

SJAA ephemeris

July '81

- July 1 New Moon
- July 4 No club activities planned but don't be surprised if a number of people show up at Fremont Peak
- July 10 SJAA Board meeting at Chris & Shea Pratt's, 474 Safari Drive, San Jose'. 629-2994. 8:00 pm. Everyone welcome.
- July 11 The SJAA annual picnic and officer installation, to be held this year at Linda Vista Park in Cupertino. Directions and more information in Observations.
- July 11 Second anniversary of Skylab's reentry
- July 15 Northern Iota Aquarids Meteor shower in the constellation Aquarius
- July 16-17 Partial eclipse of the moon. See July issue, S&T, p. 42
- July 18 Space Day. This event is sponsored by numerous science oriented organizations in the Bay Area and will be held at San Jose State University. More details inside.
- July 25 Indoor star party at the Los Gatos Red Cross building, 18011 Los Gatos-Saratoga Rd. 7:30 pm on. There is an on-going telescope makers workshop here. Everyone is welcome. Take Hwy 17 south to Hwy 9 (Los Gatos-Saratoga Rd.) Continue up the road for about a mile and a half. The Red Cross building is on the right with parking in back.
- July 25-26 Capricornids Meteor Shower in the constellation Capricorn
- July 27-28 Northern Delta Aquarids Meteor Shower in the constellation Aquarius
- July 30 Total eclipse of the Sun, visible in the extreme North American, Alaska, and Arctic regions.
- Aug 1 SJAA Star Party at Fremont Peak State Park, Coulter Camp.
- Aug. 8 Indoor Star Party at the Los Gatos Red Cross building. 7:30 pm on. Everyone welcome. Telescope makers workshop.
- Aug 14 Board meeting at Bob Fingerhut's, 340 Rio Verde Place, #4, Milpitas. 263-4455. 8:00 pm. Everyone welcome!
- Aug 15 SJAA General Meeting, subject to be announced.
- Aug 22 Indoor star party at the Los Gatos Red Cross building, 7:30 pm on.
- Aug 29 SJAA Star Party at Fremont Peak State Park

Kevin Medlock, president 654-6796

Jim van Nuland, sec. 371-1307

Observations

First off, I would like to apologize for the July bulletin getting into the postal system so late this month. I held it up to wait for some undelivered articles, then was brick-headed enough to leave all the unfinished material sitting on my desk at work over the weekend before the printing date. If the mail service doesn't get too slowed down by the holiday you may all receive it before the next club event!

The most important club activity coming up is, of course, the

Picnic!!

For all of you who are bored with the astronomical aspects of the SJAA---now you have the chance to try the gastronomical side, this year with FREE FOOD. That should appeal to most of the members. The auction was so successful that this year the hamburgers and hot dogs are free (on a first come-first serve basis). All you have to do is bring a potluck dish of some sort, what ever you want to drink (no alcoholic beverages, please), and utensils for yourself. The barbeque fires will get going at 11 am. Plan on staying till sunset.

This year it will be held at Linda Vista Park in Cupertino. Gerry Rattley, who did all the eye, ear, mouth and footwork in reserving the park this year, gave me two sets of directions.

First off, you can take McClellan Ave. going west (McClellan Ave. is the main street that runs along the Planetarium parking lot at De-Anza College). Continue down to the end of McClellan, where there will be a sharp turn to the left, then a jog back to the right. After that the first street on the left is Linda Vista. Continue on down Linda Vista until you see the park.

Alternate route: Continue north on Hwy 280 toward San Francisco. Take the Foothill Expressway exit and go south on Foothill Blvd. until you come to a 4-way stop. Turn left onto McClellan and continue down it. There will be a hairpin left and then a jog right (Hyannisport Ave.). Turn right onto Linda Vista and continue on until you see the park.

The barbeque area is just a short walk up the hill. There will be softball, frisbie, (kite-flying?), officer installation, and the presentation of the Dr. A.B. Gregory Award. Bring a solar scope if you want. Members, family, friends, bulletin subscribers, and SJAA associates are all invited. See you there!!

Slide and Equipment Night

The June 20 Members Slide and Equipment night was a great success. I took a head count of 50+ people in attendance enjoying about two hours' worth of slides and equipment show and tell. Slides shown (that I can remember) were Gerry Rattley's Riverside TMC, Roland Mangan's Shuttle Landing and first astrophotos with his new C-8, Edwin Sabin's excellent astrophotos, Bob Fingerhut's always excellent astrophotos, and my Riverside and Fremont Peak star party pictures.

Equipment shown included Jim van Nuland's new 'telescope,' an eyepiece in a tube, Don Stone's well made accessories for his C-8, Frank Dibbell's new C-11 and Bruno Benassai's electronics for same telescope.

Slide and equipment nights are always some of the best attended and presented general meetings the SJAA has simply because it allows members to become the program through show and tell instead of just listening to a guest speaker. We will probably hold another in the late Fall.

Elections

Other business attended to at the general meeting was the election of board members. Wolfgang Hanisch, Frank Dibbell, and Chris Pratt were all candidates again with Rolf Strohm and Denni Medlock new nominees. Since there were 5 openings and 5 candidates the members unanimously (except for one vote) voted in the slate.

At the June board meeting the board voted to continue the existing slate of officers since no one wanted off and no one new wanted to run. Satisfied with the status quo. There will be a list printed in the August bulletin of the complete officers and board members.

Ever wonder what goes on at a board meeting? The following excerpts were taken from the June 12 board meeting just to give the general membership an idea of how the club is run.

"Who's in charge?" Patty Winter

"What month is this?" Jim van Nuland
"This is probably somewhere around June."
Chris Pratt

"Do you want me to wake you when something important comes up?" Chris Pratt
"Yeah, like when the board meeting is over."
Frank Dibbell

"We'll just split our forces and take the whole city." Patty Winter
"Where are you going to take it?" Frank Dibbell
"Milpitas!" Bob Fingerhut

"There's a quarrel even if there isn't a quorum."
Steve Greenberg

"I have an idea for the August general meeting. We'll just hold the board meeting there."
Gerry Rattley
"We'll lose all our members!" Kevin Medlock

In the letters to the editor department:
Editor:

I am disappointed to see the SJAA Ephemeris promoting the nonsense that summer begins on June 21 (and presumably winter on Dec. 21), and omitting the only real astronomical significance of the date, namely that the Sun is then at its northernmost declination, or summer solstice for the northern hemisphere. Yes, the dictionary says that summer may be considered to begin on June 21. But if our hot weather begins in May (as it sometimes does) most people would then consider that it is summer, or maybe "early" summer. Likewise, if San Jose gets snow in early December, isn't that winter?!

Sincerely,
(signed) Robert B. Caldwell

P.S. The time should be 4:45 am, not 3:45 pm PDT.

P.S. #2. I really should add that I think you are doing a fine job as Editor. Congrats.

Yes, I will print letters to the editor as long as they are nice to me.

D.

Because I'm leaving for Stellafane on July 24, the August bulletin will be out early (for a change!!) If you have an article could it get to me by July 19th? Thanks to all.

comet comments

As we officially enter summer, Comet Panther has faded in the western sky but Comet Bowell remains visible not far from Jupiter. Meanwhile, two returning comets have been recovered at faint magnitudes.

Periodic Comet Finlay (1981e): This 16th magnitude comet was recovered by M. Candy and P. Jekabsons on May 7th. In the constellation Pisces, it is not expected to get much brighter.

Periodic Comet Gehrels 2 (1981f): Recovered at the McDonald Observatory in Texas by A. Cochran. At magnitude 19 and in the constellation Pisces, this comet is expected to get only one magnitude brighter.

Comet Bowell (1980b)

Date	R.A.	Dec.	Mag.	
06-25	12 ^h 15.3 ^m	+00°12'	12.7	Not far from the planet Jupiter, this comet is still 4 AU from the earth and sun. Small and
07-05	12 20.6	-00 25	12.7	diffuse, some reports place it
07-15	12 27.0	-01 10	12.7	as being brighter than predicted.
07-25	12 34.5	-02 01	12.7	Take some time to look for it.
08-04	12 42.9	-02 58	12.7	

GREAT COMETS

The "Great March Comet" of 1843 was observed between February 5 and April 19 of that year. Probably a member of the "Sungrazer Family", this comet passed very close to the sun and at one time displayed a tail of 200 million miles, the longest ever observed. It is expected to return in the year 2356.

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'BUILT-IN ASTRONOMERS' TO VIEW JULY TOTAL SOLAR ECLIPSE
(reprinted from the April-May issue of the Los Gatos-Saratoga Camera Club News. Thank you, Ernie Piini.)

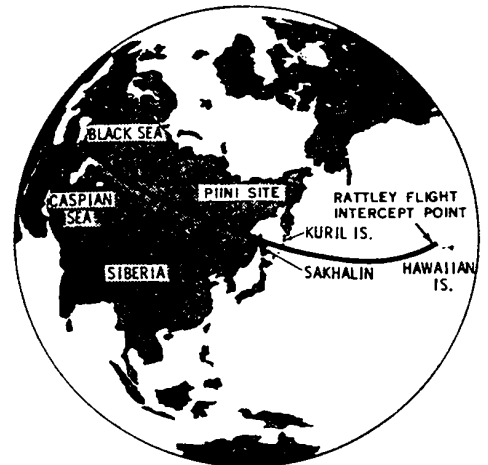
The Club's 'built-in astronomers', Gerry Rattley and Ernie Piini, are getting ready to do "It" again! "It" is another total solar eclipse which will occur on July 30-31, 1981. (Eclipses don't normally take two days to elapse but this one crosses the International Date Line.) Both Gerry and Ernie traveled together to Kenya, East Africa, to observe the February 16, 1980 eclipse; however, this year they will observe the phenomenon from different parts of the world. Ernie will travel to Russian Siberia, and without clouds, observe the eclipse from a site on the center-line where the duration will be near maximum of 110 seconds. Gerry will view the eclipse (for a little more than 55 seconds) through the window of a DC-9 aircraft flying Northwest of the Hawaiian Islands at an altitude of 37,000 ft. No cloud problem there. The eclipse begins near the Eastern end of the Black Sea at sunrise on July 31, crosses Siberia, the Sakhalin, and Kuril Islands, and the International Date Line. It ends at sunset 400 miles Northwest of Hawaii where it is July 30.

The chance of clear skies over Siberia on eclipse day, where the average precipitation for the year is between five to ten inches, is reported favorable. Gerry's chance of seeing the eclipse from a jet aircraft is, of course, 100%, assuming the flight is on schedule and that there are no goof-ups in navigation. This will be Gerry's third eclipse adventure and Ernie's seventh. Mr. Piini's experiments include the use of two newly-developed photo electric detectors (with recorders), and a large calibrated screen, both to study the mysterious shadow band phenomenon. He will also try out several new coronal streamer filters that he has designed. Gerry, a past president of the San Jose Astronomical Association, will perform coronal and shadow band studies from his window seat far above the clouds. In both cases, the eclipse will be but a part of the many things to see on these expeditions. Mr. Rattley, who will travel with a California organized "Moon Shadow Expedition", will visit the Islands of Oahu, Maui, and Hawaii. While on the big island of Hawaii, he will visit the ob-

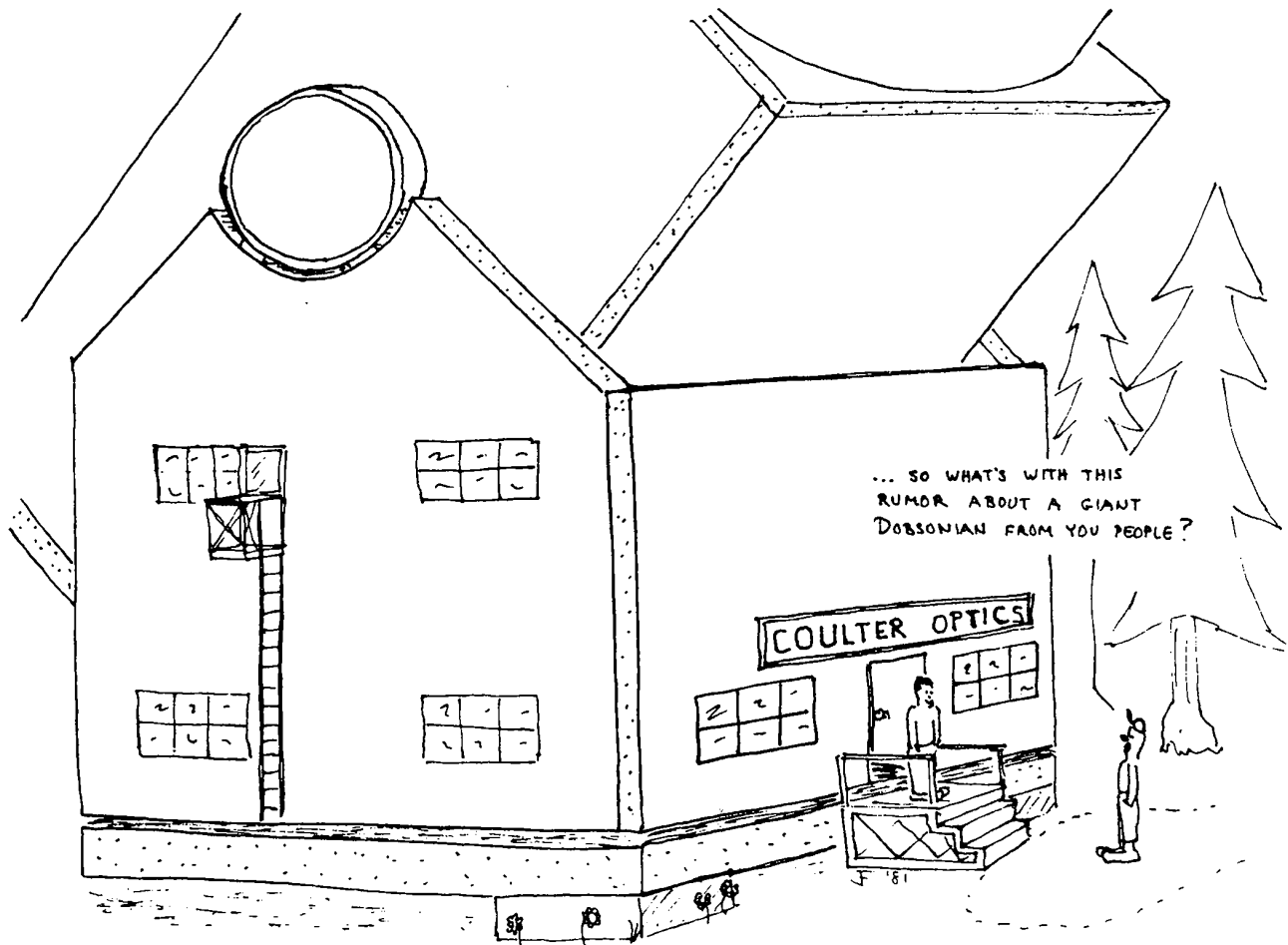
"Built-In Astronomers," continued

servatory on the peak of the 13,800 foot Mauna Kea to see the 150-inch and the 142-inch diameter telescopes. Fascinated by just about all aspects of nature, Gerry will gain first hand knowledge about the history of the Hawaiian volcanoes. Mr. Piini will join a Canadian group from Toronto and his expedition will leave Montreal. It will include visits to: Moscow and the Kremlin; Leningrad, the city built by Peter the Great; and Yerevan, the capital of Armenia, S.S.R. There Ernie plans to look for Noah's Ark on nearby Mount Ararat. The expedition continues with a 3000-mile flight to Bratsk, Siberia, the eclipse site; Irkutsk; Lake Baikal, the deepest clearwater lake in the world; and the ancient cities of Transkent, Samarkand, and Bukhara, in Central Asia. All in all, a glorious 26-day adventure (assuming US-USSR relations remain friendly.)

TOTAL SOLAR ECLIPSE - 31 JULY 1981



Map by Fred Espenak



The SJAA 12½-Inch Telescope

About ten years ago the San Jose Astronomical Association started a 12½" telescope project. Somebody made a 12½" mirror, bought a diagonal and spider, worked up a crude cell, and fabricated a beautiful Crayford focuser. Two tube assemblies seem to have been started, at different times. In the nature of things, many projects that get started do not get finished, and the 12½" languished for the better part of a decade.

Now I like to build telescopes, and when I heard about the Club project, I saw an immediate opportunity to build a large telescope without having to pay for it. So at the April, 1981 Board of Directors meeting, I volunteered to complete the 12½", Dobsonian-style. Shortly thereafter, Jack Zeiders delivered all the parts I have mentioned, plus a six-foot length of 14" i.d. Sonotube, to my home.

I proceeded to build a rather standard kind of Dobson mounting for the instrument. Most of you have seen lots of these, and may have read the booklet on Dobson mountings from Telescope Making or Coulter Optical Co., so I won't dwell on the basics. A few details and variations may be of interest, though: The Sonotube is tightly wedged and epoxied into the box -- it does not come out. The cell is middling fancy -- the mirror rests against a piece of plywood faced with carpet. A brass strip runs around slightly more than 180° of the mirror's periphery, to provide edge support. Miscellaneous cork-faced retainers do not quite touch the glass, but will keep it from going very far if the tube assembly gets turned upside down or shaken.

Collimation is entirely by push-pull screws. There are no springs. Quarter-twenty bolts through the back plate of the tube push against plates at the back of the piece of plywood with carpet on it, and three-eighths bolts with wing nuts on them pull the plywood against the smaller bolts. I'm sure that someone will think that collimation is accomplished by turning the wing nuts, as on small commercial cells, but that's not how it works.

I made a few minor mistakes during construction. I didn't realize that the Sonotube had a layer of wax on its outer surface before I started to prime it. The primer did not stick. The fix was to peel the outermost layer of paper off the tube, carrying the wax with it. The fit of the tube into the box is almost too tight -- I had to use a sledge hammer to drive the tube the last few inches into the box. The focuser is almost too far up the tube to focus to infinity -- I had to trim the focuser down a little bit, in fact.

I did not use the fancy Crayford focuser. It is about as appropriate on an instrument of this sort as jewelry is on a pig. It also is a bit long for a medium-fast Newtonian.

Jack Zeiders pointed out when he delivered the parts, that one of the nice things about building the telescope by myself was that I got to paint it any color I wanted. As those of you who know me may suspect, I took full advantage of this opportunity.

And it's done! For the record, the specifications are as follows: The primary is a 12½" f/6.3 -- the focal length is 78½". The tube assembly is about 78" long and 16" square through the box. The rocker is 20" X 20" X 24" high, and the ground board is 20" square. The side and bottom boards of the rocker, and the ground board, are made of two layers of 3/4" plywood laminated together. All else is single-layer 3/4" plywood.

The eyepiece is high enough that everybody will need at least a stool to stand on when the telescope is pointed near the zenith. The telescope is heavy -- the tube assembly, the heaviest com-

ponent, weighs 70 or 80 pounds, and is very cumbersome to boot. On the other hand, the motion is butter-smooth: Dupont's Teflon is wonderful stuff. And the mounting is rock-solid.

My bill to the Club for parts and materials was some 128 dollars -- this of course does not include the cost of the parts Jack delivered to me. The big-cost items were a Novak "Type J" 2" focuser (\$31), a sheet and a half of 3/4" AC exterior plywood (\$29), a quart and a third of resorcinol glue (\$23), and a couple of quarts of primer and paint, in diverse interesting colors (\$12).

To move the tube around I built a little dolly with two casters on it, that goes under the heavy end of the tube. When it is in place, I can pick up the light end of the tube and wheel the whole thing around like a hand-cart. I carry the ground board and rocker outside first, and set them up. Then I place a chair in a strategic location near the rocker. I wheel out the tube, put the heavy end down beside the rocker, and prop the light end on a chair. Then I lift up the heavy end and move it sideways a few feet to where it can be lowered into the rocker.

Weight and clumsiness are the telescope's biggest fault. Although the dolly makes moving it around on a hard, flat surface a bearable task for one person, I fear that set-up on rough ground or gravel, or loading and unloading from a vehicle, will require two or more healthy adults.

First light was on June 11. I looked at the Moon, Jupiter and Saturn. The seeing was too poor to say anything definitive about the optical quality. Then, being slightly fanatic about such matters, I went hunting Messier objects. I succeeded in finding 39 of them, including all the Messier galaxies in Virgo, Coma Berenices, and Canes Venatici, notwithstanding the mild complication of an eight-day old Moon in Virgo! Aperture helps a lot with situations like this.

After I tweak a few things and build some cradles to store the tube in, the 12½" will move to Chris & Shea Pratt's garage. They have promised to bring it to Club star parties for a while, so people can get to use it and get used to the fact that the Club has a large telescope. There is no set policy on making it available to members yet, though I believe the intent is to let club members borrow it for extended periods -- perhaps a few months at a time. The Club has two other telescopes -- a 6" f/9 Newtonian and a 2.4" refractor -- and these don't get used at all, but maybe the lure of large aperture will pull some would-be telescope borrowers out of the woodwork.

Seriously, if you would like to borrow this large, unusually-colored telescope, ask a Board member about it, but do make sure that you have a place to store it, a way to transport it, a way to set it up, and some eyepieces to use with it. A 12½" Newtonian is an enormous instrument, even by west-coast standards, and is capable of a vast variety of observations. If Club members have as much fun using this telescope as I had building it, they will be well rewarded.

--Jay Freeman

Editor's note: Jay is always giving me a bad time about the gross number of typos in his articles. He just doesn't realize the problems. Ever mow a lawn with a power mower and have it get away from you? Well, that's about the same relationship my electric typewriter and I have.

"What ever possessed you to paint it those colors? Are they left-over paint from some other project?"

Gerry Rattley

"Now, really, would I have ever painted anything of mine like that?" Jay Freeman

the CELESTIAL TOURIST SPEAKS

A few errors crept into this column last month: The dimensions of NGC 4565 and NGC 4236 were incorrectly given. They should have been, respectively, 1.1 by 15 arc-minutes and 5 by 22 arc-minutes.

I did not go to the first night of the SJAA club star party in late May, but was told that only six or seven people showed up. When I did arrive, in mid-afternoon on Saturday May 30, there were about ten cars in evidence but no sign of anyone except for a ragged chorus of muted snores. On closer inspection, I found Kevin, Denni, Shea, Bob Fingerhut, and Steve Greenberg, as well as a few others, seated at a shady picnic table assembling the Bulletin. My timing was perfect -- I arrived just at the point when they didn't need any more help. Actually, I got to do a little address-printing. I spent the rest of the afternoon and early evening setting up my C-14, conversing with all and sundry, and pestering Bandit, the new kitten at the Medlock household.

Perhaps twenty or thirty club members showed up that evening, as well as deverse other Fremont Peak dark-of-the-Moon regulars. There were lots of big telescopes: Kevin's eighteen-inch was resplendent in new paint with diverse mechanical improvements. Charlie Stifflemire (not a club member) had his 16 1/2-inch Dobson. There was a 14 1/4-inch Newtonian, my C-14, a 12 1/2-inch Cave Newtonian-Cassegrain, and I think one more 12 1/2-inch Newtonian. There was the usual pumpkin patch of bright orange Celestrons, several smaller Newtonians, and assorted other instruments down to Patty Winter's 2.4-inch Unitron.

Frank Dibbell had a brand new Celestron 11, set up in the middle of a group of C-8's. Not one to miss a chance to be obnoxious, I went over and asked in a loud voice if he didn't enjoy his C-8 a lot, and didn't it make him feel superior to all the owners of those little C-5's around it. I left the area immediately.

It was a pretty good night, though the late hour of the end of twilight seemed to put a damper on observing: People tended to go to bed about midnight, even though it had only been dark for an hour and a half.

The AANC star party on the next weekend was also fairly successful. There were about ten telescopes on Friday, and perhaps twice as many Saturday, ranging from two 16-inch Dobsons and two C-14's on down. Two Coulter 13.1-inch Odyssey 1's showed up -- I had a look through both of these. They seemed to have decent optics, and to be very well thought out and constructed.

Only a few SJAA members were present -- a shame, because there was plenty of room for more people. Ed Schell and Penny Pinschmidt were there both nights, with Penny's beautiful six-inch. Paul Zurkowski of the Chabot workshop came down Saturday, with an interesting pair of old 10 X 80 binoculars.

High cirrus was a problem on both AANC evenings, though it did clear up by about midnight both times. The four-day old Moon did not impede deep-sky observing too much on Saturday -- I was chasing down 13th magnitude galaxies in northern Centaurus with an eight-inch, moonlight notwithstanding.

A lot of people looked at the Moon at the AANC party. The crater Petavius -- about a third the width of the Moon's disc south of Mare Crisium -- had a prominent ridge or channel extending from its central peak toward the rim wall. Petavius was well-placed and well-illuminated on both June 5 and 6, and this remarkable linear feature caught several people's eyes. The common opinion was that somebody was excavating for a sewer line, but I held out for the minority viewpoint, that it was a canal.

I showed NGC 6207 to several people. This 12.3 magnitude galaxy, one by two arc-minutes in size, is a good starting point for observers who are familiar with Messier objects but reluctant to push on into deep sky: It's half a degree northeast of M 13. I have seen it with no difficulty in a six-inch.

There are a couple of pretty objects close together in northeastern Sagittarius. These are NGC 6818 and 6822. The first is a tenth-magnitude planetary nebula, about a third of an arc-minute across. NGC 6822 is a large, low surface-brightness galaxy, eleventh magnitude and ten by twenty arc-minutes. It is one of the lesser-known members of the local group of galaxies. Both objects are shown on the Skalnate Pleso Atlas. Only 6818 is shown on Norton's -- as 514 -- but NGC 6822 is 0.7 degrees south-southeast. I have seen 6822 in a six-inch, and 6818 should certainly be visible at that aperture.

Perusers of common star charts and catalogs will be aware that the constellation Corona Borealis seems to contain no nebulae, star clusters, or galaxies. I have found one object in this constellation that should be reasonably easy to see in modest-aperture telescopes. It is the galaxy NGC 5958, at 1950 coordinates 15^h32.7^m, +28°50'. This small galaxy seems a notch brighter than 13th magnitude. It was easy in the C-14. I suspect that a ten-inch will show it with no trouble.

There is a much more difficult deep-sky "object" in Corona Borealis: This is the Corona Borealis galaxy cluster, a group of about 400 galaxies almost twenty times as far off as the Virgo Cluster. I think I have seen this cluster in the C-14, as a half degree patch of lumpy darkness, but I am sure that a good deal more aperture is necessary for a decent view of it. The 1950 coordinates are 15^h20.5^m, +27°50'.

Antares is a double star. The companion is five or six magnitudes fainter than the primary and only three arc-seconds off, so it is a rather difficult pair unless optics and atmosphere are very fine. I have split Antares in the C-14, but that's nothing to boast about -- it has been done with a three inch.

NGC 6380 is a faint, two arc-minute globular cluster about two degrees south of Lambda Scorpii, at 1950 coordinates 17^h31.9^m, -39°02'. It is not shown in either the Skalnate Pleso or Norton's. I found it at 71X in the C-14, then switched to 315X to see if I could resolve in into stars -- but it had disappeared! This globular has so low a surface brightness that I could not see it at higher power.

Fanciers of Stefan's Quintet might take a look at Seyfert's Sextet, in western Serpens. This object, also known as NGC 6027, is at 1950 coordinates 15^h57.0^m, +20°55', and is not in either Norton's or the Skalnate. It is a chain of six galaxies whose magnitudes range from about fourteenth to about seventeenth. In the C-14, I could see three blobs and some blur.

While returning to Earth from your voyages in the deep sky, take a look at Uranus, Neptune and Pluto, all of which are well-placed in the early summer sky. The finder charts in the January Sky & Telescope make locating these planets fairly easy. Uranus and Neptune will show perceptible discs in a six-inch or less. Pluto will not show a disc, and may require a good deal more aperture to see at all (though an experienced observer has seen it in a Questar).

-- Jay Freeman

the SJAA DR. A. B. GREGORY AWARD

Last year the SJAA presented the first award in memory of Dr. A.B. Gregory. This award is given to an SJAA member for outstanding contribution of time and effort in encouraging and assisting interest in amateur astronomy. The award is presented at the annual picnic or banquet.

Many of you remember the spirit and enthusiasm with which Dr. Gregory shared his time and knowledge with anyone who was interested in astronomy. This year the well deserving recipient of the Dr. A. B. Gregory award is Denni Frerichs Medlock.

Denni has been guiding beginning telescope makers at the Chabot Telescope Makers' Workshop for many years. Among the people she has helped there are many SJAA members including myself. She helped start and is an instructor at the SJAA telescope making class which is an ongoing event at the Red Cross indoor star parties. Among her numerous other accomplishments are co-founding the Astronomical Association of Northern California (AANC) and serving as its first president; editing the SJAA bulletin for the past 2 years; judging telescopes at the Riverside Telescope Makers' Conference and other conferences; and originating the idea for the highly successful SJAA auction, not to mention doing a huge amount of the planning and work.

Denni has just been elected to the SJAA board of directors for the first time.

Congratulations, Denni. We all appreciate what you have been doing for amateur astronomy for so long.

Bob Fingerhut

I'm going to take advantage of being editor and add an answering comment: Any club is only as good as its individual members. I was surprised and honored to receive the Dr. A. B. Gregory Award for 1981. There were so many other deserving members in the club it is easy to see why the SJAA is now one of the strongest, most active amateur astronomy organizations in California. Keep it going, and thank you, SJAA!

D.

SPACE PROGRAM UPDATE

by Bob Fingerhut

NASA Administrator and Deputy Administrator Designated

James Beggs and Hans Mark have been designated to become the new NASA administrator and deputy administrator respectively. Beggs was formerly the executive vice-president in charge of the aerospace operations of General Dynamics Corp. Mark was formerly Air Force Secretary.

In confirmation hearings before the Senate Commerce Committee on June 17 both men stated that a permanently manned Space Station should be the next major step in the U.S. space program. Senator Jack Schmitt chaired the hearings and was the only senator to remain after the introduction of the nominees.

Soviets Build Modular Space Station

The Soviet Union formed what is apparently the beginning of a permanent, manned space station Friday, 19th June. The link-up between the unmanned Salyut 6, which has served as a base of operation for cosmonauts since 1977, and Cosmos 1267, also unmanned and about the same size as the 19,000 kilogram Salyut, occurred at 10:52 a.m. Moscow time. The Salyut-Cosmos 1267 combination, according to NORAD, was in an orbit shortly after link-up that had an inclination of 51.632 degrees, apogee of 363 kilometers, perigee of 333 kilometers, and a period of 91.5 minutes.

ESA Successfully Launches Ariane 3

The European Space Agency's Ariane 3 expendable vehicle was successfully launched Friday morning, 19th June, from the French space center at Kourou, French Guyana. The rocket carried into orbit a two satellite payload consisting of the ESA weather satellite Meteosat 2 and the Indian experimental communications satellite Apple. This was the third of four test flights for Ariane. The successful flight of Ariane 3 follows the unsuccessful launch of Ariane 2 in May, 1980, when the rocket disintegrated after liftoff. The first launch of Ariane was successfully completed in December, 1979.

New Members

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SPACE DAY '81

Saturday

July 18, 10a-10p.m.

**SAN JOSE STATE UNIVERSITY
MORRIS DAILEY**

STAN KENT **founder of MULTIMEDIA EXTRAVAGANZA**
 ERIC BURGESS **founder of VIKING FUND**
 DR. J. PETER VAJK **member, BRITISH INTERPLANETARY SOCIETY**
 ROBERT TRUAX **consultant to MOONRAKER**
 **author of DOOMSDAY HAS BEEN CANCELLED**
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ALSO ... PLAY VIDEO GAMES ON A SIX FOOT SCREEN ... WATCH MOVIES AND
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 ... WITNESS THE EFFECTS OF HARD VACUUM (LIVE) ... SEE OLYMPIC
 HIGH JUMP RECORDS BROKEN IN A MARTIAN GRAVITY SIMULATOR ...
 HEAR LECTURES BY SPACE EXPERTS ... EXPERIENCE MULTIMEDIA
 EXTRAVAGANZAS ... TRACK SUNSPOTS WITH SOLAR TELESCOPES
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OTHER BAY AREA SPACE WEEK EVENTS

Saturday, July 11, 9 a.m.-4 p.m.: *California Space Development*- Sibley Auditorium, UC Berkely - 642-9140
 Thursday, July 16, 7 p.m.-10 p.m.: *Arms Control In Space*- World Affairs Center, San Francisco - 566-3068
 Sunday, July 19: *Networking Party for the Future* - San Francisco, reservation only - 483-7989/956-1883

For more info, call 286-1631