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Log 20.

Observing Session Log

Sessions begin on July 2, 2002.  
with 12943 SE.

Sessions end the 1<sup>st</sup> of March  
2004

with 13863 S.

$110^{\circ} 43' 10''$  W  
 $31^{\circ} 58' 35''$  N

Dearest David, my husband-favorite comet hunter,

This log has lots of "2's" - the date and the log number. That must mean there will be at least 2 comets recorded here. I've learned a lot working with you on our photographic searches. I'm ready to see the hard work pay off, especially for you.

You deserve only the best, especially with your astronomy and comet searches. Let's find those two! I love you.

Love,

Stendee

July 7, 2002

07-02

Log 20.

12943SE. 1900-2030/2-F/Jarmac/-/Wendee/walk with  
The Boagle.

12944S. Wednesday, July 3, 2002/1400-1845/3-F/Jar-  
nac/Wendee/Echo/SS2. 3, 37. CN3J C2+C3.  
Test of new south baffle system with Wendee +  
Virgil. Apocalyptic clouds with rays at end of  
session.

12945AN2. 2000-0430/10-F/Jarnge/Miranda, Min, Est  
her/Wendee, Dean! Too windy for photography.  
Dean came by and drilled the holes for 6  
big bolts in the dome, and then we epoxied  
them in. I hunted for comets before, and  
for a long time after, he left.  
CN3 3h 15m W, E. NGC 752, 404, 84, 86  
CN3h with Minerva + Esther. 104, 49,  
N50, N21  
NGC 1023

12946S. Thursday, July 4/1500-1840/10-F/Jarmac/  
Echo/-/SS2. CN3J C2+C3.  
Today, I learned while observing this  
morning, Thoreau began his Walden  
experiment. July 4, 1845.

12947EM2 July Observing Run. /2015 to 0030/10+-F/  
Jarmac/Obadiak, Minerva, Esther/Wendee/  
CN3F 3 ~~sets~~ fields, 6 pics. CN3h. CN3e  
TVOr w. CCD C15.0.

12948S Friday, July 5/1615-1635/10-F/Jarmac/Mira/  
Wendee/SS2: 4, 47. CN3J C2+C3.

12949 E2 Friday, July 5 / 2330-2345 / 10-f / Jarnac / - /  
Wendee / @ general observing

12950 S. Saturday, July 6 / 1315-1345 / 10-f / Jarnac /  
Wendee / SS2: 4, 24. CN3 J C2 and C3

12951 E2. 2030 to 0000 / 10-f / Jarnac / Ophelia,  
Esther, Minerva, & / Wendee / CN3 F, 20 pics  
- July observing run - CN3h.

12952 S. Sunday July 7 / 1250-1310 / 10-3-f / Jarnac /  
Echo / - / SS2 4:30.

12953 SE2. 1800-2300 / 13-f / Jarnac / Wendee /  
Sunset, green flash, CN3 J C2 and C3.  
No CN3h at night, didn't happen due to  
clouds

Tues July 8 / 9 / 10

\*12954 FN 2000-1800-0430 / 10-f 1-3-f / Jarnac /  
Miranda / Wendee, Dean + Donna /  
First were efforts to free the aluminum template from  
the 6 bolts in the dome. Then after dinner we  
repaired our flagpole, then freed the template.  
Then we placed a top layer of cement on top  
of the 36" of concrete.

Before ending, Wendee + I bought Dean's  
7" refractor - Astro-Physics. Before Dawn,  
CN3 1<sup>h</sup> E.

12955 Wed July 9 / 1530-1635 / 3-f / Jarnac / Wendee /  
Echo / SS2: 4, 25. CN3 J C2 + C3

12956 E M<sub>2</sub> Thu 1930-0130 w<sup>1</sup> / 2-f / Jarnac / - / Wendee  
Jul 11 / 12

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12957S Friday, July 12/13/1500 to 1720/3-F/Jamac/Echo/1-1  
SS2: 3, 48, one big group. SOHO C<sub>2</sub> + C<sub>3</sub> CN3J.

12958E Sunday, July 14/15 Bastille Day/0-F/Jamac/  
Dean + Donna, Larry Wendee and the Starizona  
party crowd / views of Miranda and Obadiah +  
Esther Murewa but not through them.

12959S Monday, July 15/Echo/SS2 3, 63.

† 12960SE † Tuesday, July 16/1800 to 0000/2-F/Jamac/  
Obadiah / Donna + Dean, Wendee / - The official  
installation of the Shoemaker-Levy Dome plaque.  
Also work on finessing the dome. Also installed new  
O-ring on Obadiah's lens.

12961S Wednesday, July 17/Echo/SS2: 5, 108.

12962SA2 † Wednesday July 17/18/ 0230-0430/2-3-0-F/  
Jamac/Miranda / - / I went out and did a very good  
10 minutes of CN3 before it clouded over completely.  
I closed up + went inside. I went out again 1/2 hr  
later after the sky started to clear in spots. Then  
I continued. Just before dawn it cleared a lot,  
beautiful sky. Then it clouded over again, after  
50 min. CN3. (at 7:15, it was pouring rain!)  
Total CN3 this morning: 60 minutes E.

Objects in Catalog L1107 NG 6760 L10811 NG C1068 M77

12963S. Thursday, July 18/ ~~1800-1835~~ Echo/4, 98.

1745-1800

12964M2 July 18/19/0300-0420/10-3-F/Jarnac/Miranda/-/  
CN3 1<sup>h</sup> E.

12965M July 19/20/0500-0515/3-3-F/<sup>Las Cruces</sup>Jarnac/-/Capella  
through Cupid! Very bright lights at Hampton  
Jan prevented comet hunting.

12966S. Saturday, July 20/21/1315-1340/2-F/Hacienda  
restaurant Las Cruces/Cupid/-Patsy Tombaugh,  
Walter Harris, Wendea, others/SS2: 3, 5, 3. Through  
various thicknesses of clouds.

12967S. Sunday, July 21/22/1145-1200/9-F/Mark + Nanette  
house, Albuquerque/Cupid/Matthew's  
Christening party/SS2.

12968S2. 1600-1630/3-F/Mark and Nanette's house/  
Cupid/Matthew's Weekend/SS2. Pictures  
taken of Summer + Matthew with Cupid.

12969S. July 23 Tuesday, from 10-11am/3-F/Jarnac/  
Echo/Virgil Smith, James Keob/SS2:

12970M2 0000-0020/2-F/Jarnac, <sup>J-M-F</sup>120/-/-/walk  
under mostly cloudy sky.

12971S. July 24/Wednesday/1530-1800/2-F/Jarnac/  
Tim Hunter viewing observatory.

12972M2 0015-0035/2-3-F/J-M-F, then Jarnac/walk  
and view of Ursa Major low in NW.

08-02

12973G. Thursday, July 25, 2002 / 1400-1500 / R-F / Jarnac / Denise + Bob Meade / inspection tour of the Shoemaker-Jewy dome.

12974#M2. 0130-0200 / 2-F / Jarnac, J-M-F / - / The Beagle / Walk.

12975S. Saturday, July 27, 2002 / 1030-1230 / 1-F / Jarnac / widening of observatory path, placing of stones along dome path.

12976S. Sunday, July 28, 2002 / 10-12 / 3-F / Jarnac / Echo / 5, 210.

3 Towers

\*12977E2. 2030-2115 / 3-F / Jarnac / Miranda, 12" Meade at the 3 Towers Observatory / CN 3 10min W. Successful in finding  $\Sigma 1604$ , the triple star in Corvas, no-108 in the catalog. With so few clear nights, I wanted so much to confirm this object before it gets too close to the Sun for observation. I did it. Meanwhile Tim Hunter got some CCD pics of it from his observatory. This was an extraordinarily successful observing session.

12978M3 0030 to 0100 / 2-F / Jarnac, JMF / - / - / walk.

12979E Tuesday, July 30 / 2-F / JMF, Jarnac / - / - / walk.

12980E. Wednesday, July 31 / 20-00 int / Beagle / walk.

- 12981S2 Thursday July August 1/2/1800-1835/3-F/Jarnac/  
Echo 1-1/SS2 14, 82. One big cluster of several groups of  
spots.
- 12982S before 12981/1100-1500/2-F/Jarnac/Carol Reese,  
David Crown/observatory tour + discussion of CN3F.
- 12983M3 0000-0030/1-F/Jarnac/walk.
- 12984S Fri Aug 2/3/1800-1835/2-F/Jarnac/Wendee/Echo/  
walk. SS2: 11, 73.
- 12985S Sunday August 4/5/1700-1755/2-F, storm to east/  
Echo/Wendee/SS2: 4, 36. Clouds covering parts  
of  $\odot$  + moving rapidly over it.
- 12986S Monday August 5/6/1420-1445/3-F, storm cloud  
to south/Wendee/Echo/SS2: 4, 51. By 1530  
it started to drizzle. By 1600 it was pouring - by  
the end, there was 2.3 inches of rain at Jarnac.
- 12987ES, Tues August 6/7/0900-1155/3-2-F/Jarnac. /  
opening of observatory for drying process.
- 12988S2. 1700-1800/3-F/Jarnac/Echo/Wendee/  
SS2: 6, 54. CN3J.
- 12989EP Wed, Aug 7/8/2300-2310/7-F/Joanie's house/  
-1/skyrock.
- 12990E Thurs 8/9/2300 to 2200 ~/7-F/Joanie's/Howie/skycheck  
. Nice to see the sky from "up North" again.

08-02

12991S

Friday, August 9/10/1540-1740/10-3-F/STELLAFANE/  
Wendee, Nanette, Mark, Matthew, Summer, <sup>Carolyn S.</sup> + John Dobson  
many Stellafane. Wendee saw 2 large groups of  
sunspots in the Porter Turret Telescope. Pictures  
of Carolyn, me, + John Dobson.

12992E2

2130-2230/103 F/Jan + Annette's place/Wendee  
Summer, Mark, Nanette/Perseids. I saw 1, Mark  
saw 3.

\*12993S

Saturday, August 10/11/1130 to 1700/3-10-F/  
Stellafane/Mark Summer, Carolyn Shremaker,  
George + Maean Stevens, many others/  
Porter Turret Telescope, other telescopes/  
SS2: 6, 107. Summer introduced me to the  
Turret telescope; in all the years I've been  
here I've never been inside it.

12994E2.

1920-2345/10-F/~~Farm~~ Stellafane/Nanette,  
Mark, Summer, Matthew, Carolyn, Constantine  
many others. 1-Telescopes set up/ Matthew  
won the youngest child at Stellafane with  
another girl, John Dobson won the oldest  
at 87. Then Ryan Hornbace presented  
me with the National Youth in Astronomy  
Award for "his endless efforts to promote the  
science of astronomy among youth, and to bring  
many generations to the stars." I delivered  
the Shadowgram, about my first  
meteor on July 4, probably 1958. Then was  
Carolyn's impact talk.

12995E Sunday, August 11/12/10-11pm/10-f/Wallach Vermont home/Mark/-1 Perseids. We each saw 3 meteors including one bright one that stretched from E to SW. Not a very active Perseid year.

12996E Monday, August 12/13/2130-2230/10-f/Jarnac/Wendee/-1 2 Perseids.

12997S. Tue Aug 13/14/1730-1800/10-f/Jarnac/Echo/-1 SS 2. 9", 110.

\*12998E2 2200-2330/10-f/Jarnac/Miranda/-1 CN3 5m. Comet Hoerig. Not too fast moving coma, no tail. NGC 7

12999M3 040350-0440/10-f/Jarnac/Miranda/-1 CN3 35m E. Comet 2002 Subaru near d Geminorum. Moving quickly N. No tail.

13000S Wed 14/15/1430-1500/10-f/Jarnac/Echo/-1 SS2 15, 169. Very large group of spots.

\*13001M2 0115-0500/10-f/Jarnac/Miranda, Mintaka/The Beagle, digging/CN3 3h20m E. Very nice morning.

13002SE Thu 15/16/1700-0000 110-f/Jarnac/Echo, Miranda.

SS2: 11, 127. Beautiful very large group. Lovely shape to it. Live Brody & friend from Space.com came for an interview. Fantastic storm of S. Sunset, Moon & Venus. CN35.

08-02

13003G Friday, August 16 / noon - 1 / 3-F / Jarnac /  
Echo / - / SS2: 9, 128.

13004M2. 0325-0500 / 10-F / Jarnac / Miranda / The  
Beagle / CN3 1<sup>h</sup> 15<sup>m</sup> E. NGC 1637 Eridanus  
comet-like round galaxy  
NGC 1788 Orion reflection nebula  $m_v$  7.9  
NGC 2071 or 2064 near M78.

13005EM Saturday August 17 / 18 / 2300-230030 /  
Miranda, 'Obadiah / Wended / 2002 NY 40  
moving very fast. Dan Corbett on KG UN  
weather reminded us that it was passing by  
I had trouble getting the ephemeris. S+T said  
maps that were not detailed enough, and so  
I finally found JPL's ephemeris generator  
worked well. Finally after a look with either  
Miranda or Obadiah I preset Obadiah for  
the object's 2345 MST position and waited.  
This 800 m. object came through right on  
time. It was beautiful, even changed  
magnitude during the 20 minutes or so we  
followed it. It crossed the  $\frac{1}{2}^\circ$  field in  
less than 5 minutes. I spoke with Peter  
Sedicke later - he had also followed it this  
evening. He said it might be the smallest  
natural obj. in space we've ever seen in a  
telescope. Wended followed it also as it hurtled  
by.

13006M2. 0330-0445 / 3-F / Jarnac / Miranda / - / CN3 1<sup>h</sup> E.  
Quiet evening, M33 easy. NGC 2158 Levy 16 near M35.

130075. Monday, August 19 / 1430-1800 / 3-f - clearing at last  
from yesterday's clouds during  
aft. + night / Echo / - / SS2:  
9, 129. The drawing shows  
the structure of the large  
group that has been crossing the Sun lately.  
Then it clouded over again as Wendee and J  
and The Beagle took a walk.



13008M. Tuesday, Aug 20 / 0400 to 0500 / 10-3-f / Jarnac /  
Miranda / - / CN3 40m E. Last session of  
lunation.

13009S. Wed Aug 21 / 1800-1900 / 3-f / Jarnac / Echo / - /  
SS2: 7, 54.

13010ER. 2000 to 0300 int / 3-f / Jarnac / Esther,  
Minerva / Wendee / CN3h restart, several pics.

13011SEM Thursday, August 22 / 1700-0100 / 10-3-f / Jarnac /  
David Crown, David Elder, Paul Hamil, Wendee /  
CN3J, CN3H, SS2: 9, 67. / Esther, Minerva, Obadiah,  
Miranda. Nice introduction of ACP to McHenry  
County College and PSI.

13012S. Friday, August 23 / 1120-1135 / 10-3-f / Jarnac /  
Mira / - / SS2 9, 56.

13013S2. 14.00-1500 / 3-f / ~~Jarnac~~ <sup>Starizona</sup> / 6" / Wendee, others /  
Prominence. Dinosaur prominence.

13014E3 August 23/24/2000 to 2330int / 7-Fm / Jarnac /  
Esther, Minerva / -Wendee / CN3h.

13015S Saturday, August 24 / 1145-1800 / 10-F / Jarnac /  
Echo / - / SS2: 6, 65. CN3J.

\*13016E2 1900 to 1840 to 2330 / 10-7Fm / Jarnac / Obadiah,  
Miranda, Minerva, Esther / Wendee, David  
Elder and Paul Hamil, who said "this is the  
darkest night I've ever seen. It didn't last  
more than 15 minutes after the end of twilight, since  
the Moon then rose. CN3h.

13017S. Sunday, Aug 25/26 / 1600-1730 / 10-F / Jarnac /  
Echo / SS2: 6, 48. CN3J.

13018E2 1930-2350 / 10-3-F / Jarnac / Miranda, Esther,  
Minerva / Wendee / CN3 40mW and S. Some cirrus.  
Wendee and I talked in the observatory about  
her father's illness and its effect on her family.  
Catalogue objects: M80 and NGC 6520 (at  
the magnificent galactic center in Sagittarius)  
as Wendee paced around the observatory.

13019S Monday, August 26 / 1400-1430 / 30-10-F / Jar-  
nac / Wendee / Echo / SS2: 6, 49.

\*13020E2 2015-2130 / 10-7Fm / Jarnac / Miranda / Wendee /  
CN3 15mS, W. Center of MW study, L118 Sgr cloud +  
NGC ~~6520~~ 6520, L119 M24, Small Sgr cloud with 6603.  
↳ Barnard 80 + other dark lanes therein.

" L120 6457 2° From Galactic Center 1745.6-2856. L121 5846  
Virgo Rd. 321.

130215. Tuesday, Aug 27/28/1650-1730/3-f/Jarnac/Echo/-/  
SS2: 6:35, CN3J.

13022E<sup>M</sup> 2000-0200 int/3-F/Jarnac/Miranda, Obadiah/  
Dean + Donna, Wanda/Obadiah's lens maintenance/  
Phone conversation later with Tim. CN3 1<sup>h</sup> W.

13023S Wed 28/29 5 years prostate cancer free! /1030-  
1045/3-f/Jarnac/Echo/-/SS2 3:30. Much rain  
later in the day.

13024M<sup>2</sup> 0030-0100/2-f/Jarnac/Pegasus/The Beagle/  
Nice session watching gibbous moon visible through  
rapidly moving clouds. Flag (49 star) still  
flying at the start of its 7<sup>th</sup> day.

13025S. Thu 29/30/1000-1130/3-1-f/Stavizora/Dean +  
others/6" rx/wonderful series of small prominences.  
Award presented to Dean for work on  
light pollution.

13026M<sup>2</sup> Saturday Fricum/0350 to 0500/7-fm, a bit more  
than a last 1/4 moon. /CN3 30min E, and NW.  
L18 - NGC 12392, The Eskimo or Clown Face Nebula.  
Also went by L122, NGC 6226, The Blinking Nebula.  
The two blinking planetaries have been added to the  
catalogue.

13027S. Sat August 31/1430-1530<sup>~</sup>/Echo/3-f/3 SS2 3:30.

13028E<sup>2</sup> 2300-2330/3-f/Jarnac/-/-CN3 k planning

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13029 S. Sunday, September 1/2/<sup>1415-1445</sup>~~1660-1700~~ / 3-F / Jarnac  
Echo / T.SS2: 9, 102.

13030 E2. 2300-2330 / 3-F / Jarnac / Wendee, Beagle, +  
a tarantula who tried twice to get into our house /  
- / walk with Beagle.

13031 S. Monday, September 2/3 / 1700-1715 / ~~10~~ 3-F / Jarnac /  
- / Echo / SS2 12, 102.

13032 S. Tues Sep ~~2~~ 3/4 / 1730-1800 / 2-F / Jarnac / Echo /  
Wendee / SS2: 9, 102 (again).

13033 E M before 13027 S. Friday, August 30/31 / 2330-0030 /  
3-F / Jarnac / Miranda / - / VSO-1: CH Cygni.  
Searching for other red stars.

13034 E2 Tues 3/4 / 2000-2015 / 3-F / Jarnac / - / - /

\*13035 M3 0115 to 0500 / 10-3-F / Jarnac / Minerva / The Beagle,  
foraging / CN3 3<sup>h</sup>15<sup>m</sup> East.

# L 115 NGC 1788 Orion reflection nebula with  
tail! 8 arcmin.

- Hiwa <sup>first</sup> L 125 NGC 1600 Eridanus round galaxy.  
2.3 arcmin, diffuse.

L 129 NGC 2174 Orion nebula with dust.  
38<sup>+</sup> arcmin barely noticeable  
but <sup>large area</sup> ~~great~~ of brightening  
in field

L 135 NGC 2023 complex - incl. IC 434  
+ Barnard 33. Didn't see 33  
tonight.

L 77 2237, 38, 39, 46.  
2238 + 2244 Rosette Complex  
NGC 2237.

13036S Wed/Thurs Sept 4/5/5-5:20pm / Echo / hazy / -1  
SS2: 6, 41.

13037SE2 1800-1850 / 3-F / on way to Phoenix / -1-1  
beautiful cloud structures toward sunset,  
Idea to make slide show on observing  
sites to Paul McCartney.

13038M3 0230-0410 / 0-3-F / Wm Carey<sup>JMF</sup> St, Jarnac /  
Minerva / -1 CN3 10". Mostly cloudy cond.  
stopped it.

13039S. Thurs 5/6/5-5:20pm / 3-F / Echo / -1 SS2 - 4, 39.

13040S Friday, Sept 6/7/09 15-100 / 3-F / Jarnac +  
Rincon Valley drive / Echo / SS2: 7, 90 CN3J.

\*13041S Saturday, September 7/8 / 1330-1530 / 3-F /  
Patsy's house, then Walter's house / Cupid / Patsy  
Tombaugh, Annette + Bill; + Walter / SS2  
6, 54. Examination of 16" telescope.

\*13042SE2 1830 to midnight / Cupid + many scopes /  
many people at The White Sands Star Party, Brewington  
White Sands National Monument / CN3 45m S / 3-F.  
See Journal p 107 for essay.

13043S. Sun, 8/9, Richard's 60<sup>th</sup> / 1330-1430 / 3-F / Cupid, 16" /  
Patsy / SS2 6, ~57.

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\*13044SE2

1700-2100/0-1-F/Jarnac/ECHO/2 photogra-  
phers for Parade Magazine, Dale, Nancy, Doug,  
& Tessa/ Photosession. just cleared after 1 1/2" rain.

\*13045M3

0400-0530/10+3-F/Jarnac/Miranda, Castor  
(which was the alternate choice for last night's  
shoot) 1-1 CV3 0h30m E. The sky was  
possibly the best I've seen - anywhere. M33  
was not just there, it was obvious! (It was  
also almost overhead. It was as if the air  
had been ripped away and I was staring directly  
into space.

13046E.

Wed, Sep. 11/2130-2145/7-F/windy/Jeanie's  
house, Island Park/Wendee Joanie J+W  
pointed out Vega, Cassiopeia & Ursa Major.

13047E

Tues, Sept 17/2200-2330int/7-F/Mom's house &  
Joanie's house/Wendee Joanie/Phantom of the  
Opera gibbous Moon, ~ 3/4 Moon; UMi, Cass.

13048E

Wed, Sep. 18/2215-2230/3-F/Mom's house/  
Wendee, Joanie, Philip/Moon.

13049E

Thu Sep 19/1900-2000/7-F/plane betw. Dallas &  
Tucson/Wendee/We saw Venus outside  
window. This session is included in the  
acknowledgements of Cosmology 10!

also used small  
Makem  
Moon.

13050E

Sat Sep 21/1930-0003/7-F/Marwa, Esther/1-CV3 h. 3 sub.

13051SE

Sunday, September 22/1730-2345/7-F/Jarnac/  
Echo, Chadiah/Devin, Donna, Wendee/  
SS7, 0 ~ 48 01111 Esther, Mercur...

13057S. Monday, Sep 23 / 2:15-2:35 pm / 10-F / Echo / Jarmac /  
Wendee / SS2: 6, 37

13058E2 <sup>19</sup> 2230-2300 / ~~3~~ 7-Fm / Jarmac / - / The Beagle.  
CN3h with Murerwa Esther, 3 sets.

13058S. Tues Sep 24 / 1320-1335 / 10-F / Echo / Jarmac /  
SS2: 7, 69.

13058E2 2000 to 0000 / 7-Fm / Jarmac / <sup>Esther,</sup> Miranda, Murerwa /  
Wendee / - / CN3 30<sup>m</sup> west, CN3h, 3 sets.

13056S Wed Sep 25 / 1400-1415 / 10-F / Jarmac / Echo / - /  
SS2: 7, 72.

13057E2 1830 to 0000 / 10-9-7-Fm / Jarmac / Murerwa,  
Esther, <sup>Miranda</sup> ~~Murerwa~~ / Wendee, Dean / - / Final repair  
of Obadiak lens - one element was shifting. /  
CN3h 3 sets. Had to restart Murerwa's but  
all finished okay. CN3 1h 05<sup>m</sup> ~~E~~ W.

13058S. Thursday 26 September / 1:15-1:40 / 10-3-F / Jarmac /  
Echo / - / CN3J SS2 5, 56.

13059AE2 1830-~~19~~30 / 7-1-F / San Jose to Golden Gate Bridge /  
Wendee by phone / - / Greenflash. Moonroof driving.

13060S. Friday 27 September 2002 / 1300-1340 / 3-F / San  
Rafael, Jane's house / Jane Houston Jones /  
2 telescopes - 6" homemade "Dob-son" & 6" f/5 Red Dwarf.  
SS2 5, 40. also 70mm Televue Ranger "Little Red."

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- 13061E2 1900-2340 int / 3-7-Fm / San Rafael, Jane's House / Telescopes - Red Dwarf.  
Marriot Jane Houston Jones, Bob + Becky Morgan, Peter Lord, + Lonny + Todd, others / Venus as crescent. Moonrise later.
- 13062SE. Saturday 28 September 2002 / 1900 to 0000 / 9-F / <sup>amateur astronomers</sup> ~~many~~ <sup>30</sup> telescopes / San Francisco  
14 1/2 "light box" called informally "Big Blue". 1
- 13063SE Sunday, 29 September / 1800-1815 / 3-F / Jarnac / on the way from Lonny's house to San Jose airport / - / - / Green Flash.
- 13064S. E Monday, 30 Sept / 110-F / Jarnac / Echo / - / SS2.
- 13065E2 1900 to 0000 int / 10-F / Jarnac / Minerva, Esther, etc., + Obadiah / Wender, BBC Horizon team of four, incl. Matt Barrett. Interview for program on asteroids and comets impacting and S-L 9. Beagle got out, roof closed on Obadiah (It'll give it character "Dean said later.")
- 13066SE Tuesday October 1, 2002 / 110-F / Jarnac / Echo / - / SS2.
- 13067SE2. 1800-0000 int / 3-F / Jarnac vicinity / Wended / Green Flash, sort of. CN3H with Esther + Minerva.
- 13068MB 0130-0530 / 10-F / Jarnac / Miranda / - / M33NE. CN3  
3h 00m E. Catalogue Lt = 2623 Lynx  $M_v = 9.8$  9.0' v. elong  
dusty, bright core ~~M<sub>v</sub> = 9.2~~  $M_v = 9.2$  OC 7186 - 1312 CMA = L  
NGC 2359 = L 126 = F in ID Not cataloged to Catalogue til ID proper

13069E Wed Oct 2/3/1920-0000/3-F-coolt windy, front coming in / Wendee / Esther + Minerva / CN 3h.

13070S<sup>11</sup> Thursday Oct 3/0700-0655-0710/- Session began at 0530 and ended with a solar sec reading from 0655 to 0700/10-F/Jurnac / Miranda + Echo / CN 3 0h 20mE. SS2 with Echo - reading obtained twice for a better count - 4, 36.

13071E<sup>12</sup> Friday Oct 4/5/2000 to 0000/3-2-F/Peach State Star Gaze near Copperhill, Tennessee / Many Telescopes, including Cupid / Will Tirion, Ken Posedly, many others / CN 3 1h.

13071E<sup>12</sup> 2200-2345/2-F/Peach State many scopes / Will Tirion, Ken Posedly.

13073M2. 0430-0620/3-F/Peach State Star Gaze / Cupid / 2 others walking by at end, otherwise just Doved / CN 3 1h.

13074S. Saturday, Oct 5/6/1155-1210/3-F/Peach State / Cupid / Ken Posedly / SS 2 3, 37.

\*13075EM2 2030 to 0445/10, suddenly at ~0245 to 1-fog 1-F / Peach State Star Gaze / Cupid, other telescopes / Will and Cokie Tirion, Ken Posedly, many other people / CN 3 4h 45m Northwest, Northeast Catalogue objects: <sup>41271</sup> 16417 Draconis form a double star, so much like E Lyr that I thought it had moved across the sky. Only 1 of the stars is itself double, though.

16 Globular cluster 6229, spent some time on the position since Cupid's finder is reversed. Will has offered

10-22

to print out a series of Cambridge charts  
reversed.  $\dots$  <sup>6229</sup> forms A w two stars.

Also, the two halves of the Veil nebula, to be  
added as a single catalogue entry.

13076S. Sunday Oct 6/ 12-1230/10-F/Peach State/  
Cupid 1-1SS2 3, 29.

13077M2 0500 to 0600/10-F/Jarnac/Miraval -1SSCN3 20<sup>m</sup>E.

13078E. Monday, October 7/1900-2345/10-F/Jarnac/  
Esther, Miranda, Minerva -1CN3h. Catalog  
object L 128. A galaxy with a question mark  
attached in foreground stars. 2030.7 -33 29.  
IC 5029 or PGC 64845

\*13079SE Tuesday Oct 8/1700 to +8 2350/10-F/Jarnac/  
Wendee, Tom Alvin, and Jeff Medkeff / Echo,  
Miranda, Esther & Minerva. # SS2 with  
Echo 7, 42. CN3h. Jeff reintroduced me to  
the wonders of flat-fielding. Why did I ever take  
Gil's advice and not flat field all this time?

\*13080M2. 0400 to 0600/10-F/Jarnac/Wendee, Tom/  
CN3 45<sup>m</sup> E. Wendee & I took pictures of  
me looking through Miranda, 12 pics,  
Jupiter in one, tail of Leo in rest around dawn.  
For a very difficult shot, we did it all in a single  
morning.

L 129 UGC 5373 Sextans B. \*

\*L 130 #3198  $M=10.3$  VEG + 8' size

\*L 131 2964  $M=11.3$  2.7 brighter of pair.  
found in session 13082M2

13081EM Wednesday, 10 October 10/10/1900-0000/10-F/  
Jarnac Wendee, Tom / CN3h. Esther & Miranda  
EA Study of Heavenly Gr.

13082M2. 0400 to 0530/10-F/ Jarnac / Miranda / -/  
CN3 1<sup>h</sup> 05<sup>m</sup> E. See L131 overlap, and  
L132 NGC 3432 Star at Scircle and at  
W. end. Not Supernovae.

13083EM Thu 10/11 1700-0200 110-F / Jarnac / Echo, Miranda,  
Esther / Wendee and Tom / GS2 8, 43. CN3h.

\*13084M. Friday, 11/12 / 0350-0600 / ~~10~~ 3-2-F / Jarnac /  
Miranda, Esther / - / CN3 35<sup>m</sup> E. Considerable  
high cloudings. However, clear sky in E  
allowed the following confirmations.

- 1) L126 (cf. 13068/93) = NGC 2359 Thor's helmet,  
CM; bright nebula blown out from a Wolf-Rayet  
star.
- 2) L133 = NGC 3070 Leo Round galaxy, Not  
what I thought in 1981. (#37)
- 3) NGC 3055, Wendee's Galaxy, is \*L37.  
Plus Kretz search CN3hij. Most images  
OK despite clouds & dawn.

13085M. Monday, October 14/15 / 0350 to 0630 / 3-F / Jarnac /  
Miranda, Esther / Wendee / CN3 0<sup>h</sup> 30<sup>m</sup> NE.  
Cat obj. L134/4319, with Markarian 205, 4291 and 4386. in field  
L135 = 4256 Dra EOG, Br. core M11, 9. D = 4.2  
\*L136 = 3738 M11, 7 D 2.3 UMa near M97 paired w 3756 11.5 4.1  
\*L137 = 3718 M = 10.8 D = 7.9 UMa EG.  
\*L138 = 3953 M = 10.1 D = 6.6 Very elong gal w/ brt. core

13086MP Oct 15/16/ 0500-0510/ 2-F, but Orion visible / Jarnac / - / Closing observatory.

13087E † Thursday, Oct 17/18/220-2215 / 2-F but Moon visible / Penn State Altoona / ven / Jay Burslingame / Moon.

13088E. Friday, 18/19/ 1900-0000 / 7-Fm / Jarnac / Minerva, Esther / - / CN3h.

\*13089M2 0540-0540 / 7-Fm then 10-F / Jarnac / Miranda / - / CN3 20m E. Simple session just with Miranda designed to catch & catalog some objects in UMa, Coma, Virgo & Leo.

		M <sub>i</sub>	D	Const
L139 =	NGC 4449	9.6	6.1	CVn Gal, br core
L140 =	4485	11.9	2.2	CVn Elong. gal
L141 =	4565			Beautiful edge-on
*L142 =	4274	10.4	6.6	Coma EG, br core
				• 4314 (10.5, 4.8)
				• 4274 (10.4, 6.6)
				4278 (10.2, 3.6)
*L143	4559	10.0	10	(in field w/ 4278 + 4314) Com EG
*L144	M88	9.5	5.8	VEG, Br. Core
*L145	4473	10.2	4.2	C Br VEG Br. Core
*L146	M49	8.4	7.9	Vir Round G, Br C

\*13090S Saturday 19/20/ 1430-1700 / 10-F / Jarnac / Wendee, Jeff Hedkoff, Jim Tim / Minitaka and Capella / SS2 8?, 113. Moving out of big elevator chair.

13091EM2 2330-0010/3-F/Jarmac/Beagle walk

\*13092E. Sunday, October 20/21/2230-2315/7-Fm/Jarmac/  
beagle walk. CN3h course correction with Tom.

13093S. Mon Oct 21/22/1730-1800/3-F/Jarmac/Echo/-SS2:  
4, 34.

13094E2. 2230-2315/10 7-F/Jarmac-/Beagle walk.

13095M Tues 22/23/0520-0535/3-F/Jarmac/Minerwa, Pegasus/  
CN3 5<sup>m</sup>E.

13096S Wed 23/24/05-1620-1640/10-F/Jarmac/Echo/-ISS2:  
3, 28. Big group. CN3J.

13097E2 1850-2350int/3-2-F/Jarmac/Cupid-Ophelia,  
Esther & Minerwa/Beagle/CN3h stopped for clouds.  
Beautiful picture on Ophelia 2 showing a few  
well focused stars. Later, a walk.

13098M2 0500-0530/3-F/Jarmac.

13117E Oct 24/18-23/10-F/J/Dean, Vince, Wendee/Miranda, 8" Folded m/CN3 40<sup>m</sup> L<sup>147</sup>  
n<sup>47</sup>c  
6638

13099S. Fri 25/1300-1400int/west of Phoenix/Cupid/Tim/  
SS2 5, 29. Tim took a picture of me observing.

13100E2 2000-2200/2-F/Starry Nights Festival, Yucca  
Valley/Tim Hunter, others/Cupid/M31, 33.

~~13101E~~

13101E Sat 26/2100-2300/9-10-F/Starry Nights/Tim,  
others/Cupid/CN3 1<sup>h</sup> W.

10-02  
1-8

13102S Sunday October 27/ 1200-1230 w/ 3-F/Jarmac/  
Cupid/Tim/SS2 6, 36. Tim & I accidentally  
wore each other's glasses as we drove off! At least  
we didn't leave Cupid.

OCTOBER OBSERVING RUN

13103E2 1900-2345/0-2-F/Jarmac/Ether/Carolyn,  
Wendee/CN3h test on Altair.

13104S Mon 28/1330-1450/10-F/Jarmac/Carolyn,  
Wendee, Capella, Mintaka/SS2: 6, 70.

/

\*13105E2. 1830 to 0000/10-F/Jarmac/Ophelia-Cupid,  
Mr Obadiah, Minerva, Ether/Wendee &  
Carolyn/CN3F 20 pics w/Ophelia, 6 w/Obadiah.  
CN3h also. Films came out well, areas  
40, 23, 438, 369, 384.

13106S Tues 29/10-1015/10-F/Jarmac/Echo/-/SS2 6, 50.

13107E2 2300-0000/1-F/New Orleans, near 745 Crystal/  
walk, also view through Cupid at Uncle Jack's.

13108S. Wed 30/1100-1130/3-F/Uncle Jack's place/  
-Cupid/Uncle Jack/ & look at sailboats &  
Causeway & lake.

13109E2. 1100-1130pm/6-F/New Orleans near 745 crystal  
& Uncle Jack/walk. View thru Jack's  
little Celestron.

131105. Thursday 31 October / ~~1400~~ 1300-1400 / 3-F /  
Deep South Regional Star Gaze, McComb, Mississippi /  
Barry Simon's telescopes / Barry, others /  
SS2 Takahashi 78 - prominences,  
plus other scope \$ 6,52.

\*13111AN2. 1730-0530 / 3-F / Deep South Regional Star  
Gaze / many people & scopes / Cupid / CN3 9h.  
very nice night, good conversation. L148 R Lep

13112E. 1 November 2003 / 2130-2345 / 3-F / Jarnac /  
DSRSG / Cupid / lots of people / CN3 1h 10m.

13113S 2 Nov / 1000-1200 / 3-F / DSRSG / Cupid, an  
ETX / SS2.

\*13114EM 3 Nov / 1830-0050 / 3-F / Jarnac / Coronado Solar  
Conference / Wendee, Nanette, ~ 20-25 people /  
Steve Peterson ran Miranda; Ken Graun  
ran Obadiah.

\*13115S. Monday 4 Nov / 1300-1715 / 110-F / Jarnac /  
Echo, Cordelia / SS2: 8, 79 / Wendee, Nanette.  
Inauguration & First light of the new  
Cordelia on Sun.



11-02

\*\*\* 13116AN2. 1815-0645/10-F/ Jarnae / Ab Miranda, Cupid,  
Pegasus, Minerva & Esther / Wendee and  
Ranette / CN3 10 hours W, S, N, and E.

Objects:

		M	D	
* L149	NGC 6553	8.3	7.9	Sgr GC faint + large
L150	M8 6523	5.0	76.0	remember when Comet Levy we. + through it in 1972
L151	M16 6611	6.0	69	Eagle's nebula w/ cluster
L152	M20 6914	6.3	24	Trifid
L153	7293	7.3	860	Helix Nebula Age } looks like a ghost.
L154	7009	8.0	3.0	Saturn Nebula - blue
L155	M72 6981	9.4	58	Aquarius Globular Cluster
L156	6934	8.9	58	Pelicanus GC
L157	19472 + 3722			The Cone asterism
LW	519472 + 3722			3 in handle, 4 in curve, 12 in straight line, A at bottom
* L158	Castor cluster			
	IC 2196	14.0	1.4	
	IC 2197	14.0	0.4	
	IC 2194	15.0	0.9	
L159	NGC 2264	3.9	59	Xmas tree w/ rebaricity
L160	2254			Mon OC + Star chain - intro in the sky
* L161	NGC 2245			Mon Neb. comet like nebula.
L162	NGC 2252			Mon OC many stars, like a rope
* L163	NGC 2775	10.1	4.2	Enc round galaxy
* L164	3486	10.5	6.9	LMi " "
* L165	3245	10.8	3.1	LMi elong gal
* L166	3344	9.9	6.9	LMi round gal, bt. core, + nearby

			M	D	
L167	NGC 3310		10.8	4.2	<sup>near UMa</sup> <del>the</del> round galaxy
L168	3242		7.7	4.0	Ghost of Jupiter PN - blue! - "Eye Neb"
*L169	2986		10.8	3.1	Hya rg with brit. core (br)
L170	4651		10.8	3.9	CBR rg bc
L171	4450		10.1	5.0	CBR Elong g bc
*L172	4689		10.9	4.2	CBR EG
*L173	4548	M91	10.2	4.2	CBR EG BC
*L174	NGC 4649	M60	8.8	7.1	= M60 faint gal next to it
L175	4486	M87	8.6	6.9	Vir
*L176	4579	M58	9.8	4.7	Vir
L177	NGC 4552	M89	9.8	5.0	= M89 Vir
*L178	NGC 4596		10.4	3.9	Vergo EG BC
*L179	4535		10.0	6.9	Vergo RG BC Comet-like
*L180	NGC 4303	M61	9.7	6.3	Low surface bt. Virgo spiral
*L181	NGC 3887		10.6	3.1	Grater round galaxy.
	CN3e	TV Cr		12.2	

13117E see after 13098 M2.

13118S Tuesday, November 5 / Guy Fawkes Day (1300-1315)  
10-f / Jarnac / Echo / SS2.

\*13119E2 Tues Nov 5 / 1900 - 2100 / 10-f / Jarnac / Wendee +  
Nanette / Obadiah, Miranda / GAL71 Nanette's  
River, L157 the cane (sort of), L154 the Saturn  
nebula, and L153 the helix ghost. Wonderful  
session.

13120S Wed Nov 6 / 10am - 5pm / 10-f / Jarnac / Wendee  
Nanette / Cordelia / - SS2. 9, 32, installation of  
fender on Cordelia. 13 prominences. (big one)

13121E2 1900-2000/10-F/Jarnac/Cordelia/<sup>11-02</sup>  
Wendee & Nanette / Crescent Moon through  
scope & finder.

13122S Thursday, Nov 7/1330 to 1500~/10-F/  
Jarnac/Wendee, Nanette /SS2 9,90+  
13 prominences.

13123E2 1845-0000/3-F/Jarnac/Ophelia/  
Wendee, Nanette, Dean /-Dean worked on  
some motor. CN3F 12 pics.

\* 13124S Friday, Nov-8 /1000 to 1700/3-F/Jarnac/Mintaka  
& Ophelia/Wendee & Nanette /~~CA~~SS2: 9,93+ Putting  
together of new desk for CN3F.

13125E2 1930 to 2145/3-F/Jarnac/Ophelia/  
Wendee, Nanette /CN3F 12 pics incl. Oph 2  
on M31, NGC 869+884, M45.

13126S Sat Nov 9 /1100-1130/~~10-F~~ 3-F beautiful low  
lenticular clouds /Mintaka, Cordelia /Wendee,  
Nanette ~~CA~~SS2 9,95 + 13 ~~spots~~ prom-  
inences.

13127EP Sun Nov 10/200-2130/10-F/Jarnac/Wendee.

13128 M2. 0415-0545/10+-F/Jarnac/Miranda, Pegasus/-  
GN3 | h 10<sup>m</sup> E.

		M	D		
	L182	4636	9.5	5.8	Virgo Gal bar core
	* L183	4818	11.1	4.82	Vir Very EG barely there
	* L184	5147	11.8	1.8	Virgo round gal
	L185	5248	10.3	6.1	Bootes RG

13129S Nov 11, Monday / ~~1200-1300~~ 1130-1200 / 10-F / Jarnac / Echo / - / SS 2 5, 59. Windy so count might be affected.

13130M2 0430-0545 / 10-F with Mr. Wind / Jarnac / Miranda  
Mintaka / - / CN3 0h 45m E  
\* L186 NGC 5371 10.6 4.2 CVn Round gal  
\* L187 NGC 5020 11.7 3.1 Virgo EG BC  
\* L188 NGC 4591 13.0 1.5 Virgo EG  
CN3e TV Gr (13.3 w/ Pegasus } faint, high power only

13131S Tuesday, Nov 12 / 1100-1300 / 10-F / Jarnac / Wendee, Dejun, Donna / Cupid / SS 2 5, 58. Work on roof motor system.

13132M2 0445-0555 / 10-F with Mr. Wind again / Miranda / CN3 50m E CN3e w/ Miranda  
TV Gr (13.3)  
\* L189 NGC 5127 11.9 2.7 CVn RG BC Faint  
L190 NGC 4956 12.4 1.4 CVn round gal  
L191 NGC 4772 11.0 3.3  
\* L192 NGC 4536 10.6 7.4 Virgo very eg  
\* L193 NGC 4129 12.5 2.2 Virgo eg, high power only

13133GE Wednesday, Nov 13 / 1200-<sup>23</sup>1500 / 10-F / Jarnac / Mintaka, ~~23~~ Cordelia / SS 2 5, 97 + 18 prominences  
+ Miranda } also, (13125E2)  
L194 NGC 281 photo image  
L195 2419 Shapley's wanders } on Ophieta

11-02

13134M2

0440-0600/10-F/Jarnac/Miranda/CN3  
Oh 45<sup>m</sup>E. CN3e TV Gw m 0

\*L210 NGC 4685 12.6 1.5 Used 16mm for all these

"Winking gal"  
CBr RG VBC

\*L211 NGC 4779 12.4 2.0 V ergo round gal

\*L212 " 4795 12.1 1.8 V rg

\*L213 " 4623 12.2 2.1 V elong gal

\*L214 " 4713 11.7 2.6 V elong gal

\*L215 " 4688 11.9 3.1 V very low sb gal like a diffuse comet.

13135S

Thurs Nov 14 / 10-F/Jarnac/Wendee  
Mintaka, Cordelia / SS2: 6, 114 several prom.

13136E2

1900-0000 / 7-Fm/Jarnac/Minerva / - /  
picture of star for Mel Peterson.

13137S

Fri 15 / 1600-1630 / 10-F/Jarnac/Mintaka,  
Cordelia / - Wendee / SS2 6, 58.

13138E2

1900-2300 / 10-F/Jarnac/Minerva, Esther / - / CN3h.

13139MB

0510-0600 / 10-F/Jarnac/Miranda / - / CN3 30<sup>m</sup>E  
CN3e TV Gw (146. <sup>L216</sup> 121 <sup>M68</sup> 47 <sup>Hya glob cl</sup> 3923 9.8 5.8 Hya elong gal  
also NGC 3201 Vela big globular cluster

13140S

Sat 16 / 1600-1620 / 10-F/Mintaka, Cordelia /  
CA SS2 4, 48. ~~from~~ Very windy & poor  
seeing affected count  $\searrow$  Greek letter prominence

13141M Sun<sup>Mon</sup> 17/18/ 0430-0600/E 7f 3-fm / Jarnac /  
Miranda with 16mm eyepiece / - / CN3 10<sup>m</sup> E+S.  
Cat. obj. Hydra cluster.

\*13142AN Mon November 18/19/ 1730-0650/7-fm - session  
started at moonrise, /A Ophelia, Obadiah,  
Cupid / PST Don Davis, Bill Hartmann, David  
Crown, Janet Whitener, others. CHABOT Science  
Center; Mike Reynolds, Carter Roberts, others  
STARIZONA: Dean, Scott Larry, others SPACE.  
COM David Brody, 1 other JARNAC: Wendy  
Marilyn Shoemaker, Brent + Joanne Archinal, Tom G.  
Marilyn Unruh, others / First, after the long &  
tiring PST board meeting I was showing  
the observatory to a PST person when I forgot  
to loosen the back wall. Thank goodness  
the only damage was to the west hasp  
& Dean was able to fix it, easily later.

The meteors began slowly at about  
midnight when one moderately bright Leonid  
crossed the moonlit sky. Activity was  
downright slow until almost 3:30 when  
the  $\Theta$  hit the 1866 stream. Suddenly  
meteors were all over - on several  
occasions to the 1/sec level that consti-  
tute a storm. The activity dropped to  
almost before by 4:30. All in all, a  
great night! 504 meteors by our group

\*13143E Tues November 19/20/ 1800-2330 / Tucson,  
then Jarnac / 7-Fm / 15 Moonrise over Rincons,  
then PENUMBRAL LUNAR ECLIPSE. /  
Miranda, Obadiah, & Cupid on raw desk /

11-02

Wendae, Brent + Joanne, Tom Clinias.  
Brent took some pictures. We saw structure  
off the limb on the a crater (rim + peak) in  
the darkened part.

13144E Wed Nov 20/21/ 2200-2300/ 7-Fm/Jarnac/  
Wendae / Moon + stars.

13145S Thu 21/22/ 1700-1720/ 10-F/Jarnac Echo 1-1  
SS 2: 4, 21.

13145S Friday, November 22/23/ 1700-1730/ 3-F/Jarnac/  
Echo 1-1/ SS 2: .

13148E2 1955-2350/ ~~10~~ 7-3-F/Jarnac/ Esther,  
Minerva 1. Photographic effort of the Cairn.

13148M3 0500-0530/ 3-Fm/Jarnac.

\*13149M. Saturday, Nov- 23/24/ ~0230-0400~ / 7-Fm/  
on board 747 KLM, S+E of S tip of Greenland /  
Wendae - Vega just above N horizon - Vega is  
circumpolar  
here  
• Penetr  
• Vega  
N

13150SE Mon. Nov- 25/ 1500-1925/ 10-3-F/  
Kenya/Cupid, borrowed 7x35 b/ Wendae/ Thru Cupid  
-Stork. Traverse: Wildebeest, elephants,  
gazelles, buffalo, 3 lions. Dark St  
sky at end.

\*13151M32 Mon/Tues Nov 25/26/0500-1800/3-F/

Cupid / Wendee!

- 1) Clearing at 0540 for a look at Venus.
- 2) Using Cupid to set photograph  
trionesses and other animals. We saw giraffes,  
gazelles,
- 3) On way to we saw  
zebras.
- 4) at SS2 3, 6.
- 5) On evening traverse, saw elephants,  
dick-dicks, and zebras.

13152 E2. 2030 to 2230/3-F/ |Cupid|  
Wendee, Debra and Don Shadrick/  
M-15. Nice friendly get acquainted  
session.

13153 S Wed Nov 27/0830-1230/3-F/ ~~J~~ /  
Cupid / Wendee / Safari group / SS2: 5, 19.  
Photo of heartbeats through Cupid; other  
photos. Later, from hotel, spotted giraffes,  
zebras + ? hippo.

13154 M2 0400-0510/3-F/ Whitesands hotel, Mombasa/  
- / CN3 between passing clouds 30m E.

13155 S Thurs Nov 28/0840-0855/3-F/ ~~J~~ / White-  
sands resort, Mombasa, Kenya / Cupid / Wendee /  
SS2 4, 23.

13156 S Fri Nov 29/0600-0620/3-F/ Aboard Marco Polo / - Steve

11-02/12-02

O'Meara, Donna, Wendee 1-1 Green flash.  
Multiple events, one as Sun set behind distant old,  
then on horizon. Wendee, standing just a bit  
away, did not see them.

13157E2 2015-0000 / 3-F/A aboard MV Marco Polo /  
Cupid/Wendee, Owen Gingerich others /  
NGC 104, Tarantula Nebula, Saturn.

13158\$M Saturday morning / 0350-0500 / 10-7-Fm /  
aboard MV Marco Polo / Cupid / Steve O,  
Rick F, others / CN 3 10<sup>m</sup> E, Crux, & Carinae,  
the Southern Pleiades (near & Car to the one in  
Vela.)

13159E Saturday night Nov 30/Dec 1 / 2200-2330 / 3-F /  
aboard MV Marco Polo / Cupid / Wendee, Owen  
Gingerich, others / - LMC, SMC, NGC 104.  
Thunderstorms to E over Madagascar.

13160SE Sunday, Dec 1 / 1600-1830 / 3-F / MADAGASCAR,  
Nasy & KONBA / G90 / Wayra & Joya, Wendee /  
SS2 5, 39 spots, Green Flash at sunset.

13161E2 2130-2300 / 10-F / Aboard Marco Polo / Owen G,  
others / meteor, S. sky,

13162SE Mon Dec 2 / 1800-1840 / 3-F / Marco Polo / Wendee /  
Rick F, many others / Shakespeare "A Midsummer  
Night's Dream, Green Flash over clouds.

13163E2 2230-0000 13-10-F / Aboard MV  
Marco Polo / Owen, others, Rick Frenberg /  
Rick's telescope / - LMC, Tarantula. ~~Star~~  
η Carinae Nebula.

13164SP Tuesday, December 3 2002 / 1845-1855 / 3-F / Marco  
Polo / Steve O'Meara / attempt at green flash.  
Sun set behind cirrus though.

13165E2 2145-2230 / 3-F / Aboard MV Marco Polo /  
others, though not many / Southern sky through clouds.

\*\*13166MS2. Wednesday morning, December 4, 2002 / 0230-1000 /  
3-F / aboard MV Marco Polo  
position at 0511  $35^{\circ} 27.08E$   
 $-25^{\circ} 39.53S.$  /

Cupid CN3 45ms.

Total Eclipse of the Sun.

Very serious clouds over most of Africa.  
But the sky was mostly clear when we got on deck.  
But about 15 minutes before first contact at  
7:19am a big cirrostratus cloud formed.  
We missed first contact and got a few  
views of the partial phase. It got very tense  
about  $\frac{1}{2}$  hr before totality. The ship speeded  
up to try to get out of the cloud to a clear  
area to the SE but the cloud kept up with us.  
With 15 minutes to go, even 10 minutes, Wanda  
and I didn't think we'd see it. Then the edge of  
the cloud, with cooling temperatures began to  
thin out. At 14 minutes we started to see the

35° 59.14E  
26° 07.24S at 10am

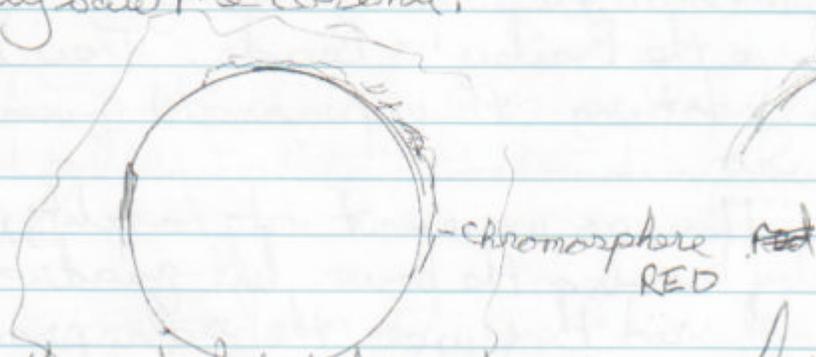
Totality: { 35° 37'E  
26° 02S.

arc present continuously, no filters were needed for a naked eye view. Then came the breakup of the arc into a diamond ring.

What a corona! a very large group of prominences along the top as seen through Cupid. The corona was more colorful than I had ever seen it.

Wanda said the best part was Bailey's Beads and the Chromosphere. She didn't like red color but was amazed to see it at all. I saw the opening diamond ring, followed by a most impressive, mostly inner corona.

There was so much color! Beautiful red prominences along the top, seen in Cupid main scope + finder. The clouds behind us were VERY DARK - in fact this was the darkest eclipse since 1970, and the darkest where I actually saw the corona.



At the end of totality there was a fine display of Bailey's Beads, white + ruby. So I succeeded in seeing these last two items I'd never noticed in a solar eclipse, Bailey's Beads and Chromosphere.

I followed the ending partial phases - visible rarely through clouds.

We were very lucky to see this eclipse at all. Half a mile back we would have missed seeing anything at totality!

Wenda's notes: "I looked up and saw the first 'contact' or 'bite' out of the Sun. Just as I pointed out my discovery to David, Rick Fernberg got on the PA system pointing out the start of the eclipse.

"Almost from the start, we rarely needed our eclipse viewing glasses. As we neared totality I was aware of two things. First, was that the Moon's shadow was very definitely darkening the sky behind us and second, whenever the Sun would almost break through the clouds, it would appear to have the diamond ring effect. The crescent would light up brilliantly.

"Again, on cue, about 8:29, totality hit. I never saw the diamond ring at the beginning. I did see the Bailey's Beads. They looked like pearls dotting the upper right quadrant of the Sun. ...

"Then, as we went into totality, I saw the ruby beads on the lower left quadrant. Actually David said they were the solar prominences. ... The eclipsed Sun had a wonderful contrast to the surrounding cloud cover. The clouds were surrounding it were gray in appearance, but the Sun was a perfect circle of charcoal gray in the middle."

Sun, Moon, clouds and ship  
Race to meet with destiny  
A circle is lit

12-02

13167E

December 5, Thursday | 2215-2345 | 2-F | Richard's Bay, South Africa | -1 | Luke Fitzgerald from England | Ship leaves. Discussion about Macbeth 2.4.

by the clock, Friday,  
And yet dark night strings to the Travelling lamp;  
It is't night's predominance, or the days  
shame  
That darkness does the face of earth's tomb,  
When living light should kiss it?

"Gainst Nature's nature still!"

13168SE

December 6 <sup>Friday</sup> ~~Saturday~~ | 1050-2355 intermittent | i-o-f | Durban, South Africa | purchase of refractor by Dollond, London, with tests throughout day and view of "Shed N" sign as ship pulled out.

13169S

December 7, Saturday | 1750-1805 | 3-F | at sea aboard MV Marco Polo | Dollond refractor 1-1 SS 2 0.0.

\* 13170E2

2030-2355 | 10-3-F | aboard Marco Polo | Cupid, Dollond ref | Wendee, Owen, others | A. Carnice, Jewel Box, NGC 104, other objects | Moon. Jupiter at end, as official first light for the Dollond.

13171S.

Dec 8, Sunday | 0800-1200 | Addo Elephant Park | Steve's binocs | Wendee, Steve & Donna, Rick, others | LOTS of elephants.

13172E2 2130 - 2200 / 0 F / Marco Polo / Wondae,  
others / leaving Port Elizabeth.

13173E. December 9 / 2230 - 0000 / ~~to~~ 3-10-F /  
aboard MV Marco Polo just S. of  $-35^{\circ}$ ! /  
Steve O'Meara, others / Vela, Musca,  
Triangulum Australe, & Coma.

13174E Tuesday, December 10 / 2130 to 2340 / 3-F /  
aboard MV Marco Polo, Cape Town / Steve O, Rick  
Fienberg, others on forward deck / lots of  
lights. Steve guided me to  $\delta$  Mensae,  
atop Table Mountain. Moon, Saturn,  
47 Tuc & other clusters near SMC. Telescope  
- Cupid - was run with drive functioning.

\*13175E. Wednesday, Dec 11 / 0930 - 1200 / 2-F / South  
African Astronomical Observatory / Wondae,  
others, Steve O, Rick Fienberg / - View of  
the refractor. Blink microscope through  
which we saw a fast-moving red dwarf,  
19(?) ly away) on 2 plates taken by us apart.  
We also learned that LaCaille put Mensa  
S. of the MC because Table Mtn. after which it  
is named, is often under a cloud!

We next visited the site where John Herschel  
conducted his southern sky survey in the  
1830s. There was a monument and inscript-  
ions on the monument, located in the school  
yard of an elementary school.

12-02

13176E2 2045 - 2145 / 2-F / aboard MV Marco Polo /  
Cupid / Wendea / the Moon at first quarter: we had  
a good look at the terminator.

13177AS HOME! Friday, December 13 / 1700 - 1715 / 3-F /  
Jarnac / Echo / - / SS 2: 5, 56.

\* 13178M2 0400 - 0600 / 3-F / Jarnac / <sup>Cupid +</sup> Miranda / - /  
CN3 10m E. NGC 3314 in <sup>Hydra</sup> + 3316.  
Geminid meteors: 25 seen including one  
bright one.

13179E Saturday, December 14 / 2100 - 2130 / 3-F /  
The Biosphere / ~~se~~ Several telescopes, including  
one made by the students, very nice / Wendea,  
Mom, many others.

13180E Mon 12300 - 0000 / 1-F / Jarnac / Moon, Clouds + wind.

\* 13181E Tuesday, December 17, 2002 / 1750 - 1930 /  
3-f / Starizona / 14" Telescope + HYPERSTAR /  
Dean, Wendea, Mom / CN3K first  
observation - 3 images 15, 30, 45 ~~min~~  
second exposures on a region around  
of Cygnus.

\*\* 13182EM2 2200 - 0100 / 2-1-F / Jarnac / Wendea / - /  
CN3K begins tonight. I scanned the 3  
images taken earlier. (Will be CN3K II later when  
merged with CN11.) (Note added Jan 4/03)

13183E Wednesday Dec 18 / 2200 - 2300 / 3-F /  
The Beagle / - / Moon.

13184E Thu, 19 / 2230 - 2330 / 7-Fm / Jarnac / Beagle / Moon.

13185E, Friday, Dec 20/155-2330/3-F/Jarnac/-/Moon.

13186E, Saturday, December 21/2230-2300/1-F/Jarnac/Beagle/Moon through clouds.

13187S, Sunday, December 22/1015-1030/3-F/Jarnac/Echo/GS2 5, 59.

13188E2 1900-2030/10-2-F/Jarnac/Miranda/-/CN3 1<sup>h</sup> W, N. Session held during brief break in big winter storm. Sky began to clear just before dinner. By 2100 was drizzling (wet snow?) again. M33 easy naked eye.

13189S Monday, December <sup>23</sup>~~28~~/0940-1000/3-2-F/<sup>23</sup> Rest area between Phx + Casa Grande/only time of the day with any view of the Sun/Cupid/Wendee, Mom/SS2:3, 18.

13190S Tues December 24/0940-1000/3-F/Jarnac/Cupid/-/SS2:3, 27.

13191E2 1920-2300 int/3-F/Jarnac/-/-/ high clouds.

13192S Wednesday, Dec 25/21700-1715/3-F/Jarnac/Echo/-/SS2:3, 13

13193E2 1920-2100/10-F/Jarnac/Miranda/-/CN3 30<sup>m</sup> W. Case (L157) confirmed. See chart on next page with stars also on this page. Also NGC 6910

12-02

131949. Thursday, December 26 / 0930-0945 / 10-F / Jarnac /  
Echo / - / SS2 2, 6.
- 13195E2 1900 to 1930 / 10-f / Jarnac / Miranda, Esther /  
- / CN3h 3 <sup>objects</sup> of images in set. Everything  
went well. CN3 15<sup>m</sup>.
- 131965 1300-1315 / 10-F / Jarnac / Cupid / - / Wendee,  
Nanette, Mark, Summer & Matthew / SS2 2, 6.
- 13197S2 1600-1700 / 10-F / Jarnac / Cordelia / Wendee,  
Summer, Nanette, Mark, Ross & Susanne  
Freund, ~~the~~ David, Linda, & Missy, Freund.  
Several nice prominences.
- 13198E3 ~~2000~~ 1930-~~2100~~ 0000 / 10-f / Jarnac /  
Esther, Muneira, Miranda / - / CN3h. Muneira  
has her CCD connected again. That is  
what was wrong earlier. CN3 15<sup>m</sup> West.

13199S Sat December 28 / 1530-1600 / 3-F / Jarnac /  
Mintaka, Cordelia / Wendee, Nanette +  
Mark, Summer, Matthew, Damas + Bill's  
lane / SS2 2, 5. row of prominences.

13200E2 1930-2300 / 3-2-F / Jarnac / observatory  
opening + closing.

13201S. 1000-1300 WENDEE'S BIRTHDAY / 10<sup>3</sup>-F /  
Jarnac + Eastwalk / Mark, Mom,  
Summer + Matthew / (Wendee + Nanette  
were in town) / Cupid / SS2 2, 11.  
(2nd group of 9 very faint.)

COUNTING  
ERROR

13002S2 1545-1600 / 3-F / Jarnac / Cordelia <sup>Mom,</sup> Mark,  
Summer + Matthew / SS2 several small  
prominences on one side.

13003E3 ~~1900~~ 1930 to 2000 / 3-F (later raining)  
Jarnac / - / Murowa / dark frame exposed.

13004S. Monday, December 30 / 1700-1715 / 10-F / Jarnac /  
Cupid / SS2 2, 5.

13005E2 1930-2130 / 10-F / Jarnac / Cupid - Ophelia /  
Wendee / CN3F - 12 pics. Cold. nice  
session, beautiful night.

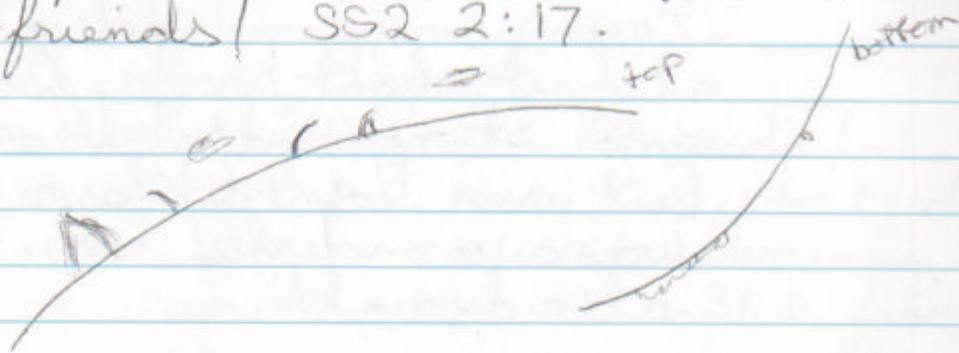
13006S Tuesday, Dec 31 / 1100-1115 / 10-F / Jarnac / Echo /  
SS2 1-2 by projection.

13007EM2 1900 to 0100 int / 10-F / Jarnac / Minerva / 01-03  
 CN3h. Beautiful dark night.

\*13008S.

— 2003 —

JANUARY 1 / 2003 / 1108-1430 / 10-F / Jarnac /  
 New First Light for revised version of Cordelia  
 - with Jason / Stellar vision refractor and  
 H $\alpha$  filter / Muntaka, Cordelia / Mom, Wanda,  
 Fishes friends / SS2 2:17.



\*\*\*1320 JAN 2 1745-0715 / 10+ - F / Jarnac / Miranda, Minerva /  
 Wanda / CN3h with Minerva - 60 images  
 CN3 11<sup>h</sup> W, E with Miranda - a record for one night  
 Catalog obj #221 NGC 300 Sculptor gal very large,  
 low surface brightness  $\mu$ , 12.0

\*L222 NGC 289  $M_1 = 11.0$   $D = 5.0$  Sculptor elongated  
 gal.

\*L223 NGC 150 11.4, 3.8 Sculptor galaxy

~~\*L224 NGC 289 11.0 5.0 " Not twice.~~

L224 IC 1830 12.8 1.7 Fornax gal, near a star.

L225 NGC 1187 10.8 5.3 Eridanus round gal

L226 NGC 2613 10.3 7.1 Pyxis edge-on gal

L227 Haffner 17 [0751.6 - 319] open cluster.

L228 NGC 4490 9.8 6.1 CVn Elong gal.  
 close cometary companion

L229 ~~\*SSV/r~~ Very Red NE (C5 3E) star  
 (12 25.2 +00 46)

\* L 231 NGC 5364 10.5 6.6 Virgo elong gal  
5363 nearby

\* L 232 NGC 5068 10.0 7.1 Very large L SB gal.  
CN Be TV Cw (14.8)

Also I saw

Saturn less than a degree from M1 the Crab  
Comet

M31, M33 AND M81 easily naked eye.  
It was a very wonderful night. No wind  
at first, light breeze, from 2200 to 2300,  
and strong wind, til dawn from south.  
But wind didn't bother me too much. It  
was a wonderful, beautiful, crisp,  
steady night.

13010SP, Thursday, Jan 2 / 1715-1720 / 10-F (windy) / Echo (-)  
SS 2, 1.

13011S Friday, January 3 / 1300-1320 / 10-F (very  
windy) / Cordelia, Mintaka / SS 2 4, 34; 2 nice  
prominences.

13012E2 2115-2130 / 7-3-F / Storying / scopes -  
6" re / Wendee + others. / Saturn. Didn't see  
M1 next to it.

13013E3 2330-0000 / 10-F / Jurnac / Miranda / - / Saturn  
walk.

13014M4 0430-0630 / 10-3-F / Jurnac / Miranda / - /  
CN Be TV Cw (14.6) .. 5694 The snowball at the  
end of the shovel.

01-03

13015s Saturday, January 4/2000-1300/10-F/Jarnac/  
Cordelia, Mintaka / SS2 5, 76, 7 prominences.

\*13016E2 1900 to 2330/10-3-F/Jarnac/Munera-Ophelia,  
Obadiah/Carolyn, Mom <sup>Wendee</sup> CN3F, CN3h. Two sets.  
one with Ophelia (actually two with Ophelia)  
+ one with Obadiah. So actually 3 sets.  
Then we ended this extraordinarily successful  
session. ~~See~~

13017M2 0430-0630/10+-F/Jarnac/Miranda/-1  
CN3e TV CW (14.8). CN3 1<sup>h</sup>15<sup>m</sup>E. Cat. obj.  
NGC near M13. While observing this  
morning I was thinking. CN3K is designed  
to cover wide areas of the sky with a  
camera. Originally the Yashica atop Pega-  
sus ~~was~~ was also designed for a  
photographic comet hunt program called  
CN-11. It was born on Friday, October  
27, 1967. On November 2, 1967, the idea  
gelled to a wide-field camera atop Pegasus,  
whose mount would be fitted with a motor drive.  
On Nov. 24, Constantine offered to get me an  
enlarger lens for the project. Then I wrote  
that CN-11 would start in May 1968.

So, it was supposed to be a wide field  
survey. I thought this morning why not  
combine the mount and CN11 with CN3K -  
So when we have first light with Clyde,  
CN3K will become CN3K-11. Saturn  
over (or in front of) M1 today of 1054.

13018~~5~~ Sunday Jan 5/0 1200-1400 ~ 13-F / Jarnac /  
Mintaka, Cordelia / SS2 5, 46, several  
prominences.

13019E2. 2000 to 0000 / 3-10 then 3-F Cloudy at  
first but then it cleared long enough  
for us to get our full 3 sets - two with  
Ophelia + one with Obadiah. CN3F-CN1.

1302033 Monday, January 6 / 0545-0730 / 2-F /  
Jarnac, to airport, + from there, + Jarnac  
once again / Wendae, Mom H session  
included some stars, Venus, + ended  
with a beautiful cloud-colored sunrise.

130215 Mon, Jan 6 / 1000-1500 int / 2-F (windy) /  
Jarnac / installation of ~~an~~ drives in  
spare (future Obadiah computer) and  
Clyde's computer.

130215E2. 1740-2330 int / 2-F / Jarnac / Wendae,  
Carolyn / gorgeous ripple clouds at  
sunset. Mostly cl + windy evening.

130223 ~~MB~~ EMTuesday, January 7 / 2000 to 0030 / ~~12~~ 3-F /  
Jarnac / Esther / -CN-II. Pictures of Saturn  
Standing very near M1.

13024~~5~~ Wednesday, January 8 / 1100 to 1730, very  
intermittent / 3-F / Sunnyside pool, then  
Jarnac / Echo later / CN-II review of  
(Wendae, ~~Tomby phone~~. Tom, over phone).

13024<sup>S</sup> continued. situation, Idea in 1967, Oct 27.

Began in May 1969. It was supposed to have started in May 68 but was delayed a year, probably due to my 2nd failure at McGill. At end of day, Echo looked at Sun by projection via spots through partly cloudy sky. SS2 0, 0.

13024<sup>S</sup> concluded: "spotty" session.

(intermittent most of day) Changed monitors

13025<sup>M2</sup> in dome, then changed back again.  
0450-0630/3-F/Jarnac/Miranda/-/  
CN3 14E. CN3e TVGw 14.6

13026<sup>S</sup> Thursday January 9/1400-1530/10-F/Jarnac/  
Table, observatory/Wendae & Mintaka,  
Cordelia. SS2: 5, 64, 18 prominences, two  
very large ones.



13027<sup>E2</sup> 2000 to 0000 110-17-Fm/Jarnac/CN11  
photos of Saturn near M1. Staryzonia  
group. 9 CN3h. Minerva + feather. Used  
Camera atop Esther also for Saturn pics.

13028<sup>MB</sup> 0430 to 0630/10+-F/Jarnac/12-1/CN3/115<sup>m</sup>E.  
CN3e TVGw 14.8. CN11 Castor + Pollux  
area picture. LPO-1-Venus tho through  
Obadiak - quarter phase, just shy of quarter/  
Obadiak, Miranda.

13029<sup>S</sup> Friday January 10/1600-1630/10-F/Jarnac/Wendae/  
Mintaka, Obadiak, Cordelia. SS2 5 119 17 14.

13030E2 2000-0000 / 7-Fm / Jarnac / Munera,  
Esther / - / CN3h.

13031M3 0445-0600 / 3-2-F / Jarnac / Miranda / -  
Increasing high clouds and more of a challenge,  
but observing was effective towards the east /  
CN3 D<sup>h</sup> 55<sup>m</sup> E. LPO-1 Venus CN3e TVCw C14.8  
MP25-Con / (breakfast? ~~no~~ CMP-D) / fireball burst but  
couldnt see meteor or train

13032S Saturday, January 11 / 1030-1115 / 3-F / Jarnac /  
SS2 8, 129 + several prominences. <sup>many</sup>

13033S2 1530-1610 / 10-F / Jarnac / Wendel / Cordelia / SS2 <sup>many</sup>  
<sub>much taller than before</sub>

13034E3 2030-0000 / 7-Fm / Jarnac / Mattias, friend,  
and Wendel Obadiah / LPO1 - Saturn, M1.

13035M2. 0450-0615 / 10-F / Jarnac / - Miranda / - /  
CN3 1<sup>h</sup> 05<sup>m</sup> E. CN3e TVCw C14.8. LPO1: Venus, Mars  
China means obs. to this point submitted to AAUSO

13036S Sunday, Jan 12 / 1500-1600 / 10-3-F / Jarnac /  
Cordelia, Mintaka / SS2 8, 101. 8 prom. <sup>quite large</sup>  
<sub>now.</sub>  
photo taken thru afocal projection of prominences.

13037M2 0430 to 0615 / 10-F / Jarnac / Miranda / - / CN3e  
TVCw C14.8 CN3 1<sup>h</sup> E. L23 NGC6181,

13038S Monday, Jan 13 / 1600-1700 / 3-F / Jarnac /  
Mintaka, Cordelia / - / ~~SS2~~ SS2: ? 7, 44  
23 prom. - ? <sup>even larger.</sup>

B039M2 0440 to 0635 / 10+ - F / Jarnac / Miranda / - /  
CN3 1h15m E. New catalogue object NGC 6118 L237  
CN3e TVGw - 14.8

13040S Tuesday, Jan 14 / 1645 - 1700 / 3 - F / Jarnac / Echo /  
SS2.

13041E2 2130 to 0000 / 3 - F / Jarnac / Clyde's pier & mount  
installation / - Wendee, Donna & Dean /  
Very bright Lunar halo.

13042S Wednesday, Jan 15 / 1000 - 1100 / 3 - F / Jarnac /  
Mintaka, Cordelia / - / SS2. fewer prominences  
~~9744~~

13043E2 2200 to 0000 / 3 - 2 - F / Jarnac / Clyde's pier &  
mount completion of installation / CN3K prep.

\* 13044SE Thurs Jan 15 / 1400 - 0000 / 3 - F / Jarnac / Esther,  
Mintaka, <sup>Obadiah</sup> Cordelia / SS2 9, 31. 1 big prominence,  
~ 7 smaller ones. Sol 2 = Sky 2, drawing of  
horizon map for Project Sunset. /  
Wendee, (Jody and Neal Kilmer Arrived later)  
Sunset observation at 5:40. Through high  
cirrus so no green flash.

Later, we observed Saturn + the Moon + M42,  
all through Miranda + then through  
Obadiah.

Sky-2: used to focus Esther on M42's  
Trapezium, and with the new \$300 temperature-  
compensating focuser. Double + Multiple  
star project.

13045M2 0400-0530/3-F, windy / Esther, Obadiah / - /  
Sky 2. & Leonis, focusing on Esther; conclusion  
of temperature compensation (wind + light  
clouds allowed only a 3°C temperature drop.)  
& Leo & Mizan looked ok in Esther; too  
long expt bright to separate; & Leo beautiful  
through Obadiah.

13046S Friday, January 17, 2003 / 1400-1420 / 7-F / (Staryjona)  
Wendee, Dean / SS2, 6, 37. 2 big prominences.  
4" rt + 6" rt.

\*13047S2. Friday, Jan 17 / 1530 to 1745 / 10-F / Jarnac / (Cordelia)  
S. Tabb, SS2 2 very big prominences.  
SKY 2 (Sol 2) Green Flash - strong - at  
sunset.

13048E3 1930-0000 int / 7-Fm / Jarnac / Minerva, Esther /  
CN3h.

13049S Saturday, January 18 / afternoon / Jarnac /  
M~~ar~~ Cordelia, Mintaka / - / SS2.

\*13050SE Sunday, Jan. 19 / 2000-0000 int / 3-2-F / Jarnac.  
Murinda + Galileo replica / - / Jupiter + 4 Moons! M42.

13051S Monday Jan 20 / 1630-1730 / 3-F between  
rain. / ~~Mintaka~~ <sup>M~~ar~~ Cordelia</sup> & Cordelia / 4, SS2 4, 23, Sol 2  
11 prominences.  This is the largest  
~~prominence~~ ever. Also nice green flash.

13052E2 . 1945-0000 / 10<sup>3</sup>-F / Jarnac / Murinda / - / CN3  
15mW.

01-03

130535 Tuesday, Jan 21/1700 to 1745/3-F/Jarmac/Wendol  
Mintaka + Cordelia/-ISS2:  
This is the biggest prominence ever.

Sol 2 (Sky 2)  
Green flash. Saw

130541E 1920 to 0000/ Setting of prom. after Sun.  
10-3-F/Jarmac/-Miranda, Esther, Meneria,  
Ophelia/Wendee, Scott Tucker/CN3 1<sup>h</sup> W.  
Catalogue objects:

\*L 38 NGC 578 \*L 239 NGC 247

\*L 240 NGC 157 L 241 AA Cet

13055S Wed Jan 22/16 1530-1615/10-F/Jarmac/Mintaka,  
Cordelia/Wendee, Mawl/SS2: 5, 29.

13056E ~~1700~~ + 1930-2030 inst/11-F/Jarmac, earlier The Tack  
Room/Orion, Jupiter.

13057S Thursday, January 23/1130-1145/2-F/Clemence  
Pool/Wendee/-/Sky 2: Beautiful solar  
halo with beginnings of 2 tangential arcs.

13058S 1530-1700/3-2-F/Jarmac/Mintaka and  
Cordelia/Wendee/SS2: 6, ~~58~~ 57.

Beautiful prominences all over Eastern  
limb but earlier I thought something  
was wrong when I found a false image  
of the Sun ~ 3° away from the real one.  
It is a normal part of the fan of the  
filter.

13059E2 2100-0000 12-F/Jarnac/Obadiah/Wendee/  
CN3F - focus test postponed for clouds.

13060S. Fri Jan 24/1400-1435/7-F/<sup>Staryon</sup>Jarnac/Maw, Ed,  
Dean 1-6", 4"/SS2: 6, ~25 4 nice prominences.

13061S2. 1620-1750/3-F/Jarnac/Wendee, Carolyn,  
Maw, Ed/Cordelia/4 prominences.  
Sky 2 - Sunset.

2 joining together at one point.

\*13062E3. 1930-0000/3-F/Jarnac/Munera, Esther,  
Ophelia-Cupid, Obadiah/-Wendee, Carolyn/  
CN3F 12 pictures Ophelia, 12 Ophelia 2,  
6 Obadiah = 15 fields. Also confirmed  
CN3h w/Munera + Esther. AA Coti.

13063S. Saturday January 9 25/1630 to 1755/10-F/  
Jarnac/Mintaka, Cordelia/Wendee, Carolyn/  
SS2: 5, 15. Sky 2 (Sol 2) and CN-11 - Sunset  
and photographs of Sunset in H<sub>α</sub>.

13064EM2 1907-0030/10-F/Jarnac/Ophelia, Miranda,  
Munera, and Esther/Wendee, Carolyn/CN1,  
CN3F 32 pics 16 fields in Ophelia 1 + 2,  
including Comet Linear  
Comet Neat.  
Also confirmed!

13065S. Sunday, Jan 26/1600 to 1730/10-F/Jarnac/  
Mintaka, Cordelia/SS2: 5, 15? Carolyn,  
several prominences. Maw, Ed, Wendee.

01-03

13066E2. 1900 to 0000 / 10-F / Jarnac / Wendee, Carolyn /  
Ophelia, Cupid, Minerva, Esther /  
CN3F 24 pics CN3h 3 sets.

13067S Monday; Jan 27 / 1630-1730 / 10-F / Jarnac /  
Mintaka, Cordelia / SS2. 7, 12. several  
prominences

13068E2 1900 - 2300 int / 10-F / Jarnac / Minerva,  
Esther, ~~Miranda~~ Miranda / CN3h 2 sets with  
Minerva. Conf. of new catalogue object  
\*L242 NGC 1165, Mv 11.7, found on Minerva films.  
VERY BRIGHT in Minerva, barely visible  
in medium power in Miranda.

13069 ~~M3~~ <sup>S</sup> Tues Jan 28  
0230-0630 / 10-3-F / Jarnac / Mintaka,  
Cordelia / <sup>1200-1215</sup> SS2 5, 12. Several prominences.

13070 ~~M3~~ Jan 27/28 / (before 13069) / 0230-0630 / 10-3-F  
/ Jarnac / Miranda / - / CN3 3h 30m E.  
CN3e TV Cw C14.8.

13071E2 Jan 28/29 / 1900-0000 / 10-3-F / Jarnac /  
Minerva, Esther / - / CN3h.

13072M3 0540-0630 / 10-F / Jarnac / Esther + camera,  
Miranda / - / CN3 10m E, CN3e TV Cw C14.8,  
Sky 2: Photographs of

VSO-1 of Sco 1.8

• Venus  
• Mars  
• of Sco

\*13073S. Wed Jan 29/1200-1330/10-F/Jarnac/Mintaka,  
Cordelia - Wendee, Mom/SS 2 5, 40, several promin-  
ences. Walk at by old 120 Carey St also.  
Decision to add chapter on Comet of 1577 + other  
comets in that period to thesis. Also Carolyn  
called saying she likes proposed asteroid "Wildcat."

13074M2 0600-0620/10-F/Jarnac/Miranda/CN3eTV  
Gw (14.8).

13075S. Thu Jan 30/1700-1730/10-F/Jarnac/Cordelia,  
Mintaka - SS 2 5, 19 plus several prominences.

13076E2 #1900-0000 int/10-F/Jarnac/Minerva, Esther/  
- CN3h 3 sets.

\*13077M3 0430-0700/10+-F/Jarnac/Miranda, Pegasus/  
- CN3 1<sup>h</sup>E. Field of view w. Miranda is  $1.25^\circ$   
Field of view w. Pegasus is  $1.8^\circ$   
using 31mm eyepiece.  
I should use Pegasus more for comet hunting.

13078S Friday, ~~February 3~~ <sup>January 31</sup>/10-F/Jarnac/  
Cordelia, Mintaka/SS 2 5, 12 + a few  
prominences.

13079E2 1900-0000 int/3-F/Jarnac/Minerva,  
Mintaka Esther/CN3h. CN3F. Area 31.  
I identified later NGC 278, found by Carolyn.

\*13080M3 0430-0630/10-F/Jarnac/Pegasus,  
Miranda/CN3eTV Gw (14.8)

0203

CN3 1<sup>h</sup> E. A very pleasant session. However, about 1/2 hr. later Columbia passed 6° from N. horizon as it disintegrated, killing all 7 of its crew members in a terrible tragedy.

13081S. Saturday, Feb 2, Ground February 1 / 10-F / Jarnac / Cordelia, Mintaka / Maw, Wendee / SS 2 E + a few prominences, one faint large one on the West side.

13082 E2. 2000-0130 / 10<sup>3</sup>-F / Jarnac / Wendee, Charles Heller / Esther, Miranda, Obadiah / -Jupiter, Saturn, M42, M65, M66. CN3e TVGw (14.6)

13083 E. Sunday, Feb 2 / 2330-0000 / 3-10-F / Jarnac / -1 G, Miranda / CN3e TVGw (14.6).

13084 M2 0500-0615 / 10-F, much colder than last few days / Pegasus, Miranda / CN3 0<sup>h</sup>40<sup>m</sup>. CN3e TVGw again (14.8).

\*13085S. Monday, February 2 / 1100-1230 / 10-F / Jarnac / Mintaka, Cordelia / -Wendee, John Patterson + cameraman from channel 9, KGBN. Interview about why we need to keep exploring in space. SS 2 3, 39 + a few small prominences.

- 13086E2 2200-2330/3-F/Jarnac/-/-/general observation.
- 13087S Tuesday, February 4/1245-1300/3-F/Jarnac/  
Cordelia, Mintaka/-/SS2: 4, 28, 9 prominences
- 13088E2 2000-2100/2-F/Jarnac/-Pegasus/-Wendee/  
Installation of protective lights around base  
of Pegasus.
- 13089S Wednesday, February 5/1700-1715 110-F/Jarnac/  
Echo/-/SS2
- 13090M2 0530-0610/10+-F/Jarnac/Pegasus, Miranda/  
-/G, CN3 0<sup>h</sup>30<sup>m</sup>E, CN3e TV Gr-(14.8).
- 13091SE Thursday, February 6/10-F/Jarnac/Mintaka,  
Cordelia, Pegasus, Miranda, 14"/1700-  
CN3 w/Pegasus, 20m W.  
SS2 5, 20. several prominences.  
Sky 2 Project Sunset
- 13092M Friday Morning, February 6/7/0430-0545/  
3-2-F/Jarnac/CN3 40m E. CN3e TV Gr-(14.6  
Sky became mostly cloudy during the  
session in anticipation of a cut-off low.
- 13093S. 6/7/1100-1330/3-2-F/Jarnac/Mintaka,  
Cordelia/-Wendee, Dr. Connie Walker, asst.  
Robby/SS2 2, 8 (clouds) + at least 1  
nice prominence.

02-03

\*\*13094SE Saturday 8 Feb / 1500 to 0000 / 0-7-FAND  
VERY STEADY SEEING 9-10 / Jarnac / Cordelia,  
Minerva, Esther, Pegasus, Miranda, 28", 1-11",  
CN3h. m31 Db cl Db cl SS2 m42  
2362.  
Bright \* in object. in CMa "Little M11"

13095m2 0430-0630/10t, 10 seeing / F-1 Jarnac /  
Miranda - 1 CN3 1<sup>h</sup>E.  
L243 n G C6440, + 6445<sup>L244</sup> in same field.  
CN3e TV Gw C14.8

13096E Sunday, 9 Feb / #2300-2330 / ~~10-F~~ 3-Fm /  
Jarnac / Pegasus / general

13097S Tuesday, 11 Feb / ~~11~~ 1230-1245 / 3-F / Jarnac /  
Echo 1-1 SS2 3, 12.

13098S Thursday, 13 February. / 1030-1045 / 2-f /  
Jarnac / Echo / SS2 3, 7,

\* 13099SE2. 1250 to 2145 / 0 to 7-Fm / Jella, Arizona  
at the school, then KITT PEAK, then the school /  
Connie Walker, many students, later students  
& parents / Echo, 28" + 3.5" scopes.  
A) Used Echo to look at O + show some  
students + children @.  
B) Walk at Kitt Peak to 36" scope.  
C) Later on, sky cleared. Looked at  
Moon with Echo, students, teachers, +  
parents.

13100E2 Saturday, February 15 / 2100-2300 / 3-F - EXTREMELY  
GOOD SEEING = 10 / Pegasus + Obadiah / Jarnac /  
Moon, Jupiter, Saturn, M42, Spica Sirius,  
M45, M44. 1 Wendell Lisat Sue.

Jupiter was beautiful at high power.  
Switching to structure in the GRS, Io  
appeared later, plus GRS moved across 2.

13101S. Sat 15 / 1600-1630 / 3-F / Jarnac / Mintaka,  
Cordelia / Wendell, Lisa Andradot Sue /  
SS2 3, 9 + 4 prominences.

13102S Sun February 16 / 1800-1815 / 3-F / Jarnac /  
Echo 1 - / SS2: 0.0. Sky 2 Project Sunset.

13103S Monday, Feb 17 / 1100-1200 / 3-F / Jarnac / Mintaka,  
Cordelia / Wendell / SS2: 2, 9 + 4 prominences.

13104E Tuesday Feb 18 / 2220-2245 / 3-F / Jarnac /  
Miranda / Moon. Sky clearing after cloudy  
day. Moon viewed in all Miranda's  
compute components: 16", both finders,  
8" and Galileo + tiny 8" + 8" finder.  
Warm night.

13105S. Wed, Feb 19 / 1030-1330 / Jarnac /  
Mintaka, Cordelia, Obadiah, Miranda's lower  
finder / Wendell SS2: 5, 26, 9 prominences.  
Attempts to see Comet Neat in daylight failed,  
except via Soho. CN3 J. Lasco C2, C3.

02-03

- \*13106E Friday, February 20/1900 to 0000/10-F/Jarnac/Ophelia-Cupid, Muneiva and <sup>Miranda</sup> Esther  
Wendee, Carolyn, Candace Kohl, Brent  
Archival/CN3F-CN1, 6 fields <sup>or 6 fields</sup>, CN3e  
TVGw-14.6. CN3h. Watched Ganopus  
set with multiple colors + green flash.
- 13107E (before 13106) Thu 20/2330-0000/3-F/Jarnac/  
Miranda/-/CN3e TVGw-13.3.
- 13108S. Sat Feb-22/1600-1830/10-F/Jarnac/  
Mintaka, Cordelia/Wendee, Carolyn.  
SS2. Sky 2. Sunset recording.
- \*13109EM2, 1930 to 0100/10-F/Jarnac/Cupid-Ophelia,  
Obadiak, Miranda, Esther, Muneiva/  
Wendee, Carolyn, Jim Ashley/CN3e TVGw  
14.8. CN3F-CN1 8 fields + 8 = 16 fields.  
CN3h. CN-11 photos. Jupiter + Saturn rock  
steady.
- 13110S. Sunday, Feb-23/1300-1400 int/3-F/Jarnac/  
Mintaka, Cordelia/-Carolyn, Wendee/SS2.
- 13111E2 2200-2230/2-F/Jarnac/Obadiak/Carolyn/  
Jupiter very nice!
- 13112S. Tuesday, Feb-24/1200-1215/3-F/Jarnac/  
Cordelia, Mintaka/-/CN3 SS2 2, 6, few  
prominences.
- \*13113E (before 112) Mon Feb-24/2000-2355/3-2-F/Jarnac/  
CLPDE/Dean, Wendee/First Light Cassio. CN3K11.

13114S. Wed February 26, 2003/1400-1800/2-0-F/  
Jarnac / Cordelia, Muntaka, Clyde / -/  
SS2 2, 6 + 9 prominences, 2 bigones. CN3k11.  
Work getting Clyde ready.

13115E. Thursday, Feb 26/27/21900-2000/0-F/  
School / Echo / lots of students + parents /  
demonstration + presentation.

13116E2 ~~Wed~~ <sup>Tues</sup> Feb 25 (before 114) 2000-2100/0-F/  
Jarnac / obs. maintenance.

13117S. Friday, February 28/1030-1045/3-F/Jarnac/  
Echo / - Wendee / by projection on hand,  
SS2: 0, 0. Sky clouded over surprisingly  
later, so this was my only sun session  
today.

13118S2. 1530-1700/1-0-F/Jarnac/observatory - Clyde/  
- CN3k11 - work on Clyde.

13119S. Saturday, March 1/1000 to 1245<sup>int</sup>/2-F/Jarnac/  
Echo, Cordelia / Beagle, Wendee / SS2 - 3, 17  
2 prominences. Beagle snuffed +  
investigated Echo's  tube at start of this session.

13120S. Sunday, March 2/1355-1410/3-2-F/Jarnac/  
Muntaka, Cordelia / - / SS2 3, 18, 4 prominences  
1 very big spot, 1 big prominence.

13121E. Monday, 3/1900-2300<sup>int</sup>/1-F/Jarnac/obs. maintenance and  
work on Clyde.

03-03

13122MS. Tues March 4/0930-1030/10-F/Jarnac/Clyde,  
Cordelia, Mintaka. SS2 3, 18. 1 very big  
spot.

13123EM2 March 4/1900-~~2345~~<sup>0045</sup>/3-F/Jarnac/Clyde,  
Minerva | - | CN3K11, CN1 - first shots near  
Castor + Pollux. CN3eTV Crw (14.8 w/Minerva.

13124M3 0215-0245/3,2-F/Jarnac/Miranda/-|CN3  
10m E.

13129S

\*13125EM2 Wednesday, Mar 5/1800-0030/3-10-F/  
Jarnac/Clyde/CN3K11-CN1 Set between  
 $\alpha$  +  $\beta$  Gemniorum. A success! First set  
with Clyde. Earlier, Sky 2: Sunset recording.

\*13126M2 0230-0615/10-F/Jarnac/~~Minerva~~ Miranda,  
Clyde | CN3K11 - closing Clyde. CN3eTV  
Crw (14.8. CN3 Predawn 3:00m E.  
Got this idea for the start of my thesis:

CN3e L 245 NGC6781

Beautiful night. Listened to Bonanza Look to  
the Stars. And Galileo (Nova) + NASA.

13127S. Wed. Mar 6/1330-1400/10-F/Jarnac/Mintaka,  
Cordelia/Wendae/SS2 4, 20. 1 very big spot.

13128E2 1930-0000/10-F/Jarnac/Wendae, Ken Graun/  
Clyde, Esther, Minerva, Ken's scope/CN3K11-CN1  
part of 1 set Area 65.

13129 M2. 0430 to 0630 / 10-F / Jarnac / Miranda / - /  
CN3 1<sup>h</sup>E.

13130 S Friday, March 7 / 1200-1215 / 10-F / Jarnac /  
Cordelia, Minitaka / - Wendae / SS2 3, 29.  
Huge spot near center. 1 big prominence.

13131 S2. 1325-1340 / 3-F / ~~Jarnac~~ <sup>Starusonta</sup> / 6" + 4" / Wendae /  
Sun spots, + prominence under high power.

\* 13132 EMB 1930 to 0200 / 10-F / Jarnac / Clyde, Miranda /  
- / CN3 K11-CV1 Set between  $\alpha$  +  $\beta$  Gem, done  
without plate solutions. Dean and I  
fixed roof of observatoire. We also did  
aligning on Clyde.

13133 M4 0530-0615 / 10-F / Jarnac / Miranda / - /  
CN3 20<sup>m</sup>E.

13134 S. Sat Mar 8 / 1500 to 1630 / 10-F / Jarnac /  
Cordelia, Minitaka / - Wendae / SS2  
4, 3<sup>h</sup> 32. 2 great big spots. 8 prominences,  
all small.

13135 E2 Sat 8 / 1900-2345 / ~~10-F~~ / Jarnac /  
Clyde / CN3 K11-CV1 area 65.  $\approx$  234 images!

13136 M3 0430-0615 / 10-F / Jarnac / Miranda / - /  
CN3 1<sup>h</sup>E.

13137 S. Sunday 9 / 10-F / Jarnac / Minitaka, Cordelia /  
SS2.

03-03

13138E2. 2100-0000/10-F/Jarnac/Clyde, Miranda.

\*13139S. Monday, March 10, 1963/2003/1745-1830/10-F/  
Jarnac/Wendee/Echo/SS 2 4; 6. Sunset  
marked, Project Sunset on the 40<sup>th</sup> anniversary  
of the start of this project. Sky 2 at 1820.

13140M. before \*13139. 0430-0630/10-F/Jarnac/  
Pegasus, Miranda/CN3 0h50<sup>m</sup>E. 2nd.  
discovery of Comet

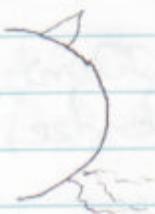
13141E2. 3/10/03/2300-2330/10-F/Jarnac/Miranda/  
Strained wrist/CN3e TV Gr C14.6.

13142S. Tues Mar 11/1000-1015/10-F/Jarnac/  
Echo-1/SS 2 4, 20<sup>n</sup>.

13143E2. 2100-0000/~~10~~-7-Fm/Jarnac/Wendee, Dean/  
Clyde/CN3K11-CN1. Area

13144M2. 0430-0600/10-F/Miranda/CN3 1hE. Cat 6760M 91 D 6.3

13145S. Wed Mar 12/1640<sup>1640</sup>-1720/10-F/Jarnac/Muntaka,  
Cordelia/-1SS2 3.28 + 12 prominences



13146E2M 1900 to 0100 17-Fm/Jarnac/Minerea,  
Eosier, Clyde/Wendee, Dean/CN3h, CN3K11-  
CN1.

13147S Thurs 13 March / 1515-1535 / 3-F / Jarnac /  
Cordelia, Mintaka / SS2 4, 24. 2 big prominences.

13148E Sat 15 March / 1745-0000 VERY intermittent /  
3-F / San José airport, Tucson airport, Jarnac /  
Larry, Wendee / Moon appearing at departure  
of storm in San José. Moon appearing in  
advance of same storm in Tucson.

\*13149SE Sun 16 March / 1400 to 2300 / 0-3-F / Jarnac /  
Obadiah, Ophelia-Cupid / German Television  
crew, Wendee / Full Moon. Interview about  
S-L 9 and comet/asteroid threat. Also,  
Minerva got CN3e TVGw (14.8) at full Moon  
with Moon  $\approx 20^\circ$  from star!

13150S Monday 17 March / 1800-1815 / ~~10~~.2-F / Jarnac /  
Echo1 - SS2 3, 19.

13151E Tuesday, 18 March / 1815-<sup>23</sup>~~19~~00 / 2-F / Clyde /  
Jarnac / Cordelia / Sky 2 Sunset over  
Kitt Peak - a little N of center. CN3J Kreutz

13152SE Wed 19 March / 1800-0000 int / 3-F / Jarnac /  
Clyde, Minerva, Esther / Wendee, Dean /  
CN3K-11. Testing.

13153SE Thurs / 20 Mar / 1815-0000 / ~~10~~.3-2-F / Jarnac /  
Wendee / Clyde, Mira, Cordelia / CN3J  
Kreutz. But clouds stopped the program.

03-03

13155E Fri 21 March / 2000-0000 / 10-3-F / Jarnac /  
Obadiak, Miranda / Kazmieras / Gernie, 2 Vatican  
astronomers  
Kazmieras hunted for comets for 0<sup>h</sup>30<sup>m</sup>.

13156E Sat 22 March / 2000-0000 / 10-F / Jarnac /  
Ob Ophelia and Cupid / Wendee / CN3F.

13157S Sun 23 March / 1100-1130 / 7-F / Jarnac /  
Cordelia, Muntaka / SS2. 2, 2.?

13158EM 2000-0130 / 10-F / Jarnac / Obadiak, Murewa,  
Clyde / Gerry, Wendee / Jupiter, Saturn

13159S Monday, 24 March / 1815-1850 / 10-3-F / Jarnac /  
Echo / - / SS2 2, 2. Sky 2. Sunset recording.

13160EM 2 1900-0230 / 10-F / Jarnac / Clyde, Obadiak /  
Installation of Obadiak's Computer.

13161S Tues. 25 March / 2200-0200 / 10-F / Jarnac /  
Obadiak + computer / - / CN3 10<sup>m</sup>E.

13162S Wed, 26 March / 1800-1830 / 10-3-F / Jarnac /  
Echo / - / SS2 2-23.

13163E Friday, 28 March / 1900-0000 / 10-F but WINDY  
later / Murewa, Esther, Obadiak. / Wendee /  
CN3h. CN3e TVCw-C17.5

\*13164<sup>S</sup>PN Sat 29 March / 1730-0515 / 10-F / Jarnac /

Ophelia - Cupid, Obadiiah / Wendee / SS2.  
CN3F 8 pics. CN3e TV Gr C17.5  
CN3 3 hours E with Obadiiah, WINDY.

\*13165<sup>S</sup>ES. Sun 30 March / 1000-1100 / 10-F / Jarnac /  
Cordelia, Muntaka / Wendee, Larry  
Gershon / SS2. 7, 41. a few small prominences.  
In Memory of Uncle Jack.

13166<sup>E</sup>E2 1800-2300 / 10-F, windy / Jarnac /  
Wendee / Ophelia - Cupid, Esther, Clyde.  
CN3h, CN3k-11. 8 pictures, 2-B Gem.  
CN3e TV Gr C17.5 In Memory of Uncle Jack.  
May he rest in peace.

13167<sup>S</sup> \$ Mon 31 March / 1000-1020 / 10-F /  
Jarnac / Muntaka, Cordelia / Wendee /  
SS2 6, 40, 1 hook prominences &

13168<sup>S</sup>E2 1800-2300 / 10-F / Jarnac / Munerica,  
freshly repaired & upgraded with new  
backing serial port for CCD. / Wendee /  
CN3h, CN3e TV Gr C17.5.

13169<sup>S</sup> Tuesday, April 1 / 1130-<sup>16</sup>0400 vit / 10-F / Jarnac /  
Muntaka, Cordelia / SS2 - 2 6, 45, / Wendee, Curtis  
Harris.

13170<sup>E</sup>E2 18030-1945 / 10-F, breezy / Obadiiah / Curtis  
Harris, Wendee / Saturn & Jupiter.

13171<sup>M</sup>2 before 13169 / Tues am / 0430-0515 / 10-F /  
Jarnac / Miranda - / CN3 30m E.

04-03

- 13172S Wed, April 2 / 1800-1820 / 10-F / Jarnac /  
-1SS2, with Cordelia + Muntaka
- 13173E2 1900-2300 / 10-F / Jarnac / Minerva, Clyde,  
Esther / CN3; Kreutz CN3e TVGw C17.3
- 13174M2 0340-0515 / 10-F / Jarnac / Miranda / - / CN3  
1h 05m E.
- 13175S Thurs April 3 / 1600-1630 / 10-F / Jarnac /  
Cordelia + Muntaka / ~~CA~~ SS2 6, 39. A few  
prominences.
- 13176E2 2000-0000 / 10-F / Jarnac / Very thin  
smiling crescent Moon / ~~Muntaka~~ Minerva,  
+ Esther, Clyde / CN3j. CN3e TVGw C17.3
- 13177M2 0350-0500 / 10-F / Jarnac / Miranda, Pegasus  
- / CN3, 1h E.
- 13178S Fri Apr 4 / 1745-1800 / 10-F / Jarnac / Muntaka,  
Cordelia + Wanda / ~~CA~~ SS2 5, 35. Several  
prominences, 1 huge one.
- 13179~~M~~<sup>M</sup>E2 1900-0100 / 10-F / Jarnac / Obadiah,  
Minerva / CN3 1h W. Horsehead seen with  
31 Nagler, old 32 Effe + Nebular filter on both  
eyepieces. Then beam came and fixed  
Pegasus' encoders. "It's too gzeled  
telescope not to have the encoders working,"  
he said.

13180M3. 0400 to 05520 / 10+ - F / Jarnac / Pegasus / - /  
CN3 1h E.

\*13181S. Saturday, April 5 / 1200 to 1245 / 7 - F but windy /  
- Echo / Wendee / SS2: 5, 21. In front of house,  
changed a flat tire. # First time I did that  
in about 20 years.

13182E2. 1900 to 2230 / 10 - F, F Cold + windy / Jarnac /  
Wendee, Jack + Shirley Schechter / CN3j,  
(No CN3e tonight) CN3 10m W. Jupiter,  
Saturn, Moon with Obadiah.

\*131843M3 0250-0515 / 10 - F / Jarnac / Miranda / - /  
CN3 # 2h00m E. I set the alarm for 3:45  
and woke up. The TV clock also said 3:45. So  
did the clock in the observatory. Denab seemed  
a little low but I began hunting there. After  
an hour, I was wondering where the dawn was.  
It turned out that all 3 clocks had really  
automatically had advanced to daylight  
time. I had really awoken at 2:45, not  
3:45! I was totally confused for a while.

Catalogue objects

NGC 7044	Cyg Open Cl. Rich.	110, 3.4'
NGC 7027	Cyg PIN	8.5
NGC 7006	Delphinus GC	10.6, 2.7'
NGC 7217	Peg Round Gal	10.1, 3.8

+ Comet 9

131845 Sun 6 / 1000-1130 / 10 - F / Jarnac / Mintaka, Cordelia / Jack +  
Shirley, Wendee / SS2 4, 19 + several prominences

04-03

131855E2. 191700-0000 ~ 13-F/Jarnac/Cordelia  
Minerva, Esther / SS2 Several prominences!  
CN3j. CN3j with Esther and Minerva CN3e  
TV Crw (17.5)

13186SE Monday, April 7/1840-2200 10-F/Jarnac/  
Obadiah, Minerva / Wendee, Gerald Coil /  
CN3e TV Crw (17.5. Sky 2 (Sol 2) Sunset +  
green flash.

131875 Tuesday, April 7/0850-0905 10-F/Jarnac/  
Echo / windy / SS2: 1, 2.

13188E2 2010 to 2200 7-F/Phoenix / - / Wendee, Duet  
Lisa + Emily, Joanie / - Moon, constellations  
during walk this warm evening.

13189SE Wed April 9/1700-0000 int / Mira, Cordelia/  
Esther, Minerva / Wendee / G, SS2 2, 8.  
Some prominences, CN3j. CN3e TV Crw (17.5  
CN5 Dome.

13190M 0355-0510 / 2-F (clear int, later in Milky  
Way) / Jarnac / Pegasus / - / CN3 1 1/2 E N,  
high E / CN5 + Milky Way / - Dome check.  
Meteor AND Geminid? satellite flash.

13191S Thu. Apr 10/1400-1530 / 3-F / Jarnac /  
Wendee, Myntaka, Cordelia / Beautiful  
Hedgehog flowers all over yard. SS2 2, 8.  
Many prominences. faint but large.

13192E. 1920-2330 / 7-Fm / Esther, Minerva / - / CN3j.  
CN3e TV Crw.

13193SP Friday April 11/1730-1740/3-F/Jarnac/  
Echo/SS2: 2, 5.

13194E2 1840-2035/3-F/Tanque Verde Elementary  
School/Wendee, Larry & Nancy Lofsky,  
many students, teachers & parents, Dean &  
Kenny/Sky 2. Evening with children &  
lecture given.

13195E3 2300-2330/3-F/Jarnac/Minerva 1-1/CN3e  
TVGw-C17.5.

13196AM Saturday/Sunday April 12/0550 to 0510/  
3-F clearing/Jarnac/Pegasus, 60s music  
through portable CD player/1-1/CN3/14E.  
DGC The "Owl" cluster.

13197SE Sunday, April 13/10-3-F/Jarnac/Wendee/  
Echo, Minerva/SS2: 2, 4. Sky 2 (Sol 2)  
Sunset recording. Later with gibbous  
Moon nearby and clouds & halo even closer  
still, with Minerva, CN3e TVGw-C14.8.

13198E Monday, April 14/2300-2330 int/3-F/Jarnac/  
Wendee.

13199E Wednesday, April 16, 2003/2000-2015/7-F/  
Albuquerque/1-Wendee, Nanette, Mark, Seanna,  
and Matthew/Full Moon at Passover.

13200E Thurs/7/2200-2230/7-F/Albuquerque/Mark/Jupiter,  
Saturn with Kaia.

04-03

13201S. Friday, April 18/1800 to 1835/3-F/Jarnac/  
Echo 1-1 SS2. 2, 3.

13202S. Saturday, April 19/ in honor of Joyce's  
birthday. P Muntaka & Cordelia/SS2 3, 7  
Several displaced prominences.

13203E2 2200-2300/3-F/Jarnac/ getting  
automated scope computers running. CN5  
Dome.

13204S. Sunday, April 20/ 400-415pm/10-F/Jarnac/  
Echo 1-1 SS2 3, 25.

13205E2 2200-2300/10-F/Jarnac/ Minerva 1-1  
& CN3e TV Cr- (17.3) Very bright Lyrid?  
travelling west from zenith. CN5 Dome.

13206S. Monday, April 21/1800-1810/10-F/Jarnac/  
Echo 1-1 & SS2. 4, 26.

13207E2 2300-0000/10-F/Jarnac/ Minerva 1-1 CN5+MWI  
Dome, CN3e TV Cr- (17.3).

\*13208S Tuesday, April 22/10<sup>00</sup>-1200/10-F/Jarnac/  
Tom Gehrels + Wendee/SS2, Cordelia & Echo. <sup>Muntaka</sup> 3, 26.

13209E 2230 to 2330/10-F/Jarnac/ Minerva 1-1 CN3e  
TV Cr- (17.3), CN35+MWI Dome.

\*13210S Wednesday, April 23/10-10:30/10-F/Jarnac/  
Muntaka & Cordelia/SS2: 3, 28 + several prominences.

\*13211S2. 1715-1900./10-F/Jarnac and in town/Cordelia  
Wendee/ prominences. Wendee took the  
Sunset reading on Sky 2 (Sol 2). Beautiful sunset  
she said.

13212E3 2300-0000/10-F/Jarnac Minerva 1-1 CN3e  
TV Gw L17.3. CN5 MWI Dome. ~~at~~ MPC1 Lyrids.

\*13213S Thursday, April 24/0915-1045/10-F/Jarnac/  
~~at~~ Cordelia 1-Wendee, Janet Mattei / ~~SS2 3252~~  
multiple prominences. Janet  
suggested that we use our  
data for searches for new variable  
stars.

13214S2 1820-1835/10-F/Jarnac/Echo 1-1 SS2.326

13215E3 2300-2345/10-F/Jarnac/Minerva 1-1  
CN3e TV Gw L17.3 no filter, as usual. MPC1,  
Lyrid Meteors. 2 meteors, both faint. Lyrids.

\*13216SEM Friday, April 25/26/1750-000/10-F/Jarnac/  
Echo, Obadiah, Miranda, Esther, Minerva, Cupid  
SS2:545

The AAVSO Meeting Star Party! a  
wonderful experience. Dean ran Miranda;  
Michael Magee ran Obadiah. Vance  
Petrie had his 20". Wendee was generally in  
charge! The ~~top~~ job she did tonight was  
sensational.

The highlight was Ron Royer, and  
Tom Gregg doing estimate of T Pyridis  
L with Obadiah. They and I got it at  
15.3 with Minerva + CCD. CN3e TV Gw L17.3  
Then they LOVED my old blueprint  
charts.

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- 13217S. Saturday 26 Apr / 1800-1820 / 10-F / Jarnac / Echo / -SS2 5, 59.
- 13218EP Sat night 26 Apr / 2300-2330 / 2-F / Jarnac  
A few stars visible.
- 13219S Sun 27 Apr / 1800-1810 / 10-F / Jarnac / Echo / -SS2
- 13220AN2 observing Run: 1930-0500 / 10-F / Jarnac /  
Cupid - Ophelia, Miranda / Carolyn, Wendee /  
CN3F 2 sets but overdeveloping lost most of  
the data. CN3e TV Grw (17.3) ~  
CN3 3h East. Cat: L245 V460 Cyg.  
L247 NGC 7217.
- 13221E Monday 28 April  
1900-0000 / 10-F / Jarnac / Cupid - Ophelia  
Clyde, Esther, Minerva / Wendee, Carolyn /  
CN3F. Rept. of last night but successful.  
CN3h. CN3e TV Grw - (17.3)
- 13222S Tues 29 April 1730-1800 / 10-F / Jarnac / Miria,  
Cordelia / Wendee, Carolyn, Jeff Wynn / -SS2:  
Several small prominences.
- 13223E2. W 1945-0000 / 10-F / Jarnac / Cupid - Ophelia,  
Clyde / Wendee, Carolyn, Jeff Wynn /  
CN3F 2 sets (1 with each camera) but  
when testing development, I turned on  
the light to view the test film & discovered  
I had forgotten to cover the rest of the  
films. Not my finest moment. Wendee  
saved it: "We'll retake them tomorrow!"  
CN3e TV Grw - (17.3) - CN3h.

- 13224E. Wed. 30 Close of Obs. Run. 1930-0000/10-F/Jarnac/Cupid - Ophelia/Wendee/CN3F  
successful repeat of last night: beautiful films  
CN3e TV Grw (17.3)
- 13225SE Thurs. 23 MAY 1/2300-2330/  
3-10-f/Jarnac/Mercury 1-1 CN3e TV Grw  
(17.3)
- 13226S. Friday May 2/0845-0910/10-F/Jarnac/  
Mintaka, Cordelia 1-1 SS2 5, 59, two big  
& several small prominences.
- 13227AN2 TSP 2003: 2200-0600 CST/10+-F/TSP/  
Cupid + MANY scopes, 2 36ers, Larry's  
and Bob's. CN3 2<sup>h</sup> N, E. Took nap betw.  
2<sup>15</sup>-4<sup>15</sup> TV Grw (14.6 CN3e. <sup>63</sup>247 Hockey Stick
- 13228S Sat May 3/1600-1630/3-F/McDonald Observatory)  
8' Solar Telescope + very very long truss.  
4, 21.
- 13229EM <sup>EDT</sup> 2200-0300/3-F/TSP/Cupid + many  
other telescopes/others - Steve O'Meara,  
Steve Goldberg, Bob + Lisa / TSP observing.  
Broke glasses. Good session though. TV Grw (14.6  
CN3e.
- 13230S. Sunday, May 4/1450-1510 MDT/Cupid/Las  
Cruces 7' Walter Haas/SS2: 2, 4.
- 13231S<sup>E</sup> 1900-2300 int/10-F/Jarnac/~~Sty 2 Sunset~~.  
CN3e TV Grw (17.3).
- \*13232<sup>S</sup>E Monday, May 5/1840 to 2345/<sup>7-Fm</sup>10-F/Jarnac/  
Wendee, ST group/Wonderful starlit session

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with Stuart Goldman and a whole group,  
and Dean and Peterson. Omega Cen,  
M13, Saturn, Jupiter, etc. Beautiful night.  
CN3e TV Co - C17.3. Sky 2. Sunset.

13233M2 0400-0430 / 3-F / Jarnac / Alt Pegasus / - /  
CN3 15m.

13234MS. ~~Wed~~ Wednesday, May 7 / 0500 to 0900 /  
7-F then 1-F. ALBANY, - <sup>AGCS MONTREAL</sup> I woke up to a  
beautiful clear sky at the Northway Inn,  
and set up in the parking lot. Then I  
realized that an office parking lot across  
the street had a better eastern horizon,  
and a series of wooden flat-topped posts  
for telescope mounts. I used two of them  
depending on where the Sun was relative to  
trees. / no others present. SS2 1, 2 + 1 planet.

### TRANSIT OF MERCURY

SS2: ~~Sat~~ SAROS-1 (SS1-LUNAR). When the  
Sun rose it was dim enough that I  
couldn't see it using the filter, and  
projection wasn't clear enough. But within  
10 minutes I got a dim view of a large spot  
group in the center of the Sun, plus  
Mercury on the west side. I knew it was  
Mercury for 3<sup>4</sup> reasons: 1) supposed to  
be there, 2) round spot near edge, no  
Wilson effect, 3) saw motion especially  
as it grew close to edge. It took almost  
exactly 5 minutes for the planet to leave the  
disk of the Sun.

What a sensation, to enjoy watching in real time as a planet orbits the Sun! There was little sense of motion at first but much more as the planet neared the solar limb.

Drove "home" through clouds + fog past the Adirondack Science Camp and then to Montreal.

\*13235ER May 7/1330-0030/ 3-F/ Hollaford Meteor Crater/ -1 Leo Enright / ? Aurora?

13236M3 0130-0245/ 10-F/ OSO Observatory / -1 Leo R Aquarids and T Herculids. 4 of the Herculids within a few minutes. Sky was darker than at our home, but the MW was fainter and Scorpius buldge barely visible.

132375E <sup>Thurs.</sup> May 8/1900-1930~ / 2-F/ Rolf's house/ Rolf + Linda/ Sunset.

\*13238E2. 2230 to 2330/ 3-F/ JARNAC! / Cupid / -1 Jupiter, the Moon, and CN3 5<sup>m</sup> W. Aur-1. LPO.  
I drove through rain, but the sky started to clear just as I got to the unpaved road N. of Buckingham. From the porch there were some clear areas (though tree growth has become dense there). I set up on the steps to the attic and used Cupid to make the observations. This is the first time that Cupid

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has made any observations at night from Jarnac, and the first, night observations under a starry sky from Jarnac since the late 1980s. Later on, down the Jarnac road, checked for Auroras.

Drove back into heavy rain on my way to Montreal.

13239EM Friday, May 9/2300-0015/7-F/McGill.

\*13240<sup>S</sup>E Sat, May 10/1830 to 2200/7-Fm/Morgan Arboretum/Constantine, others - David Brown + family / several telescopes, Meade + Celestron, Orion, + other telescopes / Astronomy Day. SS2. Lecture, then Moon, M13.

\*13241E. Sunday, May 11/2230-2300/3-Fm/Jarnac/Moon near Corvus/Minerva/ -1CN3e TV Gr-14.2. Outburst! Seen easily with CCD.

13242E Monday, May 12/2300-2315/3-Fm/Jarnac/Minerva/ -1CN3e TV Gr-14.2.

\*13243<sup>SE</sup>E Thursday, May 15/1500-2300/7-9-F/Flandrau to 6:10, then Sabino Canyon / 4 scopes at Flandrau (over a dozen later) about 2 dozen at Sabino / Many people, perhaps 400 at Sabino / WENDEE'S TELESCOPES FOR TELETHON EVENT, LUNAR ECLIPSE. The Moon rose

in deep partial eclipse over the Ruineons.  
Totality was dark and beautiful; L=2.5 at  
start, 2 in middle and end. It was  
the darkest eclipse since 1963! The T4T event  
was great, attracting a lot of media attention.  
Ch. 4+9 set up towers at Flandrau, and  
Ch 9 with Paul Hutter was again at Sabine.  
A very successful evening; congratulations  
Wendee! Sky 2 for T4T; Saros 1: Lunar  
Eclipse Saros

13244E2 2395-0000 / 7-F / Jarnac / -1 / Wendee / Moon  
to Moonlight Sonata.

13245S. Friday, May 16 / 1815-1841 1930 / 3-F / Jarnac /  
SS2: with Mira and Cordelia 4, 11. Several prominences.  
Sky 2: Sunset.

13246E2 2230 to 0000 / 7-Fm / Jarnac / Miranda, Minerva,  
Clyde / -1 / Removal of Clyde to install mirror  
alignment device. CN 3e TV Gw & 15.3.

13247E. Saturday, May 17 / 2000-2130 / 3-F / Jarnac /  
Pegasus and Minerva / CN 3 30<sup>m</sup> W.  
CN 3e TV Gw ~~65~~ 15.3.

13248SE Sunday, May 18 / 1900-1930 / 10-F / Jarnac /  
Mira, Cordelia / SS2: 4.24. Several prominences,  
one long & straight. ) Gran flash. Wendee obs. from  
Dean's pad, re from top of Dean's road; 7 sec difference.

13249E2 2000-0000 / 10-F / Jarnac / Pegasus, Minerva,  
Aether / -1 / CN 3 1h W. CN 3e TV Gw 15.6.

132505 Monday May 19/1800-1815/10-F/Jarnac/Echo/1  
SS2 4, 20.

13251E2 2000-0000/10-F/Jarnac/Miranda/  
Esther/Wendee/CN3 1h. CN3e TV  
Cw 18.7. L248 NGC 2986, L249 NGC 457

13252E Tues May 20/2230-0000 18-F very  
hazy - 4-F/Jarnac/Maria Minerva/1-7  
CN3e TV Cw 14.8

13253E Wed May 21/2000-2335 110-F/Jarnac/  
Esther/Wendee/CN3h Esther Clyde's star  
seg. CN3e TV Cw # 18.4. Still  
imagining it!! SUCCESSFUL test of  
Optech Temperature-Compensating Focuser.  
Through 5°C Temperature difference it learned  
where Esther has to be focused. Also recorded  
airlines image.

\*132545 Thursday, May 22/1545-1605/2-F/Kitt Peak N.O./Cupid/  
Wendee/SS2 1, 2.

*132555	SA2/53 P/Van Biesbraeck	10pm	1559	46.7	-9 43 43
		11pm	1559	45.1	-9 43 37
	TV Cw			16.8	
	5852 Nanette	8pm	521	58.7	+25 23 08
	6485 Wendee/Esther	1am	2051	32.2	+05 25 57
	3673 Levi	4am	2335	24	-8 02 42

Thursday, May 22/1630-0400 13-F/KPNO/20"  
RC Telescope, Cupid/Wendee, Adam Block,

others / Jpo.  
Pictures taken:

CN3e TVCw

CN3h Comet 53P Van Biesbroeck

\*L250 M7C 6946 compiled with several images  
plus 3 color filters images.

CN3 30 min E Cat obj NGC 6946.

13256S May 23/1030-1115/2-F/KPNO/Wendee/-/1  
Cupid / SS2 1, 2. Sky 2.

13257S2. 1900-1930/3-F/Jarmac/Cordelia/-/1  
SS2 9 prominences, all small / Sky 2.  
Sunset.

13258E2 2040-02230/3-F/Jarmac/Eather/-/1  
CN3h. binning 2x2 expt.

13259M3 0035-0420/3-F/Jarmac/Miranda/-/1  
CN3 3h 00m / L251 NGC 7789  
L252 65 Piscium Db. Close,  
L253 BC Andromadae very close.

13260E Sat May 24/2100-2200/3-F/Jarmac/Eather/-/1  
- / CN3e TVCw. CN3h TVCw-region

13261S May 25/3-F/Jarmac/Echo/-/1 SS2 2, 20.

AN Sun  
13262E2 May 25/2000 to 2300/10-F/Jarmac/Ophelia +  
Cupid / Wendee / - / CN3F 6 pairs. CN3e  
TVCw. CN3 2h E. The Graduate as bkgnd.

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13263 M2 <sup>Mon/Tues am</sup> 0000-0130/10-F/Jarnac - / Wendea,  
Bob Summerfield / several meteors. Nice MW  
bulge in Sco - Oph. CN5-MW1.

Tuesday, May 27.

\*\*13264 S 1600-1731/45/9-F/Coronado Instruments /  
Two telescopes / Bob + Lisa, Wendea, David  
Lund. X-class solar flare - big bright  
region in large spot group.

13265 S2. 1730-1745/10-F/Jarnac Cordelia, Mira / -  
SS2 2, 22. Flare STILL there but fainter &  
smaller.

13266 E. before 13263 M2. Monday May 26/2000-2300/  
10-F/Jarnac/Ophelia-Cupid / Wendea /  
CN3e TV Gw, CN3h. TV Gw set. CN3F 6 pairs  
L & B Gem.

13267 EMB. Tues May 27 / 2300-02:00 / 3-F/Jarnac/Pegasus.  
Miranda / Bob / CN3 / h 10<sup>m</sup> E. Beagle tried  
to upgrade the computers.

13268 E Wed May 28 / 2100-2200 int / 2-F/Esther / - /  
CN3e. TV Gw 14.6. very poor conditions.

- 13269 ~~S~~ <sup>S</sup>AN Friday, May 30 / 1900-0400 / 3-10-F/Jarnac/  
Miranda, Obadiah, Esther / Wendea, TAAA /  
T4T Thank you party. Jupiter. CCD  
images w/ Esther. CN3e, CN3h. TV Gw  
17.3.

\*13270E. Saturday May 31/2030 to 2300/10-F-3-F/  
Jarnac/The Michaelsons, Wandaal T4T  
star party / 3C273 with <sup>cut low 2300</sup> Obadiak, Jupiter.  
M57, Plyg. NGC 4038, 4039. M82. M57.

13271E SUNDAY, JUNE 1 - MOM'S 25th! -/2000 to 0000/  
10-F/Jarnac/ Esther, ~~Museum~~ Cupid-Ophelia/  
Wandaal CN3F; 6 pairs. In area 255  
the Hubble Space Telescope went right through  
during the <sup>first</sup> exposure - the N. part of the field.  
HST W-E.  
Also, the Cosmos 1076 Rocket tracked S-N  
through the same exposure.  
CN 85 - MWI Dome.

13272S Tuesday, June 3/1730-1745/9-F/Jarnac/Echo/H  
SS2 2, 16.

13273M2 0245-0415/10-F/Jarnac/Miranda/-/CN3 1<sup>h</sup>5<sup>m</sup>E.  
Reminiscences of McGill '66-'67, '67-'68, '70, '74-'75,  
and '96, '97-'98, 2002+3  
Mass. Collog. Hist. Degree.

13274E. Tuesday Wednesday June 4/2130-2230/3-F/  
McGill University/Wandaal. Clear evening, Moon.

13275MP Sunday, June 8/0345-0355/3-F/Jarnac.

13276SE Mon June 9/1900 to 2000/10-F/Jarnac/Echo,  
Esther/CN3h. SS2 earlier in the session 3, 74.  
Sky2 (Sunset Sol2) Sunset recording.

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\*132775 Tuesday, June 10/1230-1600 Laps Cruces time 19-F/  
Patsy Tombaugh's + Walter's houses / Clyde's  
16, Walter's 12, + Spica / Dean, Walter, Patsy,  
Alden, Annette + Bill. Investigation of  
value of Clyde's 16". ~~ST~~ Also a look at  
Walter's 12. Sky-2.

1327852 1850-1905/10-F/Jarnac/-Echo/Wendee,  
Dean / SS2 4, 56.

13279E3 2015-2230/7-Fm/TTT Bigelow / ~~B~~ Kuiper 61" /  
-Dean, Don McCarthy / UTA Astronomy  
Camp. Sky 2: M13, Jupiter.  
NGC 6207 was beautiful and so big!   
M57 beautiful, 3-D appearance.

132805 Wed June 11/1300-1330/10-F/Jarnac/~~10~~  
Echo-1 SS2 5, 82.

13281E2<sup>S</sup> 1800-2300/7-Fm/Camp Shadow Pines,  
Heber, Arizona, 16" r/r, 8" Celestron with  
hyperstar, 1 Dean, Dima, many children and  
staff / The Moon. images of M13, 101, etc.

13282M3 0330 to 0410/10-F after moonset / Pegasus / -/  
CN3 20m E, NE.

132835 Wed Friday, June 13/1350-02:1405/10-F/Jarnac/  
Echo / Delivers from Oak + More / SS2 4, 49.

13284E2 1900-2200/10-F/Jarnac/Obadiah/Wendee,  
Ed + Pat Vega / Sunset, Moon, ?.

13285S Sun Saturday, June 14/1600-1615/10-9-F/Jarnac/Echo/  
Wendee/SS2 2, 13. down a lot from before.

13286E2 190-2100/7-Fm/Connie Walker's house/Echo/  
Connie's party/-Jupiter.

13287E3 2200-0000/7-Fm/Jarnac/-/Wendee, Tom  
Glinos. Dome + walk preparation.

13288S Sunday, June 15/0900-1940 int/10-F/Jarnac/  
Tom, Wendee. Work on Dome, ~~at~~ Sky 2,  
(Sunset 2) Sunset (Sol 2). SS2 3 groups.

13289EM2, 2100-0230/7-Fm/Jarnac/Tom, Wendee/Rebuilding  
of Computer + Telescope connections.

13290AS Monday June 16/0900-1000/10-F/Jarnac/  
Tom, Wendee, Dome work. Tom broke the  
upper door of the dome as he was trying to close  
it. He decided to abandon dome for his telescope.  
Pegasus gets to go inside the dome! New  
observatory bldg. discussed.

13299S. Friday June 20/1800-1815/10-F/Jarnac/Echo/SS2 4, 6.

13291SE Saturday June 21/1850 to 2330/10-F/Jarnac/  
Ophelia, Cupid, Esther, Minerva/Wendee,  
Adam and Miwa Black/CN3h, CN3f - Observing  
Run. Concentrated on Leo fields. Echo SS2 4, 48.

13292SE Sunday June 22/1800-1945/10-F/Jarnac/Echo/  
Wendee + Sky 2 (Sol 2) Sunset, SS2 3 groups, CN3e  
CN3f Observing Run. Corvus fields with Ophelia

13293S. Monday, June 23/1100-1120/10-F/Jarnac/Echo/-/  
SS2 4, 41.

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1331E2 2000-0000/10-F/Jarnac/Minerva+Esther/Wendee/  
CN3h. With Minerva, found Epyaxa 802.

13294S. Tuesday, June 24/10-F/Jarnac/Echo/SS2.  
3 groups, ~20.

13295AN2 2015 to 0415/10-F/Jarnac/Ophelia  
Miranda/Wendee/CN3F 2 pics TV Cw-area,  
CN3e CN3 3h 30m E. Listened to War Games and  
Meatballs movies.

13296S Wed June 25/12:20-12:35/10-F/Jarnac/  
Echo/Wendee/4, 26.

13297E2. 2030 to 2330/10-F/Jarnac/ Esther and  
Minerva/CN3h.

13298S Thursday, June 26/0830-0900/10-F/  
Jarnac/Echo/SS2 4, 46.

13299S. See after 13290.

13300S, Tuesday, July 1, /1800-1815/10-F/Jarnac/  
Echo/SS2 3, 25? Sol-2 (Sky 2) Sunset.

13301SE Wed July 2 1700-2345/10-F/Jarnac/  
Echo, ESTHER, MINERVA/SS2 3, 48.

CN3h. Plotting for shed/solar observatory.

13302M2. 0230-0400/10-F/Jarnac/Obadiah/CN3 1h 10m E.

13303SE Thurs July 3/1750-2350/10-13-F/Jarnac/  
Echo, Esther + Minerva - Wendee/SS2 3, 55.  
CN3h 1228 Scumbiosa spotted w/Minerva

13304SE Fri July 4/1700-0000/10-F/Smoky/Jarnac/  
Echo, Esther, Minerva/SS2, 3, 60, CN3h. 1228 again.

13305<sup>S</sup>E July 5, Saturday / 21920 - 2300 / ~~10-3-F~~ 3-F /  
Jarnac / Obadiak, Munerwa, Esther / ~~SS2~~ Sky 2  
with Rachel, Rebecca, Suzanne + Ross Freund,  
Lori + Gary, Gail + Marc,  
Wendee /  $\frac{1}{2}$ , C, M57, B Cyg. View of  
Aspen Fire to N. in Catalina. Sunset.

13306M2 0300-0320 / 3-F / Jarnac / Miranda / - / CN3  
15m E.

13307S. Sunday, July 6 / 1925-1940 / 10-F / Jarnac /  
Smoky sky / - / Sky 2 (Sol 2) Sunset.

13308M2 0245-0410 / 10-F / Jarnac / Miranda / - / CN3  
1h 10m ~~W~~ E.

13309S. Mon July 7 / 0830-0930 / 10-F / Jarnac /  
Wendee, Virgil / plotting for new observatory.

1330S2 1200-1225 / 3-F / Jarnac / Echo / Wendee, Gail + Marc /  
~~SS2~~ 2, 54.

13311E2 1935-2315 110-7fm / Jarnac / Launch  
of Mars Rover Opportunity on TV. As seen on  
NASA TV, carried 22,300 miles from satellite.  
We then looked at the satellites and at I  
saw Mars rising.

13312 see before 13294.

13313M3 0230-0430 / 10-F but some smoke to N / Miranda,  
Obadiak / CN3 1h 15m E. Mars

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13314S. Tuesday, July 8/0930-1700 | 10-F, some smoke  
from Aspen fire in the Catalinas / Echo /  
Wendee / Construction of Jarnac Stations  
3 and 4 (Tom's + solar shed.) SS2 4, 77.

13315M Monday, July 14/15/ 02.30 to 0450 | 3-0-7-Fm/  
Jarnac / Obadiak / Michael Terenzoni / Mars:

13316SE (before 13315) 1920-1935 | 2-F / Some  
rain threatening / Jarnac / Wendee,  
Virgil / Sky 2 (Sunset - Sol 2.)

13317SM Tuesday, 15/16/ 0445-0530 | 7-F / Jarnac /  
Obadiak / - / Mars: before colonoscopy.

13318S Thursday, July 17/0800-1300 | 0-F / Jarnac /  
Wendee, Virgil + crew / construction of Jarnac  
3 station, wall built.

13319SE Sunday, July 20/1920-1935 | ~~10~~ 2-F / Jarnac / - /  
Sky 2 (Sol 2) Sunset.

13320S Tues July 22/1930-1945 | 3-F / Near Phx,  
west near I-10 to I-8 cutoff. / Dean / - /  
Sunset ~ 7 or 8 mins LATER (due to N+W  
location) than in Vail.

13321S Thurs Jul 24/1700-1920 | 0-3-F / Jarnac /  
Wendee, Dick Buchroeder, James.  
Obs Property Tour.

13322E Friday July 25/1850-2130/2-0-F/Tyson to  
Jarnac - Wendep, Art + Jeff / beautiful post  
sunset to lightning + rain.

13323S. Sat July 26/1000-1100/10-F/Jarnac - Jack  
Williams, Wendep / Discussion of trenching for  
Jarnac 3, and future construction  
projects. A lot in the SE, little S. of us,  
and nothing to the West for a long time.  
Basically it's good news.

13324S Sunday, July 27/1100-1300 int / Cordelia + Mini /  
Attachment of Mini - Wendep's ETX - to the  
Cordelia system. SS2 4, 10, + 6 prominences.

13325AN2 2000 to 0500 / 3-F / Jarnac / Mutinda,  
Obadiah, Mira, Cordelia - / CN3 3<sup>h</sup> 20<sup>m</sup> W,  
(+ 3<sup>h</sup> of it E.) CMP1 - Delta Aquarids. 7 meteors, of  
which 2 (1 bright, 1) were Delta Aquarids,  
2 were early Perseids, and 1 was sporadic.  
A lot was happening tonight. In the evening  
there was a major lightning display to the  
SW and W. In the predawn hours there  
was lightning to the NW. The sky was partly  
cloudy. I stopped a couple of times tonight  
I worked on balancing Cordelia. The second  
time, I stopped in the morning until the clouds  
finished Cordelia and found a beautiful  
lizard in the garage. Meanwhile, during  
the comet hunt ~~arrange~~ <sup>great horned owl</sup> set down  
upon the top of the dome to observe the landscape.

Great Horned Owl 07-03

The Beagle was observing the ~~Green~~ <sup>Great Horned Owl</sup>, and there were a lot of coyotes howling. With lightning to the NW and meteors in the east, it was a very busy morning.

I ended the session with a look at Mars. The S pole cap was clearly visible in red but the rest of the planet was somewhat muted.

13326E Monday, July 28/2130-2230/2-3-F/Jarnac/-  
some clearing after a late afternoon storm that brought us 1.25" of rain.

13327E Tuesday, July 29/2345-0000/2-F/Jarnac/-  
only Mars appears brightly in the East.

13328E Wednesday July 30/2030 to 2100 int/3 /  
Joanie's house & ven. | Wendee & Joanie |  
Moon crescent.

13329E Thursday, July 31/2000 to 2350/3-F/  
Meadowmount School, S of Plattsburgh |  
Cupid/ Bill Ehmann, Staff & students get  
Meadowmount /- Sky 2, CMP-1 / Views of  
Vega,  $\beta$ Cyg, M57, M13, and the Milky Way. The  
sky is as dark here now as it was during the  
days at ASC. A beautiful night - the sky  
cleared for ~45m to reveal something  
beautiful, & untouched by light. The Meadow-  
mount school is only a couple of miles ~~or~~ from  
the Adirondack Science Camp.

\*13332S. Friday, August 1/1015-1100am / O-F / ASC / Cupid / Bill Ehmann, others from Plattsburgh State etc / We focused (through a light drizzle) at the #12 sign on the cabin that was once Observatory headquarters at ASC. The site has barely changed since 1966. A beautiful, magical place even in the drizzle. The group renting it had a tent that we could set up ~~our~~ Cupid for observation. What a memory. What an experience. Sky 2.

\*13331E2 2115-2130 / O-1-F / Twin Lake Camp / Cupid, camera / picture of TLC signpost. Sky 2.

\*13332SE Saturday, August 2/1515-2115 / 3-F / STELLA FAVE / Wendee, Jeanie, Philip + many others; John Martin / Meade ETX / SS2. Sky 2. Shadowgram.

\*13333S Sunday, August 3/1500-1630 / 2-F / Long Island / Wallach family and friends. Unveiling Service for Dad's tombstone. Crescent Moon in South.

13334S Monday August 4/1730-1800 / 3-F / Jarnac at last / Cordelia-Miri / - / SS2. ~~Sol 2 Sunset~~.

13335M2. 0300-0410 / 10-F / Jarnac / Minerva / - / CN3 1<sup>h</sup> E. CMP1 - Perseids, 5 seen. 3 P, 2 DA, 1 SP

13336S. Tues August 5/1600-1830 / 10-F / Jarnac / Cordelia - Miri / - / Wendee / SS2 4, 58. 9 prominences also Sol 2 (Sky 2) Sunset.

13337S Thurs Aug 6 / 1900-1915 / 2-F / Jarnac / Cordelia / Miri / - / SS2 3, 25. + several prominences.

08-03

- 13338M2, 0300-0430/10-3-F/Jarnac/Miranda  
Obadiah/-/CN3 1<sup>h</sup> E. Sky cleared (mostly)  
at 3 as predicted by the Clear Sky Clock.  
Big storm to SSW. Mars beautiful.  
CMP1 - Perseids. Several seen.
- 13339S Sat. August 9/1730-1800/3-F/Jarnac/  
Virgil, Wendee/Jarnac/SS2 4,55, 19  
prominences all small.
- 13340E2 2300-2330/7-F/Jarnac/Obadiah/Wendee  
Mars.
- 13341MB 0300-0435/7-Fm, then 9<sup>1</sup>/<sub>2</sub> F/Jarnac/  
Obadiah/-/CN3, 1<sup>h</sup> E + N, also 2 to B Gem/  
Mars different from last night.
- 13342S Sunday Aug 10/1630-1930/3-F/Jarnac/  
Cordelia-Mini/Wendee/SS2 4,45 + 3 prom-  
inences. Thunder afterwards, then  
clearing low in W. for a beautiful sunset.  
Beautiful clouds in W, long thin lines of rain.  
Sol 2 (Sky 2) Sunset.
- 13343E2 2210-2245/1-F/Jarnac/-Jarnac main  
bldg/Wendee/Wendee saw Mars briefly  
through the clouds. Jarnac's main  
obs. has a door that dates from the old  
structure on Carey St. That building  
contains material (door and E wall)  
going back to 1980. 89° during session  
on ~~main~~ back porch.

133445E Monday August 11 / 1730 to 2045 / 3-F / Jarnac / Echo / Wendee / SS2 4, 43. Moonrise with a cloud on top and in center of Moon; Wendee said it looked like a phonograph record.

\*13345AN 2 2100 to 0530 / 0-3-F / Jarnac <sup>Yes!</sup> to KPNO / CAPELLA, 20 RC / Doug Lebell, Adam Black, film crew + Today Show team. View of Mars through Capella, and occasional view with video on 20". Syrtis Major, Hellas and S Pol. Big Thunders storm on way to Kitt Peak.

13346 Tues August 12 / 1200-1245 / 7-F / Jarnac / Reg-asis / Dean, Donna, Wendee / Installation of Clyde, Dome repair. Clyde

\*13347S2, 1750-1815 / 3-F / Jarnac / Cordelia-Mini / Wendee / SS2 3, 45. Several prominences.

Thin broken prominence  
 $\frac{1}{3}$  Solar Diameter away!

13348S Wednesday, August 13 / 1630-2100 / 3-0-F / Jarnac / Curtis Harris, Wendee / ~~earlier~~ <sup>clouds</sup> Echo / SS2: 3, 45. Then a thunders storm then clearing low, low in the west and a soft sunset. Sky 2 (Sol 2) Sunset. Then more rain + lightning.

08-03

\*13349M2 Thursday morning. 0010 to 0050 / 2-F / Jarnac / PEGASUS at last! (after being locked in broken dome for a while) Mars. Beautiful view with 4mm Nagler and Red filter.

\*13350S Friday August 15 / 3-F / Jarnac / SS2: 4, 41 + 4 nice prominences. Cordelia-Mini.

13351EM 2000 to 0145 / 10-F / Jarnac / Clyde and Obadiak / Jimmy Stewart, Dean. Focusing for Clyde. M13. Mars.

13352S Saturday, August 16 / 1200-1230 / 10-F / Jarnac / Echo 1-1 SS2: ~~62~~ 63.

13353E2 2000-0000 / 7-10-F / 7-F / Tim's place, then Jarnac. Many people at Tim's 60th birthday party, especially Tim + Carol, Wayne + Arlene Johnson, Doug Snyder / Mars Rising. Later, Wendee, Mike Terenzoni and used Obadiak to study Mars, and still later, Uranus, Neptune, + the Moon.

Mare Sirenum →  ← Mare Cimmerium

13354S Sun 8/17 / 1700-1730 / 3-F / Jarnac / Cordelia-Mini 1-1 SS2 4, 44, several nice prominences.

13355E2 1855-1910 / 3-F / Jarnac / - / - / Sol 2 (sky 2) AND Sunset.

13356EM2 2/30 to 0100/10-F/Jarvise (to 7-Fm)/Clyde,  
Obadiyah/Wendee, Jimmy Stewart and  
Lainey, Dean / CLYDE NOW ALIGNED AND  
FOCUSED ! / Sky 2: Mars - Mare Serenium,  
Uranus, Neptune, and M31, M13.  
CMP-1 - No Perseids. CN3K - Clyde aligned.

13357E: Tuesday, August 19/9-F / Mikael + Ruby's house /  
200-2230 / Cupid / Mik + Ruby / Mars.

13358EM Wednesday, August 20/3-F / Peter + Dianne's  
house / 2300-0200 / (Train Tracks) + Mars through  
Herschel and Cupid.

13359EM Thursday, August 21/22 / 2300 - 0030 / 0-F /  
Train Track + Railroad bridge / Train + Thunder-  
storm.

\*13360AN Friday, August 22/23 / 2200-0540 / 10-3-F /  
Starfest / Peter, Tom, <sup>Constantine</sup> many others / Cupid, other  
telescopes / Mars. Best view was through  
Tom's Delphinus telescope.  
CN3 3h through Cupid. I walked w/ Peter  
in the last hour before dawn when haze + Moon  
made comet search unwise. 6 Perseids. CMP-1.

\*13361SEM Sat August 23/24 / 1530-0200 / 3-F /  
Starfest / Constantine, Jim Low, Geoffrey  
Caherty, Attila Danko, Tom, Peter, Andreas  
Gadey, + many others / Cupid, other telescopes  
Delphinus / CN3 30m E w / Delphinus. Mars.  
Db. Cl. Several late Perseids CMP-1.

08-03

\*13362M Monday, Aug 25/26/0000-0530/0-1-F/Kitt Peak National Observatory/Castor, 20"RC/Doug Ibell, ABC Good Morning America / Live appearance talking about Mars on National Television.

13363S Tues Aug 26/27/0845-1000/3-F/Jarnac/Pegasus/Wendee, Virgil / work in dome SS2.

\*13364EM Wednesday, August 27/28/1930-0030/2-10-F/Flaudran Planetarium, then Jarnac/Dean Ketelsen's 11-inch Celestron that he got from Bob Goff's estate, John Kalas' Astro-Physics telescope, then Pegasus. / Then lectures + interviews. Today 6 interviews about Mars. During the session I gave 3 lectures about Mars. Once Wendee + I were finally home, I observed Mars through Pegasus and drew this drawing.

Tonight Mars appears than it has been in 60,000 years.



27/28 August

Pegasus  
LPO-1 Mars.

13365M2, D330-0430/3-F/Jarnac/Pegasus/CN3 ~~HOME~~, 40"ME.

\* 13366E Thursday,  
1845-0000/  
Wendae  
Mars LPO-1  
with  
Pegasus.



August 28/29/  
10-3-F/Jarmac/  
Sol-2 (Sky 2) Sunset.  
CN3K Clyde  
Area 40.

13367M2. August 28/29/0330-0500/10-3-F/Jarmac/  
CN3/K00 with Miranda, Catolij NGC 1851. (L46).

13368ESE. Friday, Aug 29/30/1500-0000/3-10-F/Jarmac/  
Cordelia + <sup>Mirna</sup> Obadiach / ~~Wendae~~ Wendae, David + Jerry from Coronado  
SS2 3 beautiful prominences, 5, 23, Mars through  
W-red + Coronado blocking filters.  
CMP Kappa Cygnids

13369M2 0330-0530/10-F/Jarmac/Miranda/  
CN 3, 20m E.

1337RS Sunday, August 31/1500-1700/3-F/Jarmac/  
SS2 4, 27 + 17 prominences. SS2 with Mari +  
Cordelia.

\* 1337IE. Monday, September 1/10. 2200-2330/3-F/Jarmac/  
Obadiach/Wendae/Mars.

13372E Tues Sept 2/2300-0000/Jarmac/Obadiach/Wendae/  
Mars. CN3A/Area 369. ~~FF~~ Clyde. CN3h Murrain  
and Esther.

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13373EP Wednesday, Sept 3 / ~~220~~ 2030-2040 / 7-F /  
Tucson Conv. Ctr / Planetarium - Alexis Faust,  
Michael Magee / Mars with naked eye - so bright.

13374M ~~043~~ 0320-0500 / 3-F / Jarnac / Miranda,  
Clyde / CN3 45<sup>m</sup> E. CN3K / Pollux-Castor.

13375EM Thursday Sept 4 / 2200-0100 / 3-F / Jarnac /  
Obadiak, Clyde / - Gil, Tom Glinos, Dean /  
CN3K adjustment. ~~at~~ Mars.

13376S before 75 / 1500-1700 / 3-F / Jarnac / Cordelia-  
Mini / Wendee / BIG low prominence.

13377M3. 4/5 / 0330-0530 / 10-F / Jarnac / ~~at~~ Miranda Clyde,  
Obadiak, Echo, and Mira / Tom / CN3 0<sup>h</sup>45<sup>m</sup> E.  
Echo + Mira used to align N in J3 building.  
Laser attached points to Polaris.

13378S. 5/6 / 1100-1830. 110<sup>3</sup>-F / Jarnac / Virgil,  
Wendee, team from Rolling shutter company /  
installing shutter, building J3.  
SS2: with Cordelia + Mini - 2, 14 and 13  
prominences.

13379E2 2100-2200 / 2-F / Jarnac / Mira / Tom, Wendee /  
Prep for Polar alignment in J3.

13380M3 0330-0500 / 1-2-10-3-F / Jarnac / Mira, Pegasus / Tom /  
Laser attached in place in offender, ~~at~~ Polaris <sup>→ 20 minutes</sup> then moved  
scope down to mark N line in J3 - ~~at~~ laser beam CN3 ~~300~~ m E

\*13381SE Saturday, Sept 6/7/3-0-3-F/1030am-2230/Jarmac



LPO-1  
Mars, red f.  
2130.

Wendee, Tom, Virgil | 1) Tom finally got shutter in dome electrified and dome moving. He also successfully got J3 roof electrified after he + Virgil installed rack + gear - I helped. It was good to see the look on Tom's face when he started the motor and it worked!

Finally Wendee, Tom, and I looked at Mars through Pegasus.

13382 M2. 0330-0500/10 to 3-F/Jarmac/Clyde, Miranda 1-1 CN3 kill Pollux-Caster. Successful! CN3 1/4 E

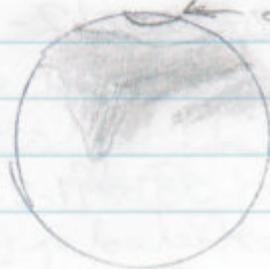
Sunday 7/8 SS2 w/ Cordelia - Mini 1:2, 8 prom.

13383 SE M 1000-0130<sup>mid</sup> 7-Fm-F/Jarmac/Pegasus, Clyde, Phidid Wendee / CN3 kill Area 40. Successful! Sol 2 - Sky 2 Sunset Mars with Obadiah blue H<sub>2</sub> blocking filter Mars with Pegasus Wratten Red

brighter →



LPO-1  
Mars



← darker

09-03

13384M

0330-0530/10-F/Jarnac/Clyde, Miranda/CN3K areas near + CN3 1<sup>h</sup> E BGem.

13385S

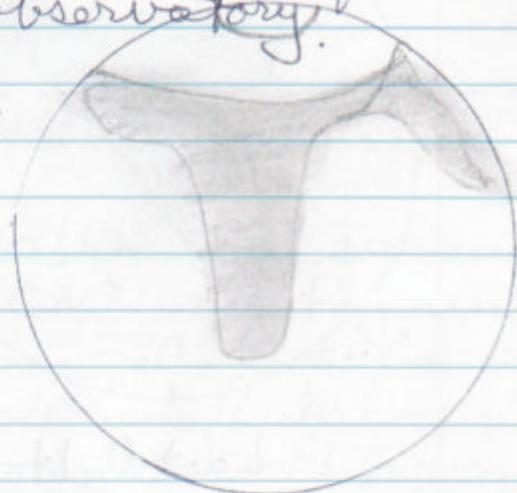
Monday, Richard's birthday 1600 to 1700/3-F/Jarnac/Cordelia-Mini/SS2 2,8: 7prom.

13386ER. 1930-0130/3-F/Jarnac/Pegasus, Clyde/

Mars: Urejil helped me move Hyperion's Computer to J3. I spent some time cleaning the dome and turning it from a storage bin into an observatory.

CN3K was area 384.

LPO-1 Mars



13387FA Tuesday, 9/10/

1500 to 2330/

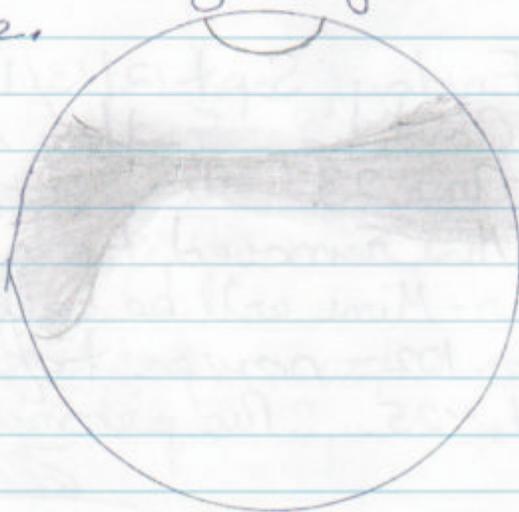
3-2-F/Jarnac/Dean, Wende/

Clyde, Pegasus, earlier Cordelia-Mini/

SS2 2,8, 7prom. again.

CN3K/inst. of new driver, view of Mars through Pegasus in nicely refurbished dome.

LPO-1 Mars  
nF



13388EM

2300-0030/Wed 10/11/7-fm/Jarnac/Pegasus/-1 LPO-1 Mars, see drawing overleaf.

13389 SEM Thursday, September 11/12/1800-0130/ Wendee/  
 10-F-7/Jarnac/Cordelia-Mini/SS2:1,28,  
 30 prominences. Wow! Wendee thought  
 they were fantastic.  
 Cupid & Pegasus. LPO-1 Mars.



Last Night  
 CN3K11 Area 383.



Tonight

13390 SEM. Friday, Sept 12/13/1700-0200 10-7-fm/  
 Jarnac/Cordelia, Esther, Minerva, Clyde, Pegasus,  
 CN3K11 Area 23. Wendee

Cordelia: Mini removed & placed on Esther.  
 → Esther-Mini will be called Esther.

Cebatron 102 - now part of Cordelia System.  
 SS2:1, ~25. Nice prominences.



13391 SEM Saturday, September 13/14/10-7-fm / Kitt Peak/  
 20", 16", several Orion refractors / Wendee, Connie  
 Walker, Project Astro / Sky 2: Mars. M17, M18,  
 Moon.

09-03

13392SEM Sunday Sept 14/15/1815-0130/10-7Fm/Jarnac  
Cordelia/Wendee/SS2: 1, 13, 12 prominences.  
CN3k11-140 pics x 2 of Area 23, completing  
the set began on Friday 13390SEM. with Clyde.  
CN3 1<sup>h</sup>W. with Pegasus in dome.  
Sky 2 (Sol 2) Sunset.

13393SEM Mon Sept 15/16/1800-0200/10-7-Fm/Jarnac  
Cordelia/Wendee/SS2 4, 19.  
Pegasus CN3 1<sup>h</sup>W.  
Clyde 100x3 CN3k11 Area 438(23a).

13394SEM Tues 16/17/1800-0130/10-7Fm/Jarnac/  
Cordelia/Wendee/SS2. CN3 with Pegasus  
1<sup>h</sup>W. CN3k11-CN1 Area 370. Pic of Owl + C.

13395S. Wed 1100-1230/10-F/Jarnac/Clyde/Luke/repair.

13395E2 Wed 17/18/2200-2300 int 13-10-F/Jarnac/  
-1<sup>h</sup> Pegasus/Mars



13397EM Thu 18/19/1945-0130/10-F/Jarnac/  
CN3 with Pegasus 1<sup>h</sup>W. CN3k11-CN1 Area 39.  
1/2 dome only.

13398S. Friday 19/20/170 to 1800/10-3-F/Jarnac/  
Cordelia + SS2 2, 7; 8 prominences.

13399AN2 1900 to 0515/10-7-fm/Jarnac Flandreau, then Jarnac/  
Refr. and SCT at Flandreau, then Clyde + Miranda/  
Lect. via "A Time for Mars". Then unscrewing of construction  
knobs lights to the SE of Jarnac. Clyde: CN3k11-CM  
finished Area 39. CN3 with Miranda 3h E.

13400SEM Saturday September 20 / 1700-0000 / 10-F /  
Jarnac. / Wendee / Cordelia, Pegasus /  
SS2-3, 11, 18 prominences.



Mars through Pegasus.  
no filter.



13401S Sunday, September 21 / 1000-1715 / 10-F / Jarnac /  
Echo / - / SS2 2, 17 with very big spots finally  
appearing. Seeing not the best.

13402AN 2 1900 C.D.T. to 0730 London Time / 7-F / int.  
over Atlantic just S. of southern tip of  
Greenland as northernmost star part / Mars,  
Sirius, Orion, beautiful dawn.

Lord Rosse drew M51 in 1845  
published in Flammarion's Les Etoiles  
book even had a frontispiece  
illustration of a church spire pointing  
skyward.

M51, stars reversed

like in Road with Cypress & Star  
Apr<sup>20</sup> 1890 Moon was near Venus  
& Mercury after 6 nights of clouds.  
Van Gogh might have forced F. to  
take advantage of fading light,  
to use a mirror to show scene, reversing

Starry Night was June 1889.

England

G-DT

09-03

\*13403S. Monday September 22/1215 to 1330/3-F/  
 William and Caroline Herschel's house in  
 Bath, England. Tricia Brown 16" reflector  
 built in Herschel's style. A walk through  
 the garden from which William discovered  
 Uranus and Caroline <sup>Possibly one</sup> ~~some~~ comets. before  
 they moved to Slough in 1786. She may have found it here.

13404E2 2300-2315/8-F/Buss Bristol / The Meachams  
 Mars. Fairly dark sky. Milky Way visible.

\*13405EM Tuesday, September 23/2200-0100/9-7-F/  
 Rasse observatory, Pontefract, 18" Nasmyth  
 telescope. Beautiful instrument / Mars.

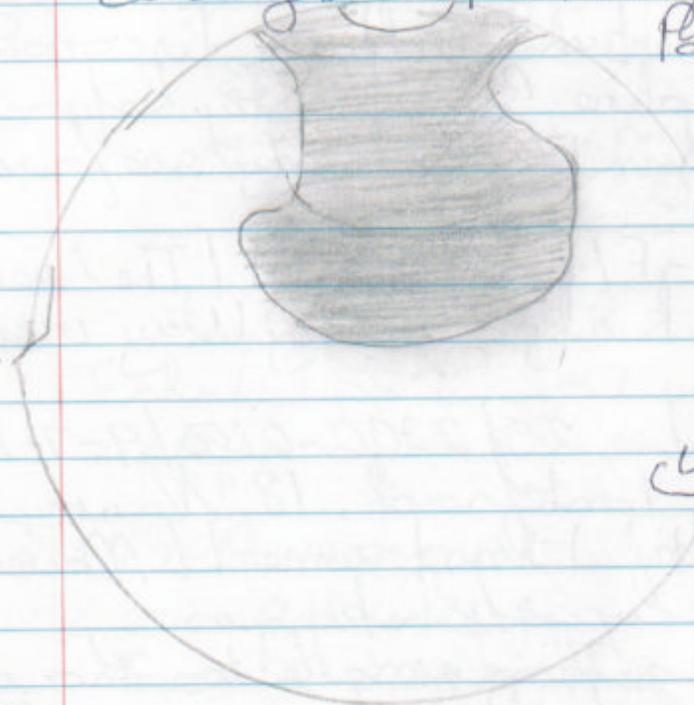


Pole cap shrinking.  
 Disk getting smaller too, though  
 not as fast as the cap.

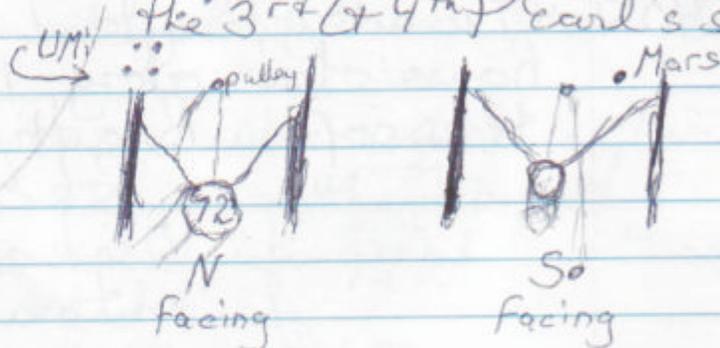
Then we went to the Physics building of  
 the University of Leeds, saw Mars from  
 there. Grampa Willie was a Leeds early  
 last century.

\*13406S. W Friday September 24/0945-1130/  
 2-F/9mpt. Fox Astronomy, Cambridge/  
 Roderick / Refractor that John Chaffis did  
 not recognize Neptune with, smaller re-  
 flector, F/3.2 Schmidt, Baker-Nunn  
 style telescope. A wonderful visit to  
 a special observatory.

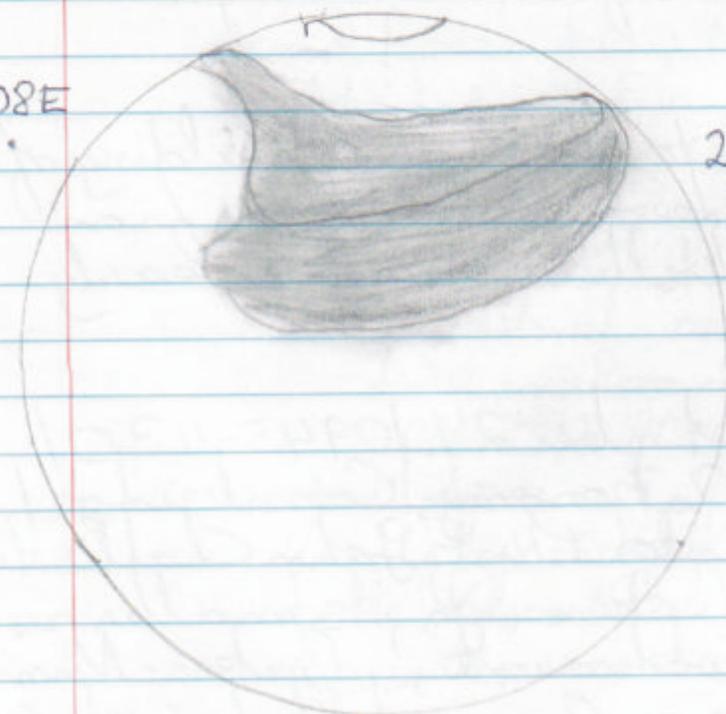
\*13407SEM Saturday, Sept 27/1400 to 0300, with break  
 in late afternoon to late evening 12-9½-F/  
 BIRR CASTLE / 72" heycathan, F120 Orion Mak  
 Cassegrain / others from Whirlpool Star  
 Party. At night is a drawing



of Mars seen through  
 the Orion, but Mars  
 was over the heycathan  
 west wall. What  
 a thrill it was to enjoy  
 it, vicariously through  
 the 3rd (+4th) Earl's scope



13408E



Sunday, September 28.  
 2230-2315/10 F 3-F/Gerry's  
 home NW of Dublin/8" F.17  
 homemade reflector on  
 Dobson/lawnmower mount  
 signed by John Dobson  
 - found me P/Gerry / Mars,  
 NGC 869-884.

13409E Mon 29/2230-2245/3 F f/ Jarnae.

10-03

13410EM Tuesday September 30/2000-0100/10-3-F/Jarnac/  
Obadiah, the observatory pig, Clyde/Wendee,  
Joan + Smits / Mars. CN3K11-CN1 Area 60.

13410M2 0350 to 0510/3-F/Jarnac/Pegasus/CN3 1<sup>h</sup>E.

13415EM Wednesday October 1/2/1800-0215/10-9-F/  
Jarnac/Clyde 1-1 Sol 2 (Sky 2) Sunset.  
CN3K11-CN1 Area 61.

\*13413S to Thursday 2/3/1100-1230/3-F/Jarnac/  
Wendee, Virgil / Completion of beautiful new  
observatory building. JS.

13414E Friday Oct 3/4/2130-2200/7-F/Seattle from  
Museum of Flight to Seneca St/Vintage Park HxL  
AWendee, Dave Ingram / Mars, Moon.

13415S Saturday, Oct 4/1045-1145/1-F/University of  
Washington / Visit to outside of observatory  
with Wendee; Audrey + Dave Ingram. Beautiful  
old stone building made from leftover stones  
from the building of another building. Beautiful  
home.

13416E Sun Oct 5/2130-2200/3-F/Jarnac/Wendee, Dean,  
Donna / Focus on Clyde.

13417M2 ~~0400~~ 0350 to 0530/10-F/Jarnac/Miranda,  
Clyde/CN3 45m E. CN3K11-CN3J, Kreutz search.  
Worked well this morning.

13418SE Monday, Yom Kippur / afternoon + evening - / Moon at gibbous phase.

13419S Wednesday, October 8 / 1700 to 1800 / 3-F / Jarnac / SS2: Sol 2 (Sky 2) Sunset recording.

13420E Thursday, Oct 9 / 2200-2330 / 3-F / Jane + Mojo's house, San Rafael, CA / 4" refractor APO / Mars. poor seeing.

13421E Friday, Oct 10 / 2230-2300 / 10-F / Jane + Mojo's house, San Rafael, CA / 4" r2 APO / Jane, Mojo / Mars.

13422EM Saturday Oct 11 / 2300-0130 11-F / Jane + Mojo's house / 7" F / 9 APO / Jane, Mojo / Mars

CM = 22.15

D = 18.43"

Phase 93

$M_V = -1.76$



Moon: Petavius with Rille, & Palitzsch.

13423SE

10-03



Monday, Oct. 13/1730-2245/7-fm/Jarnac/Obadiah/  
Virgil, Wendee/Sol 2 (Sky 2) Sunset + green flash,  
Mars. Virgil removed back wall in anticipation  
of tomorrow's installation of new rolling shutter.

13424S. Tues Oct 14/0900-1100/3-F/Jarnac/Wendee, Virgil/  
Installation of shutter failed due to wrong  
measurements, and will be tried again on  
Saturday.

13425S Thursday, October 16/1100-1145/7-F/Susque-  
hanna University Observatory / 28" reflector/  
/check out of telescope which  
like shutter above, isn't working. The  
observatory is beautifully located above  
the columned front entrance of the science  
building.



13426EP2 2200-2210/10-F/Jarnac/Wendee/dark sky;  
home briefly.

13427E Friday October 17/2015-2035/7-F/Nanette & Mark's  
home/Summer/Mars. I brought my  
granddaughter Summer outside and showed  
her Mars.

13428S. Sat Oct 18/1200-1300/7-F/Albuquerque/  
Geo Soccer game with Summer's Rocket Team/  
Wendee, Mark & Nanette, Summer & Matthew,  
Mom/Moon. Photos of children with Moon.

13429S. Sun October 19/1030-1200/7-F/Albuquerque/  
N & M's house/Summer, Matthew, Mark, Nanette,  
Wendee/Kaia/Moon. Photos of S & M  
looking through Kaia.

13430E2 1900-2130 int/7-F/N & M house/Wendee,  
Summer, Matthew/Mars. at end, Matthew  
came out to sit with me.

13431EM Monday October 20/1730-0100/10-F/Jarnac/  
Wendee, Mom/Sky 2 (Sol 2) Sunset.  
CN 3 kll-CVI.

13432EM Tuesday, Oct 21/1930-0130/10-F/Jarnac/  
Sturzenegger people/Several scopes. Clyde, Obadiah,  
Minerva, Esther/CN 3 kll-CVI. area 40, 71.  
CMP-1-ORIONIDS. 2 meteors (1 sporadic.)

13433M2 0500-0520/10-F/Jarnac/Miranda, Clyde/  
CN 2 bll-CVI-1 CN 2 E... E

13434EM Wednesday October 22/1930-0100/10-F/Jarnac/  
Clyde - Wendee / CN3kll-CNI Area 23, Mars.

13435MR 0455-0550/10-F/Jarnac/Miranda, Clyde  
CN3kll-CNI closing for night. CN3 30min E.  
CMP-1 Orionids. Meteor?

\*13436EM Thursday, Oct 23/2000-0030/10-F/Jarnac/  
From Italy & Switzerland & from Starizona / Cupid  
Miranda, Obadiah, telescopes from Starizona. Capella.  
They really liked Cupid. We looked at Mars,  
M33, M31, B Cygni. Then Dean & Donna & Wendee  
did first light on Apollo - Castor, M42.

\*13437E. Friday October 24/25/2000 to 2330/10-F/  
Yucca Valley / Starry Nights Festival.  
CN3 30min W. Spy 2: First  
light party for Apollo. What a telescope  
- Dean did a superb job. The encoders  
worked flawlessly. Tim thought  
Apollo's view of D6 C1 was the best  
he'd seen. It was an extraord-  
inarily good performance. The older  
observers were attracted to the  
appearance of a Cave telescope - and  
one with encoders! As Dean said  
yesterday, it is now one of a kind.  
Wally Pacholka took pictures of  
Tim, Wayne Johnson, & me with Apollo.  
Another guy took a picture of me & " for a  
website. A wonderful session. Also

BAXENDELL'S

13438S Sat Oct 25/26/2000-1215/10-F/Starry Nights Fstul/  
others / Outerior telescope of Mary Firth 1882 3.77.

13439AN Sunday, October 26/27/1900-0600/10-F but windy / Clyde, Miranda, Apollo, Minerva / Wendee /

1) Test of Minerva and Apollo - Apollo at F18 gave clearer images.

Not all these cat obj. scan

2) CN3K11-CN1 Area 57 <sup>this session</sup> M7, D10

3) CN3j - Kreutz Search <sup>NGC 1851 Columba GC glial comet-like at low altitude</sup> NGC 2683 <sup>LYNG VE Galaxy</sup>

4) CN3 3<sup>h</sup> E with Miranda + Apollo. <sup>bright core M9.8, D 9.0</sup>

<sup>WSS</sup> 3) NGC 5016 CBr Round Gal M128, D1.6 4) IC 2367 Puppis Galaxy <sup>L7.56</sup>

13440S Monday, Oct 27/1600-1615/3-F / Jarnac / Cordelia / -Wendee / CN3 3, 77.

13441S Tuesday, Oct 28/1300-1300/3-F / Jarnac / Cordelia / Session began at 120 Carey St. Very nice walk with the Beagle. Wendee met me after her appt. Then at Jarnac, ~~at~~ SS2 7 (big from) 7, 94.

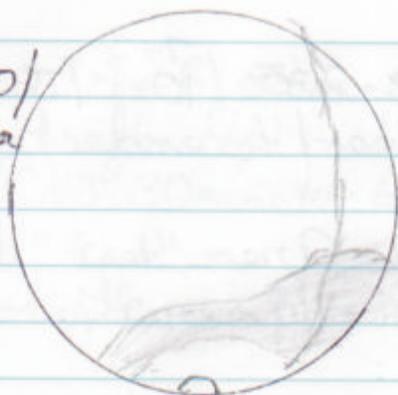
13442E2 2000 to 0000 / 10-F / Jarnac / Clyde, Esther, Minerva, and Apollo, CN3h. CN3K11-CN1 Area 39. CN3K11-CN1 Area 57 again

13443M3 0400-0600 / 10-F, beautiful morning / Jarnac / Clyde, Apollo. CN3 1<sup>h</sup> 5<sup>m</sup> E. CN3j Kreutz Areas

13444S <sup>Wed 29/</sup> 1100-1115 / 3-F / Jarnac / Check on Apollo.

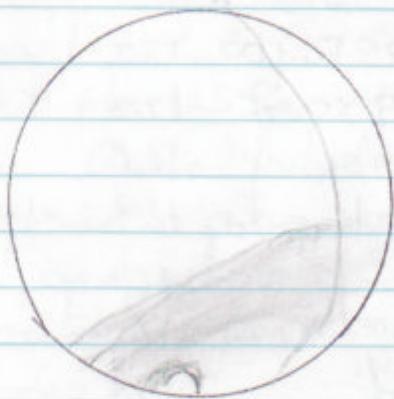
13445E 1750-1815 / 3-F / Jarnac / Apollo, Cupid - Ophelia / Moving Apollo to J3 + rebalancing Oph, removing <sup>the Schmidt</sup>

13446 E3 2000-0000/  
Cupid-Ophelia  
Cupid as  
Ophelia.



10-03  
3-F/Jarnac/Apollo,  
1 Installation of  
main scope on 0

13447S. October 30/31/1645-1700/3-F/smoke from CA  
forest fires. (Ophelia) CORDELIA/Wendae/  
SS2 5 prominences. 6, 84.



13448EM2 2100-0100 13-F, +smoke from California  
forest fires/Cupid-Ophelia/Wendae/Completion  
of print of Cupid on Ophelia on 1/4" top. Mars  
drawing.

13449S. Friday Nov <sup>Oct 31</sup> 1100 to 1130/3-F/Jarnac/Cupid/  
-/SS2 5, 77+. 24 pics of sunspots  
taken through Cupid on Ophelia's mount.

13450S. Saturday, Nov ~~14~~ <sup>13</sup> 1430-1500/7-F/Jarnac/  
Cupid-Ophelia/SS2 5, 112+. 24 photos of  
Sunspots. One above J.

13451E2. Sat Nov 3 / 1900-2300 / 7-3-  
10-F / Jarnac / Clyde,  
Minerva, Esther / Wendee.

CN3h.

CN3k11-CN1 Area "test" between Hamal  
and ~~the~~ directly south.

Asteroids:

13452M3 0400-0600 / 10-F / Jarnac / Clyde, Miranda /  
- / CN3 JhE. CN3J Kreutz search.

30 ~~mm~~ fields.

13580 1993 OP5 16.5

21430 1998 FG107 17.7

67035 1999 XO171 17.3

7218 1979 SK 16.6

5557 Chimi Keppuko 16.7

2276 Wark 16.1

1782 Schreier 16.0

1941 Wild 15.6

2001 FE45 17.7

4644 Oumu 16.1

13453SE Monday November 3/4 / 1720-1750 / 3-F / Jarnac /  
Cupid / - / Sol 2 (Sky 2) Sunset. Setting up Cupid

13454E2 2200-2300 / 7-Fm / Jarnac / Cupid / - / Mars.



13655M2 0420-0515/19+-F/Jarnac/Pegasus/- Beautiful, pristine night after cold + stationary flight <sup>front</sup> passed through / CN3 30 minutes E.

Counting error discovered back in session 13201-13002

\*13656S Tuesday November 4/1500-1600 / T-F / Rocket Park, Huntsville, Alabama / in the shadow of Saturn 5, Saturn 1, Atlas, Redstone / Mtzi Alabama / Sunny afternoon at the US Space Rocket Center. A real tribute to what NASA tried to accomplish back then, and what our nation could do when its heart was set on it.



NOV 6 2003

13657SE Wed Nov 5/1545-2330 / 7-F ml / Jarnac stand earlier on an AA plane from Dallas to Tucson. / Wendee / - Minerva, Esther, Clyde, Cupid / CN3k-CN11, CN1: Area 2, 71. CN3k. CN5 - Dome, Earlier, Moon rising over Gate Runcons, <sup>constell</sup> SS2 / prom, P1, 2.

13658M2 0430 to 0615 / 10-F / Jarnac / Miranda, Clyde, CN3J Kreutz search. 38x3 pipe.

13659S Thu Nov 6/1700-1715 / 3-10-F / Jarnac / Cordelia / SS2 / prominence, and O spots!

13660E2 6/7/1800-0000 1A 7-F/Jarnac/Munira,  
Esther, Cupid-Ophelia, Clyde/Wendee/  
CN3K11-CN1 Area 2

Mars:



13661SE 7/8/1720-1740/~~#~~ 2-F/Jarnac/Cordelia/-/  
Sky 2 (Sol 2) Sunset. SS2 thru clouds 0.

13662E2 1900-2145/3-F/~~F~~ Starizona/11" Celestron/  
several people/Sky 2. Moon,

13663E3 2315 to 0000/7-Fm/Jarnac/Cupid/Mars  
drawing. Photos of Moon.

13664M4 0515 to 0550/8-Fm/Jarnac/Pegasus/  
CN3 5<sup>m</sup>E.

\*13665E. Saturday, November 8, 2003/1730 to 2300/  
7-Fm/Westmount Lookout (earlier Montreal  
airport ~~HBB~~ then Mom's apt. condominium,  
then the Montefiore Club - CUPID/WENDEE,  
Rachel, Matthew, Jerry, Jeff & Mindy, Wendy &  
David/ Total Eclipse of the Moon. Eclipse  
No. 64. The Moon rose full and very large in  
the beautiful clear sky as we left Dorval.

11-03

We drove in our Airstream mobile to 818, where the sky was very clear. Then we continued on to the West Mount Lookout where I had observing session 1 on October 2, 1959 that had Hashang morning to observe my first eclipse. Only last part observed because of clouds, I wrote so long ago. Tonight the sky was clear.

But it was cold. We sat in the car to keep warm, emerging to see the gradual onset of partial eclipse penumbral eclipse. The shadow was bright - we didn't see obvious penumbral shading until minutes before the umbral first contact. We got some good pictures of the march of the umbra til it was about  $\frac{1}{3}$  of the way across. Then we left to go to 3570 at water. We warmed up a bit, then set up Cupid to watch the final embrace of the Earth shadow and the onset of total eclipse. It was about an  $L=1.75$ , pretty bright on the Lanyon scale.

Then, as 3<sup>rd</sup> contact neared - wait! This time it was easy to see the PROGRESS of totality - the change of the Moon's southern edge as the umbra moved westward (or eastward.) Then as 3<sup>rd</sup> ctc neared, we left for the Montefiore Club. There we met all the others and discovered that Matthew and Rachael were interested in the eclipse. I went out with Matthew & Jeff & Mindy. At short we saw the Moon

about  $\frac{1}{2}$  way out of the umbra. Then, ~~we~~ about  $\frac{1}{2}$  hour later, Rachel, Wendy and David took me out again, where we saw about  $\frac{1}{5}$  or  $\frac{1}{6}$  of the umbra left. Rachel explained that the shadow was much less than it was before. They want to buy a telescope; Wendy and I will buy one for them.

When the Montefiore event ended, the eclipse also was over. Eclipse #64 was one of the best. Planned originally as a in-the-air event betw. Chicago & Montreal, we (and American Airlines) were flexible enough to get an earlier flight when the Clear Sky clock showed clear sky over Montreal at eclipse time. So, a very successful Montreal observing session.

13666S. Sunday November 9, 2003, Billy & Glama's Wedding day | 1430-1500/7-P | Montreal La Fort de la Montaigne | Cupid | - | SS2 3, 18

13667E Nov 13/14/1-F/Jarnac/Wendee, Dean, Curtis | 32, 33, J1 | 200-2230

13667E2 Friday, November 14/15, 2003/2030-2215/3-F/Jarnac/Curtis, Wendee | Taurid Meteor Watch. I saw 5 meteors in 1.25 hours, 3 Taurids, all 2nd or 3rd magnitude, 2 Sporadics. Total # between Curtis & me = 11 meteors.

13669S Saturday Nov 15/1030-1045/10-F but humidity haze/Jarnac/Sapphire/Wendee/Moon.

13675. before 13668, | Fri 14/0900-1045/3-F/Jarnac/

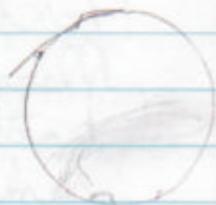
11-03

Dissipating fog, considerable sunshine!  
Dr. Richard Powell, Vice President for Research,  
Graduate Studies, and Economic Development/  
Photographs of buildings J1, J2, and J3  
closed, then of J1 open with telescopes  
pointed south. Obadiah looked at Moon.

1367152. Saturday, November 15 / 1100-1130 / 10-F but  
humidity haze / Echo / Moon.

1367283 Saturday, November 15 / 1500 to 1640 / 3-F / Jarmac /  
Cordelia, Apollo / Tom over phone / SS2 26 prom.  
3, 14. Measuring in J3.

<sup>S</sup>  
13673E4. Saturday, November 15 / 16 / 1700 to 0000 / 10-3-F /  
Jarmac / Cupid / Wendee / Sky 2 (Sol 2) Sunset.  
This is the first opportunity and I've had to  
record the sunset this week, and the last  
before Antarctica. I realized that the last 3  
sunset positions before this one were recorded using  
the wrong mountain "twin peaks"  
on my chart, but since I knew  
they were done relative to those  
peaks they were easy to sal-  
vage and correct.



Tonight, Mars ~~through~~ through Cupid.  
Also Moon at last quarter, 1/2 way between  
the lunar eclipse and the Solar eclipse.

ANTARCTICA ? Time Zone

13674M Sunday, November 15 / 16 / 0200-0400 / 7-Fm (aboard)  
American flight Chicago to London 1-1 / Wendee /  
CUP-1 Leonid Meteor Watch 2003. 2 possible Leonids, 1 Taurid.  
FOR 3-1 - at low with some noise in it.

13675S Tue/Wednesday, November 19/1000-1230/3-F/Tabb  
Mtn and vicinity / 10x30 binocs / Wendee and others/  
SS2 2, 5. Also we saw Moon at 12:20 high in  
west. The Moon at noon. ^

13676E2 Friday, November 21/2200-2300/3-F/  
Cape Town Harbour / Wendee, Vic and Jon  
Winter / - / Attempt at southern stars  
through clouds and light pollution

13677S. Saturday, November 22/1100-1700/3-F/  
Cape Town A. Observatory. B. Obelisk for  
John Herschel's Telescope, and Synagogue  
across the street. C. Planetarium.

13678S. (before 13676E2) Fri 21/1000-1400/7-F/  
E of Cape Town / 10x30 binocs / Wendee, Tour group/  
Views of sea & a whale. SS2. 2, 8.

13679E2. Sat 22/2030-2300/7-3-F/Cape Town  
Harbour / Wendee, the Winters, & others / - /  
Mars, Venus, Mars, and now thanks to  
better sky & a sky chart from the Planeta-  
rium. — Pomelhaul, Archenar, Canopus,  
Sirius, & Betelgeuse, Rigel, Belt stars, &  
Aldebaran.

\*\*\* Sunday, November 23, 2003.

13680S. 1430 to 0400 / 10, 3 after totality /  
Near Novo Station, ANTARCTICA / Cupid /  
Wendee, our Tour group, and others /

11-03

136829

cont'd.

2

FIRST MIDNIGHT SUN AND  
TOTAL ECLIPSE OF THE SUN No 65,  
OF NO. 9 TOTALS EXPERIENCED;  
8 IN WHICH CORONA SEEN.

But this session began with the clear-  
est, sharpest view I've ever had of the Sun.  
The seeing was an absolute 10. I could  
not see any seeing or scintillation.

SS2 3, 51. Shortly after this, I  
gave everyone a briefing on eclipses  
outdoors. It was cold & windy but  
except for occasional clouds appearing  
and disappearing, including one around  
the Sun just before first contact, the sky  
was perfect.

We rode out on a tractor vehicle  
that also carried the Japanese group to our  
viewing site. It was a disappointment,  
seems snow had drifted since Len had  
first seen it. We were not sure the Sun  
would be entirely clear of the <sup>snowy</sup> horizon.  
The Sun was moving along the northern horizon.  
It reach 1<sup>st</sup> contact there and continued  
to get lower from 10:25 til 11pm.  
Then it started to rise and climb again.  
At about 7 minutes before totality I  
discovered faint shadow bands in the  
Sunlit area of snow in front of us. They  
were quite regular waves of dark lines  
moving at about a meter per second  
away from the eclipse. As totality drew near,

136805 The bands darkened and grew more obvious.  
cont'd. I pointed these bands out to Wendee, the  
3 Winters, & the others & they admired  
them.

With totality about a minute away I made a big mistake. I took off my gloves so that I could remove Cupid's cover, and to take picture during totality with the Canon 5 megapx. camera. By the time totality was over 2 or 3 minutes later both thumbs were frostbitten, though mildly. They still hurt as I write this 18 hours later.

As totality neared I alternated looking at Sun through Cupid's finder and to checking out the shadow as it approached us almost head on from just NE of the Sun. The sky was much darker than <sup>is</sup> typical during the totals I've seen, probably due to the low Sun angle. After the superfast progression of the partial phase in this retrograde eclipse, totality seemed to creep toward us in slow motion because the oncoming shadow just kept getting darker and darker. As

As the crescent began to break up, I took the cover off Cupid. The diamond ring was more a "diamond emerald cut" ring. The Corona was just faintly starting to appear when I looked without a filter or glasses. Within about 5 seconds it blossomed to a brilliant

11-03

136805  
cont'd  
4

color scheme - as Wendie described it, red at the horizon, a brilliant green at the top. There was a huge coronal flare - not a streamer but a big fat extension - at around 1 o'clock.

During totality the shadow AT THE HORIZON moved from S to N across the Sun like the slide of a huge slide rule.

We checked for Aurora Australis but could not see any despite the major sunspot activity, recorded earlier in this session.

The highlight of this eclipse was the intersection of the Sun, Moon and Earth horizon. At totality we could see the entire Sun except for a tiny almost insignificant slice at the bottom. We could not see the corona below it but the rest of the corona appeared big, thanks to the Moon illusion. Near the end of totality the chromosphere appeared brilliantly, and then a second emerald jet ring.

During this time Wendie and I were looking through Cupid. The image was poor due to ~~the~~ horizon seeing but extremely dramatic thanks to the juxtaposition of the eclipse against the snowy horizon. Then I snapped pictures, at wide angle, of the shadow both to the North during totality and toward the South after totality as the shadow raced away.

136805.  
cont'd.

5

My fingers were so painful that I had to fight to concentrate on what Isaac was going and not scream. But as soon as I took that final southward shadow picture I put my gloves back on with their hand warmers. The gloves were off; about 2m 45 secs. Then the Japanese group set off fireworks against the snow, just as the corona faded away.

As soon as my hands could hold our satellite phone, by prearrangement I called a station in Toronto so that Wendee and I could be interviewed. Wendee described the colors, and how this eclipse was the most dramatic of the 4 she's seen. Wendee is now a very accomplished eclipse chaser.

So that is about it. As the partial phase diminished, Wendee, whose toes were very cold, and I headed to a biplane for the ride back to camp. I saw the last bit of Moon just before the plane lifted off. As we lifted off and banked, I got one more look at the Sun through the eye filter, but now the eclipse was over. At camp, we sat up as the Sun rose slowly towards the east.



11-03

136805,  
cont'd

6

\* Then I looked back at the <sup>newly re-</sup> sunlight snow and right away saw the shadow bands again. They were still very strong, apparently moving in the same direction as they were before totality. They faded as the crescent grew brighter but I believe that the total viewing time for the bands was, including totality when I didn't check for them, about 12 minutes.

This may be a record. Also, this may be the first land-based view of a total eclipse of the Sun from Antarctica. It was quite a privileged no day and night, and all of it happened and coincided with a view of the midnight Sun.

Impressions of the people on our tour

I arrived at the viewing area with the Sun already close to 'first contact'. The speed of the partial phase was noticeable to me. I was concerned that the cold would limit my ability to use both my SLR and digital camera. In the event I was able to photograph totality at the start, just after the diamond ring effect. The temperature dropped further and my hands were frozen completely so movement of my fingers was very painful. I looked away from the sun ~~briefly~~ briefly to the opposite horizon. Although dark, it was not possible to make out the Aurora Australis which was a little disappointing to me. However, the splendour of the sun eclipsed close to the horizon so close to midnight (local time) was awesome. I said a prayer to the Creator, for allowing me to see this so far from home.

Roger Webb England.

136809

cont'd.

7

# Group Observation

## Ant-Arctic Eclipse

For all the uniqueness of this eclipse, I was completely mesmerized by the rippling effect of the shadow bands. Also, as amazing as the moon's shadow over the sea was, the sight of the moon's shadow behind me was just as awesome. *Hended*

I think Eclipses of the sun are the greatest of art!

Christy Sweet

christys@surfglobal.net  
Key West Florida

The corona and prominences were awesome at this eclipse, but the incoming shadow and shadow bands are what I will remember this eclipse for.

Fred Bruenjes (rhymes with spaces)  
fred@moonglow.net  
Ramona, CA

It was a pleasure to meet you David ed Wedee. This trip was logistically the most difficult and by far a "mail-biter" / "cliff-hanger". We are the first, and that will carry with us through our lives. Congratulations to all of us - we are now all inextricably bound as a new "Antarctic Eclipse Family".

Bob Stambor  
eklipse1@msn.com

136809.  
conc'd.  
8

Because of the low sun intensity close to the horizon I could look at the diamond ring for a very long time. It was really beautiful!

11-03

Bruce Allen Bennett - Scientist  
b-a @ Lab. 5e

"The incredible journey" in more ways than one  
"Against all odds" the cold, the lugging, the very fragile existence at the Antarctic.

The blue sky became streaked with grey, the wind blew, the temperature dropped.

The sun began to disappear with wavy heat giving even more strangeness.

A flash, steamers, — what! it's over already?  
All a treasure — precious.

Debbie Marie Gau O'Neil  
Lanham, Maryland

Wonderful!!!

— thank goodness I didn't go on the Antarctic cruise as I had intended

Carole Howard, (violinist)  
Glasgow, Scotland

A unique sight from a unique site

Brian Wamer  
Cape Town

136819. Tuesday, November 25, 2003 / 1400-1500 / 3-F / Cape Town Harbour / Wendee / testing telescopes at an antique store. These are replicas constructed from old designs. One is a small telescope designed for ship navigation. Its tripod has a magnifying glass attached to aid in reading charts.

\*13682<sup>5</sup><sub>1</sub>E2. 1900-2330 int / 3-7-F / restaurant atop hill w. of Cape Town / Wendee, eclipse group / Beautiful sunset over ocean, and later, a close conjunction of the Moon and Venus. The thin crescent Moon was actually . Absolutely gorgeous.

\*13683M3. 0045-0145 / 3-F / Sir John Herschel's 20 foot telescope site / Cupid / Vic and Jen, Carol, and D, and others. / Observing session where Sir John Herschel mapped the southern sky. Archemar, M42, LMC, Jewel Box, Mars. The sky, though cloudy earlier, cleared in time for our visit. At 0130 it declouded over rapidly. Our last object was  $\alpha$  Centauri, beautiful double star only 4.3 light years away. See picture

13684E. Wednesday, November 26 / 1900-2015 / 3-F / Cape Town Harbour / - / Wendee / Crescent Moon, Venus, & Mercury.

13685M2. 0300-0345 Cape time / 8-f / airplane 747 N of

11-03

Cape Town / Jupiter, + Leo upside down toward east.

\*#136865, Thursday, November 27/1:30-6:30 Greenland Time / - / On American Flight 47 from London to Chicago / Wendeel / As we flew over Greenland, we saw the Earth shadow towards the Arctic night. Thus, in just one trip, we witnessed both the midnight sun and the winter night.



136875, Saturday, November 29/1600-1630/3-F / Jarnac / Wendeel, Lisa, David + Emily / observatory tour. SS2: with Cordelia

\*#13688M2, 0215-0615/10-F, cold / Jarnac / Miranda, Clyde, CN3 3hE. CN3R11-CN1 areas 56+71 near Castor + Pollux. - - 600 microns. M81 glimpsed naked eye.

L260 4519 V. 30  
L261 5350 Clp  
#13688M2  
#4366 V. 30  
#4536 V. 30  
#4536 V. 30

Catal: #4366 V. 30 EG-M 11.2 D 6.1' 213201 Vela GC 6.8 10'  
#4536 V. 30 VEG- 10.6 7.4' #4594722 CVRQ double  
#22477 V. 30 21.5 7.5 5.8 21.6' Armas 9.2 11.7 1.7 1-24)

- 13689S. Sunday, November 30 / 1700-1725 / 3-F / Jarnac / Cordelia / SS2. Sky 2 (Set 2) Sunset.  
1, 13 12p ? Thuesday?
- 13690M2 0430 to 0600 / 10-F / Jarnac / Miranda / - / CN3 1<sup>h</sup>00 m.
- 13691S. Mon, December 1 / 1600-1630 / 3-F / Jarnac / Cordelia. SS2 4, 19. Thuesday?
- 13692M Wed, Dec. 3 / 0430-0630 / 10-F / BEAUTIFUL MORNING / Pegasus / - / CN3 1<sup>h</sup>E.
- 13693S. Thu, December 4 / 1700-1715 / 10-F / Jarnac / Cordelia / - / SS2. 3, 14 + 7 prominences, all thin filament ones.
- 13694E2 1900-2000 / 7-Fm / Jarnac / Clyde / Area in CN3 K11-CN1. Ramon Clyde crossed the meridian and got rather tangled in cables and turned upside down and stayed there.
- 13695M3. 0430-0610 / 10-F-BEAUTIFUL MORNING / Jarnac / Miranda / - / CN3 1<sup>h</sup>E. M81 glimpsed naked eye. 1 prom.
- 13696S Fri 5 / 1100-~~1245~~1250 / 7-F / Strigona / 6" in / Wendee / Sun in box.
- 13697E2 Fri Dec 5 / ~~2200~~2400 / 7-Fm / Jarnac / Cupid, Clyde / Rebalancing of Cupid - Ophelia mount for Cupid's use. SS2 with Cordelia
- 13698E3 2230 to 0100 / 7-Fm / Jarnac / Cupid, Clyde / - / CN3 K11-CN1. Ran out of disk space.

13699SE Saturday, December 6/1600-0000/7-Fm/Jarnac/  
Clyde, Cupid-Ophelia 1-1552: 3, 15 + 7 prominences  
with Cordelia. CN3K11-CN1. Finally success on  
CN3K area 3

12-03



\*1368313 → a picture from that session at  
the Herschel monument.



700  
136705EM

701  
136715E

702  
\*136729EM

Sunday, December 7  
1700-0100/7-Fm/  
Jarnac/Wendee,  
Tom/preparatory  
work for install-  
ation of Hyperion.

Monday, December 8/  
1500 to 0000/7-Fm/  
Jarnac/Tom/  
Preparation for  
Hyperion's arrival.

Tuesday, December 9/  
10-1430 int/7-Fm/  
Hyperion prep. Apollo  
on Ophelia.

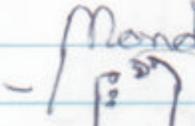
+13703EM2 2000 to 0300 / 7-fm / Jarnac / Tom, Wendee / Brad  
+ John Smith / Hyperion Esther /

Installation of Hyperion. The building up of the Paramount went smoothly while Wendee & I interviewed Brad for Let's Talk Stars. When we arrived at J3 around 9:30 the mount was in place. We mounted the bottom of the 25" on the mount and then it became obvious to me that Tom & John had installed the Paramount facing south instead of north. It looked funny at first, but then it was obvious, Wendee, John, Brad & Tom moved the mount around and then the truss was installed. Suddenly, from a simple collection of metal parts, Hyperion was born and suddenly there she stood, staying into the sky, a thing of beauty. Our first test object was Sirius, which I was able to find without the help of an aligned finder despite Tom's insistence that I'd never find anything in that scope without the finder except the Moon. I found Sirius within a couple of minutes. Then I went to after they focused & collimated on Sirius & aligned the finder, suggested Jupiter for first light. Tom agreed, so Jupiter was the first light object. Although the seeing was poor, I could identify a feature between NIS eq. belts and Ganymede's ~~(G)~~ disk. Also used Sapphire to see Jupiter. M42 with both scopes; easily saw 6<sup>th</sup> in trap. w/ Hys

137045 Wednesday, Dec 10 / 1000 to 1700 int / J3-F / Jarnac / Hyperion installation

- 12-03
- 13705S. Thursday, Dec 11/8:30 to 1700 int / 10-F / Jarnac / Hyperion, Cordelia and Clyde, Apollo. | Setup of Clyde Hyperion and work on others. SS2.
- 13706E2 before 13705S / 2000 to 2355 / 10-F 7-Fm / Jarnac / CN3h with Esther. CN3k with Clyde. Area 31.
- 13707S Friday, December 12 / 0650-1700 int / 1-F / Jarnac / Rain overnight damaged J2 Dome. w/ Tom + G worked to repair it.
- 13708E2 1300-2000 / ~~9-F~~ 8-F / Tanque Verde School / Students, teachers, Stacey, one Larry from Starizona and Larry + Nancy Sebofsky / 8" refl. Sky 2 and CMP-1 Meteor, not a Geminid
- 13709EM3 2130 to 2000 / 10-F / Jarnac / Tom / Hyperion. Magnificent view of Saturn. Crepe ring very clear. Encke's division possible.
- 13710SE Saturday, December 13 / ~~10-F~~<sup>3</sup> / Jarnac / 1600 to 1900 / ~~3-~~ Sky 2 (Sol 2) Sunset.
- \*13711M2 0200-0500 / 7-Fm / Jarnac AND Carey St / Esther / - The Beagle / CN3h. CMP-1. Geminids - 24 Geminids tonight!
- 13712S. Sunday, Dec 14 / 1500 to 1900 / 10-F / Jarnac / Beautiful afternoon, then sunset.

13713E2 Sunday Dec 14/2008 to 0000/10-F 7-Fm / Jarmac /  
HCMP1 - 4 meteors.

13714S Monday, December 15 / 1100-1200 int / Tucson /  
-  Moon.  
Two standards light + traffic light with  
Moon in between.

13715E2 ~~Wed~~ Monday, December 15 / 2300-2330 / 7-F /  
Very windy.

\*13716S Tuesday, December 16 / 0900-1000 / 7-Fm /  
U of A South / David Patterson, many others /  
Groundbreaking for the Patterson observatory.

13717E2 2200-2300 int / 10-F - VERY WINDY / Jarmac.

13718SE Wednesday December 17 / 1700-1725 / 10-F /  
Jarmac / Cordelia 1-1 SS2 1 prom, 2 spots.  
(or 1 elongated org - poor seeing) Also  
beautiful green flash at sunset.

\*13719A12 Wednesday evening and  
Thursday morning, December 17/18 / 1840-0640 /  
10-F, windy / Jarmac / CN3 38th anniversary  
comet search. CN3 4<sup>h</sup> (1 west with Pegasus ← -  
in the dome, 3 east with Merinda amid strong  
wind.) at 11:30 pm, very close to the hour of  
the original start in 1985, I prepared a  
CN3 special research album to handle my  
dissertation. Also CN3F, prepared the stereo-  
microscope to display pictures. CN3e TVGw  
Delta Sco 1.7 C14.8.

12-03

catalogue object NGC 5248, <sup>+L185 (asterisk added)</sup> a round galaxy in Bootes.  $M_v 10.3$  Diam 6.1'

Despite the wind this was a very memorable observing session. CN3k, with Clyde, did a two sets, including Pollux and Castor in honor of the first place searched in 1965.

13720<sup>SE</sup> Thursday, Dec 18/1900-2300 int/10-F-windy still/Jarnac/Wendee/Esther/text to try to get Esther + Meade CAD working.

13721<sup>SEM</sup> Friday, December 19/1500-0200/10-F-windy still/Jarnac/Weather!/Wendee/Successful conclusion of attempt to get CAD from Meade and filter wheel working. Also Cordelia/SS2.

13722<sup>SE</sup> Sat December 20/1710-0000/3-10-F/Jarnac/Green flash twice as sun set over mtn. Sol 2 (Sky 2) Solstice sunset. CN3k Area and 65 during night. ~60 pictures. CN3h with Minerva and Esther.

13723<sup>M2</sup> 0430-0640/10+-F/Jarnac/Clyde, Esther, Minerva, and Miranda/-/CN3k concl. of area 65. CN3h also. CN3 14.5<sup>m</sup>E. Picture of very thin crescent moon near  $\delta$  Scorpii.  $\delta$  Sco 1.7 VSO-1. <sup>L262</sup> Cat. obj. 5897 Libra GC.  $M=8.6$  Diam=12'. CN3eTVGy C14.8.   
 L262=NGC 6814, L263=NGC 7006  
 Catalogue objects  
 262+263  
 dates uncertain.  
 This session?

13724<sup>S</sup> Sunday 21/1530-1730/10F/Jarnac/Cordelia/SS2 5p prom, 4,50. Many small spots. <sup>them</sup> Wendee + I delivered Wanda's baking to neighbors.

13725<sup>EM</sup> Sunday 2/21/1840 to 0000/10-F/Jarnac/Pegasus,  
Clyde, Minerva, Esther. /CN3 /h W.

13726<sup>M3</sup> 0025 to 0130/10-F/Jarnac /~~at~~ The Beagle/ Esther,  
Minerva /CN3h. /CMP-1 The Uraid Meteors.  
2 meteors, one Geminid, one Uraid almost - point  
meteor. Both ~ 2nd magnitude.

13727<sup>M4</sup> 0430 to 0615/10-F/Jarnac/Miranda /- /CN3  
1<sup>h</sup> East. CN3e TVGw (17.3).

13728<sup>S</sup>. Mon 22/23/1100 to 1300 int/ 3-F/Jarnac/Wanda,  
Virgil / Installation of protective materials  
in J2 dome so that motor won't go off by  
itself.

13729<sup>EM</sup> 2200 to 0315 / 3-2-F - windy / Jarnac/ Esther /- /  
I tried experimenting with the F/3.3 focal  
reducer but I couldn't bring it to a focus.  
Then I couldn't find anything when I tried  
to reinstall the longer one .6.3. Finally  
on Jupiter, I realized it was just too far out of  
focus. I finally got it to a clear, sharp focus,  
and then at 2:45 am I decided to try a  
tricolor shot of M42. Despite the wind I  
eventually got 4 clean pictures in clear, R,  
G+B.

13730<sup>S</sup>. Tuesday 23/24/1000 - 1100 / ~~10~~ 1-F, windy / Jarnac/  
Wanda, Virgil / Completion of J2 dome  
safety work.

12-03

13731E. Wednesday, December 24/25/1900 to 0000/10-3-F/  
Jarnac/Miranda, Esther, and Clyde, Wendee/  
CN3 K11-CN1 5677 special. Also a check on  
asteroid Sharp, whose appearance showed a tail the  
other night. However, better focus tonight elim-  
inated the tail.

13732M2 0400 to 0630/10-F/Jarnac/Miranda/-/L265  
CN3 1430<sup>M</sup>E TVGw (17.3 CN3e MGC  
5746 - candidate for imaging. <sup>M=10.3, P=7.1, V=1.0, EQ=Dusty</sup> 5665962, <sup>Samp RA 11.3, 2.9</sup> 5859. <sup>10.8, 4.2</sup> Vir EG, <sup>2 spots</sup> <sup>Galaxy</sup>

13733S. Thursday, Christmas/1500-1700 int-143-F/Jarnac/  
Cordelia/SS2 2 large prominences, 3, 25 spots.

13734E2 2000 to 0000/3-F/Jarnac/Apollo, Miranda,  
and Miranda, and Hyperion /-Wendee,  
Michael Magee + sisters, Karen Mendenhall  
& family / Apollo: Mars, Double Cluster. DBCI  
was magnificent!

Sky 2. Obadial: M42.

Miranda: Saturn, Sirius

Hyperion: Saturn, M42. Plenty of  
Moon on Saturn.

13735M. Friday, Dec 26/27. 0430 to 0500/2-3-F/Jarnac/  
Minerva/CN3e TVGw (14.8).  
CMP-I: Late Monocerotids. I saw one; others  
saw at least one also.

13736S Sat Dec 27/28/1500-1725/10-F-very cold/Cordelia/  
-14, 25 + 8 prom. Sky 2 (Sol 2) Sunset.

13737EM2. 2345-0230/10+ -F/Jarnac/Very cold, & beautiful, rich  
sky - MW very sharp. CN3P Clyde Flat fields.  
CMP-I Coma Berenizids. 1 definite CBr, 1 possible, 2 sporadic.

13738S. SUNDAY, December 28/1400-1430/3-F/rest stop near Palo Verde Nuclear Plant/Cupid/Wendee/SS2 3, 13.

\*13739E2 2025 to 2215/7-F/Lake Havasu City and London Bridge/Cupid/M42, Sirius. Before I used Cupid on the beach in front of our room, Wendee and I walked to for about 45 minutes an hour to get to London Bridge & walk half way across it, then less time to go back. It was very cold. The sky was pretty good despite some light pollution and moonlight from a bright crescent moon. Even the Milky Way was visible. It was a good session.

13740S. Monday, December 29. Wendee's birthday! / 1200-1300/2-F/Nautical Inn, Lake Havasu City / Cupid/Wendee/SS2 1, 4.

13741E2 2000-2130/2-F/London Bridge/Wendee/photos of Bridge with moon. Gondola ride under and around Bridge, with boatman singing Italian love songs as we kissed each time we went underneath the bridge, with Moon just less than first quarter, shining weakly through the clouds.

13742E Tuesday, December 30/2130-2300/2-F/Jarnac/Cupid/Wendee/testing different eyepieces with it. Very nice telescope even on a cloudy night.

01-04

13743SEM. Wednesday, December 31/1500-0130 int/  
1-0-2-F/Jarnac/ Esther, Minerva, Clyde/ - Wen-  
dee Phlower/ upgrades of ACP, and preparation  
for RD24 for imaging through Esther.  
- 2004 -

\*13744SEM. Thursday, January 1, 2004/1300 to 0135/  
2-then 7-fm after dark/ Jarnac/ Wendee/  
tests on Esther, Minerva, Clyde, + Obadiah  
for ACP's latest version, Maxima + Pinpoint  
all upgraded. Sky cleared after dark. At 7:45  
pm RD-24 was launched and Wendee and I  
did a tricolor image of the Merope Nebula as our  
first object. Later I did a similar series on  
M42. RD-24 also does Region Drawings,  
and double star and other observations. So  
I sketched  $\Sigma 2816 + \Sigma 2819$ , and observed  
Mars. So CN3h - set with Minerva + Esther.  
CN3k - set with Clyde  
RD-24 - M45, M42,  $\Sigma 2816/9$   
and LPO-1 Mars.  gibbons

\*13745EP Fri January 2, 2003/2100-2110/ 7-Fm/ Stewart  
Observatory/ - Tim/ Pegasus.

13746EP2 Should be before 13737 (M3) Saturday Dec 27/  
2100-2200 int/ 7-F/ North Restaurant/ Wendee,  
Schreiber clan/ view of Sirius right outside  
restaurant window during much of the meal.

13747<sup>S</sup> Saturday, January 3/0800-0815/ 7-F/ Jarnac/  
J.I. check, covering telescopes.

13748M2 should be after \*13744SEM. January 1/2/  
0430-0650/10-F / Jarnac / Clyde, Minerva,  
and Miranda / CN3 1<sup>h</sup> E,  
CN3k area 369. - 2nd. disc of Comet Linear C/200  
CN3e TV Grw C14.8.

\*13749M Saturday, January 3/4 / 0400 to 0630 / 7-fm-  
10-F / Rancho Europa, west of Denver, Colorado  
- / Clark and Y / Quadrantids seen from hot  
tub, occasional blowing snow just after  
snowstorm. Absolutely magnificent night.  
There was a noticeable raintail in addition  
to the Quadrantids which produced 3 or 4  
bright meteors.  
CMP-1 Quadrantids 48 in almost 1 1/2 hours.

With wonderful memories of a morning's hot tub  
meteor observations with David & Y following  
David's memorable, two-storied-address  
to the Longmont Astronomical Society. Thinking  
also of Wendee, who should have shared this, and  
with love, *Chk* (Chk) →

1.4.04 A special star who renders gifts  
that equal the number of stars in the  
cosmos to all of mankind for his  
astronomical enthusiasm and  
knowledge is: David H. Levy  
hand in hand of course with  
The Director of Jarnac Observatory;  
his lovely wife - Wendee Levy ♡

\*13749M

ONE moment we were effused with being part of standing ovations for DOVEED \* (DAVID H. FEY) and hearing dozens of cameras clicking when DR. Clark B. Chapman (my super wonderful husband) exclaimed:

DOVEED is treated like a "Rock Star" and of course I computed that to be a royal "COMET STAR".

The next moment with a blink of an eye with lashes frozen our eyes were fixed on the night sky at Rancho Europa. The big dipper was revolving as our precious planet was moving. As the outdoor Jacuzzi\* cover slid off at Rancho Europa I challenged the cosmos in the 90° snowy weather, "Now show me your royal glittering gift if you dare - at this very command".

Instantaneously, for the first time in my life a burst of light - a meteor punctuated with a spectacular exclamation point made us gasp with the greatest joy one could ever imagine.

Before the curtain of light there were 48 (forty eight) meteors that we (David Levy, Clark Chapman & I Chapman) had counted. What a show\* Our hearts were filled with even more love for the Cosmos.

with COE, I Chapman (aka Linda Moon Chapman)

137505, Tuesday, January 6/1700-1730/10-F/Jarnac/  
SS2 2, 32, 4 prominences. SS2 first observation  
of 2004. Sol 2 (Sky 2) Sunset observation.  
2nd to last one if sky is clear around the 11<sup>th</sup>.

13751E2. 2230-0000/7-Fm/Jarnac/SAPPHIRE/Wendee/Moon, 2, 3, <sup>Sirius, Regulus</sup>  
13751M Wednesday, Jan 7/0000-0100/2-F/Jarnac/-/  
The Beagle/ The Moon.

Summary of above two sessions:

Late Tuesday evening, I brought  
Sapphire to the back door from J3.  
Over there, Wendee and I installed her  
35mm eyepiece. Sapphire is a great  
little telescope. The Moon, very nearly full,  
with Tycho & its rays so prominent,  
always a favourite sight. Then we  
looked at Saturn. Even at this low power  
it was great and the rings were clear.  
Then Sirius - Wendee's favourite - and  
Regulus. We both brought Sapphire  
back to J3 where we looked at Jupiter  
rising.

The next night, the Beagle & I took  
a walk past J3, by Dean's pad, and  
to the street & also past our table. I  
enjoyed seeing the Moon, now covered by thin  
clouds, at fuller phase than last  
night. The weather was warm and the  
slight humidity and Beagle feeling  
better made it a lot of fun.

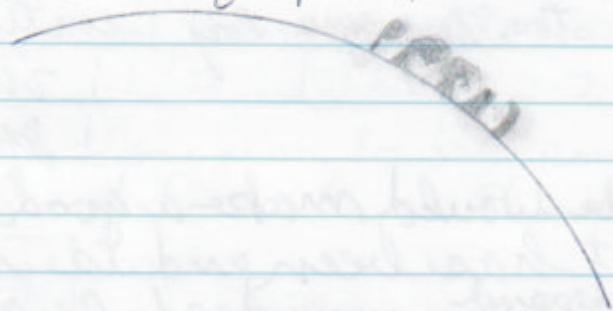
01-04

13753EM Thursday, January 8/2200-0130/7-Fm/Jarnac/  
Minerva/Beagle/CN3h. 1 set of pics.

\*13754SP Friday, January 9/1730-1735/7-F/Jarnac/  
Cordelia/-/SS2: 2, 14. 7 prominences; 6 drawn below.

Wendee noticed that the sun was about to set and I realized that I had forgotten my sun reading. I dashed out to J4 in time to look first at the Sun in Ha. There was a series of gorgeous prominences! Then I counted the spots through the other lens.

Here is what the prominences looked like:  
The most effective "P" (for petit) session I've had.



13755EM2. 1900 to 0135/10-F-/Jarnac/Minerva,  
Pegasus/-/CN3 1<sup>h</sup> W. CN3h 2 sets with  
Minerva.

13756EM2 Saturday, January 10/1130pm-0100/1-F/  
Jarnac/The Beagle.

\*13757SE. Sunday, January 11/1715-1745/2-F/Jarnac/-/  
Wendee/Sky-2 (SOL-2) Final sunset reading.  
The Sun appeared from behind clouds ~3 min before  
sunset! This completes a project begun in 1963.  
Sky 2 continues as a public & children outreach mission.

137528 Monday, January 12, 2004 / 1725-1745 / 3-F / Jarnac / Cordelia /  
-1552 3, 14, 7 prominences. The ones from Friday  
(at least similar positions, only barely rising above  
chromosphere).

13759E2 1830 to 0000 / 3-F / Jarnac / Pegasus, Clyde,  
Minerva, Esther / Wendee / CN 3 1h W.  
CN 3 h (1 set with Esther, 2 with Minerva)  
Also, RD-24 with Esther. Multiple tricolor  
imaging of  $\Sigma 2816$  C $\phi$ hei. Talk over phone with  
Brent Archinal.

13760E. It is a pleasure to see this industrious and artistic  
13761S. observer's notebook. It is a beautiful record by someone who  
(see loves the stars. May you long continue!  
also next page).

Walter Hans  
Jan. 16, 2004

Clyde would make a good pun on Clyde Telescope  
It has been and is now, to have as  
a good <sup>friend</sup> is a wonderful gift.  
Love Patsy

1/16/04  
Clyde would love to see the pictures from  
your "Clyde" telescope. I wish you great success  
and happiness in all you do.

Love Annette Soudaugh - Fritz

13760E.

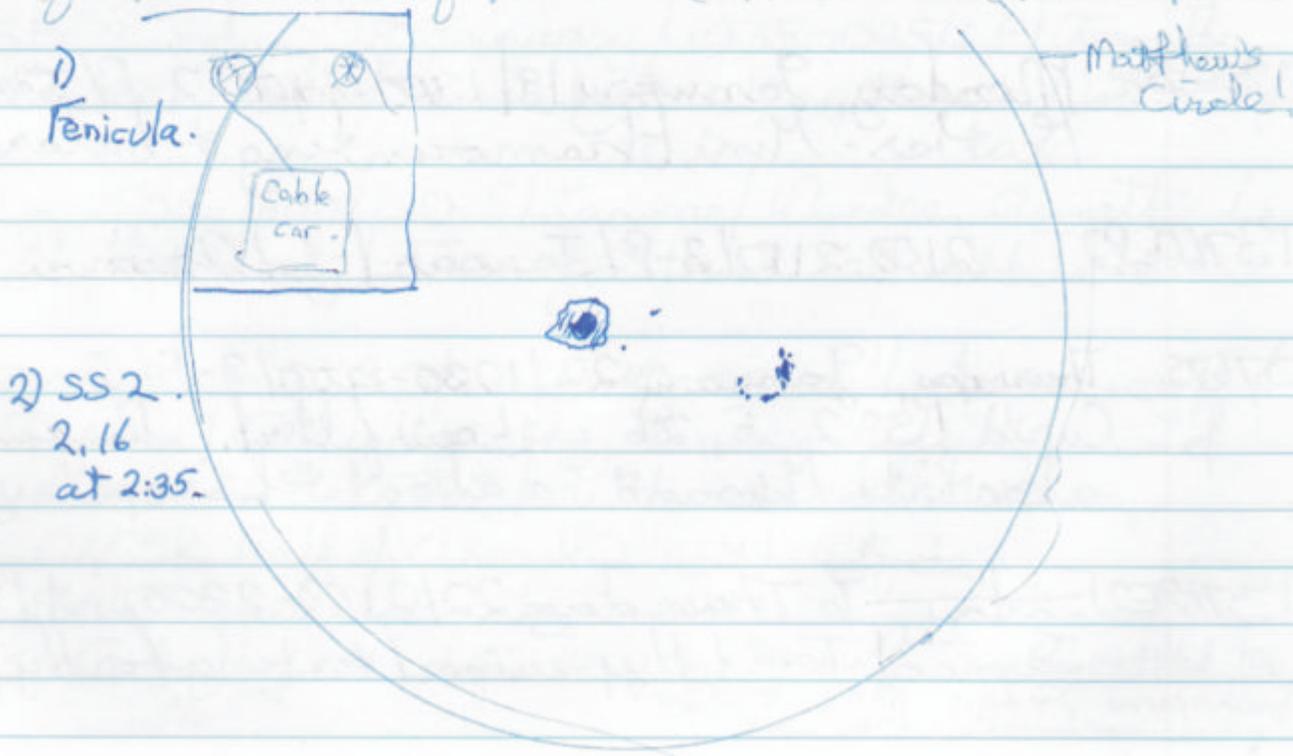
~~13760~~ Thursday, January 15 / 2030 to 2215 / 3-F /  
Jarnac / Esther / -15 RD24 M1 Tricolour.  
Need better signal/noise. Plan: Put Mini back on  
its mount to let it find a bright guide star.

01-04.

\*13761S. Friday, January 16, 2004/1215 to 1700/1-F/  
 (see Las Cruces to Albuquerque / Mom, Wanda, Laura  
 also Wright, Patsy Tombaugh, Annette, Walter Haas  
 prev. page) Walter + Patsy + Annette wrote in my observing  
 log. Later, study of a mesquite tree, a large  
 one, in 32mm + 24mm eyepiece. 32 has slightly  
 larger field. (For even less!) 32  
 Walter also signed Clark Chapman's  
 1960 observing log.

13762S Saturday, January 17/1500-1530/2-F/Vigil home,  
 Albuquerque/Cupid 7-1 SS2: 1, 3. hazy image.

13763S Sunday, January 18/1200-1450/7-F/Vigil home,  
 Albuquerque/Cupid/Summer, Matthew, Rainette,  
 Mark, Mom, and Wanda! SS2 2, 2.5 at 12:15  
 Work on filter. Decision to buy new full-aperture  
 filter. View of Fenicula on Sandia mountains,



\*13764AN2. 1815-0630/7-10-3-F/3parts/Cupid, Minerva,  
Clyde, Miranda/Wendee, Mom, Summer, Matthew,  
Mark, Nanette!

Part 1. Albuquerque. Using Cupid we looked  
at Saturn and Venus. Cold and clear.

Part 2. Albuquerque to Vail. Very dark sky  
all the way, but just as dark as every-  
where else except in NW. Mom enjoyed  
watching the Big Dipper rise and circle the  
pole; Wendee enjoyed the Milky Way.

Part 3. Jarnac.

CN3c - TVCw 017.3.

CN3k Area 369 in east.

CN3~~h~~ 3<sup>h</sup>30<sup>m</sup> E. some curvatures  
just before dawn.

CN3c objects:

13765S. Monday, January 19/1300-1400/2-f/Jarnac/  
Esther - Mini-remounting & balancing.

13766EP2 2100-2110/3-F/Jarnac/1-1/Orion.

13767S. Thursday, January 22/1030-1200/2-F/Jarnac/Tom/  
Cupid/SS2 5, 26 with new filters. Discussion  
also with Mom and Ed about telescope sizes.

13768E2 Friday - to Thursday 22/2100-2300 int/2-3-F/  
Jarnac/Tom/Hyperion/testing for Hyperion.

01-04

\*13769EP Friday, 23 January /1815-1830/1-2-F/  
Jarnac - Wendee, Mom, Ed, and Nanette over  
the phone - View of Crescent Moon with Venus  
above it. Summer wanted to know when  
the crescent Moon would next be visible, so  
we called to let them know we saw it. Nanette &  
Summer went out of their home: "Mom, I saw a crescent!"

13770EM2 2330-0100/1-3-F/Jarnac/Hyperion,  
& Sapphire/Tom, Wendee. /CCD imaging  
& focus tests.

13771S Sat 24 Jan 10900-1700 very intermittent/  
Esther-Mini, Hyperion/repair of Mini  
so that slow motion in altitude now works!  
Also installation of ACP/Airpoint in Hyperion.

13772E2 Sat 24 Jan /2300-2315/1-0-F/Jarnac walk.

13773SP Sunday 25 January /1035-1045/1-F/~~J~~ The  
Costco Test of large binoculars there. Not terrific.

13774S2 1505-1600/1-0-F/Jarnac/Wendee, Annette, Lee,  
David, & Emily/Tour of J1 and J3 with Tom.

\*13775M3 0000-0630/1-3-10 - excellent seeing/F/  
Jarnac/Tom/Hyperion, Minerva, Clyde, and  
Miranda - 1 CN3h. 1 2/3 sets with Minerva,  
CN3K Half of Area 40 with Clyde.  
CN3 2 hours East. L119

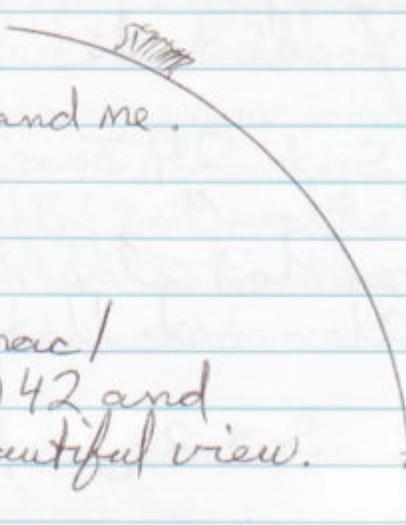
Catalogue objects: L270 6535 Ser GC mottled 106 35  
+L271 6287 oph GC unresolved  
cometlike when low

RD 24 with Hyperion M65, 104, 83, MFC (L16)  
CN3e to cut (7.31)

137765. Monday 26 Jan / 1100-1300 / 3-F / Jarnac, Town of  
S1 and S2 + S3, Maw and Ed were very impressed  
with the Levy compound. The telescopes, she said,  
were awe-inspiring. Maw asked me to write this  
Using Obadiah we looked at Venus in gibbous  
phase.

137782 1715-1740 / 10-F / Jarnac / Cordelia / - Mom, Ed / SS2  
2 prominences, Osports.

Drawing by Mom and me.



137783. 2330-0000 / 10-F / Jarnac /  
Obadiah / The Beagle. M42 and  
Jupiter and Saturn. Beautiful view.

137799. Tuesday 27 January / 1050 to 1105 / 10-F / Jarnac /  
Echo / - SS2 0,0.

13780E2 2345-0000 / 10-F / Jarnac / - / Wendee / ~~J~~ Orion.

13781M3 0410-0635 / 10-3-F / Jarnac / Clyde, Miriwa, Miranda /  
- / CN3k 2nd 1/2 of area 40. CN3e TV 6w- (17.3  
CN3 1<sup>h</sup> 40<sup>m</sup> E to "My Fellow Americans."  
Cat L ~~272~~ 6791 Lyr. cc dense? nebulosity

13782S Wed 28 Jan / 1500-1700 / 3-F / Jarnac / Wendee, Annette /  
Cordelia / - / GA SS2 2 big prominences 0,0.  
Begin process of hanging Bok piece.

01-04

137835. Thursday, 29 January / 0915-0530, very  
intermittent / a: Archer Pool, rear and in  
sight of Tumamoc Hill Telescope. Moon.  
b. Tubac - again the Moon. c: Jarnac  
at end. Cordelia: 12 prominences, 2 big  
ones. Sunset also.

13784M2 0430 to 0630 / 10-F / Jarnac / Clyde, Mir-  
anda, Minerva / - / CN3e TV Cam C# 17.3.  
CN3k' area, 30 CN3 1<sup>h</sup> E.

137855 Friday, 30 January / 1200-1215 / 10-F / Jarnac /  
Echo / - / SS 2, 1, 2.

\*13786AN2. 1900-0645 / 11-Fm-10-F / Jarnac / Clyde, Minerva,  
Esther, Pegasus, Miranda / CN3e TV Cam C17.3,  
CN3k11 - CN1 Areas 31, 5, and 1/2 of 39.  
CN3h with Minerva & Esther  
RD 24 with Esther: 10 minute guided exposure  
of M51, made up of 2 clears,  
1 red, 1 green, 2 blues, then 3  
more clears. Had to start after  
moonset and curtail when 4 CCD  
was about to hit the mount, then  
resumed it later. Final exposure  
was a good 90 second one.  
CN3 90 min E C 30w Minerva, 60w Pegasus.

13787S Sunday Saturday 31 February<sup>Jan</sup> / 11 am to 5 pm /  
3-F / Jarnac / Observatory maintenance and,  
with Cordelia: SS2.

13788S Sunday, 12 Feb / 1200 to 1700 int / 10-F / Jarnac /  
Wendee, Virgil / Cordelia / Installation  
completed of Bart Bok transparencies &  
outside skin repair completed. I helped Virgil  
accomplish this.

13789S. Monday, 2 February, 2004 / 1200-1215 / 3-F / Jarnac  
Echo 1- / SS2.

13790E 2 19 10 - 0000 / 3-F incoming storm / Jarnac /  
Clyde 1- / CN3K II - CN1 area 7.

13791S. Tuesday 4 3 Feb / 1000-1020 / 2-F / Jarnac / Echo 1-  
SS2 4, 29.

13792S Wed. 4 / 1500-1700 / 3-F / J / Mt. Geographic / Cordelia, Obadiah / Venus, SS2 3, <sup>43</sup>  
<sub>10 prominences</sub>

13793E 2 Wednesday, 4 Feb / 2330-0000 / 1-F / Jarnac / The Beagle /  
Walk & check on domes.

13794E 2 Thursday, 5 Feb / 2300-2320 / ~~10-F~~ 7-Fm / Jarnac / - /  
The Beagle / Walk & check on observatories.

13795S. Friday, 6 February / 1600-1615 / 10-F / Jarnac / Cordelia /  
- / SS2: 4 prominences, 3, 20.

13796S. Thursday, 5 February (BEFORE 13794) 9:30 to 11:45 /  
10-F / Jarnac / KVAT / Obadiah / Wendee, The Beagle,  
KVAT crew / Crew here to film The Beagle! View of  
Venus.

- 13797M2 Friday February 6/100-115/7-Fm/Jarnac  
The Beagle/Observatory check.
- 13798S Saturday February 7/1500-1730/3-F/Jarnac  
Completion of Bart Bok light switch at last  
SS2 with Cordelia 4, 33 + 6 prominences.
- 1379AE2 1900 to 0000/10-7-F/Jarnac/Pegasus, Clyde,  
Minerva, Hyperion/Tom from Toronto/  
CN3 30m W.
- 13800S Sunday 8/1530-1800/10-F/Jarnac/Beagle, Wanda/  
Walk to table. Later, Cordelia - SS2 6 prom; 3, 18.
- 13801EM2 1830 to 0100/10-7-Fm/Jarnac/-/CLYDE, APOLLO,  
Hyperion/Tom (Toronto)/CN3 D<sup>h</sup> 5<sup>m</sup> W. CN3e  
TV crew - C14.8. CN3k11 - CN1 1/2 of Area 31.
- 13802S Mon Feb 9/1600-1700 int/SS2.
- 13803E Monday Feb 9. 12<sup>19</sup>00-2300 int/10-F/Jarnac/Miranda, Hyp-  
erion/CN3 1h W. Cat. NGC 288 Sculpt GC resolved 2.6 13'.  
\* @ NGC 247 Cat EG 9.1, 210'
- 13804S Tuesday, February 10/1000-1030/10-F/Jarnac/  
Mintaka 1 - 1 SS2.
- 13805E2 2200-2350 int/7-F/ASU Hayden 1 - 1 Tryout  
for tomorrow's star party.
- 13806S Wednesday, Feb 11/0940-0955/T-F/ASU/  
Mira 1 - 1 SS2 2, .
- 13807E2 1700-2300/10-F/ASU Hayden Lawn/  
6" refr, several Celestrons, Mira, new funscope

from Orion/Wendee, Dean, my students  
about 250 people. This was the introductory  
Star Party in my Rhodes chair at ASU. Very  
successful. Sky 2: Star Party.

13808S Thursday, Feb 12/1500-1530/10-F/Jarnac/  
SS2.

13809E2. 2000 to 2345/10-F/Jarnac/Obadiah,  
Miranda, Apollo group that "bought us"  
at a Jewish Federation of Southern Arizona  
auction. Wendee ran Miranda - showed  
Sirius + Canopus. We saw Saturn, Jupiter,  
M42, M65 also through Obadiah. Sky-2.

13810S. Friday, Feb 13/1740-1800/10-F/Jarnac/  
Cordelia/Wendee/SS2, 2. Big  
prominences. Faint, full of filamentary  
lines, but magnificent.

13811E2 1900 to 2355/10-F/  
Jarnac/Obadiah, Miranda,  
Wendee, McQueen family  
& Eddy our gardener/  
Search for star "named"  
for Denver McQueen. Venus, Mars, ~~Jup~~ not up  
Saturn, M42, M81, M82. Sky 2 star party. <sup>(yet)</sup>

13812S. Saturday, February 14/1500-1700/

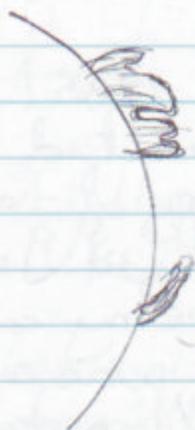
02-24

10-F/Wendee/Cordelia/Valentine's Day  
session with look at Sun + lunch at table.  
SS2 2, 8.

2 huge though

faint clusters  
of prominences. Fainter  
than yesterday but  
larger.

Magnificent.



138135. Sunday, Feb-15/1550 to 1730/10-F/  
Jarnac/Obadiah, Cordelia/Wendee,  
Clark and Y/Venus, Saturn. Sky 2.  
SS2: 2, 4. Much smaller prominences.

13814EM2 2220-0130, 10-F/Jarnac/Clyde,  
Munira/-/CN3K11-CN1 Area 68. CN3e  
TVGw C17.3.

\*13815M Monday, February the 16/0000-0100/3-F/  
Jarnac. E Munira/-/CN3e TVGw 17.3?  
Observed in 2 images but seeing + focus were not  
the best.

13816S Tuesday, February the 17/1000-1015/3-F/  
Jarnac/Mintaka the talking telescope/-/  
SS2 1, 2.

13817E2 2100-2130/3-F/~~Jarnac~~ASU/-/Wendee/walk  
+ site test, for next stay party at Honors College  
& Hayden lib. actually better.

138139 Wednesday, February 18, 2004/1600-1615/3-F/  
Twin Palms Hotel, ASU/Mira 1-SS2 0. Through  
light cloud.

13819S2. 1715-1735/3-F/Twin Palms, ASU/Mira 1-1  
I had walked back to from the Music Bldg to  
get a copy of Tennyson's *Ulysses* from the web,  
and realized I was close enough to the car also  
to retrieve my asthma relf. So when I got there  
the Sun was out from behind the veil of clouds.  
I set up Mira and saw a sunspot group.  
It reminded me of October 5, 1957, walking  
home from school and seeing a hazy, cloud-  
filtered Sun & a friend telling me about Sputnik.  
I mentioned this session & the Sputnik incident in  
my talk tonight.

13820E3. 2100-2130/3-F/ASU Space Lecture,  
Book signing. ASU Astro Dept had a telescope  
set up though I didn't get to look through  
it. I enjoyed the outdoor book signing,  
though.

\*13821M4. 0100-0600/3-F/ Gale force winds / Pegasus 1-  
1 Dome shutter blew off, but dome still  
effectively blocked the South wind. Clouds  
threatened but never took over. NGC 6207  
clearer than ever. CN3 3<sup>h</sup> 20<sup>m</sup>  
Hercules globular?  $\circ \cdot \circ$ . CN3e TVGw C17.3

13822S. Thu 19/1500 to 1600/1-F/Jarnac/Curtis Harris/tour

02-04.

13823E2 2230-2300/3-2-F/Jamaica/Hyperion/  
Curtis Harris, Pat Balfour, Wendea/tour.

13824M Fri 2/20/ <sup>0420-0500</sup>~~0000-0030~~/3-F/Jamaica/Wendea/  
Munira/CN3e TV Gue (17.3, before KC flight.

13825A <sup>EP</sup> Sat 2/21/ <sup>1830-1840</sup>~~0000 to 0030~~/7-F/Kansas City/The  
Winters/Crescent Moon - Vic took photograph.

13826M2 0000-0030/1-F/KC Observatory  
View of their telescopes and ancillary equipment.  
12" LX200 in tiny shed - works well.

13827S Sun 2/22/1640-1700/2-F/IC Stars observatory/  
The Winters Stargarden board. View of their  
telescopes & observatory structures.

13828E2 1930-2000/8-F/S. of KC, airplane. Test  
how high can see a star. Viewed for Betelgeuse  
near limit of window at 2000.

13829S Tuesday 2/24/1030-1045/Valley Animal H/  
Mira/The Beagle, Wendea/SS2 4, 31 after sky  
began to clear.

13830EP2 2130-2135/7-F/Phoenix/Wendea/Moon & Venus  
Not nearly as close as last night, but last  
night was cloudy. Audrey called to tell us  
about it and Justice, in our class, saw it.

13831S Wed 2/25/1500-1515/~~10~~ 3-F/Jamaica ASU hotel/Mira/-/  
SS2 3, 33.

13832E2. Wednesday, February 25/26/1800-0000 int | 10-F/Jarnac/  
Clyde, Minerva - Wendae / CN3e TVGw C17.3; CN3kll-CN1.  
Area 31.

13833M3. 0430 to 0600 / 10-F/Jarnac / Miranda, Clyde / - /  
CN3 h E. CN3kll-CN1 Area 40.

13834S. Thursday, February 26/1500-1525 / 3-F/Jarnac  
Drueway / Mira / Wendae / SS2 3, 58 49.

13835EM2. 2315-0100 int | 3-F/Jarnac / Minerva / - / CN3e TVGw  
C17.3.

13836S. Friday, February 27/0820-0910 / 2-3-F/Jarnac/  
Echo / Wendee and Carolyn / SS2 3, ~~49~~.58.

13837E2. 2330-0000 / 10-F/Jarnac / Minerva / - / § CN3e  
TVGw C17.3.

13838S. Saturday, February 28/1000-1200 / ~~#~~ 2-1-F/  
Jarnac / Neil + Isley from Coronado Inst, in Cambridge  
England / tour of observatories.

\*13839SEM2. ~~01500 to~~ 1400 to 0130 / 3-7-Fm/Jarnac/  
Miranda, Minerva Obadiak, Apollo, solar  
telescopes / David + Jerry from Coronado Inst,  
Bean Koenig, Connie Walker and ASTRO packers  
+ astronomers, CN3kll-CN1 area 65.  
CN3h.

13846S. Sun 29/1200-1210 / 3-2-F/Jarnac / Echo / Carolyn, Wendae / SS2.

\*13840E2. Sunday, Feb 29 / 3-F/Jarnac / removal of

03-04

Minerva from CCD and installation of  
Minerva on chair (Grappe's chair).  
Minerva is a visual telescope again! I ordered a  
Schmidt-Newtonian from Meade.  
CN3e TV Grw-19.0.

138415. Tuesday Feb March 2/1215-1230/10-F/  
~~Jarnac~~ I-10 near Phoenix, in ASU mobile/  
Wendee / Mira-1 SS2 4, 12.

13842E2. 10pm-midnight/3-F/Jarnac Clyde-/  
CN3e TV Grw-~~17.5~~ 17.5, CN3K11-CM1 Area  
56 71 (partial) + check of suspect - nothing.

13843E Wed March 3/1900-1930, then 2230-2245/  
3-F/San Diego Hyatt / Venus high in the sky.  
It had set + Moon was high at end of session.  
Used my sighting of Venus as the start +  
end of my hosting of the Kyoto awards dinner.

13844S Thu 4/18 1850-1910?/3-F/San Jose Airport,  
beside plane Horizon air / Sunset through  
some haze behind mountains to west.

13845S Sat 6/1215-1230/10-F/Jarnac / Echo- / Wendee/  
SS2. § 3, 20

13846S. See after 13839 SEM2.

13847S2. 1500-1800/10-F/ASU / Friendship 6 / Dean,  
Addy, Sally Ride + many people / Sally Ride  
event. 2 nice prominences. SS2, Sky 2.

13848S. Sun, 7/1800-1815/10-3-F/Jarnac / Echo- /  
SS2 1: 2, 9.

13849E2/ 2230-0000 13-Fm/Jarnac/The Beagle,  
Wendee/ Full (almost) Moon. Jupiter + his moons  
seen through Obadiah.

13850S Monday, March 8, 2004/1245-1300/10-F/Jarnac/  
Echo/-Wendee/ SS2 2, 18. Breezy.

13851<sup>S</sup>E2 ~~1830-1900~~ - 2345/7-Fm/Jarnac/Miriwa with  
New version of Desktop Universe. CN3 0130m.  
Later CN3e TVCw ~~14.8~~ 14.8 with Clyde.

13852EM3. 0130-0300/3-F/Jarnac/Miriwa with an  
even newer version of Desktop Universe; works  
faster. Can't sleep.

13853A#S. Tuesday, March 9, 1962. /1030-1045/10-F/  
Jarnac/Echo/-/SS2 2, 16.

13854E2 2315-0000/3-F/ASU/Star Night at Westmount  
High, March 9, 1962, + a walk at ASU. It has  
been 42 years since the first star party I  
ever organized. Now I am a professor at  
ASU - the first time I've been so honored.

13855S. Wednesday, March 10, 2004/1400-1500/3-F/ASU/  
Mira/Jeff Hester and - we walked to the  
Astro bldg, then I went on to look at O. SS2 2, 8.  
One big group.

13856S. Thursday, March 11, 2004/1100-1400/3-2-F/ASU)  
Lawrie Leshin, others / examination of

03-04

meteorites - chondrules from the very beginning of the Solar System, the "LA" Meteorite from Mars - got to hold it - and the "from (probably) Vesta. Then lunch with the students outdoors. after, I went to the car - it was clearing up - and I got a sunspot reading through Mira. SS2: 3,

13857 M2. 0100-0130/3-F/Jarnac/Clyde/CN3e TVGw (14.8).

13858 S, Friday, March 12/1430-1500/3-F/Echol-SS2.

13859 M2 0000-0030/3-F/Jarnac/Clyde/CN3e TVGw (14.8).

13860 SEM Saturday, March 13/1830 to 0100/0-9-F/  
 Jarnac/Apollo Clyde Miranda Obadiah  
 M45 CN3e Jupiter Jupiter  
 M44 TVGw Saturn  
 (17.3) M3  
 M51.

The IDA fundraiser Star Party. ~12 people including Ron, who is building houses here and wants to do a good job on outside lighting.

13861 S. Sunday, March 14, Summer's birthday/1500-1700/10-F/Jarnac Table/Cupid/Wendee, the Beagle/SS2 3,

13862 E2 2230-2300/10-F/Jarnac/Clyde/-/SS CN3e TVGw (17.3).

13863 ES. Monday 15/1000-1030/10-F/Jarnac/Echol-/  
 SS2 3,6. Crescent Moon in SW, horns pointing more or - less downwards.