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Comet Search Codes.

- CN3 Comet Search December 17, 1965
- CN3a added Edmund wide field finder
- CN3b 1973 larger telescope
- CN3c 1977 catalogue of masqueraders.
- CN3d Miranda used for search September 16, 1981.
- CN3e TV Corvi, + other variable magnitude objects like P/Schwassmann-Wachmann 1 December 17, 1986.
- CN3F Photographic + electronic search December 17, 1988.
- CN3g Joining with other group searches December 17, 1988
- CN3h Automated searching December 17, 2001.
- CN3j Internet Kreutz comet search December 17, 2001.

For David, the ultimate
observer visually, photographically,
& with CCDs, whose superb
knowledge of the skies &
enthusiasm & love of the
heavens leads him on a
path of discovery. This first
volume of the new millennium
will surely reveal an
astonishing record of achievement.
May you find many more
comets, variable stars, and
unique objects in the skies!
With love,
Carolyn Shoemaker



Log 19
March 29, 2000
to
December 17, 2001.

*** 12530 SANS

Dearest David,

you are one of the most persistent and enthusiastic men I know. May this observing log be filled with many new comet discoveries. It is always a joy doing our searches each evening.

It is time we were rewarded! you are a wonderful mentor and great husband. I am honored to be such a big part of your life.

I love you! much the most!

Love,
Wendee

Observing Log
David H. Levy

Log 19

110° 43' 10" W.

31° 58' 35" N.

~ 3483 Ft.

11570E2 Wednesday, March 29/30, 2000/1930-0000/
10-F/Jarnac/Minerva-Ophelia, Esther-Ophelia,
Echo/Wendee, Carolyn, Marilyn Unruh/CN3F
24 pictures

11571S. Thursday, March 30/31, 2000/1530-1630/3-F/
Jarnac/Mintaka/Carolyn, Wendee/SS2: 11, 133.

11572E2. 1845-2300/1-3-F/Jarnac/Minerva, Esther
& Ophelia/Wendee + Carolyn/CN3F 5 pictures.
Clouds were always interrupting!

11573S. Friday, March 31/32, 2000. 11530-1630/3-F/
Jarnac/Mintaka/Carolyn/SS2: 11, 108.

11574E2. 1900-2330/10-F-miraculous clearing/Jarnac/
Minerva-Ophelia/Carolyn, Wendee/CN3F 24
pictures. Beautiful night. CN3e TVGw (14.6).

11575M. Sunday April 2/3/Midnight-12:30/10-F/Jarnac/
Pegasus/-/CN3e TVGw (19.6).

11576M. Monday, April 3/4, in the morning 0430-0530/
10-F/Jarnac/Minerva/1-CN3 45m E.

11577E Monday, April 3/4/1900-2300/10-F/Jarnac/
Minerva - Ophelia and Esther - Ophelia 2/Wendee,
Bob Goff/CN3F - 2 picot focus. CN3e
with Pegasus, TVCw (14.6).

11578M2 April 3/4, 10430-0520/10-F/Jarnac/Miranda/
-/CN3 40 minutes east.

11579S Tuesday, April 4/5/450-5:15/10-F/Jarnac/
Mintaka 1-1552: 12, 86.

11580E2. 8:00pm - 10:00pm/7-F then 10/Jarnac, earlier at Dakota
Cafe parking lot/Pegasus/Wendee, Art + Jeff/CN3e,
TVCorwi (14.6. Conjunction of Mars, Jupiter, and
Saturn.

11581M3. 0340-5:00/10-F/Jarnac/Miranda/-/CN3 1^h5^mE.

11582SE. Wednesday, April 5/6/1700-2030/10-F/Chaz
Bob Goff/10th Catadioptric SC/Wendee, Bob,
Valerie, Junco/Orion. Conjunction of
Jupiter, Mars, + Saturn.

11583E2. 2230-2245/10-F/Jarnac/10-F/clear sky.

11584M3. 0345-0510/10-F/Jarnac/Miranda, Pegasus/
CN3 1^h5^mE. CN3e TVCw (13.6 - with
Miranda. Listened to a program about
a woman who lived in Luna, + a big redwood,
for 2 years.

* 11585E. Thursday, April 6/7/1930-2030/3-F/Jarnac/
Yashica twin-lens camera/Wendee/photos of two
rare events: the season's first hedgehog cactus
flower, in same field as Moon, Jupiter, Saturn,
& Mars.

11586E2. 2230-2250/10-F/Jarnac/Pegasus/-/CN3e
TVGw L14.6.

11587M3. 0340-0505/10-F/Jarnac/Miranda/-/
CN3 1^h10^m East.

11588S. Friday, April 7/8/1730-1750/3-F/Jarnac/Mintaka/-/
SS2: 8,50.

* 11589E2. 1830-2200/3-F/Tanque Verde Elem. School/
Pollux, others/Marilyn + Jeff Selwyn, Fifth grade
classes, and Wendee./Moon, Jupiter, Sirius.

* 11590E. Saturday, April 8/9/1730-2200/Sabino Canyon/
Lots of Telescopes/2-F/Telescopes for Teletthon/
Wendee, Laurel Dunlap, Anastasia Piper,
TAA, Dean + Starizona, Steve + Skyworks,
Frank + Stellar Vision, Bob-Ross + MDA.
The Moon saved us! M42 also.

11591S. Sunday, April 9/10/1730-1800/3-F/Jarnac/
Mintaka/-/SS2: 8,82.

* 11592AN2. 1900-0530/3-F/Jarnac/Miranda, 11^h
Celestron/Ken Graun, Scott, others, and

of course Wendee/CN3e TV Gw (14.6. CN3
6^h 15^m W, then S of -30°, then East.

Very nice observing session. Scott showed me
3C 273 in Virgo. Also I independently
discovered - so to write - NGC 1999 near M42.
It's a diffuse nebula around a star - looks
like a planetary.

11593E. Thursday, April 13/14/2100-2230/3-F/Jarman
Peter + Dianne, + bridge / Train.

*11594E. Saturday, April 15/16/2245-2355/3-F/
MONTREAL / The Polish Telescope, recovered/
Carl, Peter, Constantine / Moon.

11595S. Sunday, April 23/24/1800-1840/3-F/Jarman/
Polish Telescope 1-155 2: 2, 2.

11596E2 2030-2330/10-F/Jarman/Minerva, Esther,
Ophelia / Wendee, Bob Goff / CN3e TV Gw
(with Pegasus) † - 14.6, CN3F 8 pieces in Auriga.
Also further attempt to focus #3 telescope.

11597S. Monday, April 24/25/1710-1730/3-F/Jarman/
Polish Makutov 1-155 2: 2, 6.

11598E2. 2000-2330/10-F/Jarman/Ophelia 2,
Minerva + Esther / Carolyn + Wendee/
CN3e TV Gw (14.6. CN3F, 4 16 pieces.

11599SE. Tuesday, April 25/26/1900-2355/10-F/

Jarnac/Ophelia, H2, Minerva, Esther,
Pegasus / -Wendee + Carolyn / CN3e TV
Cw C14.6. CN3F 21 pictures. incl 10at-30.

11600S. Wednesday, April 26/27/1700-1720/10-F/
Jarnac / -SS2: 6, 73. with Muntaka,
and Carolyn + Wendee.

11601E2M. 1920-0030/10-9-F/Jarnac / Minerva,
Ophelia, Pegasus, Miranda / Wendee,
Carolyn / CN3e TV Cw C14.6. CN3F
20 pics. Omega Centauri.

11602S. Thurs. April 27/28/1700-1730/Muntaka / -/
SS2: 7, 85.

11603E. Friday, April 28/29. Happy birthday Gene,
+ Bert / 2030-2130/10-F / Wendee / Jarnac /
CN3e TV Cw C14.6 with Pegasus; with Minerva-
Ophelia, CN3F 4 low pics.

11604M2 Saturday morning. 0310-0430/10-F / Jarnac /
Miranda / - / CN3 1:05^m W E.

11605S. Saturday 29/30/1230-1300/10-F / Jarnac /
Muntaka / SS2: 6, 79. / with Wendee +
Leif Robinson.

11606E2. 2305-2320-110-F / Jarnac / Pegasus / - / CN3e,
TV Cw C14.6.

11607M3 0310-0430/10-F/Jarnac/Miranda/H
CN3 1^h E.

11608SE Sunday April 3^{May} 1850-0000/10-F/Jarnac/
Minerwa - Ophelia, Pegasus, Ken G's telescope/
Ken + Wendee + Lynn + Gindi Underwood.
CN3e TVGw (14.6. CN3e F 4 pics, completed
set from 11603. Also nice green flash.

11609M2. 0240-0500/10-F/Jarnac/Miranda/Ken/
CN3 1^h.

11610S Mon, Apr May 2/1800-1815/10-F/Jarnac/Mintaka/
-ISS2: 8, 6, 39.

11611E2. 2230-2300/10-F/Jarnac/Pegasus/-1CN3e
TVGw (14.6.

*11612AN. Tuesday, May 3/4/2000-0630 CDT/
10-F/Texas Star Party, Prede Ranch/Minerwa
with IBM Computer, many other telescopes/
many people/ CN3e TVGw (14.8, CN3,
5 hours W, N, S below -30, and E. 3 telescopic
Eta Aquarids. Goldbergs, many others

11613AN Wednesday, May 4/5/2100-0615/10-3-F/
~~Jarnac~~ Texas Star Party/Minerwa-IBM,
Barbara's 20-inch, other telescopes/ CN3e
TVGw (14.8, Σ 28/6-19 through Gary
Seronik's telescope & CN3 3^h30^m W, N, S below
-30; + E + SE. 5 meteors, incl 1 sporadic
-4, and one -1. Eta Aquarid.
Goldbergs, Triple Vixen, Garys Seronik, others

Seeing Record of Visual Observations at Combaugh Private Observatory

Samples from Clyde's Log.

My session		MST		
3E, 4E: 1-3	Sept 6, 1960.	2010	9-inch	Jupiter, Saturn
	Sept 12, 1960	2000	9-inch	Sat Jupiter
	Sept 13, 1960	1845	9-inch	Jupiter, Saturn
	14-18 every night		"	Jupiter, Saturn
	19-29 every night		"	" "
*874AN. ♂	July 8, 1965			Mars, Moon
	July 9, 1965		♂	
	July 12, 1965		♂	
*886E3.	July 15, 1965	Marsier 4	♂	
♂ drawing 893E3, 896E3	19, 20, 22, 23			
	July 31, 1965	superb	♂	
	Aug 4, 6, 7, 8, 9, 11, 12, 13		♂ 2, 2	
	...			
	1966.			
	3 Jan 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 19, 20, 23, 25,			
	27, 29, 30,			
	Feb. 1, 3, 4, 5, 6, 7, 9, - 9 observed + draw 2			
	with GRS. NEB fired spot changes from			
	cream to deep golden and narrows.			
	March 16, 17, 19, 26, 28, 30, April 4, 6, 28, 30.			
	May 5 + 7 Uranus.			
	May 8, 12, 13 Uranus. May 28 Moon.			
	1969, the Summer.			
	July 11, 12, 13 - Mars.			
	16 Mars, ε Lyrae.			
	17 July Mars.			

my sessions

Clyde's sessions cont'd.

Seeing Record of Visual Observations
mostly at Tombaugh Private Observatory
on Mesquite Park NM, 3890 feet above
sea level Lat N 32° 18'

- *909AN/3 July 27, 1965 Moon, Mars.
- 910E July 29, 1965 Mars
- 911M, 912M2. July 30, 1965 Mars
- 914EM. July 31, 1965 Mars.
- 9 Aug 7 Mars
- 921M2 Aug 12 Mars
- Aug 12. Sun - 4" or.
- *925AN Aug 13 Mars.
- 926E, 927M, 928M2 Aug 14 Mars.
- *929M (16) Aug 15, 16, 17, 19 Mars.
- Aug 22 Mars, Moon.
- +934EM Aug 23 Moon, Saturn, & Andromedae
- Aug 24 Moon

- 6301M. May 14, 1983 82-inch, McDonald Pluto
- *6565EM → April 25, 1984. Mars + Saturn w/ 40cm. David Levy
- ?6807E^m ^{19/20} May 15, 1985. Saturn w 40cm 524x David Levy
- +6870E. August 26, 1985¹⁹⁸⁵ Jupiter ^{16"} Uncle Lee's 3' x 2", Levy.
- +6923EM. November 9, 1985 Halley's Comet 10"
- 6951E. December 9, 1985 Jupiter } David Levy, Lonny Baker
- *7183EM. July 19, 1986 } 40cm, 466x

- Mars. 40cm, → 12-inch, David Levy
- Jupiter w/ 9-inch.
- 11758EM. Sept ~~17~~²⁰, 1986 Jupiter 9-inch @ 250x. David Levy

11614E. Thurs May 5/6/2/08-0000/3-F/Texas Star Party/
Minerva, many other telescopes. CN3e TVCw 114.6

11615M2. 0430-0550/10-3-F/~~3~~ Texas Star Party/
Minerva-TSP radio station / CN3 1^hE.

11616 AM Friday, May 6/7/2100-0550/10-F/Texas Star Party/
Minerwa + many other telescopes / many people.
CN3e TV Cr (14.8 with Barbara's 20-in.
CN3 5" 20" W, S, E.

11617 EM Saturday, May 7/8/2030-0130/3-F/Texas Star
Party / Minerwa + other scopes / fewer people /
CN3e with a 25-inch. TV Cr (14.8.
CN3 2 minutes! sky not too clear.

11618 M2 0430-0630/3-F/Texas Star Party / Minerwa /
David Lee, and someone who laughed when I
answered "~~comet~~" "just ~~comet~~ doing some
comet sweeping" to his question "what you
lookin' at?" CN3 58 minutes E.

⁹
11618 S. Sunday, May 7/8/8/1830-1900/7-F/Patsy's house/
Clyde's 16-inch, Minerwa / Patsy.

²⁰
11619 E2 Tuesday evening May 9/10/2100-2300/11-F/Jarnac/
Wendee / John + Barbara Powell, Wendee / Miranda /
-CN3e TV Cr (14.6 w/ Pegasus. Moon, Vega, M13.

11620 M. 0305-0415/10-F/Jarnac / Wendee was asleep,
but I love her very much! / Miranda / -CN3
1" E.

11621 S. ~~Tuesday~~ ^{Tuesday} May 9/10/1800-1815/10-F/Jarnac/
Mantaka 7' - 1 SS 2: 6, 48. before 1120 E.

11623 M2. 0300-0420/10-F/Jarnac / ~~Mantaka~~ Miranda /

-/CN3 1^h E.

11624S. Thursday, May 11/12/1800-1820/10-F/Jarzac/SS2 with Mintaka/SS2: 6, ~~8~~.69.

11625E2. 2300-2330/10-F/Jarzac/Miranda, Mintaka/
-/Moon/Wendee, Carolyn Myberry.

11626S. Saturday, May 13/14/1700-1800/10-F/Jarzac/
Mintaka/-/SS2: 12, 127.

11627E2. 1920-2000/10-F/Jarzac & Wendee/Crebbous
Moon: Beautiful evening.

11628E3. 2100-2130/7-Fm/Jarzac/-/Installing Dad's
radio on Miranda.

11629M4. 0315-0430/10-F/Jarzac/Miranda/-/Moonset
& CN3 45^mE.

11630S. Sunday 14/15/1600-1700/10-3-F/Jarzac/Mintaka,
Miranda/-/SS2: 12, 122. Installation
of Daddy's radio and Mintaka's cassette
player on Miranda.

11631E. Tuesday, May 16/17/1940-2000/3-F/9^m in the air
over Washington, D.C./-/-/The Washington
Monument, The Lincoln Memorial, White House,
Capitol, AND the Moon.

11632E. Wednesday, May 17/18/2200-2215/Washington/1,

-1-1 City and Moon.

- 11633S. Thursday, May 18/19/0930-0955/3-F/Washington Mall/view of Sun + clouds making patterns over Washington Monument. Proved that from a distance it is deceptively small.
- 11634S. Saturday, May 20/21/10:30-11:00/3-F/Jarroc/Mintaka/Wendee/SS2: 10, 157.
- 11635E. Friday May 19/20 [before 11634S] 2000-2145/3-F/Accacia School/Wendee, 3rd graders, teachers + parents/ fallout, 4" rd, binoculars/ Mizart + Alcor saved the night! Moon was up later in the evening.
- 11636E2. Saturday, May 20/21/2000-2200/3-F/Jarroc/Wendee, The Underwoods/ Mizart + Alcor, Procyon, M13, M83. CN3 0^h 35^m W.
- 11637S. Sunday, May 21/22/15:30/3-F/Jarroc/Miranda, Mintaka/-T Repair of speaker wire attaching to large finder on Miranda/SS2: 7, 128.
- 11638E2. 2000-2300/10-F/Jarroc/Miranda, 7x50b/Wendee/CN3 1^h 30^m W, Moon after moonrise, fire South of us.
- 11639S. May 22. 10745-0900/10-F/Mintaka/Jarroc/Wendee/SS2: 11, 110.

- 11640S2. Monday, May 22 / 1230-1245 / 3-F / Starizona / Wendee,
Dean, Tom Bopp / 4" Celestron rd / Sun, also
Minerva.
- 11641S3. Monday, May 22 / 1500-1540 / 10⁻³-F / Kitt Peak
National Observatory / #2-36", Minerva.
Just walking around.
- 11642E4. 2000-2300 / 10-F / Jarnac / Minerva with new
focuser, Ophelia 1 / Wendee / CN3e 8 pics,
including Pollux, Castor, & Hya, + 8 Corwin.
CN3e TV Gr (14.8. w. Pegasus
- 11643S. Tues, May 23 / 1630-1700 / 10-F / Jarnac / Mintaka /
-ISS 2: 8, 69.
- 11644E2. 2000-2300 / 10⁻⁸-F / Jarnac / Minerva - Ophelia 2 / Peg /
Wendee, Bob Summerfield / CN3e TV Gr (14.8.
CN3F 8 pics. Encoders are gone!
- 11645S. Wed, May 24 / Noon-12:30 / 10-F / Jarnac /
Mintaka / -ISS 2: 8, 56.
- 11646S2. 1600-1900 / 10-F / Jarnac / Minerva / Dean,
Wendee / # Installation of new encoders
+ NGC-Max.
- 11647E3. 2030-0100 / 10-F / Jarnac / Minerva - Ophelia 3 /
Wendee, Dean / Installation + adjustment
of new encoders. CN3E 4 pics CN3e (14.6
- 11648E. Thurs May 25 / 2145-2200 / 10-F / Jarnac /
Pegasus / CN3e TV Gr (14.6.

11649S. Friday, May 26/27/1800-1815/10-F/Jarmac
Mintaka/SS2: 5, 39.

11650E2. 2030-2230/10-F/Jarmac/Munierwa-Ophelia/
Wendee/CN3F 10 pics, Leo + Cancer. Also
with Pegasus: CN3e TV Cw (14.6).

11651S. Saturday, May 27/28/10:00-11:00/10-F/Jarmac/
Mintaka/SS2 5, 6 7.

11652E2 2030-2230/10-F/Jarmac/Munierwa-Ophelia/Peg-
asus/Wendee/CN3F 9 pics, Leo + Procyon.
CN3e TV Cw (14.6).

11653S. Sunday, May 28/29/1630-1700/10-F/Jarmac/Mintaka/
-/SS2: 1985. Small groups all over Sun.

*11654SAN2. 1815-0500/10-F/Jarmac/Jarmac Observatory
Star Party/Mintaka, Munierwa-Ophelia, Obediah.
Telescopes from the Starizona group: 9 1/4" Celestron,
other telescopes/Roberto, Virginia + Scott, Ken G.,
and Wendee/a mini-Riverside: CN3F 9 pics
in Leo + Procyon. CN3e TV Cw w/Pegasus (14.6).
CN3 2^h30^m E and N.

11655S. Monday 29/30/1700-1730/3-F/Jarmac/Mintaka/
a cat in the observatory/SS2: 8, 61. Several
photographs.

11656E2. 2030-2230/10-F/Jarmac/Munierwa-Ophelia
Wendee/CN3e TV Cw w/Pegasus (14.6) CN3F 9 pics.

11657M3. 0235-0430/10-F except for haze low/Jarmac/
- / CN3 with Minerva / - 1^h NE.

11658S. Tuesday, May 31/31, 2000/1715-1745/10-F/Jarmac/
Mintaka / - / SS2: 5, 47. Several photographs
with camera properly mounted to telescope.

11659E2. May 30/31/2000-2300/10-F/Jarmac/Pegasus,
Minerva-Ophelia / - / Wendee / CN3e TV or U. 6
CN3F 9 pics.

11660S. Wednesday, May 31/32/1200-1300/10-F/
Jarmac / Mintaka / SS2: 6, 4730-. Pictures as well.

11661M3. before 11660S. / 0250-0410/10-F/Jarmac/Miranda,
/ - / CN3 1^h 10^m E.

11662E2. 31/32/2200-2230/10⁻³-F/Jarmac/CN3e TV or
U. 3.3. with Pegasus.

11663M3. 0300-0415/10-3-F/Jarmac/Miranda / - /
CN3⁴ 1^h E.

11664S. June 1/2/1500-1530/10⁻³-F/Jarmac/
Mintaka / SS2: 4, 30. Pics of Sun.

11665E2. 2200-2210/1-F/Jarmac.

11666E2. before 11665/1900-2000/2-f/Jarmac yard / - /
Wendee Sunset in W; dark clouds in east.

- 11667S. Friday, June 2/3/1300-1300/3-F/Jarnac/
Mintaka/-1 SS2: 5,50. End of roll of photos
of Sun, using camera with cable release.
- 11668E2. 2100-2210/10-F/Jarnac/Miranda-Ophelia 2/
Wendee/CN3F & Crow field. With Pegasus, CN3
TV Crow (14.6. CTU Crow down well below 15.5 on
films.
- 11669M3. 0235-0430/10-F/Jarnac/Miranda/-1 CN3
1.5^mE.
- 11670S. Monday, June 5/11-11:30am/7-F/St. Joseph's
Oratory/Wendee, Nanette, Mark, Summer,
Peter Evans. Nice visit. CN5 Sun Ven.
- * 11671E2. 2100-2230/~~10~~ 3-F/Jarnac Westmount Park/Wendee
Nanette, Mark, Summer/Summer pointed out
the Moon to us.
- * 11672E. Tuesday, June 6/2230-2230/3-F/Olympic
Stadium/Wendee, Nanette, Mark, Summer/Summer
points out Moon again.
- * 11673S. Wednesday, June 7/1430-1630/10-3-F/JARNAC
and vicinity/-1 Wendee/CN5 Sun Ven.
- 11674E2. 2230-2345/3-F/Osg. Observatory/Leo, Denise,
Wendee/partially clear sky.
- 11675EM. Thursday, June 8/2130-0230 int/~~10~~ 3-1-F/Osg.
No aurora, even though predicted.

- 11676E. Friday, June 9/2145-2315 MST/7-F/Tanque Verde Ranch /M57, 4, Moon. Starizona Star Party.
- 11677SE Saturday, June 10/11/1800-2200/7-Fm/Biosphere/Wendee, Biospheriana/clear sky, lecture on SL-9.
- 11678M2. 0300-0400/10-F/Jarnac/Miranda/-/CN3 50m.
- 11679E Sunday, June 11/12/1915-2215/7-Fm/Jarnac Mt Bigelow/Astronomy Camp, Vof A./M51/Michael Magee, Don McCarthy, staff + campers.
- 11680S. Monday, June 12/13/1800-1815/10-F/Jarnac/Mintaka 1-1 SS2: 12, 96. /Wendee.
- 11681S2. 1900-2000/10-F/Jarnac/Wendee/-/Sunset + green flash.
- *11682E Wednesday, June 14/15/7-Fm/Camp Shadow Pines/Pollux, 6" refractor, another ETX. Moon, M57. MDA Camp.
- 11683E Friday, June 16/17/2000-2300/7-Fm/Jarnac/Wendee, Paul ^{Johnson} + James Ashley/Moon.
- 11684S. Sunday, June 18/19/1500-1615/3-F/Jarnac/Wendee, Art and Jeff, /Mintaka/SS2: 7, 84. Transplanting in wake of yesterday's storm, which dropped 2.0 inches of rain and hail.

11685S. Tuesday, June 20/21, 2000/1500-1800/10-3-F/
Jarnac/Wendee Lynn Underwood, Dean
Koernig / - Study of possible lat 3 site for
Observatory. Mintaka: SS 2: 6, 70.

11686E2. 2115-2325/10-F/ Beautiful Night/Min-
erwa - Ophelia I, Alt. Pegasus / - 1 CN3e TV
Cw C13.3. CN3F 8 10 pics incl. 8 Cw.

11687E. Wednesday June 21/22/1900-2330/10-F/Jarnac/
Pegasus Minerva - Ophelia / Carolyn, Wendee/
CN3e TV Cw C14.6. CN3F 12 pictures.

11688E Thursday, June 22/23/2030-2330/3-F/Jarnac/
Pegasus, Minerva Ophelia - / CN3e TV Cw C13.3,
CN3F 8 pics.

11689EM Friday, June 23/24/2345-0015/10-3-F/Carolyn's
home / View of NW, N, NE sky.

*11690SAN Saturday, June 24/25/1545 - 0400/10-3-F/
Prescott to Vail / Prescott Astronomy Club /
Gary Fray and others /
a) 1600-1700 View of the Fray - Lines
observatories.
b) 1700-2100 - dinner, sunset, + lecture
c) 22100-2200 - drive back to Fray - Lines
and sky examination - good site, despite
Prescott + Phoenix glows.
d) drive: 2200-0153 to Tucson. e) 153-2:40 home
240-4:00 / w/ Miranda / CN3 1^h E.

- 11691S. Sunday, June 25/26, 2000/1330-1400/3-F/
Jarnac Starizona Wendee, Dean / 4" Celestron
6" Solar scope / SS2: 9, 70; 2 nice prominences
- 11692E2. 1930-2300/3-F/Jarnac/Pegasus, Minerva -
Ophelia 2 / -Wendee / CN3e TV Gr (13.3. CN3F
10 pics.
- 11693S. Monday, June 26/11-Poon or 12:30/3-F/Jarnac/
Mintaka / - / SS2: 9, 68.
- 11694S. Wednesday, June 28, 2000/14:20-14:45/2-F/Jarnac/
Mintaka / -Wendee / SS2: 7, 41.
- 11695M Sat July 1/3-4/3-F/Jarnac/Miranda / - / CN3 50m E.
- +11696S AN Sunday, July 2, 2000. /1630-0500/3-10-F/
Jarnac/Mintaka, Pegasus, Minerva - Ophelia / etc.
Wendee, ^{Miranda, other} about 15 other people: Scott,
Virginia + Mom, Rob and Suzanne from the UofA
Music Department, Larry, Ken, Suzanne + Adria,
Tom Bopp. CN3e TV Gr (14.6; CN3F 10 pics
CN3 2h35m. NRC 1333 as a catalogue
object - weird reflection nebula. Earlier SS2: 9, 49.
Jupiter + Saturn w/ Pegasus after dawn.
- 11697E. Monday, June July 3/4/14-1500/3-F/Jarnac/
Mintaka / Wendee / plant inspection tour
and SS2: 10, 68.
- 11698E2. 1908-2330/10³-F/Jarnac/Minerva - Ophelia //
Wendee / Miranda also for CN3e TV Gr (14.6.
CN3E 10 pictures. Sunset and green flash
earlier.

11699 M3. 0250-0415. / 10-F / Jarnac / Miranda. / CN3
1^h E.

11700 S. Tuesday, July 4 / 11:30-2:00 / 3-F / Jarnac / Mintaka / Wendee / Repotting of our 2 wedding Euphorbia plants + 3rd one also. SS2: 11, 67.

11701 E2. 2130-2300 / 3-F / Jarnac / View of sky. Then fireworks seen through Pollux with Wendee.

11702 M3. 0300-0410 / 10-F / Jarnac / Miranda. / - / CN3
1^h E.

11703 S. Wednesday, July 5 / 1400-1430 / F / Jarnac / Mintaka / Wendee / SS2: 9, 56.

11704 E2. 2100-2200 / 3-F / Jarnac / Moon, seen as I was developing films taken earlier, a few nights ago.

11705 M3. 0300-0400 / 3-2-F / Jarnac / Miranda, Echo / - / CN3 20^m E. Session held after nightmare about trying to rescue for Echo during a war of some kind.

Jul 6

11706 S. 1115-1300 / 10-F / Jarnac / Mintaka / Wendee / SS2: 9, 102. After swimming.

11707 E2 1900-2000 / 3-F / Jarnac / Wendee / Sunset with Green flash.

11708M3 0300-0400/3-F/Jarnac/Miranda/-/CN3
45m E.

11709S. Friday, July 7, 2000/1100-1315/3-F/Jarnac +
Bob/Wendee/Mintaka/SS2: 9, 176.

11710M2. 0300-0415/10-3-F/Jarnac/Miranda/CN3/1^hE.

11711S. Sat. July 8/900-1130/3-F/Jarnac/Mintaka/
Wendee, David the phone man/phone repair.
Later, SS2: 10, 151.


11712E2. July 8/1900-2330/3-F/Jarnac/Minerva-Ophidial/
Wendee/Area 362 + special field. Unsuccessful
search for comet suspect.

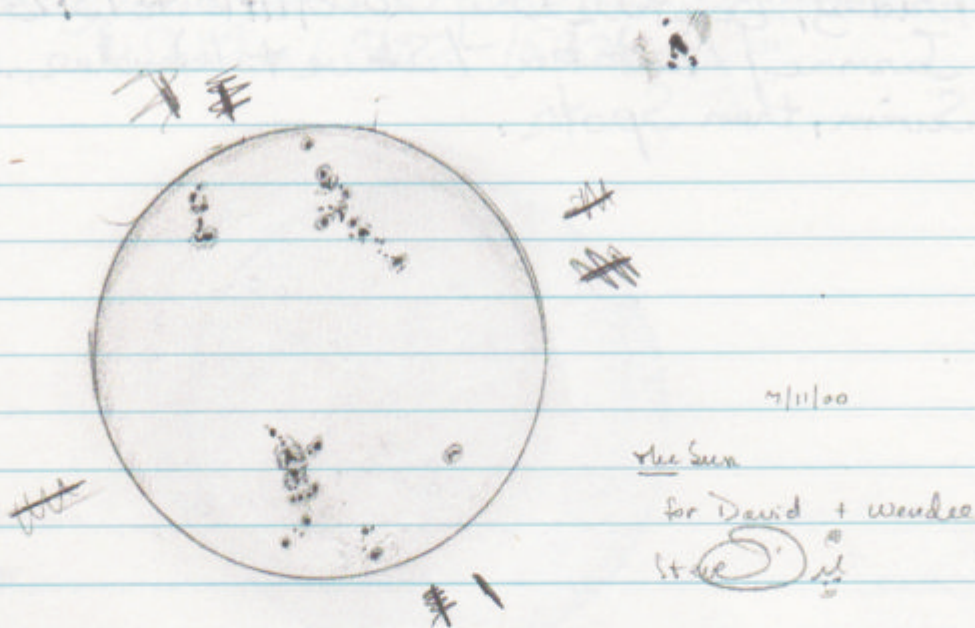
11713M3. 0300-0430/10-F/Jarnac/Miranda/Jim
Scott/over the phone/CN3 1^h10^mE, upper
E + N.

11714S. Sunday, July 9/2-3pm/10-3-F/Jarnac/
Wendee/-/Mintaka/SS2: 11, 175.

11715MP 0300-0305/2-F/Jarnac/cloud check.

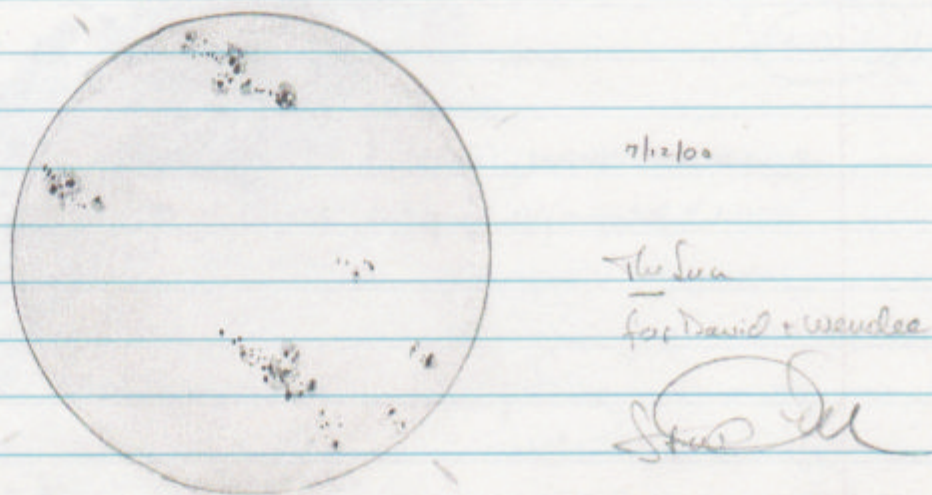
11716S Monday, July 10/11/1730-1815/3-F/Jarnac/
Mintaka/Wendee/SS2: 11, 202.

11717S. Tuesday, July 11/12/1630-1800/3-F/Jarnac/
Steve O'Meara/Wendee/Mintaka/Pegasus/
SS2: 17, 173. See drawing opposite. 

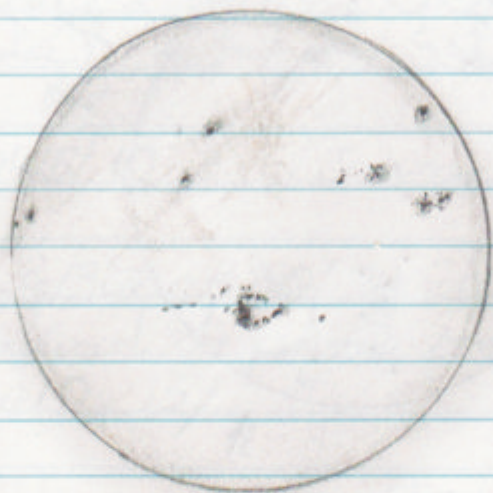


11718M2. 0300-0415/10-3-F / Jarnac / Miranda / - /
CN3 0435^mE. The sky was mostly
to partly cloudy BUT there were holes that
grew and streak in the Northeast.

11719S. Wednesday, July 12/13, 2000 / 1700-1800 / 3-
10-F / Jarnac / Mistake / Steve O' Meara,
Wendee / SS2: 17, 223. Also Moon thru Pegasus.



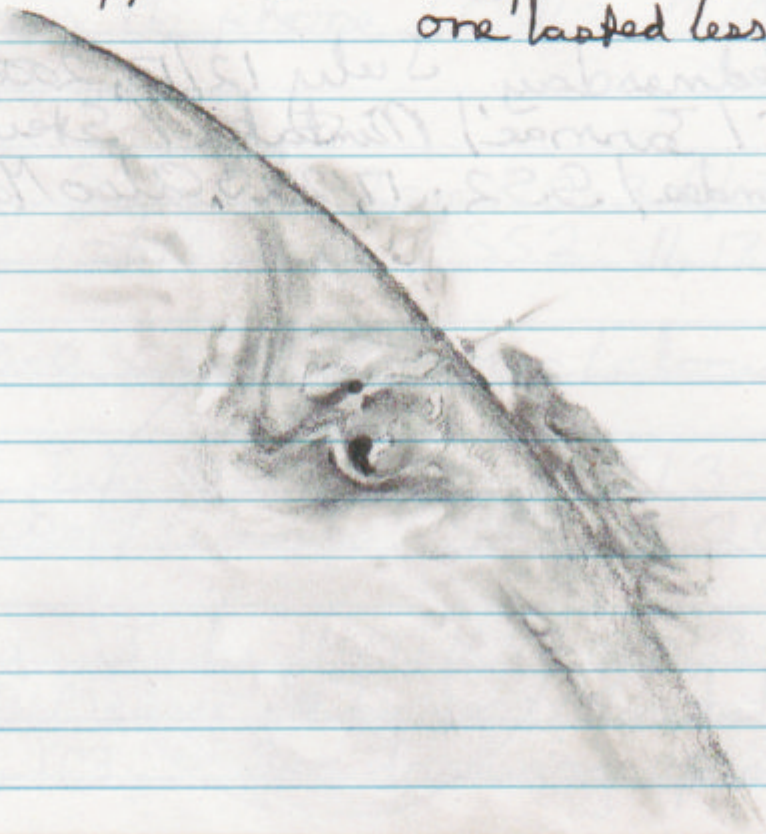
117209. Friday, Bastille Day 2000/11:15 to 13:15/3-F/
Jarmac/Muntaka/Steve + Wendee. 1 SS2: 9,148.
Swim, then Spots.



The "Noon-Day" Sun

Steve O'Meara

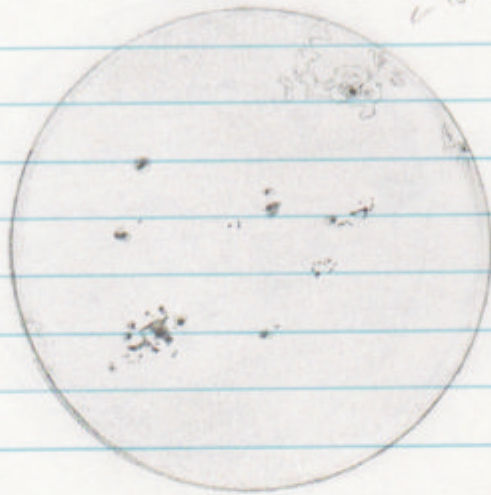
*1172152. 1500-1545/3-F/Dean's Starizona/6" refractor/
Steve O'Meara, Dean, Wendee, Larry, Scott,
and Tom Bopp / Fantastic prominences. The straight
one lasted less than 1/2 hour.



Steve O'Meara

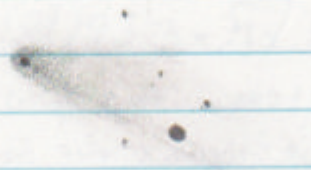
11722S. Saturday, July 15 / 140-1220 / 3-F / Jarnac / Mintaka / Steve, Wendee / SS2: 15,206.

lots of ^{faculae} _{plagium}



The Noon Day Sun, again
Steve D.

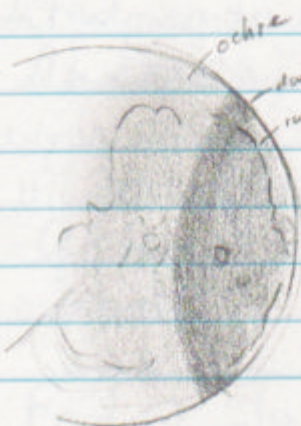
* 11723/2S 0300-0600 / 7-Fm / Jarnac / Pegasus, Echo, Minerva, Miranda / Steve, Wendee / Partial Lunar Eclipse No. 54. Also Comet Linear, Jupiter.



7/16/00 ~ 4:00 a.m.

Comet Linear on eclipse morning

Steve D.



4:23:00 penumbra noticed (definite), suspected minutes earlier

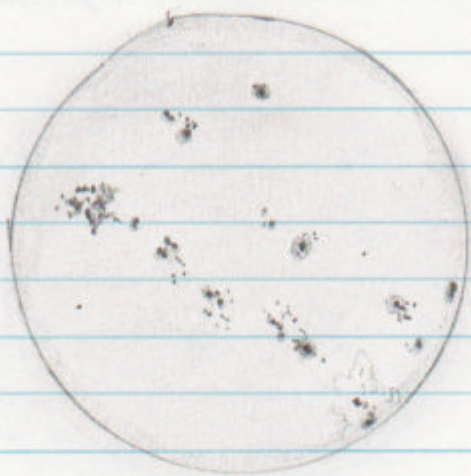
4:57:00 1st Contact, dark grey shading suspected ~ 4:56:45

partial lunar eclipse

Steve D.

David and my first eclipse together

117249. Sunday, July 16/17/1600-1700 | 3-F | Jarnac | Mintaka /
Wendee, Steve / SS2:



7/16/00 at 4:15pm

The post Moon-Day
Sun

Steve D. Green

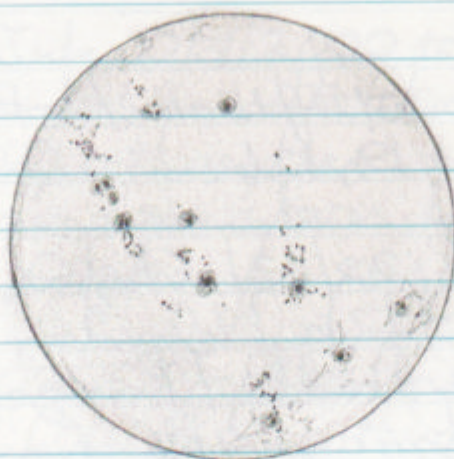
11725E2. 2000-2330/3-unFthon F/Jarnac | Minna + CCD/Steve:

David and I had a wonderful time struggling this beautiful clear night with a demonic instrument called a CCD whose sole purpose is to steal time away from the observer who would otherwise be looking out at wonder at the Heavens. After three fruitless hours of non-sensical computer manipulation, David closed down the system with a few choice words and we spent the next 15' looking out toward the South where Scorpius and Sagittarius begged for our attention. Silently but together we apologized by being in awe of their beauty. We were rewarded by receiving a sense of inner peace, our souls cleansed with starlight radiating from the heart of the sky all the way. Two friends looking out at the night together, gazing upon the part of nature that matters the most - the soul of the night. Thank you David and Wendee for a week of bliss. I will always treasure my moments with you.

Steve

7/16/00

11726S. Monday, July 17/18/1430-1530/3-F/Jarnac/Mintaka/
Steve/SS2: 17, 259.



7/17/2000
3:00 P.M.

Steve

11727EM2. 2300-0130/3-F/Jarnac/Minerva, Pegasus, Miranda
/Steve, Edgar Castro from Guatemala, Wendee/
Discussion about astronomy, M31.

11728S. Tuesday, July 18/19/3-F/Jarnac/Mintaka/-/
SS2: 19, 249.

11729E2. 2030-2115/10-F/Jarnac/Miranda/-/
CN3 30^mNW.

11730S. Wednesday, July 19/20/14-15:00/3-F/Jarnac/
Mintaka, Miranda/Dean Koenig/SS2: 18, ~~249~~
258.

11731E2. 2015-2130/2-F/Jarnac/Minerva/Wendee/
Attempt at CN3F pictures was foiled due to
clouds.

11732S. Friday, July 21/22/11-11:15/3-F/Jarnac/Mintaka/-/
SS2: 16, 196.

11733E2. 1900-2200/0-F/Jarmac/Wendee/-/Fantastic lightning storm with almost no rain but continuous lightning to S, E, then NW.

11734S. Sunday, July 23/24/15-16^h/3-F/Wendee/Jarmac/Mintaka/SS2: 19, 126.

*11735S. Saturday, July 22/23/ (before 11734S.)/0600-11:00/3-F/Burn Lake/Wendee, Laura + Craig, Barbara and Dudley/Ranger/We all looked at the Moon through Ranger. Then during my 5k run-walk I stopped and examined the gibbous Moon again. Later, asteroid presentation of Triathlon.

11736S2. @ 1330-1350/3-F/Clyde + Patsy's house/Wendee, Patsy/16" telescope.

11737E. Sunday, July 23/24/1930-2200/3-F/Jarmac/Mirerwa, Ophelia/Wendee/CN3F, partial set interrupted by clouds.

11738S. (before 11737) 1600-1700/3-F/Jarmac/Mintaka/Wendee/SS2.

11739S. Tuesday, July 24/25/26/1600-1630/3-F/Jarmac/Mintaka/-SS2: 13, 130.

11740M2. 0400-0430/3-F/Jarmac/Pegasus/-/CN3 10" E.

11735S. Saturday, July 22/23/ (before 11734S.)/0600-11:00/3-F/Burn Lake/Wendee, Laura + Craig, Barbara and Dudley/Ranger/We all looked at the Moon through Ranger. Then during my 5k run-walk I stopped and examined the gibbous Moon again. Later, asteroid presentation of Triathlon.

11741SE Friday, July 29/30/2000 1500 to 2100/3-F/Stella/fare!
partly cloudy, clear beginning of night.

*11742E. Saturday, July 30/31/2000 to 0000/0 to 3-F/Stella-
fare/-Wendee, Annette + Lenney, Gail + Marc, Joanie,
+ over 1000 others then home. /Rain, then
cloudy, then some stars by the time we got home.
Standing Ovation for my Shadowgram.

11743MP2. 0345-0355./2-F/Vermont, Mom + Dad's
house. CLOUDY so nothing.

11744S. Monday, Jul 31/1900-1920/3-F/American Airlines
over Tucson /-Wendee /Red sunset to west.

11745S. ~~Fri~~ Wednesday, Aug. 2/1600-1630/3-F/
Starizona/-Wendee, Dean, Larry /4" Celestron/
SS2: 7, 45.

11746EP2. 2200-2210/7-F/Jarmac /-/-/clear sky!

11747MB. 0330-0430/10 or 9 1/2/F/Jarmac /Minerwa/-/
EN3, 1^hE.

11748S. Thu August 3/11:00-13:30/10-F/Jarmac +
pool /Mintaka /Wendee /SS2: 7, 33.

11749S. Fri Aug 4/1400-1420/3-F/Jarmac /Mintaka/
-1SS2: 7, 67.

11750S. ^{Sun} Sat Aug 5/1500-1520/3-F/Jarmac /Mintaka/
-1SS2: 9, 74.

11751S. Monday, August 6⁷ / 1230-1300 / 3-F / Jarmac /
Mintaka / SS2: 10, 71.

11752S. Tuesday, August 8 / 1530-1730 / 10-F / Jarmac /
Mintaka, Miranda / Deant + Steven Koenig, Wendee,
SS2: 9, 96. Newly rechromized + ~~new~~ mirror
+ new secondary installed.

*11753M2. 0330-0500 / 10-F / Jarmac / Miranda / CN3
0^h50^mE. Independent discovery of 2P/Encke's
Comet in Gemini. Comet moving rapidly SE.

11754S. Wednesday, Aug 9 / 1400-1430 / 3-F / Jarmac /
Mintaka / Wendee / SS2: 10, 69.

11755M2. 20345-0440 / 2-3-F / Jarmac. / Miranda / - /
CN3 0^h40^mE, NE. Jupiter + Saturn.

11756S. Thursday, Aug 10 / 1400-1500 / 3-F / Jarmac / Wendee /
Mintaka / - / SS2: 11, 64.

11757SE Fri, Aug. 11 / 1900-1915 / 2-F / Jarmac / Blux /
Wendee + Odie / SS2: 2, 2 - Sun just above
horizon and visible for first time all day.
Then, sunset + green flash.

11758EM. (should be after 7237E, Vol. 15) / Sept. 19th / 20, 1986 /
Clyde / 9-inch at 250x / Jupiter.

*11759M3. Saturday morning, Aug 11 / (12), 2000 / 0345 -
0435 / 3-2-F / Jarmac / Wendee / Perseids -

I saw 9 meteors - 8 of them Perseids - before going inside because of clouds. But shortly thereafter, Wendee and I went outdoors for less than 5 minutes - and within 2 minutes we saw an additional 4 in different directions from the radiant. Total: 13 Meteors.

11760S. Saturday, August 11/12/1700-1730/3-F/Jarnac/Mintaka/Wendee/SS2: 11.69.

11761E2. 2000-2100/2-F/Jarnac/Wendee/stars.

11762E2. before 11759. /Friday Aug 10/11/2030-2100/2-F/Jarnac/Echo/-/Moon.

11763MB. Sat. 11/12/0415-0445/10-F/Jarnac/Miranda/-/CN3 0^h 20^m.

11764S. Sunday, August 13/13/1330-1430/3-F/Jarnac/Mintaka/-/SS2: 11.101.

11765S. Monday, August 13/14/1330-1350-13-F/Jarnac/Mintaka/-/SS2: 10.80.

11766E2. 2000-2015/3-F/Jarnac/Wendee/Obadiah/-Moon.

11767S. Tuesday, Aug 14/15/1615-1630/10-3-F/Stavizona/Scott, Larry Dean, Tim, Wendee/4"rd/SS2: 10.70.

- 11768E2. 2330-2345/2-F/Jarnac/Wendee/new 10x25
binoculars, Obadiah/Moon.
- 11769S. ¹²⁴⁰⁻¹³¹⁰ Wednesday, August 16/17/~~1340-13410/103-F/~~
Jarnac/Mintaka/-/SS2: 11, 131.
- 11770E2. 2000-2030/3-F/Jarnac/Miranda/-/
SSCN3: 0h 15m West.
- 11771S. Thursday, August 17/18/1230-1300/3-F/Jarnac/
Mintaka/-/SS2: 10, 88.
- 11771S. Friday, August 18/19/1100-1310/7-3-F/Rita
Ranch' Pool, then Jarnac/Wendee/Mintaka/
SS2: 10, 75?.
- 11772S2. 1700-1715/3-F/Sturizona/Wendee,
Dean, Larry/-/SS2 only for 2 prominences
through Dean's telescope.
- 11773E3. 2040-2130/*3-4-F/Sturizona/Wendee,
Dean, Larry, others for 10x30 Image
Stabilizer binoculars - ket.
- 11774E4. 2330-0000/3-F/Jarnac/Wendee/10x30
Image Stabilizer binoculars/Moon.
- 11775S. Sat, Aug 19/20/1700-1230/3-F/Jarnac/
Mintaka/-/SS2: 6, 46.
- 11776E2. 1900-2000/3-F/Jarnac/TL Reflex camera)

Wendee pictures of lightning to NW.

117778E3. 2200-2230int / 7-Fm / Jarnac / Wendee / Moon

117779S. Sunday, Aug 20/21/1445-1500 / 3-F / Jarnac /
clouding over rapidly but still perfect
around Sun / Mintaka 1- / SS2: 6; 36.

117780E2. ~~At~~ 2000-2315 / 2-F / Jarnac / Wendee,
Carolyn / Esther, Ophelia 2 / focus test.

117781E. Monday, August 21/22/2030-2330 / 3-F /
Jarnac / Wendee + Carolyn / - Minerva -
Ophelia 1 / CN3F: 12 pictures.

117782E Tuesday, August 22/23/2000-2200int / 1-F /
Jarnac / checking weather with Wendee +
Carolyn.

117783E. Wednesday, Aug 23/24/1900-2200 / 3-0-F /
Jarnac / Minerva / Sandy Wallach, Joe
Kirschvink and friends/family, Wendee /
Milky Way, Thunderstorm.

117784E2 Thursday August 24/25/2100-2300 / 3-F /
Jarnac / Wendee / Minerva - Ophelia 1 / - /
CN3F5 pictures.

Thursday, August 24/25
117785S. Friday, Aug 25/26/1300-1330 / 3-F /
Jarnac / Mintaka 1- / SS2; 8, 57. ?

orderie 783, 785, 784, 787, 789, 786, 788, 790

Thurs - Friday

11786E2. Friday Aug 25/26/1900-1930/0-F/Jarnac
Yashica / Wendee Light ring photos to NW

11787M3 (before 11786) / Friday morning 10:30-0445
~~3-F~~ / Jarnac / Miranda, no sleep. / - / CN 3
1h 30m East.

11788S. Saturday August 26/27/1200-1300/2-F/
Jarnac / Mintaka / Clouds prevented a
reading, but we did walk to see Mr. Big
our flowering barrel cactus.

11789S Friday August 25/26/1745-1800/2-F/Jarnac/
Obadiah / - / SS2: 7.32..

11790S Sunday August 27/28/1120-1140~ / 3-F/Jarnac
Mintaka / - / 8.65 for SS2.

11791E2. 2100-2230int 10-F/Jarnac / - / - / would
have been our all-night Starizona session

11792S. Monday August 28/29/1300-1330/~~10~~ 2-F/
Jarnac / Mintaka / - / SS2: 10.30. Sun
through clouds.

11793E. Tuesday, August 29/30/2000-2200/10-3-
2-F/Jarnac / Minerua - Ophelia II, / Wendee
Just 3 pictures before clouds came
in.

11794S. Wednesday, Aug 30/31/1715-1735/3-F/

Jarnac/Mintaka/-/SS2: 9, exactly 100 spots.

11795E2. 1930-2230/10-F/Jarnac/-Miranda-Ophelia/
Wendee/CN3F completion of set from
last night.

11796M3. 0345-0500/10-F/Jarnac/Miranda/-/CN3
1h E.

11797S. Thursday, August 31/32/1230-1300/3-F/
Jarnac/Mintaka/-/SS2: 13, 149.

11798E2. 1950-2200/3-F/Jarnac/Miranda/-/
CN3 15min W.

11799M3. 0330-0500/3-F/Jarnac/Miranda/-/
CN3 1h 15m E. New Catalogue object
NS 159. or NGC 2374 at $\sim 72^\circ$ and $-13^\circ 17'$.
During the session. Dad's ^{little} radio broad-
cast two advertisements for Let's Talk
Stars, talking of my discovery of S-L9 and
20 other comets, my Emmy, + my new
radio show. As I listened and comet
hunted, I thought Dad would have been
proud to hear this.

11800S. Friday, September 1/2. 1400-1420/3-F/
Jarnac/Mintaka/-/SS2: 12, 82.

11801S. ~~Sat~~ Wednesday, Sept. 6/7/1700-1730/3-F/
Jarnac/Mintaka/Wendee SS2: 5, 54.

11802MS. September 7/8/1700-1720[?]/3-F/Jarnac/
Mintaka /-/SS2: 8, 63.

*11803M2. 6/7 / 0400-0500/10-F/Jarnac/(before 11802)
Jarnac / Munira with her new tube /-/CN3
35^m East.

11804M2. 7/8/0350-0500/10-F/Jarnac/Miranda /-/
CN3 ~~4~~ East. 1 hr.

11805SE ? Friday, Sept 8/1800-~~18~~¹⁹15¹⁹/12-F/Jarnac/Wendee/
~~4~~²SS Pumpkin/SS2: 1, 8. Moon later through Obediah.

11806M2 0350-0500/3-F/Jarnac/Miranda, Pegasus/
-/CN3 35^m ~~to~~ East. Pegasus excellent
with 31mm Nagler eyepiece.

11807S. Saturday, Sept. 9, ~~18~~¹⁴14-1430^B/3-F/Jarnac/
Mintaka/Wendee/-SS2: 1, 13.

11808E2. 2100-2345/3-0-F/Jarnac/~~Ant~~ Miranda/
Wendee, Anastasia, MDA group /Moon,
M13, then a very big thunderstorm followed
by clearing, then Moon, Vega, M57, M31,
Saturn, and Jupiter. Enjoyable session.

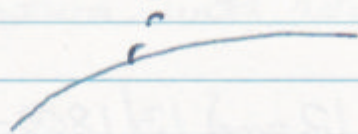
11809S. Sunday, Sept 10/11/1800-1815/3-F/Jarnac/
~~Mintaka~~ Pumpkin/-SS2: 0 spots!

11810M2. ~~18~~²0350-500/10-F/Jarnac/Miranda /-/
CN3 110^m E.

- 11811S. Monday, Sept 11/12/1300-1330/10-F/Jarnac /
Mintaka /- /SS2: 1, 2.
- 11812E2. 1840-³¹1900/3-F/^{underwoods, then Jarnac}Jarnac /- /Wendee + the Underwoods /
The Moon.
- 11813SE Tuesday, Sept. 12 and 13/1800-1830/10-7-F/Jarnac /
Mira Pumpkin /- /Wendee /SS2: 1, 2.
- 11814S. 13/14 1800-1815/10-F/ Jarnac / Mira Pumpkin /- /Wendee /
SS2: 5, 20.
- 11815E2. 2310-2330/7-Fm/Jarnac / Wendee / Obadiah /-
Moon, Jupiter, Saturn. Harvest Moon.
- 11816S. ~~Sunday~~ Thursday, Sept 13/14/15/7-F/Jarnac/12:00-12:30/
Mintaka /- /SS2: 5, 62.
- 11817E2. 2240-2300/7-Fm/Jarnac table / Mira Pumpkin /
Wendee / Moon. - Harvest Moon.
- 11818S. Friday, Sept 15/16/ 10:30-13:40 int /10-F/
Clemente Pool, and then Jarnac / Wendee /
Mintaka later /SS2: 5, 62 again. Earlier CN5 Sun
Vicinity.
- 11819E2. 1920-2005/10-7-Fm/Jarnac / Miranda /- /Wen-
dee / CN3 30m W. Moonrise.
- 118120S. Sat Sept 16/17/1750-1810/3-F/Jarnac /
Mira Pumpkin /- /Wendee /SS2: 5, 44.

11821E2 1920-2015/2-F/Jarnae/-/Wendee/skychecks.

11822S. Sunday, Sept. 17/18, 2000./1300-1330/10-F/
Starizona/6"refractor/Dawn, Wendee/



The Olympic
Gymnast Jumper!

11823S2. 1730-1950/10-3-F/Jarnae/Pollux/-Wendee,
SS2: 5, 44? Sunset + green flash.

11824E2. 1900-2345/10-7F/Jarnae/Minerva-
Ophelia//Wendee/CN3F 8 pictures.
Also Echo, on Moon.

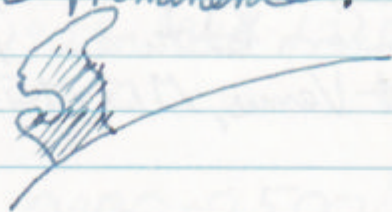
11825SE Monday, September 18/19/1830-2300/10-7F/
Jarnae./Wendee, Carolyn/CN3F 12 pictures.
^{Minerva - Sep 1}
^{Jupiter Saturn}

11826SE Tuesday, Sept 19/20, 2000/10-7F/Jarnae/
Echo, Minerva-Ophelia//Wendee, Carolyn,
Jeff Wynn/SS2: 8, 69. Sunset and Green
flash. CN3F 16 pictures, then Saturn, Jupiter,
Moon. 1815-2300.

11827SE Wednesday, Sept 20/21/1800-0000/10-F/Jarnae/
Carolyn, Wendee/Echo, Minerva-Ophelia/Green
flash.
CN3F 16 pictures.

11828S. Thursday, Wed 20/21 before 11827. ~~18~~ 1100-1330/
3-F/Clements Pool, then Jarnae/Echo at Jarnae
SS2: 9, 147.

*11829S. Thursday, September 20/22/1300-1430/3-F/
Starizona / Wendee, Jeff Wynn, Dean/
Sun Prominence: Video made of it.



11830S2. 1700-1730/3-F/ Jarnac / Echo / Wendee / SS2: 10, 162.

11831E3 1930-2045/3-F/ Jarnac / Miranda / - C N3 35^m W.

*11832S. Friday, September 22/23, 2000/16:20-17:40/10-F/
Jarnac / Miranda, Mintaka / Wendee. /
Installation of Eneke's Comet Plaque on
Miranda. cf #1753M2.
SS2: 6, 184. Also pictures taken of
gigantic spot.

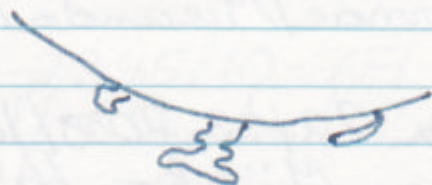
11833E2. 1930-2300/10-3-F/ Jarnac / Miranda,
Minerva - Ophelia / Wendee / \$ CN3F 4 pics
@ 8 and 12 minutes each. CN3 30 min. W.
Area 24.

11834S. Saturday, September 23/24/1200-1145-1230/
3-F/ Jarnac / Mintaka, Echo / Wendee /
SS2: 9, 204. Very large group at center of
Sun. Very nice! pictures taken.

11835S2. 1425-1508/3-F/ Jarnac / Mintaka / - / SS2:
pictures of sunspot group.

11836^E3. Saturday 23/24/1800-2308/10-F/Jarnac/
Carolyn Mayberry & family, Wendee/Miranda,
Ophelia. Photos of setting Sun ^{over Kitt Peak} on special
film for next week's Sun lecture. Then we
looked at the planet Venus, M13, M57,
Milky Way, M31.

11837^S Sunday 24/25/1300-1430/10-F/Staryzona/-Dean,
Wendee/ 6" refractor. Sun prominences.



11838^{SA}N 1745-0535/10-F/Jarnac/Minerva - Ophelia,
Mintaka, Miranda, other telescopes / Wendee,
Scott + Ken (from Staryzona, + Virginia W., +
Chapman from KTKT / CN3F 6 pairs, 12 films.
CN3 3^h30^m E. Earlier, SS2 with Echo:
9, 132, plus sunset over Kitt Peak pictures.

11839^S Monday 25/26/1230-1308/10-3-F/Jarnac/
Mintaka / - / SS2: 8, 94.

11840^{SE} 1800-1825/3-F/Jarnac/Ophelia mt / - /
pic of Sunset over Kitt Peak.

11841SM Tuesday 26/27/0430-0515/10-F/Jarnac/
Miranda / - / CN3 0^h35^m E.

118425. Wednesday, Sept 27/28/1630-1700/3-F/Jarvac/
Echo/-/SS2:12, 115.
- 11843ER. 1900-1945/3-F/Jarvac/-/Wendee/weather
check.
- 11844M.3. 0400-0500/10-F/Jarvac/Miranda/-/
CN3 1^h10^m E.
- 11845S. Thursday, September 28/29/1800-1805/10³-F/
Jarvac/Echo/Wendee/GS2:
- 11846ER. 2330-0100 int/3-F/Jarvac/-/-/weather check.
- 11847S. Friday, Sept 29/30/0750-0805/3-F/Jarvac/
Echo/Wendee/SS2:
- 11848ER. 2200-0130 EDT/10-F/Hidden the Hollow
Star Party/Mira - Pumpkin, Ydscope/David
Hartsel, Joey, family, Bob Summerfield, Peter
Jedlicka, Tom Arlinas, others, Brent Archind/
& CN3 30^m S, W. Saturn + Veil + M27 thru
Ydscope. Beautiful Night.
- 11849E. Saturday, Sept 30/31/2100 to 2300/3-F/
Jarvac/Hidden Hollow/Dave Hartsel,
Peter, & Brent, Tom, others/CN3, 5m. M13.
Mira - Pumpkin.
- 11850M Monday, October 2/3/0100-0400/10-F/Jarvac/
Miranda/-/CN3 0^h30^m E.

11851M. Tuesday, October 3/4/0430-0515/3-F/Jarnac/
Miranda/CN3 35^mE.

11852E. Saturday, October 7/8/2000-2200/3-F/Jarnac/
The Biosphere 2/Several telescopes & a pair of
large binoculars/Wendee + others/
the great conjunction of Jupiter + Saturn.

11853M2. 0400-0520/10-F/Jarnac/Miranda/-/CN3
1^h10^mE. Session held Fri/Sat Oct 6.

11854SP ^{Sat}
Sunday Oct 7/8/9. 1700-1710/3-F/Jarnac/Echo/
-Wendee/SS2: 4, 26.

11855ER. Sunday, Oct. 8/9/2100-2115/3-F/Or Chadash/
-Wendee/Gibbous Moon, Kol Neidre.

11856S. & Monday, Oct 9/10/1200-1215/3-F/Jarnac/
-Echo P/SS2/4, 15.

11857E2. 1840-1855/3-F/Jar Or Chadash/-/Wendee, the
Marka's/Yom Kippur Moon., 1 day late though.

11858S. Tues, Oct 10/11/1630-1650/3-F/Jarnac/
Echo/-/SS2: 4, 26.

11859E ^{Friday}
Saturday, October 14/15/1900-2100int/3-F/
Airplane over Chicago, then Chicago/-/Full
Moon over clouds, cumulus fractus layer.
Beautiful view of rising Moon

- 11860S. Saturday, October 14/15/2100-2300/3-1-F/
Adler Planetarium and vicinity / Roy Kadlin
and / Moon, Saturn, Jupiter, and
fireworks.
- 11861E. Sunday, October 15/16/1900-2000/10-F/
Jarmac / Miranda, Wendea / CN3 0^h50^m
Jim Reston came later. View through
Galileo telescope at Moon, Jupiter, + Saturn
- 11862S. Monday, Oct 16/17/1730-1745/10-F/Jarmac/
Echo 1 - SS2:4:
- 11863E2. 1850-2100/10-F/Jarmac/Minerva - Ophelia/
Wendea / CN3EF - 6 12-minute pier.
- 11864SP Friday, Oct 20/21/ 730-740/3-F/Jarmac/
SS2: with Echo:
- 11865E2 2200-2300/3-F/ Yucca Valley / Mira
Pumpkin / - Binoculars / Tim, Carolyn /
Jupiter, Saturn.
- 11866E Saturday, October 21/22/2230-2330/3-2-F/
Yucca Valley / Mira Pumpkin, binocs / Tim,
Carolyn, others / Jupiter, Saturn.
- 11867S. Mon 23/24/10-11/1-F/Jarmac / planting Joshua trees.
- 11867S. Tuesday, Oct 24/25/1600-1615/10-F/Jarmac/
Mintaka / - Wendea / SS2: 6,
- 11869E2 1900-2200/10-F/Jarmac / Minerva - Ophelia

Wendee / CN3F 10 pice.

11870M3. 1200-1215 / #10-F / Jarmac / Obadiah / - /
M42.

11871E Mon 23/24 (after 1186D) / 1830-1900 / 2-F / Jarmac,
Obadiah / Wendee / Venus.

11872E^M Wednesday, October 25/26 / 2350-0030 /
9-F / NASA Observatory / Mark Disko /
M31, 33.

11873E Thursday, October 26/27 / 2200-2345 /
3-F / NASA Observatory / Mark Disko,
others / - Jupiter and Saturn.

11874S. Wednesday, Thursday, Nov-2 / 1500-1545 /
3-F / Windsor Castle, England / Wendee
David Taylor / - Crescent Moon over
Castle.

11875SE Friday, November 3 / 1600-1730 / 10-F /
~~Trip~~ (Chardly!) / Caesarea, Israel / Sunset
behind the Roman Aqueduct. Wendee, Glan

11876S. Saturday, November 4 / 1500-1700 / 10-F / Wise Obs. +
Nitzpe Ramon Crater, Israel / Wendee, Glan /
- Beautiful / telescope at the Wise
Observatory.

11877E2. 2100-2300 Israel time / 7-F / Hyatt Hotel, Dead

Sea/Wende, Ilan Manulis/Obadiah/
nice observing of Jupiter + Saturn. And
lovely conversation about life on other
worlds. Ilan thinks it is rare; Wende
thinks life is common.

*** 11878 SE Sunday November 5, 2000 / 1700-2300 /
7-Fm / Masada / Wende, Ilan, and Eitan, +
one other. / That's all the people up on
Masada this evening. / Obadiah, 3 cameras /
We began with a private seminar on
the history of this magical place. Then
Eitan left and we presented Ilan
with his asteroid citation, a special
event on a very special place. He read
the citation by moonlight. Then I
did tefillin service; we were in the
synagogue. Then many pictures
of the great conjunction of Jupiter and
Saturn over the Synagogue + over the tower,
then Orion rising over the Synagogue,
Moon over the place, + finally Moon
through a Byzantine window. This was
a wonderful, magical observing session.

11879 S. Monday, November 6. ~1500-1530 / 10-F /
Dead Sea / Obadiah / - / SS2: 2; 2. by
projection.

11880 E2. 1900-2200 / 7-Fm / In Hyatt hotel, Dead Sea /
Wende / on balcony + walking; very nice.

11881E. Tuesday, November 7/2030-2245/7-Fm/
Israeli Astronomical Association Observa-
tory - Wendee, Glen, others/16" Meade LX
200

11882E Wednesday, November 8/2200-2230/3-F/
Jarnac at last. Home/Wendee.

11883S. Saturday, November 11/11am-1300/3-F/
Jarnac & Munitaka / SS2.

11884M. After 1883. Nov 8/9/0450-0540/10-F/
Jarnac/Miranda - / CN3 \approx 45 minutes East/
Also CN3e TV Gr (14.6 with Pegasus +
Miranda.

*11885E2. Saturday, November 11/12/1800-0000/10-3-F/
Jarnac / Rabbi Louchheim + Wendee, Dean
Congregation Or Chadash, Bert + Janet Stevens/
Havdalah Service and observing session.
Almost every one had at least a look at
the Moon. ☉

11886E. Monday, November 13/14/1830-1830/10-F/Jarnac/
- / Miranda - / CN3 25^m West.

11887E Wednesday, November 15/16/1830-2050/10-3-F/
Jarnac / Carolyn Shoemaker, Wendee / Munitaka
CN3F, 10 pick. M33 naked eye clearly ^{optics}

11889S. Thursday, November 16/17/1430-1450/7-F/

11889E2. Swimming Pool / Carolyn + Wendee / CN5, Sun
Vicinity.

→ 1815 to 2230 / 10⁺-F / Jarnac / Minerva - Ophelia /
Carolyn, Wendee / CN3F 20 pics - 2 sets. M33 NE.

11890M3. 0000-0230 / 7-fm / Jarnac / Wendee + Carolyn /
- 1 Leonids 16 meteors. (Yashica
Camera)

11891S. Friday, November 17 / 18 / 10-F / Jarnac / Echo / SS2.

11892Em2 1815-0120 / ~~10~~³-F, then 7-Fm / Jarnac / Minerva -
Ophelia 2, Camera, 1 Wendee + Carolyn / CN3F
2 ~~12~~ pics, 1 set. Leonid Meteors.

11893E Saturday, November 18 / 19 / 1815-2200 / 10⁺-F / Jarnac /
Wendee + Carolyn / Minerva - Ophelia / CN3F
12 pics, 1 set. M33 naked eye clearly

11894E Sunday, November 19 / 20 / 1815-2030 / 10⁺-F /
Jarnac / Minerva - Ophelia / Wendee / CN3F
8 pics, 1 set M33 naked eye clearly + distinctly.

11895M3 M. Tuesday /
Wednesday, November 21 / 22 / 0430-0545 / 10-F /
Jarnac / Miranda / - / CN3 0h45m E. NGC
5466. a diffuse globular cluster. CN3e TV / Gw / 14.6

11896S. Wednesday, November 22 / 23 / 1500-1730 / 10-F /
Jarnac, Mark, Pamette, Summer, Wendee,
Mom + Dad. Mark + I moved Ophelia to
SW corner of obs. and returned Esther to
altazimuth status. SS2 w/ Echo:

11897E. 2100-2300/10+-F/Jarnac/Esther, Minerva/
Mark/Jupiter, Saturn, M42, M31, Sculptor
NGC 253. Beautiful night.

11898S. Thanksgiving Day, Nov-23/24/1300-1400/10-F/
Jarnac/Mintaka/Dad, Michael Mage/SS2:554.
Large group near center.

11899M2 0440-0550/10+-F/Jarnac/Miranda/-/CN3 0^h50^m
E. CN3e TV Crv C14.6, Pegasus.

11900E Friday, November 24/25/2245-0000/10-F/Jarnac/Mark
+ Rannette, Wendee/Esther^{Mum}, Minerva/Jupiter, Saturn,
M45, M42, NGC 253, M31. Mark found γ with
Mini - Rannette found θ Pleiades. Very good
session.

11901~~1~~2 0505 to 0545/10-F/Jarnac/Miranda/-/
CN3 0^h35^m E. CN3e TV Crv C14.6, Pegasus.

11902S. Saturday, November 25/26/10-F/Jarnac/Mini, Suppig,
Pegasus, Esther, Mintaka/- Photos of Summer/
Wendee, Mark, Rannette, Summer. Photography
session 11:30-3:00. also S. walk.

11903E2. 1900-2200^{int}/10-F/Drive home + Jarnac/Mark,
Rannette, Summer/Venus. Summer points
out the stars, and Jupiter "big star."

*11904MB 0315-0630/10-F (windy) Jarnac (Miranda)
-Wendee, Summer, Rannette, Mark, Mom

Bon Voyage to our children - and CN3 2^h E. CN3
TV Cw C14.6

*11905SE Sunday, November 26/27/1400-2000/10-F/Jarnac/
Rob Cadoff with Cindy, Gemma, Danny; and Doug,
Tessa, and Nancy Fish; and Wendee, Mont & Dad,
Belle & Ralph/Mimi, Echo, Pegasus, Mirerwa,
Miranda, Pallax, Castor, Mira Pumpkin, Pictures
for Universe for Children book. Later, with
Mirerwa + Miranda - CN3 0^h40^m west.

*11906M2. 0415-0610/10-F/Jarnac/Beautiful Morning/
Miranda/-/CN3 1^h20^m SE. Independent
Discovery of Comet McNaught-Hartley. CN3 TV
Cw C14.6

11907S. Monday, November 27/1700-1750/~~#~~3-F/Jarnac
SS2 with Echo/-/SS2:5,52.

11908E2 1840-1950/^{into}~~10~~-F/Jarnac/~~Mirerwa, Miranda/-/~~
~~CN3 40 minutes to star.~~ a look at the sky...
Wendee, Aunt Belle etc. saw some stars as we left.

11909M3 0500-0550/³~~10~~-F/Jarnac/Miranda/-/CN3
0^h35^m E. CN3 TV Cw C14.6

11910S. Tues Nov 28/29, 2000/10-F/Jarnac/1100-1115/
10-F/Jarnac/Mintaka/SS2:6,105.

11911E2. 1815-2000/10-F/Jarnac/moving Pallax, Castor,
Mimi, Mira, Obadiah, + Capella to their new
shelf in the observatory/-/Miranda/-/CN3
1^h00^m W. A very nice, calm, clear night.
Beautiful evening.

11912M3. 0415-0600/10-F/Jarmac/Miranda/-/CN3
1h15m E. CN3e TV Cr-14.6
Nov 29/30/2000.

11912S. 1630-1650~/10-F/Jarmac/Echo/-/SS2: 6,72.

*11913E2. 1750-1840/10-F/Jarmac/Echo/-/Wendee/\$ Moon
~2° from Venus.

11915E3. 2150-2210/10-F/Jarmac/Echo/Wendee/2+
2y @: with interesting placement of
moons.

11916M4 0430-0600/10-F/Jarmac/Miranda/-/CN3
0h50m E. CN3e with Pegasus TV Cr-14.6.

11917M. Thurs Nov 30/31/0500-0600/10-F/Jarmac/Pegasus,
Miranda/-/CN3 0h35m E. CN3e TV Cr-14.6

11918S. ^{December 1/2} Friday November 31/32/16:00~16:30/10-3-P/
Jarmac/Echo/-/SS2: 9,65.

11919S. Saturday, December 2/3/14:45-15:00/2-F/
Jarmac/Echo/-/SS2: 7,33.

11920E2. 2000-20¹⁵35/2-F/Biosphere/-/Wendee.

11921E3. 2100-2115/10-2-F/Starizona/8" Celestron/Dean/Ph:
Deel - Rigel.

11922M4. 0500-0605/10-F/Jarmac/Miranda/-/
• CN3e w/ Pegasus, 14.6. CN3 1hr E.

11923S. Sunday, December 3/4/1600-1630/10-F/Jarnac/
Lyn + Cindy Underwood, Wendee / SS2: 6, 38.

11924E2 10:00-10:15pm/10-f/Jarnac/. gnd obs.

11925M2. 0500-0610/10-F/Jarnac/10-F/Jarnac/
Miranda/-/CN3e with Pegasus, TVCw-C14.8.
CN3 1^h E.

11926SE Monday, 4/5/1730-1750/3-f/Jarnac/Echo/4
Wendee, Tom Glinoe / SS2: 3, 5.

11927E2 1930-2200 13-f/Jarnac/Wendee, Tom Glinoe/
Mintaka, Miranda. Jupiter, Saturn, Moon.

11928E Tuesday, December 5/6, 2000/1830-1910/7-fm/
Jarnac. /Capella /- /CN3 5m W.

*11929M2. 0130-0615/⁷⁻³10-f/Jarnac/Ether, Minerva-
Ophelia, Miranda/-/Aligning of Ether &
Minerva-Ophelia, unsuccessful search for
Hydratio but found NAC, something
like it. Also, CN3 3^h 10^m E, and in
Hydra. Also, CN3e, TVCw, C14.8.

11930S. Thursday/
Friday, December 7/8/12:00-1430 vit/10-F/Jarnac,
earlier pool/Echo/Wendee/SS2, 4, 29. CN5 S/Vcm.

11931M. Fri Dec 8/9/0500-0615/10-3-f/Jarnac/Miranda/
- /CN3e w/ Pegasus, TVCw-C14.6. CN3 1^h E.

Aligning on pole for Minerva.

- 11941S Wed Dec 20/Noon-1400/10-F/Jarnac/Peter,
Wendee, Dianne / SS2: 9, 77 with Mintaka.
- 11942S. Thurs Dec 21/1600-1710/10-F/Jarnac/
Peter, Wendee, Mintaka / SS2: 9, 68. Also
delivery of eclipse invitation to neighbor
with bright light.
- 11943E2M 22:10-0115/10-F/Jarnac/Peter / Urid Meteor. 16 seen.
(at least by me) Beautiful night.
- *11944S. ~~Monday, December 25/~~ Saturday, December 23/
10-3-F/Sturizona / Peter, Wendee / Sun SS2: 5, 44.
Also several prominences 16" refractor and 4" refl.
- *11945S Monday, December 25/08:15-10:55/3-F but no
clouds where Sun was / Echo, Castor; Mintaka/
Wendee, Peter + Dianne, Neighbors / Partial
Eclipse of the Sun. SS2: 6, ~45. Moon's
mountained edge striking against the Sun
covered with spots.
- 11946S. (before 11944)/1500-1700/Friday, Dec 22/3-F/
S. walk + Jarnac / Wendee, Odie, Peter + Dianne.
Multiple Solar halo - Later SS2: 5, ~3020.
- Sun
- 11947AE3 Mon 25/26/1900-2100/10-F/Jarnac / Minerva
Ophelia / Wendee / CN3F 8 pics.

Aligning on pole for Minerva.

11941S Wed Dec 20/Noon-1400/10-F/Jarnac/Peter,
Wendee, Dianne/SS2: 9, 77 with Mintaka.

11942S. Thuro Dec 21/1600-1710/10-F/Jarnac/
Peter, Wendee, Mintaka/SS2: 9, 68. Also
delivery of eclipse invitation to neighbor
with bright light.

11943E2M 22:10-0115/10-F/Jarnac/Peter/Ursid Meteors. 16 seen.
(at least by me.) Beautiful night.

*11944S. ~~Monday, December 25~~/Saturday, December 23/
10-3-F/Starizona/Peter, Wendee/Sun SS2: 5, 44.
Also several prominences 16" refractor and 4" refl.

*11945S Monday, December 25/08:15-10:55/3-F but no
clouds where Sun was/Echo, Castor, Mintaka/
Wendee, Peter + Dianne, Neighbors / Partial
Eclipse of the Sun. SS2: 6, ~45. Moon's
mountained edge striking against the Sun
covered with spots.

11946S. (before 11944)/1500-1700/Friday, Dec 22/3-F/
S. walk + Jarnac/Wendee, Odie, Peter + Dianne/
Multiple Solar halo. Later SS2: 5, ~3020.

• Sun

11947E3 Mon 25/26/1900-2100/10-F/Jarnac/Minerva
Ophelia/Wendee/CV3F 8 pics.

- 11948M2. 0445-0615 / 10+ - F / Jarnac / Miranda / -
 CN3 1^h 15^m E. CN3e with Pegasus TV Gr (14.6)
- 11949S. Tuesday, December 26 / 1715-1720 / 10 - F / Jarnac /
 Echo / - / SS2: ~30? spots.
- 11950E. Wednesday, December 27 / 28 / 2000-2230 /
 10 - F / Jarnac / Minerva - Ophelia, Miranda /
 Wendee, Peter + Dianna / Peter found several
 NGCs with Miranda:
 Wendee and I took 8 pics with Minerva - Ophelia for
 CN3F.
- 11951M2. 0445-0630 / 10+ - F / Jarnac / Miranda, Pegasus /
 Peter / CN3 1^h 10^m ± East. CN3e TV Gr (14.6).
 Nice session with Peter.
- *11952S Thursday, December 28 / 29 / 1300-1700 /
 10 - F / Jarnac / Wendee, Peter, Eitan Weinrich
 + Nina Purmer, Bill Hartmann, Carol Nease,
 Gil Esquivardo / Echo, Minerva both with
 Ophelia and on LX 200 mount, Miranda.
 Is this the evolution of the PST-SL
 Comatograph? SS2: 05, ~29.
- 11953E2. 2100-2230 / 10 - F / Jarnac / Esther +
 Minerva / Wendee / completed the remounting
 that Peter and I started at the end
 of last session.
- 11954E. Friday, December 29 / 30 / Happy Birthday

to Wendee! / 2100-2300 / 10-F / Jarnac / -Wendee /
Alignment of Minerva on the pole. Jim Scotti
discovered a comet tonight.

11955 M3 (before 11954) / 0530-0615 / 10-F / Jarnac / - /
Pegasus, Miranda / CN3e TVCw (14.6,
CN3 25^m E.

11956 M2. 0450-0630 / 10-F / Jarnac / - Jim Scotti over
phone / Pegasus, ^{Capella} Miranda / CN3e TVCw (14.6,
CN3 1^h 10^m E, and betw. α + β Geminaurum.

11957 S. Saturday, Dec 30 / 31 / 1330-1630 / 3-F /
Jarnac / Mintaka, Minerva / Wendee /
SS2: 5, 122.

11958 E2.M 1920-0100 / 3-F / Jarnac / Minerva /
Carol Neese, Gil Esquedero, Wendee / CN3 Ftg /
Installation of ST8 (Santa Barbara IG)
CCD chip 1x1.5K. The evening began with
the one problem I had feared; that we
wouldn't be able to reach focus. But
then I pushed the mirror forward with the
alignment screws. That worked! The
rest of the evening was flawless. M3 /
in 5sec, Comet Linear M67!

11959 S M3. 0545-0615 / 3-F / Jarnac / Pegasus, Miranda /
- / CN3e TVCw (14.6, CN3 15^m E.

11960 S December 31 / 1100-1115 / 10-F / Jarnac / Mintaka / -
Removal of Minerva for collimation / SS2: 8, -79.

2001

11961ER. December 31/2330-0115/3-F/Jarnae/Miranda/
Peter + Dianne, Robert + Vicky, Michael + Kandra,
Wendee/M42, Jupiter, Saturn.

11962S. January 01/01/01/1400-1530/3-F/Jarnae/
Peter, Dianne, Wendee/Mintaka/Halo around
Sun - Double halo $22^{\circ} + 46^{\circ}$, Sundog &
hint of circumzenithal arc, and hint of
iridescent clouds 3-10° from Sun + lower tangent
arc.
SS2: 5, 79.

*11963E2. January 01/01/01/2300-0230/3-F/Jarnae/Peter,
Gil Esquedero/Minerva + CCD/200th anniversary
of the discovery of Ceres. Test on CN35g, Discovery
of ghost of Castor in Castor - Pollux fields -
exciting for a while.

11964S January 6/1600-1630/3-F/Quebec/on via train/
Beautiful Sunset with refl. in St Lawrence River,
and Moon, gibbous phase. Sky cleared,
then clouded.

11965S. January 7/1500-1530/3-F/aboard via train
east of Montreal/-1-1/Filtered Sun - no naked
eye spots.

11966E2 160-1630/3-F/Montreal/-1-mother/moon.

11967S. Tuesday, January 9/1100-11:15 Montreal Time/
2-f/35^{mm} Patwater/Obadiah/-1-SS2: 2, ~8 -
through haze + unmounted scope.

* 11968SE2. January 9/10, 2001/1600 to 1730/0-F/3 Montreal -
Atwater to Sharpbrooke walk, then to Mt Royal
NE Lookout, then back to Atwater / Obadiah /
Constantine. / Attempt to see Partial Lunar
Eclipse. Completely clouded out by clouds +
snow. / All day I studied the weather but
could find no place to enjoy clearings. The
N, E & W were all cloudy, and Gerry,
driving V through the Adirondacks,
was under increasing clouds. So we
decided not to travel. We walked first
through the snow to Constantine's car,
then drove to the Mt. Royal West lookout.
where we saw visibility of a mile or so. We
then returned to 357 Atwater.

This is eclipse "F" - my 6th attempt to
see an eclipse during which I saw nothing at
all.

11969E3. 2200-2230 int / 3-F / Jarroc 3577 Atwater /
-1-1 Moon. The weather map indicated that
an arrow of clearing from the WSW came
very fast, and clouds broke up all along
the arrow rapidly. I doubt we could
have done anything short of flying to catch
this one.

11970S. January 10/11 / 0730-0800 / 7-F / Montreal - /
Maw, taxi driver / Moon in W, Sun in East.

11971S. Thursday, January 11/12 / 21500-1600 / 3-F / Jarroc
Wendee, Maw, Debra Scott / Mintaka / 552: 19, 84.

11972ER. 1900-2030/10-F/Jarnac/Miranda/-/
CN3 1^hW. First visual appearance (look) at
Edumbus S, which we photographed on
Christmas Night + discovered a few
days later.

11973S. Friday, January 12/13/1630-1645/10-F/3-F/
Echo/-/-/SS2: 26, 25. Very poor seeing.

11974SP Saturday, Jan 13/14/1145-1155/3-F/
Jarnac/Echo/-/SS2: 15, 12.

11975ER. 1850-2015/10⁺-F/Jarnac/Miranda/-/
CN3 1^hW.

11976S. Sunday, Jan 14/15/1400-1415/10-7-F/
Starizona/4" mt + a refr/SS2: 8, ~89.

11977ER. 1900-1930/10³-F/Jarnac/Miranda/-/
CN3 20^mW.

11978S Monday, January 15/16/1700-1115-1145/
7-F/Swimmingpool/Wendee/-/CN5, Sun Ven.

11979S2 1700-1730/3-F/Jarnac/Echo/Ed Summa/
Echo/-/SS2: 6, 33.

* 11980S. Wednesday, January 17, 2000/12:30-13:30/
3-2-F/Jarnac/Mintaka/-/Wendee, Summary
SS2 5, ~25. ADOPTION DAY.

119815. Friday, January 19/1050-1100/7-F/Starizona/
Dean + Wendee Beautiful prominences with
the new refractor and Ix filter he has.
Also, with Obadiah, SS2: 3, 8.

119825. Sunday, Jan. 21/1700-1730-13-F/Jarmac./
Mintaka: SS2 with Echo.

*11983EM2. 1815-0130/3-F/Jarmac/Obadiah/Dean,
Scott, Ken, ^{Family} Rick McL, Wendee/Installation
and alignment on the pole of Obadiah. First
light through refractor on Jupiter. Also
looked at M42. Very successful night.
Drilled 4 holes - 3 for pier, one for 4-ft. ground.
First came the very heavy pier, then fork, then
telescope, then refractor.

119845. Monday, Jan 22/3-F/Jarmac/1130-1:30/
2-3-F/Jarmac/Ed, Maw/Obadiah,
later Mintaka 1-1 SS2.

~~11985E2 1900-2200~~

11985M2 ^{Monday} Tuesday, Jan 23/24/0550-0600/10-F/Jarmac
Pegasus - CN3e TV Gr L14.6. CN3 10^m E.

11986E ¹⁸⁻²³⁴⁵ Tuesday 18-2345/18-F/J/Mom, Ed, Wendee, Eil/CN3Fg. Jupiter Sat,

11986M2 ^{M42 with Obadiah} Wed Tues 23/24/0530-0615/10-F/Jarmac/
Pegasus, Miranda/CN3e TV Gr L14.6. CN3 40^m E

11987S. Wednesday 24/25/1508-1630/10-F/Jarmac/
Obadiah, Minerva, Esther, Echo/Dean + friend,
Wendee, Jupiter + Saturn! daylight.

11989^FM2 Wednesday, January 24/25/10-F / Jarnac /
Maw, Ed, Wendee, Gil / Obadiah, Minerva /
Test for focus on both instruments.

11990M3. 0550-0630/10 - sort of w/f / Jarnac /
Miranda, Pegasus - / got up too late to
check on suspect from 11987. Almost missed
TVGr but got it at 13.2 definitely,
maybe 14.6.

11991EM Should be before 11981S / Thurs Jan 18/19/
2000 to 0100 / 10 Fg some humidity - F /
Jarnac / Wendee, Bob & Lisa, Summerfield,
Miranda & Ben, Mom / - Miranda, Minerva
to CCD / Test session & fun session!
I wanted also to add something about
11986E from Tuesday Night. Gil was here
also and we did a set of fields with Minerva.
Mom and Ed too and Wendee looked at
Jupiter and Saturn and M42 through
Obadiah. Beautiful night. Mom really
enjoyed this session.

11992E. Thursday, Jan 25/26/2000 to 2200 /
10-F / Jarnac / Obadiah / Wendee / test
again - no focus.

11993M2. 0430 to 0615 / 10-F / Jarnac / Miranda / - /
CN3e with Pegasus / TVGr - 14.6 ; CN3 1^h05^mE
Catalogue object NGC 6756 (1858.7 + 623)
Not a comet. Also at 1853.3 + 4010

11994S. Friday, January 26/27, 2001/1500-1730/~~#~~3-2-F/
Jarnac/inspection tour of observatory for the
new

JARNAC COMET SURVEY.
involving

Wendee Wallach-Levy
Carolyn Shoemaker (by phone)
Carol Neese
Gil Esquerdo
David H. Levy.

Look at Minervat Obadiah.

11995E Saturday, January 27/28, 2001/2000-2015/
Anthon/Wendee et al/3-0/Moon + Venus.
6" refractor not set up outside, though.

11996E Sunday, January 28/2000-2030/~~#~~0-F/Jarnac
Dean, Wendee/Focusing of Obadiah.

11997S Monday, January 29/30/3-F/Jarnac/Echo/1600-1730
SS2: 7.53.

11998M2. before 97S/0450-06530/10, then very
suddenly a low cloud layer formed from
west, so 10-2-F/Jarnac/CN3e TV Crv
(14.6. CN3 0^h25^m E. | Pegasus, Miranda.

11999E2. Jan 29/30/1900-2200/4-F/Jarnac/Obadiah/
Wendee/focusing on Schmidt, M42.

A deliberate number change.


12001MP3. 0500-0510/2-F/Jarnac. Clouds.

12002MS. Tuesday, January 30/31/3-F/Jarnac/
1000-1015/Muntaka 1-1/SS2: 8, 58.

and now, session

12000E2 2000-2200/10³-F/Jarnac/Obadiah/Wendee/
Very nice session. Focus with Brunson looking through
Obadiah at image of Moon. Then photo M42. -7 fireball.

12003M3. 0500-0600/10-f/Jarnac/Miranda/-/CN3e
with Pegasus TV Crw (14.6). CN3 1^h E.

12004S. Wednesday, ~~Feb~~ Jan 31/1500 to 1520/3-F/Jarnac
Starizona/Dean, Scott, Larry | SS2: 5, 29. Beautiful
prominences, one on left side.  left one bigger
than right one.
6", 4".

12005M2 0500-0600/10-f/Jarnac/Pegasus, Miranda/-/
CN3 1^h East. CN3e TV Crw (14.6).

*12006EM Thurs. February 1, 2000/2000 to 0140/10-7-Fm/Jarnac
Wendee, James, Gil/Obadiah, Minerva CCD, new
scope hours/focus on Obadiah. CCD test with Minerva
+ Home. CN3e with Pegasus. ~~to~~ TV Crw (14.6).
Wonderful session setting up, though
Meade CCD didn't work.

12007S. Fri, Feb 2/0500-0530/3-f/Jarnac/
Echo 1-1/SS2: 5, ~30.

- 12008E2 1900-2130 / 7-F / Jarnac / -Minerva - Ophelia (attempt to polar align), Horus, imaging / Gil, Wendee.
- 12009S Saturday, Feb 3 / 1630-1730 / 3-F / Jarnac / Mintaka, Obadiah / Wendee, Joan-ellen + Philip / SS2: 5, 41. Jupiter, Saturn, Venus, Moon through Obadiah.
- 12010E2 2000 to 2230 / 7-Fm / Jarnac / Obadiah / Wendee, Lisa Andrada + family, Philip + Joan-ellen / Jupiter, Moon, Saturn, & CMa, M45, M42.
- 12011S Sun Feb 4 / 0950-1005 / 10-F / Jarnac / Echo / Wendee, Joan-ellen, Philip / SS2: 6, 28.
- 12012E2 2230 to 2300 / 7-F / San José Carriage House Tel / after my lecture Jupiter, Saturn.
- 12013E2 Tuesday, February 6 / 2300-2315 / 2-F / Jarnac / Moon + clouds.
- 12014S before 12013. / 1745-1815 / 2-F / Catalinas / Wendee, Joan, Philip, Maw / Beautiful low sun on Catalinas followed by beautiful sunset.
- 12015S Wednesday, Feb. 7 / 12:00 to 2:30 / 3-F / Jarnac / Ophelia, Minerva, Miranda, Horus, Pegasus, Mintaka, Mini, Sapphire, Obadiah, Mira, Estor, Bruner, Odie - Bows (Joan's Escape), and Echo / Joan, Philip, Wendee / Calligraphy of scopes. also SS2: 8, 78. with Mintaka.

*12016S Friday, February 9 / 1500-1700 / 10-F / Jarnac /
Mintaka / Wendee, Joan + Philip / SS2: 7.42.
Wendee + I focused Obadiah using Esther!

12017E (before 12016) / Thu, Feb 8 / 1745-1815 /
2-F / Jarnac / Wendee / Venus through
clouds.

12018EP2 (also before 12016) / 1900-1930 int / 3-F /
Jarnac / Wendee, Joan, + Philip / Moon
through clouds.

12019E2. Feb 9 / 1930 to 2200 / 3-F / Jarnac /
Wonderful session. / Minerva, Horus, and
Obadiah / Wendee, Joan, Philip, Coill /
Focused thought shot of Orion. Test
shots with new CCD on Minerva, + Horus.
auto software.

²⁰12018S. ²Saturday, February 10 / 1300-1700 / ~~10~~²-F /
Jarnac / Minerva and new guide scope, in
stallation of Apollo, and Obadiah /
-Dean, Wendee, Wayne + Arlene
Johnson + colleagues / installation
of guide scope on Minerva. also inst. of
little Obadiah.

12021E.2 ~~Sunday~~ 2200-2215 / 3-F / Jarnac. Moon
through clouds.

12022S. ¹⁵⁰⁰⁻¹⁶⁰⁰Sunday, Feb. 11 / ~~1400-1700~~¹⁷⁰⁰⁻¹⁷¹⁵ / 10-F /
Jarnac / Echo / SS2: 8.5, ~20. Also,
walk with Wendee.

- 12023E2. 2030-2200/10-F/Jarnac/-Obadiah/
Wendee/CN3F. 2 pics with Obadiah.
- 12024S. Monday Feb-12/1705-1720/10-F/Jarnac/
-1SS2: 4, 12.
- 12025E2. 1900-0000/10-F/Jarnac/Minerva, Horus,
and Obadiah/Wendee, Gil/CN3Fg: Krentz
search. CN3F: 8 pics with Obadiah.
- 12026S. Tuesday Feb 13/1215-1230/10-F/Jarnac/
Mintaka 1-1SS2: a few spots.
- *12027E2. 2010 to 2300/1-2-F/Jarnac/Carolyn, Wendee,
Gil, Carol/Minerva, Horus, and Obadiah/
first session with old + new team - all but
Bill Hartmann.
- 12028S. Wednesday, Valentine's Day/11:05-11:20/
2-F/Jarnac/Wendee/Mintaka/SS2: 4, 20.
- 12029S. Thursday, February 15/9:25-9:40/3-F/Jarnac/
Mintaka ♀-1SS2: 4, 15.
- 12030E2. 2300-0000/10-F/Jarnac/Pegasus, Obadiah/
-1CN3e TVCw-C14.6. Replaced battery in
Obadiah.
- 12031MB 0440-0450/3-2-F/Jarnac.
Fri February 16.
- 12032S. 1230-1245/3-F/Jarnac/Mintaka/1-SS2: 3, 5.

12033E2. 2000-2200/10-F/Jarnac/Minerva/Wendee,
Gil/CCD autoguider test.

120345. Saturday, February 17/0830-0845/3-2-F/
Jarnac/Echo/SS2: 4, 16.

12035E2. 2100-2115/3-2-F/Akala, NY/Echo/Jupiter,
Saturn, Wendee's star.

1203675. Sunday, Feb 18/10:20-10:35/3-F/Jarnac/
Echo/SS2: 4, 26.

1203752. 1600-1640/10-F/Jarnac/Obadiah/Wendee,
Lisa + David/Jupiter, Saturn, Venus.

12038E3^M. Sunday, February 18/1900-0200/10-F/Jarnac/
Minerva, Horus, ^{Pegasus} Obadiah/Wendee, ^{Scott + friends, Dean} David + Lisa,
Gil/Focus on Obadiah, script running.
Pegasus: CN3e TV Coric @ 12.6.
Final polar alignment of Obadiah.

12039E. Monday, February 19/1900-2300/3-F/Jarnac/
Minerva CCD, Horus, Pegasus/Wendee, Gil,
David + Lisa/CN3Eg with Minerva and Horus - 12
images, plus ^{incl} M42 and TV Coric. / CN3e TV Coric
12.8, 13.9 with CCD.

120405. Tuesday, Feb 20/12:30-1300-1315/3-F/Jarnac/
Mintaka/SS2.

12041E2. 2000 to 0108/3-F/Jarnac/Pegasus, Minerva
Pro-Horus, Miranda/Wendee, David + Lisa, Gil,

CN3e TV Cw #12.9. CN3 script with Horus,
along Kreutz Sungrazer track.

12042M3. ~~0500~~ 0450 to 0610 / 10-F / Jarnac / Miranda /
- / CN3 1^h E.

12043M2 (before 12040S.) Feb 19/20 / 0500-0600 / 10-F /
Jarnac / Miranda / - / CN3 0^h40^m E.

12044M (before 12039 E) Feb 18/19 / 0510-0610 / 3-F / Jarnac /
Miranda / - / CN3 / 0^h40^m E.

12045S. Wednesday, February 21/22 / ~~05~~ 1500-1515 / 10-F /
Jarnac / Echo / - / SS2. 5, 20?

12046E2. ~~020~~ 1900 to 0000 / 10-F / Jarnac / Miranda,
Pegasus, Minerva, Horus / Gail, Wendee, David +
Lisa, Marc + Gail / - / CN3 along Kreutz track
with Minerva + Horus. CN3e TV Cw #12.8.

12047M3 0500-0600 / 10³-F / Jarnac / ^{Obadiah,} Miranda / - / CN3
0^h50^m E, S.

12048E Thursday, Feb. 22/23 / 2300-2315 / 2-3-F /
Jarnac.

12049S. Friday, February 23/24, 2001 / 3-F / Jarnac /
Mistake / Wendee, Gail + Marc / SS2:

12050S. Saturday, Feb 24/25, 2001 / 1400 to 1700 int /
Jarnac / Wendee, Marc and Gail / SS2: 4, 31.
Marc + G installed finder on Obadiah's east side.

12051E2. 2245 to 2315 / 2-F / Jarnac / Wendee, Marc, +
Gail / Obadiah / Jupiter, Saturn, M42, & CMa,
NGC 1931.

12052S. Wednesday 28 Feb / 1745-1800 / 2-F / Jarnac,
Echo / - / SS 2:0. Just half of Sun seen.
Rest obscured by clouds. Half to 2/3 seen.

12053E2. 1900-2200 / 2-F / Jarnac / - / Gail, Wendee,
observing, recording CD, w/ from previous
nights. Cloudy all last few nights.

12054ES Thursday, 1 March Friday, March 2/3 /
1330-1530 / ~~to~~ 1-F / UNT observatory,
Denton, Texas / other amateurs + professional
astronomers, one being Ron Dylulio /
View of 6" Unitron, 12" eq. tube, + helped
repair sliding roof blown off during recent
windstorm.

12055E2M 2355-0005 / 2-F / Denton, TX / Ron Dylulio + others,
1st gr. moon.

12056S. Sat. March 3/4 / 1430-1730 / 3-unF then F / Jarnac /
Mintaka, Cordelia, and Esther / Wendee /
Attempt to put Cordelia's eq. wedge onto Esther
didn't work. SS2 with Mintaka, 6,44.
Moon through Esther (set in altaz. mode) /
and a few minutes later Sail Along,
Silvery Moon plays.

12057E2 1900-2030/3-F/Jarnae/Wendee/Minerua
confirmation search for possible Wendee-Gil
comet. not.

12058M3 0500 to 0600/10-F/Jarnae/^{Pegasus}Miranda/-/
CN3e TV Cw (14.6. CN3 35^m E.

12059E Sunday March 4/5/1900 to 2100/2-F/Jarnae/
Gil, Wendee/Minerua. Mostly cloudy.

12060S. Tuesday, March 6/7/10:00 to 12:00/3-F/
Jarnae/Obadiah/Dean, Donna, Wendee/
Installation of little Obadiah, beautiful
job Dean did. Plus balancing.
SS2 through the Obadiah catadioptric 5,22.

12061E^S 1700-2300/7-Fm/Jarnae/Obadiah, Minerua,
and Home. 1-Tim Hunter, Gil, Wendee/
CN3Fg. Sungrazer track (that's it - as
of course clouds would move in again) led
Friday. Earlier, I showed Tim the newly
reconfigured observatory. Through
Mintaka we saw sunspots: SS2, 5:45.
(but compare with 12060S.).

12062S. Thursday, March 7/8/9/1430 to 1700/10-F/
Jarnae/Mintaka/1-Wendee/Burial of Odie's
ashes, then a walk. Then SS2: 4, 89. Farewell,
Odie, have a good journey, and rest in peace.

12057E2 1900-2030/3-F/Jamae/Wendee/Minerwa
confirmation search for possible Wendee-Gil
comet. not.

12058M3 0500 to 0600/10-F/Jamae/^{Pegasus}Miranda/-/
CN3eTV Cw C14.6. CN3 35^mE.

12059E Sunday March 4/5/1900 to 2100/2-F/Jamae/
Gil, Wendee/Minerwa. Mostly cloudy.

12060S. Tuesday, March 6/7/10:00 to 12:00/3-F/
Jamae/Obadiah/Dean, Donna, Wendee/
Installation of ditty Obadiah, beautiful
job Dean did. Plus balancing.
SS2 through the Obadiah catadioptric 5,22.

12061E^S 1700-2300/7-Fm/Jamae/Obadiah, Minerwa,
and Home. 1-Tim Hunter, Gill, Wendee/
CN3Fg. Sungrazer track that's it - as
of course clouds would move in again Wed
nesday. Earlier, I showed Tim the newly
reconfigured observatory. Through
Mintaka we saw sunspots: SS2, 5:45.
(but compare with 12060S.).

12062S. Thursday, March 7/8/9/1430 to 1700/10-F/
Jamae/Mintaka/1-Wendee/Burial of Odie's
ashes, then a walk. Then SS2: 4, 89. Farewell,
Odie, have a good journey, and rest in peace.

12063E2. March 8/9, 2001/1900-2115/3-Fm/Jarnac/
Minerva ~~Miranda~~ / Wendee / CN3Fg: 18 pics along
Kreutz track.

12064S. Friday, March 9/10, 2001/1130-1430/
~~to~~ 3-F/Jarnac / Wendee, James Ashley,
Kelley + Cheryl Beatty ^{at home} / Mintaka,
Obadiah / Interview - both me and
Wendee / SS2: 4, 54.

12065S. Saturday, March 10/2001/10:30-1300/3-F/
Jarnac + south walk / SS2 with
Mintaka / - Wendee / - 4, 62.

12066S. Sunday, March 11/12/1600-1815/2-F/Jarnac/
Mini 1- / SS2: 2, 32. Trying to load the
Meade program for ~~the~~ Minerva's CCD.

12067E2.M 1900-2000/3-F + humid / Jarnac / Miranda,
Minerva, Capella, Horns, Mintaka, Pollux,
Castor, Mini, Mira, Obadiah, Pegasus, Apollo-
Ophelia, Esther / Wendee, Marianne Arrien /
Jupiter, Saturn, M42.

12068S Monday, March 12/13/1130-1200/10-F/Jarnac/
Olivia Verdensula?, the notary for our 2nd
mortgage loan / SS2: 4, 52.

12069E2 1800-2330/10-F/Jarnac / Horns, Minerva/
Wendee, Gil / CN3Fg. 18 pics w/ Minerva +
full set with Horns.

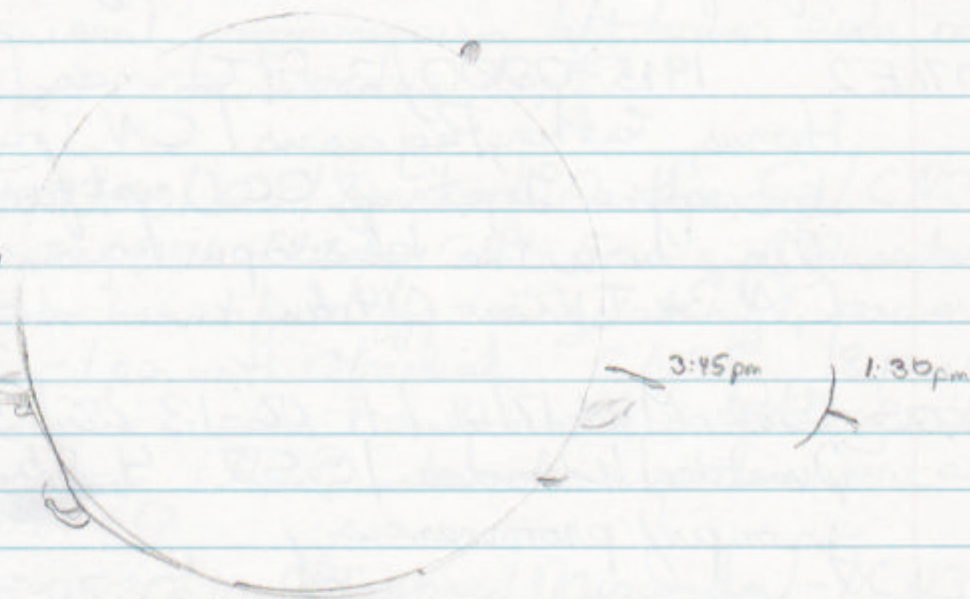
120709 ~~Wednesday~~ ^{Tuesday}, March 13/14/1045-1100/3-F/Jamaica/
Pollux/-/SS2: 4, 79.

120719 Wednesday, March 14/15/1100-1700/10-F/part one,
City pool; Part Two, Jamaica-Wendee/ Esther/
first, we did CN5 Sun Ven, and no comets. Then
we went to FedEx Ground to pick up the Equat-
orial wedge, then installation & relocation
of Esther. Also CN3- SS2: 5, 84.

12072E2. 1900 to 2355/10-F/Jamaica/Minerva, Horus, &
Esther/-Wendee, Grill/-#CN3 Fig 18 pics, plus
set with Horus. Polar alignment with Esther
completed. CN3e with Pegusus, TVCw-114.6

120738. ^{March 15}
19:1350-1105/10-F/Jamaica/Mira/-/SS2:
4, 60.

Thursday,
March 16
120755.



③ 12074E2. March 15/16/1820-0000/10-F/Starizona,
then Jamaica/Questar!, Minerva, Horus/-
Dean and Donna, Wendee/ First light for
Questar on Jupiter, then Saturn/then

18 search pictures with Minerva and autoscrypt
with Horns. | FIRST LIGHT FOR QUESTAR:

After Jupiter + Saturn at Starizona,
at Jarnac we did Jupiter + Saturn again,
then M642. Then

CN3 10^m with area betwn. 2 + B Gem
Later, with Miranda: M51, M13, Omega Cen
Gegenschein. Pegasus CN3e TV Crw C14.8
beautiful night. Gil here for part of it.
Finally, alone with Questar,
M13, Omega Cen.

*120759. Friday, Mar 16/17 / 11:30-15:00 / 3-F / Jarnac /
Questar / Wendee / SS2: 4, 49. See overleaf
for first Questar view of prominences.

12076E2. 1915-0000 / 3-F / Jarnac / Minerva,
Horns, Eather, Pegasus / CN3 fg 18 pics +
script. Inst. of CC.D up for Eather.
My, how the telescopes have changed!
CN3e TV Crw C14.6.

120775. Sat, Mar 17/18 / 11:00-13:00 / 3-F, windy /
Questar / Wendee / SS2: 4, 55, one massive
group of prominences.

1207892. 16-1700 / 3-F / Jrd / Questar, Pallas / SS2: 55, ^{quest} 49, ^{test. optics} close at low power.

12079E2. 1900-2300 / 10-F (a little unf) / Jarnac
Minerva, Horns / Wendee, Gil / CN3 fg -

18 pics with Minerva, but none using the automated program with Horus because I forgot to take the cover off. Dumb. CN3 Fe - TV
Or 14.6 through Pegasus.

120805. Sunday, March 18/19/1430-1600/10-F/Jarnac/
Questar/Wendee/SS2. 4, 47. Some prominence on
lower left side.

12081E2 1800-0000/10-F/Jarnac/Minerva, Horus,
Obadiah, and Pegasus, Miranda, + Questar/
Wendee, Grl/CN3 Fg 36 pics with Minerva,
automation w/ Horus. CN3 F 3 pics with Obadiah/
Sunset + Green Flash.

12081S. Monday, March 19/20/17:30 to 18:00/10-F/Jarnac/
Wendee, Lynn + Darius Underwood/Questar/
SS2: several prominences on left lower side, not as
prominent as on Sunday. 4;57.

12081E2. 1900 to 2350/10-F/Jarnac/Wendee, Grl/CN3e
with Pegasus, (14.6 TV Gr. CN3 5 min with Questar,
(also + Leo beautiful diff. rings at high power)
CN3 F - 1 pic with Obadiah. CN3 Fg 18 pics
with Minerva, none + automated scrolling with
Horus. The Questar observations were actually
in 12081 SE2.

12081B 0415-0530/10-F/Jarnac/Miranda/-/CN3
40m E.

12081S. Tuesday, Mar 20/21/1015-12:55/10-3-F/Jarnac/
Esther, Mira/Dean, Wendee/Attachment of

beautiful guidescope on Esther + repair of
Miranda's encoder. SS2 with Mira, 3, 42.

12086E2. 1915-2000 / 3-F / Jarnac / Esther's CCD / Talking
with Ray over phone, he's doing very very well
after his surgery. Venus crescent through Mira.

12087EM3 2300-0030 / 3-F / Jarnac / Esther CCD, plus
Pegasus / - / CN3e TVCw (14.6).

12088C. Wednesday, March 21/22 / 1055-11:10 / 10-F /
Jarnac / Mira / SS2: 3, 27.

12089M Thursday, March 22/23 / 0000-0100 int / 7-F /
18th floor, Ritz Carlton Hotel, St. Louis / - / -.

*12090S. Friday, March 24 / 1630-1645 / 10-F / Jarnac / Quasar /
Wendee / SS2: 5 prominences. ~~many~~ ^{no} sunspots
in this check.

12091E2. 1800 to 2230 / 8-F / Old Tucson / Wendee, Larry
from Starizona, and other Starizonans / The
White Sox / Quasar, other telescopes / M42, 45,
Sirius, Venus, Jupiter, Saturn, & Leonis
Star Party at Old Tucson.
Before Sunset: SS2: many spots + 1 big
group coming on.

12092M3 0410-0530 / 10-F / Jarnac / Miranda / - /
CN3e TVCw (13.3, CN3 0440^m E.

12093S. Sat, March 24/25 / 1500-1630 / 10-3-F / Jarnac /

Wendee/Quaster, to be named Rigol ①? / SS2: several small prominences. 6, 92.

12094E2 1923-0000/10-3-F/Jarnac/Miranda, Horus/Wendee, Gill/18 pics with Miranda, some Messiers with Horus, testing with CCDs with Esther. Pegasus: ~~SS~~ CN3e TVGw (14.6)

12095M. 0415-0530/10-F/Jarnac/Miranda/-/CN3 # 0h45m.

12096S. Sunday, Mar 25/10:50-11:10/10-F/Jarnac/Mintaka/-/Wendee/17, 183 with SS2.

12097S2 1400-1430/10-F/Jarnac/Mintaka/Wendee/SS2 photography.

#12098EM3 1900-020 /10-F/Jarnac/Horus, Obadiah, Miranda, Esther, Pegasus/Wendee, Gill/Messiers marathon on CCD and Horus, prepared by Gill, monitored by us. Miranda did 12 pics CN3Eg. Capella tested also.

#12099M4. 0430 to 0600/10-F/Jarnac/Horus, Pegasus, Miranda/-/CN3 45min E. Horus completes marathon - was M30 captured? Didn't look like a globular cluster in CCD.

#12100S. Monday, March 26/1015-1030/3-F/Jarnac/Mintaka/Wendee/SS2: 18, 204. Huge naked-eye spot.

121015. Tuesday, March 27/0915-0940 CST, Augustana College, Illinois / 14" Celestron / Mel Peterson / SS 2. 13, 134 poor seeing

1210252. 1430-1530 / 7-F / Augusta College, John Deere Planetarium / 14" / Mel Peterson / SS 2: 16, 217.

Friday, March 30/31

121035E 1715-0000 / 8-F / Sabino Canyon entrance / Capella, 6.7" refractor, many other telescopes (about forty-four) / Wendee, Dean, Steve & Sharon, John Kalas and TAAH, Elaine and PSI, about 100 people / Telescopes for Telethon / Wendee organized a terrific, fabulous star party. We raised about \$1900 for MDR. I used Capella, our 5" ETX, to view the Moon. Beautiful image M42, Jupiter, Saturn. Earlier, SS 2: 13, 287. As we were putting things away, the red auroral glow we were seeing suddenly erupted into a major display with a red curtain and red NNE. Whoopie! It was wonderful!

Wendee prepared and ran a beautiful star party. Congratulations Wendee.

1210412 0030-0100 / 7-Fri / Jarnac / Pegasus / -Wendee
SS CN3e T/Gw (13.3. Auroral glow in East, quite high and red in sky.

1210513. 0430-0510 / 10-F / Jarnac / Miranda / -
CN3 20^m E.

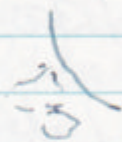
*12106S Saturday, March 31/afternoon 1700-1800/
3-F/Jarnae/Wendee/Mintaka/SS2: 13,
317.

12107E2 2200-2230/3-2-F/Jarnae. clouding over.

12108E Sunday, April 1/1800-2230/~~10~~ 7-3-F/Jarnae
Boulders' Resort, Carefree, Arizona/Dean and
Starnora people/Star Party with 7" rrt + 2
8" Celestrons.

12109M2 0130-0200/3-F/Jarnae/clouds.

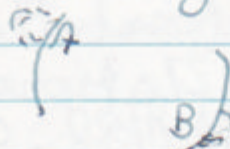
12110S Monday, April 2/1400-1500/3-F/Jarnae/
Mintaka, Questar/—/Wendee/SS2: 11, 126.



Two sets of prominences; one
where the large group is leaving,
the other on other side of Sun.

12111EP 2250-2300/~~10~~ 2-F/Jarnae/—/—/Moon.


12112S 1235-1300/3-F/Jarnae/Mintaka/Wendee/
SS2: 14, 146. Very large streaming prominences
on both sides of the Sun, near departing group.



I was right about yesterday; big new group
has appeared at "B", "A" is departing group.

- 12113S. Wednesday, April 4 / 1530-1600 / 3-F / Jarnac /
Mintaka / -
- 12114S. Thursday, April 5 / 1830-1900 / 1-2-F / Jarnac /
Echo / Wendee / SS 2: 7, 8. Seconds before
Sunset. Just part of the Sun seen.
- 12115S. Friday, April 6 / ~~18~~ 1500-1700 / 3-F / Jarnac /
Wendee, Marilyn Unruh, Carolyn Mayberry /
Mintaka / SS 2: 7, 86. several prominences.
- 12116SE2 / 1800-1815 / 3-F / on 82 on to Sierra
Vista / Wendee, Carolyn / Almost Full Moon.
Big Moon over highway.
- 12117S. Saturday, April 7 / 10-F - very clear / Mintaka /
8, 82. 8 prominences. / Wendee / 1300-1400.
- 12118E2 Saturday, April 7, 2001 / 1950 to 2200 / after our
nice Seder / Obadiah / Wendee, Carolyn Mayberry /
CN3F, Focus 15 films. #6 was focused!
- 12119S. Sunday, April 8 / 0830-0845 / 9-F / Jarnac /
Echo / SS 2: 7, 66. somewhat; seeing rather poor.
- 12120E Monday, April 9 / 2130-2215 / 3-F / Santa
Barbara Museum of Natural History / Wendee
Staff, & members of the Astronomical Unit /
Jupiter, Regulus, M81, M82. After my
evening lecture.
- 12121S. Tues. Apr 10 / 1800-1815 / 2-F / Jarnac / Echo / -SS

12122E2. 2045-2105/3-F/Jarnac/Pegasus/-CN3e, TVCam,
C14.6.

12123S. Wednesday, April 11/1700-1830/10-F/Jarnac/
Mintaka/Wendee, Carolyn/SS2: 11, 77, 8 prom-
inences.  including a big one on leading edge

12124EM 1915-0200/10-7-F/Jarnac/Jarnac Comet
Survey / Minerva, Horus, Obadiah, Ophelia-
Apollo, Miranda / CN3fg: 8 pics Ophelia,
8 pics with Obadiah (out of focus still), 3 sets
Minerva, test asteroids w/Horus/Wendee,
Carolyn, Carol Nave, Gil, Jeff Medkoff.
Investigation of new software.

12125S Thursday, April 12/11:45-12:45/7-F/Starrion
2 telescopes, /Dean, Carolyn / Sun.

12126S2. 1800-1800/10-F/Jarnac/Mintaka/-Wendee +
Carolyn/SS2: 13, 93. Focused Obadiah with Easton.

12127 ~~12126~~ EM3. 1900-0100/10-F/Jarnac/Obadiah, Ophelia,
Miranda, Horus, Minerva, /Wendee, Carolyn,
Gil, Carol - CN3F, CN3Fg / 8 pics Ophelia,
8 pics Obadiah, 3 sets with Minerva, 1 with
Horus / Beautiful Night.

12128S. Friday, April 13/1600-1700/Mintaka/SS2:
13, 93 again!, 8 prominences.

12129^SE2. 1900-1830-2330/10-F/Jarnac./

Obadiah (10 pics), Ophelia - Apollo (2 pics),
Pegasus, Miranda / James Ashley, Gil, Wendee
& CN3F. GFC 5128, Om. Cen. Horus didn't run.
New Comet Linear in Orion C/2001 A2.

12130S. Saturday April 14 / 1430-1500 / 10-F / Jarnac / - /
~~12~~ SS2: 7, 55. 13 prominences.

*12131E2 1900-2345 / 10-F / Jarnac / - Obadiah, Apollo,
Miranda, Capella / Congregation Or Chadash /
Havdalah service and observing session.
Jupiter, Saturn, Comet Linear 2001 A2,
M65 + 66. The service and singing under the
stars was so beautiful.

12132S Sunday April 15 / 1730-1800 / ~~10~~ 3-F / Jarnac /
- / 4 Echo / SS2: 2, 2.

12133E2M 1900 to 2200 / 10-F / Jarnac / - / Echo Minerva,
Horus, Miranda, Wendee / CN3F / 8 pics. w/ Minerva
Horus ~~out of focus~~ ^{out of focus} ~~didn't run at all~~: CN3e TV Cr (14.6)

12134E. Monday April 15 / 1900 to 2300 / 3-F / Jarnac /
Miperya, Horus / - Wendee, Gil / 18 pics. Horus
~~out of focus~~ better.

12135S. Tuesday April 16 / 1100-1300 / 3-F / Jarnac /
Mintaka, Wendee, Christine + Jim Gray /
SS2: 2, 3. Several prominences.

*12136E ~~2~~ AN2 + ~~100-2350~~ ~~3~~ ~~3~~ -F / Jarnac. Thick haze.
2000-0500

12136 AM2
concd.

increasing during night / Obadiah / Dean, Wendee /
All night attempt to focus Obadiah. Worked
okay and fun, and we are well on our way
after focusing, aligning primary AND equalizing
invar rods. CN3 ~ 15 min E near hazy dawn.

12137S.

Wednesday, April 8 / 1630-1800 / 3-F. haze
turns out to be from across the Pacific, from
high winds turning up dust there, in MONGOLIA!
Wendee, Lynn + Darius Underwood, Jim

12138SP

Friday, April 20 / 1730-1740 / 10-F / Jarmac /
Echo / - / SS2: 8, 34.

12139E2.

1930 to 2335 / 10-F / Jarmac / Ophelia - Appollo, Howard
Wendee Gil / CN3F 8 pies, testing on Hous.
CN3e with Obadiah, TV Gr C17.6.

12140MB

0410-0445 / 10-F / Jarmac / Miranda / - / CN3
30^m E.

12141S.

Sgt Apr 21 / 1345-1530 / 7-3-F - windy / 6" refr /
- Dean, Wendee, others / SS2; 8, 81.

12142E2

1930-2000 / 2-F - windy / Jarmac / Buttoning
down of observatory in anticipation of
storm. Damage from wind to observatory.

12143S.

Sunday April 22 / 1400-1630 / 10-F / Jarmac +
south walk / Wendee / & Echo / SS2:
8, 67.

12144AN2 Sunday, April 22/23/ 1900 to 0500/10+-F/
Jarnae, Obadiah, Apollo - Ophelia, Miranda,
Pegasus, Horus, Wendee, Dean, Gil

1) Rearrangement of finder + encoder
reader for Apollo - Ophelia

2) Horus test

3) Focusing Obadiah. Mirror pinched.

CN3e TVCw C14.6 with Pegasus

CN3 20min E with Miranda.

12145S. Monday, Apr 23/24/ 1330-1410/10-F/Jarnae/
Wendee / Wintaka / SS2: 8, 89, + 21 prominences

12146E2 1900-2330/10-F/Jarnae/Wendee, Gil (for
a few minutes) / -Horus, Obadiah / several
sets of images / -CN3 30" W with
Obadiah. CN3e with Pegasus
TVCw C14.6.

12147S. Wednesday, April 25/26/ 1400-1415/
7-10-F/Jarnae Starizona / 4" rd / Dean, et al /
SS2: 8, 102.

*12148SE2. 1700-2330/7-F/The Boulders/
Starizona people, Dean, Larry, Kenny,
+ Pratt + Whitney people / 2 C-8s, 17" rd,
Astrophysics Refractor / - Moon, 2, 7,
181-82, 3, 13. Owl Cluster NGC 247.
5 minute lecture.

12149M. 0330-0440/9-F/Jarnae/Miranda/
EN3 1h E.

12150M Thursday, April 26/27/0400-0430/10-F/Jarmac/
Munera/-1 CN3 30 min E.

12151S. Friday, April 27/28/3-F/Jarmac/New Meade
ETX 70 Telescope from Sky Publishing Corp.
Testing. SS2: 1, 1. by simple projection.
12-1300.

*12152E2 ~~So~~ 1830-2130/10³-8-F/Jarmac/Tongue
Varde Elementary School/Capella/Star
Party/Wendee, Summer and Nanette, many
others, including Jakob and his family/
Speech. Moon. *+Marilyn + Jeff Selwyn.

12153E3. 2345-0000/10-F/Jarmac/Pegasus/-1CN3e,
TVGw C14.6.

12154M4 0345-0440/10-F/Jarmac/Miranda/-1
CN3 40m E.

*12155S. Saturday, April 28/12:00-1200/10-F/Jarmac/
Mintaka f -Christine and Justin from Computers
Etc., Wendee, Summer, Nanette, Virgil.
SS2: 7 prominences, 8:87.

Munera's CCD works on SC22I, and so
does Esther's new CCD finally repaired!
Very productive day.

Virgil works on Observatory back window.

*12156AN2 1900-0440/T-10-F/Jarmac/OBADIAH/Pegasus/
Wendee, Dean/TVGw C14.6. Complete taking
apart of mirror + invar support system.

Earlier, Nanette and Summer looked through the telescope at 4×7 . Then, Jakob + his family came ~~over~~ for a brief viewing. Dean arrived at 11 and we had a successful night. Then, CN3 1^h 30^m E.

12155. Sunday, April 29 / Afternoon / SS2. Echo: 6:57

*12158 AN2 / 1900-0500 / 10-F / Jarmac / MIRANDA, MIRANDA / Gil, Wendee, Dean / CN3e TV Gr C13.3, CN3 1^h 10^m. Almost 25 pics, but FINALLY we got Obadiah focused and aligned. The alignment was the hard part. At last it is done. ↙

↗ Wendee started hours while Dean + Gused Capella and 28⁴ at Christmas Star Party.
*12159 E Monday, April 1 / 1900-2350 / 10-3-F / Jarmac / Wendee, Gil, Nanette, Summer / Echo for SS2. Then Hours on CN3. poor focus. CN3e with Pegasus - TV Gr C13.3. M51 w. Obadiah.

12160S. Tuesday, 11430-1700 int / 7-F / Tucson. Summer, Nanette + Wendee looked at Moon during our radio show. We all looked at Moon later in afternoon.

12161 EAR 2100 to 0100 / 7-Fm / Jarmac / Wendee, Rob McNaught. Picture of M51 with Obadiah. Long and pleasant conversation about Leonid predictions - this November will be seeing several trails - the best one being the 1866 one.

12162 ~~#2~~ EP. Wednesday, May 2/3 / 2330-2340 / ~~#~~ F / Jarmac
bright Moon.

12163 M2 0315 to 0500 / 10-F / Jarmac / Miranda / - / CK
25m E. Check on new Panette's River in
Cassiopeia. Couldn't find it on charts or photo
afterward, though.

12164 S. (before 12162) / 1300-1315 / 7-F / Jarmac / Quasi /
Wendee, Nanette / Quasar used to see beau-
tiful flowering cactus.

12165 S. 1500-1515, Thursday, May 3 / Quasi / Wendee,
Nanette / view of Rainbow cactus flower!

12166 M2 0315-0500 / 10-F / Jarmac / Miranda / - /
Finally used Atlas Coeli + Millennium &
Starry Night to confirm Nanette's River
Finally got it! Also plotted it E border 2341.5
W border 2336.2

12167 S. Sunday, May 6 / 1200-1400 / Patchantraire
Astronomy Society Picnic, New Orleans / Wendee
SS2 through 8th Celestron. 7, 49.
(Wendee remembered the number!)

12168 E2. 2220-2240 / 7-F / Jarmac / Kenner Plane
tarium / Wendee, Michael, Sandra, etc. /
Moon.

12169 S. Tuesday, May 8 / 3-F / Jarmac / Summer
Huntara / SS2: 4, 18.

12162 ~~#2~~ EP. Wednesday, May 2/3 / 2330-2340 / ~~F~~ F / Jarnac / bright Moon.

12163 M2 0315 to 0500 / 10-F / Jarnac / Miranda / C 113
25mE. Check on new Nanette's River in Cassiopeia. Couldn't find it on charts or plates afterward, though.

12164 S. (before 12162) / 1300-1315 / 7-F / Jarnac / Quasar / Wendee, Nanette / Quasar used to see beautiful flowering cactus.

12165 S. 1500-1515, Thursday, May 3 / Quasar / Wendee, Nanette / view of Rainbow cactus flower!

12166 M2 0315-0500 / 10-F / Jarnac / Miranda / - /
Finally used Atlas Coeli + Millennium + Starry Night to confirm Nanette's River. Finally got it! Also plotted it. E border 2341.5782
W border 2336.25615

12167 S. Sunday, May 6 / 1200-1400 / Pontchartrain Astronomy Society Picnic, New Orleans / Wendee. SS2 through 8th Celestron. 7, 49. (Wendee remembered the number!)

12168 E2. 2220-2240 / 7-F / Jarnac / Kenner Planetarium / Wendee, Michael, Sandra, etc. / Moon.

12169 S. Tuesday, May 8 / 3-F / Jarnac / Summer / Nintaka / SS2: 4, 18.

- 12170S Wednesday, May 9/3-F/Jarnac/Mintaka/
Summer 14, 24.
- 12171E2 2300-2315/10-F/Jarnac/Pegasus/-/
CN3e TVGw C14.6.
- 12172E Friday, May 11/12/2230-2300/3-F, breezy/
Jarnac/Pegasus/-/CN3e TVGw C13.3.
- 121735 Saturday, May 12/13/1530-1700 int/1-F/
Jarnac/Marilyn Unruh + John, Gil, Wendee/
tour.
- 12174E Sunday, May 13/14/1800-2200/10-F, 3-F/Jarnac/
Carolyn, Wendee, Gil/SS2 with Mini, 2, 2.
CN3e with Obadiah, a few pics.
- 12175E Monday, May 14/15/2300-0000, but 1900-0000
at Jarnac/3-F/Rio Casino Hotel, Las Vegas/
-/Wendee, Carolyn, Gil, + Carol + Jarnac/
just a walk for me, saw stars down to 2nd
mag. BUT clearing sky at Jarnac allowed
the group to observe tonight both with
+ Obadiah, with Wendee + Carolyn
handling it themselves, and Gil + Carol worked
Mimera + Horus.
- 12176EM. Tuesday, May 15/16/1900-0050/10-F/
Jarnac/Wendee, Carolyn, Gil/Mimera
Horus, Esther, Obadiah, Ophelia-Apollo
Miranda, and Pegasus/CN3e TVGw C14.6

w. Pegasus. CN3Fg, CN3F, pics through Ophelia +
Abadih.

12177S Wed May 16/17/1600¹⁶⁰⁰-1900^{int} / 10-F / Jarnac /
Carolyn, Jeff Lynn, Wendee / - Mira. First
part - view of telescopes. Second part -
near sunset SS2: 6, 42.

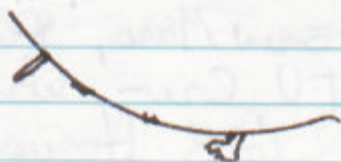
12178EM2 1930-0100 / 10-F / Jarnac / Carolyn, Wendee,
Jeff / Abadih, Ophelia - Apollo, Pegasus /
CN3F, 8 pics w/ " ; 6 with Abadih. CN3e
TV Cr C14.6

12179SE Thu May 17/18 / 1800 - 2300 / 10-F / Jarnac /
Wendee (Orbit beginning) / Horus, Abadih, /
Mira / SS2: 1, 5. near sunset. With Wendee
CN3F, 4 pics. CN3e TV Cr, C14.6.

12180M2. 0840-0430 / 2-F / Jarnac / Abadih / - / CN3
20m NE. It was clear in the low northeast.

12181S. Saturday, May 19/20, 2001. / 3-F / Jarnac / Wendee
1100-1330 / cleanup of garage and SS2: 4, 30.

12182S Sunday, May 20/21 / 1430-1530 / 3-F / Jarnac / Wendee
~~Abadih~~ / Mintaka, S & T scope / SS2: 6, 35,
+ several prominences.



*12183A12. 1900-0420/10-F/Jarnac/Miranda, Mintaka,
Pegasus, Obadiah, 18" + several other scopes/
TAAA, Bob + Lisa Summerfield, Gil,
Wendee / MDA appreciation Star Party.
Very successful! Horus did sets of films.
CN3e TV Crw (14.6. CN3 Fg. → CN3: 1^h 10^m E

121845 Monday, May 21/1400-1500/10-F/Jarnac/
Wendee, Bob + Lisa / Mintaka 18, 63 for SS-2,
plus several beautiful prominences.

12185E2. 2100-2300/
10-F/Jarnac/
Horus, Apollo - ^{Pegasus} Ophelia / - Wendee, Bob + Lisa /
~~Mintaka~~ CN3e TV Crw (14.6; CN3 Fg w/ Horus,
CN3F, Hydra.

1218613. 0320-0415/10-F/Jarnac/Miranda / -/
CN3 0^h 35^m E.

121875. Tues May 22, 2001. /0115-0130/10-F/Jarnac/
Echo / SS 2: 7, 71.

12188E2. 2130-2230/10-F/Jarnac /
FIRST LIGHT FOR NEWLY
NAMED

CUPID (QPID)
THE QUESTAR.

We saw Mars, + M13.

CN3e TV Crw with Pegasus, (14.6
CN3 Fg with Horus. Gil set up for a night
of pictures

- 12189M3. 030245-0415/10-F/Jarnac/Horus, Miranda,
Cupid/Bob Summerfield. / CN3 1^h East.
- 12190S. Wednesday, May 23/1030-1100-10-F/Jarnac/
Wendee/Echo/SS2 8, 77.
- 12191E2 1900-2300int/10-F/Jarnac/Horus, Pegasus/
Wendee, Gil/CN3 Fg. CN3e TV Gw (#. C13.3.
- 12192M3 0420300-0410/10-F/Jarnac/Miranda/-/
CN3 1^h East.
- 12193S Thrus May 24/1800-1815/10-F/Jarnac/Echo/
Wendee/SS2: 8, 46 / Very big spot.
- 12194E2 1930-2200/10-F/Jarnac/Obadiah/Wendee/
CN3e TV Gw-C14.6, with Pegasus. CN3F 5 pice
- 12195S Friday, May 25/1245-1300/10-F/Jarnac/Wendee/
SS2: 7, 35.
- 12196E2 1930-2300/10-F/Jarnac/Miranda,
Horus/-/CN3 Fg. CN3e TV Gw-C14.6.
CN3 1^h W. Peter J. over phone.
- 12197E Sat May 26/1930-2030int/10²-F/Cupid/-/
Moon.
- 12198E Sun May 27/1930-2015int/12-F/Jarnac.
- 12199S. ~~Sun~~ Mon 28/1600-1620/10-F/Jarnac/Miri/-/
SS2: 8, 27 but very windy so hard to be accurate.

*12,200E2. Monday, May 28/1945-2100/10-F/Jarnac/
Cupid/Wendee/ First light: Jupiter very low
in NW. Moon near first quarter.

The moon looked the best at low power. The evening
was perfect and peaceful. David does wonderful sky tours.

12201M2 0340 to 0415/10-F/Jarnac/Miranda/-/
CN3 0h20m E. ✓

12202F Tuesday, May 29, 2001/2000-2255/7-Fm/
Jarnac/ Installation of bug zapper, and
installation of Capella's plug.

12203S. before 12202) /1200-1230y/7-F/Jarnac/
Wendee/Capella + cord for plug-in.
Mini SS-2.

12204M3. 0250-0400/10-F/Jarnac/Miranda,
Capella, -1 CN3 1h E. Capella looked
at Mars for most of that hour, left it once!

12205E. Wednesday, May 30, 2001/2100-2300/
7-Fm/Jarnac/Capella/Wendee/Mars,
M57.

12206M2. 0255-0415/10-F/Jarnac/Obadiah/-/
CN3 1h East. Also Mars through Capella! ✓

12207E Thursday, May 31/2100-2200/Jarnac/
Capella and Castor/ M57 from both telescopes
now plugged in.

122088 M2 0400-0430/10-F/Jarnac/Miranda/-/
CN3 20^m E. ✓

122095 Friday, Maw's birthday / Jarnac / Pollux /
SS2: 5, 44.

12210 M2. 0300-0415/10-F/Jarnac/Miranda/-/
CN3 1h E. ✓

~~12210E~~ 12217
Saturday, June 2 / 2300-2330 / 7-Fm,
windy / Wendea / Moon.

122115 Sunday, June 3 / 1500-1600 / 10-F, windy /
Crd, Wendea / Pollux / SS2: 5, ~~50~~ 49.

12212 E2. 2230-2300 / 7-F / Jarnac / - / Wendea /
Moon.

122135 Monday, June 4, 2001 / 1415-1445 / 10-F, windy /
Jarnac / Pollux / SS2: 5, 56. Pics taken
of Starizona rebar work.

*12214 E2. 2200-2240 / 10-F / 7-Fm / Jarnac / - / Wendea /
Moon, beautiful night.

122155 Tues, June 5, 2001 / 1000-1015 / 10-F / Jarnac /
Echo / SS2: 6, 78.

*12216 E52 1600-1815 / 10-F / Shoemaker Dome
Shoemaker-Ley Cometograph project (CF#1
12217). Carolyn, Dean, Brent / Dismantling of Dome.

12218E3. 1920-2000 / 7-Fm / Shoemaker-Levy Dome,
Flagstaff / Dean, Carolyn, Brent / Galatron
CG 117 - Further checking of site. Moonrise.

*12219E4 2200-2315 / 7-Fm / Carolyn's house +
site of future Shoemaker-Levy cometograph
work in June, where we can search NW
N + NE sky from Carolyn's deck / Binocs
CN3F with Carolyn + Dean - checking
out possibilities of site. It will
work for us, when we want to stay
North when Sun is near solstice.

122205E Wednesday, June 6, 2001 / 1400-1930 /
10-F / Shoemaker-Levy Dome / Dean, Brent,
Carolyn horses / Dean broke up pad, we
took most of it to dumps, loaded + 700 lb
to be used as filler on west side of
new Jarnac Starizona pad. Loaded
Dome into truck + van.

12221E2 2050-2115 / 7-F / Carolyn's house +
site of future S-L Cometograph work in
June / Dean, Carolyn / NW, N, NE sky.

12222M3. 0230-0245 / 7-F / Jarnac / new concr

12223E Thursday, June 7 / 2015-2115 / 10-F / Jarnac
Miranda, Pegasus / - / CN3 30m W,
CN3e TV on C14.6.

122245 Friday, June 8/10-3-F/Jarnac/Mira/-/
SS2: 10, 75.

12225E2 2/30-2215/10-7-F/Mt Bigelow/61"
Wendee, Don McCarthy Astronomy Camp/
M51. Beautiful spiral arms.

122265 Sat June 9/10-F/Jarnac/1700-1730/
Mira/Vergil/SS2: 10, 82.

12227E2 June 9, 2001/1900-0300/10-7-F/Jarnac/
Wendee, Carolyn, Jean later joined by Jean and
Donna and Scott Tucker/Obadiah, Ophelia,
Telvue 85/CN3e TVCw (14.6, CN3F, several
pictures. Focusing of Obadiah.

122275 Sunday, June 10/2:35-4:00/10-F/^{Wayne J. obj}Jarnac/
31 Wendee, Carolyn, Jean, Wayne + Arlene
Johnson/Their own home + observatory.

12228E2 1800-2330/3-F/Jarnac/Telvue
Cupid, Obadiah/-/Wendee, Carolyn, Jean/
Mars! lots of detail, Syrtis Major, Moon.
earlier SS2 with Mira. 10, 30. CN3e
with Pegasus/CN3e TVCw (13.3/Telvue 85

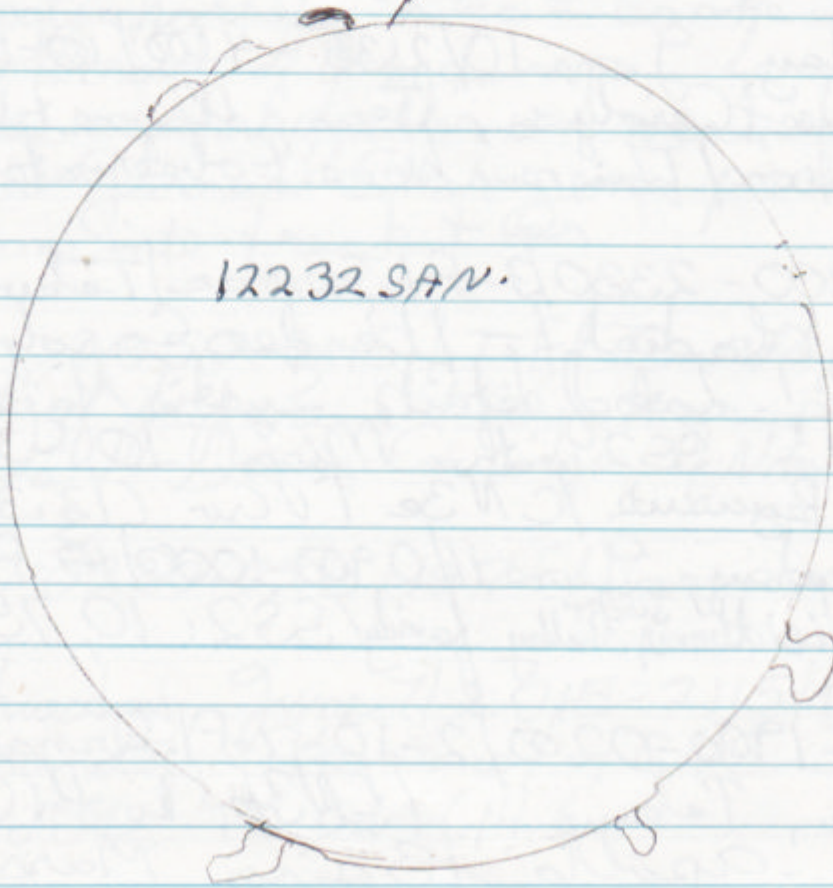
122295 Monday, June 11/0900-1000/10-F/Jarnac/
Mira/Wittmann, ^{Jack}Shelley family/SS2: 10, 75.

12230E2 1900-0200/2-10-7-F/Jarnac/Obadiah,
Ophelia, Telvue /CN3e with Obadiah
31 Ophelia-Apollo, 13 pics. Mars/Carolyn,

Wendee, Jean, Alex Schestine, + Dean /
beginning assembly of dome. / Jean
sang her songs, accompanying herself on
guitar, as work progressed under a
starlit sky.

Fu Tuesday, June 12/1945-0400/10-7-F/
12232 SAN 2 Jarnac / Obadiah, Apollo, Ophelia, Mirand-
Wendee Carolyn, Jean, Dean + Donna /
CN3e TVCup 64.6. CN3F 7 pairs, 14 pieces
Assembly of Dome til 2:15. Then CN3,
4.5m E. U Earlier, SS2: Promurances, see below.

12233S. Wednesday, June 13/1908-1920/10-F/
Jarnac, Wendee, Virgil / Mini / 10, v80.



12232 SAN.

- 12234S. before 32. 1100-1130/10-F-Jarvac/SS 2. 10, 77.
- 12235E2. June 13/14/ 2200-2245/10-F/Jarvac front /-/
- / nice sky. Night before trip!
- 12236S. June 14 / 0800-0830 / 10-F/Jarvac/Cupid/Wen-
lee, Virgil / SS 2: 10, 67.

These following sessions took place
during the African Eclipse - Montreal -
RASC - Toronto trip.

There are two kinds of light -
The glow that illumines,
and
the glare that obscures.

James Thurber.

I like darkness. It's cheap
E.B. Scrooge

12237E. June 14/15, 2001. 0125-0140/7-f/ in airplane above Montreal/Cupid/-/ look at the city of Montreal through Cupid's finder. Montreal- an outstanding view from exactly 37000 feet. I've never seen it from quite this high. I could easily see the curved shape of the island, and even set up Cupid for a look. It was difficult to get a good look through the telescope but I did get a look in finder mode. Then I put Cupid away and saw the city all draped perfectly right outside the airplane window. What a view! So this is a trip to Montreal. Now we're leaving for a side trip- to Africa.

12238S. June 15, 2001. 1400-1700/0-3-f/London, particularly in front of the Globe Theatre on the Thames/Cupid/David Taylor/SS 2. 12, 44.

12239E June 16 2130-2230/7-f/Southern Sun Intercontinental Hotel/Cupid/ Steve/ MARS. Solis Lacis. See Steve Drawing.

12240S June 17. / 1230-1330/10-f/ Sabi Sabi Game Reserve, Bush Lodge, Skukuza/Cupid/ S&T group/SS2: 13, 96. Some very bug spots!

12241SE2 1530-2140/10-f/Sabi Sabi/ Cupid/ our group/ At 3:30 pm we had an orientation session, and afterwards we piled into the jeeps for our first safari. That it was going to be a success was obvious when after less than 5 minutes we saw a herd of buffalo. Did you hear that? They were peacefully grazing as we were gazing. Then we saw- WOW! Three giraffes! Their necks were sooooo long! (Like me when I stick my neck out.) All this was enough, but then one of the other jeeps radioed that there was a leopard. So we drove pretty fast along the roads until we saw this leopard peacefully walking down the road. We drove on the grass and through the meadow to catch up with him. He stopped and looked at us, but we were all still and quiet, engines off. What a beautiful animal. I almost cried he was that beautiful, because I know how Wendee would have loved to see this. We couldn't have been more than 20 feet away. Then he did something amazing. He lay down, and rolled over, scratching his back like the Lima Bean and Bounder used to do. Our guide said that leopards are among the most intelligent mammals. Then he started walking toward us. I swear that he was looking straight at me- we really made eye contact. As he walked closer I moved to the far side of the back seat in the jeep I was sitting in. He walked till he was about 10 feet away, then turned toward the back of the jeep and passed us. Our guide said that he rolled over to hide his scent in preparation for a hunt. Then we walked into the field and camouflaged himself. We saw some Impalas grazing, and the leopard was watching them intently. We watched him while he watched them. We stayed there for about 15 minutes, but he didn't attack them. Nature in progress. I am glad I didn't see him attack the impalas though. Then we went somewhere for a beer and drink break. The sun had set and Mars was there. Suddenly Alpha and Beta Centauri and The Cross were right there, very high in the sky! It was fantastic! Leo I recognized despite its being upside down and Arcturus and Spica, but it was harder before I finally recognized Procyon, Sirius, and Canopus. Wendee would have just adored these animals and this day turning into night.

12242MS3. 0415-1000/ 9-f/ Sabi Sabi, near Bush Lodge, and vicinity/ Cupid/Rangers Matthew and Cameron/ CN-3, 30 minutes E. LMC and SMC. The observing this time was with Rangers Cameron and Matthew, who drove me to a good site nearby and we saw the LMC and SMC with 47 Tucanae, seen for the first time, and I did some comet hunting. Then we had breakfast and at 6:30 the bird walk started. It was not a bird walk but a safari- we saw two big male elephants eating trees- we were just a few feet from them. Their ears, we were taught, are their cooling system. They weighed 4-6 tons each. Then we heard a lion roar. What muscular strength they have. Then we saw 3 male lions and we followed them as they walked for over a mile, heading one direction, then another, to establish their territory. Wow! We also saw a giraffe, impala, waterbuck with a neat white ring around their backsides. Then a herd of 19 female elephants, and a little one about 3 months old- so cute!! He didn't know how to feed with his trunk yet. The elephant families seem family oriented, at least the females, with cousins and sisters all helping raise the young. Cameron made an elephant sound but they ignored it- they didn't react to it.

12243SE Monday, June 18/ 1400-2200/ 10-f/Sabi Sabi Conference room, then traverse safari, then dinner, then at room/ Cupid/ my lecture *Eclipses and More*. SS2: 10, 54., Traverse with Rhinoceros, and Hippopotomus

observing LMC, Eta Carinae is spectacular in Cupid. CN3 05min, West and South. Dinner under the stars, then final look at the Milky Way high overhead.

12244MS2 0415-0830/10-f/Sabi Sabi room/Cupid/just me/ CN3 1h 10m E. 47 Tucanae. We saw bushhawks, a Wildebeest— a particularly relaxed one, just enjoying his day. A baboon! And Venus, the Moon and the Sun all together in the sky with the Moon half way from Venus to the Sun. The big baboon by the light of the Moon was combing his auburn hair. A honey badger, small and quite rare, a lucky sighting. We saw lion tracks, probably from yesterday's trio. Most of the bedrock, I learned, is granite, with some basalt. A black Drorger? Bird. Two zebras, obviously relaxed since they still have their stripes on. The stripes might be to confuse predators, which is mostly the lioness. A greenback teren? bird. A shortsafari— just 2 hours, but a good one.

12245EM Tuesday, June 19/2200-0030/7-f/Lusaka, Zambia/Steve's Meade ETX/Roger Sinnott, Dennis Di Cicco, Steve O'Meara, Edwin Aguirre, Imelda Josen, other S&T people/ View of Alpha and Beta Cen, Crux. Repair of Steve's eyepiece on his telescope, check on Mars.

12246S/Wednesday, June 20/1100-1300/7-f/Lusaka/Cupid/many S&T expedition people/SS2: 6, 87.

12247EM2 1900-0100/10-f/ the eclipse site north of Lusaka/ Cupid, Steve's broken telescope, now usable, and other ETXs/ many S&T expedition people/Eta Carinae, Mars. We set up Cupid, and Steve set up his ETX, and Mars was a great success! I left Cupid on Mars since she was by far the best telescope there to look at it with, and Leif and the others were sending people over to look at Mars. The view was pretty good! We also looked at Eta Carinae and other objects, but Mars, overhead, was really stunning. I paid attention to where South was so I'd have an easier time setting Cupid up at this site tomorrow. Then we went back to the hotel in about half the time it took us to get to the site.

***12248S Thursday, June 21, 2001/1215-1730/10-f/the eclipse site north of Lusaka/Cupid, a second Questar, and many other telescopes/the entire S&T expedition/Total Eclipse of the Sun.

We arrived in plenty of time to set up, which we did— Steve and me, Dennis and Johnny Horne, all beneath a stark dead tree, kind of a nice backdrop to the Sun. I set up Cupid; apparently I did a really neat job of estimating where south was last night, because Cupid tracked better today than at any other time! Just for a few minutes when the Sun passed behind the dead tree branch, did I lose it. Before the eclipse began, Roger, Steve, and I conducted an eclipse orientation and discussion session. I quoted again from the preface of *Eclipse*; the group seemed really to like it. Later, Leif said he was very proud of the way we conducted that session.

I saw the partial phase begin right on schedule, and it quickly became apparent that Cupid was showing the jagged edge of the Moon very clearly. The Moon swallowed up the sunspots, which were mostly on the leading edge. I took off my glasses (their sun darkening wasn't needed any more) when about half the Sun was covered by the Moon. Then things started to happen. I didn't see the onset of the shadow as clearly as in 1998. As the crescent started to get really thin, darkness started to come in waves. About five minutes before totality, a flock of birds started chirping loudly— this was a tremendous effect since it's the first time I *know* I heard birds preparing to roost for the night just before an eclipse. There were cows around also; those who were near them saw them turn direction as if to go home, then the cowhands made them go back.

About three minutes before totality Steve saw shadow bands appear on the white pillow cases he had set up for that purpose. I saw them too! He was right— they look like what swimmers see when we're under water and we see the ripples in the water around us. That is what they looked like. My first shadow bands!

As the crescent continued to thin, I saw through Cupid the crescent begin to break up into pieces— Baily's Beads! But I saw them only through the filtered telescope, not with the naked eye. The whooping began as what was left of the Sun rapidly disappeared. Steve pointed out the corona beginning to appear about a minute before second contact. Because there was a big valley at the edge of the Moon, the diamond ring at the onset of totality was long and magnificent, and the corona grew bright and sharp. And what a corona! Its shape was circular, but it was unbelievably complex, streamers going out every which way along the Sun's complex magnetic fields. Steve called my attention to two bipolar extensions going out maybe four degrees, as far out as

Jupiter. This was a really sophisticated crowd— after a minute of whooping, they fell silent and really got to work. We could see the edge of the shadow all around us. I cried a bit because I really wanted Wendee to be here with me. Steve felt the same way about Donna. For more than three minutes night hung across the land. Cupid really showed a superb image of the corona and many prominences, including a really huge detached one. They weren't as red as in 1999 but this one was by far the biggest one I had ever seen during an eclipse. It was not surprising since I had seen so many recently, and a guy with an H-alpha filter said there was a big one.

The really unusual part began as totality ended with another big diamond ring. Steve hid the Sun's bright limb with a branch of the dead tree, and watched the corona. Dennis was filming, and we called him over and he *filmed* the corona. I saw it for perhaps $4\frac{1}{2}$ to 5 minutes *after* third contact; Steve saw it for $6\frac{1}{2}$, and that was confirmed by Dennis's video. So we really had corona for $1 + 3\frac{1}{4} + 6\frac{1}{2} =$ a total of almost 11 minutes, and had we known to watch it earlier, we might have had it for 15.

With that, the Moon departed, and we stayed as the Moon gave up the solar spoils it had won, to quote Peltier. After 4th contact we packed up and slowly made our way back to the hotel, seeing sunset on the way.

Results from experiments:

- 1) Try to see shadow bands either before or after totality. Successful before totality.
- 2) Try to see Baily's Beads. Yes, but only through filtered telescope.
- 3) Study shape and extent of the corona. Successful.
- 4) Try to see the Chromosphere. Did not notice it.
- 5) Allow Steve to use Cupid to draw the Corona and prominences. Successful beautiful drawing.
- 6) Try to see post-totality Baily's Beads. No, but spectacular diamond ring.

Tonight, we had a celebratory dinner for the whole group. After the meal a Zambian cultural group, in costume, played native tunes and dances with African drums. As I was watching, my mind went back to *The Golden Book of Astronomy* and its painting of African tribesmen beating drums and dancing to ward off a total eclipse. Suddenly I understood that this was the eclipse I saw in that book almost half a century ago. The event we had come so far to see was the one I dreamed of from that early book.

12249E2/2200-2230/7-f/Holiday Inn, Lusaka/ after polite robbery/Cupid/-/CN3, 10M E.

12250M3/ 0500-0540/7-f/Holiday Inn, Lusaka/Cupid/-/Cn3- 25min E.

12251S/Friday, June 22/11:30-12:30/ 10-f/Elephant Hills Hotel, Victoria Falls/Cupid/-/SS2:8,88. Didn't have money for the tip for the porter who brought my bag in during this session, but after I paid for tomorrow's Flight of the Angels over Victoria Falls, then I tipped him.

12252S2/1530-1800/10-f/Zambeze River Cruise/Edwin and Imelda and others/Very nice and peaceful cruise with hippopotomi, crocodiles. Sunset and faint green flash.

12253E3/2230-0130/10+-f/Victoria Falls Observing site/Cupid, other telescopes/S&T people/Very fine night, with Southern Cross lower than before; Small Magellanic Cloud rising in SE, 47 Tuc, Omega Cen, and Mars. Eta Carinae homunculus. Beautiful night.

12254M4/0500-0540/10-f/Elephant Hills Hotel with fine view to the East/Cupid/CN3 30m E. Beautiful view of Comet Linear (the one I saw last winter, but much brighter now, ~3rd magnitude. Very easy to find high in the east.

12255S/Saturday, June 23/1400-1700/10-f/Victoria Falls/Steve/beautiful view of the falls.

12256E2/1900-2200/9-10-f/ Victoria Falls Observing site/Cupid, other ETX telescopes but not Steve's/the S&T crowd plus the president of the Irish Astronomical Society/Crescent Moon at first; then NGC 3819 (?), a planetary nebula, quite blue, in Crux. Eta Carinae Homonculus seen again and confirmed with Eta much higher

in the sky than last night. Mars, Omega Cen, Jewel Box. Nice night, though much hazier than last night.

12257MP3/0500-0510/3-2-f/Elephant Hills Hotel/-/-/some clouds.

12258E/Monday, June 25/1700-1800 int/3-f/Johannesburg/ride to airport/-/Crescent Moon.

12259M2/0200-0500 int/en route from Johannesburg to London, on second floor of "Whale Flyer," our British Airways 747/ Cassiopeia and Perseus, later Pleiades, Venus.

12260E Tuesday, June 26/2100-2130/7-f/3577 Atwater/Cupid/Mom/Mars.

12261S Wednesday, June 27/1450-1505/7-f/3577 Atwater/Cupid/Mom/SS2:6,22.

12262S2 1715-1730/1-f/ 3577 Atwater/Cupid/Mom, Constantine /view of distant trees and building.

12263E3 June 27/.2130-2230/3-f/3577 Atwater/Cupid/Mars. The beautiful Eye of Mars, Solis Lacus, or maybe Syrtis Major.

12264M3/0030-0110/3-f/818 and vicinity/-/-/ I took a brief walk along Upper Belmont Avenue, just from 818 to Sunnyside and back again. The clouds had cleared somewhat so there were a few stars out, and it was wonderful nice. The new addition they put on 818 was very large, but if it is only two floors it isn't much bigger in square feet than the office we are adding on. I have to admit I was a bit envious when I first saw the addition to 818— what would it have been like to live there?— but now I think Wendee and I are going to have something even nicer, and better for us. It was a nice little walk.

12265S. June 29/0945-0950/7-f/Fanshawe College/Cupid/-/SS2 through window; 3, 4.

12266E2. 2300-0000/2-f/Fanshawe College/Cupid/Roy Bishop/Look at red lights in tower at high magnification.

12267E. June 30/2300-0000/3-f/Fanshawe College/Cupid/Roy, Peter, and a group from the RASC/Mars, Moon, then clouds and the red light.

12268EM/July 1/2130-0220/7-3-f/Fanshawe College/Cupid, and ^{Eric Clinton's} 5-inch Astrophysics refractor/Roy, Leo Enright, Peter, Geoff Gaherty, ^{Eric} others/Mars, Moon. Geoff identified the crater we were seeing as Gassendi.

Tonight we observed outside in the area where we all had taken our sweltering picture yesterday. Much cooler and nicer, Peter and I sang songs out there. Cupid was up against a big Astrophysics and people couldn't tell which one was better! Roy said the the 5-inch astrophysics had a brighter image but that the detail was comparable. Then we looked at Crater Gassendi on the Moon, which Geoff Gaherty, author of "With the Planets" in Skyward in the 1960s, identified.

The party then went inside and the singing went on and on— Stars go nova, Battle Hymn, Peter did the constellation song, and other stuff. One person did a very beautiful rendition of Danny Boy. A great hootenanny evening that I left at 2:20 am; called Wendee briefly and went to sleep. I love Wendee!

12269S/July 2/1230-1320/3-f/Jeff and Mindy's home, Toronto/Cupid/Jeff, Mindy, Marci, Richard, Leo Enright/SS2: 4, 14.

12270S2/2040-2055 CST/10-f/flight to Dallas, at 35000 feet/-/-/Sunset.

122719. July 3/1700-1800/2-F/Jarnac/Dean,
Wendee/Completion of Dome!

122729. July 4/1000-1200/3-F/Jarnac/Wendee/-/
SS2 with Pegasus in Shoemaker-Levy
Dome! / SS2: 6, 22.

12273E2. 2100-2200 Hi-F/Jarnac/Wendee/-/
Fireworks displays.

12274M3. 0500-0530/3-F/Jarnac/Cupid/-/
Beginning of penumbral stage of Lunar
Eclipse. Moon set Orion after eclipse
began, but clouds obscured it. Saw
Venus as half phase planet.

12275S. July 5/1400-1700/0-F/Jarnac/Pegasus/
Wendee, Dean, Steve O'Meara on phone/
Thunderstorm blows off S-L Dome
Shutters. Dean came, we ~~re~~ put
them back and completed the locking
mechanism which had not been done
on July 3, 122712S. Wendee also devised a
rope system for added security.

12276E2. 1845-2000/2-F/Jarnac/-/Wendee/
Sunset through clouds, walk through
new office.

12277S. July 6/1300-1330-13-F/Jarnac/Pegasus/-/
SS2: 2, 4.

12278S. July 7, Saturday / 1800-1830 / 3-2-F / Jarnac / Shoemaker - Levy Dome / Pegasus / SS2: 3, 15.

12279S. July 8, Sunday / 1700-1730 / 3-F / Jarnac / Pegasus / - / SS2: 3, 20.

12280E2. 1910-2150 / 3-F / Jarnac, Shoemaker - Levy Dome / Wendee / Pegasus / CN3: 30 minutes NW.

12281S. July 9, Monday / 1830-1915 / 2-F / Jarnac / - / Wendee / sunset amid clouds, nicely red.

12282S. July 10, Tuesday / 1000-1900 / 3-F / Jarnac - S-L Dome / Pegasus / Dean, Wendee / SS2: 4, 25. Faculae on edge. Then let's talk stars, then checking the beautiful job Dean did putting mortar on the base of the dome. I helped a tiny bit.

12283E2. 2030-2200 / 3-F / Jarnac / S-L / Pegasus / - / CN3 20mLW. Mars w. dust storm. Features barely visible but there still.

12284S. Wed, July 11 / 1200-1300 / 3-F / Jarnac / S-L / SS2 with Pegasus 14, 15.

12285E2 ~~Thurs~~ Wednesday, July 11 / 2020-2115 / 3-F / Jarnac - S-L / Pegasus / - / CN3e TVow C13.3.

12286S. Thur July 12 / 1300-1700 / 2-F / Jarnac / Cupid /

SS2: 5, 12. Later-tour of S-L Dome with
Wendee, Fred, + Carol.

12287 E2. 2000-2130 / 2-F / Starizona Pad / -Dean,
Steven, Wendee / drainage work on pad.

12288 EM Friday, July 13 / 2230 to 0130^{CDT} / 3-F / The
Minnesota Astronomical Society Cupid,
other telescopes / Peter Jedicke, MAA members /
Mars. Cupid's view showed more detail on
Mars, despite its dust storm, as than
the MAA telescope. Moonrise through
haze on way to hotel.

12289 EM Saturday, July 14 / 2200-0130 / 3-F /
Minnesota Science Center / Cupid, Meade
ETX, Celestron, CCDs / Peter, Mel Peterson,
Elizabeth Waagen, Richard Barry + his
group, Scott Roberts, others. / Mars.
Cupid showed polar cap + marking seen
despite Mars dust storm.

12290 EM Sun, July 15 / 2200-0100 / 3-F /
Radisson Hotel, St Paul, Mn / Cupid /
Peter / Mars. Panhandler came by.

12291 ES Tuesday, July 17 / 1200-1300 / 3-F / Jarnac /
Pegasus + Wendee / SS2: 6, 22.

12292 E2. 2030-2145 / 3-F / Jarnac / Miranda /
Wendee / 9N3 30m W.

12293M3. 0350-0410/10-F/Jarnac/Miranda/-/
CN3 1^h to E. at last!

12294S. Wednesday, July 18/1120-1150/#3-F/Jarnac/
Mini/-/SS2: 6, 30.

12295ER 1930 to 2030/2-F/Obadiah/Wendee, Lynn
Underwood + friend Mark/Mara.

12296M3 0340-0420/10-3-F/Jarnac/Miranda/-/
CN3 30^m W. - probably E instead. (May 2 2002)

12297S. Thurs July 19/1230-1330/3-F/Jarnac/Pollux/-
Wendee/SS2: with Pollux, 7, 48.

12298S Friday, July 20/1700-1730/3-F/Jarnac/
Echo/Wendee/SS2: 5, 34.

12299ERS. Saturday, July 21/0915-0945/3-F/Walter
Haw's house/1-Cupid/-Walter/SS2: 5, 30.

12300ER. 2100-2200/3-F/Hampton Inn, Las Cruces/
Cupid/Wendee, Nannette, Mark, Summer/Mara.
No detail. Dust storm raging.

12301S. Sunday, July 22/1030-1045/7-F/Hampton Inn,
Las Cruces/Cupid/Wendee, Nannette, Mark,
Summer/SS2: 4, 39.

12302M# Mon July 23/24/
0350-0410/10-F/Jarnac. Beautiful
morning with Miranda/-/CN3 1^h 15^m E.

3 catalogue objects found:

NGC 1491, a reflection nebula

L 100

04 03.4 + 51 19.

NGC 1333 reflection nebula.

03 29.2 + 31 25.

L 44

NGC 1579 a third reflection nebula. L 50

04 30.2 + 35 16.

These may be related to the Merope,
even though they are not that close to it.

12303S. Tues 24 ~1200-1230 ~|3-f| Jarnac / Mira |
-| SS 2 4, 47.

12304S. Wed. 25 1300-1330|3-f| Jarnac / Mira | -|
SS 2: 5, 49.

12305S. Thu July 26|1500-1530|3-f| Jarnac / Mira |
Art Boehm / SS 2: 5, 45.

12306S2 1900-2000|2-f| Jarnac | -| -| Wendee/
Sunset through cloud - so TWO green
flashes, one ^{against} through clouds, one
against mountain.

12307M3P 0250-0300|2-f| Jarnac | -| -| too cloudy
to set up for comet hunting.

12308S. Fri, July 27|10:00-11:00|3-f| Jarnac / Mira |
Wendee / SS 2: 4, 37.

12309E2. 1800-2130|3-f| Jnt. Lemmon, chez Don

Davis / Don, Diana, Wendee / Cupid / Moon -
rays not at full 360° around Proclus, more like
 270° , indicating a shallow angle impact.
Mars, no detail due to dust storm. Beta Cygni.

12310S Saturday, July 28 / 10:00-11:00 / 3-F / Jarnac /
~~Also~~ Mini / Wendee, Jason Thomas / Et SS2: 4, 29.

12311S: Sunday, July 29 / 1730-1900 / 0-F / Jarnac /
- All the Koenigs! Dean's family + sister
Karen's family / A look at both observatories +
the Staringna pad.

12312~~SE~~M2 / 0400-0430 / 3-F / Jarnac / Miranda / - / CN3
15 minutes E.

12313S. Monday, July 30 / 1015-1045 / 3-F / Mira / - / Wendee
SS2 6:30.

12314^SE2 1700-1900 int / 3-F / Jarnac / - / Wendee /
Sunset + green flash. Disipating cloud
in west BUT clouds increasing in east.

*12315M3. 0250-0430 / 10-3-F / Jarnac / Miranda / - /
CN3: 90 min E.

12316S. Tues July 31. / 18¹⁵~~30~~-1845 / 2-F / Jarnac / Echo /
Wendee / SS2: 2, 9. Some cloud dimming
part of Sun.

12317S. Wed, August 1 / 1020-1045 / 3-F / Jarnac / Mira / - /
SS2: 4, 29.

- 12318S. Thursday August 2 | 1230 to 1330 | 3-F | Jarnac /
Mintaka | Wendee, Richard Feldman, Lana Feld-
man / SS2: 3, 52.
- 12319S. Friday, August 3 | 10:00-1030 | 3-F | Jarnac /
Mini Wendee | SS2: 6, 55.
- 12320SE2 1900-1930 | 2-F | Jarnac | - | Wendee /
Nancy, Doug + Tessa + Dale Fish / - Sunset and
Moonrise.
- 12321S Sat August 4 | 1100-1130 | 3-F | Jarnac / Mintaka | - |
SS2: 7, 165.
- 12322M2 0130-0245 | 3-F | windy | Jarnac / Myerice
and Esther + CDs | CN3⁶ several shots for search-
ing. 0137, +41, 15, 1pic thought was lot of
galaxies. Probably not. Just a perpic & cloud.
- 12323S. Sun Aug 5 | 1530-1550 | 2-F | Jarnac / Mintaka / Wen-
dee | SS2: 6, 96.
- 12324E2. 1930-2040 | 0-F | Jarnac | - | Ricoh Camera /
Lightning strike photos behind observatory.
- 12325S. Monday, August 6 | 8:35-8:50 | 3-F | Jarnac /
Mini | - | 9:158 with SS2.
- 12326E2 2015-2200 | 3-F | Jarnac / Miranda, Horus / Gid,
Wendee | CN3 Oh 25^mW.
- 12327S. Tues 7 | 12:30-13:00 | 3-F | Jarnac / Mintaka | - | SS2: 9, 10.

1232852. 1700-1740/3-F/Jarnac/Pegasus, 8" Miranda
finder/Wendee, Dean, Donna/Dean is planning
to give Pegasus a set of encoders.

123295 Thursday, August 9/12:00-12:20/3-F/Patsy
Tombragh's house/Wendee, Patsy/Cupid, 16"
SS2? 2, ~12 through trees and haze, set up
next to Clyde's 16-inch.

+ 123305E2. 192000 - 2045/1-2-F/Carlsbad Caverns
entrance/Wendee, many others, camera/
Flight of the bats - 100,000 of them, one of
which probably touched my head!
- no one really knows what makes them
leave, although one can predict it almost
to the minute. Always dark where bats are.
- Mexican Free-tailed bat. Free-tailed.

What an amazing experience!

These bat extravaganzas have been
followed by the public here since 1929.
The bats use a high frequency sound called
SONAR to navigate. It is the only flying
mammal, bats have been extraordinarily
successful - almost 1000 species of bat.

1233152. 0545 - 0700/2-F/Carlsbad Caverns entrance/
Wendee ^{Wendee's binoculars} & Cupid/We began by sighting the
Moon - last gibbous (waxing), then Wendee
saw Saturn's rings extended more than she
had ever seen them. Then we put Cupid
away and we then walked to the amphitheatre

in front of the cave entrance. When we got there, Venus and Jupiter, close in conjunction, appeared through the clouds. Then the bats started to come. A few at first, then hundreds, then thousands. They 'fly' about, then die-horn towards the cave and fly in through the front entrance. We could clearly see them entering the cave when using Wendell's binoculars. It was an absolutely stupendous show.

"No aspect of nature... is more mysterious than the flights of these... constellations. The constellation forms, as I have hinted, in an instant of time, and in that same instant develops its own will. ... There is no such thing, I may add, as a lead bird or guide... By what means, by what methods of communication does this will so suffuse the living constellation that its dozen or more [tens of thousands] tiny brains know it and obey it in such an instant of time? Are we to believe that these birds, all of them, are machines, as Descartes long ago insisted, mere mechanisms of flesh and bone so exquisitely alike that each cogwheel brain, encountering the same environmental forces, synchronously lets slip the same mechanic ratchet? or is there some psychic relation between these creatures? Does some current flow through them ^{and} between them as they fly? Schools of fish, I am told, make similar

mass changes of direction...! We read another and a wiser and perhaps a more mystical concept of animals. Remote from universal nature, and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours they move finished and complete, gifted with extensions of the senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth.

- Henry Beston, The Outermost House (1928) p. 24-25.

And as if in sync with Beston's prophetic words, hundreds of cave swallows all began left to leave the cave as their day began, even as the bats' night was ending. And behind all this activity at the entrance, the sky was brightening and the sun rose.

12332S. Friday, August 10 / 1500-1530- / 3-F / ~100 mi W. of Sonora, Texas / Cupid / Wendee / SS2: 6, 78.

12333E2. 2215-2230 / 7-F / Sonora, Texas, at Best Western Inn / Cupid / - / Mars. Glibious phase, probably due to dust storm.

12334S. Saturday, August 11 / 1020-1035 / 8-F / Sonora, Texas at B.W. Inn / Cupid / Wendee / SS2: 5, 89.

12335S. Sunday, August 12 / 5:10-5:25 / 3-F / West of Birmingham, Ala. / Cupid / 5, 38 for SS2. We did this at a beautiful rest area on I-20. Wendee also looked at the spots this day.

12336S. Monday, August 13 / 5:25-5:40 pm EDT / Forbidden Caves / Wendee. / Cupid / SS2: 5, 35.

12337E2. 2200-2300 / 4-F / Bristol, Va / Cupid / - / Possibly one perseid, Mars, possibly one albedo feature through dust storm.

12338S. Tuesday, August 14 / 1255-1310 / 3-F / Rest stop on I-81 near (S. of F) Grand Caverns / Wendee / Cupid / SS2: 6, 26.

12339EP2 ~ 2030-2040- / 5-F / Luray, Va / - / Wendee / Darkening sky, lots of light pollution.

12340E3 2230-2300 / 5-F / Luray / - / Wendee / Cupid / Mars. 0 Perseids.

123415. Wednesday, Aug 15/1525-1540/3-F/ Rest stop
on 95 betw. Washington + Baltimore/Cupid/
Wendee/SS2: 6, 18.

12342E2 2230-2245/6-F/Joan-ellen, Wendee/-1-Little
Mae/Mars.

12343E. August 16, Thursday/~2100-~2130/3-F/Joan-
ellen's house/Wendee/walk.

12344S Friday, August 17/0835-0850/2-F/Joan-ellen's
house/Cupid/Wendee, Philippe/EA SS2: 2,5.

12345SE Saturday, August 17/1315 to 2145/3-2-F/
STELLAFANE/Constantine, Wendee, Joan-
ellen, Maw, Gail, Marc, and about 2,500
others/Cupid/Stellafane convention.

a) 1340 SS2 with Cupid. 4, 17.

b) 1820 SS2 again with Cupid;
Constantine + others present.

Some stars at night; some clearing.

12346M2. 0410-0510/10-3-F/Jo Bedlam -
Annette + Len's house/Cupid/SS CN3 Oh
40^m East. Possibl something. Probably
globular or planetary nebula, or NGC 1624,
cluster with nebulosity. ?

12347S. Sunday, August 19/1555-1615/3-F/
Bedlam - Wallach house/Cupid/Wendee,
Maw, Annette + Len/SS2: 7, 39.

12348S. ~~Monday~~ ^{Tuesday} August 21/22/11:30-13:30/0-3-F/
A SC rest stop on 87, then Natural Stone Bridge
and caves, Pottersville/Wendee. First, we
stopped at the T-87 rest stop about 3 miles
from the old Adirondack Science Camp. There
we set up Cupid to look at some trees &
mountains in light drizzle. Then we drove
to Natural Stone Bridge & Caves, Pottersville, and
by then it had stopped raining and
partially cleared for the sun reading. The
session ended with a hike through the
Nature trail around the Caves.
SS2 with Cupid: 8, 65.

12349E2 2045-2115/3-F/Cobleskill/Richmondville,
near Howe Caverns, NY/Cupid/Wendee/Mook.

12350S. ~~Tuesday~~ ^{Wednesday} August 22/23/0850-0905/
7-F/grocery store ⁱⁿ Cobleskill, NY/Cupid/
Wendee/SS2: 8, 64.

*12351E2. 1920-2000/3-F/Altoona, Pennsylvania/
Cupid/Wendee. (Around 1958 or so, in
Hebrew School, I saw what seemed to be a
comet but which was probably a high-
flying jet trail lit by the Sun. Tonight, for
a minute, we saw the same thing - I think,
exactly. Same brightness, same type of
image. Also saw crescent Moon.

12352E3. 2305-2335/3-F/very brightly at Motel 6, Altoona, Pa.
Cupid/1 Vega, ϵ Lyrae.

- 12353S. Thursday, August 23/24/19:25-20:40/2-F/
 Connelville, Pennsylvania to Uniontown, Pa./Cupid/
 Wendee. At Connelville: SS2: 4, 23. through
 clouds but some obvious big spots.
 At Uniontown MacDonalds, the Moon through
 Cupid.
- 12354S. Friday, August 24/25/4:05-4:20pm EDT/
 3-F/ Marysville, Ohio/Wendee/Cupid/SS 2:5, 44.
- 12355S. Saturday, August 25/9:20-9:40am/Marysville/
 Cupid/Wendee/SS2:5, 45. Partly cloudy +
 hazy.
- 12356S. Sunday, August 26/12:00-12:40/3-2-F/
 Debbie + Joe Sattler's home/Cupid/Wendee and
 Debbie, Joe, Jewell Sattler/SS2: 4, 31. Nice
 large spot. ☉
- 12357S. Monday, August 27/15:00-15:30/2-F/Onyx Cave,
 Cave City, Kentucky/Cupid/Wendee/SS2: 3, 15.
- 12358S. Tuesday, August 28/10:00 to 10:30/3-F/
 Mammoth Cave National Park/Cupid/Wendee
 and 2 Park visitors/SS2: 5, 44.
- 12359S. Wed. Aug 29/3:1350-1410/3-F/Blanchard
 Springs Caverns, Arkansas/Wendee/Cupid/
 SS2: 7, 42.
- 12360E2. 2045-2100/2-F/Branson, Missouri/Cupid/-/
 Moon.
- 12361E3. 2150-2210/3-F/Branson/Cupid/-/Moon. Tycho.

- *12362S. Aug 30, 2001 / 1725-1740. 13-F / Joplin rest area / Cupid / Wendee, others / SS2: 4, 31. through clouds. In honor of Harlow Shapley.
- 12363E2. 2115 to 2130 / 7-F - 7 at last! / Tulsa, Oklahoma Motel 6 / ♀ Cupid / -1 Moon, Mars. (♂ Both are gibbous.) Mars is also smaller than before. ? feature in center, probably not.
- 12364S. Friday, August 31, 2001. / 13-1315 / 12-F / (most SW) Oklahoma rest area / Cupid / Wendee / SS2: 4, 23. Sun partially obscured by haze
- 12365S2. 3: 1505-1520 / 3-F / Vega, Texas / Cupid / Wendee / second SS2, now Sun is clear: 6, 47.
- 12366E3 2000-2100 / 3-F / Mark, Nanette, & Summer's house / Cupid / ~~the~~ Nanette, Summer, Wendee / light atop Sandia mtns. Albireo.
- 12367M4 0400 to 0540 / 7-8-F / M, N, & S's house / Cupid / Nanette / CN3 1^h 20^m E.
- 12368S. Saturday, September 1, 2001 / 3-F / M, N, & S's house / Cupid / Summer, Nanette, & Wendee / -SS2: 5, 56.
- 12369E2. 1500^S int to 2000, then 2005 to 2200 / 3-F / Rest area M, N, & S's house / Cupid / Mark, Nanette, Summer, Manny & Barbara, Gilbert and Christine, and Wendee / Wendee pointed out at first

the presence of a sundog, and later moon-rise. Then we observed the Moon, Arcturus, Mizar, + tramway lights.

123705. Sunday, September 2, 2001/0830-0850/3-F/
JN, N, and S's house/Cupid/Summer/SS2: 7, 58.

1237152. 1240-1255/⊕ 3-F/Tombaugh house/
Patsy, Wendee/Cupid/Second SS 2 today.
Sky not as steady, but the spots had
changed in just a few hours: SS2: 7, 33.

12372E3 2130-2145/7-Fm/Jarnac at last/Full Moon.
♂ Sco bright.

12373E Tuesday, 4 Sept/2000-2030/3-F/Jarnac,
drive home to Jarnac earlier/-/Wendee,
Wendee saw constellations - rare after
this cloudy summer. Then when we got
home I went out and saw ♂ Scorpii very
bright still. Where $\alpha = 1.1 + \beta = 2.6, \delta = 1.6.$

123749. ~~Thursday~~^{Wednesday}, 5 September/1730-1800/10-F/
JARNAC/Cupid/Wendee/SS2: 6, 68.

12375E2. 1930-2030/10-F/Jarnac/Miranda/-/SS:
CN3 30 min E.

123765. Thursday, 6 Sept/1720-1750/10-F/Jarnac
Lynn Underwood/Cupid/SS2: 7, 85.

12377E2. 2000-2130/10-F/Jarnac/Obadiah/Wendee/
CN3 45m W. Beautiful sky.

12378S. Friday, September 7/-1200-1230/10-F/Jarnac/
Cupid/-/SS2 with Wendee/- SS2: 7, 105.

12379E2 1920 to 2140/10-F/Jarnac/Wendee/
Obadiah/CN3 0^h53^mW. Finally a clear
sky - a beautiful night.

12380S. 1515-1540/Sept 8/10-F/Jarnac/Cupid/- Virgil/
SS2: 8, 101. Sat. Sept. 8.

12381EM2 1900-2300 110-7-fm/ Jarnac/Wendee,
Sheldon at Starizona Obadiah [Wendee, the new
Celestron 11"/ CN3 - 1^h20^mW. Sheldon
used his new 11" telescope at Starizona.]

12382S. Sunday, September 9. (0930-1015/10-F/
Jarnac/Cupid/Virgil, Wendee, electric
man / SS2: 9, 142. Last night (12381E4)
Wendee noted, that even though other
planets are brighter than Mars right
now, Mars's red color makes it prettier.

12383E ~~M~~ Sunday, September 9/120-2130/10-F/Jarnac/
Wendee/Obadiah/CN3 Fg - 4 pier.

12384E Mon Sept 10/~~09~~ 2000-2115/3-F/Jarnac/-/
Wendee/weather checks.

12385S. BLACK TUESDAY, September 11/1750-1810/
3-F/Jarnac/Echo/Wendee/SS2: 9, 76.

12386E2. BLACK TUESDAY, SEPTEMBER 11, 2001/
1930-2200/3-F/Jarnac/Obadiah/At last,
completion of set from 2 rights ago.

12387B. Wednesday, September 12/1400-1730/3-0-F/
Jarnac/Cupid/SS2: 9, 105. Later, Dean
returns Miranda's 8" guiding scope, &
Wendee, Gil, Carol & Virgil inspect site.

12388G. Thursday, Sept. 13/14/0920-0940/2-F/
Jarnac/Cupid/-/SS2: 9, 57. Sun veiled
through clouds, on porch of new building.

12389S. Fri Sept 14/15/1315-1330/3-F/Jarnac/-/
SS2: 9, 60.

12390S. Sat Sept 15/16/1100-1300/3-F/Jarnac/-/
Cupid/SS2: 9, 88.

12391E2. 2200 to 2300 int/2-F/Jarnac/-/Wendee/
Some stars & Mars. Test of new special FDA
shielded light.

12392S. Sunday, Sept. 16/17/170-1810/3-F/Jarnac/
Cupid/-/SS2:

12394E2. ⁻¹⁰⁻ 2000 to 0215 19½-F/Jarnac/4 big scopes
3EM/Obadiah/Wendee, Scott, Larry & Starryona/
-1 CN3 Fg - 4 pics. Later visited with
people at Starryona pad.

12394M. 0400-0510/10-F/Jarnac/Miranda/Larry
on pad/CN3 @ 45^m East.

⁴⁰²
12394S. Monday, September 17/18/1000-1015/10-F/Jarnac/
Cupid/SS2: 4, 36.

12395E2 2000-2100/3-10-F/Jarnac/P/Horus,
to Ken Graun's telescope / Ken Graun, Wendee,
Gil / Setting up for CN3 fg.

12396M2. 0400-0500/10-F/Jarnac/Miranda/-/
CN3 40^m E! Proper malfunction - no
Kreutz search.

12397S. 0500-0530/10-F/Jarnac/Cupid/-/
SS 2, 6, 50. Tues. 18/19

12398E2 1930-2130/10-F/Jarnac/Gil/Horus/
Gil / Kreutz startup and Jarnac code
acquisition attempt.

12399S. Wed 19/20/11:00 to 1330/10-3-F/Jarnac/
Cupid/Wendee/SS2: 8, 80?

12400E2. 2000 to 2330/10-F/Jarnac/Wendee, Gil,
Ken Graun / Obaidial, Horus, Minerva / -/
CN3 fg. 6 pice.

12401M. 0400-0540/10 but 3 in E / -F/Jarnac / -/
CN3 fg. 18 successful pice.

- 12403E. Thurs 20/21/1900-2300/10-F/Jarnac/
Wendae, Ken G, Larry + Scott + others / -
several telescopes.
- 12404M2 0400-0500/10-F/Jarnac/Minerva/-/
CN3fg Kreutz search. 18 pics.
- 12405E Fri Sept 21/22/7-Fm/Jarnac/evening session.
- 12406M2 0400-0545/10³-F/Jarnac/Minerva/-/CN3fg
Kreutz search / 18 pics.
- 12407S. Sat Sept ~~21/22~~^{22/23}/1230-1530/10-F-HOT!
Mini 1-1 SS2, 8, 142.
- 12408M2 ~~SM204~~^P 0510-0520/3-F/Jarnac/-/-/overlapt.
Dawn.
- 12409S. Sun Sept ~~22/23~~^{23/24}/2-F/Jarnac/Echo/Wendae/
Gil, Carol/SS2.
- 12410M2 2000-2100/10~~2~~ 3-F/Jarnac/Horus/
Gil, Wendae/test.
- 12411M3 0400-0530/9-10-F-windy/Jarnac/
Minerva/CN3Fg - Kreutz Search. 18 pics.
- 12412S. Mon Sept ~~23/24~~^{24/25}/1300-1800/10-F/Jarnac/
Mira/-/SS2: 11, 87.
- 12413E2. 1900-2230int/7-F/Jarnac/Horus/Gil, Wendae/
CN3Fg test. Moon + Mars conjunction.

12414M3 0400-0530/10-F/Jarnac/Minerva/-/windy/
CN3Fg Krentz - 18pics.

12415S Sept 25/26/0830-0935/10-F/Jarnac/
Mini/-/SS2 10, 112.

12416E2. @ 1800 to 2300/7-Fm/Horus, Obadiah/
first; at FL Pao's, we described the
just-past first quarter Moon, the night
before Kol Nidre. Then we met Gil - his
program still having difficulty. Through
Obadiah, later Wendee and I looked
at a gibbous Mars (? pole cap) + Moon.

12417M3 0400-0500/10-F, less windy/Minerva
Horus/CN3Fg Krentz: 18pics, several
with Horus. (out-of-focus.)

12418S. Wednesday, Sept 26/27/10-11:00/Jarnac/
SS2: 14, 152.

12419E2. 1900 ~~21~~ 2130 int/7-Fm/Shul/Wendee/Kol
Nidre Moon.

12420M3. 0400-0530/10-F/Jarnac/Horus, Minerva/
CN3fg 18pics Minerva, a few out of focus ones
with Horus.

12421S. Thursday, Sept 27/28/.

12422E2 2000-2200 int/7-Fm/Jarnac/Gil, Wendee/
Horus, Minerva / focus test on Minerva

- 12423M3 0410-0530/10-F/Jarnac/Minerva, Horus/
-/CN3fg 18pics Minerva, a few Horus. Kreutz
search.
- 12424S. Sept 28/29/10⁹-1030/10-F/Jarnac/Mini/-/SS2:
10, 94.
- 12425E2 2100-2200/7-Fm/Jarnac/-/Horus/setup.
- 12426M3 400-530/10-F/Jarnac/Minerva, Horus/-/
CN3fg 18pics w/Minerva. Kreutz search.
- 12427S Sunday, Sept 30/10-11/3-F/Jarnac/Mini/H
SS2: 4, 16.
- 12428S2 1630-1700/0-F/Jarnac/Wendee/David +
Geraldine / Visit to observatory in anticipa-
tion of next week's star party.
- 12429S. Thursday after much clouds + rain/
0950-1030/10-F/Jarnac/Mini/Neil Hanna/
SS2: 9, 52.
- 12430E2. 2200-2230/7-F/AzSc.Center / Wendy / Moon.
- 12431M2 0400-0530/10-F/Jarnac/10-F/Minerva,
Horus / CN3fg 18pics + set with Horus.
- 12432S Friday, Oct 5/1230-1350/10-F/Staraton (Hotel)
Subteacher's' workshop / ~ 35 people / SS2: 9, 41.
- 12433M2. 0400-0540/10-F/Jarnac/Minerva, Horus/
-/CN3fg 18pics with Minerva; some out-of-
focus pics w/Horus. Kreutz search

*12434EM Sat October 6 / 100-0100 / 3-F / Jarnac /
Star Party for Solar workshop / Dean,
Marilyn Unruh, Rick Fienberg, and Jack Newt
~ 15-20 others / Miranda, Obodiac /
Mars, M13, M92, M22, M27, M31, Saturn,
Moon.

12435M2. 0430-0600 / 10-3-f / Jarnac / Minerva,
Horus / - / CN3 Fg 18 pics w / Minerva, some
with Horus / Krentz search. CN3 w / Cupid, 5 min.

12436S. Sunday, October 7 / 1750-1815 / ~~10~~² F / Jarnac /
Echo 1-7 / GS2: 2, 8. some clouds over
part of Sun.

12437^EM2. 1900-0030 / 10-f / Jarnac / Miriappa /
Bob Denny, Gil / Minerva / installation of
new software to automate Minerva's
searching. Very fine session; instructive
and successful.

12438M3 0420-0535 / 3-f / Jarnac / Minerva / - /
CN3 Fg: 18 pics. Krentz search. CN3 5 min.
with Cupid

12439S. Monday, October 8 / 3-F / afternoon / Miria / - /
SS2: 6, 39 ~.

12440EM2. 2100-0130 / 3-F / Jarnac AND 120 William
Caray / - / Minerva, test of new software
successful. Later, South walk

- 12441M3. 0410-0530/10-3-F/Jarnac/Munerva/-/
CN3Fg Kreutz search AND CD image,
at least, of Larry, Moe, + Curly in Hydra;
aka Trip 321. 18 search images.
- 12442E. Tuesday, October 9/1855-2300/3-F/Jarnac/
preparation for tomorrow's search.
- 12443M2 0400-0540/10-F/Jarnac/~~3-F~~/
Munerva/-/CN3Fg 24 pictures. Kreutz
search. CN3 with Cupid 5min
- 12444S. Wednesday, October 10/10-F/Jarnac/^{+ brief}
Echo/1700-1800/-/SS2: ~6, 43. Also
beautiful green flash on Wentworth Road.
- 12445E2. 2100-2300/10-7-F/Jarnac/~~7-F~~ Preparation
for tomorrow's first - ever automated
search with Munerva. Testing with
Munerva 1-1.
- *12446M3. 0355-0600/10-F/Jarnac/-/~~7-F~~ MINERVA/1-/
CN3Fg 24 pictures for Kreutz search.
CN3 45 min E.
Two comet searches at the same time!
- 12447S Thursday, October 11/1100-1200/10-F/Jarnac/
Mira/1-SS2: Kreutz image scan.
- 12448E2 2000-~~0000~~/2-F/Jarnac + 120 Carey/Mun-
erva/ + Gil/Munerva test, later south walk
alone near old house.

*12449M3. 0400-0600/10-F/Jarnac/Mirerwa, Miranda/
-1CN3 Fg: Kreutz search 24 pics.
CN3: 1^h East.

12450S. Friday, Oct 12/1300-1500/10-F/Jarnac/
Mini 1-1 SS2.

*12451E2 1930-2310/10-F/Jarnac/Mirerwa,
Miranda. 1-1 CN3: 1^h 40^m W, plus walk
by 120 Curvy Street. Calls with Wanda,
Peter, Michael Magee, + Tim Hunter during
this session.

12452M3 0400-0645/10-F/Jarnac/Mirerwa,
Miranda/-1CN3 0^h 30^m E, usual sighting
of Larry, Moe, + Curly in Hydra despite crescent
Moon in Leo. CN3 Fg 24 pics. Kreutz search.
Looking for sungrazers still. After,
reconnecting outdoor speaker / Mintaka.

12453S. 1400-1600/10-F/Jarnac/Mirerwa, Mira 1-1
SS2 4, 17. + reviewing last night's data.

*12454SE 2 1600 to 0000/10-F/Jarnac, later s. walk at
120 Curvy / Mirerwa, Obadiah, Miranda/
Michael Magee / -CN3 1^h 35^m; Mirerwa
images M31 + M33. (M33 naked eye.)
Also Mintaka, 2 small prominences. SS2.

12455M3 0400-0550/10-F/Jarnac/Mirerwa,
Miranda/-1CN3: 30^m E. CN3 Fg: 20 images in
Kreutz search.

12456S. Sunday, Oct 14/04 1300-1410/10-F/Jarnac/
Mira 1-1SS2: 4, 36. Scanned last night's
images. When it's a dry, cool night telescope
needs refocusing before dawn - 30° temp
difference does make a change in focus.
I knew this happened in 12455M3; actually
the images weren't as bad as I thought they'd be.

12457E2. 2100 to 2300/3-F/Jarnac - Starizona Pod/
Scott + Larry / Cupid, 2-inch RC and other scope/
CN3 with Cupid, 1 h hand S.

#12458M3 0330-0545/10-F/Jarnac / Murerwa, Miranda/
- / CN3 Fg 24 pics Kewy search, good focus.
CN3 0h 35m.

Catalogue objects:

Arp 321, aka Larry, Mae, + Curly in Hydra.

Spindle Galaxy

09° 38.89', -04° 51.6'

NGC 1851 Globular 05 14.0 - 40 03
in Columba

12459S Mon Oct 15 / 1700-1800/10-F/Jarnac/
Mira 1-1SS2:

12460E2 1900-2300/3-F/Jarnac Gil for a few
minutes, Bob Denny over phone / Murerwa/
Rewriting script so that scope would
wait til tomorrow instead of hanging
up right away because object was
below horizon. Bob is brilliant, kind
person.

Oct. 15 In honor of Matthew Stephen

12461M3. 0330-0550/10-F, very windy from East/
Miranda, Meneva / CN3. 1/4 E.
CN3Fy, 24pics. Automatic
program worked only to bring scope to
position of first field, then another bug
"elevation too low" kept program from
running. However, using the older script
and today's plan worked perfectly.

12462S. Tuesday, Oct 16 / 12:30-12:45 / 8-F / Clyde + Patsy
Tombeugh's house / Patsy / Cupid / SS2: 7, 46.

12463S2. 13:45-14:00 / 7-F / Cattle Baron Restaurant /
Cupid / Patsy, Walter / SS2: 7, 56. But I accidentally
turned away the finder's Sun filter, & got an eyeful
of Sun for a fraction of a second.

12464E3 2030-2130 / 8-F / Vigil house / Cupid, Kaia /
Mark, Summer, Wendee / Summer loves being
out with us when we are observing. Training
Mark to use Kaia's new Tebrad. M31,
NGC 869-884.

12465M34 / 0530-0600 / 8-F / Vigil house / Cupid /
CN3 B, 25 minutes NE. Sky dusty from
yesterday's winds.

12466S. Wednesday, Oct 17 / 1720-1735 / 3-F /
our children's home / Summer, Manny Vigil
Cupid / SS2: 5, 37.

12467E2. 2000-2200ut/3-7-F/our children's home/
Mammy + Mark + Gilbert Vigil, Wendee/
Cupid Kaia with new Tetrad. - M31, E Lyrae,
NGC 869, 884. Constellations.

12468M3. 0500-0535/9-F/our children's home/Cupid/
-1 CN3, @ 25 minutes NE. Sky clearer than
yesterday morning; winter Milky Way barely
visible.

12469S Thursday, Oct 18/0930-0945/1-F/our
children's home/Cupid/Wendee, Norette/
SS2: 10, 73. Two huge spots, very impressive.

12470E2. 2100-2200/3-F/Jarmac/Minerva/-1
preparation for CN3H and tomorrow's Kreutz
search.

*12471E M3. 0425-0600/10-F/Jarmac/Minerva,
Miranda/CN3H preparation: Minerva was
already busy with Kreutz search when I
arrived. A milestone.
CN3Fg 20-30 pictures Kreutz search.
CN3 35 minutes E w/ Miranda.
see also after 125075.

12472S Sat, Oct 20/1200-1300/3-F/Yucca Valley,
Starry Nights Festival/10" Meade, refractor/
with refractor, 1 prominence of
with Meade, SS2: 14, 133. blue filter - saw
faculae + granulation.

12473E2. 2100-2330/3-F/Starry Nights/Cupid,

Oct. 15 In honor of Matthew Decker
other telescopes / Tim, others / α UMi, M57, M27,
NGC 869, 884, M31, M33, Saturn.

Gregory left us because the Cupid was too small.
Another complained loudly that Cupid has
mirror shift. Besides these, it was
a great session with Tim.

124749. Sunday, Oct 21 / 1:00-1:20 / 3-F / J Gas str.
west of Phoenix / Cupid / Tim + Wendee
SS2: 9, 86.

12475E2. 2045-2200 / 3-F / Jarnac / Minerva /
Wendee / Prep for tomorrow's Kreutz search
and CN3H preparation.

12476M. Monday, October 22 a.m. / 0430-0545 /
10-F / Jarnac / Minerva, Miranda
CN3 $1^h 10^m$ E. CN3Fg 24 pics, + (2min) + (3min)
Several ~~to~~ ^{some} meteors + / Indium flare near α UMi.

124779. 10-F / Jarnac / SS 2:

12478E2 ~~043~~ 2100-2200 / 7-Fm / Jarnac /
Minerva / CN3Fg and CN3H prep.

12479M3. 0330-0545 / 10-F / Jarnac / Minerva, Pa-
dah / Wendee, Gil / CN3 with Miranda 30min
CN3F - 3 pics
CN3Fg 24 pics @ 2min.

124809 Tue. Oct 23 / 1230-1330 / 10-F / Jarnac /
Mira / SS2 / Wendee, Dean
+ Donna.

12481E2 2200-2230/7-F/Jarnac/~~Wendee~~
Moon + Mars in conjunction / -Prep for tomorrow.

12482M3. 0330-0615/10-F/Jarnac / Miranda, Munerwa,
Horus, Obadiah / Wendee, Gil /
CN3 Oh 50m E.
CN3 Fg 24 pics w/ Munerwa
CN3 Fg several pics w/ Horus 12 pics.
CN3 F 5 pics with Obadiah.

12483SE Wednesday, October 24 / 1720-1750 / 10-3-F /
Jarnac / Echo / SS2: 9, 60, + green flash.
/ Wendee.

12484E2. 19~~20~~²¹ 20-2215 / 7-Fm / Jarnac / Munerwa, Horus
Gil, Wendee / Prep for tomorrow.

12485M3 0445-0540/10-3-F / Jarnac / Munerwa,
Horus, Miranda / - /
CN3 Oh 30m E. (Miranda)
CN3 Fg 24 pics (Munerwa)
CN3 Fg 24 pics (Mir + Horus)

*12486SE. Thursday, Oct 25 / ~~0515~~ 1715-1740 /
3-f / Jarnac + vicinity / Echo / first,
a sundog while driving home. Then
SS2: 6, 27.
Then watched Sun set behind mountain.
Green "stripes" visible as parts of Sun set
even through orange filter.



12487E2. 2000 to 2130/10 7-Fm/ Jarnac / Obadiah, Minerva, Horus / Gil, Larina + friend Laura D., Wanda by phone. Prep for tomorrow morning's searching.

12488E3. 2230-2250/ 7-Fm/ 120 Carey / - / - / Taurid meteor in eastern sky.

*12489E4 2315-2345/ 8-Fm/ 120 Carey, front with Cupid, + backyard / Cupid / - / Magh. Gibbous phase. Good seeing tonight

12490M5 0430-0540/ 10-F / Jarnac / Miranda, Minerva, and Horus / - / Change in weather - light east breeze, but sky a little hazier.
CN3 45 min with Miranda
CN3 Fg 24 pics with Minerva
CN3 Fg 12 pics with Horus.
CN3 h preparation.

12491S. Friday, Oct 26/27/ 1430-1600 / 3-F / Jarnac / Miranda, Mintaka, putting Astro Master's mount on Opt Miranda for easiest near encoder computer mount. SS2 with Mintaka: 9, 113 at 15:35.

12492E2. 1900-2230/ 3-F / Barnes + Nobb, then Starizona / book signing and observing session / - Larry Scott, Dean, others, and Demo Galanos / Moon, DBC, Demas

said that the role of celebrities like me is going to increase in this uncertain time. People need to see people like us, who pursue their lives with passion. We had a very interesting discussion.

12493#EM3. 2330-0115/7-Fm/Jarnac and 120 Carey/at Jarnac, setting up Minerva + Horus for tomorrow's observing. Windy.

12494M4. 0440-0540/10-F but windy from east/Jarnac/Minerva; Miranda, F Horus.
CN3: 45 minutes - E
CN3 Fg: 24 pics with Minerva
CN3 Fg: 12 pics with Horus.

12495.S. Sat Oct 27/28/Noon-12:45/2-F/Jarnac/Steve, righties, look at glare buster light and at comet sliding rod.

12496S2 1700-1715/3-F/Jarnac/Echo/-/SS2:7.64.
light cirrus.

12497EB. 2230-0055/3-2-f/Jarnac AND 120 Carey St/Minerva, Horus/-/prep for tomorrow's Kreutz search even though the sky is fully clouded with varying thicknesses of cirrus. "Through the motions." CN3h prep also had to replace Horus' mouse to get her ready.

12498S Sunday, Oct 28/0815-0840/3-F/Jarnac/Horus + Minerva; Mira/-/SS2-7.68. Sky must have been okay because last night's images are ok!!!

*12499EM2 Sunday October 28/29/2215-0050 13-Fm/
Jarnac, 120 William Carey St. + South walk/
Cupid / Setup Cupid atop Mira's old stand,
wooden 4x4 plus plywood top, still standing.
Viewed Moon. Setup Minerva + Horus
for tomorrow's Kreutz search.

12500S Monday, October 29/30/0940-1020/10-F/Jarnac/
Plant watering, Mini / - / SS2: 6-70, scope
shutdown from this morning's (Minerva + Horus)
CN3Fg. 24 pics were taken with Minerva,
12 with Horus, all automatically.

12501E2 1830-1908/3-F/Jarnac/Minerva, Horus/Ceil/
CN3Fg prep. CN3h prep.

12502M 0000-0130/3-Fm/Jarnac, 120 William
Carey St. and south walk / - / Minerva,
Horus / - / CN3Fg prep. CN3h prep.
Coysote ran down Starizona road.

12503S. 1030-1200 int / 3-F / Jarnac / Mira / Dean /
SS2: 6, 68. Putting away Horus +
Minerva away. Minerva took 24 pics, all good
for some reason Horus didn't do anything
I don't think. - No, no images taken.

12504E2. 1930 to 2340 / ~~10~~³ / Fm / Jarnac / Mr Minerva, Horus,
Dean, Wendea, Ceil / Installation of dome
motors. Successful! Prep for CN3Fg.
CN3h prep.

125055. Wednesday, October 31/32/0950 to 0240 int/
3-f/Jarnac, then Clarence Pool, then Jarnac again/
Minerva and Horus put away; Minerva took
24 pics through clouds. Horus took
12 Mira/ Sun this morning, then SS 2:6, 84
along one belt. - none in other belt.

12506 E2. 1815-0000/7-Full moon/Julas, then
Art and Jeff's house, then Jarnac/Art, Jeff,
Wendee, Carl/ Full Moon. Later setup of
Minerva + Esther. CU3h prep.

125075. Thursday, November 1/2/1230-1305/3-f/
Jarnac/Mira, Minerva/SS 2: 5, 107. Putting
away Minerva from this morning CU3fg: only
16 images before clouds.

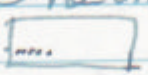
12471M3 conc'd.

I have been observing since 1959 and searching for comets since 1965, but never have I had on observing session like the one I had on the morning of Friday, October 19. When I arrived at the observatory at 4:25 a.m. to begin session no. 12471M3, ACP was already busy taking images through my 6-inch reflector. During the next hour I searched for comets visually through the 16-inch while ACP successfully took 24 search images. I had no doubt that the program was running smoothly since it provided musical notes at the end of each image and after the telescope completed each pointing. Had there been a problem, the program would have issued a series of loud beeps, but that never happened. I also knew that the telescope was pointed where I wanted it to point, since Pinpoint completed an astrometric solution of each image seconds after it was downloaded.

In a single stroke ACP doubled my ability to search for comets. Bob, ^{Denny} thank you for writing a program that is as easy to use as it is sophisticated in what it can accomplish. In decades of comet search, I thought I had seen everything. Now my search for comets will enter a new and exciting phase.

David H. Levy

12508E.2 Thursday, November 1/2/7-Fm / Jarnac,
Munewa / Prep for tomorrow's session.

12509S. Friday, November 2/3/10-F / Jarnac /
Munewa and Mira / putting away from
last night. One image showed a tumbling
satellite.  SS2. 24 pics.

12510E.2 1830 to 2355/10-F / Jarnac / Munewa,
Apollo, Obadiah, Miranda - The
PSI Board Meeting: Byron Groves,
Cly, Wendee, Don Davis, Stu Weiden-
schilling, others / B/Cyg, Edys, Mars,
M57, M81?, Moon, Saturn. Prep for CN3Fg

12511S. Saturday, November 3/4/10³-F / Jarnac /
Munewa / Checking CN3Fg - 16 pics -
16 pics - last set clouded.

12512E.2 2000-2130/10-F / Skyworka / Bookkeeping

12513E. Monday, November 5/6/2030-2300 /
9-7Fm / Between Columbus and Findlay,
Ohio - Michael / Driving to Findlay,
from Columbus. Aurora began as
a thick homogeneous arc, grew very
bright, became draperies with red off
to West + East. Got very bright with
spots, a bit "messy" in later stages.
Beautiful Aurora.

- 125148 Tuesday Nov 6/7/1400-1500/7-F/Findlay,
Ohio/Sam Littlepage/Ceatron 8/Sam Littlepage/
-/SS2: 8, 77.
- 1251552 (before 12514) /1100-1140/7-F/Findlay,
Ohio/Sam Littlepage/Vivid observing site,
path, & metal-walled observing area with
mounts for 2 eq. scopes & altaz. one.
- 12516E3. 2015-2300/7-F/Findlay, Ohio/Sam
Littlepage and Mill Stream Opt. Soc/
Mars, M57, good session. 12 Ceatron 8s.
- 12517E November 7/8, Wed/2100-2300/7-F/Findlay,
Ohio/Sam Littlepage, Peter Gedicke/
1 Ceatron, M45, Saturn, Jupiter, IC 1396
aka ϵ 2816+19.
- 125186E November 9/10, Friday/1730-1830/7-F/Jarnac/
Minganda/Crit/picture. Glasses run over by
roof but damage was slight.
- 12519E2 2315-2355/1-F/Jarnac/-/-/Glasses not run
over by roof.
- 125205 Saturday, November 10/11/1000-1100/10-F/
Jarnac/Mintaka/-/SS2: 11, 126.
- 12521M2 something during the night, somewhere over
the Pacific/Wendell Cassiopeia low in sky,
in NW.

12522S. Tuesday, November 13/11^{am}-12 noon / 3-F / cruise
along Daintree River / binoculars aboard
the boat / a crocodile, Sun through
binoculars. No spots seen. / Wendee, others

12523E2. 2050-2115 / 3-F / Thala Beach Resort /
- / Cupid / Identification of some s. stars,
though the sky was difficult to see through
the trees. I did identify Fomalhaut
& Arcternar high in the south, though -

12524E. Wednesday, Nov 14/15 / 2145-2315 / 3-F /
Thala Beach / Cupid / other members of the
Intrepid Travel group / LMC, SMC, 49 Tucanae,
M31, M42, M45, Saturn, and Jupiter.

12525G. Thursday, Nov 15/16 / 1400-1555 / 3-F /
Thala Beach / Cupid / swimming, walking
to Beach / Wendee / SS2: 6, 27. Through trees.

12526E2. 2030 to 2140 / 2-0-F / Thala Beach / Cupid /
others / Telescope started started on
Arcternar, through mostly cloudy sky.
We then packed up barely in time for rain.

12527SE. Friday, November 16/17/18.30 - 2130 /
10-F / area near Alice Springs, Australia /
Cupid / our group - Wendee, Eric, Don McCarty
others / 47 Tuc seen through band-held
Cupid, LMC + SMC. We had dinner
that began with a man showing us

how to bake bread and eat it with Kungaroo butter, then another man lecturing on Aboriginal mating customs. I am an Aboriginal man in group 1. My father was in group 4, mother in 3. They chose a wife for me from group 2. Our children will be in group 2. After dinner, sing along. I played the bush bass; Wendee played the sticks.

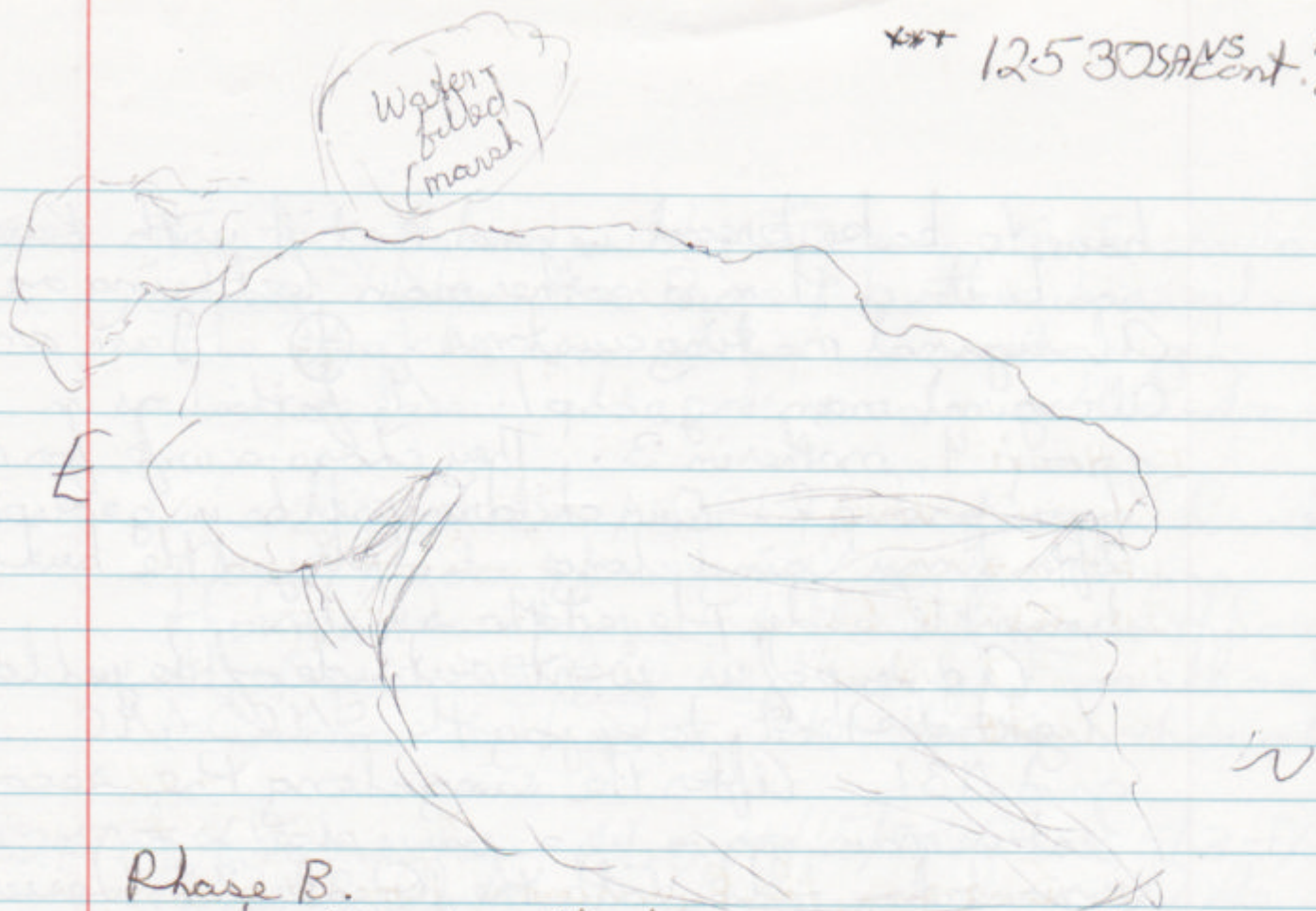
A group of us went outside of the yellow-light district, to enjoy the SMC, LMC and M31. After the sing along the second lecture man gave us a very nice star-orientation talk with the "Greater" & "Lesser" Clouds of Magellan. It was very nice. After, he told me he was aware of Bert Bok's being in Australia.

12528 E2. 2230-2330 / 7-F / Alice Springs Resort / Cupid / Wendee, PLUS others / 47 Tuc, Saturn, M42.

12529 E Saturday, November 17/18 / 2045 to 2355 / 3-10-F / Cupid, 11" Celestron GRS - / Mars, Saturn, Jupiter, 47 Tuc, Tarantula Nebula

12530 SANS Sunday November 18/19 / 0930 to 0715 / Cupid 3-10.F / Alice Springs, Henbury Craters, EWANINGA ROCK CARVING DRY LAKE. Phase A: Wendee focusing binoculars SS2: 6, 56. Then my lecture on the Leonids, followed by sun observing. This afternoon,

*** 12.5 30SAMS cont. 2.



Phase B.

a bus trip to Henbury crater complex. We saw the main double-crater, and two satellite craters, including a watered one. Then back to Alice Springs, where we had dinner.

Discussed situation with Tom Collins, who is heading south from Darwin. Stopping at Eliot, $\sim \frac{1}{2}$ way from Darwin to Alice.

Phase C.

1845-2130 Dinner outside with Wemjee, Bob + Jean Cirkovic, and a passage of the Hubble Space Telescope.

At this point, sky is dry + clear, some wind, waxing crescent moon.

The group is now resting - bus leaves for site at 23:30, this evening. Still checking weather maps to decide whether N or S is best.

*** 12530SANS cont'd.

Leonid Meteor Storm 2001.
Final count for Wendee and me = 2164.

	Watch began ~ 0100.	
	Count at 0155	28
EWANINGA	0208	51
ROCK CARVING	0215	63
DRY LAKE	0224	109 - ?
24° 00.753' S.	0240	118
133° 57.214' E.	0242	201
1852 ft.	0255	289
	0257	311 - then too many to record times.

Our site, the Ewaninga Rock Carving + Dry Lake, is ~70 km south of Alice Springs. It was a bit less than an hour's drive on a dirt road south. When we stepped off the bus we immediately realized what a treasure this site was - as in view of an ancient Aboriginal rock carving, we were under one of the darkest skies either Wendee and I had seen.

We walked down the path to the dry lake, with ground tarps, mattresses, chairs, Cupid, + other essentials including my counter. However part of the lake was not as dry as J.B., our driver, had thought - there was some water in it - so we set up on the dry part. With Cupid I first looked at θ Carinae (Eta Carinae) and briefly moved to Jupiter when Bob Atkovic asked me to. Then I ~~to~~ reset Cupid ~~on~~.

***12530SANS.

on Eta Carinae for the rest of the night.

The radiant in the sickle of Leo started to rise at 01:30 a.m. It was ~~th~~ as though the celestial curtain was opening on a grand performance. I recorded one faint meteor, but at 01:30 a. - 3 magnitude Leonid fireball shot ~~at~~ out of the radiant and crossed the sky, passing overhead, and finally streaking to oblivion in the far western sky about ten seconds later. It was the most dramatic meteor event I've ever seen, and it alone made this trip worthwhile. We then had to wait only a few minutes before a second meteor lit up the southern sky in the same way.

Meteor rates started steadily, but as the 1699 β dust trail approached they increased rapidly. Lots of fireballs in every direction of the sky. For a short time ~~th~~ around 2:45 a.m., the encounter with 1699 produced a meteor every few seconds along with that backdrop of fireballs.

The rate did not decrease after that, but it was easy to see when Earth slammed into the 1866 dust trail of Comet Tempel-Tuttle, the trail rebased during the comet's discovery apparition. Suddenly, a whole flock of fainter meteors with short trails appeared near the radiant, around 3:15 a.m. Alice Springs time. It was as though someone was emptying a

*** 1253 P.S.A.N.S.

bowl of water - meteors were just pouring out. At one point, between Wendee and me, we recorded 9 meteors in the same instant, and there were many instances of four or more meteors coming at the same time. Meanwhile, the southern cross came up, along with Band α (Beta + Alpha) Centauri. When I pointed the southern Milky Way out to the group, they thanked me, for at that moment two bright meteors appeared.

Eventually the full majesty of the southern ~~evening~~ sky was visible - Alpha and Beta Centauri, the Southern Cross, the Coal Sack, Eta Carinae, and the Large and Small Magellanic Clouds - in a monstrous arc around the south pole. But even this display was only a sideshow compared to the near-constant stream of meteors spilling all over the sky.

The Zodiacal light appeared, then dawn began, and still the rates kept up. They dropped a bit after the 1866 encounter but not very much. We were at 1800 when dawn began, but they were still falling heavily into bright twilight - in fact the fireballs seemed even brighter in twilight, as Don McCarthy noted.

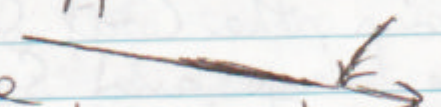
Meanwhile, from his landing strip site in Eliot, Tom Collins said that he was

*** 1253DSANS.

mesmerized by the storm, even with 30% cloud cover. "It was just awesome," he said. "at times it moved me to tears."

So many meteors were coming that from our site they some of the longer-trailed ones seemed to converge in the west in a form of "anti-radiant." Ray Gross, one of our team, counted 1145 meteors.

People were watching the trails of the fireballs through binoculars. One meteor, someone said, disappeared below the horizon, then must have exploded, for he then saw a glow appear over the horizon.

I saw a Leonid appear to intersect with a sporadic meteor.  Could this be, as someone suggested, what the woodcut artist of the 1833 storm saw when he drew a meteor that stopped in flight & did a sharp turn?*

The 1866 storm, which peaked for a few minutes at our counting several meteors at once, put in spurts, was ~~was~~ an incredible burst of activity in an already spectacular night. "Spouting fish out of a barrel" Tom Collins described it.

Just before putting Cupid away, I took a final look at Eta Carinae. Wendee got her first look at this object tonight. It was good to see Bart and Priscilla again.

*** 1253 DSANS - concluded. continued.

We reboarded the bus, went back to the hotel, and this observing session ended after a second sunspot reading at 0700. SS 2:5 groups, 39 spots.

Lasting 21 hours 45 minutes, this session included two sunspot readings taken in 2 days, a visit to a spot where a meteoric visitor from space (as Peltier would have written) had come to stay, and a meteor watch during which we saw more meteors than at any other time in our lives. The 2001 Leonid Meteor Storm was a truly wonderful event.

Wendee's accountings of the night/mornings of the Leonids

This was the day we had come for! Just before leaving the hotel, everyone was doing last minute weather checks. Eric pulled out one map that confirmed the area a little north of Alice Springs where he wanted to go. The driver even had a nice spot chosen for us. But David learned from Tom China that it was already cloudy to the north. David wanted to go south! So... David and Bob City Athorik not only pulled up a weather map, but the satellite images of the time lapse as well. Suddenly the consensus was to go south where David had suggested in the first place.

He pulled up to a site not too far from a dried up lakebed. As everyone stepped off of the bus they had the same reaction we did --- they just couldn't believe how black and starfilled the sky was. He picked up our cushions and walked about 400 yds to the "dry" lake, which wasn't as dry as we were told. There was, however, enough dry area for the group to spread out the tarps and mats and telescopes.

*** 125309ANS.

We didn't have long to wait for the show to start. At 1:30 AM we had our first preview of what the night would bring. The first meteor shot across the sky. It was VERY bright, at least a -3 magnitude, and must have had a time duration of 10 seconds. Everyone had time to look up, find it, and give the appropriate shout of approval. Shortly after, a second one went right over us with almost the same beauty as the first one. As Heidi Hammel said about S₂ 9 after the first impact, we knew we were in for a really good show & only had to settle in and watch.

I settled in on my mat next to Bobbie Neeshon. She and I tried to watch while we were laying down. It was much too exciting & kept sitting up to see if I could easily see more.

During the lulls at the beginning David showed everyone the Eta Carina Nebula and the Southern Cross. I loved looking at this really dense part of the Milky Way, the Eta Carina region, with my binoculars. It was glorious.

By 2:15 the meteors came on faster and faster. There were times we'd see at least 5 at a time. If they were dim, I had trouble spotting them. If they were fireballs, I was great. After about an hour I stood up and watched for David in the opposite part of the sky from the radiant. I think I got a much better show. "my" meteors seemed to brighten from the sky directly above us. Some of the meteors actually seemed to land in Alice Springs.

The joke of the evening was me! I was telling David each time I'd see one. All everyone heard was, "there's another one." Later on it was shortened to "... another one!" As Dan Eric later said, we need a quote for the night, we all said, "another one!"

When the sun began to rise I was really glad because by that time my neck and shoulders hurt from just the strain

***12530 SANS

of standing motionless and counting. But still the meteors kept coming in the dawn sky. David + others saw at least 12 on the way from the site to the bus! I saw none because I was looking down.

When we got back to the hotel a number of us decided to have breakfast before going to bed. He learned that last night there were rain + clouds all over Australia EXCEPT where we were! He had the best spot. He all began to stink our stuff!!!

oh! The final count for David and me was 264. It would have been much higher if I had turned around sooner + watched "the back don." It was great.

12531E. November 19/20/2000-2200 / 7-F / Alice Springs, Australia / ~~Int~~ Wendee, Larry + Becky Schamp / International Space Station at 2023, to ~ 20° elevation in SE, then HST at 2032⁺, overhead. Later, visiting wallabees.

12532S. Tuesday, November 20/21/1000 to 1300 / 10-7-F / Stanby Charm, Simpson Gap, then at Larry's + Becky Schamp / Cupid / Beautiful high red walls at both sites. SS2 but only naked eye, not through scope, which didn't have an eyepiece / Wendee, Larry, + Becky / SS2 1; 1 naked eye.

*12533^SE2 Wednesday, November 21/22/2000-2300 / ~~to~~ 3-F / Ridges Carlton Hotel, Melbourne, Australia / SS2 - only half Sun above horizon, O.P. Later, NGC 104 = 47 Tuc, + Centauri (wide and beautiful double), Mars, Moon. See 12535S for earlier session today. N.B. & Cen, GUY BELOW THE POLE! Really far south.

12534S. November 22, 2001, Thursday / ~~2230~~ 1030-1100 / 7-F / ~~Jaan~~ Ridges Carlton Hotel, Melbourne, Australia / Cupid / Wendee / SS2: 4, 26.

12535S. November 21, 2001, Wednesday (before 12533SE2). 1400-1700 / 7-F / Melbourne / Stop at Captain Cook's house, transplanted from England, to learn about the eclipse ^{resawon} and the transit of Venus in Tahiti on Then we saw the Melbourne observatory. One dome built specifically for the transits of Venus in the 19th century, and the other for the southern part of Cartes de Ciel project at the turn of the century. I changed myself on a tour of the larger dome - at first the guide was reluctant to allow me to join the tour. There was an amateur astronomer from England who on the tour. When the guide heard me asking some detailed questions about the telescope and dome structure, she asked if astronomy was a hobby. I asked if she had heard of a comet that collided with Jupiter in 1994. She hesitated, but the Englishman said "Yes, Shoemaker-Levy 9". I admitted "I want to talk with you afterwards." At the end of the tour, he told the guide that ^{he said} "You can tell your other tour that you showed this building to one of the most famous astronomers in the world." In this historic building, I felt very humbled.

12535 S. concluded


She opened the dome, which had a beautiful view of the government buildings. The dome operates on very large wheels.

Wendee earlier pointed out the large model of a neutrino setting in front of the observatory.

12536 SE2 November 22 2001 / 1500 to 2345 int / 2-F / from Melbourne to Phillip's[#] Island and return / Cupid / all the Intrepid Travelers / Using Cupid to observe the seals off Phillip's[#] Island, and 2 pairs of binoculars to observe the parade of penguins just after sunset. Also unaided eye view of Crescent Moon and Sirius, Rigel, Canopus, & Arcturus.

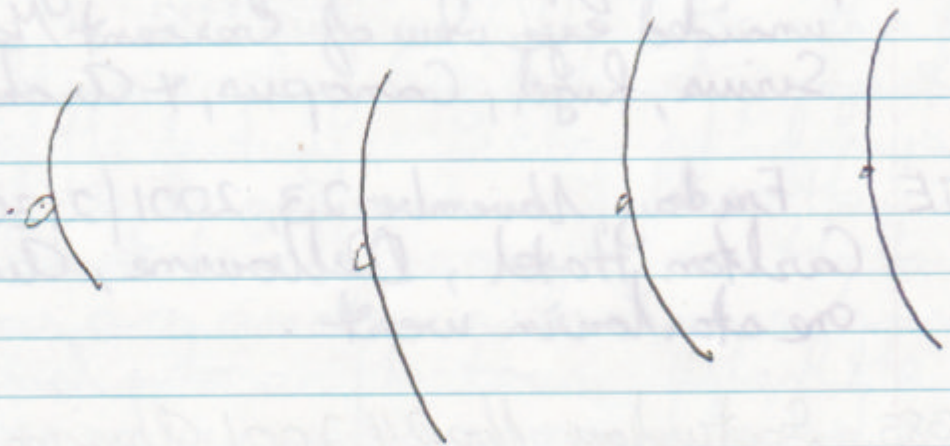
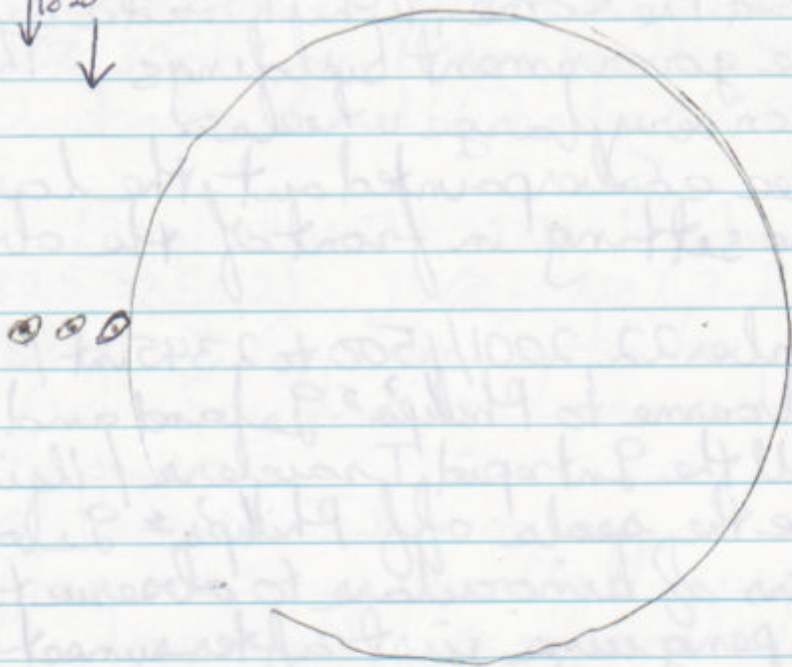
12537 E Friday, November 23, 2001 / 2130-2200 / 2-F / Ridges Carlton Hotel, Melbourne, Australia / -1-1 / one star low in west.

12538 S. Saturday, Nov 24, 2001 Arizona date and time / 1530-1730 / 3-F / Jarnac, Wendee, Lisa & David / SS2: . View of observatory.

12539 E Sunday, Nov 25 / 2100-2200 int / 2-F / Jarnac
Weird clouds to North, layered.  E

12540 E Wednesday, Nov 28 / 1910-1930 / 3-F / Kenner, observatory, New Orleans / Sagan lecture / André Branic, Larry Sclafsky, Dava Sobel / The Moon.

1810
1815
1820



1254/E. Thursday, Nov 29/1900 to 2300 / 3-2-F / Patchy
Mississippi River cruise / DPS members /
Moon being eclipsed by bridge, very pretty.



12542E. Friday, November 30/1740-2330/7-Fm/
 ← Uncle Jack's house or (apartment or actually
 condominium) on Lake Marina Drive, then
 restaurant, then Kenner Observatory.
 18:20 Occultation of Saturn Ingress.
 20:00 View of Saturn west of Moon with ^{Jack, John} Barbara ^{etc.}
 22:10 Walk by Grandparents' old 745
 Crystal Home
 22:40-23:30 14" Celestron / M42, Owl
 Cluster, M42, Saturn and Jupiter with John
 Cerniglia.

12543E Saturday, December 1/2/2010-2030/3-F/Uncle
 Jack's condo on Lake Marina Drive / - / Moon,
 Saturn, and Jupiter.

12544M2 0015-0030/3-F/Uncle Jack's condo / - / Jupiter

12545S Sun, Dec 2/3/1645-1715 CST / 3-F / N. of
 New Orleans, on plane / - / view of Mississippi N.
 of New Orleans. Strage \Rightarrow curius with glory
 - sundog? combination. \leftarrow

12546S Mon, Dec 3/4/1645-1715/10-F/Jarnac at
 least / Wendee / Mira / SS2: 6,

12547E2 1930-2015/10-F/Jarnac / Miranda / Wendee
 C/3 30min west. Some kind of missile
 launch formed a bright cloud in the west
 which spread out & dissipated.

12548EP. Tues 4/5/2220-2230/7-Fm/Jarnac / Wendee / Clear

12548E1. 1025 110 2230-2200 7 11 11.0-11.5
 clear skies but cold & humid.

25495. Wednesday, December 5/6/ 13-F/
Jarnac/Wendee/SS2:

2550E2. 1900-2030/3-F/Jarnac/Minerva with
newly installed Astronomer's Control Program,
v. 3.

551S Thursday, December 6/7/1300-1400/10-F/Jarnac/
Mintaka/Wendee, Neil, /SS2: 12, 136.

2552E2 1830-2100/10-F/Jarnac/Miranda, Minerva/
Wendee/Green flash through apodizing
screen. Then failed attempt to see
faint comet 2001 W2 & test for AC prog-
ram. Billy Causey, Director of the Tortugas
Reef, called during the session & we talked
about reefs.

1) 40% of U.S. water, betw the Divide & the
Appalachians, flows into G of Mex. where it
affects reef life. 2) The Canals in Florida
built to take water from the Everglades to the
oceans have damaged both the "and the
reef ecosystems. Interesting observing session.

2553S. Friday, December 7/ 110-F/Jarnac/
Wendee/SS2.

2554E2. ~~2000~~ 1740-2230/10-F/Jarnac/^{Minerva}Obadiah,
Miranda/Gil, Tom Ghinas, Wendee, Jack
Newton, Gene /Saw Comet 2001 W2,
Datters, and bright Comet Linear, 2000 WM1. 12

Obtained 3 images of Batters AND Bob Denny's program later, after some adjustment, will have found it. Batters is ~ 11.5 .

12555S. Saturday, Dec. 8/1200-1655/10-F/Jarmac/Mixtaka/Wendee/SS2. With Tom, we did measurements on the dome; may need two or one more wall area.

12556E2. 2200-2230/10-F but windy/Jarmac/Tom+Wendee.

12557S. Sunday, Dec 9/1500-1700/10-F/Jarmac/Echd/Wendee/SS2. plus S. walk + table.

12558E2. 1930-0000/3-F + windy/Horus + Mineral Gil, Wendee/H: collimation; M: Comet 2001 imaged + then detected with Pinpoint. $M_v = 14.6$
 $\mu = 0.14$ $\sigma = 0.10$
+ conditions were windy, poor seeing, possible thin clouds + still worked.

12559E. Monday Dec 10/2100-2300 int/3-F/Jarmac:

12560E Tuesday, Dec. 11/1920-2205/10-2F/Jarmac/Gil, Wendee/obs. cleanup etc. Departing storm.

12561S. Wed December 12/1700-1735/2-F/Jarmac/Wendee/SS2: 6, 26 and sunset.

12562E2. ~~2000~~ 2200-2230/10-2-F/Jarmac/Wendee/very cold/Square of Pegasus, Orion, Jupiter.

12563S. Thursday, December 13/14/1300 to 1530/3-F/Jarnac /
Mintaka / Jerry Diaz + Kelly Larkin, from MDA,
and Wendee! SS2: 8, 123.

12564S2. 1645-1715/3-F/Jarnac/Wendee, Lynn + Cyndi/
pictures.

*12565EM3 2200 to ~~08~~0610/10-FC 23°, plus strong wind
for about 2 hours from east, then stopped) /
Jarnac / Minerva, Horus, Miranda / Dean,
Wendee, Michael Magee, Scott Tucker, Gil +
Carol / Geminid Meteor watch. 914 meteors
seen, including 3 fireballs of minus 4, minus 3
and about minus 10 (in SW). Very cold, but
I was dressed warmly. A very successful
night. Wendee was out for about 3 hours,
from 10 to about 1:30, and enjoyed the
watch despite the cold. Then I
did CN3 30 minutes SE with Miranda.
Pics w/ Minerva + Horus for comet + stars didn't
come out due to wind. From ~ 4 to end, just me
observing. Record of 1966 (*1582AN2-28) broken (not
counting Leonids)

*12566S. Friday, December 14/1300-1600/10-F (3 near
end) / Jarnac Echo, Mintaka / Wendee!
SS2: 6, 139 at start, near end, with better seeing
6, 151.

Partial Solar Eclipse. At the very end, just
before the 1535 2nd contact, the two mount
axes on the Moon's limb came into sharp
view. They, and other limb detail, were
much harder to see during mid-eclipse.

My first view of the eclipse was just after - a few seconds after - first contact. Very nice eclipse. The clouds from an approaching storm didn't reach the Sun until after 2nd contact.

*12567E. Saturday, December 15 / 2100-2300 / Clear, but patches of low cloud or fog / Ft. Jarnac / Obadiah, Minerva / - / Asteroid 1998 WT 24. moving rapidly past \odot at 4x Moon's distance - closest approach of an asteroid since Icarus in '68? -. Because it wasn't moving past any stars I didn't see it move in Obadiah. But two pictures from Minerva clearly recorded it as a bright streak moving E-W (mostly) in the 120 second exposures.

12568S. Sunday, December 16 / 17 / 1030-1100 / 10-F / Jarnac / Mintaka / - / SS2: 13, 102.

12569S2. 1500-1630 / 10-F / Jarnac / Pegasus / Wendee / Installation of Wendee + my new encoder system for Pegasus. Also Wendee looked at images of last night's asteroid encounter.

12570EP3 1800-1810 / 7-F(m) / Mike + Elaine's place / Wendee / view of thin crescent Moon only 2 days and a half past new Moon.

12571. Monday, December 17/18/10 - F / Jarnae /
Mintaka / Wendee / SS 2: ~7,55.

#12572 AN2. December 17/18/10, 1830-0615/10, before dawn 3F/
Jarnae / Minerva, ^{Obadiah} Miranda / Wendee.

First: launch of CN3j. Went inside &
inspected C2 + C3 SoHO images for possible
sungrazing comets.

Second: Wendee and I took 6 pics
CN3F with Obadiah: 6 pictures.

Third: Launch of CN3h at 23:35 pm.

Took 39 pics through Minerva
automatically through ACP, which found ast.

2840
Kallavei.

Fourth: During night, while CN3h in
progress

CN3 3^h South (below -25°) and East.

Catalogue objects:

NGC 2188 in Columba - comet-tail like gal.

NGC 1851 in Columba, a bright oval globular.

NGC 1679 in Caslum, a round galaxy.

Fifth: CN3e TV Corvi (14,6).

Tonight began an automated search for
comets. It was a beautiful, calm,
clear night, a spectacular night for
the start of what Wendee and I hope
will be a spectacular part of ~~my~~ our
mission to find comets. And it all
began today.

Also, a start on a program to
find sungrazers. It began today too.

Remember: The primary goal of

** 12572 AN2 concluded.

CN3, as discussed in 1965 was NOT the discovery of comets but the search for comets. Discovery of a comet and/or a nova, and learning as much as possible about them through a research programme were aims 2 & 3. Actually, the primary aim was, and is:

"To become "very" familiar with the sky through searching for comets and/or novae."

So even though it has been $7\frac{1}{2}$ years since I have last found a comet, the project has been and continues to be successful. This night was the 36th anniversary of the start of the original CN3. Through it I have learned much about the sky.

This log is continued
in Log # 3.