

# sjaa ephemeris

aug'80

- Aug. 2 Indoor star party at the Los Gatos Red Cross building, 18015 Los Gatos-Saratoga Rd., Los Gatos. 7:30 pm on. Everyone welcome!
- Aug. 5 Occultation of Aldebaran by the Moon. More information on this inside.
- Aug. 9 SJAA star party on Mt. Umunhum. This is a change from Henry Coe State Park! Directions and information inside.
- Aug. 10 New Moon and annular solar eclipse. (Peru)
- Aug. 14-15 SJAA Observing sessions at the Santa Clara County Fair. Information concerning this inside.
- Aug. 16 Indoor star party at the Los Gatos Red Cross building. 7:30 pm on. This will be a grazing occultation planning session also. (See next date.)
- Aug. 19-20 Grazing occultation expedition to Greenville. See inside in Occulting Zone.
- Aug. 23 General meeting at the Rosicrucian Planetarium, Park & Naglee Ave, San Jose'. 7:30 pm. The speaker will be Jack Marling of Lumicon, talking on "Different Techniques for Astrophotography." This lecture, with its new methods for astrophotography and the incredible astronomical photos obtained by the speaker, will be of interest to all members.
- Aug. 29 Board meeting at Norm Neinchel's, 190 Rose Ct. Campbell. 8:00 pm. 378-4488. All SJAA members are invited to attend.
- Aug. 30 Indoor star party at the Los Gatos Red Cross building. 7:30.
- Sept. 6 Tehachapi star party. If interested contact the editor for more information on this sountern California event.
- Sept. 6 SJAA star party, site to be announced.
- Sept. 13-14 AANC conference at Cal State University, Hayward. More information inside.
- Sept. 20 General meeting at the Rosicrucian Planetarium. The speaker this month will be Stan Kent of the Viking Fund presenting the incredible "Mars in 3-D" movie. Don't miss this! 7:30 pm.
- Sept. 26 Board meeting at Jim van Nuland's, 3509 Calico Ave, San Jose. 8:00 pm. 371-1307. Everyone welcome!
- Sept. 27 Indoor star party at the Los Gatos Red Cross. 7:30 pm.

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Kevin Medlock, president 278-8475 Denni Medlock, editor 278-8475

# Observations

The summer months have traditionally been a very active time for the SJAA. June saw election of board members and membership renewal, July a new star party site, the picnic, and a new president. August looks promising with again a new star party site, a good speaker for the general meeting, and a grazing occultation expedition, (the first of the year for us since we've been located poorly for the earlier ones). As stated by the club's constitution the members elect the board of directors, who in turn elect the president, vice-president, secretary, and treasurer. At the July 18 board meeting at Bob Fingerhut's the board elected Kevin Medlock to serve as the SJAA president for the next two years. Frank Dibbell was elected vice-president, and Phil Hermsmeyer and Jim van Nuland were retained as treasurer and secretary, respectively. As editor I would like to speak for the whole club membership in expressing an immense amount of thanks to both Gerry Rattley, our outgoing president, and Bob Fingerhut, our ex-v.p., who have both many times over the past years offered untiringly their energies and resources in making the SJAA the outstanding astronomy club it is today. Now that they both have more time for the observational aspects of astronomy I want to see some beautiful astrophotos from the both of them at the indoor star parties! Again, many thanks from the club.

Listed below are the names and addresses of the SJAA officers and board members. Feel free to contact these individuals of you have any questions, comments, or criticism about the club functions. All board meetings are open to the general membership and members are urged to attend.

President: Kevin Medlock, 16105 Via Paro  
San Lorenzo, 94580 278-8475

Vice-pres: Frank Dibbell, 710 Georgia Ave.  
Sunnyvale, 94086 733-7208

Secretary: Jim van Nuland, 3509 Calico Ave.  
San Jose, 95124 371-1307

Treasurer: Phil Hermsmeyer, 20900 Alves Dr.  
Cupertino, 95014 252-5529

## Board members

Gerry Rattley, 185 Homestead Rd. #2  
Sunnyvale, 94087 732-0202

Bobby Fingerhut, 340 Rio Verde, #4  
Milpitas, 95035 263-4455

Wolfgang Hanisch, 1815 Cleveland Ave.  
San Jose, 95126 998-0861

Shea Pratt, 474 Safari Dr.  
Chris Pratt, San Jose, 95123 629-2994

The general membership list will be printed in the September bulletin because not everyone has gotten their renewals in yet. If you haven't already, membership, which includes Sky & Tel, is \$18 a year, junior memberships under 18 years of age are \$12. Send them to the treasurer.

Santa Clara County Fair officials have approached the SJAA and asked if we are interested in setting up some sort of observing session at the fair on August 14-15. Gerry Rattley has the details so if you are interested contact him at 732-0202 in the evenings.

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The L5 Society of the South Bay is presenting Bob Truax of 'Volksrocket' fame speaking on "Project Private Enterprise," Saturday, August 2nd, at the Rosicrucian Planetarium. 7:30 pm. This lecture will include an update, engineering aspects, and test results of his phenominal astronautical attempt.

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Thanks to the many contributors to this month's bulletin. It will be dropped in the mail and then Kevin and I are off to the Stellafane Telescope Makers' Conference in Springfield, Vermont, August 9th. We'll tell you all about it in the next bulletin! Deadline for the September newsletter will be August 23rd. See you in a month! (And good luck at the graze!)

Denni

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UMUNHUM  
Yes — Another New Observing Site!  
by Wolf Hanisch

Some time ago Bob Scott made contact with the civilian caretaker at Mt. Umunhum about the possible use of the air force facilities as an observing site. Bob asked me to help scoping out the site and we made an appointment to visit the site. On July 14th we arrived at the electric gate at Mt. Umunhum base, which cheerfully greeted us with a sign reading:

DANGER—HIGH VOLTAGE

We are authorized to use deadly force! Trembling in our boots Bob and I crept through the gate and found the place deserted except for one caretaker, who cheerfully greeted us. He gave us a deluxe guided tour of the place and made us feel very welcome.

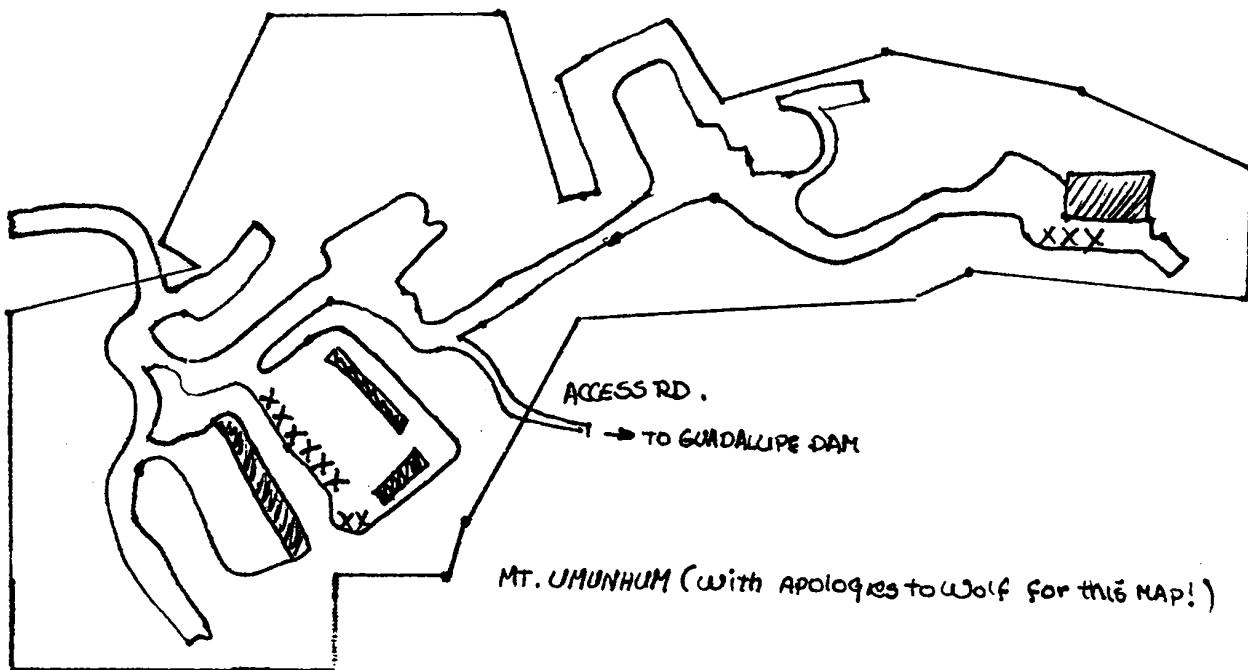
The place looks very promising. The board has changed the Aug. 9 star party from Henry Coe State Park to Mt. Umunhum. To get there you simply drive out Almaden Expressway to Guadalupe Dam where you turn right and simply follow the signs up to Mt. Umunhum. (Please consult a map—it's simple). The first gate you come to is locked by a combination lock for which I'll get the combination. The gate will be unlocked. The second gate—the one with the ominous sign—has a post twenty feet in front of it. On the post you will find a metal box with a button on the bottom. Press the button and the gate will open. Drive through and the gate will close automatically. Leaving the base you will find a similar post, with the button on the side facing away from the fence. Push—wait till the gate opens—drive through—gate close automatically.

Note attached map of base. The X areas are promising observing sites. Happy observing and see you there.

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"A solar powered sun dial? I thought they were all solar powered!"

Patty Winter



### The Glasspool Site Star Party

About twenty SJAA members and associates took advantage of Dick Glasspool's generous offer to use his land in the Santa Cruz Mountains as a star party site and descended (or rather, ascended) upon him and his barbecue guests with telescopes, vehicles, binoculars tripods, and cameras July 12th. Unfortunately, the level areas were taken quickly and since I cannot level my 8" well it had to be left in the van. Jack Zeiders and I binocularized it all evening instead. There were the usual number of C-8's set up, though: Bob Fingerhut and Mark and Rolf Strohm had theirs but I don't think Jack Petersen set his up. Patty Winter and Steve Greenberg played with an infrared scope while Kevin was having a field day with the 18", jumping from object to object in Hercules.

It was good to see a number of newer members there (Dan Dickerson, Jerry Jones, John Malecki, George Taylor, the Strohms, Bill Ramstad), and some we hadn't seen at a star party for awhile (Dick Glasspool, Ed Schell, Penny Pinschmidt, David Pratt). It appears the closeness of the locale to the Bay Area was a definite plus.

The site, sky-wise, was not all that bad for being so near San Jose'. A high northern ridge cut out the physical lights and still allowed Polaris to be seen. Eastern and southern horizons were the best but were the first to be wiped out when fog began to come in around midnight. (Reports from Fremont Peak say it was fogged in all evening.)

The SJAA would again like to thank Dick Glasspool for the hospitality, the site, and the coffee, all of which contributed to a fairly good summer star party.

Denni

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"You want it level? I'll level everything for you!"

Ed Schell

"That's the biggest nebula I've ever seen—horizon to horizon!"  
George Taylor, describing the fog July 12th.

## THE PICNIC

About 50 people, 75 pounds of food, a dozen kites, and 6 frisbies attended the annual SJAA picnic held this year at Cupertino's Portal Park. I don't think the conditions could have been much better. Phil Hermsmeyer's selection of the site was perfect: it had a shaded picnic area and large fire pit, a well-equipped playground for the little kids, an open grassy field for the big kids, and we had it all to ourselves. Wolfgang and Martha Hanisch expertly and deliciously organized the hot dog and hamburger line while Shea Pratt's potluck planning turned out great with all of us getting to sample a good number of other dishes.

Before lunch a few baseballs were knocked about by Debbie Moore, Gerry Rattley, Bobby Fingerhut, and Phil, while Patty Winter, Steve Greenburg, Bob Hatcher, and myself flew some of the many kites brought. (Patty used to work in a kite store and has a collection matched only by Wolf's.)

After stuffing ourselves at lunch about ten of us waddled onto the field and had a frisbie war for about thirty minutes. The frisbies won. Conceding defeat we went ahead into the business part of the picnic since it was a general meeting. Jean Gregory was there to see the Dr. A.B. Gregory Award, a beautiful plaque, presented to Kevin Medlock by Gerry Rattley and Jim van Nuland. Officer installation took place next with introductions of the new president, vice-president, secretary, and treasurer.

Business attended to, the most ambitious of us went back to the field with kites while the others formed what looked like a big "outdoor" indoor star party. Freed of playing chef Wolfgang took up his fighting kites and terrorized the sky lanes while photographers Jeff Lo, Rolf and Mark Strohm, and Shea click away at all of the activities.

The picnic was not without its astronomical aspects. Later in the afternoon Jim brought out his 4" sunscope and Gerry his C-90 for sunspot observing. They were immediately mobbed by a crowd of enthusiastic viewers.

The day finally ended when those of us playing frisbie again could no longer see the frisbies coming out of the dusk at us. It was somewhere around 9:30 and approaching observational dark. We have some real diehards in this club....

The picnic was very enjoyable for everyone involved. Everything came together so well it was surprising more people didn't attend. Those would didn't will never know the good time and good food they missed.

Denni

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### Want Ads

For sale: Edmund 6" equatorial mount w/clock drive, slow motion controls, drive corrector. \$100.00

Bushnell 7X50 binoculars, American type, high quality. \$50.00 Call Tom Palmer at 267-8459

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For sale: C-90 spotting scope w/special coatings. \$250 or offer. Call Doug Berger at 352-4689 after 5:30pm.

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For sale: 6" f/8 reflector w/equatorial mount, guide scope, clock drive, manual declination slow motion and electric R.A. control, 6 oculars and barlow, color filters, camera mount, sun projection screen, Skalnate Atlas and Catalogue. \$400.00 Call Shaun Hogan at 591-2552

## COMET COMMENTS

As we roll through the summer there are no bright comets currently visible. However, this autumn should see two or three brighter than magnitude 10. The most recent finds, Comets 1980 e, f, and g, all took place in the same country and on the same morning. They are reported below. Also, I am including the positions for Comet Forbes, which may not live up to the predicted magnitude estimates.

Comet Torres (1980e): This faint comet was discovered on a photographic plate taken by Carlos Torres, on June 13, from Chile. In the constellation Sagittarius, about midway between M 54 and M 55, this 15th magnitude object had a short tail. It was closest the sun on April 18th, and now, moving out of the inner solar system, it will remain faint.

Periodic Comet Brooks 2 (1980f): A few hours after the previous comet was discovered H.E. Schuster, in Chile, recovered this comet on a photo taken for that purpose. At magnitude 19 and in the constellation Aquarius, this comet will be getting closer to the sun and brighter later this Fall. At that time it should be within reach of the smaller scopes.

Periodic Comet Stephan-Oterma (1980g): Only 68 minutes after the previous comet was recovered, H.E. Schuster recovered this comet. Then in the constellation Cetus and magnitude 18, this comet should attain magnitude 9 in December.

### Comet Forbes:

Date	R.A.	Dec.	Est. Mag.
July 30	13hr 42.2min	-14° 44'	13.0
Aug. 9	14 03.5	-16 51	13.0
Aug. 19	14 27.5	-19 00	13.0
Aug. 29	14 54.1	-21 07	12.9
Sept. 8	15 23.2	-23 04	12.9
Sept. 18	15 54.7	-24 47	13.0

### Comets in Their Eyes:

Joel Metcalf (1866-apprx. 1940): A minister by profession, the Reverend discovered 6 comets in the early 1900's. In 1919 he discovered two comets in three nights—it would have been three comets but a third prospect had already been discovered. Joel also did a lot of lens grinding and discovered, by photograph, some 60 asteroids.

Doug Berger (1954- ): This Bay Area amateur discovered Comet Kobayashi-Berger-Milon on the evening of July 4, 1975 from Henry Coe Park. At the time he was not looking for a comet—it happened to be near M 2 which was under observation at that time by others at the star party. Several members of the SJAA would know more about this than I—they were there. Doug used a 8" f/8 reflector to discover this 7th magnitude comet—the first to be discovered by an American amateur astronomer in 7 years!

Merlin Kohler (1929- ): Living in Quincy, California, this casual comet-hunter discovered a magnitude 9 comet in the constellation

Corona Borealis in September, 1977. He used an 8" Dynamax for the discovery. His profession is electronic technician. Merlin had no systematic comet-hunting program set up—he just spent a few minutes sweeping the sky after every observing session.

Don Machholz  
(448-7077)

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### SJAA PROFILES

by Frank Dibbell

I want to thank everyone who took the time to respond to my survey. The information obtained from such surveys is a great help in determining the types of activities that our club should sponsor. Data reduction is going to take awhile, but I have some preliminary information that I would like to share with everyone:

1. The most popular telescope owned by club members is of 8" aperture. There seems to be no preference of Newtonian over Schmidt-Cassegrain; there are as many C-8's as 8" Newtonians. The second most popular telescope is the C-90. 4 $\frac{1}{4}$ " and 10" Newtonians share third place.
2. The vast majority of respondents indicated that deep sky observing is their main interest, followed by lunar and planetary observing and astrophotography.
3. Response to the workshops was very positive. Plans are underway to establish a telescope making class, astrophotography class, and a night sky observing workshop. Stay tuned to this column for further details.
4. For those who are interested in lunar grazes and/or occultations, Jim van Nuland is the club's team captain. Your names have been forwarded to Jim, and he will contact you about future expeditions, and answer any questions you may have.
5. Our club has no formal variable star observing program. Many people have responded favorably to having such a team. We need a volunteer to be team captain, and who can organize those who are interested. Volunteers may call me at 746-6493 during the day, or 733-7208 in the evening.

By next month I hope to have put together a statistical profile of the typical SJAA member, which will appear in this column. Again, I want to thank those of you who took the time to respond.

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Jim van Nuland reports to this editor that, "Tuesday morning, August 5th, will see a pre-dawn occultation of Aldebaran by a third-quarter Moon. Immersion on the bright limb will be at 4:13 am, on the lower left side. (PA=54°). Emergence on the dark limb will occur around 5:16 am on the upper right. (PA=270°). Binoculars will be needed for immersion. Emergence should be visible without optical aid. The graze may be seen in Southern Mexico and Florida."

In the January, 1980 issue of Sky and Telescope, page 83, is other pertinent information concerning this occultation members should find interesting.

## OCCULTING ZONE

## GRAZE INFORMATION

Date: August 19-20, 1980, Tuesday-Wednesday. All times are PDT.

Circumstances: Excellent; a bit far for a weekday. The profile shows several small peaks, so multiple events are likely. Call me if you think you can come, so I know how many stations to lay out.

Location: Between Soledad and Greenfield; about 85 miles. Leave hy. 101 at Hudson Road, look for "SJAA" signs. Someone will be here at 6:00 to lead a convoy to the site. THIS COULD CHANGE. Better call Florence before you leave.

Site/Weather update: I will call Florence at 371-1307 before 4:00 PM. Call her after 4 to learn of weather and changes. Call her before 3:45 to pass information to me, especially that you can or cannot come. I will also call her earlier if there is a site change.

CB: Channel 14. The group handle is "Graze Chasers"; answer any such calls with your own handle. My handle is "Sunspot". Bring a Handy-Talkie if available; they can talk to a car from half a mile or so. Be sure they're for channel 14.

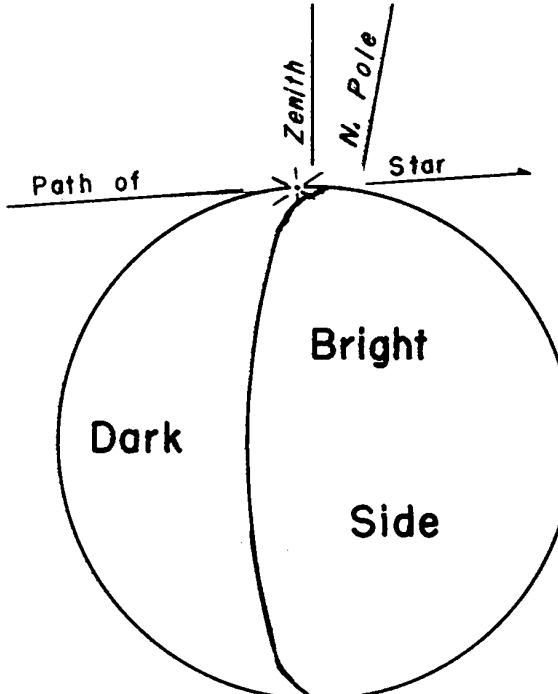
Time: Start continuous record at 8:16 PM. Central graze time is 8:31 PM. End record at 8:36 or when star is well clear of moon.

Be ready by 8:00 PM. Allow time to search for station, and plenty for setting up, testing equipment, finding star, trying eyepieces, etc.

Many handy numbers and neat stuff

Jim Van Nuland, (408) 371-1307  
3509 Calico Ave., San Jose 95124

Graze Position Angle: 14 deg  
Vertex Angle: 4 (top)  
Cusp Angle: +5N  
Watts Angle: 7  
Limit: Northern  
Moon North Pole PA: 7 deg  
North Cusp PA: 9  
South Cusp PA: 189  
Sunset: 7:44 PM  
Civil Twilight: 8:13 PM  
Astro. Twilight: 9:10 PM  
Moonset: 1:06 AM  
Star: 24 Scorpii ZC2399  
Constellation: Ophiuchus  
Magnitude: 5.0  
Spectrum: Orange, KO  
RA (1950): 16h38.7m  
Declination: -17.6 deg  
Sun Elevation: -9 deg  
Moon Elevation: 35 deg  
Azimuth: 192  
Illumin: 9 days, 62%  
Moon RA (1980): 16h40m  
Declination: -17.2 deg  
for time: 8 PM.  
Site Longitude: 121 15'  
Latitude: 36 20'  
Elevation: 240 ft.



South... 197°

## USING A HAND-BRACED, LOW-POWER NEWTONIAN TELESCOPE

For a year and a half I have been observing deep-sky objects with a six-inch f/4.7 Newtonian telescope, at 36 power, with no mount at all -- just tube and optics. The telescope is not a rich-field telescope -- I use more magnification -- and is not hand-held but hand-braced, as I shall describe. This very effective telescope is inexpensive, highly portable and easily set up. It can quickly be put inside a car or other warm place to evaporate dew. It has an eyepiece whose position and orientation are infinitely adjustable over a wide range, so that I do not have to pretzel my spine in order to observe. Finding objects with this instrument is fast and easy, as is holding them steady once found. These features are all obviously very desirable, so who don't more amateur astronomers use mountless Newtonians like mine?

I believe that most amateurs have not acquired the knack of pointing and steadyng a hand-braced telescope, and so cannot make effective use of one. There definitely is a knack: I remember that when I was learning to use my first such telescope, I found it all but impossible to find what I was looking for. But I persevered, and after picking up a little skill, I found the telescope so useful that I rapidly acquired more practice and proficiency.

The main key to finding objects is knowing how to hold the telescope steady. Don't try to hold it like a babe in arms. Put the bottom end of the tube on something solid, like the hood or trunk of a car, a picnic table, or the ground itself. One of those black vinyl caps for the bottom end of the tube will help prevent scraping the tube or the car's paint, and will also keep stray light from sneaking up past the primary mirror and fogging the view. Now arrange your body so that you can brace the upper end of the tube rigidly as you look through it. Sit or kneel on the ground, or rest the elbow of the arm that supports the tube on a solid surface. It should be easy to find many positions in which you can comfortably hold the tube quite rigidly.

Many rich-field telescopes are almost too stubby for this kind of bracing to work well. A 4½-inch f/4 RFT might have the eyepiece only a foot above the bottom of the tube. With the tube bottom on the ground, you might have to lie down to look through the telescope, which would probably be less comfortable than sitting or kneeling. In my six-inch, the eyepiece is 25 inches up the tube, which is much more convenient for me.

Once you have learned how to support the telescope steadily finding objects with it is a simple two- or three-step procedure. First, with the aid of a simple sight, point the telescope at the right place in the sky, or at least at a good place from which to start scanning for the object. (Bright stars and prominent small asterisms make good starting points for scanning.) Second -- here's where the need for steadiness comes in -- hold the telescope still, pointing in the right direction, while you move your eye from the sight to the eyepiece. And third, as necessary, scan to find the object or to find your starting point.

What kind of sight you use is up to you, but I suggest keeping it simple. At such low powers, finders and peep sights are surely overkill, as well as being expensive and fragile. How about a block of wood or a piece of aluminum extrusion, attached to the tube as a straight edge to sight along? Collimation adjustments for the sight are also superfluous, if you are careful about fastening it on straight to begin with. My telescope doesn't even have a sight as such -- the pinion shaft on my focuser is parallel to the main optical axis, and has a knob on both ends: I just sight along the knobs.

How steady do you have to hold the telescope so that an object doesn't sneak out of the field of view while you are moving your eye from the sight to the eyepiece? The field of view of my 36-power eyepiece has a linear diameter of one inch -- about as large as is possible with a 1½-inch eyepiece holder. So if I line up an object with the sight, and then can hold the upper end of the tube steady, plus-or-minus half an inch, until I get my eye to the eyepiece; the object will be in the field. It works that way about one time in three. Otherwise, I have to scan a little. Occasionally I become disoriented while scanning, and have to start over again, with the sight.

The problem with the "babe-in-arms" way of holding the telescope is now clear: even if you can keep things steady while observing, you will find it difficult to move your head from sight to eyepiece without drastically changing the direction in which the telescope is pointing.

Several hints may make scanning easier. First, know how many degrees wide the field of view of your telescope is, and how big a circle that makes on the star charts you use. Learn how to relate directions on the chart to directions on the sky, and how to untangle the image rotation caused by the two mirrors of the Newtonian. It may help to rotate the telescope tube so the focuser points either parallel or at right angles to the direction in which you will have to scan.

My six-inch travels to star parties on the back seat of my car, held in place with a safety belt. Set-up is no more than taking off the dust covers and putting in the eyepiece. I haven't had to recollimate since I built the telescope. I usually observe from my car's hood or from the ground nearby, but at sites where trees and rolling ground sometimes block part of the sky, it is useful to be able to walk around with the telescope.

In the year and a half that I've had it, I have observed over 400 deep-sky objects with the six-inch -- as many as 75 on a single night. These include all the Messier objects, several scarce globular clusters as faint as eleventh magnitude, a couple hundred galaxies to twelfth magnitude and occasionally a little fainter, and even a handful of wide double stars. The telescope is particularly effective for such broad, low-surface brightness objects as NGC 6822 (Barnard's galaxy, in Sagittarius), NGC 1499 (the California Nebula, in Perseus), or IC 434 (the bright -- er, faint -- nebula against which the Horsehead nebula is seen in silhouette). Such a telescope is not effective for tasks requiring higher magnification; such as resolving globular clusters, finding planetary nebulae, or looking at close double stars. It is also not effective for showing things to other people -- though whether that is a good or bad point depends on how selfish you are about your telescope time.

And you can always make friends at star parties by asking why anyone finds it necessary to put up with something as expensive, complicated and cumbersome as a Dobson mount!

-- Jay Freeman

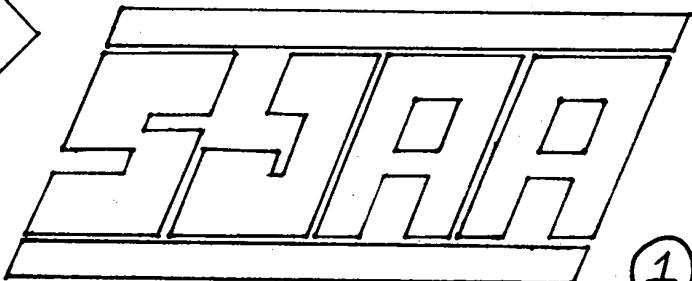
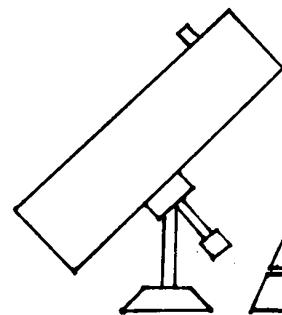
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"I'm overwhelmed! I don't know what's going on!"  
Shea Pratt

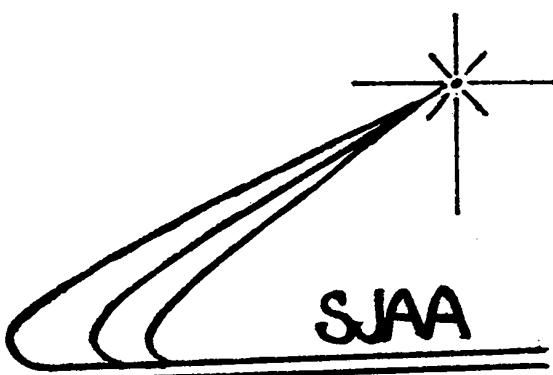
"You're making a great board member!"  
Gerry Rattley

## LOGO CONTEST

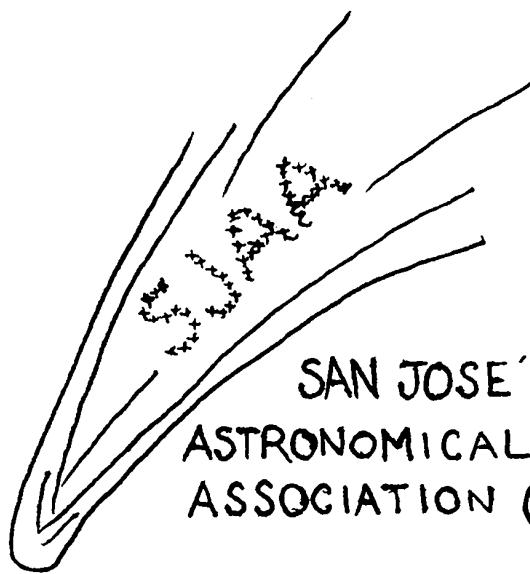
It was decided at the picnic to let the general membership have a vote at the SJAA logo. Just place the number of your selection on the ballot and drop the ballot off at the next general meeting or indoor starparty in the suggestions box. I'll announce the winner in the October bulletin so you have two months to vote, but PLEASE VOTE!!



①



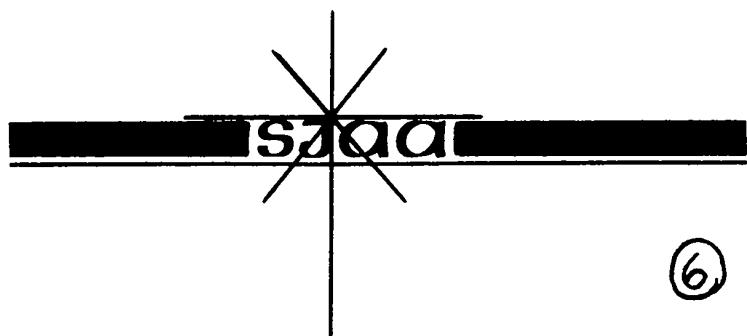
②



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④



⑥



⑤

## LOGO CONTEST

I select number \_\_\_\_\_ to be the new SJAA logo.