cover. Mint condition - \$350. Bill Dellings 415-792-9206 4/91

Celestron Firstscope 80 with Azimuth-Altitude mounting w/slow motion controls. Adjustable tripod w/accessory tray, 26mm and X2 eyepieces. Paid \$600. Asking \$400. Like New! Call Ted at 415-367-0570 or 415-691-2324 4/91

Celestron C8 complete with carrying case, equatorial wedge and tripod. With Telrad finder, 8 X 50 right-angle finderscope with lighted crosshairs, setting circle lights, front end counter weight, 2X Barlow lens, T-adapter and T-ring for Nikon camera. The following eyepieces are also included: 9mm Ortho, 40mm Kelner, 25mm Kelner, 26mm Plossl (with skylight filter). All like new, \$650/obo. Celestron C90 (90mm aperture, 1000mm f/11) with carrying case. Includes 6X30 finderscope, 2.5X Barlow lens, Barlow extender, Porro prism, star diagonal, and 18mm Kelner eyepiece. All like new, \$250/obo. Alan Tuthill, 415-345-2514 4/91

THE CASE OF THE MISSING MASTHEAD

- J. GLEASON

I want to take this opportunity to thank those members who took the time to send me masthead designs. For years a little observatory has been the ICON in the upper left hand corner of our club newsletter masthead. When I went over to the MAC I thought it would be fun to ask members to participate in a logo contest. Several nice entries have been received, but I was really looking for a replacement for the observatory all together folks, not just an upgrade of the old building. Galaxies, planets, stars, telescopes, ???, would be welcome additions. Where are all those Silicon Valley artists?

METEOR NOTES

- JIM RICHARDSON

Early May marks the time of year for one of my favorite meteor showers, the Eta Aquarids (maximum May 4). This difficult, cantankerous shower is one of the most challenging strong showers of the year to observe successfully. Why? There are two major contributors: The peak is somewhat variable, occurring between the 3rd and the 6th (sometime a double peak), thus making your observation timing hard to predict. The radiant angle from the Sun is low (42 degrees), as well as the declination angle (-2 degrees), thus placing the radiant low in the eastern/south-eastern sky just before dawn during the peak period. If you observe on the right morning, and you have a good south-east horizon, and your sky is clear of clouds and moon - then you have a good chance of seeing these very swift, often-trained, yellow/white meteors. This year, a near last quarter moon to the south-west won't help either.

Despite all this, this shower can still yield some real beauties, especially in the hours prior to twilight when the radiant is very low, and the shower meteors enter at such a low angle at the atmosphere that they can cover a huge section of sky (as much as 40-60 degrees) in 1-3 seconds, almost always leaving a train. The catch here is that these meteors are far and few between; there may be only 3-4 of these during the night of the maximum.

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COMET EPHEMERIS

PERI. DATE	ON JULY 11.8 UT RA (2000) DEC	ELONG	EST. MAG.
07-04.0	07h25.1m +12°01'	10.1°	+7.0
07-05.0	07h25.7m +12°41'	9.4°	+6.6
07-06.0	07h26.3m +13°25'	8.7°	+6.0
07-07.0	07h26.9m +14°15'	7.9°	+5.4
07-08.0	07h27.6m +15°11'	7.0°	+4.7
07-09.0	07h28.2m +16°18'	5.9°	+3.7
07-10.0	07h28.7m +17°40'	4.6°	+2.3
07-11.0	07h28.8m +19°30'	2.9°	-0.3
07-11.5	07h28.0m +20°52'	1.7°	-3.4
07-12.0	07h16.0m +21°33'	1.7°	-4.7
07-12.5	07h10.5m +20°13'	3.4°	-0.7
07-13.0	07h07.3m +19°13'	4.6°	+1.0
07-14.0	07h03.1m +17°40'	6.4°	+2.9
07-15.0	07h00.3m +16°28'	7.7°	+4.1
07-16.0	06h58.0m +15°26'	8.9°	+5.0
07-17.0	06h56.2m +14°32'	9.8°	+5.6
07-18.0	06h54.7m +13°45'	10.7°	+6.2

THIS MONTH'S METEORS

SHOWER NAME	DATES	DATE OF MAXIMUM	MAXIMUM VISUAL ZENITHAL RATE (per Hr.)	RADIANT POINT (ON MAX DATE)		VELOCITY km/sec.	NOTES
				R. A.	DEC		
Alpha Bootids	Apr 14 - May 12	Apr 28	<1	14h 32m	+ 19	20	slow meteors
Phi Bootids	Apr 16 - May 12	May 1	<1	16h 00m	+ 51	12	very slow usu. orange/red
Alpha Scorpiids	Apr 11 - May 12	May 3	<1	16h 00m	- 22	35	
Eta Aquirids	Apr 21 - May 12	May 4	25	22h 22m	- 2	65.5	very swift often trained
Tau Herculids	May 19 - Jun 14	Jun 3	<1	15h 12m	+ 39	15	very slow usu. orange/red

AUCTION XI

The eleventh annual Bay Area Astronomical Auction comes on May 4, so it's time to start sorting through your goodies. Whatever is astronomical or telescope-making related is welcome at the Auction.

Pre-registration makes it easy. Fill in the form below or a copy of it, listing each different item you have. If there are several of one item, use a single line and show the quantity. Enter a minimum bid, even if you wish to list it go really cheap. Indicate whether the item is an outright donation; if not, the commission is 10% of the selling price. The SJAA share of all sales is tax deductible, and goes to further public education in astronomy.

Next, MAIL the complete form with a SASE, to Jim Van Nuland, 359 Calico Ave., San Jose, CA 95124. You may wish to keep a copy of your files. Jim will assign a bidder/seller and item numbers, and return the form to you promptly. Use adhesive labels to label each item, indicating the minimum bid and item number on each item. If you omit the SASE, Jim will assign numbers, but hold the form for your pickup at the auction.

As in previous years, we will have a Swap Meet in the afternoon. Pre-registration is not needed for the Swap Meet. Items having a realistic minimum bid of \$5 or less probably should be Swap Meet material, as auction time is limited. Items of limited or specialized application, even if valued above \$5, should be considered for the swap meet.

A silent auction may be used, too. This is mostly for big ticket items such as complete telescopes. Attach a tag with the minimum bid to the item; bidders write in a new bid and line out the old one. Results of the silent auction will be made final at the break and the winning bidders announced. However, a seller may close bidding and sell at any time.

DIRECTIONS TO THE MILPITAS LIBRARY

Take hy. 17 (880) to Milpitas. Take the hy. 237 exit and go east for 1.1 miles. Turn left onto Milpitas Blvd., then an almost immediate right into the parking lot. Doors open at 1:00 pm. Swap Meet 2 pm to 5 pm, auction from 6 pm. \$1 donation is requested for registration to buy or sell during the auction. Refreshments will be available.

SJAA AUCTION PRE-REGISTRATION				
Name _____		Address _____		Phone _____
Item num.	Qty	Min Bid	Donation Y/N	Description . . . (<~ 60 characters)

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SAN JOSE ASTRONOMICAL ASSOCIATION MEMBERSHIP APPLICATION

Membership only: \$10 Membership/S&T: \$28 Junior (under 18): \$18

Name: _____

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

Address: _____

Jack Peterson, Treasurer

San Jose Astronomical Association
1840 Yosemite Dr.

Telephone: _____

Milpitas, CA 95035

Telephone: (408) 262-1457

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