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JARNAC OBSERVATORY

LOG 14

David H. Levy

WED, SEPT. 28 1983

6413 E Wed, Sep 28/ 2130-2245/ 8-F/RASC/14" Celestron/
Stu/ "Blinking Neb."

* 6414 E2 2315-0015/ 7-F/ LCP-818-C-LE, Summit walk/
Phoebe 1-1 ? β Pegasus. Vega. Probably last
session from LCP-818-LE site, one of the most
productive observing places.

6415 MP 29/30/ 0200-0210/ 7-F/ Le Fort / - Minerva/M42.

6416 E 30/31/ 2300-2330/ N. Dartm. Mass, Gerald Dyck's
observatory/ - 1-f.

October

1/2 cloudy

2/3 cloudy

3/4 cloudy

6417 M 4/5 Tues. - γ^2 - 0200-0215/ 3-F/JMF/Alouette / -

6418 M 5/6 Wed - 0440-0530/ 10-F/JM4/Jupiter / -

CN3 D^h 30^m E.

6419 MP 6/7 Thu / 0430-0435/ 3-F/JMF/1-1/ h₂ + cirrus.

6419b E 7/8 Fri / 0330-0450/ 10-9-F/JM4/Jupiter / -

CN3 1^h 00^m E.

9

Sat.

#10 83

6:20 AM October 8/9/ 1815-0530/10-F/JMB/Jupiter, Pegasus.

C-14, others. Video. CN3 0h20mE.

TAAA + SAC Star Party

Virgil B. Smith

James A. Nail

Michael Magee

Erich Karkoschka

Rick Swenson

Peggy Shaver

Edward Duke Shaw

Demiel Craig Stowell "Crip"

Margie & Charles Ross

Gene Luman

Pete Manly

David W. Rasmussen

Jim & Karen Olwe

Paul Lorenz

Paul E. Scraggs

Gregory Scraggs

Gene M. Alwan

Scott Henning

Erica Ferguson

Wes Ferguson

FRED BRODSKY I

Joel Brodsky

Gary Rosenbaum

Rancho Del Loma

GLENDALE

TAAA (Friend & Confidante)

Lunar and Planetary Lab.

TAAA

Gilbert SAC.

" "

Friend of the family
Chandler

PHOENIX

Tempe, AZ.

Gilbert AZ {SAC.}

TAAA

TAAA

Cranford NJ A.A.I.

" " "

Tucson Bigfoot TAAA.

TAAA.

TAAA

TRL-UA

TAAA

TAAA

TAAA

Julian Guzman
Walter Wagg

TAAA
TUCSON

6421 E. Sunday 9/10
2000-2200 / 10-F / 3M4 / Jupiter / - / CN3 14.5 m. W
Hercules.

* 6422 EM Monday 10/11
1800-0400 / 10+ - F / KPNO / #2-36, Alovette-2
Rick Greenberg / 511 Davida, 45 Eugenia, 65 Cybele,
1219 Britta, "New object" not observed, 39 Laetitia,
41 Daphne, * Finder + offset off. RT system
crashed twice. Funny data on photometer for
1/2 hr. cirrus? Hook broke on paddle. Floor
broke + tilted, ending obs at 0250.

6423 S Tues 11/12 / 1600-1630 / 10-F / KPNO / Rick / binocs / Sun.

6424 AN 2S 1800-0600 / 10-F, windy / KPNO / Alovette, #2-36 /
Rick / Asteroid Geodesy. 511 Davida, 45 Eugenia, 65
Cybele, 1219, 1168 New obj. 1983 SA (I saw it)
39 Laetitia, ~~41 Daphne~~, 683 Lanzia. Sunrise + Shadow
of KP.

6425 AN Wed 12/13 / 1800-0600 / 10-F, nice / KPNO / Alovette,
2-36 / Rick / Asteroid Program. 65 Cybele, 45 Eugenia,
225 Henrietta, 1168, 1983 SA, 39 Laetitia, 29 Amphitrite.
I ran scope for 2 3/4 hrs at end.

6426 EM Thw 13/14 / 1830-0300 / 10-F, ~50 mph wind / KPNO / Alovette,
2-36 / Don Davis / - Ast. Prog: 372 Palma, 694
Ekard. not much data were collected.

6427 AN Fri 14/15 / 1810-0450 / 10-3-F / KPNO / Alovette-2,
2-36 / Don / 511 Davida, 45 Eugenia, 65 Cybele,
372 Palma, 694 Ekard, 41 Daphne, 683 Lanzia.

6428 EM Sat 15/16 / 1810-0430 / 10-3-F / KPNO / Alovette-2,
2-36 / Don / Asteroid Project: 511 Davida, 694 Ekard,

372 Palma,

④ 6429EM. 1800-0300 110-3⁺F/KPVO/#2-36, Alouette/
no one else! / Asteroid Project. Begin
with 65 Cybele. Visit to 16" Moon. (Lisa)
Cirrus, but better at 8pm for 511 Davida
372 Palma, in east

CLARK 607-257-2000 Y 1206

~ P50⁰ 18^h 19^m 36.5' +53°52', 0^h 17^m 19^s 22.1' +55°01'

lots of
cloudy weather.

but see Sun Oct. 23, below.

6430.E Sun. Oct. 23. 1900-2000 / 8-F / 3M4 /
Jupiter / -1 CN3 0^h 30^m E.

Mon - cl. Tues - t. cldy.

Oct 26 1983

6431 E.

Wed. 7

1830-192100-3-2-f/SM4/

Jim + Karen Oliver

Jupiter / children

David & J W Whetten

Vernado R Standefer

Peter Heidenreich

John Bailey

Jason Crane

Eric Carrier

Josh Clark

Taylor Tollison

David Crane

Joseph W Heidenreich

Peter Jones Oliver

Billy Jay Oliver

Travis Tollison

Leslie Tollison

Gerald R. Crane

Barbara J. Crane

Bruce M Bailey

Jay Bailey

Wilma Standefer

Linda Clark

Lyle Whetten

Craig Porter

Gene Pol

Gerald Pol

Fred Heidenreich

Now return to Vol. 13 after 6412M2

Resuming after end of Log 13.

- 6521MP 1984. March 13-14. Tuesday. 10130-0140/3-F/
jmb, JM2/ Penumbra/ -/moon
- 6522E. Thu. 15/16/ 1900-2000/ 3-F/ JMB/ Various
Telescopes. R. Vern Zandt, Jim Scotti - see
last page of log 13 for signatures.
- 6523MP 16/17, Fri/ 7-fm/ JMB/ Penumbra/ -/ moon.
- 6524MP Sat, 17/18/ 7-fm. Breezy/ JMB/ Penumbra/ -/
LUNA (incognita?)
- 6525E. Sun 18/19/ 8-f/ JMB/ Penumbra/ -/ M42.
- 6526MP Mon 19/20/ 0235-0240/ 7-fm/ JMF/ 7x50b/
-/moon, CN1 Area 40-(6) 23 (5).
- 6527E. Tues 20/21/ 1900-2030/ 10-f/ Johnson Rd, Az/
Mercury/ Comet Crommelin! Also tried for
Encke. Michael. CN3 0h15m W.
- 6528E. Wed 21/ 2115-2225/ 10-f/ JM2, 3, 4/ Jupiter,
Pegasus, Maia/ Mira 3. Gerald. CN3
0h15m W. Gerald did M84, 86 etc.
- 6529M2. 0235-0300/ 7-fm/ JM2, 3, 4/ Jupiter,
Pegasus, Rigel/ Mars, Saturn.
- 6530EM. ^{Thu 22} 1945-0115/ 10-f/ JM2, JM4/ Gerald/ Jupiter/
Pegasus/ CN3 2h00m W.
- 6531EM Fri. 23/24/ 2315-0110/ 10-f/ JM2, JMF/ Gerald/
Pegasus, Mercury. Gerald completes Messiers with Pegasus, M109

It was a great pleasure to begin and end my Messier hunting project using the
same telescope and in the same company. You are a great inspiration, David. Thank.

Gerald Scotti

This is the 2nd time Pegasus was used to finish
a Messier List. c.f. #1906EM-35.

- *6532-E Tues 27/28/1945-2330/10-F/5M4/Jupiter/Pegasus^{=M31}
with Jupiter: CN3 3^h20^mW.
- 6533M2. 0410-0455/10+ -F/5M4/Jupiter/-/CN3:
0^h35^mE.
- 6534E Wed 28/29/1950-2200/8-F/5M4/Jupiter/-/
CN3 1^h00^mW.
- 6535E 29/30/1940-2245/10-F/5M2/also South Site/
Pegasus/-/ try for M74, no go. CN3 1^h00^m
from south site. Fixed Pegasus - moved mirror
back in tube, with 10¢.
- 6536E 30/31/2015-2215/7-F/Image Point/Telescopes/
People/objects.
- 6537E 31/32/2245-0000/10-F/Windy/Davison Ranch/
Telescopes/people/objects. 2 variables - VSO-T,
(see diary.)
- 6538M2 0030-0100/10-F and not windy! /5M4/
Jupiter/Duane, Vivian, Terri, Agnes Guiter from Mth.
M82, M13, Mars, Saturn.
- 6539M3. 0400-0500/10-3-F/5M4/Jupiter/-/
CN3 0^h45^mE.
- 6540e. 1900-1925/Sun. April 1,2/7-5-F/~~3A~~
FPI Surveyor-2/-/M42.
- 6541M2 0440-0505/10-F/5M4/Jupiter/-/CN3 0^h15^mE.
- 6542E Apr 2^R 045-2145^P / I 10-F/5M4/Jupiter/ CN3 0^h45^mW.
- 6543M2 R 0400-0515/10+ -F/5M4/Jupiter/-/
CN3 0^h30^m. Hartley - IRAS tea. ~ 10 mag.
- 6544E 5/6/2030-2215/~~#~~ 8-F/Camp Cooper/Echo/
6th grade class/Moon

6545M2 ~ 0000-0015/8. 10-F/3MF/Echo/-/Mars.

6546MP. April 4/5 (before 6544) 1~0100-~0110/10-F)
3MF/Phoebel-/general. Jupiter.

6547M3 5/6 again | 0415-0500/10-F-windy-39/JM4/
Jupiter/-/CN3 0h30mE. 617 Rain.

* 6548AN 7/8 | 1835-0530 | 10-F/~~JM4~~/KPNO/
Clark Chapman, Steve Ostro | 2-36, Phoebel
Asteroids.

6549S. 8/9 | 1600-1615~ | 10-F | 3 KPNO | Steve
Ostro, Peter Shames from Hubble ST/Razdow.

6550AN2 1900-0615 | 10+-F | KPNO/#2-36, Phoebel
-Steve Ostro, Clark, others | Asteroid
Project.

6551S. 9/10 | 1500-1515 | 7-F | KPNO/Vis. Tel/-/Sun.

6552AN2 1845-0600 | 10-F | KPNO | 236, Phoebel - Dr. Chapman/
-Asteroids. including Penelope (201), 16 Psyche + others

6553SP. 10/11 | 1500-1510 | 3-F | KPNO/Vis. Tel/-/Sun. 2 Fac, 1 sp

6554AN2 1800-0500 | 3-F | KPNO | 236, Phoebel/Clark/
Asteroids

6555M. 12/13 | 0300-0315 | 8-Fm | 3M2 | 2 Pegasus | -/Moon.

6556M ? Tues 17/18 | 0200-0230 | 7-F | 3MB/Saturn/3 Saturn.

6557M ? Wed 18/19 | ~0200-0230 | 7-Fm | 3MB | Penumbra,
Saturn/Moon. Jupiter.

6558M Thu 19/20 | 0230-0245~ | 8-Fm | 3MB | Penumbra | -/gnl.

6559E Fri 20/21 | 2000-2115 | 10-F | JM4/Jupiter | - | CN3
1h00mW

6560E Sat 21/22 | 2000-2130 | 3M4/Jupiter/
John Sanford | CN3: 1h00mW.

- 6561EM 2200-2:0130 / 10-F / Dawson Ranch /
- / Jon Sanford, TAAA. / John R Sanford
- 6562 E Sun. ^{21/23} 2000-0000 / 7-F / Gary's house / Mars etc.
- 6563 E2 Mon 23/24 / 2015-2300 / 10-F / JM4 / Jupiter / - 12^h10^m
W CN3.
- 6564M3 0230-0315 / 10-7-F / JM4 / Jupiter / - 12^h25^m E. CN3
- * 6565EM Tues 24/25 / ~~2330~~ - 0110 / 7-F / Clyde Tombaugh's
house / 16-inch F/10 / Clyde Tombaugh / Saturn.
Exquisite crape. Mare Acidalium with
desert swath cutting it longitudinally.
- 6566M Wed 25/26 / 0245-0300 / 2-F / JMF / Mercury /
Found SS Cyg field by chance just as I set
up the telescope. C10.8.
- 6567M. 03 Fri 27/28 / 0330-0415 / 10-F / jm4 /
Jupiter / CN3 0^h20^m.
- 6568M. ^{Sat} ~~26/27~~ 28/29 / 0345-0415 / 9-F / JM4 /
Jupiter / - CN3 0^h10^m.
- 6569M Sun 29/30 / 0315-0425 / 10-F / jm4 /
Jupiter / CN3 1^h00^m E.
- 6570M Mon 30/31 / 0315-0415 / 3-F / JM4 / Jupiter /
CN3 / 0^h20^m E east.
- 6571E ^{May 2} 2/20-2150 / 7-F / FPI / Surveyor 2 / Galadriel /
Michael Magee; et / Saturn & Mars
Surveyor performs very well.
- 6572E ^{May 2} 2100-2240 / 10-F / JM4 / Jupiter / - 1 CN3
1^h25^m.
- 6573M2 ^{May 2} 0400-0415 / 10-F / JM4 / Jupiter / - 1 CN3 0^h10^m E
- 6574M Thurs May 3 / 0200-0400 / 10-F / JM4 + S walk

Eta Aquarid max, ~ 7 meteors, mostly 3-4th +
fast. CN3 0^h40^m.

6575M 4/0300-0330/10-f/5^{MV}~~III~~/-

- * 6585 1750-1840/10-F/ New MMT Amateur Site/ Lots of people/ Echo/ Sun, MMT view.
- * 6586 E2 2100-2315/ 4½-F/ Trv Y Camp/ Echo/ Mrs. Campau's group/ Saturn.
- * 6587 EM 2200-0200/ 4½-F/ Lowell Observatory/ .24-inch Clark refractor, 12-inch Clark. Mars. Seeing ~4. Then 21" refl. in sliding roof.
Norm Thomas, Gary R, + Brian S.
- 6588 E May 22. my birthday. / 2000-2300/ 10-F/ JM4/ Jupiter/ CN3 2:00m.
- 6589 M2 0230-0300/ 4-F/ JM4/ -/ CN3 0:15m E.
- 6590 EM Fri 25/ 2100-0130/ 10-F/ Riverside Teles.
- 6591 EM Sat 26/ 2100-0130 10-F/ Riverside
- 6592 E 2100-2130/ 10-F/ 10-F / Riverside
- 6593 M 0300-0410/ 10-F/ JM4/ Jupiter/ -/ CN3 0:45m E. (Date?)
- * 6594 M MAY 30/ 0900-1300/ ANNULAR ECLIPSE
- 6595 EM MAY 31/ 2100-0145/ 10-F ITSP.
- 6596 M. June 3/4? 0315-0345/ 10-9-F/ JM4/ Jupiter/ -/ CN3 15m E.
- 6597 EM 4/5/ KPNO / 2-F. / 1900-0300.
- * 6598 EM 5/6/ 2000-0300/ 2-F/ KPNO/ 2-36.
saw Phobos!!
- 6599 AN 6/7/ 2000-0500/ 10-F/ KPNO/ 2-36, Phoebe/ Asteroids
- 6600 AN 7/8/ 2000-0500 / 10-F/ KPNO/ 2-36, Phoebe/ Asteroids
- 6601 AN 8/9/ 2000-0500/ 10-F/ KPNO/ 2-36 Phoebe/ Asteroids.

6602 AM 9/10/10-F/KPNO/~~10~~ 2-36, Phoebe / Asteroids /

6603 EMⁿ ~~10/11~~ 16/17 / 2000-2300 / 10-F / 3M4 / CN3
2^h00^m W. Duane, Viv, Terri

6604 E. 18/19 / 2100-2300 / 10-F / 3M4 / Jupiter / Duane / 0^h30^m

6605 E 22/23 / 1945-2000 / 2-F / 3M4 / Debbie / Jupiter

6606 M2 0240-0300 / 7-F / 3M4 / Jupiter / - / Moon

6607 S. 27/28 / 3-F / not far from Springfield, Ill /
Phoebe / - / SS2.

6608 e2 2230-2300 / 5-F / Chicago / Phoebe / general.

6609 em Fri, July 13 / 2330-0015 / 3-F / McGill / - / - / moon

6610 M. July 6?? / 5-F / J-J-pond / Peter / general.

6611 M. 19/20 / 2-F / JJ. Minerva / general.

6612 M. 22 / 7-F / J-J-Front lawn / Minerva / Jupiter.

6613 EM. 27/28 / 10-F / Stella fane,
AUG.

6614 E 1/2 / 2000-2230 / 2-F / Milwaukee Observatory.

6615 E 3/4 / 2200-2300 / 2-F / Racine AS Obs.

6616 E. 4/5 / 2200-0000 / intermittent / people. stuff

6617 M 9/10 / 0000-0100 / 2-F / Summit walk + LCP-

818 / - Perseids? none seen though. (06/11/03)

6618 M 17/18, Fri / 0200-0230 / 7-F / Peter's house /
Peter, Dianne, Leo / Voyager / Jupiter, moon

6619 M. 19/20 / 2225-2300 / 2-F / Mt. Royal.

6620 M2 Mon. 0200-0215 / 7-F / Le Fort / Minerva / - /

6621 M. Tues. 0155-0220 / 7-F / Fort / Minerva / USO-I.

6622 M 21/22 0155-0220 / 7-F / Fort / Minerva / USO-I

6623 EM? ~~100-11~~ 2230-0300 / J-J-Front. / Minerva /
Peter, Alistair, Jeff, Bill / CN3 0^h35^m W.

6624 #M 2. 0400-0500/10-F/33D/Minerva/
Alistar/ -/CN3 0h25m E.

6625 EM before 6622/ 2100-2115/~~8~~ 1-2-F/ Luke
Georgel Minerva/ Billy, Debbie.

6626 EM ~~2~~ 2045-0300/10-3-F/SM4/Minerva/Alistar,
Peter, Jeff/ CN3 0h15m ~~E~~ W. Σ 2816.

6627 M. 000-0200/ August 28, Tues/ Alistar, Peter,
Dianne/ -/2-F/ Briefly, Db Cl.

6628 ~~A~~^E 29, Wed/ ~~10~~ 2100-2130/ 3-F/33/ Alistar,
Peter, Dianne, Sandy I.

LOTS OF CLOUDY NIGHTS
this summer.

6629 AN 30/Thu 2045-0450 but with a 2-hr break in the
evening but outside almost constantly the rest of the night
10-Fog at times f/ ~~SM4~~ 3-3-1 ~~EA~~ Richard, Jeff,
Marcy, Peter, Dianne, Alistar. / CN3 1h00m W.
0h30m E. /Minerva

6630 E 31/ 2045-0000/ 3-F/~~33~~ 3-3/ 3-2-F/ ~~F~~ Minerva
others/ Jeff did some good Messier hunting M-8, 20?

6631 E 1/ 2100-0000 (September) 3-F/3A37 ^{Jupiter, Mars}
general.

6632 Sun 2/ 2100-~~2200~~ 2-F/ moon.

* 6633 EM Wed. ~~5/17~~ Tues 4/ 2345-0100/ 7-F/LCP-818 +
summit walk/ -/ Aurora! Bright RA plus C
and F.

6634 E Wed 5/ 2200-2330/ ~~10~~ 7-Fm/IRO/ Rolf,
Linda, Sandy/ M57, B, 6207/ some Aurora.

* 6635 M 2 0115-0135/ 8-F-9-F/ 3-3-D/ -/-/ beautiful,
quiet last Jarnac session.

- 6636 MP 0200-0210 ~ on Fri, Sept. 7/8/ 7-F / Le Fort / - / - / Orion
- 6637 ME Sat, 8/9/ 2200-2300 int / 6-F (lights) RASC /
- 6638 M Sun 9/10/ ~~23:00~~-0220 / ~~8~~ 3-F / LCP-818 +
walk / - / - / general.
- 6639 M Mon 10/11 / 0200-0230 / 3-F / Oso obs. / 8" (Celestron)
Leol M45, Moon.
- 6640 M Tues 11/12 / ~~03~~ 0100-0115 / 7-F / Peter + Dianne's /
- / Dianne.
- 6641 M.E Wed 12/13 / 2200-2300 / ~~8~~ 5-4-F / Adler Planetarium
- / Janet Maddenberg / -.
- 6642 EP Thu 13/14 / 2345-2350? / 7-F / David's house / - / - /
general look.
- 6643 EP Fri 14/15 / ~2300-2310 / 7-F / " / Dave / couldn't see
M31 ne.
- 6644 E Sat 15/16 / ~~2300~~-2020-2035 / 9 1/2 F / near Williams
Bay / - / - / nice sky.
- *6645 M Monday 17/18 / 0030-0100 / 8-F / CARITH, or what was
left of it / - / unaided eye: milkyway in Cyg, M31 visible.
- 6646 S Tues 18/19 / 1020-1100 / 8-F / CARITH, ven / - / CN5
Sun kn
- 6647 E2 2100-2200 / 3-F / Mark's House / 10" / Mark
Heifner / Blinking nebula, M13, 6207, Bkris.
- 6648 E ~2100-~2115 / Wed 19/20 / 10+ - F / at viewpoint
stop in east Utah on I-70, no lights / very fine sky.
- 6649 M Thu 20/21 / ~~2100~~-2100-0300-0315 / Motel 6, Las Vegas /
- / ~~at~~ general.
- 6650 MT Fri 21/22 / 0100-0115 / Regal 8, Flagstaff / -.

6651M. Sat, 22/23/ 0300-0440/¹⁰8-F/ JM4/ Jupiter/-
CN3 0^h50^m.

6652M Sun. 23/24 0330-0500/¹²8-F/ JM4/ Jupiter/-
CN3 0^h30^m.

6653EM Mon 24/25? 0330-0500/ 10-F/ JM4/
Jupiter/ 0^h50^m.

6654M ? Sat 29/30/ 0330-0500/ 10-F/ JM4/ Jupiter/
CN3 0^h30^m.

6655E Thurs 27/28/ 1900-2100/ 10-F/ ~~3A~~ 14"/ W, off
Sandario Rd/ Gary R/ attempt at Meier 840.

6656E Fri 28/29/ 1900-2100/ 10-F/ 13"/ 6 FF S. rd/
Duane/ attempt at 840 again.

6657E before 52M/ Sun 23/24/ 1900-2000/ 3-F/
JM4/ Jupiter/ attempt at Meier 840.

6658M Sun 30/31/ 0330-0500/ 10-F/ JM4/ Jupiter/-
CN3 0^h30^m.

6659M Mon Oct 31/32/ ~~00~~ 0330-0500/ 10-F/ JM4/
Jupiter/- CN3 1^h05^m.

6660M

OCTOBER ↗

wed 2/3/4 0330-0500/ 10-F/ JM4/ Jupiter/
- CN3 1^h ~~05~~ 20^m E. (Saw comet Austin
here somewhere!)

6661EM Sat 29/30 (before 6658) / 2000-0200/~~8~~F
10-F/ near Buckeye/ Mercury/ Pt Sag. A. C..

6662E ~~Sun~~ Mon 8/9/ 2100-2130/ 7-F/ P Charles Morris
house / Moon.

6663E. Fri 12/13/ 2300-0000/ 7-F/ Steve Edberg's house.

6664EM Sun 7/8 (before 62E) / Redlands / Phoebe / Moon, M45.

6665M Sun 14/15/ near Yuma/ 0100~0115~/ Phoebe / Moon.

Friday, October 19 1984

Penelope's First light party

Phillip W. Budine, A.L.P.O. Jupiter Recorder
Formerly @ Haysville, N.Y. / Now Tucson, Arizona
to David a fine friend and ALPO Staff
Associate. The best always and the best
of seeing with your Telescopes. - Phil

Velma Budine, Phil's wife, thanks you
and welcomes you as a friend.

Otan Foster Phil Amo Velma's
daughter, thank you very much
Amo welcome you as a friend.

James, Karri + Jennifer Scotts

Terri Lappin

Duane Nichols, Derold Nye, Vivian Lewis.

6666EM Friday, 19/20/84 2-3-F1 JM/ Penelope/
"First light". Cleared enough to view Mizar,
later M31, 33, with Penelope.

PERSONALS

140

HYPNOSIS—And instruction in self-hypnosis for self improvement. 257-564

LOANS Arranged — Quick, friendly service. 4-822

REBUILT

VOLKSWAGEN ENGINES

VOLKSWAGEN VILLAGE HA 1-36 6

SAVE ON AUTO INSURANCE

John 9 6-11 2

SEARCH Attic Trunk—Need old ink fountain pens, old silver dollars, old postal cards, any city, used or not, old love letters, old clocks & watches, what have you got? 5 3-0244

SMALL loans arranged. 421-633

Mr. & Ms. Escorts 542-308
SCALP Treatments for healthy hair, by EVA. 257-077

TRAINS WANTED

PAYING CASH FOR OLD LIONEL ELEC. TOY TRAINS, BROKEN OR COMPLETE. 26-247

VACUUM Cleaner Hoses—Any make \$6.95 Royal. 83-230

MOTALOY Ring-Valve Job—\$6 While driving, guaranteed. 4-2-82

LIBERAL Friends Wanted—Discussions, cards, games. 763-166

VACUUM — Hoover, new in carton with attachments, \$34.90. Royal Distrib., 833-202

CASH—Small amounts up to \$100 for employed men & women, subject to approval. 84-094

HELP WANTED

403

ACCOUNTING CLERK — Diversified position available for person with 3 years experience in general ledger, scheduling, billing and related duties. For appointment call Personnel. 831-950

ADVERTISING—Promotional Work Secretarial-bookkeeper combination for shopping centers. Pay \$800 per month. 362-387

BARBER — Stylist, with business, many opplys, good location. 7-3-29 6

WANTED GUESTS FOR PARTY

Fun-Loving, Laughing, Kick-Up-Your-Heels Persons, Willing To Devote Time To Livening Up A Party.

CABINET Makers—Experienced. 231-491

DELIVERY Drivers Wanted—Small package service, need men willing to work hard and sharp enough to advance to management. 7-7-1301

DESK Clerk—Pensioner considered, over 35, evenings. Adv. & salary. WA 1-213

DAIRY PERSON, Experienced, top wages, trailer house furnished, & extras. 7-2-246-537

HELP WANTED

403

GENERAL OFFICE

Self starter, good typing, 10 key, aptitude for figures, ability to communicate, good salary and benefits. Call 842-216. Equal opportunity employer

LANDSCAPING—Min. 2 yrs. exp. & ability to manage crew. 942-470. 9 am-noon only.

MEN/WOMEN—Bomb Pop Drivers. 18 or over, with driver's license. Good routes still available. 241-521

NIGHT Operation supervisor needed for rapidly growing air freight forwarder. Unlimited advancement. Call 91-8585

PRODUCTION WORKER

Individual needed in assembly department, should be person with well organized work habits and willing to be trained in a semi-technical field. We are an equal opportunity employer with good company benefits and pay. Call 321-759 for appointment

SECRETARY

Southside location, permanent position, experience necessary, good typing, no shorthand, 5 day week, good pay. Call 96-9733

STUDENTS

Over 18, drivers license required. 43-4235

TRUCK DRIVER, tractor trailer. ICC clearance, start immediately. 24-304

No experience necessary. Will train!

Date Friday, October 19 1984

Time 7 pm

Place David's

First Light Party
for Penelope

6667M after a cloudy week, 10/28²⁷/~~29~~/ Saturday / 0430 - 0540 / ~~8~~ 10-F / JM4 / Jupiter / - / CN3 0^h 45^m E

6668M sun 28/29 / 0400-0540 / 10-F / JM4 / Jupiter / CN3 ~~8~~ 1^h 10^m E.

6669M NOVEMBER

Thurs 1/2 / 0^h 40 - 0510 / 10-F / JM4 / Jupiter / - / CN3 0^h 20^m E.

6670M Fri 2/3 / 0330 - 0410 / 10-F / JM4 / Jupiter / - / CN3 0^h 35^m E. Also

6671M2 0530-0545 / 10-F / JMF / Penelope / - / CN5.

6672M Sat 3/4 / 0510-0535 / 10-F / JM4 / Jupiter / - / CN3 0^h 15^m E.

Sun 4/5 Nov.

Dan Ferdie

Not for Morris

Mike (The Maffia) Ferdie

Paul Ferdie

6673ES Sun 4/5 / [↑] 1415-1435 / 10-F / JMA / ~~8~~ Penumbra / ~~7~~ Ron's family / Sun. Also JMF / Penelope / looked at moons.

6674E2 2200-2215 / 8-F / Dave Patterson's house / Dave, Ralph Peters. Rooftop.

6675EP3 0000-0015 / 8-F / " / Dave / Penelope.

6676E Mon 5/6 / 8-F / JM / Penelope / Venus, Mars, Jupiter.

6677 MP Tuesday, ? 6/7/ ~ 0200 - ~ 0210/7-F/ JMB/
Penumbral - Moon?

* 6678E Thurs, 8/9/ 2330 - 2350/8-F/ Clyde Tombaugh's
house/ Clyde/ Observed J. Moon + star with his
lawn-mower mounted telescope.

* 6679E Fri 9/10/ 21745-18 0/7-F/ Walter Kraas'
house/ 12" Refl/ Walter/ Venus, Jupiter, Mars

6680E Sat 10/11/ 1830-1930/10-F/ JM4/ Jupiter/ -
CN3 0h 20m W.

6681E2 Sat, 10/11/ 2030-2130/ :7-F/ Echo Valley
Observatory/ Duane/ - Vivian, Gary/ M15.

6682E Sun 11/12/ mostly cloudy / ~ 2345-0000/
Penumbral - Moon, M42.

6683E Mon 12/13/ 1830-1930/ 7-F/ JM4/ Jupiter/ - Ron Ferda/
CN3 0h 30m.

*** 6684 E.

Tuesday Nov 13/14

1859-2200

10-F

JM4

Jupiter

CN-III $1^h 03^m$ W.

Discovered Comet 1984 t

Levy-Rudenko.

at 1950 RA $18^h 47^m + 9^{\circ} 50'$

$m_v 8.5 \sim$.

6685M2 0230-0400/7-Fm/SMB plus south walk/moon.

* ⊛ ⊛ 6686E Wed 14/15/10-F/SM4/Jupiter/
Gary Rosenbaum/
Brian Marsden's confirmation call
comes during session. 1984t:
Levy-Rudenko.
Observed comet at $18\ 47.4\ +10^{\circ}13'$
at $M_V 9.5$.

6687E Thu 15/16/1830-0000/10-3-F/KPNO/16-inch/
R. Greenberg, J. Africano/Comet 1984t, Asteroids.

6688E Fri 16/17/1830-0000/3-F/KPNO/16-inch/. general.

6689EM Sat 17/18/1830-0200/3-10-F/KPNO/16-inch/
Comet Levy-Rudenko, (mottled nucleus, ??tail?)

6690EM Sun 18/19/1830-0200/3-10-3-F/KPNO/16-inch/
Comet 1984t, Asteroids.

6691AN Monday, 19/20/1830-0600/10-F/KPNO/16-inch/-/
Comet Levy-Rudenko, Asteroids.

6692EM Tues 20/21/1830-0300/10-F/KPNO/16-inch/-/
Comet Levy-Rudenko, 65 Cybele, other Asteroids.

6693M Thurs 22/23? / 0505-0600 / 10-F / JM4 / Jupiter / - /
CN3 0h40m. Observed V Hya in fe 2nd field.

6694M. Fri 23/24? / 0500-0600 / 10-F / JM4 / Jupiter / JMF /
Penelope / 0h20m CN3.

6695E Sat 24/25 / 2100-2300 / 3-F / Echo Valley Obs. /
Duane, Terry, Gary.

6696E Sun 25/26 / 1800-1840 / 2-f / opening of Sabin Canyon Obs.

* 6697E. Wednes Mon, 26/27? / 3-F / JM4 / Jupiter / 1984t.
brightening. / Gary Rosenbaum. / Also saw Comet Levy-
Rudenko in Echo and in Pegasus.

6698E Wednesday, 28/29 / 1800-1900 / 3(int) / Liz's house /
mostly clouds.

6699E Thu 29/30 / 1830-1950 / 7-f / Image Pt / Duane, Jim,
Ron. Test of "Comet-Catcher."

6700E Friday, 30/31 / 1830-1930 / 8-fm / JM4 / Jupiter, Pegasus /
Duane, Terri, Vivian + Heather / Comet Levy-Rudenko.

December

* 6701AN Saturday, 1/2 1830-0600 / 7-10-F / JM4 /
Jupiter / see next page. / Leo 1, Leo 2,
other faint galaxies including Larry Moe +
Curly in Hydra. Especially impressed with
Gerry Rattley + Chris Schur's ability to observe
faint objects.

CN3 0h30m E.

found Comets Levy-Rudenko 84t and
Shoemaker 84s, not Meier 84o.

67019N-
conc'd.

JOAN MANLY, TEMPE Had a great time!

COMET Levy-Rudenko (1984t) - just visiting my friend DAVID!

Jim, KARRI & JENNI SCOTT, TUCSON (comet beat ^{us} to it.)

BILLIE WESTERBARD WILMINGTON, DE.

Pete Manly, Tempe az. nice telescope, so-so comet.

John E Peracchilli - what do you do with all
of these telescopes David? Save some new
discoveries for the rest of us!

Jerry Maurer - CONGRATS ON FINDING YOUR COMET
MABY YOU CAN FIND ONE FOR ME!!

Anthony Galanis - WHAT AN inspiration! THANKS AND
CONGRATS ON YOUR NEW COMET!

Steve Quinn - Do you want to sell one? It opened
my eyes!

Pat & Doreen - Tucson AZ.

Mary Rosenbar

Terri Lappin

Dwaine McLeod

Richard Hill - Saw the god damned comet!

Chris Schur ~ Well now I've now added a new comet

to my collection and have been very glad to be able to observe with you, especially in the future

as in the case observing together

Samuel W. ~~Platt~~ like your comet, but could you
please learn to collimate your scopes!

Walter Woyszig
Scott Fleming

Jupiter. - but Gerry - you said I was collimated.

- 6702S Sunday 2/3/ 1600-1700/3-F/JM4/Jupiter/
 Jim, Karri, and two young girls from Corona
 who came to congratulate me on 84t. Maybe
 the discovery + my showing these ~12-yr-olds
 the observatory will spur them into astronomy.
- 6703E2 1845-2000/3-F/JM4/Jupiter/-/ Comet Levy-
 Rudenko. Fainter than last night.
 - clouds.
- 6704M Tues 4/5 + 0440-0600/10-F/JM4/Jupiter/-/
 CN3 0h 30m E. no comet Meier.
- 6705E Thurs., 6/7. 1800-2200int/3-fm/David + June's
 house/. Astroscan, 8" dynascope/ Comet Levy-
 Rudenko.
- 6706E Sunday 9/10 1845-2100/3-F/JMB/
 Mira 3 now renamed to Ophelia / Gary. Also Propus, in
 JM2.
- 6707E2 Thursday, 13/14/2200/-2300/7-F/JM4/Image Pt/
 Ophelia Duane, Gary, Terri / test. slight
 astigmatic + out of collimation; better, somewhat,
 than the "Renaissance" or "Comet-Catcher."
- 6708E before 6707. 1830-1930/3-2-F/JM4/Jupiter/-/
 CN3 0h 10m LW



HOPE YOU'LL COME
JOIN THE FUN!

DATE December 14 1984

TIME 6:15 pm

PLACE David's house

Ophelia's first light party

GIVEN BY 1984t

*6709EM 1800-0300 /10-3-F-JMB/ Ophelia, Jupiter / First light party.
Geminids. 1984t perihelion.

Bounder + Linda Bean

DERALD NYE

Virian + Bob Lewis

Judy + Roy Stowell

Michael Magee

Bill Duvall -

Mary Rosenbaum

Jennis Scott's + Karin + Jim

Donald Hartman Ft. Worth, TX

Raphella

Teressa Loppin

Dean Ketsler

Faint light for Ophelia

Comet 1984t - Levy - Rubenko, no tail (maybe a faint one) bright inner coma - beautiful sight

Geminid photographic expedition.

North site

JMB

South site

30" telescope meeting

{	10:00 - 30 - 10:10:30	cirrus.
{	10:11 - 10:21	
{	10:21:30 - 10:31:30	
{	10:32 - 10:42	↑
{	10:42:30 - 10:51	haze

Janet H. Ferde

Also

30" telescope meeting

Star Trek festival for Karri + others.

Short business meeting for Convention.

Friendly words to me and discussion about Dad's going into hospital, + Mother beginning a new life.

This is one of the best first light parties ever.

15/16

6710E 1830-1930 / 7-6-F / NW Tucson / Pegasus / - Don Davis, Clark, Bill Hartman, Paula Macbride, Sheila, and Stu, and all the others / M57. Db Cl. Comet Levy-Rudenko.

6711AM Sunday 16/17/9³-10-F / KPNO / Ophelia, 16-inch / Stu / Asteroid 45, 129, 39, Comet 1984t.

* 6712IS Monday, 17/18 / 1400-1600 / 8-3-F / KPNO / Vis Tel / - / 19th Anniversary of CN-III.

6713E2 1830-2100 / 10-F-3-F / KPNO / 16-inch, Ophelia / Werner Starlach from NRAO, Bob Goff / good look at 1984t, them a bit on 45 Eugenia-

6714EM ^{Thurs} 1830-200 / 3- F / KPNO / Ophelia, 16" / Comet Levy-Rudenko - bright (m8) and Fot.

6715EM Fri 21/22 / 1830-2300 / 3-1-F / Tom Gehrels, Don Davis,

6716EM Saturday, 22/23 / ^{Bob Goff} Brief view of 1984t.

3-F / JMB / Jupiter / - The Scotts, Duane, Vivian, ~~John~~ Scott. ~~Kat~~ Kathy Hedges.

CN3 0^h20^mS.

6717M2 Sunday? 10300-0400 / 3-F / coll / JM 4 / Jupiter / - /

CN3

0^h10^mS.

~~Donald Hartman~~
Kaplan
Leresa Lippin
Alan Kelso

6718 ^E ~~A~~ ^{wed} Thurs, Dec 26 / 2200-2300 / 3-F / JMF +
South site. Idea for poem. Why do we watch

6719 M. the stars? Fri 28/29 / 0530-0630 / 10-F /
JMF, JMF / -Jupiter / CN3 0h 10m CN5.
w/ Penelope.

6720 AN Sat. 29/30 / 1830-0600 / 10-F / JMB / -Pegasus,
Propus, Jupiter / Rolf, Linda, Vivian /
1984t Levy-Rudenko.

SS Cyg 12.1

Shoemaker.

V2 Com 5.1

Faint galaxy near 1940_o
position

S Per 10.1

CN3 1h 50m E.

6721 E Sun 1830-2100 / 7-fm / JMB / Rolf, Linda, Duane.

6722 M.2 Sun 30/31 / ~~18~~ 0200-0630 / 10-F / JMB /
Jupiter, Propus, Pegasus / Rolf, Linda /
CN3 0h 40m E.

Comet Meier not found.

instead Arend-Rigaux + P/Shauvassse, Levy-Rudenko.

6723 E. Mon 31/32 / 1830-0000 / 3-f / JMB / Jupiter, Pegasus /
Pegasus, Propus, Jupiter / Levy-Rudenko,
Mars, Moon.

1985.

6724E. Jan 1/2, Tues. 2300-0000 / 7-fm / South
Site / Rolf / - / Picture of Canopus area.

6725M2 0330-0615 / 10-f-windy + cold / JM4 /
Jupiter / - / CN3 1^h30^m E. Levy-Rudenko, photo of Jupiter.

6726S 2/3 wed / 1400-1440 / 10-f / JM4 / Sam Negri, Az. Republic / Jupiter.

**6727.M2 0430-0630 / 10-f / JM4 / Jupiter, Propus, 1 ROLF,
Linda. Quadrantids. Windy + cold.

0450	1	2	0	21	5
	2	4	0	22	5
	3	4	0	23	5.5
	4	4	N	24	5 N
	5	4	0	25	2.5
	6	3	0	26	3
	7	2	0	27	3.5
	8	2	0	28	0
	9	1		29	5

0500	10	1	~0520	30	3
	11	2		31	3.5
	12	3		32	4
	13	3		33	1
	14	5		34	-1.5
	15	6		35	3.5
	16	3		36	3
	17	2		37	3.5
	18	2		38	3
	19	3		39	3.5
510	20	1		40	4.5

41 6
 5 30 42 1
 43 6
 44 2.5
 45 -4 N over 30° over head to E.
 46 5
 47 2.5
 48 3.5
 49 6
 50 2.5
 5 40 51 5.5
 52 3.5
 53 3.25
 54 2.5
 55 3
 56 3.5
 57 4
 58 5.5
 59 4.5
 60 3.5
 61 1.5
 62 2
 63 3
 64 4
 65 3
 0550 66 2.5

One hour count
 66 meteors.

Direction = S.

Linda looked N,
 saw 67.

Total count 133 but
 a few were seen by
 both.

Rolf took photos centered on
 Leo. + did SN search.

Comet Levy-Rudenko
 (nuclear)
 still not much inner condensation
 bright inner coma.

Mercury at greatest w. elong.

CN3 0^h 10^m E.

From 0600-0610.

6728M. Thurs 3/4/0540-0620/10-F/JM4/Jupiter/-/
CN3 0^h20^mE. 1984t. brighter. inner coma
more striking.

6729E Sunday 13/14/1800-1900/3-F/JM4/
Robert Burnham, George Ellis/
M42
M1

Robert Burnham - but not "the Robert Burnham"
George D Ellis - "The Philastropher"

* 6730AN^S ^{Wed 16/17} ~~Thurs 17/18~~ / 1800-06-1730-0740/
10-F/KPNO Sunset + Sunrise Shadows.
Green flash at sunrise. Don Davis.
8 Asteroid Greedasy. 16 inch. Comet 1984t.

6731AN ^{Thu 17/18} ~~Friday 18/19~~ / 1815-0630/10-F/KPNO/16-inch.
R. Greenberg/ Asteroids. Comet 1984t. Nuclear
Condensation

6732S. ~~Sat.~~ Fri 18/19/1500-1530/10-F/KPNO/Via Tel./Sun

6733AN2 1800-0630/10-F/KPNO/16"/R Greenberg/
Asteroids. Also Steve Edberg was here. CN3
0h 30m E with guides Finder refractor. 1984t, no condenser

6734ANS 1500-1520/10-F/KPNO/~~16"~~ Vis Tel + Celestron/
Bob Goff. Sun in Hx.
↑
Sat 19/20

6735AN2 1800-0630/10-F/KPNO/16"/R. Greenberg and
Robert Burnham. / ~~16"~~ Asteroids. 1984t.

Date? 6736M. 0540-0620/10-F/SM4/Jupiter/Rolf + Linda/1984t. CN3
0h 30m E

6737M Sat. 26/27/ 0045~ - 0145~ / 8 9-10-F/
Site near LA / Steve Edberg, Charles Morris/ Pegasus/
Comet 1984t, Levy Rudenko, and Comet. 1984

F 6738M2 ~0430-0600/10-F/Morgan site near Mt Wilson/Pegasus/-/
CN3 0h 45m. E.
Montreal.

February

6739M 9, Sun 3/4. 0100~ - 0115/ 6-F/ Le Fort de la Montagne/
Mercury / - / Moon.

6740MP Monday 5/6 9 . ~0000 - ~0010/ 6-F/ " / Mercury / - / Moon.

6741MP ? Mon 12/13/ ~ 0000 - ~0010/ 6-F/ " / Mercury / - / general.

Goodbye, Daddy.
Always, I will love you and miss you.

* 6742 E.

First Light For Mercury

Saturday | Sunday, February 15/17/ 1730-1850/0 to 2, 3 | F/
Jarnac / Mercury / Venus, Rigel, Pleiades, M42.

- Mercury's First Light -
Alister Ling. A true telescope for the road.

Peter Jedicke Starble, starble, little twink, up above the skating rink

Daime Victoria Kapitaniuk Boy, was it cold out! David, I also
enjoyed looking at Venus through
your wonderful telescope.

Mercury- Portable Telescope from Caulter
Optical Company. Arrived in September of
1979, just after I moved to Tucson. Mirror
refigured in early 1983 by Pierre Schwaas,
with more collimating in 1984.

First light tonight held, midwinter,
at Jarnac Pond, on road in front of house.

- 6743 E2. ~2100-2145 / 8-9-F / near Hawkesbury / Mercury / Alistar, Peter, Dianne / unsuccessful search for 1984t; look at M81 and 82.
- 6744 MP Sunday 17/18 / ~0000-0010 / 7-F / Le Fort / Mercury / Arcturus.
- *6745 E 22 Feb 21 / 0030-0145 / 6-F / ~~SM~~ Cedarcrest / 12" / Alistar / NGCs. No 84t.
- 6745 MP March 29 / 1230-~1245am / 4-f / New Orleans / - / - / general look.
- 6747 EP March 4 / ~2035-2045 / New Orleans / - / - / general.
- 6748 E. March 8/9 / ~~2200~~ 2000-2200 / 1-F / KPNO / - / - / -.
- 6749 EM 9/10 / 2300-0200 / 1-2-F / KPNO / - / - / -.
- 6750 E 12/13 / 2000-2300 / 10-3-F / JM4 / Jupiter / Michael Magee / - / CN3 2^h 00^m W. No 84t.
- 6751 E Wed. 13/14? 2000-2300 / 10³-F / JM4 / Jupiter / - / CN3 2^h 00^m W.
- 6752 M Fri. 15/16 / 0300-0415 / 3-F / JM4 / Jupiter / - / CN3 1^h 15^m E.
- 6753 E. Sun 17/18 / 2000⁴-2330 / 3-10-F / JM4 / Jupiter / Dennis Mamana / CN3 2^h 00^m.
- 6754 M2 0300-0530 / 10-3-F / JM4 / Jupiter / - / CN3 1^h 45^m
- 6755 E Mon 19/19 / 2300-2315 / 3-F / JM4 / Pegasus / M51.
- 6756 E 18/19 / 20/21 / 1940-2300 / 10-F / JM4 / CN3 2^h 00^m.
- 6757 M2 0045-0220 / 10-F / South walk / - / - / beautiful night. No Ampt comet.
- 6758 M3 0420-0530 / 10-F / JM4 / Jupiter, Penelope / CN3 1^h 00^m E.

6759M Thu 21/22 / 0430-0530 / 10-F / Jupiter / -1- CN3 0h 45m E

6760E Fri 22/23 / ~~0440~~ 1930-2300 / 9-10-F / JM4 / Jupiter /
Jim. CN3 0h 25m W. Possible sighting of
extremely faint but steadily moving Comet Levy-Rundenko
1984t, ~13th mag + diffuse.

6761M2 0440-0530 / 10-F / JM4 / Jupiter / -1- CN3 0h 30m E.

6762E Sat 23/24 / 1930-2030 / 10-F / JM4 / Jupiter /
-1 no sighting of '84t.

6763EM2 ~~Sun 24/25~~ 2115-~~0000~~ 030 / 10-F / Davison Ranch /
Pegasus / other / CN3 0h 30m E.

6764M3 0430-0515 / 10-F / JM4 / -1- CN3 0h 15m ??

6765S. Friday, 29/30 / ~~093~~ 1000-1200 / walk along
Santa Monica Beach / -1- CN5 Sun Ven.

6766M Monday ^{morning} Apr 1 / ~~10~~ 0400-0510 / 10-F / JM4 /
Jupiter / -1- CN3 0h 50m E.

6767E Saturday, Apr 6/7 / ~~2100~~ 2045-2100 / Kerry's house /
7-f / Egeus / Billy / M42, Pollux + Castor region.

6768E Sun 7/8 / 2000-2200 / 3-F / JM4 / Jupiter / -1-
CN3 0h 45m W.

6769AN Mon 8/9 / 2000-0500 / 3-F-10-1 / KPNO / 36" /
Clark / Asteroid Geodesy.

6770E. Tues 9/10 / 2000-2300 / 3-F / KPNO / 36" /
Clark / probable sighting, in TV + direct, of
Comet Levy-Rundenko.

6771AN Wed 10/11 / 1900-0500 / 10-3-F / KPNO / 36" / Clark /
LR not in last night's position. Not sighted.

6772E Thu 11/12 / 2000-2300 / 10-F / JM4 / Jupiter / -1-
CN3 2h 45m W.

6773E Fri 12/13/1950-2230/10-F/SM4/Jupiter/-/
CN3 2^h00^m.

~~6774M2~~ 0200-0300/10-F/SM4/Jupiter/-/CN3 1^h00^mE.

6775EM Sat 13/14/1945-0200/10-3-F/SM Davison Ranch
TAAA/Pegasus, etc./CN3 2^h00^mW. Comet
Shoemaker 1984F. with Chris Gbur. "Tsuchinshan^I

6776M2 1 ~~0230~~ 0300-0345/3-F/SM4/Jupiter/-/
CN3 ~~2~~ 0^h45^m30^mE.

6777M Sunday 14/15/0230-0445/10-F/SM4/Jupiter/-/
CN3 1^h15^mE.

6778E Mon 15/16/2045-2330 (no sleep since 6777M)!/J. McG
16, 12/James McGaha, Gary Rosenbaum/M51, & Gem.

6779E Wed 17/18/2100-2200 int/Continental Divide, vcn/
-/-/general view.

6780M2 0330-0500/3-F/SM4/Jupiter/-/CN3 1^h00^mE.

6781M Thus 18/19/0340-0440/10-F/SM4-Jupiter/-/
CN3 0^h45^mE.

6782M Fri 19/20/0240-0445/10+-F/SM4/Jupiter/-/
CN3 1^h30^mE.

6783E Sat 20/21/2000-2200/3-2-F/Davison Ranch/Pegasus/
Jim, Duane, TAAA/CN3 0^h30^mW.

6784M ^{Mon} ~~Sat~~ 22/23/0400-0430/10-F/SM4/Jupiter/-/
CN3 0^h20^mE.

6785M ^{Tues} ~~Mon~~ 23/24/0300-0440/10-F/SM4/Jupiter/-/CN3 1^h05^mE

6786M ~~Fri~~ Wed 24/25/0400-0430/10-F/SM4/Jupiter/-/CN3 0^h15^mE

6787E Thurs 25/26/2100-2115/3-F/Flandrau Surveyor II,
Galadriel (16) Mrs Rosenbaum, Gary, others/Mizori.

6788M2 0130-0145/3-F/SM4/-/-/general.

67895. Fri 26/27/0000-0100/3-F/JMB/

Barbara J. Wimmer
John Wimmer

~~67899~~ 67905 Sat 27/28/01300-1800/0-F/Park Mall/Pegasus,

6791E Duane's telescope TAAA/ National Astronomy Day
Sun 28/29/2110-2130/7-F/FPI Surveyor, Galadriel & Leo, Moon. 2/6a? too

6792M 2 Sun 28/29/0300-0430/10-F/JM4/Jupiter/-/

CN3 0h40mE. NGC 7753 in Pegasus.

~~679~~

6793M Mon 29/30/0415-0440/10-F/JM4/Jupiter/-/

CN3 0h10mE. Confirmed 7753.

6794M Tues 30/31/0200-0215/3-F/JMB/Penumbra,
Saturn/-/

Imbora, Saturn

6795M Wed May 1/2/0300-0315/3-F/JMB/Saturn,
Penumbra/Moon. Saturn w/ Pen. MAY

6796M Thu 2/3/0245-0300/3-F/JMB/Saturn/-/Moon,

6797M Fri 3/4/0215-0230/3-7-F/JMB/Saturn, Penumbra/
moon moon, Saturn

6798A Sunday 5/6/2000-2100/3-F/JM4/Jupiter/-/

CN3 0h20mW.

6799E Monday 6/7/2000-2130/3-F/JM4/Jupiter/-/

CN3 ~~h0~~ 0h40mW.

6800E Tuesday 7/8/2000-2200/3-F/JM4/Jupiter/

CN3 1h05mW.

* 6801EM We Friday 10/11/2000-0130/10-F/JM4/Jupiter/

CN3 4h20mW, E.

6802EM Sat 11/12/2000-0245/10+-F/~~JMB~~ Davison Ranch
Pegasus/TAAA/CN3 3h45m.

6803E Sun 12/13/2000-2215/10-F/JMB/Jupiter/-/CN3 1h20

6804AE Thurs 16/17/2100-2300/3-F/34 TSP '85/-Pegasus/-
General viewing.

6805AN Friday 17/18/2100-0535/3-10-3-F/TSP/Pegasus/
Steve Edberg, Pierre Schuur, Robert Burnham, Kathy Hedges,
Brian Skiff, CN3, 1^h 25^m E. M51. VS. S5 Cyg
121. M31. NGC 869, 884. Zodiacal Light strong.
Galaxy group in Pegasus confirmed. Jupiter.
Venus up just before dawn. (Not viewed with scope.)

The 1985 Texas Star Party

acknowledges the accomplishment of

David H. Levy

who, in accordance with all regulations governing
the **OBSERVING OLYMPICS**, has successfully
located, observed, and recorded 10 celestial
objects at the Texas Star Party.

Presented May 18, 1985

Fort Davis, Texas

John W. Wagoner
Director, TSP Observing Olympics

Rob Zelig
Coordinator, Texas Star Party

6806EM Sat 18/19/2200-2300 int/2-F/TSP 85/Pegasus

6807AE Mon 20/21/ Sun 19/20/1985 2330-0100 8-F/Clyde Tombaugh's

obj. Clyde Tombaugh, Robert Burnham/-16"/Saturn
Sun 20/21/0200-0420/10-F/3M42 Jupiter/-CN3-1^h 25^m E.

6811M Tue 21/22/0350-0420/10-3-f/SM4/Jupiter/CN3 0h20mE.

6810S. Howard + Fran Brown 5/22 22/23/
1300-1330/3-f/SMB/-/-1 looking at telescopes.

6811M2 Wed 22/23 Mar/0915-0410/9-10-f/SM4/Jupiter/-/
CN3 0h40mE.

6812E Fri 24/25/ 2200-0000/ 9 1/2-10-f/Riverside/
-/telescopes+people.

6813S. Sat 25/26 0900-1700/10-f/Riverside.

6814E2 Sat 25/26 2200-0000/10-f/1".

6815S Sun 26 0900-1700/10-f/Riverside

6816EM2 26/27 2200-0200/10-f.(Riverside/
20", others/ Doug Berger. Don, ^{Machholz} Wald
Find a comet later this night.

6817M. Tues (?) 28/29 to Thu 30/31? 0350-0410/
10-3-f/SM4/ Comet Machholz.

6818M Sat Morn. 31/1/0350-0420/8-fm/SM4/Jup/no 1985e

6819M Sun. Morn? June 1/2/0350-0410/7-fm/SM4/
Jupiter/-/ 1985e. with full moon.

6820M Tues 4/5?/0200-0215/7-fm/SMB/Saturn/. Moon.

6821E Wed 5/6/ 2030-2200/8-10-9-f/SM4/Jupiter/7
CN3 1h50mW

6822E Thu 6/7/ 2000-2200/10-f/ ^{near Soudith} ~~SM4~~ ^{Pegasus} Jupiter/-/
2h15mW.

* 6823EM Fri 7/8/ 2000-2200/7-f/ Duane's / Pegasus
with new mt/ others / CN3 0h30mW

6824M Sat 8/9/ 0200-0300/7-f/ ^{SM4} Saturn/ Jupiter,
Moon

6825M Sun 9/10/ 0100-0300/7-fm/SM4/Jupiter/

CN3 15^mE.

- 6826AE Mon 10/11/ 2030-2230 / 10-F / 3M4 / Jupiter /
Jim / CN3 0h45mW.
- 6827M2 0100-0130 / 10-F / 3M4 / Jupiter / - / CN3 0h30mE
- 6828M Tue 11/12 / 0130-0215 / 9-F / 3M4 /
Jupiter / CN3 0h35mE
- 6829ME Wed 12/13 / 2100-2200 / 9^{1/2}-F / 3M4 / Jupiter / - /
CN3 1h00mW.
- 6830M2 0130-0300 / 10-F / 3M4 / Jupiter / - /
CN3 0h30mE.
- 6831M Thu 13/14 / 0200-0330 / 10-F / 3M4 / Jupiter / - /
CN3 0h30mE.
- 6832M Fri 14/15 / 0300-0355 / 10-F / 3M4 / Jupiter / - / CN3
0h30mE.
- 6833E Sat 15/16 / 2100-0000 / 10-F / 61" / Steve Larson,
Ch. Moring S. Edberg / Giacobini - Zinner
- 6834E Sun 16/17 / 2300-0000 / 10-F / 3M4 / Jupiter / - / Charles
CN: G2.
- 6835E Mon 17/18 / 2300-0000 / 10-F / 3M4 / Jupiter / - /
Charles, Steve / Giacobini Zinner.
To my friend David - Hope you discover at
least an even dozen comets. Charles

12030-0000

6836E. Tues 18/19/10-F/SM48 Jupiter, Pegasus,
large binoculars/-see below.
Tucson '85

Gary Dydrox Richmond Astronomical Society
Maristhea Emery San Diego Calif Thanks!
Richard A. Sweetser Jacksonville, FL Thanks for having us!
Nelson Wall Tucson AZ ITD!

Annie Goldberg. I like David. It was a real pleasure.
Steve Goldberg HOUSTON, TX GREAT! KEEPING LOOKING!

Michael Gordon - 1st viewing M13 Thanks!

Ronald Permenter Green Bay, WI Great! Thanks a lot
Carroll Evans. 215 Springside Ridgecrest, CA 93555

James H. McMahon 236-C Deammore Lane, Ridgecrest, CA 93555

Barren Farizo, Chicago, you are a wonderful host!
Morton Schiff Nat. Capital Astronomers Dist of Columbia
Thank for your dedication & devotion Paul E. Heyman, Fairway, N.J.
Mike Hood I enjoy the visit.

Very good! Almost fine! Bill Ward.
Dan Kuebler - HI DAVID!! YOU MUST BE CRAZY!!!
Rob de Santos - excellent!

George McLout 548 Cornelius DR. GREEN BAY, WI.
Larry Wade Houston, TX Cool to see you again and JARNAC!
Jim Crites Berkeley CA

Wendy Crider Berkeley
JT observations, Granada Hills, Ca.

Manu Manu - LA/JPL
Donald Wiley Berkeley, Ca.

Nora M. Wiley - Gridley, CA - Thanks for letting us see M13!
Loretta Harsh - Peoria Ill. - Sure are glad to we got to come.
Carl Horst Peoria Ill.

Bill Chester Fresno, CA Thank you

Carter Robat Berkeley CA - Beautiful view.

O W Coy Sulphur MS.

Joe DeRocher Cleveland OH. Great

John Leachman Camp Hill PA Loved it!

Alaine Stangler NMB JTA breathtaking! looks like CRYSTAL!

Edwin A. Aguirre Philippine Astronomical Society picture-perfect!

Peter J. Elza R26 Cambridge St. Concord, MA I love it

Stephen M. Smith Cleveland, Ohio

Marie E. Schiff Ft Lauderdale Fla.

Robert Mann Houston, Tx.

R. Steve Robinson Tucson, AZ

Stephen James O'Meara Bahstahn

Jack Bruskin (DAS) CANTON Mich 313-981-4096 -

SKYWATCHERS HOTLINE 313-837-0130

Ashley Thomas In Penna P.O. BOX 2316

PALM Desert Ca 92261. College of The Desert

Curtis A. Palmer Nas Glenview Ill.

Jerrid Metz 2318 Albin Pl. St Louis, Mo 63104

Jan Maderberg, Chicago Branch of the TAA., Thanks for the CKE!

James V. Austin Tucson P/G-Z or bust!

6837EM.

Tucson '85

Wednesday, June 19/20/2100-0200/2-3-10-F/SMB

John Soren 2545 No. 40 St., Milwaukee 53210 Jupiter

Charlie Costdyk OCA 2nd time It gets better with each trip.

Don Lynn, OCA. Truly amazing place, this telescope farm.

Robert L. Tracinski Moline, Illinois Too bad it's cloudy!

Sally + Merrill Manion, That air feels good

Robert R. Clark - La Place, La - GREAT

George E. N. Nelson Georgia, IL.

Phyllis A. Joseph. Pritchett Astronomy Soc. New Orleans
Curtis + Marice Cummins - Coicy-Cre - Fairfield

Edwin J. Lurott 1384 Station Place, West Chester, Pa. 19380

Richard + Sally Hathorn 212 Westwood Burlington, Wisconsin 53105

Chris Ashford 4160 W. 163 St. LAWNDALE CA. 90660 L.A.A.S.

Dr. + Mrs. William H. Glenn 2411 Well Ave. Bronx, NY 10468

Waldon Schuette, 7418 Adelaide, Normal, IL 61761 Would like to see this in daytime
or well

James Wroth Me again...

John Wagoner, Plano, TX. - I like your taste in landscape artists.

Mr. + Mrs. Robert Cop - O Fallon Mo.

William Shull Racine Wis.

Larry Paulk 306 Malibu House, LA 70364 Pritchett Astronomy Soc.

Bob Buckner 18242 N. 20th Ln. Phoenix AZ 85023

Russell R. Dunlop 433 E. High Point Road Peoria, Ill - I saw Halley
in 1910 Age 4

Mr. + Mrs. Mark Jones - ST. LOUIS, MO.

RITCHIE FALK 3325 15th St. RACINE, WI. LIKED YOUR SCOPES, NOT THE WEATHER!

James Timian 2305 N 10th St Fargo ND USA 58102 Thanks for
your hospitality

Bob Trotta P.O. Box 692, Media PA 19063 Thank you for being the
very special person you are

Alison Trotta 209 Ash Ln Lafayette Hill Pa. 19444 Thank you for
everything

Morton Schiff Past secretary National Capital Astronomers Washington DC

Andy Glynn 2820 N. Kennicott Ave. Hts. Ill.
 Dan Krauss 2212 E. Prockman St. Tucson Az 85719
 Phil & Margaret Hefflin 6901 Starlite Drive
 Omaha, Nebraska 68152

R. Steve Robinson POB 43536 Tucson, AZ 85733

John Zenebar Camp Hill PA # 17011

Jack Brusbin 5429 SANDHURST 102 DETROIT ASTRO SOC -
 CANTON MICH 48187 LONDON CENTRE RASC

Alain Stangler 2321 NE 19th ST. FLA (33180) Here for the 2nd
 time & more knowledge
 & Enlightenment!

6/20/80 8:30 P.T. Stephen James O'Keefe

observed Comet Giacobini-Zinner with David's 16"

using various magnifications the comet took on the following
 appearance



I will have to
 check the stars'
 ~N positions on an Altaz
 later for orientation.

Mag. 11.8 : Comparison stars
 55 Cyg field:
 12.3 + 11.8
 11.0

The coma was displaced in 3 layers. Beside the faint nuclear condensation,
 a prominent inner and outer coma were present. However, a secondary
 Halo, extremely tenuous, outlined the comet's head. Definite parabolic
 structure to the outer coma. Two tails - bifurcated. - dark lane between.
 inner edges of tails more sharply defined.

Mag estimate of 55 Cyg 9:10 P.T. 11.7

Stephen James O'Keefe

Jan Madenberg, Chicago, Ill., David, thank you - your skies are great!

Pete & Ed 11.8 cont 6-7 11.7 55 Cyg • a consensus of experts

0030-0230/10-3-9-F/SM4/Jupiter -
6838M Thursday, June 20/21
Jan Madentz, Chicago, IL, Nice Clouds!
120000-0200/3-F/SM4/Jupiter 1-1 Steve O'Meara, Jan,
Peter Collins/ GZ.

21/22/230-0200/10-F/SMB-2-3-4/Maria,
6839M. Jupiter, Procyon -/ GZ.

Friday, June 21 1985.

David Roberts, College Park, GA. Incredible sky & scopes!
John E. Marsh Atlanta, GA. Stupendous - Amazing - !!! Great
A. Blaine Brooks ALPHARETTA, GA. FABULOUS SKYS!
Larry Beatty - Oklahoma City, OK. Excellent skies!
Mike Dennis - Oklahoma City, OK. Beautiful Milky Way!
Bruce Spainhower - Portland, OR ... like your sky projector!
Rick Clark Atlanta, Ga. More scopes than you can shake a stick at.
P. Collins Central Buroux viddy good, viddy good viddy good
Dennis L. Mearns Pleasant Valley, Ia. Excellent!!
Kevin Healy Puyallup, Wash state. Very nice!!
William J. Mearns Pleasant Valley Ia. Excellent!
A. Richard Hunter 400 S. Ithan Ave. Villanova, PA 19085 - Thanks!
John Sanford Orange A. Good show, number one! Ta.
Charlie Oustdyle Costa Mesa, CA
J. Mark Hamby, Knoxville, TN, Cosmos
Sally M. Freschman, Knoxville, TN. Thanks!
James V. Smith - You know where I'm from
Conrad Muecholz The Solar System.
Michael Magee - YES
Jan Madentz, C.A.S., Super skies tonight, Thanks, David!

Dan Koehler - Milwaukee Astronomical Society
- Waukesha, WI Thanks for the views of GZ!!

Sweeping your 16" thru some Milky Way
fields & now better understand your
joy in observing and comet searching.
Thanks for opening my eyes wider.
Your friend and "coach", Steve Edberg
(Signed from 6836E)

6840AN Mon 24/25/10-F/2000-0430/KPNO/2-36/
Stu/Ast. Good.

6841EM Tues 25/26/10-F/2000-0230/KPNO/
2-36+new Lumicon/Ast. Good, tel. problems.

6842AN Wed 26/27/1940-0500/KPNO/2-36+Lumicon/Stu/
- Asteroid Geodesy.

6843AM Thu 28/28/10 2300-0100 intermittent (U. of Alberta)
Peter, Dianne, Alan Ryer/- All night twilight.

6844E Sun 30/31-2230-2315-16-F/Ellersley Obs/
Tony White, others/-8 "refr/-Moon, Saturn.
Twilight: Aurora, Fast-moving satellite.

6845E, Wed 2/3/3/4/2045-2115/3-F/JM4/Jupiter/

CN3 0^h15^mW. till moonrise.

6846EM Fri. 5/6/85 2300-0030 ~ | 3-F | JMB | Jupiter. (but scope not really opened) Mercury. & Cap wa meter watch. I saw 2 sporadics, Jim saw 1. | Jim + Karen Scotti.

6847S. Sat 7/8/1400-1500 | 3-F | JMB |
Sat, July 6/85 Paul Delaney, Lynne Fonseca
& Shaun Delaney

6848E Friday 12/13/85 2000-2100 | 7-F | JMB | Flandrau /
Snowden - | Brian Schumaker / Saturn

6849E Sat 13/14/2000- | JMB |
Jim, Kari, & Jenni Scotti - Lets observe the rain shower.
Teresa Lappin
Gary Rosenbaum - lets listen to Rockin Sidney
Derald Nye - Where's Bounder & Barn?
Dianne Niehaus - Raindrops are fallin' in my eyes,
Sharon Harvey - ?

Kristi Skinner
Richard Hill - Good star party! Lots of smokin', drinkin' and white lights!

Vivian Lewis
Jesse McGaha
May James Someday
Scopes as you
You need a few ducks to go with the cats.
HOPE YOU'LL ALWAYS
HAVE THE MOST SCOPES BETWEEN
YOU AND GAMES!!
have as many
Jim Hunter

James E. Milne

Adam Martin

Mariabeth Gilkey

It's been a long time! ~~Sorry I brought the~~ ~~Seattle weather~~ along with me...

6850 EP 24th July 1985

Milwaukee, Wisconsin

~2200-~2210-

To my Best Friend —
and discoverer of comets

3-f/Dave's house/
-/-/moon.

Happy Tidings — Dave Eide

Milwaukee.

6851 M.

26/27/ 0200-0430 / 10-f / Oso Observatory / Leo / M31, DBC1,
Veil. Jupiter. Comet Giacobini Zinner. p Her, + Del, x Cyg,
CN3 1h05m E. Thank you for joining my observing
session. Leo Enright

6852 S.

27/~~28/02~~ 1400-1430 EDT / 3-f / Oso Observatory /
Solar Station / LE0 / Granulation + faculae about group.
Observed with my friend Leo. Thank you! Leo

6853 S. July 29 / 1500-1530 / 0-6-f / Sherrington, St Jacques / - / memories of
sessions in 1962
+ 1976
See Journal.

6854 EM. July 28 ^{30/31} ~~29/30~~ / 0000-0015? / 7-f / 308
Le Fort / Minerva / - / Jupiter, Moon.

6855 E ^{Sat} In August 3/4. / 2100-2315 / 6-8-9-¹⁰-f / Jarnac /
Minerva / Constantine / CN3 0h45m W. Moonrise.

6856 E ^{Mon Sunday} 4/5 / 2140-2330 / 9-10-f / Cedarcrest / Minerva,
12" / Aster / CN3 0h50m W.

6857E Monday, Aug 5/6 | 2145-2390/6-9-F/Cedarcrest
Observatory | Minerva | Alistair | CN3 0140mW.
SS Cygni 11.8

6858E Thursday Aug 8 | 2130-0030/10-F/
Lake George | Minerva | Mother, Larry | M27
CN3 1h 00m W.

6859E. Fri Aug 9 | 2100-2000/3-F | Lake George/
Joyce, Larry, Mother | ~~CN3~~ Larry found ^{Saturn} Jupiter.
Db Cl. Jupiter, M31, M57.

6860EP Sat Aug 10 | 2100-2200 int from car | Mother,
Larry + Joyce | Jupiter + gen. sky. Study of
how city lights suddenly hurt sky condition
as we approach.

*6861M Sun 11/12 | 0115-0300 | 7-F-9½-F | 812+
Summit (0115-0215) then St Jacques (0247-0300) |
-|-| Perseids. None seen during summit walk,
a bit of a surprise. Then, 2 Perseids and
one nonshower seen from St. Jacques site. The
Perseids were ~4 and 3½ magn., in southwest
+ southeast. The nonshower ^{one} was ~3 or 2.5, overhead
Nice double session!

6862E 12/13 | 2115-235 | 7-F | RASC | -|- | general observing.

* 6863M 15/16/0 300-0500/3-7-10+ F/ J-J-D/ Minerva/
CN3 1h15m.

* 6864AN 16/17/ 2200-0445/10-F/ A Tree Farm Cgd, then Stellafane/
Minerva. CN3 1h15mE.

* 6865S 17/ 1030-1900/10-F/ Stellafane!

* 6866AN 21/18/ 2000-0445/10-F/ Stellafane/ Minerva.../.../
... CN3 2h25mE.

* 6867E ^{23/24} 24/25/ 2200-2300~ /7-F/ Chamberlin Obs/ Peter, others/
20" Clark/ Jupiter.

6868S. ^{24/25} 25/26. Sat. @ 1540-1600/3-F/ Pikes Peak Summit-/
-|- nice cloud convection. Mifty view.

6869E2 2115-230/ ~~1530-15~~ 210-F/ Levy, NM! / Minerva's
Finder|-| R.G.B 6.0.

* 6870E Sun 25/26
2330-0000~ /7-F/ Clyde Tombaugh's house/ Clyde/
16" / Jupiter. intricate detail showing .SE B activity.

6871E Mon 26/27
2300-2315/3-F/ JMF/ Minerva|-| general look.
Home!

6872M Fri 30/31/ ~0230-~0245/3-F/ JMF|-|-| general view.

6873EM Sat 31/32/ 2345-0045/3-F/ JMF/ Minerva with
new mount. Collimated. Very encouraging view
of Jupiter.

P/ HALLEY

Phase I (beginning)

- 6874 EM Sunday Monday, Sept 2: 2300-0600/9 3-F/
LPL + Tumamoc Hill. 1-1 ~~at~~ Test.
- 6875 EM Tues 3/4/ 2100-0300/ 7-F/Tumamoc Hill/21/-/
Attempt occn of GZ. Too low.
- 6876 E Wed 4 / 2000-2300/10-F/SM4/Jupiter/1-/
CN3 1^h20^m.
- 6877 E Thu 5/ 2000-2300/ 10-F/SM4/Jupiter/1- CN3
2^h20^m.
- 6878 EM 6/7 / 2000-~~23~~ 0300/61" / Steve, Sue/
mostly cldy, setting up.
- * 6879 E AN ⁸7/8/ 2000-0530/61" / Steve / Comet Giacobini-Zinner.
First sighting of Comet Halley, through eyepiece of 61.
- 6880 AN 8/9/ 2000-0600/61" / Steve. Larson / GZ after
3am clearing. Mt Lemmon sessions w/ 61" + Minerva
- * 6879⁸ AN 9/10/ 2000-0600/61" / - / set of GZ images, CN3 15^m
- * 6880 AN 10/11 / 2100-0600/61" / - / clouds except for early
evening when CN3 15^m W. Encounter right.
- * 6883 AN 11/12 / 2000-0630/61" / - / New Comet P/Maury, CN3
15^m E, Giacobini-Zinner, P/Halley.
- 6884 M 12/13/ 0400-0500/ 10-F/SM4/ Jupiter/1-/
CN3 1^h00^m E.
- * 6885 EM ~~13~~ 14/15/ 2000-0200/ 3-F/ Empire Ranch/
- Minerva, 14" / TAAA/ Comets P/GZ, Hartley-
Good. Jupiter
- 6886 MZ 0300-0515/ 10-3-F/ SM4/ Minerva, Jupiter)

- Halley
2000
- P/GZ. ?P/Halley. (Jim)
- 6887M. 16/17/0400-0510/10-F/JM4/Jupiter/-/
CN3 0^h30^mE. ?P/Halley.
3 cloudy nights. (Comet also seen by Tom Gehrels in same position.)
- 6888AN 20/21/ ~~17/18~~ 0400-0510 2100-0500/10-F/JMB/
Jupiter/ Corona de Tucson community. Michael,
Grace. Jupiter with Jupiter. Comet P/Halley.
CN3 1^h30^mE.
- 6889M 21/22/0400-0500/10-F/JM4/Jupiter/-/CN3 0^h30^mE
P/Halley.
- 6890M 22/23/ ~0100-~0120/7-F/JMF/-/-/viewing
- 6891M 23/24/ ~~0400-0510~~ 0400-0510/10-F/JM4/Jupiter/-/
CN3 1^h00^mE P/Halley.
- 6892AE 24/25/ 2300-0000/3-F/JMF+ S.walk.
nice gibbous moon
- 6893M 25/26? Echo, in front, Moon. ~0100-~0115.
- 6894E. 27/28/ 1900-2100/0-F/JMB/ B. Il Peters,
Ed Barker/ Saturn. Pictures. Later, look
through Mirat^{II} at moon. (?)
- 6895E 30/31 Mon/ ~~1900-2100~~ 2135-2150/3-F/Se David.
Gibbous, waning moon. Nice session
- 6896E Oct 1/2/ 2345-0000/3-F/JMF. Moon.
- 6897E 2/3/ 1900-2100/9-7-F/JM4/ David → The "Duck" was as wild as
ever, and so are you! Thanks again & hope to see you soon. Michael (BAKICH)
What fun to be here! Raymond Shafer -
- 6898E 3/4/ 2000-2100/2-10-9-F/JM4/Jupiter/-/
CN3 0^h20^mW.
- 6899E 5/6/ 1900-2300/10-F/JM4/Jupiter/-/10-16

neighborhood kids / CN3 2^h30^m W.

*6900M2 7/8 / 0415-0645 / 9-F(m) / Yucca Park,
on rd to 29 Palms, CA. / Minerva, Ophelia /
Michael Magee / FGZ and 3 Draconids.
Nice dawn. No storm.

6901E should be before 6900 / 2100-2200 / 2-3-F /
Cliff's house.

6902E 8/9 / 1800-1930 ~ / near Riverside / Cliff +
Jackie, Michael. Arcturus

6903E2 2100-2200 / Cliff's house / 3-2-F.

6904M. Friday ~~12~~ 11/12 / 0030-0200 / 3-2-F /
818-Summit.

6905E ~~Mo~~ Tuesday 15/16 / 2230-2330 / 3-F- /
~~3A~~ Roslyn school - 4902-818.

6906M \$ Friday 18/19/2 0425-0445 30 / ~~3E~~ 10-F /
SM4 / Jupiter / - / CN3 0^h45^m. Apparently heavy Orion

6907E2 (before 6906) ~~22~~ 2100 ~ ~ 2115 / 3-F / \$
near post office (very bright (-3) f meters
to west.

6908AN Sat 19/20 / 1830-0530 / 10-F / 2-36, KPNO /
Don Davis / Asteroid Geodesy project.

6909E Sun 20/21 / 1830-2000 / 10-F / 2-36, KPNO / Don,
Michael Magee / Asteroid Geodesy.

*6910M2 ~~18~~ 0015-00300 / 10+ F / SM4, Southwalk.
Orionids. 15 meters betw. 0030 + 0130 ~,
4 sporadic. or CN3. 1^h00^m E.
Comet Halley.

(6925M)

P/Halley

Phase 2 (CCD)

6911M. 22/23/ 0400-0500/ 10-F/ CN3 0^h30^mE with Jupiter

6912M. 23/24/ 0430-0530/ 10-F/ Jupiter / JM4/ 0^h30^mE CN3^{H_α}

6913M. 24/25/ 0845-0445/ 10-F/JM4/ Jupiter/ CN3 0^h30^mE. / Halley

6914M 25/26/ 0510-0530/ 10-F/JM4/ " / P/Halley. NGC4631, 4656

6915E 29/30/ 2300-2330- / 10-F/ JM8/ Saturn/ moon.

6917E 30/31/ 1900-2030/ 7-F/ ~~JM~~ Tumamoc/ Gary, Terri/ Jupiter.

6918E 31/32/ 2300- ~2315/ Saturn/ Moon.

6919E Friday Nov. 1/2/ 1830-2030/ JM4/ Jupiter/-/ CN3 1^h30^mW.

6920E Sat 2/3/ 1830-2100/ JM4/ 10-F/ Jupiter/-/ CN3 1^h20^mW.

* 6921E 3/4 Sun/ 1840-2200/ JM4/ 10-F/ Jupiter/-/ CN3 1^h15^mW. 'Ind. discovery' Hurttley-Good. 1851. And saw Comet Thiele (Teely) 1985m first time (reason for *): Moved in "real-time" - actually saw it swing past two stars using 9mm eyepiece.

6922E 5/6/ Tues/ 2140-2355/ 10+-F/ JM4/ Jupiter/-/ CN3 1^h00^mW. Comet P/Halley,

* 6923EM 8/9 / 2330-0015- / 9-F/ ~~JM~~ Clyde's house/ 10" "Lawnmower" telescope/ Clyde Tom baugh, Patsy, Lonnikins /-Halley - CWT's first-ever look. See Journal,

* 6924M 9/10/ 0000-0500/ 10³-F/ JM4/ -Michael, Grace Wolf, / CN3 0^h15^mW.

P/Halley Phase 2.

6925M 10/11 / ~~0000~~ 2100-0000/ 7-F/ Tumamoc/-/-/ Halley

Journal has descriptions of all these sessions →

6926 EM 13/14 | 7-F/Tumamoc/20"/-1 P/Halley.

6927 EM 14/15/2100- 17-F/Tumamoc/20"/Steve P/Halley

6928 E. 15/16/1900-2030/10-F/3M4/Jupiter/-1 CN 3 0^h30^m

6929 AN 16/17/1800-0500/10-F/Bigelow/61"/Steve, Clark
Chapman, KUFT/Halley. ~~Minerva: CN 3 0^h15^mE~~

*6930 AN 17/18/1800-0600/10-F/Bigelow/61"/Steve, Clark,
KUFT/Halley. Minerva: CN 3 0^h15^mE.

6931 AN. 18/19/1800-0600/10-F/Bigelow/61", Minerva/
Steve/Halley. CN 3 0^h15^mE.

6932 AN 19/20/1800-0600/3-10-F/Bigelow/61", Minerva/
Steve/Halley.

6933 AN 20/21. 1800-0600/3-10-F/Bigelow/61", Minerva/
61", Minerva/Halley's first jet.

6934 EM 21/22 17-F/Tumamoc/21/-1 Halley.

6935 EM 22/23/2000-0030- 18-F/Tumamoc/21/Terril Lapping/
Halley.

6936 EM. 23/24 | 17-F/Tumamoc/21/-1 Halley.

6937EM 24/25/ 12-f/Tomamoc/21/-/doubles:

6938E. ^{27/28/}25/26/ 13-f/ " 1"/Halley.

*6939EM 28/29/ 3-f/Tomamoc/21/-/The

Thanksgiving jet.

6940EAS 29/30/1500-1530/7-f/KPNB/Sun.

6941E2 29/30/1900-2100/8 10-f/SM4/-Jupiter/-/CN3 1^h00^mW.

6942EM3 2200-0100-17-f/SM4 Tomamoc/21/
Michael Magge/ ~~EA~~ Halley.

6943E. 30/31/1830-1900/9-f/SM4/ Jupiter/-/CN30^h20^m

6944A2 17-f/Tomamoc/20/ Halley.

6945E DECEMBER

1/2 1/Tomamoc/20/-1 Halley.

6946EM 2/3/ 1 " /20/-1 Halley

6947EM 3/4/ 1 " /20/-1 Halley.

6948EM 4/5/ 1 " /20/Steve Halley

6949EM 6/7/ 1 " /20/Steve, Dottie!

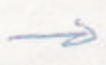
6950EM 7/8/ 1 " /20/-1 Halley.

6951E 8/9/1900-1940/8-f/16" at Clyde's house/ CWT,
Ray Shubertski / ~~EA~~ Jupiter. 10" scope, Halley.

6952E. 9/10/ 3-f/ Walter's house/ Spice/ Walter/Peggy.
Halley.

6953E 10/11/1830- 1/Tomamoc/20/G. Meekler's
class/ Halley

6954E. 11/12/1830. 10-2f/Tomamoc/20/-/Jet - Big
jet - through clouds. See Journal.



- 6955E 12/13/ 1³-F/ Tumamoc/20/ Halley.
- 6956EM2 13/14/0515-0600 10-F/ J14/Jupiter/CN3 30mE.
- 6957AN 13/14/1800-0600/10-F/ ^{Bigelow}J14/61, Minerva/Halley,
H074280, Gilara; ~~CN3~~ -15mE.
- 6958AN 14/15/1800-0600/10-F/ ^{Bigelow}J14/61, Minerva", MuTanu,
CN3 15mE.
- 6959AN 15/16/1800-0600/10³-F/ Foot of Mt, then Bigelow/
Bunco, 61, Minerva - ~~CN3~~ Halley. Steve,
C. Porco, J. Gotobed.
- 6960AN 16/17/1800-0600/10-F/ ~~J14~~ Bigelow/ -/ 61, Minerva
P/Halley, P/Boethius/ CN3 1h00mE.
- *6961AN 17/18/1800-0600/10-F/ Bigelow, /61, Minerva,
Halley, Ciffreo. CN3 0h30mE. 20th Anniversary
CN3. ~~CN3 20~~
- 6962E. 18/19/ 1 Tumamoc/20"/ ~~EA~~ Halley.
- 6963M2 ? J14/Jupiter/ CN3 0h20mE.
- 6964ME. 19/20/1800-1915 17-F/Tumamoc/20/ Halley
- 6965E2 ~~20/21~~ 2230-2220/ ~~10~~ 7-F/ " /20/ Halley/ Gerry
- 6966M3 0530-0610/10-F/ J14/- Jupiter/ CN3 30mE.
- 6967E 20/21/ Tumamoc/20/ ~~CN3~~ Halley ^{me}
- 6968E. 21/22/ Tumamoc/20/ Halley/ P. Collins
- 6969E 22/23/ Tumamoc/20/ Steve, Dottie/
Halley.
- 6970E. 23/24/ Tumamoc/20/ Steve, 3-F/
~~J14/11~~ Halley
- 6971E. 24/25/ Tumamoc/20/ Halley.
Big Jet.

→

- 6972E 25/26 | 1 Tumamoc/20/ Halley.
6973E 26/27 | 1 "/20/ Halley.
6974E 27/28 | 1 Tumamoc/20/ A. Sanchez,
S. Tapia | Halley.
6975E 28/29 | 1 Tumamoc/20/ Michael Magee/
Halley. (also Steve + Dottie)
6976E 29/30 | Tumamoc 20 | Steve | Halley
6977E 30/31 | 1900-2200 | Tumamoc/20/ 8-F | Steve
69 Ray Shubinaki, others.
6978E 31/32 | 1900-2200 | "/20/ 2-F | -.

1986

- 6979AN 1/2 | 1800-0600 | Bigelow | 61, Minerva | Halley, Cifreo.
6980^{EM}AN 2/3 | 1800-0300/3F | " | 61, Minerva | Halley.
6981AN 3/4 | 1800-0600 | " | " | Halley. CN3.5m E.
6982AN 4/5 | 1800-0600/3-F | 61, " | Halley.
6983AN 5/6 | 1800-0600/3-F | 61, " | "
6984~~AN~~NE 6/7 | 1800-2000/10-F | JM4 | Jupiter | Halley.
CN3 2h W.
6985E 7/8 | 1800-1915 | 7-F | Tumamoc/20 | Steve | Halley.
6986E 8/9 | 1800-2000 | 7-F | "/20 | Halley
6987EM 2~~9~~10 0500-0610/10-F | JM4 | Jupiter | - | CN3
0.50m E.
6988E ⊕ 1800-2000 | 7-F | Tumamoc/20 | Halley.
6989M2 0535-0635/8 10-F | JM4 | ^{Jup.}2~~5~~ | - | CN3 0.5⁵⁰₃₀m.
6990~~AN~~E 9/10~~85~~ 1800-2000/8-F | Tumamoc | Halley
6991M2 ~~10/11~~ 9/10 | 0530-0610/10-F | ~~Tum~~ CN3 | JM4 |
CN3 20m E.

See also

- 6992E 10/11/1800-2100/ Tumamoc/20/Halley.
- 6993M2 # 0000-0300/ ~~SM4~~ SM4/~~Tumamoc~~/Jupiter/
CN3 0^h25^m S. | Jim S + Karrie.
- 6994M3 ~~0000-0300~~ 0530-0615/ Jupiter/ CN3 0^h50^m E.
- 6995E 11/12/1800-2100/ Tumamoc/20/ Halley.
- 6996M2 0530-0615/ SM4/ 2 Jupiter/ CN3 0^h20^m E.
- 6997AE 05 12/13/14/ Tumamoc/20/ Halley.
- 6998AN 15/16/ Tumamoc/20/ Halley, 1800-0815.
- ~~6999E~~ Duane. Halley, then FFs, then later to
SM4 for CN3 20^m E, then Hartley-
Cozad, then back to Tumamoc.
- 6999AN 16/17/1800-0600/ KPNO/ Asteroids/ Stu.
- *7000AN. 17/18/ 1800-0600/ KPNO/ Michael/ Asteroids
with 36". Minerva for Halley.
- 7001AN 18/19/1800-0600/ Tumamoc 20 - Halley, then
36 at KPNO, asteroids.
- 7002AN 19/20 1800-0600/ Tumamoc " - Halley, then
36 for asteroids KPNO.
- 7003AN 20/21/1800-0600/ Tumamoc/20/ Halley, then
36 at KPNO - asteroids.
- 7004ANE 21/22/1800-2000/ Tumamoc/20/ Halley
- 7005E 22/23. 1800-1930/ " / 20/ Halley
- 7006E 23/24 1800-1930/ Tumamoc/20/ Liz |
Steve + Nth Greg / Halley
- 7007E 24/25/1800-1915/ Tumamoc/20/ Duane / Halley
- 7008E 25/26/ 1800-0000/ " / 20/ Steve / Halley, Moon.
- 7009E 26/27/1800-1900/ " / 20/ Curran - no Halley
- *7010E. 27/28 1800-1930/ " / 20/ Halley setting.

Journal

1/11/19
(not in 28) E 19

- 7011SE 28/29 | 1400-2200 | ~~10-F~~ / Turramac / 20 /
~~end of Halley Phase 2.~~ Steve / Halley may be seen, but no image.
- 7012M Feb-4/5-0000-0100- / 17-F / New Orleans.
- 7013S Feb-6/7 | 1200-1230 | 3-F | El Paso / CN5 SVen.
- 7014M2. # 0530-0630 / 10-F | SM4 / Jupiter 1- / CN3
0h45mE.
- 7015E 7/8 | 2200-2230 | 3-F | Flagstaff / Jeanne +
David Sherry / general.
- 7016M 8/9 | ~~2200-22~~ 0300-0330- / Flagstaff / Miranda /
CN3 0h10mE.
- 7017M 9/10 | ~~12~~ Feb-12/13 | 10-F | SM4 / Jupiter /
CN3 0h1530mE
- 7018M ~~11/12~~ 16/17 | 0500-0600 / Jupiter / 0h50mE CN3.
- 7019M 17/18 | 0500-0615 / Jupiter / CN3 1h10mE
- 7020ME ~~18 20~~ 21/22 | ~~05~~ 0h 2000-2100 / FP /
Surveyor / John Grise.
- 7021E2 ~~22~~ 2300-0000 | SM4 / Jupiter / VSO-I /
~~70~~ John Grise.
- 7022S 22/23 | 1500-1600 | 10-F | ~~SM4~~ KPN0 / Sun / John.
- *7023E2 2000-2200 | ~~10-F~~ 7-fm | SM4 / Telescope
Jupiter to be renamed.
- *7024EM 24/25 | 2000-0300 | 7-F | SM4 / Jupiter
is now Telescope MIRANDA. / Virgil + 9
added 4" + Ranger, + moved fender up to front.
- 7025E 1930-~~18~~ 2000 | SM4 / Miranda 1- / CN3
0h20mW.
- 7026E 1900-2100 | 10-F | SM4 / Miranda 1- / CN3 0h2100mW
- 7027EM 22300-0100- / 7-F | SM4 / Miranda / Moon.

P/Halley

Phase 3. (Past Perihelion)

7028 ^MES 28F 27/28 / 0030-0100 / Las Cruces, at Clydes
+ hotel / Mirasua / Moon.

7029 S. 28/29 / 1500-1515 / Las Cruces, park /
CN5 Sun Van.

7030 E2 1930-0000 / 10-F / JM4 / Miranda / CN3 3^h00^m

7031 M3 0100-0300 / 10-F / S. walk + JM4 / Miranda / moon

*7032S AN MARCH 1/2 1000-0700 / 30-3-F / JM4 /

Sky ranged from poor to pretty good. Miranda, Pegasus,

MIRANDA'S FIRST LIGHT

Clint Ch. — Cosmos II split the sunspot and David smiled sleeping

Cinette Chiseman — Ever thought you might get a thousand
Ferrisoppin — great champagne — did you ever get the bottle open

Gary Rosenbaum

Duane Niehaus — Fantastic Photons!

Jim, Karri & Jenni — Too MANY CLOUDS! NOT
ENOUGH COMETS!

Grace Wolf — so many stars even with
the clouds!

Michael Magee — "Holy galaxies, Batman!!" the clouds
are killing the observing.

Dorian Lewis — Miranda? For the 4-inch spotter
but Uranus for the 16-inch!
It always has been a marvelous
telescope whatever you call it!

Derald Nye — Another telescope in the neighborhood.
What will they say?

CN3 0^h05^mW.

Miranda

First Light: Saturday, March 1, 1986, November 28, 1981

("Second" Light: December 26, 1981)

Conceived in the Summer of 1968

Serious Inquiries made in Summer of 1970

16-inch Cassegrain-Newtonian mirror ordered December 1978

Order changed to 16-inch Newtonian in 1980

Mirror re-ordered in Summer of 1980

Mount and tube completed by Constantine Papacosmas
in September of 1980

Refractor added February 24, 1986

Cosmos II: 4-inch refractor with finder

Europa: 3 1/16-inch lens; 1 1/2-inch fl eyepiece

Callisto: Formerly finder for Minerva, then Procyon.
Now at top end of Miranda

Ranger: small refractor bought for about \$3 in Fall of 1962

MIRANDA: O, wonder!

How many goodly creatures are there here!

How beauteous mankind is! O brave new world

That has such people in't!

--Tempest, V, i, 181-184

Latin for "to be marvelled at"

M42, double stars, Moon, Saturn, Mars.

First post-perihelion look at P/Halley. Seen through
Pegasus and all 6 telescopes of Miranda (even Ranger!)

- 7033 M. March 2/3 | 0100-0115 | 2-F | 5M4 | -/- | weather check
- 7034 M2 0300-0630 | 3-9-F | Bigelow | 61" | Uwe Fink
Al Schultz | P/Halley spectra.
- 7035 M. 3/4 Monday | 0500-0800 | 10-F | 5M4 | Miranda | -/ | Halley
CN3 0h 30m. (dist. neo?)
- 7036 M 4/5 Tues | 0500-0600 | 10-F | 5M4 | Miranda | -/ | CN3 0h 30m E. Halk
- 7037 M 6/7 Thursday | 0300-0600 | 10-F | Bigelow | 61" |
Mike DiSanti | P/Halley, red images + other filters
- *7038 M *March 7/8 | 0200-0600 | 310-F | 5M4 | Miranda: first light
with Rigel attached | CN3?
R. W. (Bud) Fairley: remarkable view of Halley with "Miranda"
- 7039 M.S. Sat Mar 8/9 | 1400-1430 | 5M4 | Miranda | Liz |
Sun.
3rd first light for Miranda.
Liz Maggio: Miranda is beautiful; I'm jealous! It was an honor to see the sun with her and David.
- 7040 AN2. Sat 8/9 | 1800-0600 | 3-UNF | Bigelow | 61". See
Journal.
- 7041 AN Sun 9/10 | 1800-0700 | 2-3-F | Bigelow | 61" |
Uwe Fink, Al Schultz, Uri | P/Halley red.
- 7042 ANE. Mon 10/11 | 1800-0000 | 0-1-F | Bigelow | 61" | Al, Uri
- 7043 AN E. Tues 11/12 | 1800-0700 | 1-F | " | 1" | Al, Uri.
Opened scope but no images
- *7044 AN Wed 12/13 | 1800-0700 | 3-F | Bigelow | 61, Minera
Mike DiSanti, Eric, Uri | - P/Halley red.
- 7045 S. Fri 14/15 | 1700-1735 | 2-F | LPL | M. De Santi, Uwe Fink |
Minera | Test equipment Discussion.

7046M2 0400-0615/10-F/3M4/ Miranda First light party/ - Comet Halley. Fine night. Beautiful dark sky! CN3 0^h 40^m E.

Lisa, Susan, and George Bauer

Noreen & Mike Conano - many thanks for a great view of

Noreen Conano Halley - Good luck David

Mike, Julie & Chris Hulst - we had a great view - thanks for your hospitality

7047M. Sat 15/17/0200-0630/10-7-F/3M4 and Tumamoc/Pandora's telescope at Tumamoc with Menara - Steve + NASA Doctors. Minerva + Miranda earlier at 3M4 and CN3 1^h 20^m E.

7048EP Tues 18/19/2015-2025/3-F/Clyde Tombaugh's house/ - Clyde.

*7048M2 Tues 18/19/0405-0610, | 10-F/3M4/

MIRANDA FIRST LIGHT

Steve & Pottie Larson - Super view of Halley - Probably the best we will have this apparition! Thanks David

Pattie Larson - Thank you! Halley's beautiful - Jim Scotti - You need a "Halley" filter for Miranda. Either that, or sunglasses!

CN3 0^h 15^m E.

7050E. 19/20/2250-2315/8-10-7-F/3M4/ Angelika/Miranda/Moon.

7051M2 0430-0600/10-F/3M4, ^EEnd of street/ "1/Kal. My first view of Halley since Jan. 11, 86 - fantastic! Jka.

Comet Halley, Mars, Saturn

7052 M. 0330-0600 110-F/3M4/Miranda. Comet Halley.
Miranda First Light.

Thank You David - Marcus PERRY
1246 UT 21 Mar 86

Bill Merline nice Halley viewing, Thank
1246 UT 21 Mar 86

Another night, another view of Halley! Jim (1247UT, 21 Mar 86)
This is certainly a worthwhile trip! Great view of Halley through
"Miranda"! Ika.

7053 E AT Fri Mar 21/22 | 2000-2130/8-Fm/Bigelow/61"/
Ika, A/Schultz, Mike Di Santis/ Moon.


7054 M2S 0330-0930 | 10-F/ Dawson Ranch + 3M4/
^{AT 3M4} Pegasus, Murerwa, Miranda/ Great opportunity for more photos! Ika.
AT 3M4: Miranda's First Light + BREAKFAST

Saw 1st Earth view of Halley's Comet
MARCH 22nd, 1986 near Tucson with
Suzi Moore Jonathan J Blain NAT. GEOPH.

Enjoyable! for David & Anne Richards
A sincere "thank you" for your hospitality! Ika.

7055 ES Sat 22/23 | 1600-1730/10-F/3MB/Miranda, Echo II, III, IV/
-Ika.

7056 E2 2030-2045/7-F/Flandrau/Surveyor/Ika/M42,
P/Halley
Phase 4 (Drawings)



7057 M3 0445-0530/9-F (moonsat) / 5M4/Miranda, 32+18mm/-/
P/Halley,

7058 LM Sun 23/24/ 0040-0055/3-F / San Simon, Az / Minerva/-/
moon

7059M2. 0445-0615/3-F/3M4/Miranda/-/P/Halley, central
condensation much much brighter than last night. Comet
seen through light cloud, later through dawn. Almost no
inner coma detail through 4"; these features require aperture.

7060EM TMonday, 24/25/7-fm/2330-0230/3M4/Miranda,
Quasar/ David Beale, Alan Dyer /Moon.

7061M2. Miranda first light.

0435-0600 / 6-fm / JM4 / Miranda / P / Halley. Central condensation has faded but jets are wider.

Ad Real. - excellent detail of jet-like activity.

Alan Dye - observed with David; March 35. Confirmed bright forward-facing jets in inner

coma



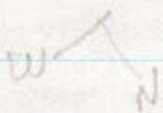
7062 M. 25/26/ 0440-0630/6-Fm/ JM4/ ~~3~~ Miranda/.

Halley. Outer coma + tail not clear because of haze, moonlight + dawn. Tailward feature was sharper, however.

Miranda first light.
Dave Rubin - not nearly as good as yesterday
Jim Scotti (I'm here almost as much as you!)

-You need to turn off the moons light bulb!

Alan Rye - I think I saw the tailward jet as well, but then again...?



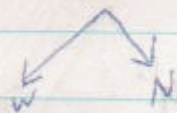
7063M

26/27/0430-0530/6-f/ Foothills Inn/ Pegasus/ Gerry,
Audrey, Billy/ Comet Halley.

7064EM

27/28/2355-0030/3-f/ JM4/Miranda/ Moon. (Alan,
David Beak,
Ure Curran)

Alan Dyer
David Beak
Ure Curran



7065M. 28/29/0400-0510/ 7-fm/ Houghton Rd + 3M4/ Miranda (-/
P/Halley, Nuclear^{condens.} brightest since 7059M2 but not that
bright. Also, bright moon nearby.

7066E. 29/30/1915-1945/7-f/Tumamoc/~~M~~ 20"/Billy/ Venus

7067E2. First light party for Miranda. | 2045-2300/
10-3-F/3M4/Miranda/ CN3 | 1^h00^m W. M82, 81, 51, 13, 42
NGC 1999, L, M, + C in Hydra. Nice galaxies ~~all~~ rich.

Observed various clusters + emission nebulae
in Coma Major + Puppis + Monoceros with a 5" F/4.5
wide-field refractor (with 32mm Erfle + 9mm
Nagler). Also observed Orion Nebula, M65/M66,
NGC 4565, and various other galaxies in Coma/Virgo.
Viewed M42, M51, M13 thru Miranda (!! -
quite a view). - Alan Dyer.

MESSAGE: 2016 FROM: EDBERG
SENT: 03/26/86-09:38 TYPE: PRCD

Re: 7059M2

VISUAL UPDATE

Charles Morris and I, using the 9.5 inch and 12 inch (sorry, that's how they're designated!) twin refractors at Griffith Observatory, Los Angeles, could not see any sub- or secondary nucleus in Halley's central condensation on about March 26.5. A fan and a ray were discernable, but the DC was only 3-4 in hazy skies.

David Levy, using the 40 cm Miranda Newtonian at Jarnac Observatory reports that on March 23.5 the central condensation appeared smaller, more condensed, and 1 magnitude brighter than the night before. Perhaps this is related to the rumored outburst observed by IUE around March 23.0.

(Note: all times quoted here are UT.)

Steve Edberg

7068EM 30/31 | 1800-0130/3-F/ KPNO/ Minerva, 2-36. | Michael
Magee, Alan Dyer | M42. no asteroids.

7069S. 31/32 | 1300-1330 | 2-F/ KPNO/ 2-36/ Michael/ photometer test, o.k.

7070E. 2200-2215 / 3-f / Minerva / David Beale / Finder test; Arcturus.

7071E. APRIL 1/2 / 10-3-F / Miranda / CN3 / 100^mW.
M81, 82, 51, 42.

Miranda First Light.

Guy Westcott Winnipeg R.A.S.C.

I am speechless for the first time
in years. Absolutely astronomical.

Andrew Campbell

7072 M2 / 0430-0605 /

3-fm / JM4 / Miranda /

Guy Westcott /

P/Halley bright but
indistinct. S. Jet

(inner portion) the strongest

Every other feature was
very delicate.

Also tested binocular
attachment - didn't focus



Miranda's last First light Party
7072M April 2/3/ 0430-0600 (8-flm) / JM4 / Miranda / P/Halley

Andrew Campbell

Cathy Breckenridge

Bob Breckenridge


Jim Scotti - Me Again!

Guy WESTCOTT.

P/Halley

Phase 5 (S. Hemisphere)

- * 7073EM. 3/4/ EST 2330-0500/3-F/ Aero Peru DC-8 plane between Mexico City and Lima / Upside down Hercules AND watching Polaris get lower. lost it near Panama, around 5°.
- ⑦ 7074E 5/6/ 1900-1930/3-F/Savoy Hotel, Cuzco / Crux, & Centauri.
- ⑦ 7075E2. 5/6, Saturday / 2000-2300/3-2-F/ Sacsayhuaman Inca Ruins. Minerva! First view of Eta Carinae Nebula. Also Southern Cross and Betat Alpha Centauri. See Journal entry.
- 7076M 6/7 Sunday / 0345-0600 / 2-1-F/ Alhambra Hotel, Yucay, Peru / Miranda, several others / Brief view of Comet Halley.
- 7077S. 7/8, Monday / 1300-1730 / 3-2-F / Machupicchu / Solar + Solstice Observatories / Phoebe through solstice observatory / Jan, Dan Brocious, others.
- 7078S. 8/9 Tuesday / 1045-1230 / 2-F / Machupicchu, Peru / Solar Solstice Observatories / Phoebe / Jan, others / careful look through 15th century solstice "telescope".
- 7079E2 1800-1900 int / 3-F / train near Cuzco, Peru / others / constellations.
- 7080EM3 2045-0135 / 3-10-F / Sacsayhuaman Inca ruin, Peru / Minerva, Astroscaun, kinoculara / entire group / Comet Halley. (See Journal)



7080EM3

0600 UT

Sacsayhuaman Incan

ruin, near Cuzco,

Peru.

Katie Hogan
B'ham, Ala.

Terry / Lersey
LOS ANGELES, CA

Noel Brazil
Washington, DC

Robert G. Smith Jr
Manhattan Beach, Ca

Julian Christensen
Manhattan Beach CA.

Patricia Dore
Chicago Ill

Robert Paul Stetson, CHICAGO ASTRONOMICAL SOCIETY

Alan Wasson
New York City, NY

A. J. Putnam, Creston, B.C., Canada

Toni Sover
New York, N.Y.

John & Betty Ann Saperstein Jr
Manhattan Beach, Ca

Richard Fen
HAWAII, CALIFORNIA

Thomas M. Bartold
HARPER WOODS, MICHIGAN

Jan. Maden berg, C. A. S.
Chicago, Ill.

7081 EA 9/10 '10/11 Thurs / Equatorial Monument, Quito,
Ecuador / ~~1100-11~~ 2230-0100 / Minerva / L5 Group +
Mark Coco + his group / 2-1-f / some stars, lots of
pictures, no comet.

7082 AE 11/12 Friday / 1000-1200^{PM} / 3-f / Roof of Colon Hotel, Quito, Ecuador /
Minerva / ^{L5} group / Halley, Om. Cen, & Cen, Saturne.



*7083EM

100%
observation

12/13 Saturday / 1800-0300 / 10-3-Flabord Bucane
Minerva ^{Jan. Erik} almost entire crew, passengers &
Captain / P/Halley, new S constellations of
Musca, Crux, Circinus, Triangulum Australis
Chamaeleon, Carina,

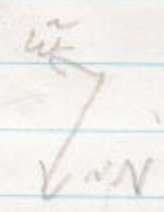


13/14

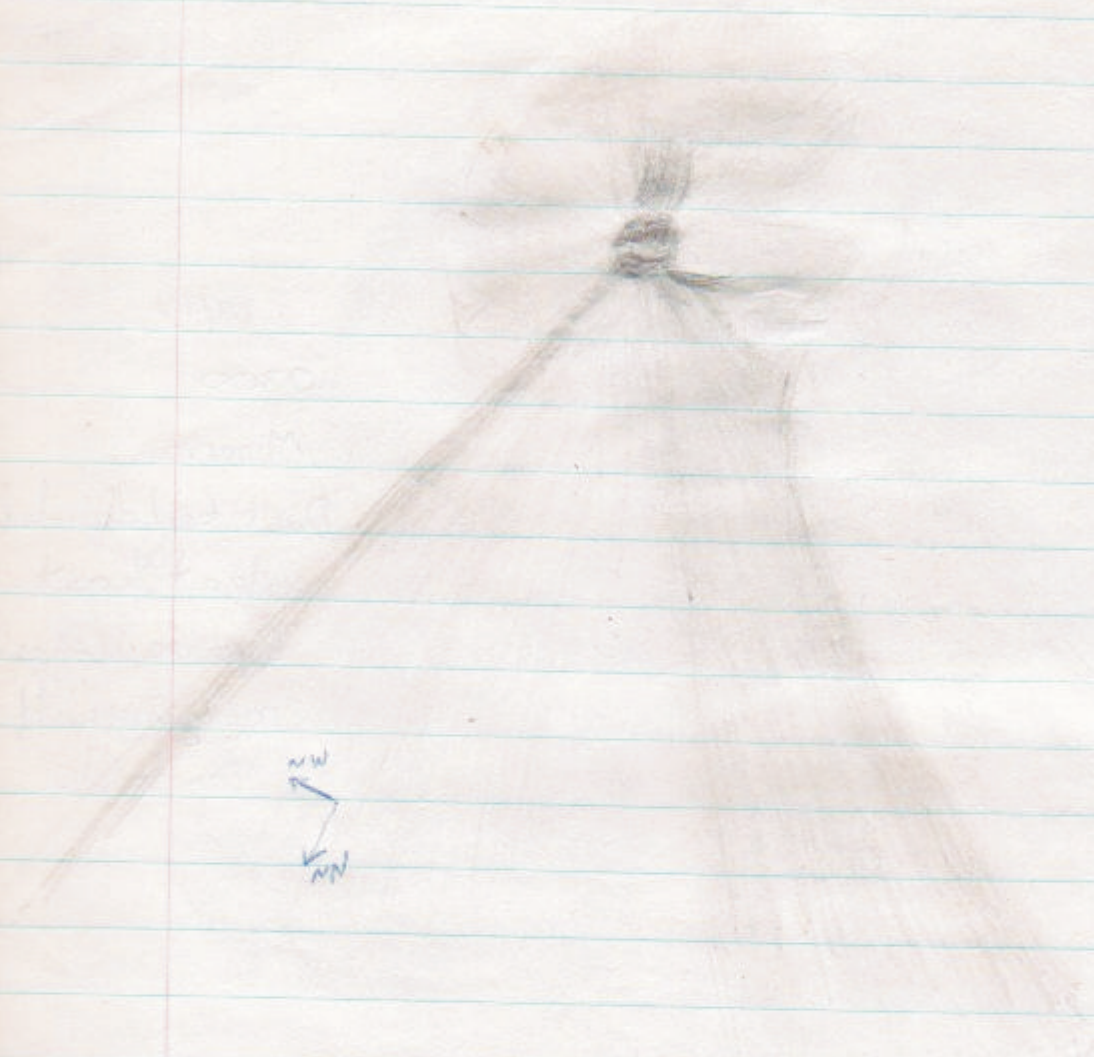
0300

Minerva

Dust tail divided into at least 6 parts, longest merging with ion tail.



- 7084E 13/14 Sunday/1900-2030/10-F/M/S Bucanero/Minerva/others/
P/Halley Doradus, ~~Chamae~~ Reticulum, Tarantula Nebula.
- 7085E2 2150-2215/10-F/M/S Bucanero/Minerva/Jan + passengers
+ crew P/Halley. Jan in charge of Minerva. Also α Cen.
- 7086E13 2300-0420/10-3-F/M/S Bucanero/Minerva/others/
P/Halley, $\sim 5^\circ$ from Omega Cen and 1° from Cen A. Corona Aus.



0200 EST

14 Apr 15 UT

Comet as
bright as
last night
but dust
tail not as
divided.

Cruz 7087 E. Mon 14/15 / 2030-2140 / 3-F
 Musca Español Island, on M/N Bucanero / - (others) / Halle
 Chamaeleon 7088 EM2 2245-0400 / 10-F / Español
 Carina on M/N Bucanero / Miranda, Astroscan, Binoculars
 Volans Jan, Eric, Rick, and many others, passengers
 Apus crew / P/Halley, Constellations on left.
 Ara 1° away ~~was~~ from comet was Centaurus A
 Pavo
 Telescopium
 Vela (12 new ones go for this trip)

0145 EST

Minerva

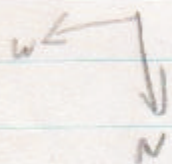
Dust portion
on left very
faint.

15/16

- 7089E 2.300-2330/3-F/aboard M/N. Bucanero/-/other/sky.
- 7090EM2 0100-0220/3-F/Puerto Ayora, Santa Cruz Island,
Galapagos, Ecuador/Minerva, binoculars + cameras/
Erik Paterson, Jan Maden berg, Rick Foss, Jay Stapleton,
others/ P/Halley. Pictures through Yashica of
Comet + Cross.
- P/Halley, Pictures of SCORPIUS, S, CROSS, CARINA, CENTAURUS,
SAGITARIUS & P/HALLEY, ALSO GROUP PICTURE,

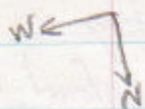
P/Halley
Phase 6.

7091 E.M. Fri. Apr 18/19 2300-2330-0430-0450 | 10-F | 5M4 | Miranda | - | CN3 0430 E
7092 E. Sat 19/20 | 2300-2330 | 7-Fm | 5M4 | Miranda | - | P/Halley.

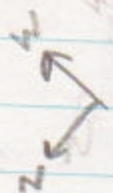


2320. Bright moonlight. Bright inner coma; Tail barely visible + uncertain.

7093 M2 0340-0440 | 10-F | 5M4 | Miranda | - | CN3 0440 M E.
7094 E Sun 20/21 | 2220-2300 | 7-Fm | 5M4 | Miranda | - | P/Halley.



2235. Bright moonlight; moon near by. Tail invisible. Inner coma starlike but elongated at angle shown. Small jet very faint.



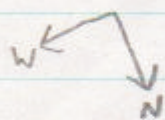
7095EM

↑
Mon 21/22/ 2230-0100/3-2-F/ JMB/ Pegasus/-/ P/ Halley
Moonlight very bright; moon nearby and gibbous.
Tail barely visible, especially east part on sketch.

7096E

Tues 22/23/ 2130-2200/3-F/ JMY/ For Miranda/-/
Moon. Clouds over Comet Halley

7097E Wed 23/24/ 2030-2200/ 3-Fm/ JM4/ Miranda/ Judy/



2145

P/Halley. Very hazy.

* 7098M2 0335-0600/ 3-F/ JM4/ Miranda/ ^{afternoon got too low} JMF/ Penelope/
Lunar Eclipse. $L = 2\frac{1}{2} - 3$. Some ^{strato} cumulus clouds but
generally a fine view. Sky ^{got} got too bright
about 15 min after totality began. Clouded over
completely afterwards.

7099E. Friday 25/26/ 2025-2100/ 3-F/ JM4/ Miranda/ +
CN3 $0^h 15^m W$.

P/Halley. Major change. Long straight tail
at least 10° long, through cirrus. \rightarrow

→ 10°

2/26
2045



7100E

Sat 26/27/2000-2200/ 10-F/ 5M4/ Miranda / Roy, Judy,
Bonnie, Rachel, + friend/
P/Halley. Antitail much much
fainter than shown.



→ 15-20°

26/27
2130



→ 15-20°

7101E Sun 27/28/2000-2315/10-3-f/
JMY/Miranda/Alita, Greg, Michael/
P/Halley, M51, 82, 13.



W →
→ R

27 APR

MICA, MICA, TAR ESTELLA...

SIMPLY BEAUTIFUL

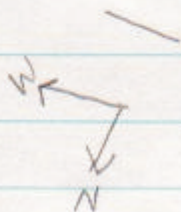
- Aletta

AFTER MANY YEARS OF LOOKING AT PHOTOGRAPHS IT'S
A REAL TREAT TO SEE THE STARS WITH MY OWN EYES ...
AS IF FOR THE FIRST TIME

THANKS FOR THE PRIVILEGE AND FOR SHARING YOUR
ENTHUSIASM

greg barr (LS SOCIETY)

Mon 28/29



-binker

-brighter

710.2E Mon 28/29/2045-2115/3-F/5M4/Miranda/-/P/Halley.
7103E Wed 30/31/2200-2300/3-F/Tumamoc/20/Michael.

7104E

Fri 2/3 / 2000-2030 / 5-F / FP / Galadriel + Surveyor / Vivian Lewis, Ewen Whittaker, others / Halley

Sketch through 16.
Details vague.



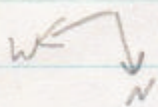
Mother, Larry,
Joyce, Robby, Al,
Wendy, look at Halley
From Lake George.

7105EM

Sat 3/4 / 2000-0130 / 3-F / Empire Ranch / Pegasus, etc / TAAA
CN3 1h 30m W.



"Lake George
group sees
Halley again,
faded."



4/5 | 2100-2330 | 10-F | 3MB | Miranda / Jim Scotti, David Eicher /
Observations of Halley's Comet

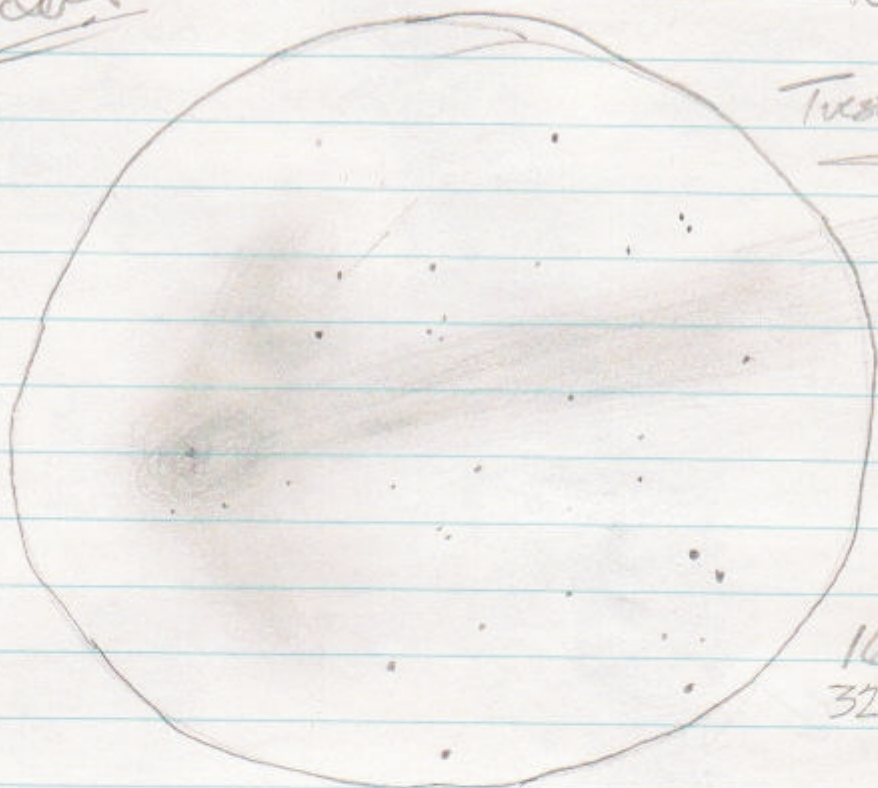
May 4, 1986

~ 10 PM MST
5 UT

7106E,

D. Eicher

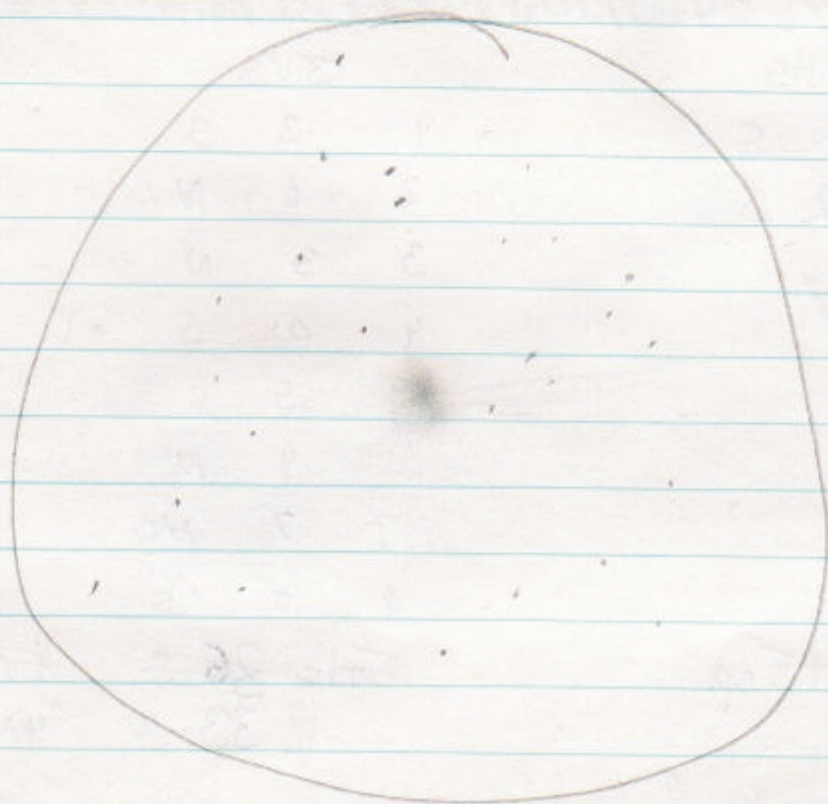
Tucson, Arizona



16" f/5 (2000mm)

32mm Erfle

65x



Sun 4/5



7107M2 0300-0440/10-F/IMB/Miranda / Jim, David.

DHS

SVS

0320 1 0 S
-2 -2 S

1 3 S

2 6 N

0318-0328

3 3 N

10min exp

4 0 S = 1

5 5 S

0330

6 4 N

7 2 NS

8 2 1S

0330

Ttl 20 + 5 sp.

Ttl = ~~36~~ S

↓ 33 S 4N

Eta Aquarids.

Many bright meteors, trains.

108S 5/6/1400-1600/10-F/SM

109E2. Mon 5/6/2030-2130/10-F/SM4

Miranda/CN3 0^h50^m.

Halley.

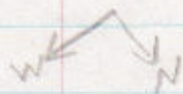


7110EM Tues 6/7/1900-0200/3-F/MT

Bigelow/

Tue 6/7

↓
Minerva



61", Minerva/
Halley.

Curious; variable
gusty winds

7111E AN wed 7/8/



Minerva

2000-0415 / 3-10-F / Bigelow / 61" / Minerva /
P/Halley. Much fainter.



↑
7112E

Thurs, 8/9/ 2030-2105 / 10-F / 5M4 / Miranda / - /
P/Halley drawing then off to Texas!

7113EM. Fri 9/10/2200 CDT/-0200/10-3 fl Texas Star Party/
Pegasus, others/ P/Halley, others. CN3 ~~0230m~~ 01h00m



7114EM Sat 10/11/2200-0300/10-3-fl/ISP/Pegasus, others/
S.O'Meara, David Eichen, Brian Skiff, many others/ P/Halley.
Also went to see the Marfa Lights.
This and Steve O'Meara's drawing on next
page were done this session.

Cometally

5/10

11:30 L.T

Stephanie O'Hear 2

7/15 E

May 12/13/2000-2100 / 8-F / 3M4 / Miranda / P / Halley.

Mon 12

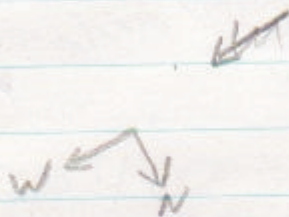
~hky
~hky
~hky

7116E.

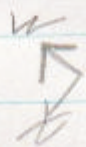
faint
spoke

Tues, 13/14

• 2000-2130/10-F/3/14/Miranda/
~~18~~ P/Halley.



7117E



2030-2100/Wed 14/15

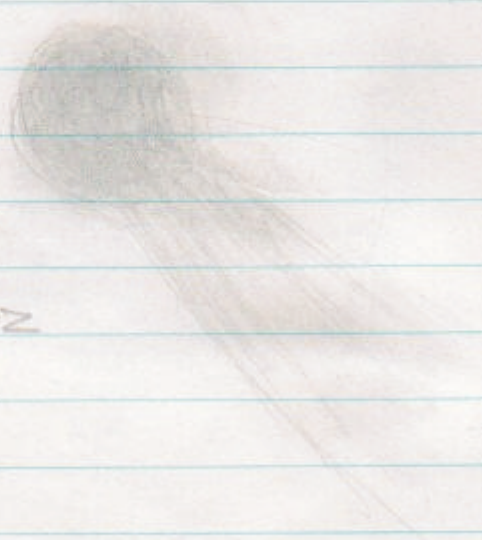
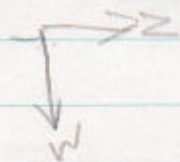
7-F (moon)/3/14/-/
Miranda P/Halley

Wed/Thurs 14/15 0230-0445 / 10-F / 3M4 / Miranda / - /
7118 M2 CN3 30m E.

Thu/Fri 15/16 0230-0445 / 10-F / 3M4 / Miranda / - / CN3.
7119 M. CN3 50m

Fri/Sat 16/17 0300-0430 / 10-F / 3M4, windy / Miranda / - /
7120 M CN3 100m. Comet Machholz 1986e. ↘
Mars.

~~Sat/Sun 17/18~~



Seeing 4,
windy.



CN3 1h00m

7121M.

~~Sat~~ Sun 11/9 230-0430 / 10-F / SM4 / Miranda 1-1
Comet Machholz, Mars
12/19

Seeing 4,
less windy.

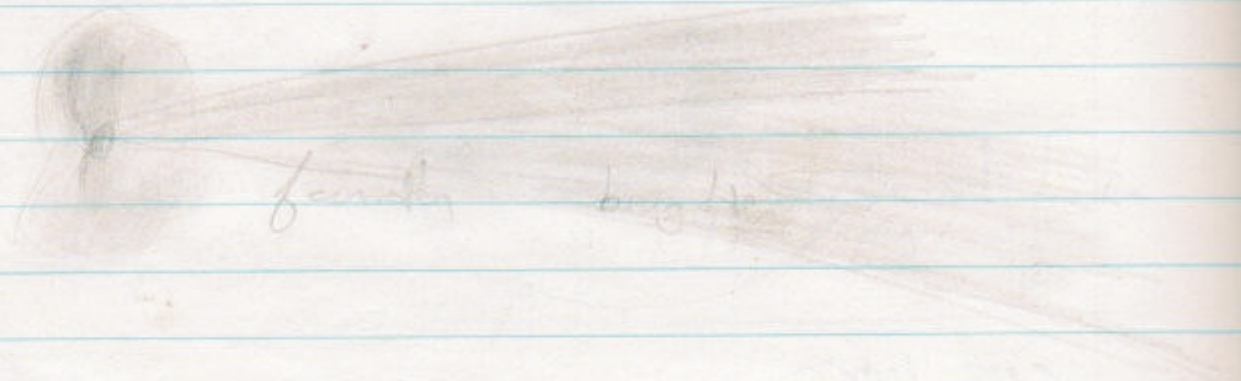


7122M CN3 0h40m Mon/Tues 11/20 / 0230-0405 / 10-F / SM4 /
Miranda 1-1 CN3. Mars, no drawing.

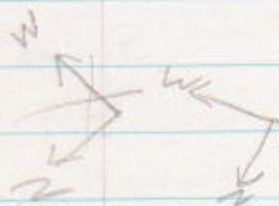
7123M. Thu 11/22/23 / 0100-0300 / 3-2-F / SM4, South walk /
Miranda 1-1 new 'teled' finder / Moon, Mars.

27/28

7128E.



Star took 3m45s to cross Field
Field is about 55'-57'



7124EM
Friday 23/24 2200-0030 / 1-F/RTMC/.

7125EM Sat 24/25/ 2100-0030 / 10-7-fm / RTMC. Gary's
. 14" G Telescope, / R Cox, Gary, Steve Edberg,
Charles / P/Halley.

7126EM Sun 25/26/ 2130-0030 / 10-7-fm / RTMC / Phoebe,
Don Machholz's telescope (binocular) / + others. 1

7127E. Mon 26/27/ 2245-2325 / 1-P / Santa Monica Beach / .

7128E. Tues. 27/28/2000-2200/810-F/JM4/Miranda/-/
CN3 1500mW, P/Halley drawing @ 2100.

←⁷¹⁴²⁵ Sat 31/1/1700-1830/3-F/Tumamoc/20 + Pandora/Steve/Setup.
P/HALLEY PHASE 7.

7129E2. Sat 31/1/2000-2340/3-2-F/Tumamoc Hill/
20"/- P/Halley. 1 exposure in red. Comet
barely visible briefly through clouds.
10:20:25 MST 30 sec red

7130M2 0230-0415/9-F/JMB/-/-/1986JK-ids.
3 sporadics. ~~10:20:25 MST~~ No "shower" seen.

7131E JUNE 1/2/2000. 1945-0000/0-7-F + extreme wind/
Tumamoc/20/- P/Halley. Sky cloudy over;
heavy rain + powerful wind. Sudden clearing, so
050035 UT 30 sec red
050351 30 " "
050608 60 " " Seeing poor + image trails
050840 30 " " " " due to high winds.
051110 30 " "

7132ES. Mon June 2/3/1945-2 1430-1630/3-F/Tumamoc/20"/
Steve/Venus.

7133E2. 1945-2300/2-F/Tumamoc/20" + Pandora/-/
Clouds + hz; did not see P/Halley

7134E Tues 3/4/1945-2215/3-2-F/Tumamoc/20" + Pandora/
Clouds + hz, did not see P/Halley.

7135M2 0230-0340 / 7-F / Tumamoc / 20" + Pandora /
 - / Mars, detail through 6". CCD malfunctions;
 no images.

7136E Wed 4/5/1930-2130 / 3-F / Tumamoc / 20" + Pandora /
 - / no Halley due to CCD malfunction. ☹️

7137S. Thurs 5/6/1140-1200 / 3-F / Tumamoc / 20" / Steve. CCD repair

7138S2. 1245-1305 / 3-F / " / 20" + Pandora / Steve. CCD repair

7139S3. ~1400-1430 / 3-F / " / " / Steve / CCD repair

7140S4 1530-1715 / 3-F / " / " / 20" + Pandora / R. A. Kers / CCD repair

7141E5 1945-2330 / 7-F / Tumamoc / 20" + Pandora / - / A. Halley

T 19 ~~20~~ 0345 UT 30 sec trailed. ^{FF} all red.

T 20 0349 20 sec 40

T 21 0354 30 sec 41

T 22 0355 bias 532.15 1710

T 23 0401 30 sec 42

T 24 bias 531.37

T 25 0406 30 43

T 26 ~~0407~~ bias

T 27 0431 60 ← Scorpion sting 44

28 0442 60 q. 51 45

29 0450 30 nice 46

30 0452 bias

31 0453 120 47 / 35 0504 120 49

32 0456 180 52 ~~48~~ 36 0509 120 50

33 0500 120 47 37 0517 120 51

34 0503 bias 38 star trail 39 FF



7112 see after 7128

7143M6 0305-0420 18-8½-f/Tumamoc/20"+Pandora/-/Mars!

7144E. 6/7/2000-2330 / 8-f/Tumamoc/Clater, S. Bell, Steve Larson/20"+Pandora/CCD images of P/Halley.

63	034131 UT	P/Halley	60 sec	77	
64	0349		60	76	Single bias
65	0354.54		120	75	was 5/33.
66	040118		60	74	
67	040157		30	73	
68	040521		120	72	
69	040940		120	70	
70	0438 50		120	81	
79	0442 35		120	80	

7145M2 0310-0400/10-f/JM4/Miranda/-/CN3 0h45m E.

7146ANA 7/8/03 1840-1945/8-f/Echo Valley obs / TAAA.

7147EB. 2005-~~0410~~⁰⁰²⁵ 18-f/Tumamoc/20"+CCD Pandora/

SUMMER P/Halley / Michael Magee, Don Davis + friends /.

6f	83	0337 07	60	red	FF 97
1986	85	0340 ⁰²	60	red	FF 104
	86	0345 08	120	✓	FF 98
	87	0348 49	180		FF 99
	88	0353 29	240		FF 100
	89	0358 50	300		" 101 ← MARVELOUS.
	90	0408 56	600		" 102
	92	0415	600		103
	93	0439	300		105
	94	0445	300		106
	95	0453 37	240		107 nice.

C. 0055-0125/8-f/Tumamoc/walk downhill. D. 0140-0215/Echo Valley TAAA Star Party / E. 0245-0410 JM4 Miranda CN3 0h45m

7147 ~~AN~~ A. Sun. 8/9/1900-2300 / 10-F / Mt Lemmon / 40" / Steve Larson,
 W. Wiesniewski, Al Shultz / Pandora - P/Halley obs. FF

108	0408 29	P/Halley	nf	30 secs	134
109	0413 14	"	red	30 secs	134
110	0415 35	"	"	60 sec	135
111	0418 22	bias	"	(300)	
112	0420	P/Halley	"	120 sec?	136
113	0442	"	"	60 sec	137
114	0458	FF	"	0.3 sec	

B. 0200-0410 / 10-F / JMY / Miranda / - / CN3 # 1h 15m E

7118S. Mon 9/10 / ¹⁴⁴⁰~~500~~-1600 / 7-F / Tumamoc / 20" + Pandora / Steve Larson

7149 EPR 2040-0045 / 8-F / Tumamoc / 20" + Pandora / 8- /

P/Halley:

115	04 20 22	P/Halley	red	120 s	} same one	126
116	04 20 22	"	red	120 s		
117	04 26 59	"	red	240 s		127
118	04 33 59	P/Halley	red	300 sec		128
119	04 41 26	"	"	240 "	Strong Wind.	129
120.	04 46 40	"	"	"	Good. Best yet	130
121	04 52 24	"	"	300		131
122.	04 58 23.	"	"	300		132
123	05 10 23	"	"	240		133
124	05 17 11		Superbias			134
125.	05 28 25		FF sep	red. (5 sec)		

7150 M3 0320-0410 / 10-F / JMY / Miranda / - / CN3 # 0h 25m E

7151 ~~AV~~ Tues 10/11/ 2000- 0430 18-F/Tumamoc/ 20" +

Pandora CCD / - / P/Halley

Time	Frame #	Filter	Exposure	Notes	Time
A. Tape	126138	P/Halley red	136	5sec. FF	035331
2000-2330	127139	P/Halley red	300s	148 1586	040659
	140	P/Halley red	300s	149	041711
	141	P/Halley red	300s	150	042625
	142	P/Halley red	240s	151	043246
	143	P/Halley red	300s	152	043748
	144	P/Halley red	600s	153	trailing 044339
	145	P/Halley red	240s	154	045446
	146	P/Halley red	300s 240s	155	045950
	147	S-bias			050937
	156	Star trail nF	60s		055334

B. ~~000015~~-0045 / JMF / Minerva / Mars. CN3 5ms.

C. 0155-0430 / 10-F / KPNO / 36" Spacewatch Camera, Minerva /

Jim Scotti / CN3 1400m NE.

~~7151E~~



7152E

at 2054 2100
3h37m HA 3h31m HA
05°35' S

wed 11/12

2035-2330 18-F/Tumamoc/20" + Pandora CCD.

No.	Time	Filter	Exposure	Notes	Time
157	041057	P/Halley red	240s		FF 165
158	041606	P/Halley red	600s	very slight trailing	166
159	042721	P/Halley red	300s		TI, 167
160	043351	P/Halley red	240s		168
161	043913	P/Halley red	240s		169
162	044448	P/Halley red	60		170
163	044805	S-bias		50 images	
164	045418	S-FF red	136	5sec.	

7153M2 W/12/0245 ~~0300~~ 0400/10-F/SMY/Miranda-|CN3 1h00mE

7154AM^S 12/13/1900-0430/10-F/KPNO/2-36/E Clark Photomet-
ric Greedasy. 29 Amphitrite, 39 Laetitia, 129 Antigone, 259 Aletheia, 482 Petrina, 423 Diotima (I found it - wrong eph)

7155SANS 13/14/1830-0430⁵⁴⁹/10-F/KPNO, Tumamoc, KPNO/2-36
2" + Photometer, 20" + Pandora CCD, 2-36" + Photometer/Michael
P/Hall A. Setup of 36.

B. P/Halley w/Pandora CCD.

172	041643	P/Halley	300	red	FF 190
173	042247	P/Halley	240	red	FF
174	042816	P/Halley	240	red	
175	043344	P/Halley	240	red	
176	044053	P/Halley	300	red	
177	044645	P/Halley	60	red	
178	044845	P/Halley	240	red	FF 190
179	045355	P/Halley	300	red	
180	050700	bias	(50)		

C. Asteroids 29 Amphitrite, 39 Laetitia, 259 Aletheia, 482 Petrina, 129 Antigone, 423 Diotima (I found it - wrong eph)

7156SAN Sat 14/15/1820-1900- /7-Fm-10-F/KPNO, Tumamoc, KPNO/
2-36, Tumamoc 20, Phoebe, AFP Photometer + Pandora CCD
Michael (KP) A. 1820-1850. Icing Down, ^{AFP} prep. at 2-36.

B. 1940-2150 /Cooling Dewar + Halley:

181	035337	P/Halley	60	red	
182	040052	P/Halley	240	red	
183	040907	P/Halley	300	red	
184	041510	P/Halley	120	red	
185	041756	P/Halley	60	red	
186	041938	P/Halley	120	red	
187	042221	P/Halley	240	red	
188	042755	P/Halley	240	red	(offset position)
189		BIAS	(50)		

B. C. 2250- 2-36. at KITT PEAK.

788 Hohensteina - new period determination.

329 Sueria - possible period close to Shows.

259 Alethia " 5 hr. period. We may know tonight.

129 Antigone 29 Amphitrite 130 Elektra ^{to be entered} - ^{hand}

~~428 Diotima~~ 349 Dembowska ^{not observed -} ^{tape crash.}

15116 Moon with Phoebe.

7157 SAN 1830-0445 3-F/KPNO, Tumamoc, KPNO /
2-36+AFP, 20"+ Pandora CCD. / - Michael ^{at KPNO}

A. Setup and ice at 2-36 1830-1900

B. Set up and cool at 20. 2015-

C. Kitt Peak: (6205337)

192 041022 P/Halley red 60 hz, high wind

193 041159 " " 120

194 041434 " " 240

195 042002 " " 240

196 042447 " " bias

197 04. → FF of 195

198 042734 bias

199 042805 bias

C (Asteroids 788 Hohensteina, 329 Sueria, 253 Alethia, 130 Elektra. Saturn + Mars.

7158 E 16/17/2 1930-2230 13-F/Tumamoc/20+ Pandora CCD - /
had to buy pliers + wrench to get through gate. But:

200 P/Halley red

201 034331 P/Halley red 240s 32

202 034925 P/Halley red 246s 33

203 035506 P/Halley red 240 34 clouds

204 040050 P/Halley red 240 35 hz

7159E 17/18/99 1900-2230 / 3-F / ~~SM4~~ Tumamoc Hill / 20" + Pandora CCD / Greg + Aleta.

Image	Time	Object	Exp.	Filter	Comment
5	040854	P/Halley	240s	red	26
6	041550	"	240	red	trailed moonlit, ²⁷
7	042110	"	180	red	28
8	042555	"	180	red	- RAMBO! FFH
9	043049	"	180	red	" 29
10	043445	"	240	red	Nice 30
11 (June)	011357	Superbians	Superbians		
12 June 180	032554	Super FF	50x13		
13	031622	SUPERBIAS			

7160E 18/19/2000-0000 / 7-Fm / Tumamoc Hill / 20" + Pandora CCD / nobody / P/Halley. FF

15	035414	P/Halley	300s	red	21
16	040126	P/Halley	180	red	22 offset; nice
17	040527	P/Halley	300	red	23 "fabulous" ^{diffuse}
18	041255	Superbians			27 (log)
19	041955 041255	P/Halley Superbians	240	red	24
20	043027	P/Halley	240	red	25
21					26

7161M2 0300-0430 / 10-F / SM4 / Miranda / - / CN3 0h15m E.
Comet suspect; diffuse lsb galaxy.

7162E 19/20/1915-0000 / 7-Fm / Tumamoc / 20" + Pandora CCD / Liz / P/Halley.

36	040811	P/Halley	180s	red	44
37	041241	"	"	"	45

	38	041700	P/Halley	180s	red	46
	39	042154	"	240	"	47
log. 5/	40	042730	"	300	"	48, 49 nice
	41	043912	"	180	"	4850 ^{again} 99
	42	s/bias	0337 18			
	43	s/ff	0333 46			

7163M2 0105-0120 / 7-F / Tumamoc / - / - / CNS.

7164M3 0330-0410 / 10-F / J14 / Mighty Miranda / - /

CN3 0A15^m + new galaxy.

7165E. 20/21 / ~~00~~ 1930-2330 / 17-Fm / Tumamoc / - / 20" 4 Pandora CCD / Cloudy at first.

	52	033109	s/bias			
	53	032749	s/ff			FF
	54	042348	P/Halley	180s	red	579 ^{log 63}
	55	042940	"	180s 240	red	5760 ^{FF100}
	56	043647	"	180s	red	60
	57	044133	"	180	red satellite	62
	58	050440			bias	54767

7166EM 21/22 / ~~20~~ 1930-~~23~~ 0030 / 7-3-f / Tumamoc / Hill + walk / Tumamoc 20 + Pandora CCD / Mike Bakich at first /

	64	033437	P/Halley	180s	red	ff 74
	65	034039	"	"	"	75
	66	034533	"	240	"	76 ^{again 104}
	67	035246	"	"	"	77 ^{better, log 84}
	68	035810	"	300	"	78
	69	040411	"	600	"	79, log 83
	70	041552	"	300	"	80
	71	042248	"	300 240	"	81
	72	042740	"	240	"	82
	73	032013	"	s/bias		

7167E. Sun 22/23/1930-0000 / 3-2-F/Tumamoc/ 20" +
Pandora CCD/-/ P/Halley

85	030137	FF 1.5	red	FF, 15 min after dawn file
86	030542	FF 1.0	"	" , 20 min
87	031020	" 2.0	"	" 25 min
88	031449	" 3.5	"	" 30 min
89	032355	" . "		s/ FF, weak, 13 avg.
90	032828	s/bias		s/bias.
91	041216	P/Halley	red	FF 92, 95, 100
93	041816	start test	red	
94	045500	FF on cloud		

7168M Wed 25/26/0100-0230 / 2-F/South of JM / -/-/.

7169EM Fri 27/28/ 2300-0100~ / 3-F/Glenlea Obs / -RASC /
Beautiful Aurora, twilight in N

7170EM Sat 28/29/ 2300-0030~ / 9-F/Glenlea Obs / RASC /
CN3 0h 30m N.

July
7171EM

Thurs 3/4/ 2100-0300 / 1-F / JMB / Miranda /
Robert, Alan, Ian.

View of Miranda,
Discussion.

86/504/3/4 David, I just wanted to thank you for letting
me use your telephone to send it the Wimpys Free Press the
article that I wrote that spoke glowingly about your work
... Best,
Robert J Ballantyne

At last after many years I have had the opportunity to visit your
"telescope farm". I hope it will not be as long before I visit again and hopefully
we will have some clear skies! Good observing! Ian McGregor

Very nice to be back in Tarnac again visiting David & the
Tarnac Observatory. No viewing, - too cloudy, but a
pleasant evening.
- Alan Dyer

7172 AN Fri 4/5/2000 2100-0400/3-F, humid/Bigelow 161"/
Steve, Robert Ballantyne, ~~John~~ Alan Dyer 1-Mostly photo,
some observing.

7173 AN Sat 5/6/2000 1900-0600/10-F/Catalina 61/
Steve/Magnificent Night. See Journal.
Mars, Jupiter, Saturn, M57, ~~NGC 51~~ Nova Cygni
1975.

7174 E Sun 6/7/1900-0000/1-F/Catalina 61/Steve

7175 M Tues 8/9/0200-0300/3-F/SM4/Miranda/CN3 0^h15^mE

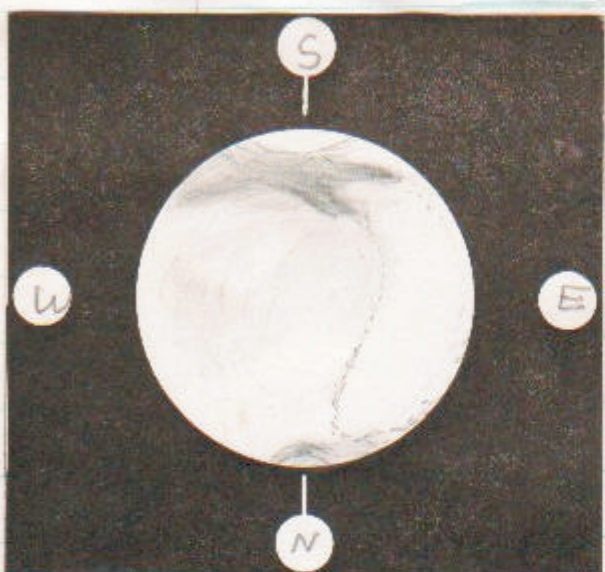
7176 EM 9/10, ~~Sund~~ A Wed ~~1900~~ 0130-0400/9-13-F/
CN3 02^h25^mE.

7177 M 10/11 Thurs 0330-0405/9-F/SM4/Miranda/CN3 0^h20^mE

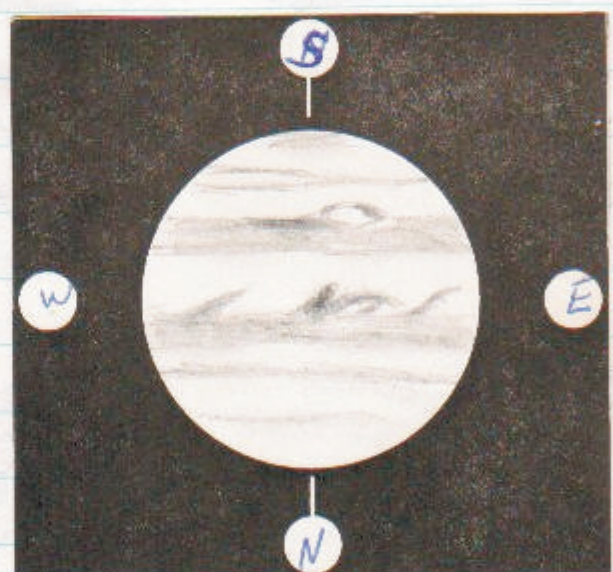
7178 M 11/12 Fri 0245-0405/10-F/"/"/CN3 1^h05^mE.

7179 M 12/13 Sat 0240-0410/3-F/SMF/Minerva/-/collimation test.
CN3 0^h40^mE.

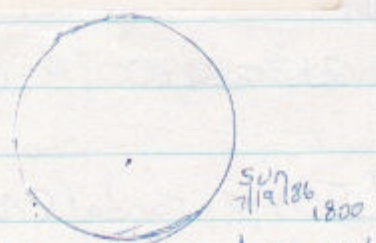
7180E. 13/14 | 2030-2130 | 2-F | on Pima Mine Road some place - Minerva -
 CN3 0^h15^mW.
 7181EM ^{15/16} ~~14/15~~ | 0230-0335 | 3-F | 3M4 | Miranda - | CN3 0^h20^m E, S.
 7182M ^{15/17} ~~15/16~~ | 0300-0340 | 3-F | 3M4 | Miranda - | CN3 0^h12^m E.



Object MARS
 Date 7/19/86 Time U.T. 0700
 C.M. 05^hW
 Seeing 3-4-5 Transparency
 Telescope 16" (to 12") Magn. 46.6x
 Observer DAVID H. LEVY
 N.M.S.U. Observatory



Object JUPITER
 Date 7/19/86 Time U.T. 0915
 C.M.
 Seeing 7 Transparency
 Telescope 9" Magn. 250
 Observer DAVID H. LEVY
 N.M.S.U. Observatory



* 7183EM 18/19, 2345-0230 | 3-F | Clyde Tombaugh's house | 16" F/10, 9" telescope
 Clyde Tombaugh | Mars, Jupiter -
 7184S. 19/20/0000-1145-1215 | 3-F | Walter Haas' house | Spica | Walter | Sun

7185EM2 2/20-0200 / 3-F / I-10 / general obs.

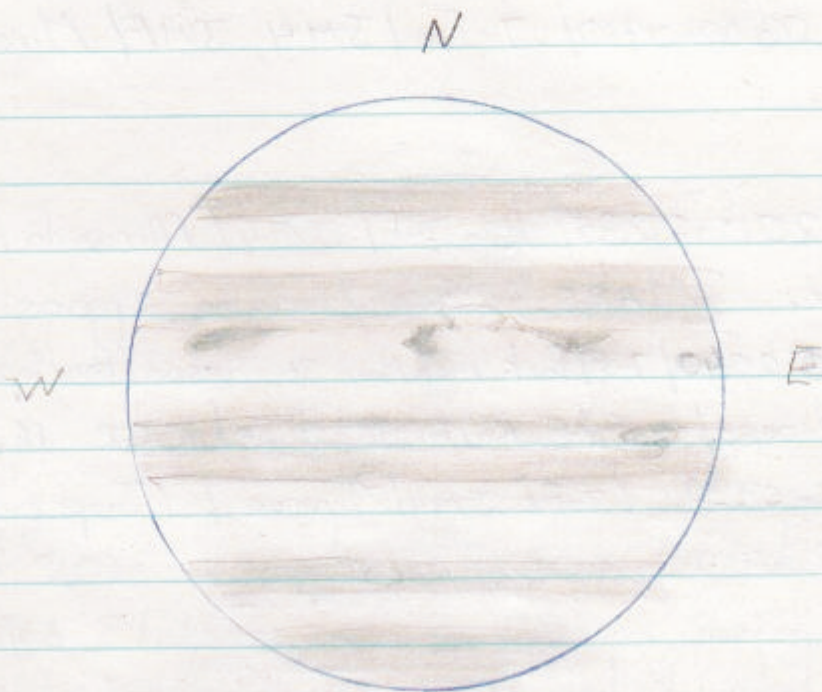
5



2/22 JULY 1986 0730

1 N MARS

7186M 2/22/0000-0100 / 3-F / SM4 / Miranda 4 / - / Mars.



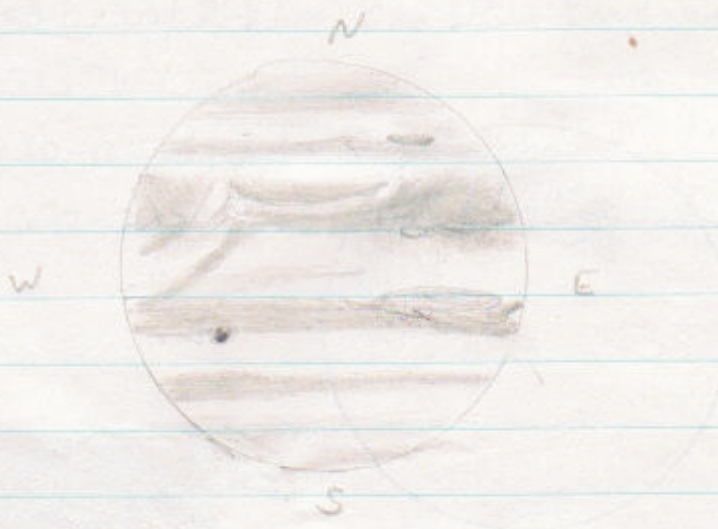
Jupiter

7/23/86 1015 UT

Seeing 0.5

4"

7187M 2/23/0245-0325 / 2-F / SM4 / Miranda-4 / - / Jupiter.



Jupiter 7/24/86
 1030 UT
 Seeing 5 1/2
 Telescope - Miranda
 4, then 16,
 also Pegasus

16 was stopped down to 7; performed better than 8 (slightly),
 which performed better than 4.

7188M

23/24/ 0300-0410/ 7-Fm/ JM4, JMF/ Miranda 4, 16, Pegasus
 Jupiter.

7189E

24/25/ 2015-2235/ 10-7-F/ JM4/ Miranda/-/ CN3
 1^h30^m W. MARS. See drawing opposite page →

*7190E2

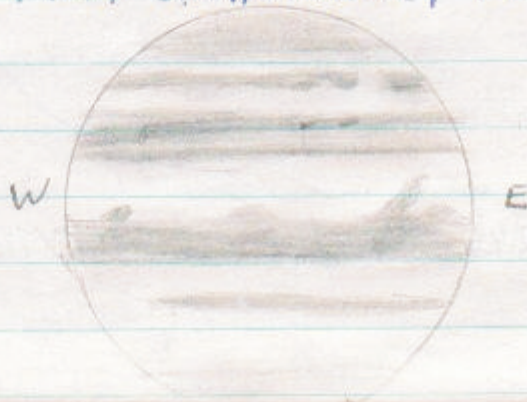
2325-2340/ 7-F/ Park near Main St, Tucson/ Penelope/ CNI: 4023432

7191M3

0020-0035/ 7-F/ S. Kolb/ Penelope/ CNI 16, 31

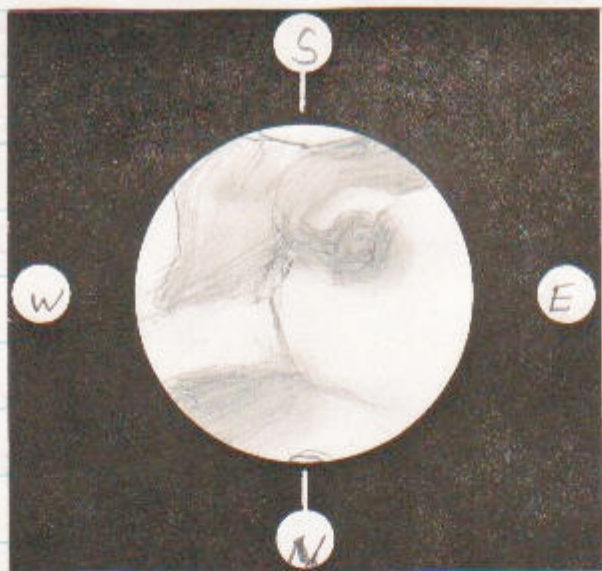
7192M4

0315-0430 17-F/ JM4/ ^SMinerva /-/ Jupiters:

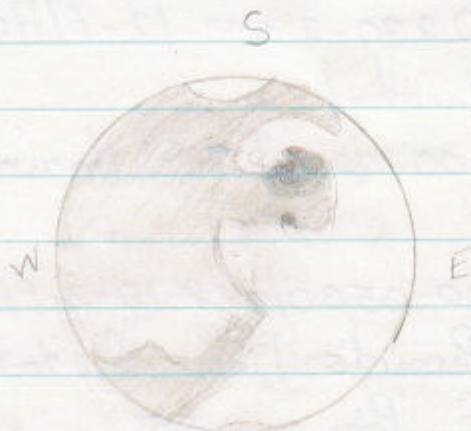


Jupiter.
 7/25/86
 1030 UT
 Seeing 3

Image as good as
 4 as in
 16



Object MARS.
 Date 7/25/26 Time U.T. 0510
 C.M.
 Seeing 4 Transparency
 Telescope 16 Magn.
 Observer David Hebery
 N.M.S.U. Observatory



7193E ^{25/26} 2015-2300 / 10^N-F / JM4 / Miranda / - /
 CN3 1.13 Mars 0515 Seeing 5 16"
 7194E 26/27 / 2000-0000 / 10-7-F / JM4 / Miranda - see overleaf /
 CN3 0^h30^m Comet Churyomov - Solotounikov
 7195E 27/28 / 2000-2230 / 3-F / JM4 / Miranda / - / CN3 1^h00^m E ✓
 Mars. Seeing 4.00

(7194E) Jeni Thatcher - Eckert - Loved sketching from your
 Ross Eckert telescope - great dark skies
 John & Mary Jane DePuy more meters than I've ever seen before, also. Thank you.
 will look forward
 Jupiter.

7196E. ^{Mon} Sunday 28/29 | 2230-0000/3-F/SM4/Miranda | not much clouds.

7197E Tue 29/30 | 2300-0030 | ~~3-F~~ 10-F/SM4/Miranda CN3 1^h 15^m

7198E Wed 30/31 | ~~2300~~ 0030-0130 | 10-F/SM4. CN3. 0^h 15^m
 Comet Churyumov - Solodounikov.

7199SE. Fri Aug 1/2 | 2000-0000 | 1-F | ~~SM4~~ Stella fane / M
 E.

7200S Sat 2/3 | 1200-1800 | 3-F | Stella fane.

7201E ~~Sunday~~ Sun 3/4 | 2000-2130 | 2-F | ~~SM4~~ Harvard College
 Observatory / - Minerva 2248 - / ~~Peter~~ Peter, Dianne, David E.

7202E. Wed 6/7 | 2000-2015 | 1-F | HCO | Peter, Dianne, Dan
 No power at observatory, ∴ dark.

7203E Fri 8/9 | 2230-2300 | 12-F | HCO Roof | Peter, Dianne
 Briant Mrs. Maroden

7204M Sat 9/10 | 0000-0200 | 7-F | Harvard Yard | Peter Dianne
 clear sky

*7205AN ^{Mon} ~~Sun~~ 10/11 | 2100-0530 | ~~8-10-3-F~~ 3-F | Jarnac / Minerva / Peter
 Dianne, Maw / Perseids 1986. My total for 1^h 20^m = 25

7206E CN3 2^h 00^m E Peter saw 55.
 12/13 2000-2030 | 10-F | J-3-J-D / Peter, Dianne, Maw, P.

*7207AN2 Mon 12/13 | 2200-0530 | 10-2-3-F | J-J-D / Minerva / Maw
 Peter, Dianne, Richard, Alistair. CN3 1^h 14
 I saw *25 meters, Peter 63. Maw 25.

*7208EM Wed 13/14 | ~~22~~ 2330-0100 | 7-F | J-818-LW / Summit
 Walk Minerva / Jupiter through trees at 818. Minerva
 hand held.