Predictions

APRIL IN THE YEAR 1978

Mar. 25	Indoor star party, Los Gatos Red Cross, 7:00 pm.
Apr. 1	SJAA sponsored public star party for West Valley College Astronomy classes at Sanborn Canyon. Turn left on Sanborn Rd. about 2 miles up Highway 9 above Saratoga.
Apr. 7	General Meeting, Mark Twain High School, 7:30 pm. 17421 Farley Rd. West, Los Gatos. James (Mike) Ryan, President of the San Mateo County Astronomical Society will give a presentation on the Sitmar Eclipse cruise in 1977. Slides include on-board activities and eclipse.
Apr. 7&8	AANC sponsored star party at Fremont Peak.
Apr. 14	Board of Directors Meeting, 8:00 pm. Ed Schell's place, 152 Carlton Ave. #4, Los Gatos.
Apr. 22	Indoor star party, Los Gatos Red Cross, 7:00 pm.
Apr. 29	Indoor star party, Los Gatos Red Cross, 7:00 pm.
May 5	General Meeting, Mark Twain High School, 7:30 pm. 17421 Farley Rd. West, Los Gatos. Speaker to be announced.
May 5&6	AANC star party at Fremont Peak State Park.
May 6	Club star party at Henry Coe Park, dusk to dawn.
May 12	Board of Directors Meeting, 8;00 pm. Dr. Gregory's, 5480 Fairway Dr. San Jose.
May 13	Indoor star party, Los Gatos Red Cross, 7:oo pm.
May 20	Indoor star party, Los Gatos Red Cross, 7:00 pm.
May 27	Indoor star party, Los Gatos Red Cross, 7:00 pm.
May 27-29	Riverside Telescope Makers Conference, Big Bear. For more information, ask Jack Zeiders.

"I think we'll have more people there than I think we will."
Gerry Rattley discussing
Astronomy Day at the last
Board Meeting

The San Jose Astronomical Association

John Rhodes, President 969 2615 Penny Pinschmidt, Editor 356 4330

History

Report of the March 3 General Meeting

Pre-program announcements were brief. Allen Meyer announced that Bradfield in Australia has discovered a new comet about 20 west of the sun and magnitude 4.6. Gerry Rattley, who is coordinating Astronomy Day, said that people are needed at the Foothill College observatory as well as the Rosicrucian Museum for that event.

For the program, Bob Fingerhut introduced Max Hunter from Lockheed, who gave a great talk on the Space Telescope. For those who missed it, here are a few specs:

1. dimensions - 42' long, 14' diameter (support system module)
2. primary mirror - 96"
3. projected launch date - December, 1983
4. equipment besides telescope - 3 cameras, spectrographs, astrometer, and polarimeter
5. faintest stellar magnitude - 28-29

----by Suzanne Lowd

The March 11th star party at Coe was, as the saying goes, well attended.....by people, telescopes, fog, hail, and plenty of rain. Les Delong, Ron Martin, Jack Zeiders, Jim Van Nuland, Larry Webster, Bob Fingerhut, Jack Petersen, Don McGlauflin, Ralph and Suzanne Lowd, Ed Schell and I were all there to get "weathered" on. Why not pack up and go home? Because we hoped to see Comet Bradfield in the morning. So, to pass away the time, one soggy astronomer had brought a portable TV and the evening was spent watching a beauty contest! We were fogged in until 7:00 am. No comet. A ranger, who commutes from Los Altos, told us that down in the valley it was clear most of the night.

Tony Di Cenzo died on January 20th. He had only joined our club in late October. Before and after that, he actively participated in many Red Cross and General Meetings. Despite being confined to a wheelchair, he was looking forward to attending some of the more close-in star parties.

Astronomy Day at the Rosicrucian Planetarium was definitely a success. We had an estimated crowd of 3 to 400 keeping nine telescopes and a pair of binoculars very busy until 11:30 pm. Among the unusual was Norm Neinchel's new C 14 and Allen Meyer's 6" refractor.

During the evening I wandered around with my trusty clipboard and asked various sightseers questions. Here are some of the responses:

"I'm glad someone thought of something interesting to do. We brought the whole family over just to see it!"

"The pockets on the moon gives it character."

"Wow! Saturn looks so close!"

"Oh, my gosh, I don't believe it!"

"The moon looks just like a piece of plastic sitting there in the the telescope."

"Saturn is pretty obvious when you see it."

"Saturn looks like Saturn."

"The moon's got a bad case of acne." John Rhodes

Over at the Foothill location, Gerry Rattley, Suzanne and Ralph Lowd, plus Phil Hermsmeyer and friend were mobbed by 5 people.

TO ED SCHELL'S PLACE 152 CARLTON AVE, APT 4
LOS GATOS 356 7498

APR. 14 BOARD MEETING
8:00 pm EVERY ONE WELCOME

FROM SAN JOSE

SOUTH ON HIWAY 17

TAKE LARK AVE. EXIT

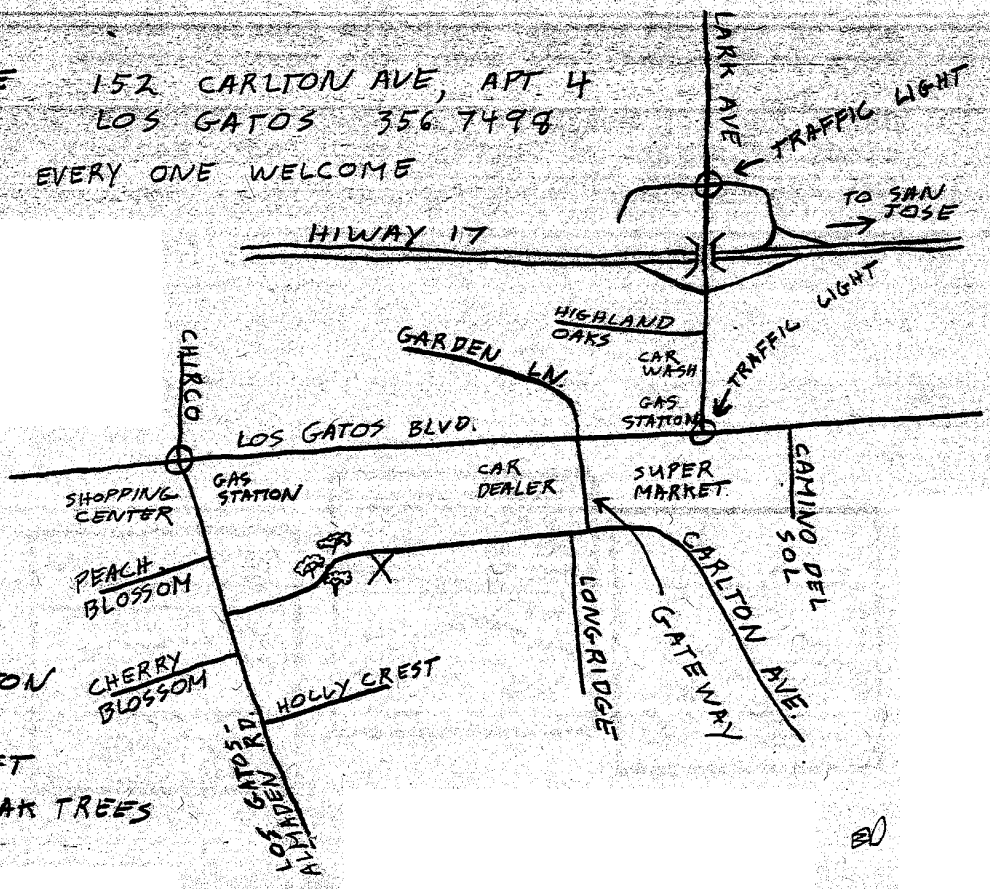
TURN LEFT (EAST) ON LARK AVE. TO END

TURN RIGHT (SOUTH) ON LOS GATOS BLVD.

THEN TAKE THE 1ST LEFT (EAST) ONTO GATEWAY

TURN RIGHT ON CARLTON

ABOUT 1 BLOCK ON LEFT
JUST BEFORE LARGE OAK TREES
UP STAIRS, # 4



ED

Blurbs

Thank you, Jack, and thank you, John, for my two (2) name tags!

The West valley star party on March 4th was cancelled because of rain. It has been rescheduled for April 1st. And no, I am not fooling you!

Club elections are coming up soon. You might start thinking about nominations and whom you do and don't want for officers and board members. The Board has been trying to get me to join them, but I'm content enough as editor.

I need reporters. Someone who would be interested in interviewing certain club members and then writing an article about them for the bulletin. If you are interested, please call me.

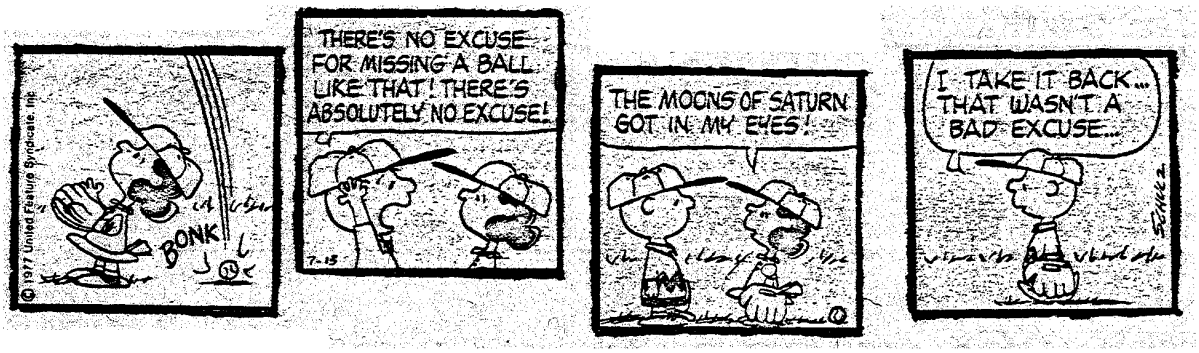
We have been having a lot of birthdays recently. March 2nd was Wolf Hanisch's and was celebrated the next day with a cake at the General Meeting. Gerry Rattley had his the day before Astronomy Day on March 17th, and Ed Schell's was on March 23rd.

Michael David McGlauflin was born on Feb. 21st at 11:49 A.M. He weighed in at 7 lbs., 1 oz. His first public debut was on Astronomy Day at the Rosicrucian. It was love at first sight for the astronomers! As far as Michael was concerned, well, he likes his bottle. Plus he already has a friend who sleeps curled up at the foot of his bed. . . Squirrel, of course!

It now takes seven (7) people to produce the San Mateo Bulletin.

The Board has not yet decided on a location for our July election banquet. If you know of a good place for under $7-8 a head, contact any of the officers. Mountain Charley in Los Gatos and the Royal Fork in Campbell are among the possibilities.

Denni Medlock reminded me about the Monterey Park Astronomical Society Swap Meet at Garvey Ranch Park, Monterey Park, Calif. Date is set for Sunday, May 7th.



Notes from the Board Meeting at Penny Pinschmidt's house on March 10th as reported by Debbie Moore

The West Valley College star party at Sanborn Canyon was rescheduled for April 1.

Nominations for the Astronomical Society of the Pacific (ASP) $250 amateur astronomers award were discussed. Don Machholz and Paul Zurakowski were mentioned. For more information or sugestions contact any board member.

Location for the annual club banquet was discussed.

As usual, the calendar for the next few months was reviewed.

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from IAU Circular no. 3150, Dec. 13, 1977:

The X-ray source 4U 0241+62 was observed by the satellite SAS 3 last November. This provided a precise position, 2h41m01.3s, +62°15'27" (1950), with an uncertainty of only ±30". The observed flux from this source was $3.1 \times 10^{-}$ ergs/cm²sec., in the photon energy range 2-11 KeV.

The brightest visible object within 30" of the X-ray position is a 16th magnitude "starlike object." It's optical spectrum was observed at the Lick 120-inch on December 3. Emission lines of hydrogen, helium and doubly ionized oxygen were observed, all at a redshift z=0.044. If Hubble's law applies, this object is at a distance of 850 million light years. The character of the spectrum indicates it is either a QSO or Seyfert galaxy. At the implied distance, the X-ray luminosity of the source would be 2×10^{44} ergs/sec, or 50 billion solar luminosities.

The X-ray position was observed on December 5th at the VLA radio interferometer. A strong point source was detected in the frequency range 1-20 GHz. The radio position is within 2" of the optical emission line object. The radio spectrum is the typical synchrotron spectrum of quasars and radio-emitting compact galaxies.

by Allan Meyer

EDITORAL

Nothing happened last month that's worth writing an editoral about.

Penny G. Pinschmidt

Visual Binary Stars for the Year 1980
...conclusion

I have kept this paper short and to the point as much as possible, because there is far to much material on double star orbits to be adiquetly discussed in a paper of this size. Those who may wish to persue this interesting field further can consult the sources listed below.

The following is a brief bibliography of the sources used by me in my studies of binary stars. I own a copy of each of these sources except for the last one listed, as I have already obtained its data with my own computer and program. I do, however, feel that this last source is of great value to anyone who does not have access to a computer. The list is arranged chronologically by earliest publishing date.

1. Celestial Objects for Common Telescopes, 1859, by Rev. T. W. Webb
   revised by Rev. T. E. Espin, 1917
   revised by M. W. Mayall, 1962
   Dover Publications, Inc., New York, N. Y.
2. Nortan's Star Atlas, 1910, by A. P. Norton
   15th edition, 1964, J. G. Inglis
   Sky Publishing Corporation, Cambridge, Mass.
3. New General Catalogue of Double Stars within 120° of the North Pole, 1932, by R. G. Aitken
   University Microfilms International, Ann Arbor, Mich.
4. The Binary Stars, 1935, by R. G. Aitken
   Dover Publications, Inc., New York, N. Y.
5. Visual Observing of Double Stars, 1961, by C. E. Worley
   Sky Publishing Corporation, Cambridge, Mass.
6. Index Catalogue of Visual Double Stars, 1963, by H. M. Jeffers, W. H. van den Bos and F. M. Greeby
   Lick Observatory, Mount Hamilton, Calif.
7. Atlas of the Heavens - II, Catalogue, 1964, by A. Bečvář
   Sky Publishing Corporation, Cambridge, Mass.
8. Burnham's Celestial Handbook, 1966, by R. Burnham, Jr.
   Celestial Handbook Publications, Flagstaff, Arizona
9. Astronomy, a Handbook, 1967, by G. D. Roth
   double star section by W. D. Heintz
   Sky Publishing Corporation, Cambridge, Mass.
10. Some Bright Visual Binary Stars, 1971, Jean Meeus
    Sky Publishing Corporation, Cambridge, Mass.
11. Third Catalogue of the Orbits of Visual Binary Stars, 1971, by W. S. Finsen and C. E. Worley
    Circular No. 129 of the Republic Observatory
    Johannesburg, Republic of South Africa
12. Ephemerides for 291 Double Stars for the Years 1975-2000, 1976, by W. Wepner
    see Sky & Telescope review, Sept, 1976, pp. 207-8

Besides the above sources extensive use has been made of the Lick Observatory Library which is located in the science library of the University of California at Santa Cruz. A complete astronomical library is also located in Evans Hall at the University of California at Berkeley.

Gerald W. Rattley

Rattley Rattles

Now that I have completed my orbital visual binary list for the bulletin, I now face the task of selecting a new topic for my articles. For the last couple of months I have been researching the list of deep sky objects compiled by Sir William Herschel, and using the N. G. C. catalogue, the RNGC catalogue and the errata listed in each of these, I have compiled a cross reference of the complete Herschel list with there N.G.C. numbers.

The complete Herschel list of deep sky objects contains about 2500 objects. This large number makes any attempt to reproduce this entire list in the bulletin impossible, but as I am a avid deep-sky enthusiast, I would certainly like to do something with these objects for my bulletin articles. Well, as most of you are aware, I have presented a number of short talks at the club meeting which I have called "Chart Talks" in which I have picked certain Skalnate Pleso Atlas charts and presented what I have found through my experence in deep sky observing to be the finest objects on that chart or charts for amateur observation in smaller telescopes. This is what I think I will now do as a bulletin project, monthly chart talks in "Rattley Rattles".

One thing that I would like you to keep in mind about these chart talk articles is that they are going to highly susceptiable to changes, such as additional objects through mine and your personal observational experences at the telescope. I could miss placing a favorite object of yours in my lists or I could easilly forget one of my favorites, even I cannot always recall them all!, and would need to modify each chart list from time to time. I would love to have club participation in this project, such as your comments on the objects that I select or on my comments about how to view them or what they look like through the telescope or any other comment you wish to make.

Anyone with ideas about how our club might start a Messier section to honor those that have completed looking at each of the Messier objects should bring these ideas to the Red Cross meetings! I would like to see the club have such a project but I do not feel I can do it alone, it will take ideas and participation by others. All the Messier objects will be included in the chart talk articles!

Another series of articles that I will be continuing again in future bulletins now that my orbital visual binary star article is completed is the series of orbital diagrams of selected bright visual binaries. I still have lots of these that I can do.

Before I close this Rattley Rattles I would like to mention two articles which have apeared in recent publications. First is an interesting and "cute" article in Science News, Vol. 113, No. 9, March 4, 1978 titled "Giving Ourselves Away" by J. Eberhart which discusses what a radio astronomer on Barnard's Star could learn by easdropping on the Earth. Second is an article in the February issue of Scientific American entitled "Supergravity and the Unification of the Laws of Physics" by D. Z. Freedman and P. van Nieuwenhuizen which deals with an approach to relating the basic forces of nature. Anyone wishing to see either of these two articles can see them at the next Red Cross meeting.

Atronomically Yours;

Donald W. Rattley

AD AD AD AD

For sale: 3 Cave orthoscopic eyepieces same as Meade Series 1 focal length 6mm, 12½mm, 25mm $35 for all three, $13 each or offer.

Les Delong
263-4612

"There are 4 satellites of Mars." Jim Van Nuland

Red Spot Predictions

The Spot is tracking close to the predictions, but is pretty faint. Excellent seeing is required. Look for a dent in the belt north of the Spot, where the belt narrows (looking west to east). The Spot nestles in the belt, east of the dent.

Let me know of your successes so that I may advise people who are having trouble.

Great Gray Spot on Meridian PST

Da	Mo	d	h	m	
Su	4	2	10	5	PM
W	4	5	7	31	PM
F	4	7	9	13	PM
W	4	12	8	23	PM
F	4	14	10	1	PM
M	4	17	7	36	PM
W	4	19	9	11	PM
M	4	24	8	19	PM
Sa	4	29	7	31	PM

CB Channels at events

To facilitate communication at Star parties and meetings, I propose that channel 20 be used. It should be monitored by someone at the site if practical. This is already done to some extent.

In addition, when a second person arrives at the site, channel 14 should be monitored, so handy-talkies can be used. Use of 14 should be minimized in town; by local convention it is reserved for side-band users.

Jim Van Nuland.

West Valley College — Tom Bullock
Astronomy 1 — Quiz 1

Galileo's major contribution toward the acceptance of Copernicus' system was his offering of observational support.

The sun is at the vernal equinox on September 23.

Copernicus proposed a new system to replace that of Ptolemy primarily because it was more aesthetically pleasing.

Up until the 1930's, our Galaxy was thought to comprise the entire universe.

Changing either the wavelength or the frequency of an electromagnetic wave changes the velocity of that wave.

Radar astronomy has been used to study the surfaces of only the nearest stars.

The image size of an object being viewed through a telescope increases as the focal length of the telescope decreases.

Most telescopes are designed to move in a direction opposite to that of the earth's spin, so as to track objects in space.

The mass of an object remains the same, whereas its weight will vary according to its location in space.

Assume that the sun is compressed to the size of the earth. Its resulting density will be roughly the same as the earth's.

Astronomy as the "study of celestial bodies" has only recently had practical benefits, the earliest star-gazers being mostly interested in astrology.

The seasons on the earth are the result of the elliptical orbit of the earth around the sun.

A person's astrological "sign" is defined as the constellation in which the sun was located at the moment of his/her birth.

The chief difference between Ptolemy and Copernicus was that the latter did not begin with the assumption that orbits had to be perfectly circular.

The Poppler displacement cannot be measured for a source that emits a continuous spectrum.

Newton's laws of motion destroyed the need for perfectly circular motion, and extended laws of mathematics into space.

As the earth revolves around the sun, to an observer on the earth, the sun and moon appear to move through the constellations of the zodiac.

Blinking — Jeff Lo

I am sure that all of you, at one time or another, have heard of Ben Mayer and his blinking program of which he spoke at the last AANC conference. Before I moved up here, I happened to be in the same astronomical society (Polaris Astronomical Society) and he asked me to help him popularize his blinking program here in San Jose. Therefore, I built myself a blinker modeled after his as shown in the September, 1977 issue of Sky & Telescope. It does not look too great, but it should work. I will bring this to the Red Cross meetings when needed so that many members can blink in one night. Other blinkers would be greatly appreciated. As soon as it clears up, I will be out taking pictures. I would like to see more people in this with me. To join this blinking program, simply send a self-addressed stamped envelope with your questionaire for your coordinates. These will be set 6h apart, so that you will have an area to shoot every season of the year. All it takes to photograph your area is a few minutes in your monthly astrophotography program, or, if you don't have anything to do on a clear night, put a fog suppressing filter on your lens and shoot away! To inspire more of you to join this program and start shooting, Ben is offering a $250 reward for the first newly discovered object that was discovered with a blink comparator. It doesn't cost much, so let's all join this very rewarding program. Below are our addresses. If you have any questions, please feel free to call me at home or see me at the meeting.

Jeff Lo, 4090 Cranford Circle, San Jose 95124 Phone - 377-3139
Ben Mayer, 1940 Cotner Ave., Los Angeles 90025

Excerpts from IAU Circulars about Comet Bradfield (1978c) cut out, pasted-up copies

1978 ET	α_{1950}	δ_{1950}	Δ	r	Elong.	m_1
Feb. 21	20^h05^m68	-35°07'9	1.211	0.746	38°0	5.6
26	20 35.00	-28 22.8				
Mar. 3	21 03.64	-20 42.4	1.161	0.573	29.6	4.4
8	21 32.60	-12 21.9				
13	22 03.07	- 3 48.3	1.191	0.452	21.5	3.4
18	22 35.99	+ 4 19.3				
23	23 11.13	+11 20.7	1.299	0.457	17.3	3.7
28	23 47.05	+16 54.6				
Apr. 2	0 22.07	+21 03.3	1.457	0.583	17.2	5.0
7	0 55.06	+24 01.1				
12	1 25.46	+26 04.2	1.647	0.757	17.8	6.4
17	1 53.15	+27 26.9				
22	2 18.22	+28 20.2	1.853	0.941	17.3	7.6

Total visual magnitude estimates: Feb. 28.31 UT, 6.5 (V. F. de Assis Neto, São Francisco de Oliveira, Brazil, 10 × 70 binoculars); Mar. 4.50, 5.9 (P. Maley, San Antonio, Texas, 15-cm refractor; correction to IAUC 3185); 5.50, 5.8 (Maley); 8.50, 5.5 (Maley, 13-cm refractor); 8.53, ~ 5.8 (P. Collins, Tucson, Arizona, 11 × 80 binoculars); 9.50, 5.5 (Maley); 10.50, 5.4 (Maley); 11.50, 5.5 (Maley).

The following improved parabolic elements, by B. G. Marsden, satisfy 25 observations Feb. 6 to Mar. 8 within 2":

T = 1978 Mar. 17.6898 ET
q = 0.436628 AU
ω = 48°7045
Ω = 259.7966 } 1950.0
i = 51.0842

The resulting corrections to the ephemeris on IAUC 3177 are:

1978 ET	Δα	Δδ	1978 ET	Δα	Δδ
Mar. 18	-0m32	-3!4	Apr. 7	-0m72	+0!3
23	-0.44	-3.2	12	-0.75	+1.7
28	-0.57	-2.3	17	-0.75	+2.9
Apr. 2	-0.66	-1.1	22	-0.75	+3.9

E. P. Ney and D. A. Brodzik, University of Minnesota, report infrared observations obtained at the O'Brien Observatory on Mar. 4.7 UT with a diaphragm 27" in diameter: 3.6 μ, 4.5; 4.8 μ, 2.6; 8.5 μ, -0.6; 10.6 μ, -1.3; 12.5 μ, -1.6.