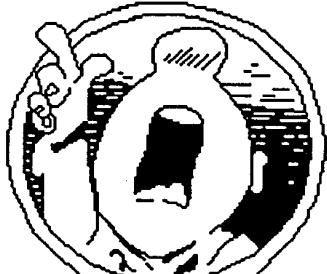


SJAA EPHemeris

VOLUME 6 NUMBER 10 OFFICIAL PUBLICATION OF THE SAN JOSE ASTRONOMICAL ASSOCIATION October 1995



The Eyepiece
by Bob madden

This article may be short as my priorities have been redirected from astronomy towards fly fishing. However, the Association has done a marvelous job in the public relations aspects resulting in a super turn out at the first September Hough Park Public Star Party. Jim Van Nuland said that about 200 people were there. I'll bet the sound of quiet conversation lifted voluminously over the observers. What I particularly like about star parties is the quiet conversations.

As you know we have been trying to hold a "Founders Supper" where we could honor some of our very early members. It hasn't panned out I received only two calls stating they would like to attend. (With those four people, my wife and myself didn't make enough to even make it worth while.) Come to the October meeting, long time members and new alike, and I'll have a cake and some fruit drink for us to meet and congratulate founding members and thank them for starting such a fine Astronomy Association.

Ernie Piini ventured to Stellafane and sends his report. Does anybody have a report from the star party at Lassen? I have had my ear to the ground and no one has any rumors about what happened. Well maybe next month we'll have something to report.

I saw on the internet (sci.astro) that Mark Coco has become ill. I met Mark at the Texas Star Party several years ago. Further on is what David Levey has to write about Mark. I'm sure many will remember when Mark represented Celestron and his articles in "Astronomy" and "Sky and Telescope".

I have also included an article I read

- Oct 7: No activity, full moon.
- Oct 14: General Meeting 8:00 pm, preceeded by Board Mtg at 6:15 pm.
- Oct 21: Observational astronomy class will meet at Fremont Peak, at the 30 inch telescope.
- Oct 21: Star parties at Coe and the Peak, also HVAG's at Ranch, Sset 6:22 pm, 5% moon rises 5:42 am.
- Oct 27: Hough park star party, Sset 6:16 pm, 21% moon sets 9:36 pm.
- Oct 28: 32% moon, too much for a star party.
- Oct 29: 2 am: Darkness squandering time ends. Turn clock back, and observe Saturn for another hour.
- Nov 4: No activity, full moon.
- Nov 11: General Meeting 8:00 pm, preceeded by Board Mtg at 6:15 pm. Speaker is author, Bob Garfinkle on star-hopping.
- Nov 18: Star party at Coe, also HVAG's at Ranch, Sset 4:54 pm, 16% moon rises 3:26 am.
- Nov 23: Thanksgiving holiday.
- Nov 24: Hough park star party, Sset 4:53 pm, 9% moon sets 7:24 pm.
- Nov 25: Star party at Peak, Sset 4:52 pm, 17% moon sets 8:30 pm.
- Dec 2: No activity as there is too much moon.
- Dec 9: General Meeting 8:00 pm, preceeded by Board Mtg at 6:15 pm.
- Dr. C. McKay (Please see page 4)
- Dec 16: Star party at Coe, also HVAG's at Ranch.
- Dec 23: No host star party at the Fremont Peak.

on the "net" about time.

The children has started to school again. I suppose you know that means the SJAA is gearing up to support school star parties. Jim Van Nuland is the coordinator for these events. Jim can always use an extra telescope out on the playground. Call him and volunteer. You won't have to attend every one as Jim does, but you can pick and choose. These are fun events, give them a try.

Flash: Paul Barton, the SJAA loaner scope program manager, states that a young member, Albert Chen, has become a freshman at Cornell University as an Astronomy Major; this is Carl Sagan's home base.

Well, a couple telephone calls later, this article has grown in length, longer than I had planned.

Bob Garfinkle, member and astronomy book/article author, called to say his book "Star Hopping" has just gone into its second printing. Bob wanted all of our members to know that Perry Remaklus, of Willimann-Bell, called him and offered to have him write a handbook on Lunar Observing. Congratulations Bob. Many of you must have read his cover article, "See You at the Hop" in the August issue of "Astronomy" Magazine. I have read it and it is another fine piece of work. Finally, Bob mentioned that beginning with the Feb/March issue of "Mercury", The astronomical Society of the Pacific's publication, he will be doing the monthly "Star Chart". When Bob is here in November for his talk to our group stop by and say "Hi" to him and pick up his latest book.

As I mentioned last month there is no longer a column of ASTRO ADS. The new postal regulations for non-profit organization bulk mailing will not permit such advertising.

And finally, there is a clarification I would like to make regarding the source of the Fremont Star Party information in last months "Eyepiece". I took it from sci.astro news group on the internet.

The Ephemeris is published by
The San Jose Astronomical Association
5380 Pebbletree Way
San Jose, Ca 95111-1846
Copyright © 1995
San Jose Astronomical Association, Inc.

Stellafane—1995

By Ernie Piini

"For it is true that astronomy, from a popular standpoint, is handicapped by the inability of the average workman to own an expensive astronomical telescope. It is also true that if an amateur starts out to build a telescope just for fun he will find, before his labors are over, that he has become seriously interested in the wonderful mechanism of our universe. And finally there is understandably the stimulus of being able to unlock the mysteries of the heavens by a tool fashioned by one's own hand."

Russell W. Porter, March 1923—Founder of Stellafane

Stellafane, a gathering place for amateur astronomers, and known as "a shrine to the stars" sits perched on the summit of historic Breezy Hill near Springfield, Vermont. It was there I attended the 60th convention of the Amateur Telescope Makers, July 28-30, 1995. What the annual Riverside Telescope Makers Convention is for us westerners, Stellafane is the same for east coast telescope makers. The traditional pink clubhouse still bears that color because of the gift of pink paint received during the original construction in the 1920's. It is here where Russell Porter, avid telescope maker and well known artist, and a group of amateur telescope makers held their first convention in 1926. His combined talents were well used in the design of the Palomar 200-inch telescope.

My lifelong desire to visit Stellafane was possible because I had to use my frequent flier coupon due to expire January 1996, and my good friend and fellow eclipse chaser, Bernie Volz, lives near Boston and could meet me at Logan Airport. He drove us to Stellafane on a very hot and humid day. As we arrived at the campground a heavy downpour began.

Bernie and I set up our tent during a lull in this wet Friday (I've been told this is typical weather at Stellafane but usually clears up shortly). Friday evening's schedule of events under the tent consisted of informal talks, including a slide show on the 1994 Bolivian eclipse by Bernie and by Dr. Mario Motta who had joined us.

A popular swap meet Saturday scheduled to start at 7:00 a.m., like our meetings at Riverside, began with eager trading at daybreak. No commercial vendors are allowed at Stellafane. Later in the morning we walked about a quarter mile up Breezy Hill to visit the pink clubhouse and to see Porter's turret telescope there. Inside are some of Porter's original pencil drawings of the Palomar 200-inch telescope, various artifacts, and historical photos of the clubhouse during construction and various groups that had gathered there over the years. The clubhouse has a kitchen, meeting room, and

sleeping quarters. Outside on the back wall is a unique sundial which has been a useful timepiece over many decades at Stellafane.

Surrounding the clubhouse were numerous telescopes being judged for mechanical and optical qualities. The impressive turret telescope, situated in front of the clubhouse, was closed that day for some unknown reason. The turret carries two telescopes, a 16-inch Newtonian of 16 feet focal length and a 12-inch Cassegrainian of 16 feet equivalent focal length; therefore, two observers may study the same object simultaneously.

We drove to Springfield for most of our meals. On one occasion we drove to the historic Hartness House, home of former Governor Hartness of Vermont, a good friend of Porter's and co-builder of another turret telescope located to the left and in front of his large mansion. Access to the telescope is by way of a tunnel, a nice thing to have on a cold wintry New England night. The Hartness Museum of Amateur Telescope Making is located also in underground rooms near the telescope. Here, one can inspect and touch some of Porter's original telescopes and other innovations.

The Saturday evening program was held under clear skies in the natural amphitheater at Stellafane with about 2,500 conventioners in attendance. Many door prizes and various other awards were given to winners of that day's telescope makers contest, to the attendee who came the furthest (Hong Kong), to who saw the most Messier objects in one night (a former student of Don Machholz), and to the oldest attendee. Later, the crowd sang "Happy Birthday" in honor of John Dobson's 80th birthday; he the founder of the modern Dobsonian telescope. Phil Harrington, an accomplished author of many astronomy-related books, gave the keynote address. He talked about the history of Stellafane and showed slides depicting each year's highlights. Phil's excellent presentation ended with a barrage of historic slides accompanied by appropriate music.

After the program we drove for two hours to Dr. Mario Motta's personal observa-

tory in New Hampshire and spent the rest of the night looking through his 32-inch computer-controlled telescope. We saw many exciting objects against the background of a very dark sky. This cardiologist's family getaway home overlooks "Hawkin's Pond", just a few miles from Squam Lake where "On Golden Pond" was filmed.

On the way back to Boston we stopped near Concord, New Hampshire to see the Christa McAuliffe Planetarium. This impressive red brick building, topped with a pyramid shaped dome, contains a 92-seat theater and memorabilia pertaining to the life of this former teacher who perished with the crew of the space shuttle Challenger in the tragic disaster of 1986.

Finally, we stopped at Mystery Hill near Salem, New Hampshire, to see another America's Stonehenge. Having authored my own version of "America's Stonehenge", which describes Sam Hill's World War I memorial replica of England's Stonehenge located on a bluff overlooking the Columbia River near Maryhill, Washington, I was surprised to see another culture's version of a stone calendar. If you can believe what you read, this Stonehenge was constructed over 4,000 years ago by either a native American culture or a migrant European population. Archaeological excavation at the site has uncovered numerous historic and pre-historic artifacts, stone tools, pottery, and samples suitable for radiocarbon-14 dating. Charcoal from two of these excavations in 1969 and 1971 proved to be 3000 and 4000 years old, respectively.

In summary, I was quite moved by my visit to Stellafane and to actually see the pink clubhouse on Breezy Hill and to view the works of Russell Porter, whom I consider as the father of amateur telescope makers, and whose many articles in books on amateur telescope making I have enjoyed reading. I encourage every astronomer, amateur or professional, to visit Stellafane at least once in his/her lifetime.

From the Internet
Announcement of Mark Coco Fund
by Tom Glinos

David Levy asked me to post this for him. If you have a few moments, please read this article. This is one of those occasions when the amateur astronomy community can do something special for one of its own.

A few months ago I wrote, in my Star Trails column in Sky and Telescope, about Mark Coco, an active amateur astronomer, writer, formerly with Celestron. I told his story, which sadly includes the fact that he has a brain tumor. I heard today that a fund is being set up to raise funds for experimental treatments that could save his life.

If anyone is interested in contributing, here is the address:

Mark Coco fund
St. Andrews Presbyterian Church
301 Avenue D
Redondo Beach, California
90277.

Thank you all for reading this.
David H. Levy

Here is the text of the Star Trails Column I wrote about Mark: **Star Trails 88** by David H. Levy

When Star Trails explores the life and character of a member of our large astronomical family, the idea is to learn more about the richness and diversity of the people who love the sky. Our story this month begins around a swimming pool on a sunny day in southern California. A group of seventh graders watch their teacher as he projects an image of the Sun and sketches some sunspots. It's 1971, and the Sun's rays are about to ignite a lifelong interest in the sky for 12-year-old Mark Coco.

"That first look at the Sun was unbelievable!", Coco remembers that one view that hooked him. Although his high school interests in other sciences like Geology also captured his imagination, Coco never forgot the rush of adrenalin that first view of a spot marching across the face of the Sun gave him. Ray Hedgpeth, his teacher, insisted on giving the class frequent looks at the Sun, as often as once each week.

As Coco's looks skyward increased during the seventies, he bought a small telescope and used it often in the clear sky of southern California. But he was mostly a lone wolf, keeping his interest to himself until he took out a subscription to Sky & Tele-

scope. "I suddenly realized," he admits, "that there was more to it than just Mark Coco at the eyepiece."

After he finished high school, Coco attended El Camino College for two years and was awarded a liberal arts degree. He worked at a sporting goods store before realizing that his interest in astronomy was serious enough to merit working in the field somehow. In 1980, he entered that grey area that separates amateur astronomers from their professional counterparts when Celestron hired him to work in its customer relations department. He worked there for two years, then spent the next four to launch a computer business with his brother. He returned to Celestron in 1988 as manager of consumer relations, a position he held until the end of 1993. Spending time handling customer complaints and problems did not hinder his basic love of the night sky. "My philosophy was that in the end, the customer was always right," Coco says. "I tried to give as much personal attention to each customer who called. I wanted to keep them happy with the sky as well as with the telescope they bought from Celestron."

During his last two years in high school, Coco had a crush on a classmate named Colleen Carroll, but he couldn't bring himself to speak to her. With graduation coming he felt that it was either now or never. He wrote her a note, put the wad of paper in an empty Dr. Pepper bottle, and left the bottle on her front porch. Half an hour later, he walked by Colleen's house again and saw the bottle nicely set up on a tray. Colleen was interested! For the next week and a half he left flowers and cookies, till finally Colleen invited him over. They married four years later, and have four children, Kymberly, 12; Jennifer, 10; Lisa, 5; and Travis, 3.

Although Colleen has not acquired her husband's love for the sky, she does enjoy accompanying him on his annual visits to the Riverside Telescope Conference. Two years ago I spent an afternoon with Kymberly and Jennifer when Mark brought them for a afternoon tour of the telescopes at Palomar. I was more than impressed with the enthusiasm the girls showed for the big telescopes despite their having to walk round the 200-inch catwalk in bitter cold and wind. They asked intelligent questions and thoroughly enjoyed the outing. They belong in the Smithsonian as examples of how well-behaved children can still show excitement about a subject.

Both Mark and Colleen recently pursued full undergraduate degrees part time, which is amazing considering that they had four children and both had jobs. Mark attended Cal State Long Beach, where he

edited the "University Magazine" for a semester, and in 1991 he earned a degree in Journalism. The articles he wrote during this period included subjects like eyepiece projection photography, but the best article he wrote was about an utterly different sort of vision. Coco had investigated a little known part of the tragedy of the war in Cambodia, and wrote an insightful piece on hysterical blindness among women who had witnessed atrocities. "Their children," Coco noted, "were not allowed to love their parents or associate with them. Instead they were encouraged to torture them and kill them." Their blindness was real, though temporary.

On December 11, 1993, the Coco family was sitting in Rolling Hills Covenant, a nondenominational church packed that day with 1800 congregants. Mark was holding his daughter Lisa when suddenly he blacked out. The service stopped. An ambulance was called and Mark was moved to a pew in the back. When he came to after a half hour, he found himself in an ambulance under the eye of an emergency medical technician.

A week later the Cocos learned that he had a malignant brain tumor.

This last year has seen a cycle of radiation therapy, and on June 30 a surgeon was able to remove most of the tumor. To try to control the grape-sized mass that remains, Mark still undergoes a regimen of chemotherapy. The treatment has changed his appearance and has affected his ability to concentrate. He no longer is able to work at Celestron. But Mark continues an active writing schedule at home, tackling astronomical issues from the Green Flash, of which he has seen many, to philosophical subjects like the meaning of the Christmas Star.

In early March Coco gave a talk about the Green Flash at the Winter Star Party in the Florida Keys. "I've wanted to come here for many years," he began. "A year ago I was diagnosed with a brain tumor. Despite that, I was able to make it this year and hope to come back again." Before he said another word the audience applauded his honesty and bravery. May Mark Coco, a valued member of our astronomical family, enjoy many more Winter Star Parties.

Tom Glinos @ U of Toronto Statistics
tg@utstat.toronto.edu

Forty Years Ago this month

by Jim Van Nuland

The October 17 meeting was held in the Science building at San Jose State. Several short talks were given by various members.

The constellation of the Month was presented by Mr. Erickson. His subject was Perseus.

Mr. Krumm addressed "Problems of Expansion in Glass", comparing plate and Pyrex. He covered problems during figuring as well as during observations with the completed instrument.

Steve Bieda took the floor to tell us "How to Collimate". He discussed two methods of collimation.

A question-and-answer period followed, with Mr. Krumm as moderator. Many subjects were brought up, discussed, and satisfactory answers were given. Telescopes, eyepieces, mountings, were all mentioned.

There being no further business, the meeting was adjourned at 10 pm.

Tom Nelson, Secretary

Working under the master

by Jim Hodgers

I recently took my 10" (250mm), F5 mirror with me to Tucson for three days under the tutelage of Bob Goff, a Master Optician. It was a real interesting learning experience. I had bought the mirror as part of a complete 10" Newtonian Fork mounted telescope. The mirror was a Coulter mirror of about 1970 vintage. I have never been able to get the images that I thought I should. Especially at higher powers on planets. I had part of three days to do this work, always trying to stay out of the way of Bob and his two workers, Dimo and Eric.

The first thing we did was to test the mirror. This immediately brought up one interesting fact, my collimation spot was about 1/4" (6mm) from the center of the mirror! This alone explained some of my problems. The mirror itself was not well corrected at all. It was completely uncorrected (spherical) from the center to 1.5"(37mm) from the center. The outer edge was turned down for about an inch (25mm). It was about a 4 wave mirror!!

By following Bob's instructions, with perhaps less than 8 hours of working, I was able to bring the mirror to about 1/8 wave from the edge to about 2 1/2 (63mm) inches from center point, with the center being about 1/4 wave. Although Bob was willing to go

further with a sub-diameter lap, by that point I had run out of time. I can't wait to get the mirror coated and try it out, should be quite an improvement.

It sure was fun and instructive!! It was amazing to me what information Bob got from the (to me) wobbly blurry images on the test stand!!

Jim

Resources

by Bob Madden

I have been sitting here wondering how I can talk some of our SJAA members into becoming a resource person for other members. I go to star parties and the general meeting where new members and ones about to join our Association come with what seems to be a thousand questions about telescopes and observing. What I notice is Board Members and a few other experts taking time to provide the folks with answers. These are folks with a keen interest in amateur astronomy and are rank beginners begging for help: for example, they don't understand polar alignment.

When I finally amassed enough money to purchase my first telescope and received permission from my wife because she saw my passion to be under the night sky with friends observing, I asked Bob Fingerhut to meet my wife and me at Fremont Peak one Saturday night. Bob toured the sky and constellations with his binoculars. For that evening I will always be thankful to Bob - for the tour, getting me to the Peak, and the nerve to buy my first telescope. His advice was invaluable.

How many of us have an expertise we can share with some beginning astronomer. I know Paul Barton does as he shares his home and shop with any amateur telescope maker who calls on him for help. I try, but feel inadequate at times. I helped the couple from Poland last year come to the US, stay three months and see our association in action and visit many observatories, Lick, Chabot, Griffith and Mt Wilson, and planetariums. In August I assisted a young Japanese man to come to our Hough Park star party. Doug Snyder has helped with CCD imagery.

What about you? Who out there is willing to take a potential amateur to Fremont Peak for a night of observing - show them the correct path to take for an enjoyable evening? Is there any one who would be willing to take a potential telescope maker up to Chabot some Friday night? Any one else who knows CCD imagery who is willing to teach a few

Continued on page 6

Directions to Hough Park

by your Editor

Here are directions to our General Meetings, Observational Astronomy class and public star party site at Hough Park. The Board of Directors meetings begin at 6:30 pm followed with the General meeting at 8:00 pm. Observational Astronomy class begins at 8:00 P.M. and may be followed with a step outside to look at the constellations. Every one is welcome at these classes and meetings, members and non-members alike. 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.

Driving south on Highway 17 exit onto Camden heading East to Union Avenue. Turn right to the next stoplight and turn right onto Woodard and go to the third stop sign. Turn left onto Twilight and drive just a little past Sunset. The Park will be on the left.

You may also exit onto Union avenue from Highway 85. Go North to Woodard and turn left and follow the directions from above.

December Speaker

Doug Ferrell has arranged to have Dr. Christopher P. McKay, Space Science Division, NASA Ames Research Center talk about "From Antarctica to Mars, the search for life."

NOTICE * NOTICE * NOTICE

We have been advised by Sky And Telescope that membership subscription(Club rate) has increased \$4. Please note the increase on the application Pg 8.

Periodical Publication Statement

The **SJAA Ephemeris**, newsletter of the San Jose Astronomical Association, is published monthly, 12 times a year, January through December, by the:

San Jose Astronomical Association
5380 Pebbletree Way
San Jose, CA 95111-1846

The **SJAA Ephemeris** is included as a service in the price of membership. The **SJAA Ephemeris** is also mailed to other participating astronomy clubs, publishers and selected individuals.

THE POSITIONS OF COMET HALE-BOPP THROUGH 1997

Below is a table giving information about Comet Hale-Bopp through 1997. The date is followed by Right Ascension and Declination in 2000 coordinates. This is followed by the comet's distance to the Sun (R) and the Earth (D) in astronomical units. Following this is the comet's elongation in degrees from the sun as seen from the Earth. Then the "E" means that the comet is in the evening sky, while a "M" means it is in the morning sky. The final column provides a magnitude estimate assuming that this comet behaves normally and that its current brightness is not due to a temporary outburst.

| 1994 O1 (HALE-BOPP) | | | | | | | |
|---------------------|-------------|--------|--------|------|-----|-----|------|
| DATE (DDUT) | R.A. (2000) | DEC | R (AU) | D | EL | SKY | MAG |
| 10-15-95 | 18h17m | -28.6d | 6.43 | 6.66 | 72 | E | 10.2 |
| 11-04-95 | 18h23m | -27.7d | 6.25 | 6.79 | 54 | E | 10.1 |
| 11-24-95 | 18h31m | -26.8d | 6.07 | 6.85 | 36 | E | 10.0 |
| 12-14-95 | 18h42m | -26.0d | 5.89 | 6.82 | 18 | E | 9.9 |
| 01-03-96 | 18h55m | -25.0d | 5.70 | 6.69 | 2 | E | 9.7 |
| 01-23-96 | 19h08m | -24.0d | 5.52 | 6.45 | 17 | E | 9.5 |
| 02-12-96 | 19h20m | -22.8d | 5.33 | 6.11 | 34 | M | 9.2 |
| 03-03-96 | 19h32m | -21.6d | 5.14 | 5.69 | 52 | M | 8.9 |
| 03-23-96 | 19h40m | -20.3d | 4.94 | 5.20 | 70 | M | 8.5 |
| 04-12-96 | 19h45m | -18.8d | 4.74 | 4.67 | 88 | M | 8.1 |
| 05-02-96 | 19h44m | -17.3d | 4.54 | 4.14 | 107 | M | 7.7 |
| 05-22-96 | 19h36m | -15.6d | 4.34 | 3.64 | 128 | M | 7.2 |
| 06-11-96 | 19h19m | -13.8d | 4.13 | 3.22 | 150 | M | 6.7 |
| 07-01-96 | 18h55m | -11.8d | 3.91 | 2.91 | 168 | M | 6.3 |
| 07-21-96 | 18h26m | -09.8d | 3.70 | 2.76 | 154 | E | 5.9 |
| 08-10-96 | 18h00m | -08.1d | 3.48 | 2.74 | 130 | E | 5.6 |
| 08-30-96 | 17h41m | -06.6d | 3.25 | 2.81 | 107 | E | 5.4 |
| 09-19-96 | 17h31m | -05.5d | 3.02 | 2.92 | 86 | E | 5.1 |
| 10-09-96 | 17h31m | -04.5d | 2.79 | 3.01 | 68 | E | 4.8 |
| 10-29-96 | 17h39m | -03.4d | 2.55 | 3.05 | 51 | E | 4.5 |
| 11-18-96 | 17h53m | -01.9d | 2.30 | 3.00 | 38 | E | 4.0 |
| 12-08-96 | 18h13m | +00.4d | 2.05 | 2.86 | 29 | E | +3.4 |
| 12-28-96 | 18h38m | +04.0d | 1.80 | 2.61 | 27 | M | +2.6 |
| 01-17-97 | 19h11m | +09.6d | 1.54 | 2.28 | 32 | M | +1.7 |
| 02-06-97 | 19h56m | +18.3d | 1.30 | 1.90 | 40 | M | +0.6 |
| 02-26-97 | 21h10m | +31.4d | 1.09 | 1.53 | 45 | M | -0.6 |
| 03-18-97 | 23h35m | +44.4d | 0.95 | 1.33 | 46 | M | -1.5 |
| 04-07-97 | 02h41m | +41.4d | 0.93 | 1.42 | 41 | E | -1.5 |
| 04-27-97 | 04h28m | +28.4d | 1.03 | 1.71 | 33 | E | -0.6 |
| 05-17-97 | 05h25m | +17.0d | 1.23 | 2.05 | 26 | E | +0.4 |
| 06-06-97 | 06h04m | +08.0d | 1.46 | 2.35 | 22 | E | +1.5 |
| 06-26-97 | 06h36m | +00.3d | 1.71 | 2.59 | 23 | E | 2.4 |
| 07-16-97 | 07h02m | -07.0d | 1.96 | 2.78 | 30 | M | 3.1 |
| 08-05-97 | 07h26m | -14.3d | 2.21 | 2.91 | 39 | M | 3.8 |
| 08-25-97 | 07h46m | -22.0d | 2.46 | 3.00 | 49 | M | 4.3 |
| 09-14-97 | 08h01m | -30.1d | 2.70 | 3.07 | 60 | M | 4.7 |
| 10-04-97 | 08h11m | -38.5d | 2.94 | 3.13 | 70 | M | 5.2 |
| 10-24-97 | 08h11m | -46.8d | 3.17 | 3.21 | 79 | M | 5.5 |
| 11-13-97 | 07h59m | -54.4d | 3.40 | 3.32 | 86 | M | 5.9 |
| 12-03-97 | 07h29m | -60.3d | 3.62 | 3.48 | 91 | M | 6.3 |
| 12-23-97 | 06h42m | -63.6d | 3.84 | 3.67 | 93 | M | 6.7 |
| 01-12-98 | 05h54m | -63.8d | 4.05 | 3.89 | 92 | M | 7.0 |
| 02-01-98 | 05h19m | -61.8d | 4.26 | 4.15 | 90 | M | 7.4 |
| 02-21-98 | 05h02m | -58.4d | 4.47 | 4.42 | 87 | M | 7.7 |
| 03-13-98 | 05h00m | -55.6d | 4.67 | 4.69 | 83 | M | 8.1 |

1995 SJAA Calendar

| General Meeting | | Houge Park Star Party | Observational Astronomy Class |
|-----------------|----|-----------------------|-------------------------------|
| Oct | 14 | 27 | 7 (Last -one Fremont Peak) |
| Nov | 11 | 24 | None |
| Dec | 9 | 29 | None |
| ----- | | Begin 1/1996 | ----- |
| Jan | 6 | 26 | 27 |
| Feb | 3 | 23 | 24 |
| March | 2 | 22 | 23 |

Please read your *Ephemeris* each month for changes

Resources (continued from page 4)
 others the best approach? What about radio astronomy? In helping someone else enjoy our hobby you may make an invaluable friend, but if not you can create a dedicated amateur astronomer who may go on to help someone else. If you have any thoughts please feel free to contact me at (408) 264-4488

Computer Filter Sources by Bob madden

Many of us are using our computers more and more during our observing sessions. Recently, while at Fremont Peak, I saw an astromoner using a portable computer without a display filter. Boy was it bright!

While reading the amateur telescope maker list, I came accross the following and thought many of our members would be interested.

From: RSeiling@aol.com
 Date: Wed, 13 Sep 1995
 Subject: re:(ATM) Red "Computer Screen Covers"

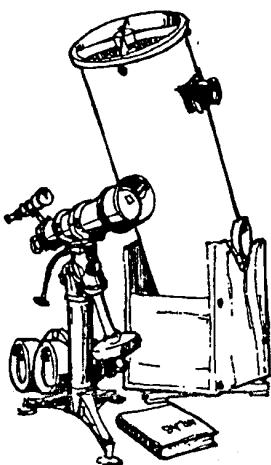
Question:

"I recently read of someone selling red pieces of plastic that you can use to cover your PC's screen. However, I cannot remember where I saw this. Did anyone else see this and remember where?"

Answer:

Go to a Professional photography store and get a Rosco gel in a red you like. These are 20x24 inch color filters used by professional photographers to "gel" lightsources. Cost should be around \$5. If you can't find a local supplier try calling 1-800-CALUMET. They are a large professional mail-order photographic supplier and will have it in stock. Also, Rosco has a small swatch book of all their filters that is perfect for eyepiece filters and its free!!! Every color you could imagine, and it includes a wavelength chart!!!

Rich Seiling
 RSeiling@aol.com



Telescope Loaner Status by Paul Barton

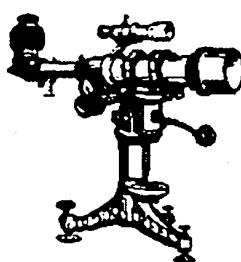
| No. | Name | User | Due Date |
|-----|---------------------|--------------------|------------|
| 1 | 4-1/2" Newt/P Mount | -----> | available |
| 2 | 6" Dobson | John Paul Dasilvia | 10/3/95 |
| 3 | 4" Quantum | -----> | available |
| 6 | C-8 Celestron | Jim Marguis | 11/10/95 |
| 7 | 12-1/2" Dobson | Tom Rice | due back |
| 8 | 14" Dobson | Lee Courtney | 11/8/95 |
| 9 | C-11 Celestron | Richard Navarrete | indefinate |
| 15 | 8" Dobson | Bob Elsberry | 11/8/95 |
| 18 | 8" Newt/P Mount | Jerry Lovelace | 10/10/95 |
| 19 | 6" Newt/P Mount | -----> | Available |
| 21 | 10" Dobson | Richard Lee | 11/5/95 |
| 23 | 6" Newt/P mount | -----> | available |
| 24 | 60 mm refractor | Patrick Rodriguez | 11/8/95 |

Solar telescope. Available only to experienced members for special occasions such as day time public star parties, etc. Call

Wait List

Steve Wincor C-8

If you want to borrow a telescope call Paul Barton (number is on the credit Marque) and get your name on a general list (any telescope) or on a specific telescope list.



Celestial Calendar - Oct 1995

by Richard Stanton

| Lunar Phase | Date | Rise | Trans | Set |
|-------------|----------|-------|-------|-------|
| FQ | 06:37 01 | 14:15 | 19:29 | 00:50 |
| FM | 07:52 08 | 17:45 | 23:38 | 06:12 |
| LQ | 08:27 16 | 22:55 | 05:59 | 13:05 |
| NM | 20:36 23 | 05:48 | 11:33 | 17:11 |

Nearer Planets

| | | | | |
|-----------|----|-------|-------|-------|
| Mercury | 07 | 06:45 | 12:32 | 18:21 |
| 0.90 A.U. | 17 | 04:49 | 10:50 | 16:50 |
| Mag. -2.2 | 27 | 06:06 | 11:54 | 17:42 |

| | | | | |
|-----------|----|-------|-------|-------|
| Venus | 07 | 08:11 | 13:45 | 19:18 |
| 1.63 A.U. | 17 | 07:34 | 12:53 | 18:11 |
| Mag. -4.0 | 27 | 08:57 | 14:02 | 19:07 |

| | | | | |
|-----------|----|-------|-------|-------|
| Mars | 07 | 10:13 | 15:16 | 20:20 |
| 2.19 A.U. | 17 | 09:09 | 14:06 | 19:03 |
| Mag. +11 | 27 | 10:05 | 14:56 | 19:48 |

| | | | | |
|-----------|----|-------|-------|-------|
| Jupiter | 07 | 11:52 | 16:44 | 21:35 |
| 5.89 A.U. | 17 | 10:21 | 15:12 | 20:02 |
| Mag. -1.9 | 27 | 10:51 | 15:40 | 20:30 |

| | | | | |
|-----------|----|-------|-------|-------|
| Saturn | 07 | 17:44 | 23:27 | 05:15 |
| 8.76 A.U. | 17 | 16:03 | 21:46 | 03:33 |
| Mag. +0.8 | 27 | 16:23 | 22:05 | 03:51 |

SOL Star Type G2V

RA Dec

| | | | | |
|--------------|----|-------|-------|-------|
| 12:52 -05:40 | 07 | 07:07 | 12:56 | 18:43 |
| 13:29 -09:24 | 17 | 07:17 | 12:53 | 18:29 |
| 14:04 -12:40 | 27 | 07:27 | 12:52 | 18:16 |

| Astronomical Twilight | Begin | End |
|-----------------------|----------|-------|
| JD 2,449,998 | 07 05:41 | 20:09 |
| JD 2,450,008 | 17 05:50 | 19:55 |
| JD 2450,018 | 27 05:59 | 19:43 |

| Sidreal Time | Transit Right | Ascension at | Local Midnight | End |
|--------------|---------------|--------------|----------------|-------|
| | 07 00:00 | = | | 00:33 |
| | 17 00:00 | = | | 01:33 |
| | 27 00:00 | = | | 02:14 |

Darkest Saturday Night 21-Oct-1995

| | |
|--------------|-------|
| Sunset | 18:23 |
| Twilight End | 19:50 |
| Moon Rise | 04:39 |
| Dawn Begin | 05:58 |

Times are Pacific Daylight time



Officers and Board of Directors

| | |
|--------------------------|--------------|
| Pres: Bob Brauer - | 408-292-7695 |
| Vice Pres: Jack Petersen | 408-262-1457 |
| Treas: Bob Elsberry- | 408-281-3559 |
| Sec: Jim Van Nuland- | 408-371-1307 |
| Dir: Rich Neuschaefer- | 408-446-0975 |
| Dir: Ed Erbeck- | 408-379-5413 |
| Dir: Bill O'Shaughnessy- | 408-984-3985 |
| Dir: Lew Kurtz- | 408-739-7106 |
| Dir: Bob Madden- | 408-264-4488 |

Ephemeris Contributors

| | |
|-------------------|--------------|
| Don Machholtz - | 916-346-8963 |
| Jim Van Nuland - | 408-371-1307 |
| Richard Stanton - | 408-662-0205 |
| Paul Barton - | 408-377-0148 |
| EDITOR | |
| Bob Madden - | 408-264-4488 |

COMET COMMENTS

09-07-95

Two new comets have been discovered recently, one should be visible in our morning sky soon. Meanwhile, Comet Hale-Bopp continues to look promising.

C/1995 Q1 (Bradfield): William Bradfield of Australia discovered this, his 17th comet, on the evening of August 17. Bradfield found it with his 6" refractor. Then at magnitude 6, the comet was closest to the sun (0.44 AU) on Aug. 31. It will emerge into our northern morning sky in late September.

C/1995 Q2 (Hartley-Drinkwater): Discovered by Malcolm Hartley on plates taken by Michael Drinkwater (at Siding Spring, Australia) on Aug. 29, this 13th magnitude comet was closest to the sun at 1.89 AU on Aug. 3. It is now dimming in our southern morning sky.

Comet Hale-Bopp: This comet continues to slowly brighten in our southern evening sky. The hope is that this comet will become quite bright in late 1997. The Northern Hemisphere is favored for this comet. With a highly-inclined orbit, Comet Hale-Bopp crosses northward through the earth's plane at 5.0 AU from the Sun (mid-March 1996), then descends through the plane (mid-May, 1997) at about 1.12 AU. By time we reach that point the comet will be long gone, and there is no chance of it hitting us.

EPHEMERIDES

| 6P/d'ARREST | C/1995 Q1 (BRADFIELD) |
|--------------------------|-----------------------|
| DATE(00UT) R.A.(2000)DEC | EL SKY MAG |
| 09-10 00h43.5m | -30d13m 147d M 10.2 |
| 09-15 00h46.1m | -32d00m 146d E 10.5 |
| 09-20 00h47.8m | -33d21m 145d E 10.7 |
| 09-25 00h48.6m | -34d18m 144d E 11.0 |
| 09-30 00h49.0m | -34d52m 142d E 11.3 |
| 10-05 00h49.0m | -35d06m 140d E 11.6 |
| 10-10 00h49.0m | -35d00m 139d E 11.9 |
| 10-15 00h49.1m | -34d38m 136d E 12.3 |
| 10-20 00h49.4m | -34d02m 134d E 12.6 |
| 10-25 00h50.1m | -33d14m 132d E 12.9 |
| 10-30 00h51.1m | -32d16m 130d E 13.2 |
| 11-04 00h52.7m | -31d10m 128d E 13.5 |
| 11-09 00h54.7m | -29d58m 125d E 13.9 |

| DATE(00UT) R.A.(2000)DEC | EL SKY MAG | DATE(00UT) R.A.(2000)DEC | EL SKY MAG |
|--------------------------|---------------------|--------------------------|--------------------|
| 09-10 18h18.8m | -30d16m 107d E 10.3 | 10-15 18h17.4m | -28d38m 72d E 10.2 |
| 09-15 18h17.6m | -30d02m 102d E 10.3 | 10-20 18h18.3m | -28d25m 68d E 10.2 |
| 09-20 18h16.8m | -29d48m 97d E 10.3 | 10-25 18h19.5m | -28d11m 63d E 10.2 |
| 09-25 18h16.3m | -29d34m 92d E 10.3 | 10-30 18h21.0m | -27d58m 63d E 10.1 |
| 09-30 18h16.2m | -29d20m 87d E 10.3 | 11-04 18h22.6m | -27d45m 54d E 10.1 |
| 10-05 18h16.3m | -29d06m 82d E 10.3 | 11-09 18h24.5m | -27d31m 49d E 10.1 |
| 10-10 18h16.7m | -28d52m 77d E 10.2 | 11-14 18h26.6m | -27d18m 45d E 10.1 |

| OBJECT | P/d'ARREST | C/1995 Q1(BRADFIELD) | 1995O1 HALE-BOPP |
|---------------------|------------------|----------------------|-------------------|
| PERI. DATE | 1995 07 27.36197 | 1995 08 31.39230 | 1997 03 31.90909 |
| PERI. DIST. (AU) | 1.34587 AU | 0.436815 AU | 0.9175546 AU |
| ARG OF PREI. (2000) | 178.0504 deg. | 331.0513 deg. | 130.37477 deg. |
| ASCEND. NODE (2000) | 138.9874 deg. | 178.0412 deg. | 282.47182 deg. |
| INCLINATION (2000) | 019.5232 deg. | 147.3865 deg. | 088.89240 deg. |
| ECCENTRICITY | 0.6140404 | 1.0 | 0.99692670 |
| ORBITAL PERIOD | 6.51 yrs. | Long Period | Approx. 5900 yrs. |
| SOURCE | MPC 20122 | MPC 25623 | MPC 25623 |

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. A text file on a 3-1/2" IBM or MAC diskette is preferred, but written is accepted.

SAN JOSE ASTRONOMICAL ASSOCIATION MEMBERSHIP

Membership only: \$15 Membership / S&T: \$39 Junior (under 18): \$25

Name: _____

Address: _____

Telephone: _____

Please bring this form to any
SJAA Meeting or send to
Bob Elsberry, Treasurer
San Jose Astronomical Assoc.
5380 PEBBLETREE WAY
San Jose, CA 95111-1846
Telephone: (408) 281-3559

MAKE CHECKS PAYABLE TO "SJAA"

Please check **type** of membership and if **New** or **Renewal**

Membership Only Membership/S&T Junior (under 18)
New Renewal

SAN JOSE ASTRONOMICAL ASSOCIATION
5380 PEBBLETREE WAY
SAN JOSE, CA 95111-1846

NON-PROFIT ORGANIZATION

U.S. POSTAGE PAID

PERMIT NO. 5381

SAN JOSE, CALIFORNIA

SJAA HOTLINE

24 HOUR INFORMATION
408-559-1221