SJAA EPHEMERIS

SJAA Activities Calendar

Jim Van Nuland

March

6 Observational Astronomy Class, Houge Park, 8 p.m. Topic: Tools of amateur astronomy

12 Houge Park star party. Sunset 6:13 p.m., 24% moon rises 3:43 a.m.

13 Star Party at Fremont Peak. Sunset 6:11 p.m., 16% moon rises 4:25 a.m. *SJAA Host Mike Koop*

20 Star Party at Henry Coe and Fremont Peak. Sunset 6:19 p.m., 16% moon sets 9:57 p.m.

26 Houge Park star party. Sunset 6:26 p.m., 78% moon sets 3:46 a.m.

27 General Meeting at Houge Park, 8 p.m.

April

3 Observational Astronomy class, Houge Park, 8 p.m. Using telescopes: setup, collimation, finding objects

4 Beginning of Summer time. Advance clocks.

4 Easter (school vacations week before or after)

9 Houge Park star party. Sunset 7:38 p.m., 40% moon rises 3:21 a.m.

10 Star party at Peak. Sunset 7:36 p.m., 30% moon rises 4:00 p.m.

17 Star party at Coe, Peak. Sunset 7:44 p.m., 6% moon sets 9:48 p.m.

23 Houge Park star party. Sunset 7:51 p.m., 65% moon sets 3:27 a.m.

24 General Meeting at Houge Park, Noon, Swap/Auction IXX

"Aperture Wins," But So Does Jay Freeman

Jane Houston

A great crowd attended the first 1999 general meeting of the SJAA on January 30th where President Ed Erbeck presented the A. B. Gregory Award to Jay Freeman. The award is a plaque including the text "In recognition of Outstanding Contributions of Time and Effort to Others in Amateur Astronomy."

The award is named after Dr. A. Boris Gregory, professor of French Literature, lifetime amateur astronomer, and president of SJAA in 1973-74. Congratulations Jay on a well deserved honor! The club thanks Jay for the many ways he helps the rest of us, through his vivid observing reports, equipment and eyepiece comparisons, and observing tips and guidelines.

Jay Reynolds Freeman receives the Dr. A. B. Gregory award from SJAA President Ed Erbeck at the January 30 General Meeting.

Without missing a beat, Ed then introduced the speaker for the evening — Jay Freeman! Jay brought two companions to assist in his presentation on deep sky observing — Refractor Red, his 55 mm dayglow tubed Vixen fluorite, and making her grand debut, Juliette, the 98 mm f/6.7 Brandon refractor. Juliette started out as a 94 mm f/7, doubtlessly in a more conservative color scheme. Juliette was resplendant in Pearlescent Pink girdled in gold — Rustoleum Gold, that is! A black lace handkerchief, snugly held in place by a red and black garter served as a dust cover.

Jay's talk, *Cosmic Birdwatching*, centered on three themes. Rule one: Aperture wins. Rule two: You don't need large aperture to do deep-sky observing. And rule three: You can develop observing skills just as well with a small telescope as with a large one. Jay's good advice given during this talk can be found (along with many other helpful guides) at http://www.seds.org/TAC/beginner/deep.sky.html.

Refractor Red and Juliette were frequently called into service to assist in answering the many questions from the appreciative audience.

Twin "Blue Moons" in 1999

Bob Garfinkle, F.R.A.S.

You have probably heard the old saying that some rare event occurs "Once in a blue moon." The moon does not actually turn blue, but a blue moon occurs when there are two full moons in a single calendar month. Blue moons usually occur once in cycles that can be about two to three years apart or about five to six years. Sometimes, one blue moon will occur approximately two years after we have had one, and sometimes the next blue moon will not be seen for up to about six years later. Prior to the blue moon on January 31, 1999, the last one was on July 30, 1996. The blue moon on March 31 is the last one for the twentieth century.

For only the third time this century, we will have two blue moons in one calendar year. This month's blue moon on the 31st is the first time since 1961 in which two blue moons occur in one calendar year. How rare? The last two before 1961 were 1915 and 1885.

This year began with a full moon on January 2 (2:49 Universal Time at Greenwich, England), followed by a blue moon and a very shallow penumbral lunar eclipse on the last night in January. There was no full moon in February; another rarity is for a month to have no full moon at all. Being shorter than the moon's 29-1/2-day-long mean synodic month, February is the only month where it is possible for no full moon to occur. Only four years this century had a February without a full moon (1915, 1934, 1961, and 1999).

Another rarity is for a month to have no full moon at all.

Though the moment of new moon is not occurring at exactly at the same time of day, the blue moon pattern of this year is nearly an identical repeat performance of the full moon pattern seen 84 years ago (4.4 metonic cycles). There were blue moons on January 1 and 31, and on March 1 and 31, 1915.

The last near twin blue moon year was 1961, with full moons on January 1 and 31 and April 1 and 30. We had a near miss in 1934, when two full moons occurred in December 1933, a single full moon in January 1934, no full moon in February, and two full moons in March 1934.

Mooning

David North

Once again, it's showtime for moon goons — and a time of great suffering for our farsighted deepsky cousins, as this month has two full moons.

Why is March "showtime?" Because this is when the moon is at its greatest elevation at first quarter, which is the easiest phase for most folks to see.

Does elevation count for all that much? Yes, yes and yes. The less air you look through, the better the image. Even on mediocre nights in March, the 1QM can look better than great nights in late summer... and the average of the first half of the lunation is all good, so it's best to try for the whole shebang, though I'm only going to cover four days with any detail...

Sunset is around 6:30, and the first quarter Moon is best viewed around sunset. Most folks are home from work around then. Also, there is just a lot of good stuff to see around the first quarter.

What is this good stuff, you ask? Let's take it day-by-day:

March 22 is really a bit before first quarter, so get out as soon as you can — the moon will already be sinking when the sun sets... but it will be very high.

First comes the well-defined crater pair Aristotle and Eudoxis. Some close examination may show the secondary impacts north of Ari, and the entire area is just plain nice.

But the real theme of the night is rilles: from the south end of Serenitatis (rimae Menelaus and Plinius) down the western edge of Tranquilitatis (the end of Ariadeaeus — which you can watch emerge as the evening passes — plus Maclear, Sosigenes, Ritter and Hypatia rilles) and the rille in Cyrillus (part of the extraordinary crater group that also includes Theophilus and Catharina — note the sharp terraces in the former).

And just for pure "looks" don't miss the Altai Scarp, the "shock ring" mountain range that surrounds western Mare Nectaris.

March 23 is almost first quarter, and things will be popping right at sunset.

Start with the Alpine Valley, cutting through (of course) the Montes Alpes like a bad gash. The "prime target" here for masochists is the rille in the middle of the valley. In good seeing, relatively modest scopes can see it, and in anything less it "just ain't there."

But the heartstoppers tonight are a pair of rilles: Hyginus and Triesnecker. These are perhaps the finest examples of two different kinds of rilles on the moon.

Remember Ariadeaeus from last night? Find it again and it will lead you to Hyginus, which will look like a widespread V with a crater at the vertex. If you look close, you'll see strings of

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COMET COMMENTS

By Don Machholz

Comet Linear (1998 M5) moves past the North Celestial Pole while Comet Williams fades in our evening sky. Periodic Comets Jager and Harrington-Abell remain near each other in our Winter Milky Way.

C/1998 A1 (Tilbrook): Justin Tilbrook of Australia visually discovered this comet on Jan 12. He was using an 8-inch reflector at 70x to find the tenth magnitude object. Justin was intentionally looking for comets when he found this, his second comet. His first comet find, 18 months ago, was accidental-he was checking out variable stars at the time. Comet Tilbrook is moving away from both the earth and sun, and dimming. During late December, while still undiscovered, it passed 30 million miles from us. I swept over it on December 9, when I picked up galaxy NGC 6217 but missed the equally faint comet, a couple of degrees away. Then on Jan. 3, shortly after moonrise, I swept over it when it was near Jupiter in the evening sky. Perhaps it brightened rapidly shortly before discovery.

COMET HUNTING NOTES: Five of the last seven visual discoveries (covering 2.5 years) have been made by Southern Hemisphere observers, all from Australia, and all five comets being found south of the celestial equator. Two were accidental finds (by Williams and Tilbrook), with Tilbrook finding one more and Tabur finding two.

EPHEMERIDES - Epoch 2000, 0h UT

C/1998 M5 (LINEAR)

Date (00UT)	R.A. (2000)	Dec	El	Sky	Mag
02-11	19h24.7m	+60°37'	79°	M	9.0
02-16	19h28.9m	+64°21'	82°	M	9.0
02-21	19h33.2m	+68°26'	84°	M	9.0
02-26	19h37.8m	+72°49'	87°	M	9.0
03-03	19h42.9m	+77°30'	89°	M	9.0
03-08	19h49.2m	+82°24'	90°	M	9.0
03-13	20h03.8m	+87°29'	92°	M	9.1
03-18	07h38.5m	+87°20'	92°	E	9.1
03-23	07h52.5m	+82°09'	93°	E	9.2
03-28	07h58.9m	+77°03'	92°	E	9.3
04-02	08h04.3m	+72°05'	92°	E	9.5
04-07	08h09.4m	+67°21'	90°	E	9.6

C/1998 P1 (Williams)

Date (00UT)	R.A. (2000)	Dec	El	Sky	Mag
02-11	09h57.4m	+33°16'	160°	M	10.0
02-16	09h28.7m	+36°27'	155°	E	10.2
02-21	09h02.1m	+38°44'	148°	E	10.5
02-26	08h38.7m	+40°15'	140°	E	10.8
03-03	08h18.7m	+41°11'	132°	E	11.1
03-08	08h02.3m	+41°43'	124°	E	11.4
03-13	07h49.0m	+41°58'	117°	E	11.6
03-18	07h38.5m	+42°03'	111°	E	11.9
03-23	07h30.4m	+42°01'	105°	E	12.2
03-28	07h24.2m	+41°55'	99°	E	12.4
04-02	07h19.8m	+41°47'	94°	E	12.6
04-07	07h16.7m	+41°38'	88°	E	12.9

P/1998 U3 (Jager)

Date (00UT)	R.A. (2000)	Dec	El	Sky	Mag
02-06	06h19.0m	+29°53'	137°	E	10.5
02-11	06h19.5m	+28°42'	132°	E	10.6
02-16	06h20.9m	+27°34'	127°	E	10.6
02-21	06h23.1m	+26°27'	123°	E	10.7
02-26	06h26.2m	+25°24'	119°	E	10.7
03-03	06h30.0m	+24°22'	115°	E	10.8
03-08	06h34.5m	+23°23'	111°	E	10.8
03-13	06h39.6m	+22°27'	107°	E	10.9
03-18	06h45.3m	+21°32'	104°	E	11.0
03-23	06h51.5m	+20°39'	100°	E	11.1
03-28	06h58.1m	+19°47'	97°	E	11.1
04-02	07h05.1m	+18°57'	94°	E	11.2
04-07	07h12.5m	+18°07'	91°	E	11.3

52P/Harrington-Abell

Date (00UT)	R.A. (2000)	Dec	El	Sky	Mag
02-06	07h03.8m	+35°07'	145°	E	10.7
02-11	07h04.9m	+33°58'	140°	E	10.7
02-16	07h07.0m	+32°49'	136°	E	10.8
02-21	07h10.1m	+31°38'	132°	E	10.9
02-26	07h14.1m	+30°28'	129°	E	11.0
03-03	07h18.9m	+29°19'	125°	E	11.1
03-08	07h24.5m	+28°11'	121°	E	11.2
03-13	07h30.7m	+27°04'	118°	E	11.3
03-18	07h37.5m	+25°58'	115°	E	11.5
03-23	07h44.8m	+24°53'	112°	E	11.6
03-28	07h52.5m	+23°48'	109°	E	11.7
04-02	08h00.6m	+22°45'	106°	E	11.8
04-07	08h08.9m	+21°42'	103°	E	12.0

ELEMENTS

Object:	Williams	LINEAR (M5)
Peri. Date:	1998 10 17.838	1999 01 24.5733
Peri. Dist (AU):	1.14674 AU	1.742213 AU
Arg/Peri (2000):	294.473 deg.	101.2873 deg.
Asc. Node (2000):	156.379 deg.	333.3766 deg.
Incl (2000):	145.730 deg.	082.2285 deg.
Eccen:	1.0	1.0
Orbital Period:	Long Period	Long Period
Ref:	MPEC 32410	MPC 32410
Epoch:	1998 10 17	1999 01 22
Absol. Mag/"n":	6.5/4.0	5.5/4.0

Object:	Harrington-Abell	Jager
Peri. Date:	1999 01 27.8772	1999 03 07.7714
Peri. Dist (AU):	1.755993 AU	2.152631 AU
Arg/Peri (2000):	138.8996 deg.	179.4942 deg.
Asc. Node (2000):	337.2882 deg.	303.8178 deg.
Incl (2000):	010.2186 deg.	019.0944 deg.
Eccen:	0.542909	0.652672
Orbital Period:	7.53 years	15.4 years
Ref:	MPC 32595	MPC 32866
Epoch:	1999 01 22	1999 03 08
Absol. Mag/"n":	8.6/4.0	6.5/4.0

More Mooning

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tiny craters in the arms! This is "catenoid" after the word "catena" which means, well, a string of craterlets.

Just south and west you'll find the slightly more elusive Triesnecker complex: there are up to 15 or more branches visible in this crosshatched area, so stay with it! You can spend a goodly time here and keep seeing more...

For lesser rilles, I like Rima Archytes (small, in Frigoris on the terminator) Rimae Theaetetus (a small group just east of Aristillus) and Rimae Fresnel (on the east edge of Autolycus in Palus Putredinus).

March 24 is the actual first quarter, and elevations will be theoretically at their best (but you won't see the difference).

Drop by Plato for a minute or two and see how many little craterlets you can spot in the floor. If you get five, your seeing is pretty good and so is your scope.

Plato at first quarter 7/1/98 through 6 inch F5 reflector at 133X. Sketch by Jane Houston

In eastern Mare Imbrium, there is a lovely arc of rilles toward the mountains from Archimedes: Bradley rille is the easier, but Hadley is more fun since it's the only rille men have ever looked at up close (Apollo 15).

Find the crater Davy and in the larger, flatter crater next to it you can see a fine chain of craterlets: Catena Davy. Find this and you'll know what a catena is — it's a fun word to toss around.

That large crater with the straight line in it just south of center near the terminator isn't a crater: it's the eastern part of Mare Nubium. And the line is the famous "Straight Wall," a fault where one side fell and went boom. Nearby, you'll see the small crater Birt, and near it Rima Birt, a most suggestive rille if seeing allows.

You can also catch Tycho in harsh light. It's an extremely well-formed crater where you can see terracing in great detail.

And as a final tidbit it's sunrise on Clavius. This is one of the great aesthetic times and places on the moon. Tonight and tomorrow night will show it entirely, and you shouldn't miss the fine arc of craters inside (doesn't look accidental, does it?)

March 25 is an amazing night! Copernicus!

Nothing more need be said. Find it and look everywhere nearby: it's all right there. Rilles? Gay-Lussac to the north. Catenae? Check Rima Stadius to the north of the crater of the same name. Secondary craters? Just look around. Domes? Look especially to the southeast, but all around — many with central craters. Craters? Copernicus is one of the finest, with delicate terraces and a rich collection of central peaks. Do not miss it!

Craters? Copernicus is one of the finest, with delicate terraces and a rich collection of central peaks.

A bit further south, linger a while on the crater group of Fra Mauro, Bonpland and Parry to the east of Mare Cognitum. They're all flattish sunken (or "ghost") craters with lots of rilles and ripples.

And near Hesiodus, you'll see the first part of a rille that will lead you, tomorrow night, to Palus Epidemarium and another amazing sight! Oh, and also tomorrow is sunrise on Sinus Irid(i)um — maybe the aesthetic event on the moon, with the last part of its arc hanging off into space!

By no means limit what you look at to this short list, or these few days. If you get clear weather, this is an incomparable time to shoot the moon, and I guarantee there will be much, much more than I'm mentioning here.

Shallow Sky

Akkana Peck

Mars continues to brighten and increase in size in March as it approaches its opposition on April 24. At the beginning of March, it rises before 11, and by the end of the month it's rising at 9 p.m.. If you have any interest in the red planet, be sure to start now if you want to be able to see detail during the opposition! Features on Mars are subtle, and observing them takes practice, perhaps more so than any other planet. The best way is to start observing Mars a few months before opposition — that means NOW! — and learn now to identify features. By the time the actual opposition comes, you'll be an expert.

It's late summer on the red planet's northern hemisphere (the one pointed toward us). The polar caps may still be retreating, so watch carefully from week to week and see what changes. It's fun to make sketches of the features you observe on planets; no matter what level your drawing skills (which will improve if you sketch planets often!), try making a sketch of the features you see, then compare it with what you see a week or two later. You might be surprised at the changes!

Hellas is expected to be bright, which means that it may be easy to mistake for the polar cap. Dark features visible should include Syrtis Major (a fairly easy feature which looks rather like India), and possibly Sinus Meridianus and Solis Lacus, the "Eye of Mars", which I found difficult to see in the last Mars apparition.

A Mars globe (see last month's column) or good computer program (GUIDE and STARRY NIGHT are two which show Mars features) can be invaluable for telling the two apart.

Ambitious observers may want to watch for the blue Syrtis cloud, which should appear dark green when viewed with a yellow filter, and for limb clouds (try a blue or violet filter).

There's more information on observing Mars on the ALPO page: http://www.lpl.arizona.edu/~rhill/

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Shallow Sky
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alpo/mars.html

Meanwhile, while you're waiting for Mars to rise, take a look at Mercury, Venus, Jupiter, and Saturn all clustered in the evening sky.

Saturn is the showpiece: still high in the sky in the early evening, the ringed planet is still a beautiful sight in any size telescope.

Venus is the unmistakably bright evening star, gaining altitude rapidly as March progresses, passing as it climbs first Jupiter, and then Saturn. On March 19, it sits only 2 1/2 degrees away from Saturn, with a slim crescent moon also nearby. Should be a lovely sight for naked-eye and binocular observers! Venus' disk remains gibbous all month.

At the beginning of March, Mercury is low in the western sky in evening twilight, and will lose altitude rapidly as the month wears on, becoming unobservable by mid-month and reaching inferior conjunction on the 19th. Get your Mercury looks in while you can! To the telescopic observer it should change rapidly from half-illuminated to crescent phase. On the 6th it passes within 4 degrees of Jupiter.

Don't miss your last chance for some time to get a look at Jupiter! The king of planets is low in the western sky at sunset, and will disappear behind the sun by the end of the month. The equatorial bands and the Galilean moons will still show, but this low in the sky, it will be tough to see much else. Bid a fond farewell to Jupiter: come back soon!

Uranus and Neptune are low in the dawn sky, too close to the sun for good observation. Pluto is a bit ahead of them, near the meridian by dawn, and should be observable by ambitious early risers.

Andrah Foundation Supports Loaner Program

Treasurer Bob Elsberry recently received a letter from the Andrah Foundation, a private charitable organization founded several years ago by Ruth S. Knoll and her husband Thomas Knoll. Paul and Ann Summers, recent members of the foundation are responsible for directing distributions from the west coast.

The Summers' letter was accompanied by a gift of $250 from the foundation. They recommmend, but do not require, that the gift be focused on community activities that promote awareness and interest in astronomy, and the Telescope Loaner Program. Many thanks to the Andrah Foundation!

A.S.P. Seeks Project ASTRO Volunteers

Train to be a "Visiting Astronomer" in Bay Area schools and community centers in 1999.

The Astronomical Society of the Pacific is seeking amateur and professional astronomers and advanced astronomy students to participate in Project ASTRO, an innovative program that matches amateur and professional astronomers with 4th-9th grade teachers in Bay Area schools and community centers.

Project ASTRO matches amateur and professional astronomers with 4th-9th grade teachers

Project ASTRO helps astronomers form an ongoing partnership with a teacher. Astronomers with an interest in education and some experience working with children or teens or presenting astronomy to the public are encouraged to apply. Astronomers attend a two-day summer training workshop with their partner teacher, receive a wide variety of activities and resource materials, work together to plan school year activities and programs and commit to make at least four daytime visits during the school year.

During the school year, visiting astronomers (depending on their interests) can help to lead hands-on activities, serve as a resource for teachers, organize evening observing sessions, create a school astronomy club, present auditorium programs, arrange field trips, or assist with science fair projects. The project's emphasis is on a hands-on, inquiry-based approach that research has shown is most effective in helping students learn the process of science.

The 1999-2000 training workshop is scheduled for Saturday, August 7th and Sunday, August 8th at NASA Ames Research Center in Mountain View. Participating astronomers are required to attend all or most of the workshop. Visits will begin in the fall of 1999.

The first application deadline (for preferred placement) is April 11, although applications will be accepted after this date. To request an application call (415)337-1100 ext. 101 or e-mail astro@aspsky.org. For more information contact Aimee Chang, Bay Area Project ASTRO Coordinator, at the Astronomical Society of the Pacific: (415) 337-1100 ext. 101 or check out our web site at www.aspsky.org.

Project ASTRO is funded by the National Science Foundation.

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"The Weekly Grind" In Progress at Houge Park

Morris Jones

Ed Erbeck says he likes to grind telescope mirrors with a check. Some of us like to try the more laborious methods.

Jane Houston has been the SJAA pied piper of mirror grinding this year, and several intrepid club members are trying their hand at manufacturing their very own telescope mirror.

Jane is an accomplished mirror maker herself, schooled by John Dobson and now his teaching assistant at the California Academy of Sciences for the past several years. Her homemade 10" Dobsonian "Stardust" was featured in the PBS production The Astronomers in 1991.

Assisting Jane is Dwight Elvey from Santa Cruz, who brings his valuable experience and Foucault test rig to each session. Tom Whittemore from Ohlone College's Astronomy Department is also joining the merry crew at the Houge Park class to help out.

Among the students is ten-year-old Mimi Wagner, who is making great progress on a six-inch mirror. Mimi's dad Mark is not one to be left out; he's working on a ten-incher of his own.

In the words of Jay Freeman, we're all having fun "turning Pyrex back into sand."

Mirror Grinding at Houge Park. Left to right are Mark Taylor, Bill Arnett, Jane Houston, Jim Van Nuland, Jay Littlefield, David North, Akkana Peck, and Mike Koop

Y2K strikes the SJAA!

Paul Barton reports that the club's eleven inch Compustar has a Y2K problem.

On Paul's eight-inch Compustar (and others like it), dates are assumed to be in the 1900's. The operator only enters the year — 80's and 90's only — but the year 00 cannot be entered.

Several years ago, Jim Van Nuland suggested going back 4 years might work, and it does! The years 1995 through 1999 all work okay; the scope will polar align and go to designated objects reasonably accurately.

Although this scope is a bit cranky, Paul says, it was truly an eye popping demonstration when it was introduced 20 years ago by Kevin Medlock.

Celestial Calendar March 1999

Richard Stanton

LUNAR PHASES (Dates PST):

	Time	Date	Rise	Trans	Set
FM	22:59	01	17:44	00:26	06:25
LQ	00:40	10	01:13	06:24	11:34
NM	10:48	17	06:28	12:25	18:29
FQ	02:18	24	11:36	18:54	01:15
FM	14:49	31	18:29	00:35	06:05

NEARER PLANETS:

Date	Rise	Trans	Set	R.A.	Dec.
Mercury — Dist. 0.63 A.U., Mag. 0.6					
07	07:01	13:16	19:32	00:08.3	+03:40
17	06:11	12:24	18:37	23:57.6	+03:38
27	05:19	11:18	7:16	23:30.0	-01:14
Venus — Dist. 1.32 A.U., Mag. -4.4					
07	07:48	14:11	20:36	01:01.7	+06:02
17	07:37	14:17	20:58	01:46.7	+11:00
27	07:28	14:23	21:19	02:32.6	+15:33
Mars — Dist. 0.76 A.U., Mag. 1.2					
07	22:23	03:48	09:09	14:38.9	-13:11
17	21:47	03:11	08:31	14:41.8	-13:27
27	21:05	02:30	07:50	14:39.8	-13:23
Jupiter — Dist. 5.92 A.U., Mag. -2.1					
07	07:21	13:28	19:35	00:20.5	+01:01
17	06:48	12:57	19:07	00:29.2	+01:58
27	06:14	12:27	18:40	00:38.1	+02:55
Saturn — Dist. 9.25 A.U., Mag. 1.0					
07	08:31	15:04	21:38	01:57.3	+09:34
17	07:54	14:29	21:04	02:01.4	+09:58
27	07:18	13:54	20:30	02:05.8	+10:23

SOL Star Type G2V Intelligent Life in System ?

Hrs of Dark.	Dt.	Rise	Trans	Set	R.A.	Dec.
09:30	07	06:30	12:19	18:08	23:09.6	-05:24
09:04	17	06:15	12:16	18:18	23:46.4	-01:28
08:37	27	06:00	12:13	18:27	00:22.8	+02:28

ASTRONOMICAL TWILIGHT:

Julian Date	Dt.	Begin	End
JD 2,451,244	07	05:04	19:34
254	17	04:49	19:44
264	27	04:32	19:55

SIDEREAL TIME:

Transit Right	07	00:00 = 10:50
Ascension at	17	00:00 = 11:30
Local Midnite	27	00:00 = 12:09

DARKEST SATURDAY NIGHT:

13 Mar 1999

Sunset	18:14
Twilight End	19:40
Moon Rise	03:43
Dawn Begin	04:55
Hours Dark	09:15

Lunar Occultation of Aldebaran Tonight

The Chronicle of a Net Community 26 Jan 1999

Bill Arnett
David North
Mark Wagner
Jane Houston
Jay Reynolds Freeman
Morris Jones

18:09:45 PST Bill Arnett

If the weather cooperates (or if you happen to get a hole at the right time), there will be an occultation of Aldebaran visible from the Bay Area this evening at about 11:30pm. The reappearance will be a little after 12:30am.

18:14:01 David North

I've got large holes here and there will be occultations of Hyades all evening. Right now there are four good ones marching on the dark limb... no need to wait!

19:09:18 Mark Wagner

7:00 p.m. in Los Gatos.

I'm half tempted to break out a scope, but those wobbly stars and bright moon don't look like such a good combination.

19:19:12 David North

Just registered my first one at 7:14 on the nose (mag 4.97 75 Tauri about 10 seconds or so off Starry Night's prediction, and that's just using my watch...)

21:52:42 Bill Arnett

I caught the occultation of SAO 93981; now waiting for 94004 (expected at about 10:30) before 94027 (aka Alpha Tauri :-) at 11:35.

22:40:30 Jane Houston

It is soooooooo clear here in central Marin! The moon is awesome tonight. Anyone up with a clearish sky shouldn't miss is. It's the stuff dreams are made of!

Continued on page 9

Minutes of the Meeting of the SJAA Board of Directors

January 30, 1999

Bill Arnett

The meeting was called to order by President Ed Erbeck at 6:42pm at Houge Park. All directors were present (eventually) except Terry Kahl who was excused.

We discussed the issue of having a host at our dark sky parties. The consensus seemed to be that we could try to have someone there with a little sign and some membership materials for a fairly small amount of effort. We also agreed that we would drop references to Henry Coe State Park from our calendar of events. Bill A and Mike agreed to try to find a "host" for the upcoming Fremont Peak events.

Bill A suggested that we might want to charge a small fee for the use of the loaner scopes. This was rejected. But we Mike may start mentioning to the borrowers that a small donation toward the upkeep of the scopes would be appreciated.

Mark will talk to KTEH about having them announce SJAA activities.

As of the time of the meeting only 13 APDs were left unsold (a few more sold later that night). This has raised over $400 for the club! Nice work, Mark.

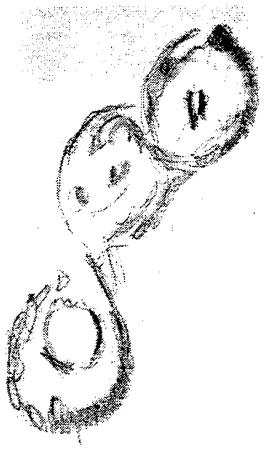
Bill agreed to print some ballots for the election next month just in case there is a nomination from the floor.

We agreed to get a PO box for the club so that SJAA correspondence doesn't have to go to Bob Elsberry any longer than necessary. Ed agreed to go to the Post Office to set it up.

WE STILL NEED A TREASURER! Dave North has agreed to do the maintenance of the membership list. But we need someone to handle the money.

We elected Morris Jones to be our AANC representative since he has been doing it unofficially anyway. He wasn't there to object so we hope he doesn't mind :-)

The meeting was adjourned at 7:50.



Theophilus, Cyrillus and Catharina through 6 inch F5 reflector at 133X at first quarter moon on 6/30/98 . Sketch by Jane Houston

The Morrison Planetarium and the Astronomical Association of Northern California present

Astronomy! Space! The Future!

A One-Day Workshop on Saturday March 27, 1999 in the May Treat Morrison Auditorium and Morrison Planetarium

Speakers will address topics including:

Dr. Alex Filippenko of UC Berkeley - What is the Future of the Universe? Is the Universal Expansion Accelerating? Will grand cosmological questions be resolved by new observations?

Dr. Alan Binder of the Lunar Research Institute and NASA AMES- Our Future On The Moon: Does the discovery of ice on the moon renew our vision of lunar observatories? The latest on the Lunar Prospector Mission.

Dr. Jeff Moore of NASA AMES- What is the future of Mars exploration and beyond?

What might future missions to comets and asteroids reveal?

Dr. Debra Fischer of SFSU - The Quest for Earthlike Planets: When might we discover worlds like Earth?

Dr. Dan Werthimer of Project Serendip - "IS ANYBODY OUT THERE?" subtitle: "The Future of SETI: the 1 HT telescope,SETI@home, SERENDIP and Optical SETI"

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What are the goals and trends in amateur astronomy? What does the future hold for amateurs?

How will we encourage young astronomers? Hear what a panel of prominent amateur astronomers have to say.

A full day of exciting science for the general public.
Includes admission to the Academy and a Planetarium ticket.

For more information and pre-registration:
Morrison Planetarium Office: (415) 750-7127, 10-6 M-F
California Academy of Sciences,Golden Gate Park,San Francisco Ca

Registration fees are as follows:
Advance Registration: $20.00
10-18 years of age: $10.00
Registration at the door (all ages) $25.00.

More exciting speakers may join us, so for up to date information, please visit the AANC web site at
www.lhs.berkeley.edu/sii/AANC/aanc.html

Bing!
Continued from page 7

23:35:43 David North
Aldebaran Is Gone!
11:35:45 by my watch, dead bang. No lingering at all. It just went off like a light.

No problem seeing the red tint on that sucker!

23:45:00 Jane Houston
Aldebaran occultation has begun! It's 11:24:50 exactly! Gorgeous!! More on the other side. Now I'm gonna enjoy the moon for a while! 11:34:50 I meant! Just call me a lunatic!

23:45:23 Bill Arnett
Bing!

23:57:25 Jay Freeman
Aldebaran disappeared more or less on schedule, and the Moon looked more or less like a pile of rocks, which is more or less
what it usually looks like...
-- Jay Freeman, Deep Sky Weasel

00:25:32 Jane Houston
It's nice to know that some of you are sharing the sky with me!

00:46:03 Morris Jones
At least I got to see Aldebaran reappear. Luckily Jane left behind her short-tube 80, and I found a camera tripod ...

00:48:03 Jane Houston
12:37 to the second. There it reappeared. Now everybody (is anybody out there??) please go and look at Sinus Iridum! Be-you-tee-full

00:50:33 Bill Arnett
:-) Why is something so simple so cool?

A strange way to share an evening but what the heck, it works doesn't it!

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Mike Koop 446-0310

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Submit

Members are encouraged to submit articles for publication in the SJAA Ephemeris. Send articles to the editors via e-mail to ephemeris@whiteoaks.com.

SJAA Loaner Scope Status

All scopes are available to any SJAA member; contact Mike Koop by email or by Phone at work (408) 473-6315 or home (408) 446-0310 (Leave Message).

Stored Scopes

These are scopes that are available for immediate loan, stored at other SJAA members homes. If you are interested in borrowing one of these scopes, please contact Mike Koop for a scope pick up at any of the listed SJAA events.

#	Scope Description	Stored by
7	12.5" Dobson	Morris Jones
8	14" Dobson	Ralph Seguin
18	8" Newt/ P Mount	Mike Rupe
24	60mm Refractor	Akkana Peck
26	11" Dobson	Raymond Brinson
30	7" f/9 Newt/Pipe Mount	David Manley

Current Scope Loans

These are scopes that have been recently loaned out. If you are interested in borrowing one of these scopes, you will be placed on the waiting list till the scope becomes available after the due date.

#	Scope Description	Borrower	Due Date
1	4.5" Newt/ P Mount	Kevin Lemay	04/08/99
3	4" Quantum S/C	Manoj Khambete	03/05/99
6	8" Celestron S/C	Slone Wiktorowicz	04/30/99
15	8" Dobson	Ron Gerber	04/23/99
16	Solar Scope	Jim Van Nuland	03/05/99
19	6" Newt/P Mount	Nilesh Shah	04/22/99
21	10" Dobson	Eric Anderson	03/05/99
23	6" Newt/ P Mount	Monica Patterson	02/13/99
27	13" Dobson	Bud Wittlin	05/01/99
31	8"/f8 Dobson	John Templeton	04/30/99

Extended Scope Loans

These are scopes that have had their loan period extended. If you are interested in borrowing one of these scopes, we will contact the current borrower and try to work out a reasonable transfer time for both parties.

#	Scope Description	Borrower	Due Date	Notes
2	6" f/9 Dob	John Paul De Silva	?	0
4	60mm Refractor	Del Johnson	Indefinite	
9	C-11 Compustar	Paul Barton	Indefinite	
28	13" Dobson	Ramin Ghafouri	03/12/99	
29	C8, Astrophotography	Alexander Koczur	03/01/99	

Notes:

0. If you know how to contact John Paul De Silva please call or send mail to Mike Koop.

Do you have some space to store a scope or two? Please E-mail Mike.

Waiting List:

#	Scope Description	Borrower
16	Solar Scope	Dave North
?	A Newtonian?	Darryl Lambert

Gassendi on the terminator July 4, 1998

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

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San Jose Astronomical Association Membership Form

New __ Renewal __
Membership - $15
Junior (younger than 18 years old) - $6
Sky and Telescope - add $27 to membership
(Sky & Tel will not accept multiyear subscriptions)

Make checks payable to "SJAA"

Bring this form to any SJAA Meeting
or send (along with your check) to
Bob Elsberry, Treasurer
San Jose Astronomical Association
5380 Pebbletree Way
San Jose, CA 95111-1846
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