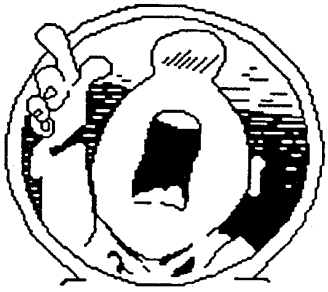
SJAA EPHEMERIS

VOLUME 6 NUMBER 4 OFFICIAL PUBLICATION OF THE SAN JOSE ASTRONOMICAL ASSOCIATION April 1995



The Eyepiece
by Bob Madden

How many days this year have you been able to get outside after dark to do some observing? Not many? Mark Wagner has a report from Fremont Peak that will make your mouth water. By the way, what have you been doing astronomically this winter? Humm!

I had a "CRASH" the other day with my disk drive. You know the one with all the past Ephemeris', text files for publication, and mailing list. Jim Hodgers has gone on vacation and I won't be able to get an up dated list from him so some may be overlooked and not get their Ephemeris on time.

Have I learned any thing about backing up? You bet I have! When the drive started to act up, I should have stopped and performed a back up. I thought good old Norton Utilities would save the day. Wrong! So I've had to start over again with a 1993 version. It is working, but all of the text files and mailing list is gone for ever. Sigh!

We received a letter from Bernal School about, our member, Bob Ashford. Bob has developed a very good program for school children. Bob started in Palo Alto several years ago. In fact you may have seen Bob mentioned in one of the astronomy magazines several years ago. Good job Bob!

I have acquired several articles by Val Germann through the internet. I find them interesting and will pass them on to you as time (or space) will permit. I think you will find them interesting also.

April 1: Star party, Coe. Sset 6:29 pm, 4% moon sets 8:21 pm.
April 2: Start of Summer time (DST darkness squandering time)
April 7: Star Party, Houge Park. Sset 7:35 pm, 49% moon sets 2:19 am.
April 8: NO General Meeting, SWAP/AUCTION at Houge park
April 15: Observational Astronomy Class, Houge, 8:00, Jack Petersen
April 22: Star party, Coe Park. Sset 7:47 pm, 39% moon rises 2:53 am. ALSO: Public star party at Grant Ranch County Park.
Apri 29: Star party, Fremont Peak. Sset 7:53 pm, 0% moon sets 8:08 pm.
May 5: Star Party, Houge Park, Sset 8:01 pm, 33% moon sets 0:55 am.
May 6: Astronomy Day. Above plus Solar scope at Milpitas Library.
May 13: General Meeting at Houge Park 8:00pm. preceeded by the Board meeting at 6:15. Dr. Ken Croswell of Berkeley, topic: the Milky Way. (He has lead article in April S&T)
May 20: Observational Astronomy Class, Houge Park, 8:00 pm Jack Petersen
May 27: Star parties, Fremont Peak and Coe Parks. Sset 8:17 pm, 1% moon rises 5:30 am. ALSO: Public star party at Grant Ranch County Park.
Swap/Auction: April 8, 2:00 pm
RTMC May 26,27,28,29 at Camp Oakes, Big Bear, Ca.
Lassen Star Party: Aug. 24 - 28

The **Ephemeris** is published by
The San Jose Astronomical Association
240 S 12th Street
San Jose, Ca 95112

Remember the Swap/Auction will be held at Houge Park in April, then in May all regular meetings will be held there. On a final note, please be aware that the dues have gone up to $15, effective immediately.

Forty Years Ago this month
by Jim Van Nuland

The April 18 meeting of the Astronomy Club was held in the basement of the Science Wing, SJSC. The roll-call showed that there were present 11 old members, 4 new members, and 4 guests.

Dean Pritchett was the first speaker, with Ursa Major as the Constellation of the Month.

Next, Wesley Lindsay discussed the optical relationships of finders, bringing out many interesting points. He had with him three home-made finders that were used to illustrate points of his talk.

Members Bieda and Cunningham demonstrated their TinCan Planetarium, made of a 1-gallon can. Copies of the directions were passed out. [JVN:unfortunately, not included in the old notebook] They demonstrated the plotting of co-ordinates, and at the end of the demonstration, the lights were turned off to show various constellation on the movie screen. The demonstration was successful and added much to the meeting.

Additional discussion went over the considerations as regards incorporation. Henry Hill, Attorney, present for the first time, said he would be willing to incorporate the club. This will be discussed at the next planning meeting.

Meeting adjourned at 9:45, observing called off due to weather.

From Bernal Intermediate School,
San Jose
January 26, 1995

To Officers of the San Jose Astronomical Association

We at Bernal would like to commend Bob Ashford, one of your associates, for his dedicated service to the community. He spent a day this last week talking to our Science classes about astronomy,and giving a guided tour of the solar system. He spoke to approximately 300 of our students and held them enthralled with his crisp and cogent commentary. He is awesome and deserves any accolades you can pass on to him. Thank you.

Sincerely,
Dan Judnick
Science teacher and Dept. Chair.

Fremont Peak
Feb 25, 1995
By Mark Wagner

A quick report on Saturday at the Peak. High clouds before sunset. Fog in valleys and along coast. Not cold (long john tops & bottoms, jeans, heavy shirt, sweat shirt, sweater, good boots). Very dark quickly. Orion was brilliant... great transparancy and steadiness early in the evening. Mars shows pronounced markings and polar cap. M42 has six star in the Trap easily, other small stars poking in and out. Entire loop visible in M42, burning bush very clear up toward Zeta. Jack Zeiders showed us some outstanding nebulosity with dark lanes just below M42.

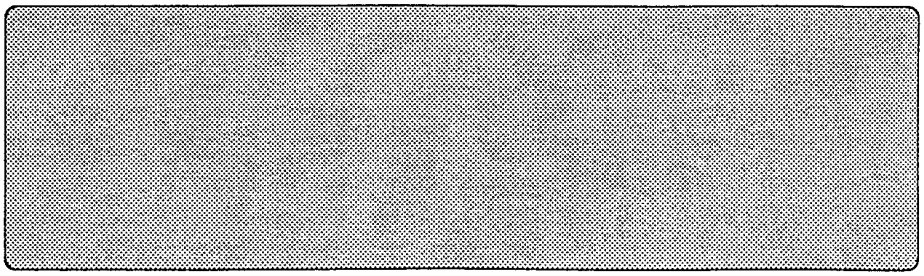
Eskimo Nebula in Gemini was great with 20" and 9mm Nagler.... concentric rings around the central star. Seeing began deteriorating by 9PM. By 10PM fog covers us, no stars visible. Transmission tower lights not visible. Left Peak at 10:30, broke through fog halfway down hill.

Lots of galaxies. Partial list:

IC 2574 UMa 10.00m 12.0 x 4.0
NGC3404 Dra 13.00m 2.5 x 1.0 elongated galaxy
NGC3034 UMa 8.40m 8.4 x 3.4 very elongated galaxy, dust & bright knots
NGC3031 UMa 6.90m 20.0 x 9.0 spiral galaxy structure
NGC3077 UMa 9.90m 3.4 x 2.8 elongated galaxy
NGC2841 UMa 9.30m 7.0 x 3.0 elongated galaxy dusty
NGC4125 Dra 9.80m 2.6 x 1.5 elongated galaxy with bright core
NGC4332 Dra 13.00m 1.7 x 1.3 round galaxy
NGC5457 UMa 7.70m 40.0 spiral galaxy structure with bright knots
NGC4256 Dra 12.00m 3.8 x 0.5 edge on galaxy with bright core
NGC4210 Dra 13.00m 1.9 x 1.8 round galaxy with bright core
NGC4221 Dra 14.00m 1.7 x 1.1 round galaxy with bright core
NGC4236 Dra 9.69m 22.5 x 6.2 very elongated galaxy
UGC7490 UMa 13.83m 3.3 round galaxy
NGC3496 Leo 12.00m 4.5 round galaxy with bright core
NGC3608 Leo 11.00m 1.4 x 1.0 round galaxy in group
NGC3607 Leo 10.00m 1.8 x 1.3 round galaxy brightest in group
NGC3599 Leo 11.90m 0.6 round galaxy
NGC3605 Leo 13.00m 1.4 x 0.8 round galaxy close companion
PGC34493 Leo 13.41m 1.8 round galaxy
UGC6296 Leo 14.50m 1.2 x 0.4 round galaxy
NGC3593 Leo 11.00m 5.0 x 2.3 elongated galaxy
NGC3628 Leo 9.50m 10.0 x 3.3 very elongated galaxy dusty
NGC3627 Leo 9.00m 7.6 x 3.3 spiral galaxy structure
NGC3623 Leo 9.30m 9.0 x 2.0 very elongated galaxy with bright core
UGC5869 Leo 14.28m 1.4 x 0.8 galaxy
NGC3368 Leo 9.19m 7.5 x 5.0 round galaxy with bright core
NGC3551 Leo 9.69m 7.0 x 4.0 barred spiral galaxy structure
NGC3379 Leo 9.30m 4.6 x 4.0 round galaxy with bright core
NGC3384 Leo 10.00m 1.6 x 1.1 round galaxy with bright core
NGC3389 Leo 11.80m 2.6 x 1.2 very elongated galaxy in group
NGC5194 CVn 8.40m 9.0 x 8.0 spiral galaxy structure attached companion

Yes.... we set up by the observatory. Enjoyed the sky from that side, and think it is better there. Took my Compaq computer and ran _The_Sky using the power in the brick —— house. I thought the computer really enhanced the observing. The weather forecast looks miserable for this weekend, but the National Weather Service's accuracy is questionable.... let's hope they're wrong. Forgot to mention the people who were at the Peak Saturday night:

Dean Linebarger (20" dob, ranger side)
Alan Nelms (18" dob, ranger side)
Jim Eiselt (scope unknown, ranger side)
Jack Zeiders (visual only, ranger side)
2 unidentifieds (ranger side)
Terry Kahl (8" dob, coulter side)
Jim Bartolini (the shadow) (10" dob, coulter side)
Bob ? (8" Meade sct) (coulter side)
1 unidentified (18" dob, coulter side)
Ed Erbeck



Grinding and Testing Mirrors

by Paul Barton and Bob Madden

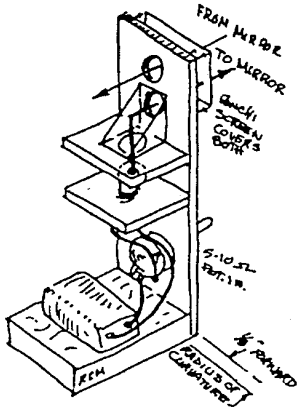
Sigh! Does it always have to end this way, excited? I have been visiting Paul Barton's house and relying on him to guide me during my 5.5-inch mirror grinding. I would have driven to Chabot Mirror Lab on friday nights, but I really wanted to grind during the day. That way I would save the time driving there. Paul permitted me to follow Paul Krukar, who ground a fine 10-inch (it tested right on the nominal curve). Using Paul B's pottery wheel, geared down, was pleasant as I didn't have to walk around the mirror. All I had to do was throw grit and rotate the blank while pushing in the classic "W" pattern.

We finally got the focus, a f-10, we thought, and proceeded to begin polishing. Here is where we began to slow down, at my insistence, and began testing the mirror for shape. Paul had a foucault tester, but it was very sensitive and difficult to use. To me the slit gave confusing slit patterns, which meant the edges of the slit may not be parallel, a difficult task. I opted to build a Ronchi tester. I had a 100 lines/inch at home. It was on acetate, not glass, but as it turned out, good enough. A couple of trips were needed to talk to Paul Zurakowski at Chabot Mirror Lab to ask him how to duplicate the light tower he used.

Armed with all of the information necessary, and I might say that Paul Z was very willing to help, I returned home and to Paul B's place. After drawing a sketch for Paul B and Paul studying it, Paul began making it. You can see the sketch below. Paul had a couple 3/16 prisms he ground with 400 grit to produce a diffused light source that we used. Paul made one for me using a halogen maglight and one for himself using a He-Ne Laser. As it turned out both work equally well.

Placing the Ronchi screen over the source and between your eye and the mirror and placing the screen/source about 1/8-inch forward of the radius of curvature you can clearly see the classic Ronchi pattern. For a Spherical surface the lines will be straight and of uniform thickness. A Parabolic figure will have curved lines and be fat in the middle. The amount of curvature and "fatness" will tell you how much more work you will have to do or how much over/under corrected and if the edge is turned up/down.

It is exciting to be able to see the product of your efforts work. If you have your mirror disassembled and want to see how good your mirror is call Paul or myself.



On Being A Kid Observer
— Novices –

by Val Germann

My brother and I started out in 1963 with a 4X rifle scope which was not a success. Our next step was to a $9.95 (fifty bucks now!) variable-power, table-top-tripod scope from Sears. We were amazed at how big we could blow up stars with it — until some other junior high kid showed us how to focus the scope after changing the power! What a letdown! We thought the stars were supposed to be BIG!

Next, we spent $50.00 ($250.00 now!) on a 60mm refractor from Sears which was ghastly. A new mount from Edmund ($17.95 plus shipping!) and eyepieces from Jaegers (six bucks each!) saved us — at a price.

Next came a 4.25-inch Newtonian, assembled from parts from Edmund. What a bowser, but it did actually show me a polar cap on Mars, for $100! Then we got a 3-inch refractor from Edmund which worked half- way well and kept us going until we both went into the military in the late 1960s.

My best investments were in the Webb books in 1966 and then in 1978 getting the Burnham three-volume set. These plus a good star chart are mandatory for everyone setting out to use a telescope, in my view.

If I were starting out now I would, when I had my charts and books, go out and get a blank book, hard-cover, and start keeping a journal. I would begin by observing all the first magnitude stars, using all of my available powers on each one and writing in the journal the color of each one and drawing the field of each star at the lowest power.

Then, if I could stand the price, I would make sure that my scope had a 50mm finder on it, at least, before I went looking for Messier objects. With a 50mm finder you are going to be able to pick up most of these things before you ever go to the main telescope—something worth its weight in chinese checkers. I would then draw every Messier object I looked at until I had looked at them all. Believe it or not, by the time a new observer has done this they are no longer a novice, not really. And, it's a whole lot of fun.

I didn't find out about this technique until 1980, when I got my first Celestron-8. Don't you make the mistake of waiting so long.

Val Germann
AstroQuest
Central Missouri Astronomical Association

Project Astro Needs You

Astronomers and Teachers as Partners in the Class Room

A program to form partnerships between amateur and professional astronomers and 4th-9th grade teachers.

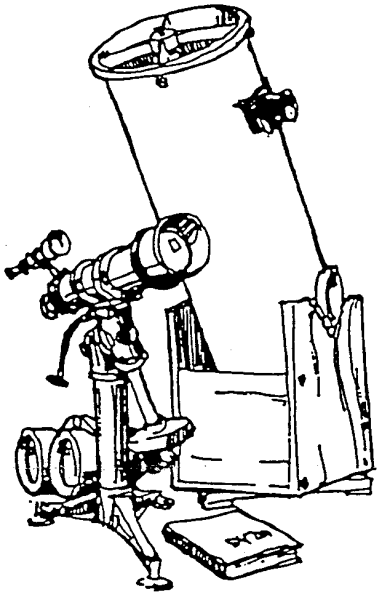
A program offered by the Astronomical Society of the Pacific and funded by the National Science Foundation. If selected you will receive training, commit to make at least four school day visits and one planning/observation visit during a six-month period.

Call Jessica Richter at 415-337-1100 for an application.

The 15th Annual

Bay Area Astronomical Auction

April 8th, 1995



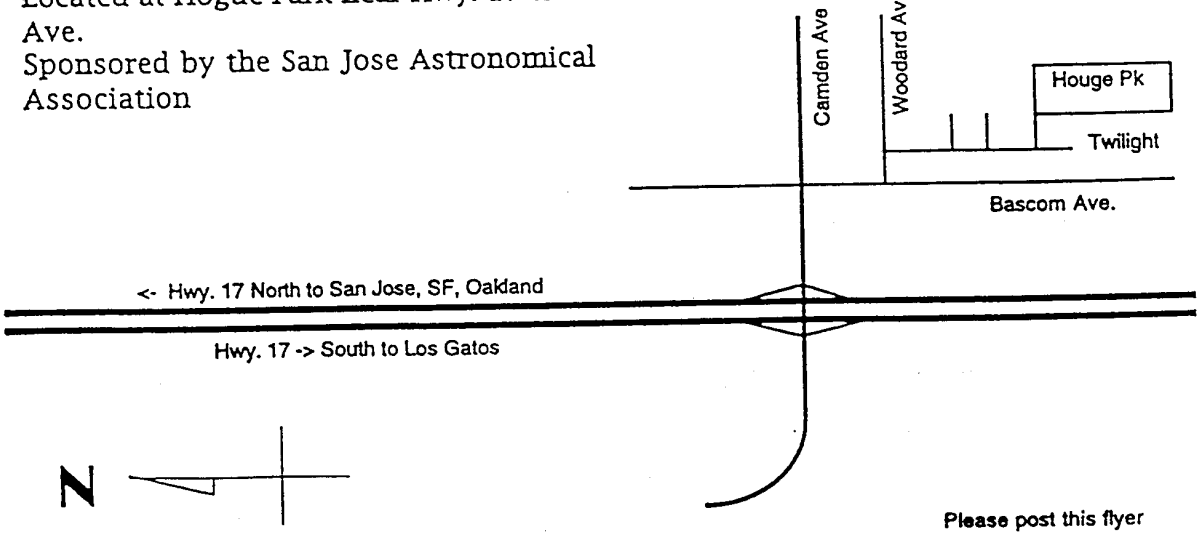
Doors open at 1:00 PM

Swap Meet 2:00 - 5:00 PM

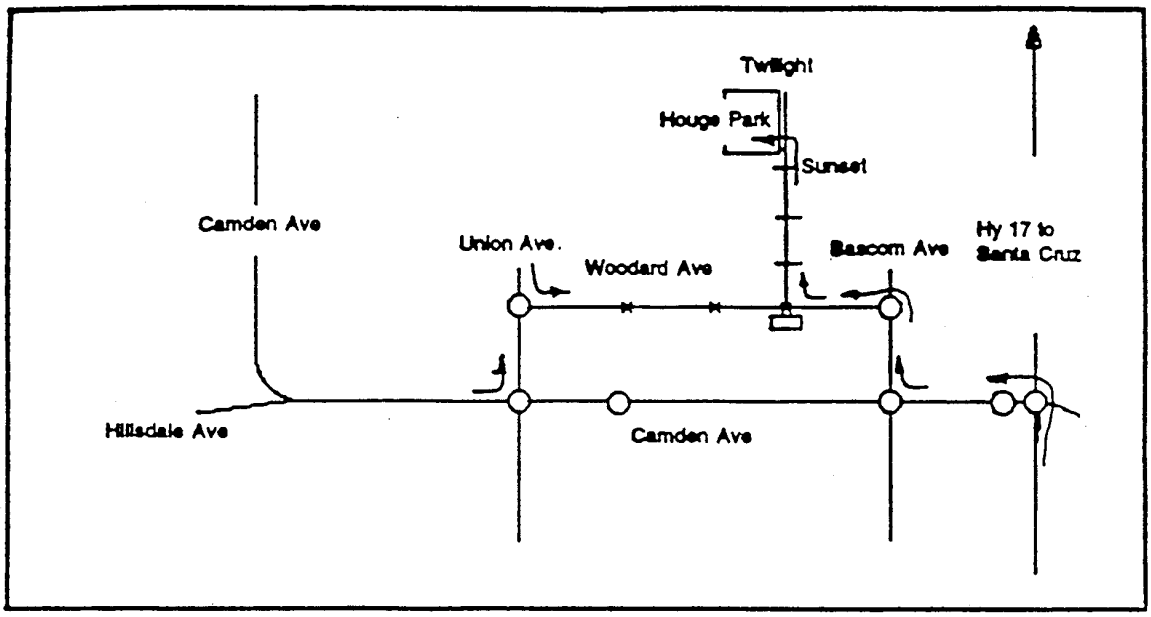
Auction starts at 6:00 PM

Bring those unused goodies and swap 'em for something new and different or turn the dust collectors in the garage and closet into cash.

Located at Hogue Park near Hwy. 17 and Camden Ave.
Sponsored by the San Jose Astronomical Association



Please post this flyer



Directions to HOUGE PARK

1995 Bay Area Astronomical Auction Registration

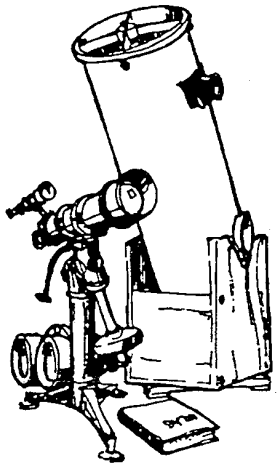
Bidder # from SJAA	Name			City
	Addr			Zip
Item # from SJAA	Qty	Min Bid	Donation 10% min	Description (40 - 50 Characters)

10% of all sales go to the SJAA - Please pre-register - fill this out and Mail to J Van Nuland, 3609 Calico Ave, SJ, CA 95124

1995 SJAA Calendar

	General Meeting	Houge Park Star Party	Observational Astronomy Class
April	8 Swap/Auction	7	15
May	13	5	20
June	10	2	15
July	8	7	17
August	12 (picnick	4	26
Sept	9	1 and 29	16
Oct	-	-	- Last one
Nov	-	-	-
Dec	-	-	-

Please read your *Ephemeris* each month for changes



Telescope Loaner Status
by Paul Barton

NO.	Name	User	Due Date
1	4-1/2" Newt/P Mount	---------->	available
2	6" Dobson	John Paul Dasilvia	4/3/95
3	4" Quantum	---------->	available
6	C-8 Celestron	Lee Courtney	4/16/95
7	12-1/2" Dobson	Tom Rice	indefinite
8	14" Dobson	Ken St George	4/1/95
14	6" Newt/P mount	---------->	Avaliable
15	8" Dobson	Bob Elsberry	4/2/95
18	8" Newt/P Mount	Jerry Lovelace	4/10/95
19(b)	6" Newt/P Mount	---------->	Avaliable
20	4-1/4" Dobson	---------->	Avaliable
21	10" Dobson	Steve Wincor	4/11/95
23	6" Newt/P mount	---------->	Avaliable
24	60 mm refractor	---------->	Avaliable

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

(on waiting list)

Bob Malot - C8. Bob has been waiting sonce October for the C8

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

ASTRO ADS

ASTRO ADS are free to all noncommercial advertisers wishing to sell astronomically related products or services. Please send your ad directly to the Editor: Bob Madden
1616 Inglis Lane
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NO LATER THAN THE 12th OF EACH MONTH! Your Astro Ad will run approximately 3-months.

8-inch Meade: Schmidt-Cass w/heavy duty Meade tripod, clock drive (8-inch Classic model), 20 mm and 7 mm extra wide angle eyepieces. $750 OBO. Call Larry Chase (408) 988-2516 or (800)-700-1993 2/95

12.5" f/7 Dobsonian. Mirror by D&G Optical. Novak mounting hardware including 9pt. cell and 2.14" spider/diagional holder. 2" low profile Tectron rack & pinon focuser with 1.25 adapter. 8X50 finder/rings, and Telrad finder. Tube is Sona tube, finished outside with glossy medium blue paint and inside with flat black. The scope is in new condition since it's hardly ben used. The base is unfinished wood, and should probably be rebuilt. The parts alone cost $1200, will sell for $900. Call William Cooke
Work (408) 492-5640
Home (408) 295-6560 2/95

Retireing: ATM stock of lenses, objectives, eyepieces, hardware, etc (no mirrors). Most items are surplus in good condition. One lot. Interested persons should send a SASE with 55 cents postage for complete list. Robert F. Jensen, 524 Ivy Pointe Circle, San Ramon, CA 94583. (510) 736-8562 2/95

TeleVue Pronto 70mm ED f6.8 telescope. LN, comes with a 2" diagonal, 1 1/4" adapter, 21mm plossl, and soft sided travel case. Plus, a screw-on. Full aperture Thousand Oaks solar filter. $785 Call Rich Neuschaefer (408) 446-0975 3/95

Televue Plossl Eyepieces, 32 mm, 26 mm, 21 mm, 17 mm, 13 mm, 10.5 mm, 2.5x Barlow, 1.8x Barlow, all in a case. Also, Meade 8.8 mm UWA (84 deg field. Every thing in perfect condition. Sacrifice all for $500 (1/2 retail). Call Edward at (209) 892-8926 Evening. (Patterson, Ca) 3/95

Celestial Calendar - APR. 1995
by Richard Stanton

Lunar Phase		Date	Rise	Trans	Set
FQ	22:35	07	11:35	18:37	01:40
FM	05:09	15	19:57	01:19	06:41
LQ	20:19	21	01:09	06:13	11:15
NM	10:38	29	05:55	12:36	20:13

Nearer Planets:				
Mercury	07	06:34	12:46	19:00
1.31 A.U.	17	06:40	13:22	20:05
Mag. -2.4	27	06:51	14:01	21:12
Venus	07	05:24	11:03	16:43
1.33 A.U.	17	05:16	11:09	17:03
Mag. -4.2	27	05:07	11:14	17:22
Mars	07	14:08	21:15	04:25
1.33 A.U.	17	13:40	20:43	03:50
Mag. -0.1	27	13:15	20:15	03:17
Jupiter	07	00:12	05:03	09:54
4.62 A.U.	17	23:27	04:22	09:13
Mag. -2.5	27	22:45	03:40	08:32
Saturn	07	05:43	11:28	17:12
10.4 A.U.	17	05:07	10:52	16:38
Mag. +1.1	27	04:30	10:17	16:04

SOL Star Type G2V VMag -26.72

RA	Dec				
01:03	+06:43	07	06:43	13:10	19:37
01:39	+10:22	17	06:29	13:07	19:46
02:17	+13:44	27	06:16	13:05	19:56

Astronomical Twilight:

		Begin	End
JD 2,449,814	07	05:13	21:07
,824	17	04:56	21:20
,834	27	04:39	21:32

Sidereal Time:

Transit Right	07	00:00	= 12:52
Ascension at	17	00:00	= 13:32
Local Midnight	27	00:00	= 14:11

Darkest Saturday Night: 29-APR-1995

Sunset	19:58
Twilight End	21:35
Moon Set	20:13
Dawn Begin	04:35

TIMES AND DATES ARE PACIFIC DAYLIGHT
Times are Local Civil
Derivation of these values are from
Astronomy with Your Personal Computer
by Peter Duffet-Smith
MacEphem
by Elwood Charles Downey

COMET COMMENTS

By Don Machholz

No new comets have been discovered recently, but I'm including the positions for Periodic Comet d'Arrest for those wanting the challenge of finding a faint comet. By mid-summer it should be visible in binoculars. This is the 200th issue of Comet Comments. This column began in May, 1978 as an addition to the San Jose Astronomical Association newletter ("Ephemeris"), and has run as a regular monthly feature since September 1978. Add to these the several special edltiqns of Comet Comments and you get 200 issues."

My original idea was to provide comet information and positions to fellow club members. Within two years I was also sending it to two other club newsletters. Presently it is mailed to twenty astronomy clubs, plus interested individuals around the world. Most English-speaking comet discoverers receive it. It is also circulated in China and in the Philippines. It remains available on an exchange basis to club newsletters and for a SASE to individuals.

The first Comet Comments were hand-written. A manual typewritter served until 1982. Then came a Commodore 64 computer with a variety of printers. Finally, last year I converted to an IBM 286 computer.

Electronic Bulletin Boards now carry Comet Comments. The Kingmont BBS has it on Area 44 at (916) 652-5920. The Tri-Valley (Livermore, CA) BBS carries it on directory 33. It can be reached at (510) 443-6146. "America OnLine" displays it in their Astronomy (Keynote: "Astronomy") department. And I understand that it can be found in other areas of the Internet. It appears on these boards, and in the mail, about three weeks before the intended month.

For the past five years I have tried to keep Comet Comments to one full page. This fits well in newsletter formats. Through the years it has varied from ten lines to two and one-half pages. Often I would add what has turned out to be popular "fillers": a paragraph or two highlighting famous comets, comet hunters, Halley's Comet or comet discovery statistics.

I continue to enjoy writing Comet Comments each month and the readers continue to find the information useful. It also keeps me in touch with many of the comet observers around the world. I plan to keep writing it for a long time to come.

EPHEMERIS

6P/d'ARREST DATE(00UT)	R.A(2000)	DEC	EL	SKY	MG	ELEMENTS PERIODIC COMET d'ARREST
03-24	18h12.5m	-00d53	90d	M	14.7	Perihelion date: 1995 July 27.36197
03-29	18h22.9m	-00d17	92d	M	14.5	Perihelion Dist: 1.34587 AU
04-03	18h33.3m	+00d23	94d	M	14.2	Arg. of Peri: 178.0504 deg. (2000)
04-08	18h43.8m	+01d05	95d	M	13.9	Ascending Node: 138.9874 deq. (2000)
04-13	18h54.3m	+01d49	97d	M	13.7	Inclination: 019.5232 deg. (2000)
04-18	19h05.0m	+02d35	99d	M	13.4	Eccentricity: 0.6140404
04-23	19h15.7m	+03d23	100d	M	13.1	Orbital Per: 6.51 yrs
04-28	19h26.5m	+04d11	102d	M	12.9	Source: MPC 20122
05-03	19h37.5m	+05d00	103d	M	12.6	
05-08	19h48.6m	+05d49	105d	M	12.3	
05-13	19h59.9m	+06d36	106d	M	12.0	

Don Machholz (916) 346-8963

EPHEMERIS is published monthly by the San Jose Astronomical Association - 3509 Calico Ave., San Jose California 95124, Members are encouraged to submit articles for publication. These should be typed and submitted **no later than the 12th of the previous month**. All submissions should be sent to the editor, Bob Madden, 1616 Inglis Lane, San Jose, California 95118. A text file on a 3-1/2" IBM or MAC diskette is preferred, but written is accepted.

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