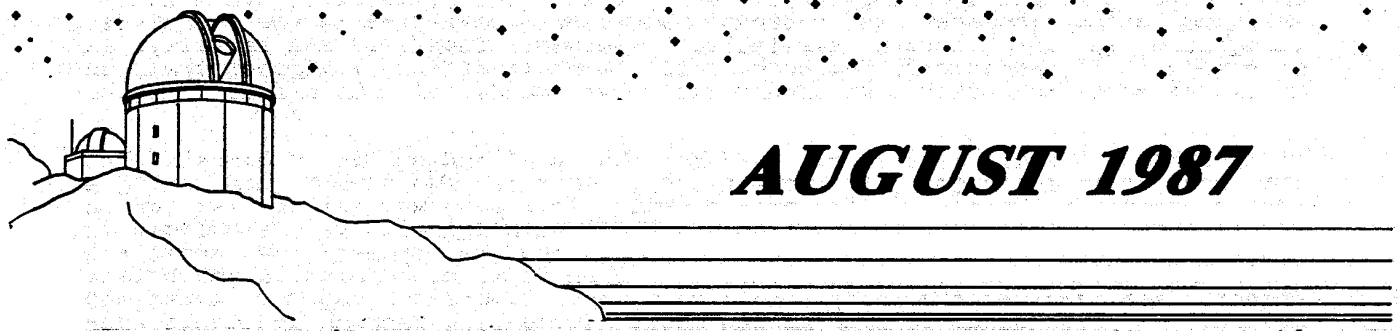
EPHEMERIS

OF THE SAN JOSE ASTRONOMICAL ASSOCIATION.



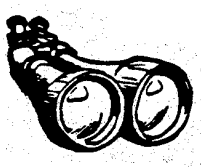
AUGUST 1987

AUGUST 1ST 8PM
JOHN GLEASON
FISHING FOR STARLIGHT
AMATEUR ASTROPHOTOGRAPHY IN THE 80's

SEPTEMBER 5TH 8PM
SLIDE AND EQUIPMENT NIGHT

AUGUST	1	GENERAL MEETING 8 PM LOS GATOS RED CROSS BUILDING. FISHING FOR STARLIGHT - AMATEUR ASTROPHOTOGRAPHY IN THE 80'S.
AUGUST	8	SJAA BOARD MEETING AT 7 PM, FOLLOWED BY THE OBSERVATIONAL ASTRONOMY CLASS AT 8:30 PM. LOS GATOS RED CROSS BUILDING.
AUGUST	12/13	PERSEID METEOR SHOWER. DUSK TILL DAWN.
AUGUST	15	INDOOR STAR PARTY, LOS GATOS RED CROSS, 8 PM.
AUGUST	22	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREMONT PEAK STATE PARK. DUSK TILL DAWN. ASTRONOMICAL ASSOCIATION OF NORTHERN CALIFORNIA (AANC) STAR PARTY AND TELESCOPE JUDGING.
AUGUST	22	FIELD EXPEDITION FOR THOSE REGISTERED, TO YOSEMITE NATIONAL PARK, GLACIER POINT.
AUGUST	29	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREMONT PEAK STATE PARK.
SEPTEMBER	5	GENERAL MEETING 8 PM, LOS GATOS RED CROSS BUILDING. SLIDE AND EQUIPMENT NIGHT.
SEPTEMBER	12	SJAA BOARD MEETING AT 7 PM, FOLLOWED BY THE OBSERVATIONAL ASTRONOMY CLASS AT 8:30
SEPTEMBER	19	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO FREMONT PEAK STATE PARK. DUSK TILL DAWN.
SEPTEMBER	26	FIELD EXPEDITION FOR ASTRONOMICAL OBSERVATION TO GRANT RANCH COUNTY PARK. DUSK TILL DAWN.

FIELD OF VIEW
BY: JOHN GLEASON



MEMBERSHIP RENEWALS

Don't miss the next EPHEMERIS! This will be the last month that you will receive our monthly newsletter if you have not yet renewed your membership or bulletin subscription. Please use the handy renewal form on the last page of this issue. $24 membership entitles you to a year of the Ephemeris, Sky and Telescope magazine, and Sky Publishing discounts. For those wishing to only receive the Ephemeris, subscription is $10.

YOSEMITE TRIP

On August 21st and 22nd, many SJAA members will be camping in Yosemite for our annual star party weekend at Glacier Point. We have already filled the group campsite area to capacity. There are 10 people whose registration forms were received too late. I know who each of you are and have talked to each of you about pending campsite arrangements. As of this writing, we will have a member arriving early Thursday to reserve 4 additional campsites in the Bridalveil campground as they become available. However, campsite availability is uncertain. If additional members still wish to attend, I suggest that you arrive as early as possible to secure your own campsite. Campsites in the Bridalveil Creek campground are on a first come first served basis.

At this point I would like to ask everyone who is attending to remember what the real reasons for going to Yosemite are. That is, the SJAA is conducting a public program on Friday and Saturday nights. This program will consist of a slide show and telescope observation until around midnight. We are obliged to let the park guests look through our telescopes and to answer any questions that they might have. Have an observing plan in mind, keeping to the bright objects, and remember that many people have never looked through a telescope before. A few words to each person about how to look through and focus your telescope will be well received. The success of our program will determine if we are invited again.

I will be in contact with everyone who has registered to confirm that you will be going. Please, if you do not plan to attend and have registered, call me at 415-792-8248 and leave word that you are not going. This will make room for others who would like to attend.

NEW COMPUTER

The SJAA's new computer is ON LINE! Now your editor is looking for some fancy personal publishing software for major changes to the design and format of the Ephemeris. Sky and Telescope watch out! Future additions of the Ephemeris can also be printed using a laser printer for higher resolution. There may even be a digital scanner available to incert photographs electronically into the text via the Laser Jet printer. Until then, we will continue to use the ThinkJet which provides the printing quality you see today.

ANSWERING MACHINE NEEDED

The SJAA is looking for the donation of a telephone answering machine. We wish to set up an association information service with information about membership, events, and General Meeting locations. Anyone who would like to make this donation should contact any of the listed Officers and Board members on the back page of the Ephemeris.

URANOMETRIA 2000.0 VOLUME 1

330,000 stars and 10,300 deep-sky objects are plotted on this new star atlas that is certain to become a modern day classic. (See Sky and Telescope, June issue, page 611.) This splendid star atlas is available through the SJAA by contacting our club Treasurer, Jack Peterson. Jack is currently making out a list of those individuals who are interested in purchasing the atlas which is expected to make shipment late this month. Suspected price is $39.95 (the best bargain in amateur astronomy today), which could be lower if the SJAA gets a club/volume discount from Sky Publishing. See Jack Peterson at the next General Meeting or Board Meeting.

POOR PROSPECTS FOR PERSEIDS

This year's Perseid meteor shower on the night of August 12/13 will compete with a waning gibbous Moon lighting the skies, three days past full phase. To make things worse, peak meteor activity is predicted well into the early morning hours where the Moon will interfere the most. Nevertheless, observing the shower will be a nice midweek activity for those interested in a little backyard astronomy on a warm (hopefully) summer evening. Reclining lawn chairs are best for this activity. Those with dark skies may see as many as 15 to 20 meteors per hour.

AANC CONFERENCE

The Astronomical Association of Northern California will be holding its annual conference this year on September 19-20 at the Lawrence Hall of Science in Berkeley. Talks on astronomy, equipment, and astrophotography will be featured. For more information contact Don Stone, AANC President, 415-376-3007. There will be a pre-conference star party held at Fremont Peak on August 22.

SLIDE AND EQUIPMENT NIGHT

Plan now to attend the September 5th Slide and Equipment night. Featured will be equipment demonstrations, recent slides of the Riverside Telescope Makers Conference and selected astrophotography from club members. Expect to see your editor there with his new 6-inch f/16 brass refractor on the Tinsly/Mathis/Medlock mount. The Porsche may be gone, but the "Astro Snob" is alive and well thank you.

ASTRO ADS

FOR SALE: CELESTRON C-90 ASTRO-SCOPE. Includes several eyepieces, diagonal, barlow, single fork w/motor drive and wooden carrying case. Several years old but used less than 20 hours. $300. Contact: George Falotico at (408) 756-6355.

COMET COMMENTS
BY: DON MACHHOLZ

One comet has recently been recovered; with a little luck you'll be able to see it this month. Comet Encke, the comet with the shortest orbital period, makes a brief appearance for Northern Hemisphere observers. Two other comets remain in our skies, positions for them are given below.

Periodic Comet Borrelly (1987p): A. Gilmore and P. M. Kilmartin of Mt. John Univ. Observatory in New Zealand recovered this comet on June 5 at a nuelear magnitude of 19. It was a few degrees south of galaxy NGC 253 and in the precise predicted position.

Discovered in 1904, this comet has an orbital period of 6.86 years. It will be closest the sun (1.36 AU) on Dec. 18 of this year, at about the same time it reaches opposition. Therefore, this is a favorable appearance and the comet may reach mag. 7 by the end of the year.

EPHEMERIDES

DATE	R.A. (1950)	DEC	ELONG	MAG.	NOTES
			Comet Sorrells (1986n)		
07-24	19h 27.6m	+00° 54'	157°	10.0	This comet passes right through the
07-29	19h 06.9m	-01° 02'	153°	10.2	Summer Milky Way as it pulls away
08-03	18h 48.2m	-02° 52'	147°	10.3	from both the earth and sun. It is
08-08	18h 31.8m	-04° 34'	140°	10.5	now high in the sky at evening twi-
08-13	18h 17.7m	-06° 06'	133°	10.8	light and stays up nearly all night.
08-18	18h 05.8m	-07° 28'	126°	11.0	Since Bill Sorrells photographically
08-23	17h 55.8m	-08° 42'	119°	11.2	discovered this comet last Oct. 31
08-28	17h 47.6m	-09° 47'	113°	11.4	it has developed nicely as it neared
09-02	17h 41.0m	-10° 45'	106°	11.6	the sun to 160 million miles in Mar.
09-07	17h 35.7m	-11° 37'	100°	11.8	Bid it farewell as it leaves us.
			Periodic Comet Klemola (1987i)		
07-24	23h 54.7m	+07° 48'	118°	11.8	This comet appears to move less than
07-29	00h 01.1m	+07° 53'	121°	11.8	ten degrees in six weeks as it pulls
08-03	00h 06.9m	+07° 50'	125°	11.7	slowly away from the sun (165 million
08-08	00h 12.0m	+07° 38'	128°	11.7	miles) but approaches the earth at
08-13	00h 16.4m	+07° 17'	132°	11.6	85 million miles. Its actual speed
08-18	00h 20.1m	+06° 47'	137°	11.6	through space remains at 17 miles a
08-23	00h 23.0m	+06° 09'	141°	11.6	second. It rises near evening twi
08-28	00h 25.1m	+05° 22'	146°	11.6	light and stays up all night. Those
09-02	00h 26.5m	+04° 29'	151°	11.6	of you who want a challenge may try
09-07	00h 27.2m	+03° 29'	156°	11.7	to locate Comet Klemola.

Periodic Comet Borrelly (1987p)

07-24	02h 05.1m	-30° 17'	101°	11.7	This comet begins the month by ris-
07-29	02h 14.3m	-30° 40'	103°	11.5	ing two hours before twilight and
08-03	02h 23.5m	-31° 06'	104°	11.3	ends the month rising only an hour
08-08	02h 32.4m	-31° 36'	106°	11.2	earlier. At mid-month it is 180
08-13	02h 41.1m	-32° 07'	107°	11.0	million miles from the sun and 125
08-18	02h 49.5m	-32° 42'	109°	10.8	million miles from the earth. It
08-23	02h 57.6m	-33° 19'	110°	10.7	takes a southern route, reaching -38
08-28	03h 05.2m	-33° 57'	112°	10.5	degrees declination in mid-Oct. be-
09-02	03h 12.4m	-34° 37'	113°	10.3	fore turning rapidly north. Watch
09-07	03h 18.9m	-35° 18'	114°	10.1	this comet develop over these months.

SEEKING COMETS

Let's spend these next few months discussing comet orbits. Most comet observers have little need for the orbital elements, but every comet that's been observed for a while has a computed orbit and this, in addition to the Earth's position, determine visibility.

Upon discovery of a new comet, a rough orbit is computed. This is done by reducing three precise photographic positions of the comet, often taken during the first week of discovery. These positions are fed into a computer at the Smithsonian Astrophysical Observatory and the orbital elements are produced. On occasion another observatory will do this and furnish the SAO with the elements.

How are these positions obtained? Major U.S. observatories such as Lowell and Lick, and perhaps Kitt Peak, will "free-up" and instrument to secure a ten-minute photographic plate. Then this plate is measured to secure a position of the comet, it is exact to a fraction of an arc-second! Often observatories in Japan, Chile, Australia and New Zealand contribute positions of the comet.

The preliminary orbit is assumed to be parabolic, that is, its shape is such that the comet will return only in an infinite amount of time. Although that assumption may prove to be wrong, this orbit is good enough for continued observation of the comet for the next few weeks.

In recent time there hasn't been much trouble getting these "astrometric" positions of the comet in the week after discovery. However, additional positions have been very difficult to obtain lately. Most professional observatories have too many other projects to complete. This results in very few instruments and astronomers for such "low priority" work such as measuring comet positions. So usually it is two or three weeks before the first refined orbit can be computed.

This is an area where amateur astronomers are needed. If you can take a ten-minute guided photograph of a comet, and measure the exact position against the reference stars in the photo, your work is more than welcome to the SAO. Amateurs in Australia, Japan and Europe have been doing this for years. American amateurs, with all their fancy equipment, are sadly lacking in this area, the exception being Everhart and Briggs of Colorado. Two articles showing how this is done appear in SKY & TELESCOPE, Sept. 1982.

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

Rodeo Gulch Rd. runs north for 5.1 miles out of the town of Soquel. The north end of the road makes a good observing site. I have occasionally searched for comets from here for more than a decade. It is wind protected and there's very little traffic.

This is easier to get to than these instructions suggest. From the corner of Blossom Hill Rd. and Camden Ave. it is 20.1 miles and 32 minutes away. Take Hwy 17 (880) south over the summit and continue for 5.3 more miles. Exit to the left side of the highway at Vine Hill Rd. (also known as Branciforte Dr.), and go up hill for 0.3 miles to the "T". Go left and downhill for 1.8 miles. You'll run into some sharp curves along the way. Slow down when you get to Jarvis Rd. Because your turnoff is just 0.3 miles away. Take a left turn at

Mountain View Rd. (you'll notice the big sign for "St. Clare's Retreat" at the corner). Go up Mt. View Rd. for 0.95 miles. You'll then come to a road on the right, make a sharp turn and go up this road. It is Rodeo Gulch Rd. After 0.65 miles you'll hit a very sharp left curve, the site is on the left side of the road, 0.15 miles past this curve.

Set up your telescope along the side of this paved road, where the packed dirt shoulder is one to four feet wide. I usually use a stretch about 100 feet long, running north-south, along the east side of the road. This area is not quite level, it slopes slightly to the south.

From here the horizon is lowest (0 degrees) from the ENE through the SE. It rises to 10 degrees high due south and about 15 degrees in the SW, dropping to 10 degrees from the NW to the NE. If I wanted a flat western horizon but a high eastern horizon I merely heave to set up 100 yards to the north on the side of the road. Indeed, anywhere along this stretch I could set up a telescope and have good sky somewhere.

Light pollution is worst in the SSW, caused by the lights of Santa Cruz. The sky in the other directions is fairly dark. However, at this elevation (about 600') and location the local weather can affect transparency: low clouds over Santa Cruz usually means low clouds here. One advantage of this site is the lack of strong winds.

Traffic is light with one to ten cars in a three-hour stretch. Occasionally young people park along this road to talk and, I guess, look at the stars. From time to time a Santa Cruz Sheriff stops by to see how things are going. He allows us to use this site. There is a residence, not visible, on a hill about 200 yards to the NNE. I haven't seen any wild animals here.

ASTRONOMICAL ASSOCIATION of NORTHERN CALIFORNIA
1987 AANC CONFERENCE

co-sponsored by

ASTRONOMICAL SOCIETY OF THE PACIFIC and LAWRENCE HALL OF SCIENCE

* *

September 19 and 20

Lawrence Hall of Science, Berkeley, California

* *

CALL FOR PAPERS and REGISTRATION

* *

— Several major speakers from the professional astronomical community
  Solar astronomer and astronaut Loren Acton, planetologist Clark Chapman, and Andrew Fraknoi, and Sherwood Harrington from the Astronomical Society of the Pacific are confirmed at this time

— Papers from amateur astronomers — Swap meet

— Astrophotography competition and display — Door prizes

— Commercial exhibits — Club exhibits with prize for best exhibit

— Banquet dinner and awards presentation at Spenger's Fish Grotto

— Star party, with concurrent planetarium shows Saturday night

— Lawrence Hall of Science exhibits, including Space Shuttle mockup

* *

Registration fee $20 per person if received by August 23, $25 at the door. (Family members who do not wish to attend the papers sessions may visit Lawrence Hall of Science for the normal entrance fee, payable at the door.)

Banquet at Spenger's Fish Grotto Saturday evening, $15 per person.

There will be a PRE-CONFERENCE STAR PARTY and telescope judging at Fremont Peak State Park on Saturday August 22. AANC will provide hamburgers.

Submit your proposals
for amateur papers to:
Kevin Medlock, Papers Chairman
15022 Broadway Terrace
Oakland, CA 94611

For further information contact:
Don Stone, AANC President
731 Camino Ricardo
Moraga, CA 94556
(415) 376-3007

Pre-registrants will receive a mailing in August giving additional information about the conference and the pre-conference star party.

Please detach along line

AANC 1987 CONFERENCE REGISTRATION FORM

Name (1st attendee) ____
Please print name the way you want it on name badge

Name(s) (additional attendees) ____

____

Address ____

____

______________________________ Phone ____________________

Please register ________ persons at $20 each ($25 after August 23)

Please reserve ______ Roast Beef and ______ Captain's Platter (seafood) dinners at $15 each.

I (we) would like ______ tickets to the planetarium show (No charge, but seats are limited.)

I (we) will ______, will not ______ enter the astrophotography contest.

I (we) will ______, will not ______ come to the August 22 Star Party at Fremont Peak.

Total enclosed ___________. Please make check payable to Astronomical Association of Northern California and mail with completed form to: *AANC Conference Registration*
Kevin Medlock,
15022 Broadway Terrace
Oakland, CA 94611

SJAA MEETING AND STAR PARTY LOCATIONS

GENERAL MEETINGS

Once a month the SJAA holds a General Meeting at the Los Gatos Red Cross building in Los Gatos California. Speakers are invited to give talks on a wide range of astronomical topics which have included equipment and slide presentations. This is also the location for the SJAA's famous "Indoor Star Parties", informal sessions where members gather to share their astronomical interests. Whatever your interest, astrophotography, deep sky observation, telescope making, or just arm chair observing, you'll find a friendly atmosphere at all of our meetings.

The Red Cross building is located at 18011 Los Gatos - Saratoga Rd. From Hwy. 17 take the Hwy. 9 (Saratoga) exit and continue West up the Los Gatos - Saratoga Road for about 1.5 miles. Turn right at Rose Ave. Then turn right immediately into the parking lot of the Post Office and Red Cross building. Doors open at 7:45 PM, with General Meetings usually beginning at 8 PM.

INDOOR STAR PARTIES

Each month there are several Saturday evenings set aside for informal gatherings of amateur astronomers to share their common interest in astronomy, to "talk shop", or to simply enjoy the company of friends. Members are encouraged to bring in telescopes and accessories to share with the group. Typically there will be several telescopes operating in the parking lot or there will be a slide show of recent astrophotography and star party events in progress in the meeting hall. The SJAA also holds its Board Meetings during this time as well as an Introductory Astronomy workshop that is conducted once a month.

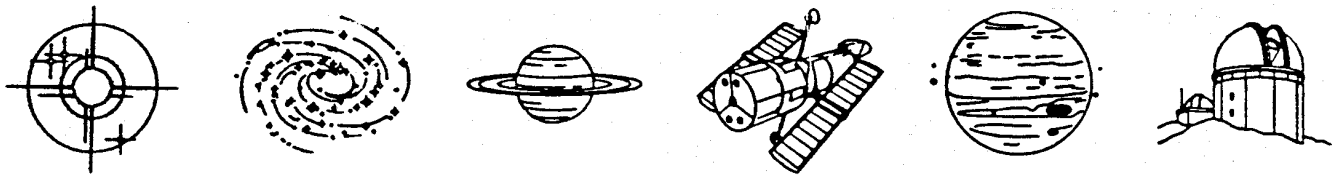
FIELD EXPEDITIONS

On the Saturdays closest to the New Moon, The SJAA will conduct a "Star Party" for astronomical observation at a designated location. Several times a year these star parties are held close to San Jose while others are held as far away as Yosemite National Park. Watch the EPHEMERIS for directions to these locations.

FREMONT PEAK STATE PARK

The most popular of locations for bay area amateur astronomers is Fremont Peak State Park. Located 70 miles south near the town of San Juan Bautista, Fremont Peak rises nearly 3000 ft. above the valley. For two decades amateurs have gathered at the "Peak" during New Moon weekends for serious deep sky observing and astrophotography. Fremont Peak is now the home of the Fremont Peak Observatory Association's 30-inch telescope that is open to the public on selected weekends. To get to Fremont Peak from San Jose, take Hwy. 101 South towards Salinas. Then take Hwy. 156 East (San Juan Bautista exit) for two miles to a yellow flashing light. Turn right and go about 1/4 mile to where the road reaches a "Y". Stay left for about 25 yards and then go right. (Watch closely for the Fremont Peak sign). Follow the canyon road for about 11 miles up and into the park. The SJAA sets up in the Coulter Camp area. It's visible on your right as you first drive into the main area of the park. Expect to find a lot of astronomical activity here every clear New Moon weekend. Arrive early if you are setting up equipment. 50 to 100 telescopes are not uncommon at Fremont Peak during the summer months.

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



SAN JOSE ASTRONOMICAL ASSOCIATION MEMBERSHIP APPLICATION

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

Name _____

Address _____

_____

Telephone (____) _____

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

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

[Phone: (408) 262-1457]

Please check type of membership and if new or renewal.

Membership Only____ Membership/S&T____

Junior (Under 18)____

New____ Renewal____

Questionnaire (optional)

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

_____

_____

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