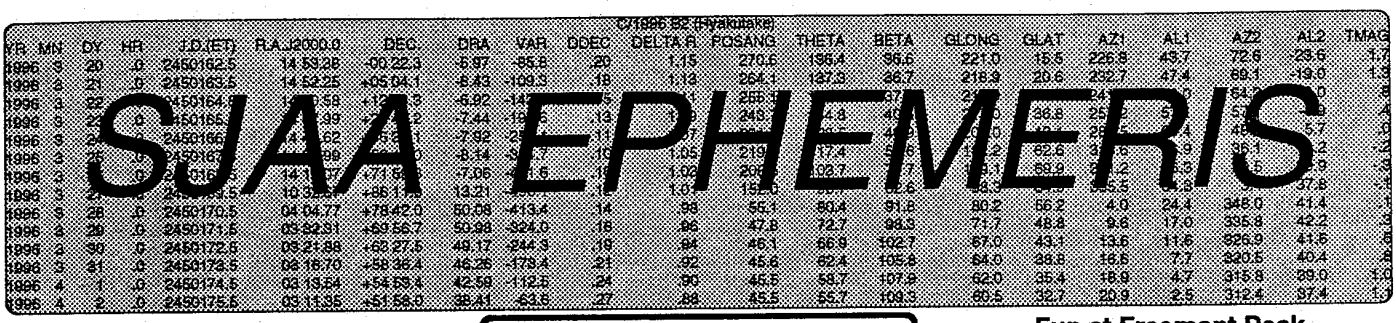

Eye on Everything
by Lew Kurtz

Well, there were no celestial sparks to be seen here in California on the night of the Leonids. However, if you managed to catch the tail end of the board meeting, you saw some good sparks there instead. Basically, there was great debate about whether or not Mark Wagner is a board member. As a result of this, Rich Neuschaefer and Ed Erbeck have resigned their board seats. Also, Bob Madden has resigned hisboard seat. (This is not intended to be biased, but these issues are so charged with emotion by now that I have probably offended several people. If I have, please accept my apologies, I am just trying to be the messenger.)

Jack Zeiders and Paul Mancuso have been elected by the board (or at least most of it) to fill two of the vacant seats. Two seats are still open.

Two amendments to the club's by-laws were passed by the board of directors at the September meeting. One fixed officers' terms at one year. The other required that board members must also be club members.

The club no longer has a home page. If anybody is interested in creating one for the club, please contact a board member.

Ed Erbeck is starting up a mentoring program. Please call him (408-379-5413) if you wish to help, or be a mentoree.

Jack Zeiders has volunteered to be the Observational Astronomy Class leader next year.

If you send me an article to publish, or an Astro Ad to run, and you don't see it in the next Ephemeris,

continued on page 2, see **Eye**

Activities Calendar

December

7 Star parties at Henry Coe and Freemont Peak state parks, also Hall's Valley Astronomical Group at Grant Ranch. Sun set 4:49 pm, 8% Moon rise 4:48 am.

13 Houge park star party. Sun set 4:51 pm, 16% Moon set 8:36 pm.

21 General meeting, Speaker TBA.

24 hour News and Information:
SJAA Hotline: **408-559-1221**

For January dates, call the hot line.

Fun at Freemont Peak
Jay Reynolds Freeman

I was at Fremont Peak State Park, near San Juan Bautista, California, on the night of 9-10 November, 1996. The night began inauspiciously, with moderate cloud cover after a rather overcast day, but the sky cleared as the evening wore on. There was no fog below to turn off the lights of cities and towns, but clear sky made for high transparency and good viewing. I was set up with my 6-inch f/10 Intes Maksutov, mostly chasing down Messier objects in the winter sky.

Even though I had viewed it before with this instrument, I started the evening with a low-magnification view of the Pleiades. I used my old 55 mm multi-coated University Optics Plossl, an eyepiece that I actually had not taken out of the box for a few years. The eye relief is several inches -- almost too long, and that and a rather narrow apparant field -- the design diameter of the Plossl's front lens would more than fill the two-inch barrel -- had made me forget how good it is. In any case, I was rewarded with the best view of the Pleiades nebulosity I have ever encountered. I have seen the Merope nebula many times before, but this was the first occasion on which I have been willing to call it bright and obvious. There was lots more wisby nebulosity in the cluster, too.

M42/43 was nice with the same eyepiece, and showed noticeable variation in color -- bluish-green near the Trapezium, warmer tones at the high-contrast boundaries of the "wings" of the nebula, and in M43. I added magnification to look at details. M1 showed its rather characteristic roast-chicken

continued on page 2, see **Fun**

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Fun, continued from page 1

shape, and at 150x hinted of structure within the plasma cloud.

I spent a lot of time looking at the Horsehead. Some folks were set up with a 20-inch Dobson and a Lumicon H-Beta filter, and had an excellent view of it. I had two filters -- an Orion UltraBlock and an old, old, Celestron LPR filter, one of the lime-green ones that date from the era when there was only one kind. I tried each of them on each of three eyepieces, and also viewed unfiltered. I was able to hold the Horsehead with averted vision in my 6-inch Intes at each of 27x, 38x, and 47x, both unfiltered and with the old Celestron LPR, but I could not see it at any of those magnifications with the UltraBlock. All nine combinations of eyepiece and filter (or no filter) showed NGC 2023 and 2024, as well as IC 435, easily. (NGC 2024 is sometimes called the "Flame Nebula" or -- more descriptively, I think -- the "Tank Tracks". It lies NE of zeta Orionis. The other two are nebulae surrounding stars that lie S or SE of zeta.)

The pieces de resistance for the night were dwarf galaxies. I had had a nice session looking at the Sculptor Dwarf from this site a month or two ago, mostly with other peoples' equipment, and was anxious to try it with the Intes. I also had a new, rather interesting, special dwarf galaxy filter, intended to put the lie to the common misconception that no filter will help with galaxies, and I was anxious to try it out. At 27x, with the 55 mm Plossl, I had no problem chasing down the Sculptor Dwarf again, though it helped greatly to know exactly what I was looking for and exactly where it was. The little whizmo dwarf galaxy filter seemed useful, too. Then I went looking for the Fornax Dwarf, which is fainter than the Sculptor one, but smaller, hence of similar surface brightness. Small size helps in another way, for the Sculptor Dwarf is so large that at many magnifications it more than fills the field -- one must swing the telescope from side to side to detect it. Anyhow, I found the Fornax Dwarf. I had actually seen part of it once before -- there is an embedded globular cluster, part of this galaxy and not merely a foreground object in our own, that is bright enough for an NGC number. But it was neat to detect the pale glow of the main system. The golly gosharootie dwarf galaxy filter seemed to help with the Fornax Dwarf, too, though I did not need the filter to see it. About then Rich Neuschaefer came by. I was pleased to be able to show him the Fornax Dwarf, and he, too, upon consideration agreed that the supercalifragilisticexpialidocious dwarf galaxy filter gave a net improvement in visibility. How neat to be on to something that the LPR marketing mavens have missed!

Before I packed to go home, I continued the Messier survey with my 10x50 Orion UltraView binocular that I have described here before. There were no surprises or difficult objects on its agenda that evening -- toughest was M78, which was very easy compared to M74 and M76, which I had looked at a month ago. M42/43 showed a wealth of detail in the binocular, and the winter Messier galactic clusters were all at least granular and some -- like M41, M46, M48 and M44 -- well resolved. I am pretty confident that the 10x50 will allow much easier detection of all 109 Messier objects on my list, than did the 7x50 with which I made my first Messier survey, nearly 20 years ago. On the way out, I chased down some other members of the local club, who had set up in a different part of the park. There was an interesting array of equipment - one person had a new 180 mm f/9 Astro-Physics refractor, someone else had a Traveler, and there was an interesting hybrid, a "Zeisstrophysics", comprising a 100 mm Zeiss lens with an Astro-Physics tube and mount. There were a handful of fair-sized SCTs, up through a Meade 12-inch LX200, and a modest array of Dobsons and smaller instruments. We tried to split gamma-two Andromeda in the 12-inch Meade, but had no luck -- seeing was too ratty. The AP 180 was giving wonderful views of M42/43, with lots of color. I coffeed up for the drive home, chatted a while, and left.

Well, I was going to tease you about the detailed identity of the little wonder dwarf galaxy filter, but I am feeling generous and so will forbear. It is not a high-tech multi-layer sculptured-bandpass tribute to the vacuum-depositor's art at all. It is a Wratten 12, a conventional broad-band photographer's filter of a kind available for generations. This filter appears medium yellow in transmission, because its spectral bandpass eliminates essentially all of the blue. In fact, it is commonly called a "minus blue" filter. Dwarf galaxies are made up almost entirely of old population II stars, and you know what? They're red.

Eye, continued from page 1

please call me and point it out to me. In the flood of e-mail I sometimes get, I miss things (I just found a couple of Astro Ads and an article that should have been in a month or two ago. My apologies to the sellers/author).

Jay Freeman gave a great talk on binoculars at the November general meeting. He talked about the optical properties of the glass, coatings, and prisms; the mechanical properties of the hinge, focusing mechanisms, prism holders; the types of eyepieces used; importance of exit pupil size and eye relief; the best way to hold binos; what you can see with binos; effects of dust and water (whether or not binos can float!). And he didn't take his hack saw out once!

All articles in this Ephemeris where written by club members

Dear SJAA Board,

While I still enjoy amateur astronomy and helping the public learn about amateur astronomy, I feel the actions of a few of the SJAA Board members are so disgusting I have no interest in remaining on the SJAA Board.
I resign.

Sincerely,
Richard W. Neuschaefer

Lunar Eclipse, West Valley College

Rich Neuschaefer

West Valley College had a huge turnout for their first annual Moon Festival that featured a full lunar eclipse as the main attraction. Professor Tom Bullock and Jaime Ebright coordinated the event. The festival activites included new age music, Chinese dancers, food and telescopes. Orion Telescope and Binocular Center donated a 60mm Orion refractor as a prize for the raffle. Ch 11 KNTV news was there doing a live remote for their early evening news. They also ran some tape of the event on their 11pm news program. The event was was held on the Practice field at the east side of the campus. Jim Bartolini, Dean Linebarger and I were the SJAA members in attendance. The event ran from 5:30pm until about 9:00pm.

The college had predicted an attendance of about 250 people. The attendance was much larger than expected. The school ran out of admission tickets. Tom and Jaime estimated there were between 500 and 1000 people. It was a fun family oriented event.

We thought there would only be 4 or 5 telescopes so we were lucky that several people who had heard about the event on the news brought telescopes. We had at least a dozen telescopes in all, ranging in size from 60mm refractors to a Celestron 14" SCT. A few people needed help with their telescopes. Jim helped a West Valley student collimate her new 8" Dob and I helped a woman set up her new 60mm refractor. She very much wanted to see Saturn.

Jim brought his 80mm refractor, Dean brought his 130mm refractor and his 80mm binoculars, and I brought my 100mm and 155mm refractors. We started looking at Jupiter and M22. Then as the moon climbed above the haze we pointed some of the telescopes at the already darkened moon. It was a strange sight since only the night before the moon was very large and bright. Now is was a deep red/orange and gray.

Jupiter showed very nice banding in the early evening. There was a dark bar on the lower side of the NEB. Three moons were on one side and one on the other with a few background stars in the field of view.

Saturn was a little below and to the right of the moon. As it got higher many of the telescopes that had been pointed at Jupiter turned to Saturn. By 8pm Saturn was high enough to be very sharp. It was a real crowd pleaser. There were very long lines of people at every telescope.

I handed out SJAA flyers I had made with one side showing the front page of the September "Ephemeris" with the listing of upcomming SJAA events and the other side giving general information about the club. I also handed out other astronomy information sheets I had made about the objects in the solar system and deep sky objects.

Sometime near 8pm the sprinklers came on in the field next to ours. We got a few sprinkles but thanks to the quick action of bystanders and the college grounds crew the sprinklers weren't a big problem.

The fog rolled in a little after 9pm. The first annual West Valley College Moon Festival looked like a great success. Everyone seemed to have a good time. One 10 year old was telling his mother and sister, sure you could see the moon but Saturn was so far away it would only look like a star. They had been looking through my 4" scope at the moon at low power, about 25x. I suggested he have a look through my 6" scope. I said he could get a good look Saturn. He had a very skeptical look on his face but he walked around and got in line. In a little while he got to climb up the ladder and look into the eyepiece. It was great to see his face. He started describing all the features he could see on Saturn and the rings. He came "bouncing" down from the ladder saying "fresh" and "tight". I think he liked the view.
Rich

Periodical Publication Statement

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

San Jose Astronomical Association

Henry Coe Park Status

Jim Van Nuland

The knoll where we have been observing since the mid-70's has been remodeled, and is going to be the site for a new ranger's residence. The house has been delivered, but will not be occupied for another month or two. The western half of the site is still usable, but more of that will be used to make a yard. We have permission to use the site on Nov.16. Once the house is occupied, the site will probably not be available.

The old gate has been removed, and another placed across the road just past the observing site. The road to the water tanks remains accessible for our use, for the present.

It was suggested that we should consider the corral, and I will look at it next time I'm there (November 16 if the weather is okay). There is a small parking area at the beginning of the campground road, but it would support only a few people, with a bit of a walk from vehicle to scope.

So it seems likely that we will move back to the overflow parking lot, 1/2 mile before the buildings. It is much bigger, much flatter, and not dusty (gravelled). The tree at the south end is smaller than the one at the upper site. We would still be considered a park activity, so we would not be required to pay use fees. Some of the campers would walk over; others would drive down. On the negative side, the lights of San Jose are visible, and passing cars, coming and going, will sweep headlights across the site.
[JVN wrote this on Oct 18. -Ed]

Members are encouraged to submit articles for publication in the SJAA Ephemeris. Send articles to Lew Kurtz (via e-mail to lewkurtz@aol.com; fax - 720-9726; or a text file on a 3-1/2" diskette; or typed or hand written to 1336 Bobolink Circle, Sunnyvale, CA, 94087). Articles received by the 10th will be put in the following month's newsletter. Please include your name and phone number.

COMET COMMENTS, Nov 6, 1996

by Don Machholz

Comet Hale-Bopp continues to brighten as it passes north of the sun and into the morning sky as 1996 draws to a close. Northern Hemisphere observers will have difficulty seeing it for a few weeks, while Southern Hemisphere observers won't see it until May 1997. While **Comet Hale-Bopp** has developed jets near the nucleus and a tail a few degrees long, **Comet Tabur** began to fade rapidly in late October. This was unexpected and it is unusual behavior for a comet. It may now be fainter than the adjusted magnitude estimates listed in the ephemerides below.

Several comets should be easily visible to us in 1997. **Comet Hale-Bopp** will likely be the brightest, reaching perihelion in late March. Between January and June, **Periodic Comet Wild 2** will reach magnitude ten in the northern evening sky. At nearly the same time **Periodic Comet Wirtanen** will be of similar brightness. **Periodic Comet Encke** is visble to the Souther Hemisphere in mid-summer. Toward the end of the year **Periodic Comet Hartley 2** may reach binocular visibility in the evening sky, while **Periodic Comet Tempel-Tuttle** crosses through the north polar region at magnitude nine. In addition to these returning periodic comets, on never knows when and where new comets will be discovered.

Ephemerides

C/1995 O1 (Hale-Bopp)						C/1996 Q1 (Tabur)				
DATE	R.A.	Dec	EL	Sky	Mag	R.A.	Dec	EL	Sky	Mag
00 UT	2000					2000				
11-23	17h56.4m	-01°31'	35°	E	4.4	15h45.8m	+25°52'	46°	M	9.6
11-28	18h01.1m	-00°58'	33°	E	4.2	15h51.2m	+23°37'	45°	M	10.0
12-03	18h06.2m	-00°22'	31°	E	4.1	15h55.9m	+21°36'	45°	M	10.3
12-08	18h11.6m	+00°18'	29°	E	3.9	15h59.9m	+19°47'	45°	M	10.6
12-13	18h17.3m	+01°03'	28°	E	3.7	16h03.5m	+18°09'	46°	M	10.9
12-18	18h23.4m	+01°57'	27°	E	3.5	16h06.7m	+16°40'	47°	M	11.2
12-23	18h29.9m	+02°53'	27°	E	3.3	16h09.5m	+15°20'	48°	M	11.5
12-28	18h36.8m	+03°55'	27°	E	3.1	16h11.9m	+14°08'	50°	M	11.8
01-02	18h44.0m	+05°05'	28°	M	2.9	16h13.8m	+13°04'	53°	M	12.0
01-07	18h51.8m	+06°23'	29°	M	2.7	16h15.4m	+12°06'	56°	M	12.2

Orbital Elements

Object	Hale-Bopp	Tabur
Peri. Date	1997 03 31.86770	1996 11 03.50419
Peri. Dist (AU)	0.9170703	0.84001480
Arg/Peri (2000)	130.40061°	057.37495°
Asc. Node (2000)	282.46983°	031.41231°
Incl (2000)	089.38442 °	073.36167°
Eccentricity	0.99674010	1.0
Orbital Period (yrs)	4700	long period
Reference	MPC 27287	MPC 27882

Celestial Calendar - Dec1996

Richard Stanton

Lunar Phase	time (pst)	date	rise	trans	set
LQ	21:08	02	23:59	05:39	12:13
NM	08:56	10	06:56	12:10	17:24
FQ	01:32	17	12:24	18:40	00:55
FM	12:41	24	17:20	00:36	06:57

Mercury Dist: 0.96 AU Mag: -1.4

date	rise	trans	set	RA	Dec
07	08:44	13:21	17:58	18:17.5	-25:44
17	08:50	13:33	18:16	19:10.3	-24:04
27	08:05	12:57	17:50	19:17.9	-21:20

Venus Dist 1.47 AU Mag -4.1

07	04:51	10:05	15:19	15:02.9	-15:35
17	05:14	10:16	15:18	15:53.2	-18:53
27	05:36	10:29	15:22	16:45.3	-21:21

Mars Dist 1.30 AU Mag +0.1

07	00:03	06:26	12:49	11:24.6	+06:11
17	23:43	06:03	12:21	11:40.9	+04:38
27	23:22	05:38	11:52	11:55.5	+03:16

Jupiter Dist: 6.00 AU Mag: -1.9

07	09:36	14:26	19:15	19:25.5	-22:17
17	09:05	13:56	18:46	19:34.8	-21:58
27	08:34	13:26	18:18	19:44.4	-21:36

Saturn Dist: 9.33 AU Mag: +0.9

07	13:08	19:05	01:06	00:06.4	-01:59
17	12:29	18:27	00:28	00:06.9	-01:53
27	11:51	17:48	23:46	00:08.1	-01:43

SOL Star Type G2V Intelligent Life in System ?

07	07:09	11:59	16:49	16:57.2	-22:39
17	07:17	12:04	16:51	17:41.3	-23:22
27	07:21	12:09	16:57	18:25.7	-23:18

Astronomical Twilight	Begin	End
JD 2,450,425 07	05:37	18:22
JD 2,450,435 17	05:43	18:25
JD 2,450,445 27	05:48	18:30

Sidreal Time

Transit Right	07	00:00	=	04:57
Ascension at	17	00:00	=	05:37
Local Midnight	27	00:00	=	06:16

Darkest Saturday Night:	07-Dec
Sunset	16:49
Twilight End	18:21
Moon Set	14:58
Dawn Begin	05:37

Astro Ads

Celestron 5 Telescope: Execellent Celestial Photography, special coatings, 12 & 25 mm oculars, tripod, wedge, case, Camera Adapter, Spotting Scope. Makes excellent 1300mm Camera lens, paid $1400 in 1987, Asking $850.
Rick 408-377-3717

Astro-Physics 155mm f9 EDT APO, opitcal tube assembly. Great condition, beautiful images. This is a Super ED triplet APO. Comes with case, 2" and 1 1/4" Astro-Physics adapters. $3195
Rich (w)408-285-0730

Celestron C8 fork mount with Byers Drive, wedge, adjustable tripod, and dual axis quartz drive, $325 or best offer.
Dave 415-859-3742 (day)
415-858-0327 (evenings).

6"f/5.6 Newtonian Reflector, Optical Tube Assembly $200. **Takahashi EM-10 Eq. mnt,** with hardwood tripod, $1,500. New **Vixen GP Eq. mnt (Head)** with Polarscope $475. Used **Vixen GP Eq.mnt (Head)** with Polarscope $395. Used **Aluminum tripod** with a new half-pier ext. tube $125 (with GP mnt only). Two sets avail. **DD-1 Dual axis controller** with two stepping motors. $275 (with GP mnt only). **Vixen GA-4 illuminated guiding eyepiece** (.965"size) $95. **Takahashi Tube mounting bracket** for 16mm O.D. tube, $85.
Lots of eyepieces
Many other items.
Ken Miura 408-456-7408 (work)
408-867-8689 (home)

Orion 60mm Altazimuth Mount Refractor originally $250, asking $125. Also includes 3 eyepieces and mag 6 Edmund Scientific sky atlas
Eileen Reinoehl 408-356-2271

Brand new **Celestron C90** spotting scope model 81011 with special coating, 45 degree erect image diagonal, 25mm sma wide angle lens, and a celestron hard case $275. Also a **20" by 2 1/8"** astronomy pyrex glass mirror blank from Newport Glass $700
Loran 408-733-1110

Telescope Loaner Program Status
Paul Barton

No.	Scope Description	Borrower	Due Date
1	4.5" Newt/P Mount	Robert Dannels	1/7/97
3	4" Quantum S/C	Stephen Shoop	11/23/96
6	8" Celestron S/C	Glen Yamasaki	12/06/96
7	12.5" Dobson	Tim Sanstrom	12/09/96
8	14" Dobson	being upgraded	
9	C-11 Compustar		see note2
15	8" Dobson	Rudy Norvelle	12/24
16	Solar Scope	Jack Peterson	indefinite
18	8" Newt/P Mount	Ram Saxena	12/12/96
19	6" Newt/P Mount	Steve Wurzburg	12/03/96
21	10" Dobson	Ravi Tembhekar	11/23/96
23	6" Newt/P mount	Mike Bennett	12/06/96
24	60mm refractor	Sridhar Lakshmikanthan	12/25/96
26	11" Dobson	Alex Crichton	01/01/97
27	13" Dobson	Bob Bart	12/26/96
28	13" Dobson	Doug Snyder	12/04/96
29	SP-C8 Optical Tube	Bob Madden	indefinite
30	7" f/9 Newt/pipe mount	**available**	

Notes: 1. Waiting list: Robert Dannels for C-8
2. Need a regular operator for club's C-11.
3. Scopes will normally be renewed for another month or two if no one waiting AND you call.

All scopes are available to any SJAA member. Call Paul at 377-0148.

Celestron Firstscope 60 EQ: "like-new" condition (less than 3 months old). Recently bought a larger scope. 60 mm equatorial refractor. Includes 20 mm, 12.5 mm, and 2X .96" Barlow lens. Asking $90.
Mike (w)408-256-0881.

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