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To a great comet  
hunter and congratulations  
on your successes.  
from your biographer

Clyde W. Tombaugh  
29 August 1996  
Mesilla Park, N.M.

Observing Log  
David H. Levy

Log 18  
110°43'10" W.  
31°58'35" N.  
~3483 Ft.

comet search. Two se



\*9759E. 1996

August

Tuesday, August 6 / 1900-2215 / 10-3-F /

Jarmac / Minerva / Wendee, Chauncey, Odie /  
CN3 1 hour, west, southwest. M5, M13.  
Sgr star field. Beautiful night.

We had a wonderful observing session.  
The milky way looked almost as dense as the clouds.  
The new Jarmac makes you feel as if you are on a  
boat in the sea of desert.

9760E.

Wednesday, August 7 / 1930-2200 /

10-3-f / Jarmac / <sup>L. Bruiser,</sup> Minerva / Wendee,  
Chauncey, Odie / CN3 35m. W.  
Look at Comet Hale-Bopp.

\*9761S. Thursday, August 8 / 1730-1830 /

1-f / Jarmac / Virgil, Wendee / Minerva  
and Cindy the computer are commun-  
icating!

\*9762EM. Friday, August 9 / 2345-0030 / 5-F,  
McGrill / Wendee / Stood on MUNDUS site  
and saw A+B Cygnus as per the  
directions - saw them from downtown MHI!



9763 E / Saturday, August 10 / 2315-0000 /  
7-F / McGill / - / Wendee / clear sky - very nice  
for downtown Montreal. No Perseids. Set  
on Founder's Tree stump near McDonald  
Engineering Building.

9764 M / Sunday, August 11 / 0000-0040 /  
7-F / McGill / - / Wendee / clear sky again  
but no meteors. Founder's tree stump  
and walk. Jupiter in south, at  
same position it was in 1960, Sum-  
mer of 1960.

9765 E / Monday, Aug 12 / 2130-2215 /  
3-F / 818 Upper Belmont / Wendee /  
Jupiter finally appeared after clouds.  
Observed from 818 near circumstances  
36 years ago, during Summer of 1960.

9766 E. / Tuesday, Aug 13 / 2130-2315 / 10-F /  
Annette & Leonard's home, Mt. Snow,  
Vermont / Minerva / Wendee, Mather,  
Ed / CN 3 14 10 m W. Wendee saw 7  
(Perseid) meteors. I saw 2 but enjoyed  
my comet search. Two satellites



in parallel paths  $\sim 1^\circ$  apart, mag 8 or 9, moved through field + I followed them for a while.

9767 M2. 0400-0500 / 10-F / Mt. Snow /  
Minerwa / - / CN3 30m. northeast.

9768 E 14 August / 2120-2140 / 10-F / Mt.  
Snow / Minerwa / Andy Bauman, ASC 1964-66 /  
Jupiter.

9769 E2. 2230-2250 / 10-F / Mt. Snow / (Minerwa)  
Gail, Joann, Wendee / Milky Way fields.

9770 EB. 2340-0030 / 10-F / Mt. Snow / (Minerwa)  
Gail, Joann, Wendee, Mother, Ed / M31, Jupiter,  
Db. Cl., CN3 10m E, 7 meteors.

9771 E. 15 August, Thursday / 2100-2120 /  
3-F / Mt. Snow / Minerwa / Gail Joann,  
Lisa + David, Wendee / Jupiter.

9772 E. 16 August / 2000-2230 / 3-F /  
Gerry's house. Party for Michael  
+ Daniel. Summer A.



9773E. ~~Monday~~<sup>Sund</sup>, 18 August / evening session at Jarnac Observatory.

9774E. Monday, 19 August / evening sessions. 1930-2030 / 3-f / Jarnac / Wendee, M. Terenzoni / Minerva LX and computer / Moon.

9775E2. 2130-2230 / 3-f / Vega-Brae Observatory / Wendee, Michael T. / nice building opens to Alas Sprach Zarathustra.

9776 E3. 2330-0000. 13-f / Jarnac / Wendee / Minerva-LX.

9777E Wednesday, 21 August / 2100-1915 ~ / 3-f / Wendee, Virgil / Sunset + nice green flash.

9778E2 ~~Thursday~~<sup>Wednesday</sup>, 21 August / 2300-2330 / 3-f / Jarnac / just a nice view of the stars + Jupiter.

9779E. Thursday, 22 August / 2200-2300 / 3-f / Jarnac / beautiful lightning + clear sky.



9780 E, Friday, 23 August | 2300-  
0030 / 7-fm / Jarnac / repair of  
speaker system, then fun with  
Minerva LX: Saturn, Jupiter, M31,  
M57.

9781 E M. Saturday 24 August | 2335-  
0100 / 8-fm / Jarnac / Minerva, LX /  
Saturn with LX, Jupiter, M31.

Tonite I saw Saturn for the first time.  
I was so amazed at how beautiful the planet  
appeared. It looked like a milk glass charm  
of Saturn hanging in the sky. It was great!

9782 M2. 0415-0530 / 10-f / Jarnac / Min-  
erva LX / - / CN3 30 min. Speaker  
repair AND alignment of Minerva's  
secondary at last!

9783 E Sunday 25 Aug / 1800-1830 /  
2-1-f / Jarnac / clouds shifting,  
shafts of sunlight.

9784 ~~E~~ Monday 26 Aug / 1708-1830<sup>int.</sup> / 3-f /  
Jarnac Preinlow.

9785 E2, 2200-0000 / 3-F / Inside, + Jarnac  
- Odie, Chauncey, outside; Wendee inside /  
While typing a report on SL9 for Sky and  
Telescope, I could see Jupiter shining  
from outside.

\*9786 SE. Wednesday, 28 August / 1900 -  
13-Fm / White Sands National Monument /  
Echo, Bruiser / Wendee, Barbara  
Pardo / Full Moon over White Sands!  
Moon rose through clouds, then  
shone beautifully over the sands.  
Jupiter ☉ . . . .

9787 MS. 3 Sept, Tues. 0600 - 0800 / 0-F /  
Jarnac / Major thunderstorm,  
continuous lightning, heavy rain,  
still saw sunrise in E.

9788 M 3/4 Sept / 0430 - 0510 / 7-F / Jarnac  
Minerva LX / -1 CU3 30<sup>m</sup> E.



9789 M. Wed Sept 4/5/0400-0500/9-F/  
Jarnac / Munerva / CN3 30<sup>m</sup>E.

9790 M. Thur Sept 5/6/0400-0510/10-F/  
Jarnac / Munerva / CN3 35<sup>m</sup>E.

9791 S. Friday, Sept 6/7/1630-1700/  
3-F / Jarnac, Obs. maintenance.  
- snake incident in between -

9792 S2 1830-1845/3-F / ~~Wentworth~~  
Rd / Wendee / sunset.

9793 S. Saturday, 7 Sept / 1600-1630/3-F/  
Jarnac / Marilyn, Wendee,

9794 E2 ? 2300-2330 / sitting outside  
behind house. (? date)

9795 E. Monday 9 Sept / 2100-2130/0-F/  
Jarnac / Barbara Wilson, Betty, Wendee.

9796 M 11 September, Wednesday morning /  
0415-0515/3-F / Jarnac / CN3  
30m. E. Munerva LX.

9797E. Wednesday, 11/12 September/  
2100-2145/10-F/Jarnac/Belle, Ralph,  
Andy,

9798M2. 0345-0510/10-F/Jarnac/  
Minerva LX, Miranda/CN3 1h E.

9799M. Thursday, 12/13 Sept/0420-  
0455/3-F/Jarnac/Miranda/  
CN3 30m E.

9800S. Friday 13/14/1730-1830/3-F/  
Jarnac/Wendee/beautiful  
rainbow. Wendee photographed it  
and observatory.

9801E. Saturday, 14/15/2100-2230/  
10-F/Jarnac/Wendee, Larry, Nancy,  
Miranda/Miranda, Minerva LX/  
M3, M17, Uranus, Saturn, Jupiter,  
Hale-Bopp.

9802EM2/ 0405-0500/10-F/Jarnac/  
Miranda, Minerva LX/CN3  
45m E.



9803E. Sunday, 15 Sept / 1900-2000 / Jarmac,

9804M2. 0400-0500 / 10-F / JMY / - / CN3 30mE

9805E. Monday, 16 Sept / 13-F / ~~JAK~~ Peak /

• Murawa, 36 / Wendee, Jim, /  
CN3 30mW.

9806M2. 400-0515 / 10-F / ~~JAK~~ Jarmac / Miranda /

- / CN3 45mE.

9807<sup>M</sup> / 17/8 September / 4-5:30 / 10-F / ~~JAK~~ Jarmac /  
Murawa, Miranda / CN3 55mE.

9808E 18 Sept / 1830-1915 / 3-F / Jarmac /  
Keith, Julia, Wendee.

9809E 20 Sept / 2250-2315 / 2-F / (Montreal) /  
walk from McGill.

9810M. 22 Sept / 0100-0130 / 3-F / 2e Fort,  
walk / Moon on Kol Nidre.

9811E 23 Sept / <sup>1930</sup>~~1800~~-<sup>20</sup>~~1830~~ / <sup>CDT</sup>~~MST~~ / ~~10~~ 3-F /  
Plane from Chicago / 3 stars to break  
fast.

\*9812E <sup>25 Sept</sup> ~~1800~~-1900 / 3-F / Observatory work.  
Major Thunderstorm, clearing after.

\*9813E. Thursday, 26/27 Sept / 1900-  
2200 MST but for me, 2045-2130 CDT.  
7-10 for Wendee, 1-2 for me  
Jarmac for Wendee, Ball State for me.



Thursday, 26 September

Tonite Chauncey, Odie + I observed the Lunar Eclipse From Moonrise → Totality → bright moon again. The moon eclipsed From the "7 o'clock" corner as if emerging From the clouds. At the beginning it seemed as if the moon would be totally blacked out. Once it was about 75% eclipsed it looked like a Carrot Cake cupcake with white icing. Once it was total, the moon looked #like a huge piece of amber hanging in the sky - Beautiful!

The shadow did not leave the moon as it originally covered it. The shadow left From "9 o'clock" & went directly across. Once the moon began brightening, the copper glow turned into silver/white. It was great!

After my lecture at Muncie (Ball State) I observed the eclipse through clouds. They thinned enough that as I, and my audience from the lecture, could watch as the Moon approached total eclipse. Though nearby, Saturn could not be seen through the clouds: Wendee and I talked via my cell phone and her cordless phone. As she described what she saw, I repeated it to the audience.

9814E. Friday, 27 Sept / 2215-0000 / 7-Fri / Jarmac / Wendee + the Greenbergs / Miranda, Mintaka. / Moon, Saturn.

9815E. Sat, 28 / 1900-1945 / 10-Fri-7 / Jarmac / Mmerva LXI CV3 30m W.



- 9816E. Sunday, 29 Sept / 1945-2015 / 3-F / Jarmac /  
Miranda / - / CN3 15m W.
- 9817E. Monday, 30 Sept / 1900-2100 / 10-F / Jarmac /  
Miranda / CN3 1h30m W. Wendy found  
N&C
- 9818E. Tuesday, 1 October / 1915-2130 / 10-F /  
Jarmac / Minerva LX, Miranda / Wendee /  
CN3 1h50m W.
- 9819E2P. 2330-2340 / 10-F / moon in sky.
- 9820E Friday, 4 October / 1900<sup>EST</sup>-2100 / 3-F /  
Hidden Hollow / Minerva / Wendee, others /  
CN3 40m W. also Yard Scope
- 9821E. Saturday, 5 October / 1930-0000 / 10-F /  
Hidden Hollow / Minerva, Wendee, others /  
- / CN3 1h15m W. First light for Cole.
- 9822M Sunday, 6 October / 0430-0530 / 10-F /  
JA: Jarmac / Miranda / - / CN3 40m E.
- 9823E. Monday, 7 October / 1900-2100 / 10-F /  
Jarmac / Minerva, Miranda / Wendee /  
CN3 1h15m W. Comet Hale-Bopp
- 9824M2 400-515 / 10-F / JA: Jarmac /  
Minerva, Miranda / - / CN3 50m E.



Tuesday, 8 October 1

9825 E. 2000-2100 / 10-F / Jarnac /  
Ed Cole, Bruiser, Miranda, Minerva /  
Wendee / CN3 35<sup>m</sup> W. Hale-Bopp.

9826 M2. 410-530 / 10-F / Jarnac /  
Minerva, Miranda / - Wendee / CN3

1<sup>h</sup> 5<sup>m</sup> E. There was a White Sands  
launch. I saw the launch in the  
northeast, while comet hunting  
with Minerva. There were 2, then 3  
points of light, with rocket exhaust  
coming out of one and rotating  
around it. As it swung down,  
there were dozens of points of light.

With dawn, the fuel cloud lit up -  
like a magnificent cloud - Wendee  
woke up to see it.

9827 E Wednesday, 9 October / 2200-2330 /  
10-F / Jarnac / Miranda / - I did not  
succeed in finding C / ~~the~~ Brewington -  
Either too faint or not at  
ephemeris position.

9828 M2. 410-530 / 10-F / Jarnac /  
Miranda, Minerva / CN3 1 hr E.

9829 S. Oct, 10 / 10:30-2:30 pm E /  
NY World Trade Center.



9830S 15 October. 19:30 am - 17:08 PDT /  
O-F / Wendee, Roy Bishop, York  
films: David Taylor / 2 Tidal bores,  
at St Croix and Salmon Rivers.  
low & high tide <sup>at</sup> Harborsport.

9831S. 16 October / 12 noon - 4 PDT / 10-f /  
Cape Split / Roy, Wendee, David /  
Mid-<sup>incoming</sup> tide to outgoing  
tide. Fabulous.

9832EP 20 October. / 1900-1915 / 3-f / N,  
Tuesday, Square Dance Hall / Moon &  
Jupiter.

9833E. 21 October / 2200-2220 / 7-fm /  
Jarnac / Steve Edberg.

9834E 22 October, Tuesday / 2215<sup>n</sup> - 2230 /  
7-fm / Steve.

9835E. 23 October, Wednesday / 2300 - 2315<sup>n</sup> /  
3-fm / Steve.

9836E. 24 October, Thursday / 2300 - 2335 /  
3-fm / Jarnac / Steve Edberg, Gene Shoemaker

9837S. 27 Oct. Sunday 10-2-F/Jarmac/Wendee  
Ken Hewitt-White + Cosmic Highway crew/  
very cold.

9838E. 28 October/1845-2000/10-F/Jarmac/  
Miranda/-/CN3 45m E West.

9839E 29 Oct/1900-2000/10-F/Jarmac/Mirna LX/CN3 14W.

9839M2. 500-600-7-fm/Jarmac/Miranda,  
40 Mirna LX/CN3 40mins E.

9841ES. 30 Oct/noon to 5 int/3-F/solar  
halo and perturbation / installation of  
new site info for LX200.

9842E2. 1900-2000/3-F/Jarmac/Wendee/  
Mirna LX, Mintaka, Mirna/  
CN3 30min. Hale-Bopp near M19.  
Saturn.

9843E 31 October, Thurs/2200-2220/  
3-F/Wetstones walk with Wendee.

9844E. 1 November, Friday/1900-1920/  
3-F/Las Cruces/Wendee, Bert + Lisa  
Andrada/Echo-15mm Lanthanum/  
Jupiter, Saturn.

9845S. 2 November, Saturday/1145-1200/  
2-f/Las Cruces/Alan Hale, Wendee/  
photo.



98 9846 E.P Sunday, 3 Nov / 2100-2110 / 10-F /  
Jarmac / - / - / M-3 / naked eye; M 33  
naked eye too.

9847 M2 Monday morning / 4:15-6:00 / 7-F /  
Jarmac / Miranda, Minerva / CN3 1<sup>st</sup> E.

9 9848 E 4 November, Monday / 6:30-8:30 /  
10-F / Jarmac / CN3 90 minutes W.

9 9849 E / 5 November / Tues / 9 pm - 11:30 /  
10-F / Jarmac / Wendee / Minerva LX,  
Miranda / CN3 ~~90~~ 35 min S. (to  
-54 40. S. horizon. M33 naked  
eye and 6-inch.

9850 S. 46 Nov, Wednesday / 1400-1815 int /  
Virgil, Wendee / work on observatory,  
Minerva LX, and baffle. Sunset +  
Green flash.

9851 S. 7 November / 10 am - 2 pm / 7-F / Jarmac /  
TBS camera crew - shots of observatory.



9852 EM. 8 November, Friday / 20:30-00:30 /  
10-f / S-L Observatory, Flagstaff / Gene  
+ Carolyn / Ophelia / 8 films - CN3F.

9853 E. 9 November, Saturday / 2200 -  
2300 / 9-f / Jarnac / Wendee, Lesa,  
Bert / Mintaka, Minerva LX, Miranda /  
Saturn, other objects. M42.

9854 M2. 4:15-6:00 / 10-f / Jarnac / Minerva  
LX, Miranda - / CN3 1h E.

9855 AE. 10 November, Sunday / 2200 -  
2300 ~ / 10-f / Jarnac / Wendee, Lesa,  
Bert / Minerva LX, Miranda / - M31,  
NGC 869, 884, Saturn. A Bruiser.

9856 E 11 Nov, Monday / evening observation.

9857 EP 12 Nov / 1800-1810 / N. Tucson / Wendee / Zodiac-Ecl.

9858 M2 12 / 13 November, Tues / 4:10-6:00 /  
10-f / Jarnac / Minerva LX, Miranda /  
~~10~~ CN3 1h 5m E.

9859 SP 13 / 14 November / 0715-7:30 / Henry 8  
Hotel, St. Louis / clearing sky.

9860 EP 14 / 15 / 1800-1810 / Carbonade / Moon + Jupiter.

9861 EP 15 / 16 Nov, Friday / 555-6 PM / 2-f /  
near Carbonade / Rick + Brigit Williams /  
some stars, Saturn.

9862 S. 17 Nov. Sat / 14:00-15:30 / Touch of  
Nature / Moon / Rick + Brigit.



9863AN. 16/17 November / 1925-0630 / 2-0-F /  
Touch of Nature Campground, some other  
spots / Rick Williams, and more than 100  
people / about 45 min of hazy sky,  
earlier the Moon. No Leonids. (1 flash  
that was either lightning or a bolide)  
Pointing out heavenly G. Ended with  
SIU breakfast.

9864E. 17/18 November / 1930-2030 / 7-F /  
roof of Physics Building / Rick Williams,  
students / 2 8" Celestron Telescopes / Jupiter,  
Moon, Saturn, M31, M57.

9865E2. 2045-2145 / 7-F / with Rick + Brigitte  
in front of their home / 2 meteors - Taurids.

9866EP 18/19 Nov / 1930-1940 / near SIU.

9867E. Wednesday, 20 November / 1800-1815 /  
flying over Toronto / - / Moon + Jupiter,  
clouds just over city.

9868E Friday, 22 November / 1745-  
1908 / 6-F / Western, then Peter's home /  
Mark Coco binoculars / Peter and  
Diannel Cornet Hale-Bopp,  $M=4.9$ .

98695E Sunday, 24 Nov / 1530-2300 /  
10-F / Jarina / Murewa LX, Miranda



Production / Lyncia Daniel, Wendee,  
Tim G... / Golf, production crew /  
Film for Solar ... how.

9870 E. Sunday, Monday ... / 1815-1845 /  
10-f / Jarnac / Minerva LX

9871 E. Tuesday, 26 Nov / 1830 -  
Jarnac / Minerva / - / - / CN3 30<sup>m</sup> W.

9872 E. Wednesday, 27 Nov / 1800-2040 /  
3-f / Jarnac / Miranda, LX / Barbara  
Pardo, Nick Devereux, Wendee / M-31,  
M-33, M45, Jupiter.

9873 E. Thursday, 28 November / 2000 -  
2030 / Jarnac / Barbara + Nick, Nanette  
& Mark Vigil, Wendee / viewing.

9874 E 2~~7~~ 2300-2345 / 7-fm / Jarnac /  
Barbara + Nick / M31, M33, M42.

9875 E. Friday, 29 November / 2200-2230 -  
3-f / Jarnac / Wendee, Mark / viewing.

9876 E. Saturday, 30 November / 1800 - 2100 /  
8-10-f / Jarnac / Minerva LX, Miranda /  
CN3 2h W. headache.

9877 E. Sunday, 1 December / 2100-2200 /  
10-f / Jarnac / Minerva LX, Miranda /  
CN3 1h W. headache.



9878E. Monday, 2 December / 1900 -  
2120 / 10-F / Jarnac / Minerva LX,  
Miranda mostly / CN3 1h 30m W.

9879E Tuesday, 3 December / 2230~~0~~  
-2250 / 10-F / ~~54~~ Jarnac / Minerva LX /  
Gene Shoemaker, Wendee / Saturn  
through LX200.

9880M2. 0410-0600 / 7-fm / Jarnac / Miranda,  
Minerva LX / Jim Scotti, by phone /  
CN3 1h 35m E.

9881 ~~14~~E. Wednesday, 4 December / 1830 -  
2200 / 10-F / Jarnac / Wendee, Virgil,  
Richard + Gerry (by phone) / CN3 1h W.  
Minerva LX, Miranda.

9882 E. Thursday. 5 Dec / 2200-2230 /  
10-F / Jarnac / Wendee.

9883M2 415-600 / 7-fm / Jarnac / Minerva  
LX, Miranda / CN3 1h 35m E.

9884M. Friday, 6 Dec / 04:10-06:10 / 10-F /  
Jarnac / Miranda, Minerva LX /  
Wendee / Shuttle Columbia land-  
ing! CN3 1h 30m ~~4~~ E.



9885 EM2 December 7 / 2030-0100 / 10-F /  
S-L Observatory, + [unclear] / Ophelia  
Gene + Carolyn / CN3 [unclear] pice.  
Gene learning to use the [unclear].

9886 ~~EAS~~ Sunday Saturday, Dec. 7,  
(before 9885) / 1-1:15pm / 10-F / Jarnac,  
Ophelia / Wendee places plaque  
on Ophelia.

9887 EM. Sunday, Dec. 8 / ~~18~~ 2030-0230 /  
10-F / S-L Observatory / Ophelia / Carolyn,  
visitor / CN3 F, T2 pice.

9888 E. Monday, December 9 / ~~1800~~<sup>1735</sup>-1810 /  
3-F / S-L Obs / Ophelia / Carolyn.

9889 E Tuesday, December 10 / 2200-  
2215 ~ / 3-F / Jarnac / Wendee /  
warmish + humid.

9890 EM Wednesday, Dec 11 / 2330-0010 /  
10-F / Jarnac / Wendee / Gemunide /  
7 meteors incl. one bright  
Monoceratid.

9891 M2. 510-6:10 / 10-F / Jarnac / Miranda  
& Minerva LX / - / CN3 40 ME.



9892 E. Thursday, December 12 / 2300-2315~ /  
10-f / Jarnac / showing mother, Wendee's  
parents, our backyard.

9893 M2. 0415-0610 / ~~10~~ 3-f / Jarnac / Minerva  
LX, Miranda / - / CN3 1h 20<sup>m</sup> E.

9894 S. ~1100-1200~ / Friday, 13 December /  
Wendee, Mother, Ed, Wendee's parents.

9895 S2. ~1500-1600~ / 10-f / Jarnac / Wendee,  
Mother, Ed, Wendee's parents /

In these sessions we showed our  
parents, and Ed, the observatory  
and our new land which is now  
officially ours.

9896 E3. 2130-2230 / 10-f / Jarnac / Ed,  
Mother, Wendee's parents, Wendee,  
Miranda, Minerva LX / - Meteors!  
Many, many Creminals! Great  
show! Also M3 / naked eye.  
Saturn, M42.

9897 M4. 410-6:10 / 10-f / Jarnac / Miranda,  
Minerva LX / CN3 1h 25<sup>m</sup> E. Possible  
comet at 14<sup>h</sup> 24, +29°.



9898SE. Saturday, 14 December / 1915-1930 /  
10-F / Jarnac / everyone! / I began by  
installing the dimmer switch from the  
old observatory. Then we saw  
Mercury, Jupiter, and the Crescent  
Moon. We also saw Hale-Bopp,  
 $M_v = 3.8$ . Minerva LX. CN3 10<sup>m</sup> W.

9899E2. 2100-2115 / 10-F / Jarnac / a general  
view tonight. Pegasus.

9900M3. 0500-0615 / 3-F / Jarnac / Miranda,  
Minerva LX / - / CN3 40min E. Comet  
suspect was NGC 5635, a galaxy.

9901S. 1200-1240, Sunday, 15 December /  
10-F / home / Ed, Lenny, Wendee / Pegasus /  
Sun. 1 big spot.

9902E2 Sunday, 15 Dec / 2300-2315 / 3-F /  
Jarnac / - / Pegasus.

9903M3 0535-0610 / 10-F / Jarnac / Minerva  
LX, Miranda / - / CN3 10<sup>m</sup> E, CN3e, TVKru.

9904S Monday, 16 Dec / 0900-1000 / 10-F /  
Jarnac / Annette, Lenny, Mother / Pegasus /  
work on telescope, and weight for Miranda  
+ Pegasus.



9905E. Monday 16 December / 2208-2235 /  
10-7-Fm / Jarnac / Pegasus / Wendee /  
aligning telescope.

9906S. Tuesday, 17 December / 1500-1530 /  
7-F / Jarnac / Mintaka 1-1 Sun.

~~9907~~ 9907 EM2 1830-0030 / 7-10-F / Jarnac /  
Munera LX, Miranda, Pegasus /

OFFICIAL OPENING

JARNAC OBSERVATORY

2500 WETSTONES SITE

and

31st ANNIVERSARY CELEBRATION

CN III

Wendee and David

Annette and Len

Bob Groff

Larry, Nancy, Miranda

Jim, Karri, Jennifer

Art, Jeff, Joe

Ray Stowell

Edith and Ed

Gerald Cecil + 2

Tim Hunter

Christopher

Virgil Smith

CN 3 5 min S.

9908 M2. 5:40-6:10/10-f | Jarnac | Minerva LX |  
- | CN3 20m E.

9909 E. Wednesday, 18 December | 1830-1850 |  
7-fm | Jarnac | Minerva LX | - | CN3 4 10m W.

9910 E M. Thursday, 19 December | 2345-0005 |  
7-fm | Jarnac yard | Pegasus.

9911 M2 0600-0615/10-f but dawn | Jarnac  
Yard | Pegasus | - | CN3 5m E.

9912 E. Friday, 20 December | 1810-1900 |  
7-Fm | Jarnac | Minerva LX | - | CN3 10m W.

9913 EP2 ~ 2030-2040/10-f 7-fm | Jarnac  
Yard | Wendee, Nancy our neighbor |  
Heavenly Cr.

9914 E3 2345-0000/10-f 7-fm | Jarnac |  
Minerva LX | Test for drive while  
set up on only one star. Not  
bad!

9915 M4 0550-0605/3-f | Jarnac  
Yard | too cloudy for comet hunting.

9916 E Saturday, 21 December | 1830-  
1930 | 7-fm | Jarnac | Minerva LX |  
- | CN3 15m W.



9917E2 Saturday, 21 December / 2330-  
2345 / 7-fm / Jarnac / test of new  
chair ladder for Miranda / Saturn.

9918S. Sunday, 22 December / 1145-1230 /  
10-f / Jarnac / Mrs. Jedicke, Robert  
+ Vicky Jedicke / Minitaka / Tour  
of observatory, Sun.

9919E2. 1815-1845 / ~~10~~<sup>3</sup>f - actually,  
a nearly full Moon / Jarnac / Minerva LX /  
- / CN3 10<sup>m</sup>W.

9920E3 2330-2345 / 3-f / Jarnac Yard.

9921E. Monday, 23 December / 1830-1910 /  
3-f / Jarnac / Minerva LX / Wendee /  
CN3 10<sup>m</sup>W. Full Moon, beautiful,  
warm night.

9922E.2. Tuesday, 23 December /  
2330-2345 / 3-f / Jarnac Yard /  
Warm, ~~windy~~, bright Moon.

9923E. Tuesday, 24 December,  
1830-1900 / 7-fm / Jarnac / Minerva  
LX / - / CN3 10<sup>m</sup>W. Some clouds  
near SW horizon.



9924 E2. 2130-2150/3-Fm/Jarnac/  
Mother, Wendee/ Full Moon over the  
desert. Windy, some cirrus clouds.

9925 E. Wednesday, 25 December/  
1530-1545/Mike + Elaine's home/  
Uncle Mike, Aunt Elaine, Mother,  
Wendee/ binoculars / Sun.

9926 E2. 1810-1910/10-7-Fm/Jarnac/  
Minerva LX/-/CN3 30mW. Pega-  
sus - M42.

9927 E3. 2210-2240/7-Fm/Jarnac  
yard/Mother, Wendee/ ~~CA~~ Full  
Moon over the desert. Calm,  
cool night.

9928 S. Thursday, 26 December/1000-1130/  
10-3-F/Jarnac/Minutaka 1-1  
observatory repair - roof latch +  
handle adjustments.

9929 EP2 8:30-8:40pm/2-F/Robert +  
Vicky's home/Wendee, Vicky/Saturn.

9930<sup>M</sup> S. Friday, 27 December/0730-830/3-F,  
Jarnac yard/Venus, naked-eye, with Wendee/  
Moon through Echo-



9931 E 2 / Friday, 27 December / 2045-2100 /  
2-f / Lordsburg / Echo / Wendee / Moon. Clouds  
rapidly covered whole sky, & finally the  
Moon rising in the east.

9932 E 3 / 2200-2215 / 3-f / Texas Canyon /  
Echo / Wendee / Moon.

9933 E. Saturday, 28 December /  
1815-2035 / 10-3-f / Jarnac /  
Minerva LX, Miranda, Cole /  
Wendee / CN 3 2<sup>h</sup> W.

9934 E 2. 2300-2315 / 3-f / Jarnac  
Front / Cole / Wendee / Moon.

9935 E P. Sunday, 29 December / 1830-1840 /  
2-f / Jarnac yard / Wendee's birthday.  
mostly cloudy.

9936 E Monday, 30 December / 2215-2235 /  
3-f / walk with Wendee. Heavenly G all  
that was visible.

9937 E M. Tuesday, 31 December / 2345-0005 /  
2-f / walk with Wendee / Orion's  
shape barely visible.

99385.

1997

Wednesday, 1 January / 10-10:15am /  
3-F / Jarnac Yard / Pegasus / Wendee / SS2  
Ospots.

9939 SE2. 1700-1800 / 3-F / Jarnac Yard /  
Pegasus. dinner outside with Wendee.

9940 E3. 1830-2100 / 3-F / Jarnac / Pegasus  
(M42), Minerva LX (CN3 1<sup>h</sup>15<sup>m</sup>W, M31,  
Saturn).

9941 SE Thursday, 2 January. / 1800-1930 /  
3-F / Jarnac / Wendee, Debbie +  
Joe / Sunset, CN3 20<sup>m</sup>W. with  
Minerva LX.

9942 E2. 2000-2200 / 10-F / Jarnac /  
Miranda, Minerva LX / Sightseeing  
with Wendee, Debbie + Joe.

9943 E. Monday, Jan 13 / 18:00-18:30 /  
3-F / LONDON, ENGLAND / Cole /  
Wendee / Moon.

9944 E2. 1945-2000 / 3-F / LONDON / - / Wendee,  
David Taylor / Capella, Aldebaran.



9945 M. Tuesday, Jan 14/15/5:30-6:15/  
10-F/Jarnac/Miranda, Minerva LX/  
CN3 25m E. CN3e TV Crv.

9946 M. Wednesday, Jan 15/16/5:30-6:30/  
340-F/Jarnac/Miranda, A/Wendee/  
CN3 30m E. CN3e TV Crv, / Interview  
over the radio with WFSM in  
Fayetteville, N.C.

9947 M. Thursday, January 16/17/5:55-  
6:30/10-F/Jarnac/Mirwa<sup>LX</sup>, Miranda/  
CN3 10<sup>m</sup>E, M17. CN3e, TV Crv.

9948 S. Friday, January 17/18/9:30-10am/  
10-F/Jarnac Yard/Sp Pegasus/Wendee/  
see 995 Sun.

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IN MEMORY OF CLYDE TOMBAUGH.

\*9949 M2 (Saturday morning) / 5:<sup>30</sup>~~50~~-6:15/  
10-F/Jarnac/Pegasus/-/CN3  
30min E. Very strong east wind;  
observed right into it.

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9950 S. Saturday, 18/19/10-10:30/3-F/  
Jarnac Yard/Pegasus/-/Sevn.  
Ospats.



9951 M2. 5:30-6:15/10-f/Jarnac/Miranda,  
Minerva LX/1-CN3 45 minutes E.

9952 S. Sunday, January 19/4:30-9:45/  
3-f/Jarnac Yard + Pegasus/Wendee/  
Sun, no spots.

9953 M2P (Mon. morning) <sup>then S.</sup> 5:30-5:35/  
<sup>+ afternoon</sup> <sup>then ~ 1400-1415.</sup>  
1-f. Got up, but sky was cloudy!  
Later, Wendee showed obs. to Gail.

9954 M. (Tues morning) 20/21/5:50-6:15/  
3-f/Jarnac/after 5:30am interview  
with KDKA in Pittsburgh/Mirerva LX,  
Miranda/1-CN3 15m E.

9955 E: January 21/22, Tuesday/1908-  
1915/83-fm/Jarnac/Minerva LX/1/  
CN3 10m. New clock.

9956 A:E2. 2300-2330/T-Fm/Jarnac/  
Minerva LX/Wendee, Gail/Moon,  
Mars, Sirius, M42.

9957 E. Should be before 9949 M2,  
Friday, Jan 17/2000-2200/  
7-fm/Jarnac/Wendee,  
Rhondi + Tom + children/  
Miranda, Minerva LX/Moon,  
M42, Rigel.

9958 E. Jan 22/23/1930-2000/2-fm/Outback restaurant  
Wendee, Gail, Tim Hunter/Full Moon.



9959E2. 2300-2315/2-f/Jarnac Yard/  
-1-1 Moon, full, through a layer of  
rapidly moving stratus cloud.

9960ASP January 23/0845-855/2-f/  
Jarnac Yard / Pegasus / Sun, no spots  
but clouds. In memory of Clyde,  
on the day of his memorial service.

9961E2P ~6:25-6:35 pm ~ / 3-f / Unitarian  
Church, Las Cruces, and Wendee's  
old house / E-1 Wendee / Moonrise,  
after Clyde's memorial service.

9962E. Friday, January 24/2000-  
2245/7-fm/Jarnac / Per Miranda,  
Minerva LX / Wendee, Sandy Rathburn  
from Channel 4, plus cameraman /  
Moon. Interview.

9963S. Saturday, January 25/1030-  
1045 / 3-f / Jarnac Yard / Pegasus /  
Sun. 0 spots.

9964M <sup>Sat, Jan 25/</sup> Sunday, Jan 26/0600<sup>550</sup>-0610/  
2-f<sub>m</sub> but clear in SE / Jarnac /  
Miranda / CN3 10<sup>m</sup> E.

9965SP Sunday Jan 26/0815-0825/2-f/  
Jarnac Yard / Pegasus / -1 SS2 0 spots.



Monday, January 27/10:00-10:10/10-F/  
Jarnac/Pegasus 1-SS2, Ospots.

9967E2 19-2130/10-F/Jarnac/Miranda-1  
CN 3 20m W.

9968E Tuesday, Jan 28/10-11:15pm/3-F/  
Jarnac Yard/Wendee/Pegasus/Call from  
Peter. CN 3 E.

9969S. Wednesday, January 29/10-9:00-  
9:15/3-F/Jarnac Yard/Pegasus/  
SS 2 Ospots -

9970S2. 10-11/7-F/Less school/Nancy  
Fish, Wendee, many children/  
Echo/SS2. Some children spotted  
a faint sunspot. Are their  
eyes better than mine (yikes!)  
Is standing farther away from the  
telescope than I do a good idea?  
4th & 5th grade.

9971E3. 19:10-20:00/10-3-F-  
~30 mph winds/-Munerva/  
Richard, on phone/CN 3 30.




9982 S. Thurs, Feb 6/ - 11:00  
Jarnac Yard / Pegasus / 6 spots

9983 M. 6/7 / 4:15 - 6:30 / 10-f - beautiful night /  
Jarnac / Miranda, Murerwa LX / - /  
CN3 1<sup>h</sup> 30<sup>m</sup> E. Hale-Bopp at 2.2.  
Beautiful, multi pronged tail 2°.

9984 M Friday, February 7 / 0130 - 0145 /  
3-f / 120 <sup>JM</sup> Carey / - / - / sky with  
considerable clouds.

9985 S. Saturday, February 8 / 1130 - 1145 /  
10-f / Jarnac Yard / Pegasus / Wendee - / SS2 - 0.

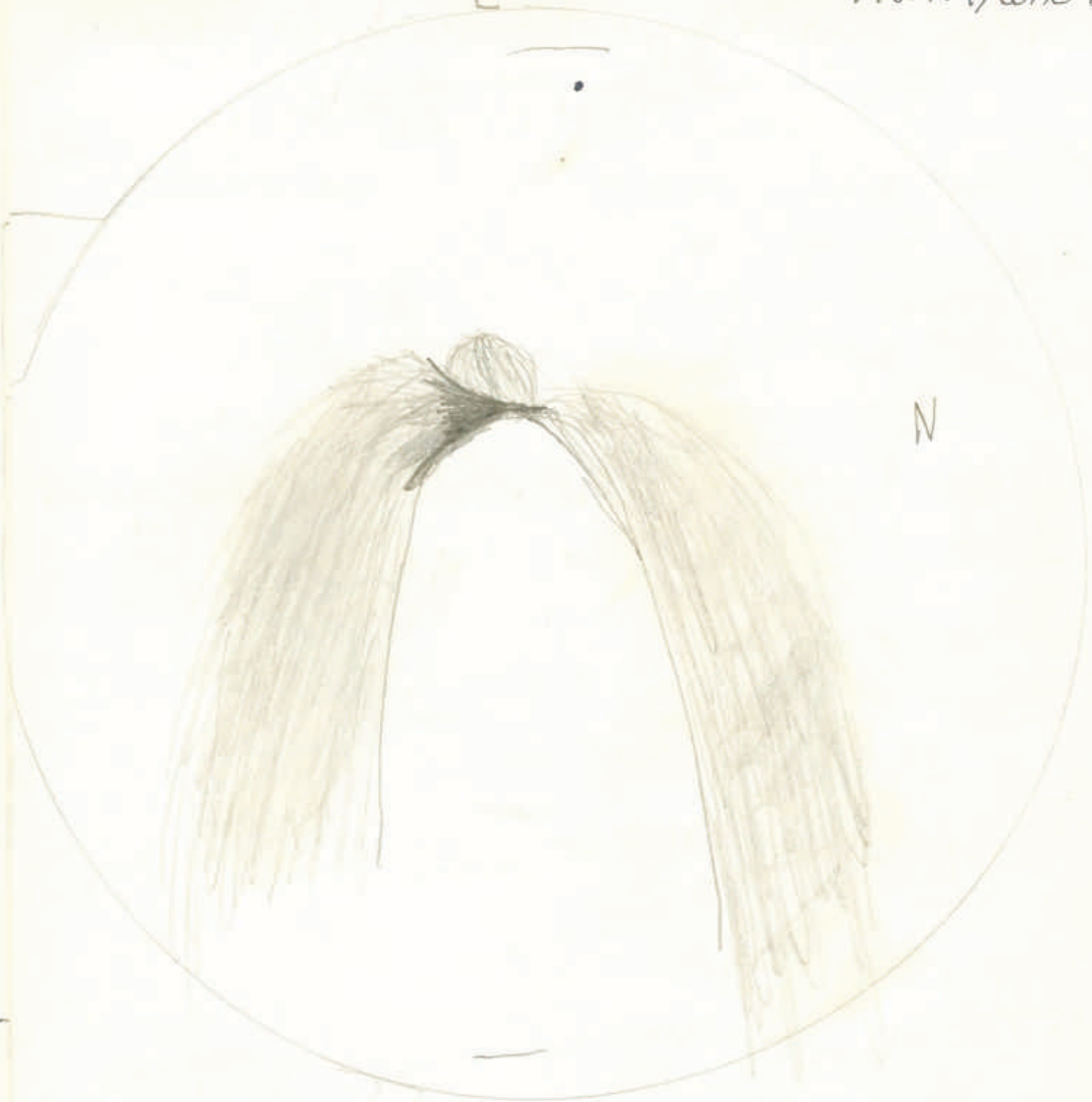
9986 E2. 1900 - 1930 / 2-f / Jarnac / Murerwa LX / - /  
CN3 5<sup>m</sup> W. a clear hole formed in  
the NW.

9987 E3 2225 - 2245 / 10 - yes! - f / Jarnac /  
Miranda / - / NGC 2467 - a   
planetary with a bright star near edge.  
Nebula disappears with averted vision.

9988 M4 Sunday Morning / 415 - 630 / 10-f /  
Jarnac / Miranda, Murerwa LX,  
Pegasus / CN3 1<sup>h</sup> 35<sup>m</sup> E.

See sketch of Hale-Bopp →  
Wendee saw comet this morning.

9988M4, conc'd,



Comet Hale - Bopp

1995 01

Sketched through

Pegasus

6:30 am

strong twilight



9989 S. Sunday, February 9. / 1300-1515 /  
10-F / Jarnac Yard / Pegasus 1-1 SS2-0.  
CN5. 5km. With Wendee, Walk through  
yard.

9990 E2. 2135-2150 / 10-F / Jarnac  
Yard / Pegasus / Wendee / M42. Some  
clouds to NW. Mars rising. Remember  
those frigid nights in the 1960s (1968)  
when I lugged Pegasus's old mount  
from the basement, then back  
with the telescope after an  
observing session?!

9991 E Monday, February 10 / 1900-1920 /  
10-F / Jarnac / Minerva LX 1-1 / CN3 10<sup>m</sup>w.

9992 E2 2230-2245 / 10-F / Jarnac /  
Minerva LX 1-1 / general session.

9993 M3 4:20-6:20 / 3-F / Jarnac / Cole,  
Miranda, Minerva LX / CN3 1<sup>h</sup> 25<sup>m</sup>E.  
Hale-Bopp: Wendee saw it!

H-B  
Through  
Pegasus



99945. Tuesday, February 11/9:30-9:45/  
2-f but clear where Sun was / Jarnac yard)  
Pegasus 1-1552-0.

9995E2 8:20-8:45 pm / 7-fm / Jarnac /  
humid after rain / Pegasus / Wendee /  
& Leo area.

\*9996M3 440-640 / 10-F / Jarnac / humid /  
Miranda / Wendee [inside with Bruiser] /  
CN3 1<sup>h</sup>E. E





Comet Hale-Bopp displayed a knot of material, or secondary condensation, at approximately 20 arcseconds from the primary condensation, in PA  $190^\circ$  approximately. The knot was elongated E-W, and was about  $M_1 = 8$ .

Date/Time February 12.50.

9997 E. Thursday, Feb-13 | 2245-2300 /  
7-fm | Jarmac Yard | Pegasus | - /  
Mars.

9998 M 2. | 515-625 / 10-F | Jarmac / Miranda, Minerva LX | Wendee | Comet Hale-Bopp. Wendee saw it through Bruiser, then through Miranda: she described it as a bridal veil. Comet was 1.7, though Jim Scottie called it 1.4. He detected a faint knot of material about 10 arcsec from primary condensation.  $38^\circ\text{F}$ .  
CN3 40 m<sup>2</sup>E

9999 S. Friday, Valentine's Day! | 11:30-noon | 10-F | cold + windy | Pegasus / Wendee | Sun-SS2-0. CN5.



\*\*\* | ♥♥♥♥ E2. Valentine's Night. 2040-2120/  
7-fm | Jarmac | Minerva LX | Wendea. | Moon  
seen through Minerva; Moon + M42  
through Bruisart Cole.

OF all the observing sessions I've had  
with David, this was by far the most romantic!  
Laying on lawn chairs, inside of the observatory, &  
simply enjoying the night sky was wonderful! ♥

10001 M3. 4:40-6:15/10-f | Jarmac | Miranda,  
Minerva LX | - | CN3 1<sup>h</sup> 15<sup>m</sup> E. TVCrv, ~~CA5~~  
(CN3e).

10002 S February 15/1000-1015/10-f | Jarmac  
Yard | Megarus 1-1 SS 2-0.

10003 M Sat | Sun, Feb <sup>15</sup>/16 | 530-615 (3-f)  
Jarmac | Miranda, Minerva 1-1  
CN3 20m E, Hale Bopp at 1.3,

CN3e, TVCrv  
10004 E 17 Feb | 2100-2215 (3-f) | Kellogg U. Obs, Indianapolis | Ercubus  
telescope high atop ground level.

10005 SE. Saturday, 22 February | H6 1740-  
1800 | 7-f | Peter's house, London | Tom  
Bopp, Peter | green flash. Herschel setup.

10006 SE. Sunday, 23 Feb | 1730-1900 | 7-f |  
Peter's house, London | party | I saw green  
flash; unsuccessful search for HB.



10007 M2. 6:30-7:00 Feb. 23/24/3-F/Peter +  
Dianne's home / Herochel. Unsuccessful search  
for Hale-Bopp in brightening, and  
temporarily clearing, sky.

10008 S Monday, Mar February 24/1500-1515/  
Royal Military College / Tom Bopp  
Beautiful telescope on Baker-Nunn Mount.  
It is a four-axis satellite tracking  
telescope with 24-inch telescope!

10009 E2 2/08-215/7 FIRM C / Leo + Denise +  
Tom / Moonrise.

10010 E3 ~2330-0000~ / 7-Fm / Oso Observatory/  
Sharbot Lake / Denise, Leo, Tom / clear!

\*10011 M4. 415-515 / 7-Fm / Sharbot Lake, on  
the lake, Oso Observatory / binoculars  
Leo, Tom, Denise / Fabulous session.  
The comet was rising, well up in the  
Northeast. The ice was expanding,  
small explosion-like cracks. Very  
cold. - 8 F.

10012 S. Sunday, March 2/1030-1045/10-F/  
Jarnac yard / Pegasus 1-1 SS2-0.



\*1001352. 2-3 am / 3-f / Jarnac / removal of Minerva +  
Epo's mirrors for recoating.  
✓ 100155. Monday, March 3 / 11-11:15 / 10-f /  
Jarnac Yard / Pegasus / Wendee / SS2-0.

10016 E 1930-2045 / 10-f / Jarnac / Miranda /  
Wendee / CN3 1<sup>h</sup> W.

10017 M3 5:20-5:40 / 10-f / Jarnac Yard /  
Wendee / Little Bruiser, Pegasus. / Comet  
Hale-Bopp. CN3 15<sup>m</sup> SE, in clear area  
near horizon.

Sunday, March 2 after 1:352.

10014 M3 / 5:25-5:45 / 10-f / Jarnac Yard / Pegasus /  
- Comet Hale-Bopp:



Comet Hale-  
Bopp  
Mar 2/3  
Pegasus

10018 E. Tuesday, March 4 / 1915-2100 / 10-f / Jarnac /  
Miranda / - / CN3 1<sup>h</sup> 25<sup>m</sup> E.

10019 M2. 5:15-5:45 / 3 -f / Jarnac Yard / Pegasus /  
- Miranda / CN3 15<sup>m</sup> E. Comet Hale Bopp.  
Wendee saw w/ Bruiser through window  
barrier through Miranda, see drawing →

10020 S. Wednesday, March 5 / 8:30-8:45 /  
3-f / Jarnac Yard / Pegasus / Wendee /  
SS2-0.

10021 S<sub>2</sub> 17-18:00 / 10-f / Jarnac / photographs  
of children for "Sharing the Sky" /  
Wendee, neighbors Dale + Nancy.



10022 E3. 2230-2300/10-F/Jarnac/Miranda/  
-Wendee/CN3e with Miranda/.

10023 M4 | 04 7-0530/1-10-F/Jarnac/Miranda/  
Wendee with Bruiser/ Comet Hal-Bopp/

CN3 35min F. Cloudy with lightning,  
then rapid clearing. Windy. Launch

from White Sands  
→ Thurs, Mar 6/10:00-10:15/10-F/J.yard/Pegasus/W/SS2-1.

10024 S. → Thursday, March 6/0030-0100/3-F/

\*10025 M2. Jarnac/Minerva with newly coated  
mirrors, Echo with newly coated  
mirror, Miranda/CN3e, M13. View  
much more contrasty. Clearly noticeable  
improvement!!

10026 M2. 5:05-5:40/10-F/Jarnac/Minerva/-1

CN3 25min E, Hal-Bopp.

10027 S, Fri, Mar 7, 4030-1045-1 3-F/J.yard/Echo/-SS2-1.

10028 S2 Saturday March 8/9/4 6pm/3-F/Minerva/  
Echo/Wendee/

SS2-0.  
Test for  
Minerva.

.. Hal-Bopp  
through  
Miranda  
Mar 5 UT  
10019 M2



10029 E3 Saturday, Mar 8/9/1930 - 2040/3 - F/Jarnac,  
Minerva LX1-1 CN3 10<sup>m</sup>W. Highly successful  
test of Minerva. New coatings. A.N.D. =  
push back of mirror yellow for better  
collimation and full view of optical path.  
After all these years, Minerva works better  
than ever before.

10030 M4. Sunday morning 15-6/10 - F/Jarnac/  
Miranda, Minerva LX1-1 Hale-Bopp,  
CN3e, TVCrv, CN3 25<sup>m</sup>E. with Minerva.


10031 S. Sunday, March 9/10/9:45-11/10 - F but breezy/  
Jarnac/Wendee, Virgil + gdc/dm / Mintaka/  
SS-2-1. ☉ Plan for wind baffle on E. side.

10032 SE 2 18:30-1850/7-f/Houghton Rd/Wendee/  
green flash.

Hale-Bopp detail

10030 M4

Minerva.





10033 E. 1830-2015 / 10-F / Jarmac / Minerva LX / - /  
CN3 30m W. Earlier, with Echo, very young  
Crescent Moon, less than a day I think.

10034 E Monday, March 10 / 11 / 2000-2100 / 3-F /  
Jarmac / Miranda, Minerva LX / CN3 25 m W.  
Windy.

10035 M2. Tuesday morning / 430-6 / 10-F / Jarmac /  
Miranda, Minerva LX / Wendee / Wendee  
got a beautiful view of Comet Hale Bopp.  
CN3 30m E.

Drawing through Miranda: 0535.



10036 S. Tuesday, March 11-12 / noon-12:30 / 10-F /  
Jarnac / -Mintaka 1-1 SS2-0.

10037 E2 1915-1930 / ~~10~~<sup>3</sup>-F / Jarnac / -Miranda LX /  
Wendee / Hale Bopp in evening, near horizon.

10038 #E3 2230-2250 / 3-F / Jarnac / Miranda / - /  
CN3e, TVCrV.

10039 S Wednesday, March 12 / 12:15-12:45 /  
3-F / Jarnac / Mintaka / SS2-0. Prep for  
CN3F.

\*10040 SE2 Wednesday, March 12 / 1700-2315 /  
10-F / Jarnac / Miranda / ~~1~~ / CN3e, TVCrV.  
Preparation for CN3F, Ophelia, photography

to take place there. morning. Earlier, from 17:00 to  
20:00, a film crew from Brazil came to  
the observatory to interview me. It was a  
very productive session!

10041 M3 Thursday morning / 4:30-6:00 / 10-F /  
Jarnac / Miranda, Ophelia LX / Wendee,  
who was incredibly helpful / CN3F.  
2 photos of Comet Hale - Bopp.

1. 1 min  
2. 2 min

10042 E Thursday, March 13 / 14 / 2330-2350 /  
10-3-F / Jarnac / Miranda / - / CN3e TVCrV.



10043 E. Friday, March 14-15/1930-2030/3-F/  
Jarnac | Miranda, LX Abne/Wendee,  
two neighbor families from the east  
on Weststones | H-B, Mars, Moon.

10044 S. Saturday, March 15/8:00-8:30/10-F/  
Jarnac Yard/Pegasus/Wendee/SS2-0,  
Projected onto Wendee's white shirt!

10045 E2. 1915-1945/7-F/Anthony's Restaurant  
-Wendee, who first saw the comet  
Mother, Elaine, Keith | Comet Hale-Bopp.

10046 M3S Sunday morning/4:15-7:30/3-F/  
Jarnac | Miranda, Minerva LX,  
Yashica/Tim Hunter | CN3 25<sup>m</sup> E.  
Hale-Bopp, several pictures, SS2:0.  
Drawing: CN3e, TVCr.





10047E Monday, March 17/18/1900-2030/7-F/  
Jarnac/Minerwa, Miranda/Virgil/Wendee/  
const. of wind baffle on E. side. Comet,  
CN3 30 minutes W. with Minerwa Yashica:  
several pics of Comet with A city below.

10048M2. 4:45-5:45/10-unf, then F/Jarnac/  
Minerwa, Miranda, Yashica, Mintaka/Wendee  
inside, saw comet w/ Bruiser.

While mounting the Yashica, I accidentally  
bumped into Minerwa while it was lying on  
the black chair. The telescope fell to the floor.  
The mirror cell with mirror was forced, by the  
loss of 2 of the 3 bolt holes. I continued  
with the session's program, taking  
pics of the comet, comet hunting with  
Miranda:

CN3, 20m E. and CN3e TVCru,  
and, at the end, doing a sweep  
with a badly de-collimated Minerwa.  
Finally I observed Jupiter through Mintaka.  
I moved Minerwa inside for repairs when  
the session ended.

10049E Tuesday, March 18/19/1900-2000/  
7-Fm/Jarnac/Minerwa LX/Wendee/  
CN3 20mins. W. Minerwa is now fully  
restored!! Mirrors are fine, as are  
eyepiece & tube!



10050 M2 Wednesday morning / 4:45-5:45 /  
10-F / Jarnac / Miranda, Minerva LX / - /  
CN3 20 min E. Minerva is completely  
repaired and doing very well!

naked eye  
view

10051 E. Wednesday, March 19 / 1910-1930 /  
~~10~~ 7-F / Jonathan's Cork Restaurant /  
Wendee, Gerry's family, Annette / Comet  
Hale-Bopp in NW, tail 11 horizon.

10052 M2 0030-0045 / 7-Fm / Jarnac / - /  
Wendee, Joanie, Gail.

10053 S. Thursday, March 20 / 15:30-16:15 /  
10-F / Jarnac / Mintaka / Rolf, Linda, Wendee,  
Matthew / SS2-0.

10054 E 2. 1900-2015 / 7-Fm / UoFA, then  
Safeway, where I saw the comet, then  
to Jarnac old station where I ~~saw~~ had  
a good view of the comet. Then  
to Jarnac new station where I viewed  
it with Wendee, Gail + Joanie.  
CN3 5m West.

10055 E 2. 2330-2350 / 7-Fm / Jarnac / Minerva

LX/-/ Mars at 5mm through Minerva,  
beautiful disk! Minerva is working very well.

10056M. Friday morning / 4:45-5:50 / 10-F, moonset /  
Jarnac / Miranda, Minerva LX / - /  
CN3 30<sup>m</sup> E. Interview with KFYI  
in Phoenix.

10057S. Friday, March 21 / 11:20-11:40 / 10-F /  
Jarnac / Mintaka / Wendee / SS2-O.

10058E2. 7:15-8:15 / 7-F / On Chadash  
Congregation / - / Wendee, her family,  
others / Comet during + before service.

10059S. Saturday, March 22 / 1500-1700 / 3-F /  
Jarnac / Wendee, Bob + Lisa Sumner-  
field, Joaniet + Gail, Virgil / SS2-O.  
with Mintaka,

\*10060E2 1700-130 / 3-F / China Rose / Comet / Out of town party

10061M3 0030-0045 / 3-F / Jarnac Yard. 1

10062S. SUNDAY, MARCH 23 / 7-7:30 / 3-F /  
Jarnac Yard / Wendee, Gail, Joaniet-  
SS2-O with Pegasus.



\*\*\*10063 SEM2 / March 23, 1994 Sunday / 1730-0030 / 3-7m-10-f / Jarnac / Miranda, Echo, Minerva, Pegasus / approximately 120 people / WEDDING RECEPTION. Hal-Bopp was high, N of M31. Eclipse began at 8; mid-eclipse at 9:20<sup>±</sup>, ended near 11. Steve Edberg + Larry covered it photographically + with video.

- \* hora dance through the yard; other dancing during the night.
- \* Aunt Buddy and family saw eclipse through Echo, the scope she + Uncle Sidney gave me in 1960
- \* TVCru not in outburst
- \* Maximum eclipse - moon was ruddy color, sky dark.
- \* Comet at mag -0.5; set around 9.
- \* at start of session, our pics taken for S+T in wedding attire by Bob-Summerfield
- \* cake cutting, bouquet, garter.
- \* from professionals doing their thing to first-time observers, + 2 TV producers
- \* Biorsei - Algol - seemed not quite at maximum but it was.



10064 S. / March 24 / Monday / 2-3 / 10-F / Jarmac /  
Lonny + Todd, Gene + Carolyn, David  
Taylor, Wendee / - / SS2-0.

10065 E2. ~11-11:40 / 7-fm / Jarmac / Minerva LX / - /  
found I had left Minerva LX on from  
the earlier session. Needs just a fuse,  
Thank goodness!

10066 E March 25 / 1900-1915 / ~~10~~ 7-F / Outback  
restaurant / Mother, Ed, others, David  
Taylor, Wendee / - / Hale-Bopp.

10067 EMB 1150-0010 / 7-fm / Jarmac yard /  
Echo / cold + windy / Moon.

\*10068 E. March 26 / 1900-2100 / 7-f / Bob  
and Valerie's house / party for our  
wedding! Comet Hale-Bopp.

10069 M2 515-600 / 7-fm / Jarmac /  
Minerva LX / - / Talk America Radio  
Network interview. CN3 5<sup>m</sup>E. Bright.

10070 S. March 27 / 1130-1200 / 3-F / Jarmac /  
Ashley + family / - / ~~EA~~ SS2-0.

10071 E2 / 7:30-7:40 / 7-f / Square dance hall / Wendee  
+ others / Hale-Bopp



10072 E 3/8:30-10:00<sup>PM</sup>/10-3-F/Jarmac/  
Minerua LX, raw fuse/-/CN3 30m W,  
Mars with 5mm Lanthanum eyepiece. TV Crv.  
March 28. CN3e.

10073 E /8:50-10:15 PM/10-F/Jarmac/Minerua LX/  
-/CN3 30m W. Mars. CN3e. TV Crv.

10074 M. Sunday morning, March 29/30/  
4:15-5:00/3-F/Jarmac/Minerua LX/-/  
CN3 20minutes E.

10075 E. Sunday, March 30/31/7:30-9pm,  
EST/at sea, aboard the m.s. Veendam/  
Minerua/Wendee, Mother, Steve O'Meara  
& Donna <sup>Briard</sup>, others/Comet Hale-Bopp. Cds.

10076 E. Monday, March 31/April 1/7:45-9pm,  
AST/3-F/at sea, aboard the Veendam/  
Minerua/Wendee, Mother, the ship's  
Captain and some senior officers/Hale-  
CN3 Bopp through occasional clouds.  
5mgW. Quiet bright, ~ -0.8 or so, M42.

10077 E. Tuesday, April 1/2/7:30-9pm/  
AST/3-F/at sea, aboard the  
Veendam's stern deck/Minerua/  
Wendee, Mother, etc/Comet.  
Faded from last night, -0.5,  
M42, B5, 45.



10078 E. Wednesday, April 21/3/8-9:30  
pm/3-f/St Kitts, on the Veendam's upper-  
most deck/Wendee, Mother, etc. / Hale-  
Bopp setting over St. Kitts, viewed  
through Minerva. M42.

10079 E Thursday, April 3/4/10-1020pm/  
3-2-f/At sea near St Thomas, US  
Virgin Islands / -1- / heavy swell,  
at least 12-15 feet. Boat pitching  
heavily. Saw this from top deck.

10080 E. Friday, April 4/5/7:30-9:30pm/  
3-f/At sea near Bahamas, Aboard the  
Veendam, on topdeck / Wendee,  
etc / Comet looking very nice! thru Minerva  
Tail faintly through 30 degree.

10081 E2. 11-11:30pm/3-f/Veendam/Wendee,  
etc / unsuccessful search for  
Southern cross.

10082 E. Saturday, April 5/6/7:55-9:50/  
3, then 9:10, f/Topdeck, at sea,  
aboard the Veendam, N of Nassau/  
Wendee, Mother, Steve, etc from  
StT/Comet Hale-Bopp - Mu - 1.0  
with 30° tail faint through  
Cassiopeia, Minerva, Bolide West.



10083E2. 11-12 pm, midnight / 9-f / aboard  
Veendam, top deck / Wendee, Steve, Brian  
Marsden / N. 3 stars of S. cross. Great  
final night at sea.

10084E. Sunday, April 6/7 / 7:30-9:00 pm /  
10-f / Jarnac / Minerva LX / Wendee,  
art + Jeff, our home's builders /  
A view of HB better than any at sea.  
Comet was higher. Took 12 pictures,  
mostly of comet. Also CN3 15 min W  
through Minerva + Miranda. Beautiful  
evening.

10085E2. 11-11:20 pm / 10-f / Jarnac / Miranda H  
CN3e TV Crv.

10086M3 → 5:00-5:15 / 3-f / Jarnac Yard / Pegasus / CN35<sup>m</sup>E.

10087E. Monday, April 7/8 / 7:45-9:10 pm /  
10-f / Jarnac / Minerva LX / - Wendee /  
Hale Bopp,  $M_V = -1.0$ ,  $30^\circ$  tail in  $PA \sim 0^\circ$ .  
curved. CN3 40<sup>m</sup>W.

10088E2. 11:10-11:25 / 10-f / Jarnac / Miranda /  
- / CN3e, TV Crv.

10089E. Tuesday, April 8/9 / 2015-2100 int /  
83-f / Portland / - / Robert Burtham,  
Roger Shaw / Hale-Bopp. also 2200-2215 int.

10090E. Wednesday April 9/10 / 2200-2230 / 3-f /  
Portland, Or / Roger, Robert / - / Hale-Bopp.



\* 10091E / ~~Wednesday~~ <sup>Thursday</sup>, April 10/11/2130-2150/  
3-F/Portland/-1-1/Hale Bopp, clear, 2° tail.  
Saw occultation of Aldebaran at ~ 21:38.  
Observed the Moon approaching the star, and  
then, just like that, Aldebaran winked  
out.

10092S. Fri, 11/1600-1615/7-F/S. Monica beach 1-1-CN5 S. U.S.

\* 10093E 2 Friday, April 11/12/1930-2100/  
7-F/Caltech campus, Alan Hale, Franky  
Tom Bopp, Paul Chodas, many others /  
Views of comet, with hoods, through  
several scopes. Comet chaser's night  
at Caltech. It was wonderful fun.

10094E, Saturday, April 12/13/2000-2200/  
7-fm/Jarnac/Minerva LX, Miranda 1-Wenda  
Phlower/CN3 D hours 50 minutes W.  
CN3e TVCru outburst?

10095M2. 0030-0145/10-F/Jarnac/-Miranda/  
-1/CN3e. TVCru-not in outburst. Learned  
pattern of faint stars near Tombaugh's  
star.

10096E. Sunday, April 13/14/2000-2130/  
7-fm/Jarnac/Minerva LX, Miranda/  
Wendee/CN3 1h West. CN3e, TVCru.



10097 M2 Monday morning / 4:20 - 5:30 / 10-F /  
Jarnac / Minerva LX / - / CN3 25 mins. E.  
Jupiter.

10098 E Monday, April 14/15/2000 - 2130 / 3-F /  
Natro parking lot / Wendee, others / Nature  
Company book signing and comet observing  
party with 8" LX and other telescopes.

10099 E 2 / 2300 - 2320 / 7-F / Jarnac / Miranda / - / CN3e TV /  
and test of Minerva's new hand-optd. 2ndary bolts.  
10100 M3. Tuesday morning / 4:05 - 5:30 / 10-F /  
Jarnac / Miranda, Minerva LX / - / CN3  
50 minutes east.

10101 E. Tuesday, April 15/16/2000 - 2130 int /  
7-F / parking lots in town, then home / Echo at  
home / Wendee / Views of fading comet;  
hoods visible with Echo.

10102 ~~M2~~ E Wednesday, April 16 / 2300 - 2320 /  
2-F / Jarnac / Minerva LX / Test with  
new, custom made mirror alignment  
locks.

10103 E Thursday, April 17/18 / 2145 - 2210 / 6-3-F /  
South Dakota State University, Brookings,  
S.D. / - / Comet viewing after successful  
lecture. Comet brighter than in 0101E.

10104 S. Friday, April 18 / 12:30 - 14:00 / 3-F / McCrory  
Gardens, SD 57051 / - / - / CN5 SVen



10105 E. 2/2030-2050/3-F/Jarnac/Wendee, Bob Giff on phone /  
H.B. - 3.1 <sup>woods</sup> <sup>Bright</sup>

10105 E. Saturday, April 19/2000-2100/  
10-F/Jarnac/Minerva LX/CN3 15m W.

10107 E. Sunday, April 20/2000-2015/  
3-F/Jarnac/Echo observations.

10108 E. Monday, April 21/2230-2245/  
3-F/Jarnac yard/Wendee/Moon - full,  
but very cirrusy and mild.

10109 E. Tuesday, April 22/23/2015-2045/  
3-F/Jarnac Yard/Pegasus/Wendee/  
full Moon - actually just past full.  
The rays from Tycho were very marked  
and easy to see. Crustarchus was  
very bright.

10110 3. Wednesday, April 23/1600-1620/3-F/  
very windy Pegasus/1 SS2:0.

10111 E2 Wednesday April 23/2000-2100/3-F/  
Jarnac/very windy from W/Minerva LX,  
Miranda/1 CN3 15m W. Minerva,  
TV Owl 13. - possible outburst.



See 10105 E  
simple hood  
sketch of HB  
SS2-1.

10112 S. Thurs 4p 24/25  
1030-1430/3-F/  
Jarnac yard/windy/rock laying on paths to observatory.



10113 E. Thursday, April 24/25/ 2135-2200/  
10-F / just before moonrise / Jarnac / Miranda  
- / CN 3e TV Crv 13.1 OUTBURST confirmed.

101135 Friday, April 25/26/ 0900-0915- / 3-F/  
Jarnac yard / Pegasus / Wendee / SS2:0.

10115 E2. Friday, April 25/26/ 2130-2200 / 10-F/  
Jarnac / Miranda / - / CN 3e TV Crv. 13.3

101165 Saturday, April 26 / 0850-0905 / 3-F/  
Jarnac yard / Pegasus / SS2:0.

10117 E Sunday, April 27/28 / 1930-2030 / 3-F/  
Jarnac / Minerva, Miranda / - / Hale Bopp.  
Fading but tail appearance changing



CN 3e TV Crv 14.7  
used nearby 14.6  
as comparison  
star.

10118 S. Monday, April 28. 0835-0850 / 3-F/  
Jarnac yard / - / Wendee / SS2:0.



10119 E2. Monday, April 28/2100-2330/  
10-F-3-F/S - Observatory, Flagstaff / Ophelia  
Gene + Carolyn / 4 pictures, 2 at 1m and  
2 at 7min. 1min of G.B went down to 13.3!

10120 E. Tuesday, April 29/30/2100-2130/  
10-3-F / Jarnac / Miranda / - / CN3e TV Crw 14.5

10121 E2 Wednesday, April 30/2100-2100/  
10-F / Jarnac / Virgil, Wendee / CN3 10<sup>m</sup> W.  
CN3e TV Crw 14.8

10122 S. Thursday, May 1/0745-0850/10-F/  
Jarnac Yard / Wendee / SS 2:0

10123 E2 May 1/2/2100-2130/10-F, windy / Jarnac  
Wendee / CN3e, TV Crw, (15.0. much faded in  
just one night.

10124 M3 Friday morning, May 2/0315-0445/  
9-fm / Jarnac / Minerva / - Peter, on phone /  
CN3 45m E.

101253. May 2/3/10:00-10:15/10-F / Jarnac  
yard / Pegasus / - / SS 2:0.

10126 E2 1830-2100/3-F / Greenberg's house / Greenberg  
family, children from Tuesday Hebrew Accademy



and teachers, Wende / Co Echo / Comet  
Hale-Bopp, Mars, Sirius.

10127E3. 2230-2315/10-F / Jarnac / Minerva.  
LX, Miranda / CN3e TVCrV 15.3.

10128S. Saturday, May 3 / 0800-0815 / 3-F /  
Jarnac Yard / Pegasus / - / SS2:0.

10129E Sunday, May 4 / 5 / 2315-2335 / 10-F /  
Jarnac / Miranda / - / ~~GN~~3e # TVCrV (14.6  
LX: Mars.

10130M2 0340-0435 / 10-3-f / Jarnac / Miranda,  
Minerva LX / - / CN3 50<sup>m</sup> E. 4:02 am  
| very bright Eta Aquarid at -4.

10131E. Monday, May 5 / 6 / 2330-2350 / 10<sup>-3</sup>-F /  
Jarnac / Miranda / - / CN3e TVCrV (13.3.

10132E. Tuesday, May 6 / 7 / 2000-2100 / 3-F /  
Jarnac / Minerva LX, Miranda / - / CN3e  
TVCrV (14.6. Look at Hale-Bopp with  
Minerva, Comet fading,  
though still bright ~2.

10133S. Wednesday, May 7 / 8 / 1400-1420 / 3-unf,  
then F / Sun's store / - / Wende. I lost car keys.  
They found them! CN5 SVen.



10134E7 May 7/8/1930-2130/10-F/Jarnac/  
neighbor children group, Wendee/Minerwa<sup>LX</sup>  
Miranda - M13, Mars, Hale-Bopp. CN3e  
TV Crv C14.6

10135M3 '0330-0445/10-3-F/Jarnac/  
Minerwa, Miranda - | CN3 30 min E  
NGC 7293. Helix nebula picked up easily  
through Minerwa.

10136EM May 8/9/2200-0200/1-F/Texas  
Star party, Leakey, Texas/Steve + Amelia  
Goldberg, Dave Clark, Steve O'Meara/  
cloudy.

\*10137AN Friday, May 9/10, 1997/2230-0430/  
3-F/Texas Star Party/Amelia Goldberg's  
telescope, Minerwa (many others)  
CN3 with Minerwa 1<sup>h</sup>40<sup>m</sup> N, E. NGC  
6791, open cluster. CN3e TV Crv C14.6

\*10138AN Saturday, May 10/11/2240-0430/  
10-3-F/~~Jarnac~~ Texas Star Party/Amelia's  
telescope - 13", Minerwa | CN3e TV Crv  
C14.6, CN3 4<sup>h</sup>20<sup>m</sup> W, N, E.



10139 E. Sunday, May 11/12/2100-2130/3-f/  
Jarnac/Miranda - 1 CN 3e TV Or (14.6

10140 S. Monday, May 12/13/10230-1600/3-f/  
Jarnac/ installation of tangent arm on  
LX/Minerva.

10141 E2. 2100-2330/3-f, then unf/Jarnac/  
Bob Summerfield/Minerva LX, Miranda/  
unsuccessful installation of tangent arm.  
Bob says, "some nights you win, some  
nights the telescope is going to win. On  
those nights, better to go inside & try  
again later."

10142 S. Tuesday, 13/14/10:15-11:50/10-f/  
Jarnac/Miranda, Minerva LX, Montaka/  
SS2: 2, and FINALLY successfully  
completed tangent arm installation.

10143 E 2. 2100-2330/3-f/Jarnac/Minerva LX,  
Miranda/Wendee, Bob/check of tangent  
arm.

10144 MS w Thursday, 14/15/9-9.15/3-f/Jarnac yard/  
Pegasus/SS2-0.



- 10145M. Friday morning, May (15)/16/3:15-4:30/  
 3-f/Jarnac/Minerwa LX/-/CN3 40m E  
 Minerwa not quite remaining boresighted/LX
- 10146M. Saturday morning, May (16)/17/3:45-4:30  
~~Same, but~~  
 3-f/Jarnac/Minerwa LX/-/CN3 30m E.  
 Same, but consistent.
- 10147S. Monday, May 19/20/9:30-9:45/3-f/Jarnac  
 yard/Pegasus/-/SS2-2 spots.
- 10148E Tuesday, May 20/21/1900-2030/first,  
<sup>almost</sup> saw full Moon through sunset - lit cumulus  
 clouds in shopping center at Palo Verde  
 + I-10. Then saw Moon thru clouds to  
 home. Then: 3-f/Jarnac/Minerwa LX/  
 Wendee/Test of boresighting. Scope  
 seems to work but heavy eyepiece bends  
 Minerwa's optical path.
- 10149S. Wednesday, May 21/22/9:00-9:15/  
 10-f/Jarnac/Wendee/Pegasus/SS2:6!  
 Finally I have solved the problem  
 of Minerwa's not remaining boresighted.  
 As the LX moves up, down, or across,  
 Minerwa exaggerates the up, down, or  
 across motion because of the weight of  
 the scope + eyepiece!
- 10150E2. 2300-2320/3-f/Jarnac yard/-/  
 Wendee/peaceful moonlit outdoor time.



10151S. Thursday, May 22 / 08:40-09:15 / 3-F /  
Jarmac Yard / Pegasus / - Wendee / SS2-3, 12.

10152E2. 2045-2115 / 3-F / Jarmac / - Wendee /  
birthday session, just looking up.

10153S. Saturday, May 24 / 12:40-14:10 / 3-F /  
- Observatoire de Club des Astronomes  
amateurs de Laval / 12" LXI /  
Jean-Marc Richard, ~30 others and  
Wendee / Beautiful public obser-  
vatory. 1 big spot.

10154M. Sunday, May 25 / 26 / 0100-0130 /  
3-F / Gerry's home, Montreal / - Wendee &  
Gerry / Moon in a clearing sky.

10155E Tuesday, May 27 / 28 / ~2300-~2315 /  
3-F / Jarmac Yard / <sup>Miranda</sup> / Wendee / CN3e (3.3)

10156E Wednesday, 28 / 29 / 2300-~2330 / 3-F /  
Jarmac / Miranda / CN3e TV 6U (14.6)

\*10157EM. Friday, 30 / 31 / 2130-0130 / 3-10F /  
Shoemaker-Ley Observatory, Flagstaff /  
Carolyn, Wendee / CN3F 12 pictures.  
Wendee <sup>was</sup> very helpful tonight.  
She recorded observations while  
outside the observatory. This pre-  
venting possible light on film. A  
very successful project tonight.



10158M May 31, June 1/03: 10-04:05/10-f (a small moon) / Jarnac / Minerva LX / - / CN3 40<sup>m</sup>E.

10159AN

Sunday, June 1/23/32 /20: 15-04: 15/10-F;

Some wind / Jarnac / Miranda, Minerva LX /  
Wendee / CN3: 4<sup>h</sup>40<sup>m</sup>, West, North, East.  
Unsuccessful search for possible comet  
in CrB. CN3e TV CrV (14.8)

10160 E. Monday; June 2/3/2230-2345/

3~~h~~-F / Jarnac / - Bob Summerfield  
over phone / CN3 1<sup>h</sup> W<sub>1</sub><sup>min</sup> N with Miranda  
CN3e TV CrV (14.8).

10161 E Tuesday, June 3/4/2330-2345/

3-f / Jarnac Yard.

\*10162 AN. Wednesday, June 4/5/2015-0415/

10-13-F / Jarnac / Minerva LX, Miranda / - /  
CN3 5<sup>h</sup> W, N, E. CN3e TV CrV. (14.8).

10163 E Friday June 6/7/2050-2230 (3-F)

Jarnac / Minerva LX, Miranda / - / CN3e  
TV CrV (14.8). CN3 1<sup>h</sup> W.

10164M2 0315-0440/10-3-f / cool + beautiful /  
Jarnac / Miranda, Mintaka / - / CN3 35<sup>m</sup> E.



Saturday June 7/8.  
10165E 1900-2115/1-0-F/Grand Canyon, 30  
years since first visit / Dean's binoculars/  
Wendee, Dean Ketelsen, Grand Canyon  
Star Party.

10166M2 0030-0230/3-1-F/Shoemaker Levy  
observatory / Optek / Carolyn and Wendee!  
2 pics for comet confirmation. (No comet.)

10167E Sunday, June 8/9/2000-2100/10-F/  
Jarnac / Minerva LX, which Wendee + I moved  
to S. wall / Miranda / Wendee / CN3 5m W.  
CN3e TV Crv (14.6)

10168M2 0230-0335/10-F/Jarnac / Minerva LX/  
- / CN3 45min E, first hunt from new  
location.

10169E Monday, June 9/10/2130-2145/7-Fm/  
Jarnac / Miranda - / CN3e TV Crv (14.6)

10170S. Tuesday, June 10/11/0830-0850/10-F/  
Jarnac Yard / Pegasus / SS 2:0.

\*10171SAN2. 1900-0415/7-fm-10. F, Unf between  
0040 and 0145, then f / Jarnac / Mintaka, Minerva  
LX, Miranda / Wendee / CN3e TV Crv (14.6,  
CN3 4<sup>h</sup> 10<sup>m</sup> W, N, E.



There was a strange accident. At 0040 I was raising the chair when the power cord got caught and the wires ripped out. The chair stopped very high. I then let myself off the chair but on the way down I hit the telescope with my head. Then I hit it again when I reached the ground. The secondary must have been very loosely mounted in its cell, for it fell out and struck the primary. I tried to save the secondary by painting the damaged edges black but I fear it will need to be replaced. I removed the primary for inspection, it suffered some damage but it will be okay! That is the good news. I cleaned both mirrors installed them, and resumed the night's work after about 1 1/4 hours. I told Wendee what was happening. When I was completed the work, I said to her that Miranda had survived the accident, and she said that she was praying that the telescope would be okay! I love Wendee very much.

101725. Wednesday June 11/12/1130-1230/  
10-3-F/Jarnac/Miranda mirror cleaning  
& alignment/Wendee/also SS2:0 with  
Mintaka.

\*101735AN2. 1915-0430/3-F/Jarnac/Mintaka,  
Miranda, Minerva LX/Wendee/The big



telescope is working okay except for its need of further alignment. CN3e TV Grv (14.6)

CN3 6<sup>h</sup> 05<sup>m</sup> W, S, N and E, cloud hopping most of night. Good hunt tonight.

101749. 13/14/1630-1730/7-F/Jarmac/instr. handles on obs.

\*10175E2 Friday, June 13/14/1900-2330/  
7-Fm/ Bigelow and Jedicke home/Wendee,  
Robert + Vicki, Don McCarthy, students  
at Astron. Camp/ Moon, M57 and 87 through  
61, and NGC 6572.

10176S. Saturday, June 14/15/10:30-12:30/

7-F (cool + breeze)/ Jarmac yard / Wood  
sealing the house with Wendee taking  
Miranda.

10177E2 2200-2300/7-Fm/Jarmac/Wendee/  
CN3e TV Grv (13.3).

10178M3, 0230-0415/10-F-beautiful night,  
calm/Jarmac/Miranda, Minerva LX/  
CN3 1<sup>h</sup>E.

10179S. Sunday, June 15/16/7-F/Jarmac  
Yard/1000-1230/Wendee/more wood  
sealing. SS2; D with Mintaka.

Alignment of Miranda's secondary

10180E2 2100-2215/7-F/Jarmac/Miranda/CN3 1<sup>h</sup>W  
TV Grv.

\*10181M3 0245-0530/10-F/Jarmac/Miranda,  
Minerva LX1-1/CN3 1<sup>h</sup>5<sup>m</sup> Possible comet.



10182E. Monday, June 16/17/2100-2130/7-Fm/  
JMC Jarnac / Munera LX, Miranda / CN3e  
TV Gr. 613.3.

\* 10183M2. 0230-0430/10<sup>F</sup>-F / Jarnac / - / Miranda /  
- / CN3 50m E. No comet; obj. was NAC  
949 at 23048.9 +3708. A  
magnificent meteor, -2, from  
to ~~HA~~ across much of the sky,  
slow moving.

10184E Tuesday, June 17/18/2030-2130/  
~~to~~ 7-Fm / Jarnac / Virgil, Wendee / Miranda  
Installation of Magellan.

10185M2 0000-0100 / 7-Fm / Jarnac / Mir-  
anda / - / Magellan test unsuccessful.

10186S. Wed. Jun 18/19/0945-1000 / 8-F /  
Jarnac / Wendee, Virgil / inst. Magellan

10187E2. ~~to~~ 2200-2300 / 7-Fm / Jarnac /  
Miranda / - / Magellan test unsuccessful.

10188SE. Thursday June 19/20/1915-1945/  
7-F / 120 William Carey + vicinity /  
Sunset + green flash. / Lynette -  
look at old site -

10189E2. 2300-0030 / 7-Fm / Jarnac / Miranda  
- / Magellan better.



10190SE. Friday, June 20/21/1900-0000/  
7-Fm / Jarnac / Virgil, then Wendee, Jim,  
Kavri, Christopher, + Jennifer Scott /  
Miranda, Mintaka / Moon. Taurus-  
Littrow, ? Manzinus (at S. End)  
Magellan still problematic.

10191S. Saturday, June 21/22. / 1030-1130/  
7-F / Jarnac yard / Pegasus / Wendee,  
art / SS2:0.

10192E2. 1900-2240 / 7-Fm / Jarnac / Miranda /  
neighbors, Wendee / green flash. Venus.  
Magellan test successful! Aligning  
to west better it seems.  
CN3 1<sup>h</sup>W. CN3e TVCrv C13.3

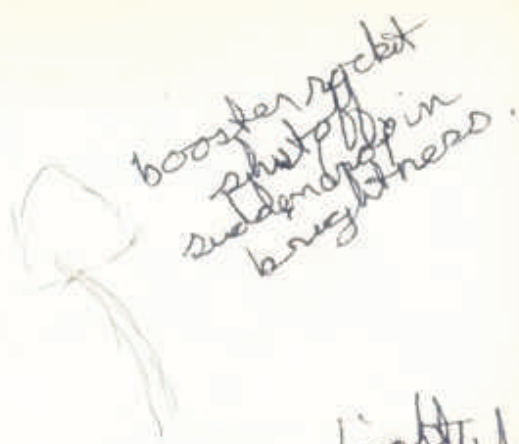
10193S Sunday, June 22/23 / 0930-945 / 10-F /  
Jarnac / Pegasus / Wendee / SS2:0.

10194E2. 2030-2200 / 10-7-Fm / Jarnac /  
Miranda / Wendee, others from art + Jeff's  
party / Venus. CN3 1<sup>h</sup>W. CN3e TVCrv  
C14.6.

10195E Monday, June 23/24 / 2015-2230 /  
10-7-Fm / Jarnac / Wendee / Miranda,  
Mingrva LX / CN3 1<sup>h</sup>W. Fabulous  
missile launch from Vandenberg.



10196E | Tuesday,  
June 24/25 | 2030-2230 |  
10-f | Jarnac / Miranda  
LX, Miranda / Wendee  
CN3 14.5m W. Const.  
New atlas made today  
in 60 sheets 6th mag stars  
and 12.5 mag galaxies.  
Atlas works in  
conjunction with the  
Magellan very well!



booster rocket  
shut off  
suddenly in  
a brightness.

- very bright  
colorful  
cloud

see 10195E.

last night.

10197S, Wed June 25/26/0830-0845/  
10-f | Jarnac yard | Pegasus / Wendee |  
SS2:0.

10198S, Thursday, June 26/27/1030-1045/  
Holiday Inn, Las Cruces | Echo | -SS2:0.

10199E2. 2300-2315 | 10-3-f | Jarnac yard |  
Echo | - Jupiter.

10200 E. Friday, June 27/28/2100-2300 | 10-f |  
Jarnac / Miranda with new magnifying  
glass that Wendee bought for me  
and new part for focuser | - 4 CN3d  
TV Or v C14.8, CN3 14 W, NE.

10201E ~~Sunday~~ <sup>Monday</sup> June 29/2700-2300 | 7-f |  
Queen's University / Ellis Hall Obser-  
vatory / Wendee, Terry D. others.



10202 EM. Wednesday, July 2/2300-0230  
int / 3-f / Makemakes Observatory / "Brüner"  
saw 3 of Jupiter's moons.

10203E Thurs, July 3/2200-2215 / 10-f /  
Jarnac Yard / Echo 1-1M4.

10204S. Friday, July 4/1030-noon / 7-f /  
Jarnac / Mintaka / Wendee / S S2:0. plus  
Miranda repair - new handle installed.

10205E 2 2000-2200 / 3-f / Jarnac / Miranda /  
- / CN3e TV Cir 14.6. CN3 25m W.  
Fireworks seen through Miranda +  
naked eye.

10206M Sunday, July 6/0230-0410 /  
9-f / Jarnac / Miranda / - / CN3 1<sup>h</sup> E.  
Jim Scottie over phone.

10207 E.S. Monday, Jul 7/1100-1110 / 3-f /  
Jarnac Yard / Pegasus / - / SS2:0.

10208 E.S. 11030-1045 / 10-f / Jarnac yard /  
Pegasus / - / SS2:0 Tues July 8.

10209 M2 ~~Thursday~~ <sup>2/9</sup> Thursday, July 10/0300-0330 /  
3-f / Jarnac / Minerva LXI - / CN3 20min E.

10210M Thursday, July 10/11/0245-0415 /  
10-f / Jarnac / Minerva LX / CN3 1<sup>h</sup> E.



\*10211AN Friday, July 11/12/2000-0430/7-10-Fm/  
Jarnac/Mintaka, Miranda, Monerwa LX/  
Wendee/CN3e TVCrv (12.5.  
CN3 6h 30m W, N, and E.

10212S. Saturday, July 12/13/1300-1325/10-F/  
Jarnac yard/Wendee/Pegasus/SS2:0.

10213S2. 1700-1740/10-F/Jarnac/Mintaka/  
Wendee, Art, Forest + Andrew/SS2:0.

\*10214AN3 Saturday, July 12/13/2015-0430/  
7-Fm-10-F/Jarnac/Mintaka, Monerwa LX,  
Miranda/Wendee/CN3e TVCrv (13.3  
CN3 6h 10m W, NW, N, NE, and E. Beautiful  
night. I do not recall ever seeing the  
galactic center so bright in Sgs. Session  
dedicated to our new adopted girl in  
Indonesia.

10215E Sunday, July 13/14/2000-2230/  
10-F/Jarnac/Monerwa, Miranda/  
-The Camerons from Acadia, Bob Gent,  
Wendee/Moon, Mars.

10216EM Monday, July 14/15/2345-0030/  
3-F/Jarnac/1-1 just a long look  
skyward.

10217E Thursday, July 17/18/2300-2330/  
3-F/Jarnac.



10218E Saturday, July 19/1930-2000/3-F/  
Jarnac yard / Wendee, Jean Mueller. Full  
Moon, lightning. Farewell, Gene.

#0219S. Sunday, July 20/1100-1230/0-F/  
Jarnac / Channel 9 / Interview;  
Reminiscing about Gene.

10220E Mon July 21/1930-2030int/3-2-F/~~3~~  
intown / Wendee, Jean.

10221S. Wednesday, July 23/0810-0830/10-F/  
Jarnac Yard / Pegasus 1-1 SS2: 2, 4.

10222E Friday, July 25/1930-1945~12-F/  
Home / Wendee / Sunset.

10223E Sat July 26/~1930~1945~/3-F/home/  
Wendee / Sunset.

10224EP Sunday July 27/~1930~1940/2-F/  
home / Wendee / sunset.

10225E ~~EP~~ Monday July 28/~1930~<sup>2000</sup>~~1940~~/2-3-F/  
Jarnac / Wendee / sunset and pretty clouds.

10226E, Thursday, July 30/2100-2230/10-F/  
Mt Snow, Vermont / Wendee, Joanie, and  
Mark / -1 Mark saw 6 meteors, I saw  
one,

10227ES. Friday, <sup>Aug</sup> July 31/1400-1700/  
~~2030-2130~~/  
3-F / Mt. Snow, Vermont Stellafane.  
for Joanie, Wendee, others.

10228S. Saturday August 1/1300-1700/3-F/  
Stellafane / Marks, others - Rob + Linda, Matthew, Estn.



10229 E2. Saturday, August 2/2000-2100/

3-f | Mt Snow Vermont | Wendee, others |  
rice walk.

10230 S. Wed, Aug 6/1800-1900/3-f | Jarnac | Virgil,  
Wendee.

10230 ~~S.~~ ~~Mon~~ Thursday, August 7/1500-  
1800/3-f | Wendee, Virgil | We learned  
that Wendee will soon be the proud  
owner of a Meade ETX! Wonderful  
news. Today we finished installing  
the power line for Miranda's Magellan.

10232 M. Saturday, Aug 9/10/0245-0430/

10-f | Jarnac | Miranda | - | CN3 1<sup>h</sup> 5<sup>m</sup> E.

10233 ~~A.E~~ Sunday, August 10/11/1900-

2300/3-f | Jarnac yard | Bob + Valeria,  
Wendee | Perseid watch. Poor -  
none!

10234 M2. 0300-0430/10-f | Jarnac |

Munera LX1-1 | CN3 1<sup>h</sup> E. 2 Perseids,  
one telescopic, train.

10235 E ~~Wed~~ Monday, August 11/12/

2300-2345/3-f | Jarnac yard | - |  
Wendee | Perseid - one beautiful,  
orange Perseid.

10236 E. Tuesday, August 12/13/2245-

2345/3-f | Jarnac | Wendee, Laura |



Perseids: Laura saw 2, Wendee 2, me 1.  
Also Moon, ~~Mars~~, Saturn, Jupiter through  
LX.

10237E Saturday, August 16/17/2300-  
2330/1-Fm/Jarnac Yard/Wendee/  
Moon near Jupiter.

\*10238E. Sunday, August 17/18/1908-  
2330/1-F/White Sands Natl. Monument/  
Wendee, Patsy, Nick + Barbara, Laura  
+ Craig (Echo) very brief look at Moon.

10239S Monday, Aug 18/19/1430-1445 ~ 1330-  
1345/8-F/Patsy's house/Echo/Wendee,  
Patsy/Sun.

10240E Friday, August 22/23/2100-2230/  
2-f/Jarnac/Krystle McEachron +  
family, Wendee/Jupiter through LX-  
200.

10241E. ~~Wednesday~~, Tuesday, Aug 26/27/  
2230-2245/10-3-f/Jarnac Yard/Wendee

10242M2. 0100-0145/3-f/Jarnac/Miranda/H.

CN3 0<sup>h</sup>30<sup>m</sup>E.  
10243S. Wednesday, 27/28/0800-0815-13-f/  
Jarnac Yard/Pegeen/-1552:0.



10244M2 Wednesday, Aug 27/28/3-f/~~IMB~~/  
0000-0100/Jarnac/Wendee/CN3 30mE.

102455. Thursday, August 28/29/0800-0815/  
3-10-f/Jarnac Yard/Pegasus/-/  
SS2: 1, 5. 15.

— Prostate Cancer Surgery —

10246E Wednesday, September 3/2200-  
2230/3-f/Jarnac Yard/Wendee.

10247E Thursday, September 4/  
2230-2245/2-f/Jarnac Yard/  
Wendee/View of Milky way, lightning.

\*10248E. Sunday, September 7/8/20:30-  
21:30/3-f/Jarnac Yard/Wendee.

FIRST LIGHT FOR MINNIE.

David is a wonderful teacher. He was extremely  
patient watching me try to sight in on the moon. He made  
just enough suggestions, I was able to do it myself.

The best part was that we sighted in on Jupiter 1st!  
For a brief moment, thru the clouds, I saw the bands!



10249 E Monday, September 8/9/ 2200-2220/  
3-F / Jarnac yard / Wendee.

10250 E. Wednesday, September 10/11/  
2105-2125/3-F / Jarnac yard/  
walk at last.

10251 S. Wednesday, September 17/18/  
0900-0915/7-F / Jarnac yard / Pegasus/  
Wendee / SS2: 3 groups, 21 spots.

\*10252 E2. 1900-~~20~~30/3-F / Jarnac/  
Miranda / - / CN3 15<sup>m</sup> W. First  
comet hunt since surgery.

10253 E. Sunday, September 21/22/  
2200-2300/3-F / Jarnac/  
Minerva LX / - / Wendee / CN3  
5<sup>m</sup> W. Jupiter, M57, NGC  
6709.

10254 E Monday, September 22/23/  
1910-2200/10-F / Jarnac / Minerva LX /  
- / CN3 2<sup>h</sup> W. NGC 6709, Saturn.  
M8 M16 M17.

10255 E Wednesday, Sept 24/25/  
1930-2030/2-F / Jarnac yard /  
Nora approaches. Clearing in E.



10256E Thursday, Sept 25/26/  
2300-2315/10-F/Jarnac Yard/Wendee

10257EP Friday, Sept 26/27/1945-1955/  
7-F/JCC/Friday Service with Or Chadash  
+ Wendee.

10258E2. 2300-2315/10<sup>-3-</sup>-F/Jarnac Yard/.

10259E. Saturday, Sept 27/28/1900-2200/  
10-F/Jarnac/Minnie, Miranda/unsuccessful  
search for C/Tilbrook. CN3 30<sup>m</sup>W.  
Look at Saturn, + Jupiter through Minnie.  
Wendee enjoyed a good session with her  
new telescope.

10260E. Sunday, Sept 28/29/1900-2230/  
10-F/Jarnac/Miranda, LX/M31 with  
H2 region, M16, M17, Jupiter with Io  
shadow right in middle, Saturn/  
Wendee, Marco + Mo/.

← \*10261 M~~1~~. Mon, Sept 29/30.  
↑ Minerva LX-1/CN3 35<sup>m</sup>E. Beautiful  
morning.

10262E. Monday, Sept. 29/30/1915-1940/3-F/  
Jarnac yard.

10263E. Tuesday, 30 Sept/1930-1945/3-F/  
Jarnac yard/Roy Bishop over phone.



10264 E. Sat, Oct 4 / ~ 2200-2215 / 3-F /

Jamaac yard. See below.

Sunday, Oct 5. See below.

10265 E. Monday, Oct 6 / 2300-2315 / 3-F /

Jamaac Yard

10266 E. Tues, Oct 7 / 2330-2350 / 2-F / Jamaac  
front + back yards.

10267 E. Friday, Oct. 10 / 2130-2200 / 3-F /

Jamaac Yard. Kol Nidre, gibbous Moon.

~~10267~~

[10264 E. from above. Marilyn Unruh<sup>P</sup>  
from Prescott was visiting, and we  
observed with Miranda (by Marilyn),  
Minnie (by Wendee) and Minerva  
(by me). CN3 35m.

10268 E. Should be before 10265 E.

This session was on Sunday, October  
5, and was held just outside the back  
doors, in the intersection of 2 of the  
paths leading towards the Observatory.  
It was a beautiful, beautiful night.

We looked at the Moon and Jupiter  
+ Saturn. It was great when Wendee  
found M17. This was a beautiful  
session.



10269S. Saturday, Oct. 11 / 0745-0800 / 3-F /  
Jarnac yard / Pegasus / - / SS 2: 1, 3 = R=13.

10270E 2. 2200-2215 / 8-Fm / Jarnac Yard /  
Echo / - / Moon.

10271M Tues 14 / 0108-0115 / 7-Fm / Jarnac:

10272E Wednesday, Oct. 15 / 2330-2345 /  
7-Fm / Jarnac<sup>yd</sup> / Wendee / Moon.

10273E Thursday, Oct 16 / 2000-2030 /  
7-Fm / Jarnac<sup>yd</sup> / Wendee / Moon. Lovely  
night.

10274E Saturday, Oct 18 / 1908-2000 / 10-F /  
Jarnac<sup>yd</sup> to Minerva LX / - / CN 3 30<sup>m</sup>W.  
M5, M13.

10275E Sunday Oct 19 / 20/2000 1940-2020 /  
10-3-F / Jarnac / Minerva LX / - / CN 3 30<sup>m</sup>W.

10276E Monday, Oct 20 / 21 / 1830-1930 /  
8-10-F / Jarnac / Minerva LX / - /  
CN 3 35<sup>m</sup>W.

10277S. Friday, Oct 24 / 0830-0845 /  
8-F / Jarnac yard / ~~Minerva~~  
Pegasus / Wendee / SS 2:0.

• 10278E 2P <sup>on way to</sup> Juca Valley 2130 / 1702-1900 very  
intermittent / Wendee / cloud shapes



\*10279E. Sat, Oct 25/26/2000-2130/10-F/  
Yucca Valley - Starry Nights Festival/  
Minerva / Mark! / CN3 1<sup>h</sup>50<sup>m</sup>W, N.

10280E Sun, Oct 26/27 1850-1930/10-F/  
Jarnac Yard / - / Minerva / CN3 30<sup>m</sup>W.  
M9.

10281E2. 2335-2355/10-F / cold & windy /  
Jarnac - / putting Minerva away.

\*10282 M, Tuesday morning, Oct 27/28/  
0550-0605/10-F / Jarnac Yard / Wendee,  
Mother / Beautiful crescent Moon  
high in the East. On our way for  
kidney surgery.

10283EP, Friday evening / ~~Nov~~ Oct 31 / 2100-  
~2110 / 7-F / Jarnac yard / home from  
hospital.

10284E Saturday, November 8 / 1825-  
1850 / 3-F / Jarnac yard / Marilyn Wood,  
Wendee / beautiful launch from  
Vandenberg. Low on W. horizon.



10285E Sunday, Nov 9 / 2000-2200 / 10-F /  
Jarnac / Wendee, ALEX SCHEELINE!!  
First obs. session in observatory  
since surgery.

10286E Saturday November 15 / 1800-1910 /  
10-7-Fm / Jarnac Yard / Muriel / Wendee  
CN3 25m W.

10287E Sunday, November 16 / ~~1730-17000-~~  
2100 / 10-3-F / Jarnac Yard / Muriel /  
Wendee / CN3 30min W.

\* 10288M 2. 0450-0615 / 7-Fm / Jarnac  
Yard / - / Wendee / Leonid shower.

→ 3 meteors in the hour. Peak was  
sharp between 0505 and 0510,  
with a rate of about 1 every 30  
seconds. Then dropped.

10289E Monday, Nov 17 / 1900-1915 /  
3-F / Jarnac.

10290E. Saturday, Nov 22 / 1800-1900 / 3-F /  
Jarnac Yard / Echo / Wendee, Art,  
Jeff, & Joe / Venus, Mars, Jupiter,  
& Saturn.



102915. Thanksgiving Day, Nov. 27/  
afternoon / Rarnerst + Mark's house/  
Wendee + others / Used honeymoon watch  
to project an image of the Sun  
at the other side of the room. We saw  
clouds pass in front of it.

#10292M. Dec 2/3. 0230-0615 / 3-F - cold,  
damp, but clear most times / Jarmac / 4  
NBC Today crew, Mom + Dad, Wendee /  
CN3F 3 pics Corvus region. Live  
on Today show, talking about  
planetary alignment. Very very successful!

10293S. Dec 3 / 1-2 pm / NBC CH4 interview.

10294E ~~Thursday~~ Thursday, December 4 / 5:30-6 /  
on Broadway / Mom + Dad, + Wendee /  
Planetary Alignment

• Saturn • Jupiter • Moon

• Venus  
• Mars  
• Mercury

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10295E Friday, December 12 / 1830-1845 /  
outside Joanie's house / Joanie,  
Philip, Wendee - 1 Moon.



10296E Monday, Dec 15/1900-1930/  
10-7-F/Jarnac Yard/Minerva/Wendee)  
CN 3 20m W.

10297E Tuesday, Dec 16/1830-~~20~~1910/  
10-F/Jarnac Yd/Minerva/Wendee/  
CN 3 30m W.

10298S. Wednesday, December 17/  
~~1000~~ 0945-1000/10-F/Jarnac Yard/  
Pegasus/SS2: 1, 4 spots.

10299E2. December 17/18:30-20:30/  
10-F/Jarnac/Miranda!/Wendee/  
CN 3 32nd Anniversary/-1h 20m W.  
and between Pollux + Castor, +  
1984t area.

10300S. December 18/1015-1030/3-F/  
Jarnac Yard/-1 Pegasus/SS2: 1, 4.

10301SP Friday, Dec, 19/~~08~~:40-08:50/  
3-F/Jarnac Yd/Pegasus/SS2: 1:2.

10302S. Sunday, Dec. 21/9:40-9:55/  
3-F/Jarnac Yd/Pegasus/-1SS2:0.

10303E2 1900-1930/2-3-F/walk. Lightning. Milky  
Way



10304 EP. Tues. Dec 23 / 2230-2235 / 10-F / COLD /  
Jarnac yard / Tim, others...

10305 S. Thursday, Dec 25 / 1330-1400 / 3-F /  
Jarnac / Tour for Saluman family -  
Fiey & Bess, + family + + and Wendee /  
Echo / Sun. SS 2: 4.

10306 E2. 1130-1145 / 10-F / Jarnac yard / Wendee

10307 S. Friday, Dec 26 / 1530-1630 / 10-F /  
Jarnac / Carolyn Porco, Wendee / Obs  
tour, Echo / SS 2: 4. Mailed RSVP for  
Lunar Prospector.

10308 E2. 2230-2245 / 10-F / Jarnac yard /  
Echo / Wendee / Saturn.

10309 S. Saturday, Dec. 27 / 1150-1115 / 10-F /  
Jarnac Yd / Echo / Wendee / SS 2: 2, 7.

10310 E2. 1830-2000 / 3-F / Jarnac / Belle + Ralph's  
family, Wendee / - LX-200. Mars, Venus,  
Jupiter, Saturn, M42. Rosa + Suzanne.

10311 S. Sunday, Dec 28 / 1530-1630 / 3-F / Jarnac /  
Echo, LX / - / SS 2: 1, 4 / set up of LX tangent  
arm.

10312 E2. 1900-2130 / 3-F / Jarnac / Ophelia LX /  
Wendee / CN 3F. 1. 1953-1958 Field  
2. 2040-2045 & Gem.



10313S, Monday Dec 29 / Wendee's  
birthday! / ~10:00-10:15 / 10-F / Jarnac  
Yard / Echo 1-1952: 1, 4

10314S, Tuesday, Dec 30 / 9:45-10:00 / 7-F /  
Jarnac Yd / Pegasus 1-SS2: 3; ~7.

10315S, Wednesday, December 31 / 1500-  
1700 / 10-F / Jarnac / ad Edina, Wendee,  
John Guise / SS2 through Echo  
1; 4.

10316E2 / 2200-2330 / 10-F / Jarnac /  
L8-200, Miranda / John Guise, Ross,  
Suzanne, Rachel, Wendee / Saturn,  
M74, M77, M42.

1998.

10317E, January 1 / 2 / 1730-1830 / 3-F /  
~~Jarnac~~ Robert + Vicky Gedicke's house /  
Wendee, Robert + Vicky / - / beautiful  
sunset with clouds. Moon,  
Venus, + Jupiter.

10318S, January 2, Friday / #1605-1620 / 3-F /  
Jarnac Yard / Echo 1-1SS2: 1, 2.



10319M2 Saturday, January 2/3/10-2-F/Jarmac  
5:00-6:15/Miranda/-/CN 3e, TVCrV U4.6  
CN3 40 minutes, E. Very nice, clear night  
but clouds rapidly covered the sky by 5:50.  
Quadrantids - ~1? faint one.

\*10320E Monday, January 5/6/1900-2000  
EST/7-F/Kennedy Space Center/Carolyn  
Shoemaker + family, Wendee/Wait  
for postponed launch of Athena and  
Lunar Prospector.

\*\*\*10321E Tuesday, January 6/7/19:30-2200/  
2, then 3-F/Kennedy Space Center/Carolyn  
Shoemaker and family, Wendee/Launch  
of Athena and Lunar Prospector  
carrying a selection of Gene's ashes to  
the Moon. Wendee and I sat in front,  
so we could photograph w/camera +  
tripod. It was marvellous. The  
countdown 10-9-8-7-6-5-4-3-2-1-0.  
Then silence and suddenly the whole  
area to the SE lit up with a bright  
orange glow. Then the Athena lifted  
out of the glow and rose slowly,  
straight into the night. The sound  
came a few seconds later, then  
staging after about 90 seconds.



112205 10 Sept / 0830-0900 / 10-F / Jarmac

Echo 74.

1122152 1500-1530 / Star Party / Wendee  
Marilyn Unruh, other demonstration.

+11233 E2. 1930-2300 / 10-F / J / W Michael  
11222 M 0400-0510 / 3-F / Jarmac / Miranda  
30m E.

11223 M. Sunday / Monday, 12/13 / 3-F / Jarmac / Miranda /  
-1CN3 50m E. <sup>4-5:30</sup>

11224 M 13/14 / 10-F / Jarmac / Miranda / -1CN3 50m E.  
<sup>4-5:20</sup>  
1999 J3 2nd. Disc. Comet Linear.

11225 S. Tuesday 14/15 / 1100-1500 / 10-3-F / Jarmac /  
Arizona Republic reporters and Dean, + Wendee /  
Echo, others scope / SS2: 7, 72. 2nd. of new  
encoder on Miranda.

11226 E2. 2000-2300 / 2-F / Jarmac / Steve + Sharon from  
Sky Work, Wendee moving Minerva back to  
old part of obs. Saturn Nebula?

11227 M3. 0400-0530 / 10-F / Jarmac / Minerva and  
Miranda -1CN3 40min. E.

11228 M Wed. 15/16 / 10400-0530 / 10-F / Jarmac /  
Miranda, Minerva -1CN3 50m E.

11229 S. Thuro. 16/17 / 10-F / Jarmac / Echo / -1SS2: 5, 47.

11230 M 1 0430-0510 / 10-F / Jarmac / Minerva / -1CN3  
30 minutes E.

11231 E. <sup>Fri 17/18</sup> 2300-2330 / 3-F / Rancho Europa / Wendee,  
Clark, Lynda, Bill / Merline / Mon. Sky from  
West + North of Denver. Dark overhead +  
East, but Denver light dome toward East  
to Denver.

11232 M Sunday 19/20 / 0400-0530 / 10-F / Jarmac /  
11233 see above. Miranda -1CN3 1h E.



- 112205 Saturday, 10 Sept / 0830-0900 / 10-F / Jarmac / Echo / - / SS2: 3, 24.
- 1122152 1500-1530 / 2-F / N. Arizona Star Party / Wendee, Marilyn Urubik, others / Astrolabe demonstration.
- \*11233 E2. 1930-2300 / 10-F / J / W. Michael / CN3 F 6 pic. obs. from floor.   
 see Journal.
- 11222 M 0400-0510 / 3-F / Jarmac / Miranda / - / CN3 30m E.
- 11223 M. Sunday / Monday, 12/13 / <sup>4-5:30</sup> 3-F / Jarmac / Miranda / - / CN3 50m E.
- 11224 M 13/14 / 10-F / Jarmac / <sup>4-5:20</sup> Miranda / - / CN3 50m E.   
 1999 J3 2nd. Disc. Comet Linear.
- 11225 S. Tuesday 14/15 / 1100-1500 / 10-3-F / Jarmac / Arizona Republic reporters and Dean, + Wendee / Echo, others scope / SS2: 7, 72. 2nd. of new encoders on Miranda.
- 11226 E2. 2000-2300 / 2-F / Jarmac / Steve + Sharon from Sky Works, Wendee moving Minerva back to old part of obs. Saturn Nebula?
- 11227 M3. 0400-0530 / 10-F / Jarmac / Minerva and Miranda / - / CN3 40min. E.
- 11228 M Wed. 15/16 / 0400-0530 / 10-F / Jarmac / Miranda, Minerva / - / CN3 50m E.
- 11229 S. Thuro. 16/17 / <sub>3</sub> 10-F / Jarmac / Echo / - / SS2: 5, 47.
- 11230 M 1 0430-0510 / 10-F / Jarmac / Minerva / - / CN3 30 minutes E.
- 11231 E. <sup>Fri 17/18</sup> 2300-2330 / 3-F / Rancho Europa / Wendee, Clark, Lynda, Bill / Merline / Mon. Sky from West + North of Denver. Dark overhead + East, but Denver light dome toward East to Denver.
- 11232 M Sunday 19/20 / 0400-0530 / 10-F / Jarmac / Miranda / - / CN3 1h E.
- 11233 see above.



11234 E. Monday 20/21 Sept. 2200-2230/2-F/Jarmac.

11235 M Tuesday 21/22/0400-0515/1-F/Jarmac/  
Minerwa 1-1 CN3 45<sup>m</sup> E.

11236 S. Thursday 23/24/1700-1800/3-F/Jarmac/  
Wendee/0-3-F/ Major thunderstorm  
ends. Inspection + photos of water  
running in arroyo. Then, with Echo/  
SS2: 2, 2.

11237 E2. 2215-2245/10-3 F/Jarmac/Minerwa/  
Wendee/The Moon. Earlier, Gril called to  
say that she was looking at the full  
Moon, then Gerry called to say he was  
looking at the full Moon. So, we decided  
to do the same thing - Wendee saw the  
rising Moon too.

11238 S. Friday, September 24/0900-100930/10-F/  
Jarmac/1-Virgil, Wendee/Echo/SS2: 2, 7

11239 E2. 2230-2300/10-7-Fm/Jarmac/Wendee/Mon.

11240 S. Saturday, September 25/1015-10:45/10-F/  
Jarmac/Echo/1-SS2: 2, 2.

11241 E2. 1930-2130/7-Fm/Jarmac/Wendee/Sukkot  
- Synagogue is an observatory!, with  
twigs on Miranda.

11241 E. Sunday 26/27/2100-2115/7-Fm/Jarmac/Wendee/  
Harvest full Moon view. Nice, cool evening.

11242 S. Mon 27/28/1100-1115/10-F/Jarmac/Virgil/Echo/  
SS2: 2, 3.

11243 E. Tuesday. # September 28/29/2115-2300/7-Fm  
Jarmac/Eather/Wendee/Polar alignment  
of the telescope. Worked well.

11244 E. Wed Sept 29/30/2130-2330/10-F/windy/  
Jarmac/Wendee/Minerwa-Ophelia/  
CN3F 6 pico 369, 384, 383.

11245 S. Thurs Sept 30/1800-1900/10-F/Jarmac G/  
Echo/1-SS2: 2, 4.



11247 E2. 2100-2245/10-F/Jarnac/Wendee/CN3F 6 pics  
40, 23, + 384. Oct 1

11248 S/1630-1735/3 10-F/Jarnac + ven/Wendee,  
Virgil/S. walk, inst. of electrical/Echo/  
SS2: 3, 7.

11249 E2/1930-2200/10-F/Jarnac/Wendee, Virgil/  
electrical inst./CN3F, 8 pics. ? comet in CrB.

11250 E / Saturday, Oct 2/1830-2230/10-F/  
Discovery Park, Arizona (near Safford), / Fam-  
tastic launch Saturday night of a  
missile from Vandenberg Air Force Base.  
Later, attempt to confirm comet through 20" CN3

11251 S. Sun Oct 3/ Also used 12" Cave + 8" Meade<sup>5m</sup>,  
1700-1715/10-F 8" LX + 8" Guterrom/  
Jarnac G/ Echo-1 Wendee, John Ratje, et.  
SS2: 3, 17.

11252 E2. 2000-2215/10-F/Jarnac/Minerva-Ophelia/  
Wendee/CN3F 8 pics. 57 (no comet), 73, 74, 75.

11253 S. Mon Oct 4/1700-1800/3 10-F/Jarnac/Echo/  
Wendee, Virgil Observatory work, SS2: 3, 21.

11254 E2. 2000-2230/10-F/Jarnac/Minerva-Ophelia/  
Wendee/CN3F, 8 pics.

11255 S. Tues Oct 5/1700-1800/3-F/Jarnac/Virgil,  
Wendee work on new observing pad - Echo-  
SS2: 3, 15.

11256 E2. 1930-1945/3-F/Jarnac.

11257 E. Wednesday, October 6/2100-2300/EDT.  
10-F/Mt Snow, Vermont/Wendee/Castor/  
CN3 D + 30<sup>m</sup> W. Very cold.

11258 M2. 0450-05:55/10-3-F/Mt Snow/Castor/  
CN3 40<sup>m</sup> E.

11259 E. Thurs Oct 7/2000-2200/10-F/ (Castor/Wendee/  
CN3 1 hour W.



- 11260 E1 <sup>Monday</sup> ~~Sunday~~ October 10/11/2100-2130/10-F/ Jarmac/Wendee, Virgil/Jupiter + Saturn
- 11261 M2 0415-0530/10-F/ Jarmac/Miranda-1  
CN3 1<sup>h</sup> E. Lots of galaxies, all with I-DH with the encoders.
- 11262 S.1 Tue Oct 12/13/10-F/ Jarmac/Echo1-1  
SS2.
- 11263 M2. 0410-0530/10-F/ Jarmac/Miranda-1  
CN3 0.50<sup>m</sup> E.
- 11264 S. Wed 13/14/10-11/10-F/ Jarmac/Wendee,  
Virgil/Echo1-1/SS2: 7, 72.
- 11265 SE2. 1800-2300/10-F/ Jarmac/Wendee,  
Virgil, Lynn + C. Underwood, Boy Scouts.  
green flash/ lecture + session.
- 11266 M3. 0450-0530/10-F/ Jarmac/Miranda-1  
CN3 30<sup>m</sup> E. NGC 4394, 4414.
- 11267 S. Thurs 14/15/10 1100-1200/10-F/ Jarmac/  
Echo1 obs. const/Virgil/SS2: 7, 55.
- 11268 EM2. 1830-0030/10, earlier 7-F/ Jarmac The  
Shoemaker-levy Double Cometograph.  
11" Celestron + Ophelia 2/ Carolyn/  
10 pictures using Shoemaker field  
structure, including Wendee's star.
- 11269 AS. Fri 15/16/13:00-13:30/10-F/ SLDC/Carolyn
- 11270 E2. 1900-2300/ 7-Fm, 10/SLDC/ Carolyn/  
11" + Ophelia 2/ Carolyn/ Polar  
alignment successful at last, and  
4 fields taken.



11271 FN. Saturday, 16/17/2100-2300/7-Fm, cold + windy /  
 The Shoemaker - lay Double Coronatograph / Carotyl  
 11" CG1 Moon. Beautiful despite poor seeing, a  
 view of Gene's home. Then, just me, a  
 drive home from F-lagstaff - Moonset just  
 past N. Phoenix, and then to Tucson and home.  
 Finally, with Miranda at home, CN3 1 hr E.  
 NGC 3115, The Spindle Galaxy. 9.2

M65

M66

NGC 3628 near 65+66, M. 9.5.

11272 S. Sun 17/18/1730-1750/10-F / Jarnae / Echo 1-1  
~~CN3~~ SS2: 4, 32. poor seeing.

11273 E2 2230-2300/10-F / Jarnae / Miranda, camera  
 Moon - MDA Moon photographs.

11274 S. Mon 18/19 - for Leo! 1700-1800/10-F /  
 Jarnae / Echo / Virgil, Sonia + Marilyn /  
 Miranda - Moon, Echo - SS2: 5, 98.

11275 M2. 0425-0530/10-F / Jarnae / Miranda /  
 - / CN3 1 hr E. Catalog objects tonight:

NGC 3115 Spindle M94

3628 May 9.5 M63

M65

M66

-? 5198/130

NGC 4278 Mv 10.2 near\* L142 M51. (1330.2

4274 Mv 10.4 + L142 +4640

4414 Mv 10.3 - L232

4214 Mv 9.7 L233

4244 Mv 10.2 L234

4425 Mv 12.0 L L140

1230.4  
 +4142



11276S. 19 Oct / 1030-1130 / 10-F / Jarnac / Echo /  
Virgil, Sam, Wendee / obs. tour, also to SS2: 4, 47.

\* 11277E2. ~~2200~~ 2130-2230 / 7-Fm / Jarnac / Miranda  
Wendee. / Retaking of our wedding vows,  
complete with prayers, and breaking of  
glass.

11278S. 20 Oct / ~~1300~~ 1300-1445-1530 / 10-F / Jarnac /  
"v" Wendee moving Miranda out to concrete pad.

11279 E2. 19 Oct - 2300 int / 7-Fm / Jarnac / Minerva /  
at pad, setting up Minerva / Wendee. Getting  
scope to understand coordinates was a challenge.

11280 M3. 415-530 / 10-F / Jarnac / Red / Minerva / - /  
CN3 1 hour E.

NGC 3938 - 10.4

3115 - 9.2

? ~~4485~~ 12.22 ←

m 65, 66, 51

5055 8.6

4382 - 9.2

4478 - 11.2

4826 8.5

5272 6.4 - G1.

4490 - 9.8.

11281S. Thurs 21 Oct / 1350-1415 / 10-3-F / Jarnac /  
Echo / - / SS2: 5, 27.

11282 E Sat. 24 Oct / 2230-2300 / 7-F / Jarnac /  
Wendee / - / full Moon.

11283 E Sun 25 Oct / 1930-2100 / 7-Fm / Jarnac /  
Wendee / - / full Moon.

11284 E Tuesday, 27 Oct / 1900-2030 / 1-F / Weston  
La Paloma / - Wendee, Dean and friends /  
Jupiter through 8" telescope and book signing.

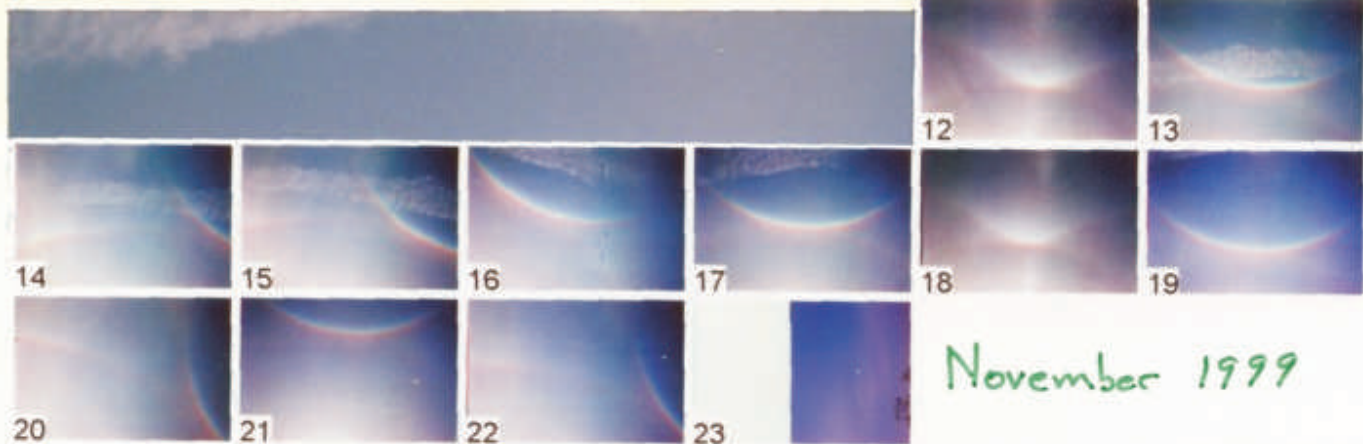
11285 S. Wed, 28 Oct / 1700-1715 / 10-F / Jarnac /

11285 here. Echo / Wendee / SS2: 7, 28.

11286 E2. 10-F / ~~1900~~ 1900-2030 / 10-F / Jarnac /  
Minerva / - Wendee / CN3 0h 35m W. 6402.

NGC  
6204  
6218  
6204





November 1999



lie  
m.

11295 EP. Fri 5 Nov / 2010-2015 / 7-F / Patsy's house / Castor / 1-1 Jupiter  
strange appearance in SEB.

11296 E2. 2210-2225 / 7-F / Patsy's house / Castor / Patsy / Jupiter.

11297 M3. 0515-0535 / 7-F / " / Castor / -1 CN3 10m NE.

11298 E. Sunday, 8 Nov / 2010-2040 / 10-F / Jarnac Pad  
6-1 / Minerva / CN3 / 5 minutes West.

11299 E2. 2215-2235 / 10-F / Jarnac, front / -1 Wendee.  
a look at Orion and Deneb.

11300 M3. 0420-0600 / 10-3-F / Jarnac Pad /  
Minerva 1-1 / 10m E.

NGC 4244 10.2 G

~~4308~~

4314 10.5 G

12 x 45  
+30 26 59 2 galaxies.

4585  
4382 9.2

?4747? 12.4 G

4826 8.5 G

~~4647~~

4649 8.8

5024 7.7 G lob

4594 8.3

11301 S. Monday, 8 Nov / 1500-1530 / 10-7-F / Starjond  
4" Celestron / Wendee / G# SS 2, 9, 76.



11302 M2. 0420-0600/10-F/Jarmac/Miranda/-  
CN3 1 hour Exact.

4030	10.6	<sup>M</sup> 4449	4608
M61		4526	4607
4665		4519	M53 G1C.
		4535	5466 - catalogue obj. 40 loose gal 10' wide!
		4753	3026
		<del>4585</del>	<del>4382 (72)</del>

11303S. Tuesday, 9 Nov/10-F/Jarmac/Echo/-  
SS2: 9, 109.

11304S Wed 10 Nov/1700-1720/10-F/Jarmac/  
Echo/-SS2: 9, 84.

11305E2. 1915-2200/10-F/Jarmac/Miranda-  
Ophelia/Wendee/CN3 F 8 pic.

11306M3. 0430-0600/10-F/Jarmac/Miranda/-  
CN3 50<sup>m</sup> E.

3521	3640	3705	3810	Catalogue: 41. round gal with br. core, diffuse
3810	4452	<del>4402</del>		
4459	- 2 gal nearby 184, 86. Wow!			
M60	4604	4340	- Catalogue obj	42- 40. CBr
M90	4419	4450.	5005	
M88	4501	4559		

M64 - Black Eye.

11307E. W Thru 11 November/1500-1530/7-F/  
Starizona/4" Celestron reflector/-  
SS2: 9, 101.

11308EP2. 2315-2325/10-F/Jarmac/Wendee.  
Orion and Gemini



11309 M3. 430-610-F/Jamaica/Miranda-1/CN3  
50<sup>m</sup>E. NGC 4700 - edge-on gal.

113106 Fri 12 Nov/1600-1620?/10-F/Jamaica/Echo-1-1  
SS2: 8, 120.

11311 E2. 2100-2115/10<sup>7</sup>-F/Jamaica/observatory/~~to closing~~

11312 M3. 0430-0600/10-F/Jamaica/Miranda-1/CN3/5E.  
NGC 4753, 4697, 4699, M104 NGC 4731 (11.5)

\* 11313.8 M Sat 13/14 Nov/ - Late at night some time/over  
the Arctic/AA flight to Frankfurt from Chicago/  
-Wendee/SPECTACULAR sky Orion + CMA sky  
darker than I've ever seen them - winter MW  
spectacular. By far the best airplane observing  
session we've had.

11314 E Sunday 14 Nov/2000-2015/Athens/guarder Moon

11315 S. Mon 15 Nov/ Noon - 1 pm Greece Time/10<sup>2</sup>-F/  
Sun + halo over the Pericles' Parthenon - very  
pretty.

11316 E. Tue 16 Nov/2100-2200/2-F/aboard M/S Norwegian  
Dream/Moon. Wendee, Al Stern et al.

11317 M2. 0415-0600/3-2-F/M/S Norwegian Dream/  
Caster 1-1 no Leonids.

\* 11318 AN Wednesday 17/18 November/1-3-F/Norwegian Dream/  
between Kisee daai and Rhodes.

- 1) ~~1800~~ 1800-2000 - check of sky - not good.
- 2) Lecture to ship in Stardust Lounge 2000-2100
- 3) Dinner with Wendee 2100-2230
- 4) Check of sky 2230-2330.
- 5) Leonids I: 2330 to 0130. 40 people on top  
forward deck. Very windy. Sky cleared a bit -  
Wendee and I lay down together on deck,  
saw a few meteors.
- 6) Leonids II: 0130-0350. Cloudy.
- 7) Leonids III: 0350-0430 - clear spots.  
a Rush of meteors - 5 of them in about a  
minute - all in Auriga.





8) 04:30-06:00 Leonids IV - several nice Leonids - including one pretty, blue-white almost point meteor in Leo.

Total Number meteors seen by Wendee & me through clouds: = 20.

11319 E. Friday 19/20/2100-2300/3-F/ ~~Jan~~ M/S 'Norwegian Dream' / Bob + Jean, Wendee / Castor / Moon, Jupiter, Saturn. Wonderful view, even on moving ship.

11320 E. Sunday, 21/22/2100-2150/3-F / Norwegian Dream / Bob + Jean, at Stern / Castor / Moon, Jupiter, + Saturn. At port in cloud.

11321 & SE. Monday, 22/23/1700-1800/3-F / Jerusalem / Wendee, Tour / Sunset over Jerusalem through clouds, and full Moon rising in a spectacular sky.

11322 E. Tuesday, 23/24/7-11 (fog) - F / Port Said / Wendee, Judy Holmes / 7-11pm int. / trying to get pic of us on the Norwegian Dream.

11323 E. Wed 24/25 / at sea, aboard Norwegian Dream / 2215-2245 / 7-fm, but howling wind / Wendee, Judy Holmes / 2nd try at pic.

11324 E. Thursday, 25/26/2200-2300/3-F / at sea, aboard M/S Norwegian Dream / Wendee, Judy Holmes / Successful picture of us.

\* 11325 E. Fri, 26/27/1930-1950/3-F / at sea, aboard Norwegian Dream / Wendee, FHX / Michelle Stern + Bob + Jean / - / sec view of eruption of Mt.

11326 M2S. 0640-0720/7-F / Naples - aboard M/S Norwegian Dream / Wendee / pic of sunrise over Vesuvius.

11327 E. Sat 27/28/1740-1900 / 3-F / Naples Harbor / at Stern / Castor / CN3 0° 15' SW.

• 11328 E2. 2100-2130/3-F / Naples harbor / Castor / - / CN3 5 min. SW. ~~4000~~.



- 11329 M3. 0500-0515/3-F/Aboard M/S Norwegian  
 Rome time. Dream / Custory / CN3 5m E. from front  
 ship (or rear front). Moon.
- 11330 E. ~~Monday~~ ~~Sunday~~, November 28/30/2215-2230/10-F/  
 Jarnac / Wendee / welcome home - darkest  
 time. sky on whole trip!
- 11331 M. ~~Monday~~. Wednesday, ~~Nov 30~~ / Dec 1 / Dec 2  
 0430-0630/10-F / Jarnac / - Mur andal -  
 CN3 1<sup>h</sup> 10<sup>m</sup> E  
 Thu Dec 23/1430-1700/10-F / S / Wendee / Echo / SS 2: 4, 20.
- 11332 E. ~~Thurs~~. Dec 2/3 / 1900-2130 / 10-F / Jarnac /  
 Menerva - Optician / Wendee / CN3 F 8 pics.
- 11334 M3 0440-0630 / 10-F / Jarnac / Miranda, Pegasus /  
 - / CN3 1<sup>h</sup> E. TV Gw 14.6. 1220.0 - 1830  
 NGC 4775, 4035, 4027, 4038.
- 11335 E. ~~Friday, Dec. 3/4~~ / Saturday, December 4/5 /  
 1800-2030 / 7-F / Dean's Starizona /  
 Various telescopes, Wendee et al / book-  
 signing.
- 11336 M2. 430-630 / 10-F / Jarnac / Miranda, Pegasus /  
 - / CN3 1<sup>h</sup> E + South, to -540. CN3e TV Gw  
 14.6.
- 11337 S. Sunday Dec 5/6 / 1600-1700 / 10-F / Jarnac /  
 Wendee / Echo / SS 2: 3, 14.
- 11338 E2. 2000-2130 / 3-F / Jarnac / Pegasus / - /  
 aligning telescope. Saturn, Jupiter, M42
- 11339 M3. 0440-0615 / 10-F / Jarnac / Miranda, Pegasus /  
 SS CN3 1<sup>h</sup> E. NGC 5466, Cat obj.  
 large globular near M3. faint and fat.  
 also 5696 in Bootes. CN3e TV Gw 14.6.



11340 S. . Monday, December 6/7/15 1200-1215/3-F/  
Jarnac/Dick, Wendee/look at observatory

11341 S2. 1500-1630/3-F/Jarnac/Wendee, Ellis  
Pillet + family + friends / Miranda / Mt. Fagin.

11342 E3 1900-1915/3-F/Jarnac.

11343 M4 0440-0615/10-F/Jarnac/Miranda /-/  
CN3 1<sup>h</sup> East. CN3e TV Cw (14.6

11344 S. Tues December 7/8. 10820-0835/3-F/Jarnac  
Echo/Wendee/SS2: 4, 18.

After watching "Savage Sun" a TV show  
about our Mr. Sun.

11345 E2. 1900-2130/1900-2130/10-F/Jarnac/  
Minerva - Ophelia / Wendee / CN3 F 8 pics.

11346 M3 0440-0615/10-F/Jarnac/Minerva /-/  
CN3 1<sup>h</sup> 10<sup>m</sup> E. CN3e TV Cw (14.6

11347 E. Wed 8/9/1900-2100/10-F/Jarnac/  
Minerva - Ophelia / Wendee / CN3 F 8 pics.

11348 M2. 0430-0610/10-3-F/Cold -29°F +  
windy / Bob Summerfield / CN3 1<sup>h</sup> 10<sup>m</sup> E.  
CN3e TV Cw (14.6. with Pegasus;  
Minerva used for comet hunting.

11346's list: - NGC 5248, gal. 4594, M13, 5

11348's list: NGC 5054, 4902, Roslyn 4544  
M63, . 5104?, 4105. M83.

11348 part B - approx 25 comets, some nice! hopefully looking up to  
a good, clear peak next week, Bright Mercury  
clearing the mountains, chasing Venus, so cold and  
windy, actually had trouble pulling - Bob

11349 E. Friday 10/11/2100-2315 EST / 2-F / Ft. Parke  
Astronomy Club / Steve + Amelia, Wendee  
others / 10" LX 200 award, presented to  
this group for their efforts in raising  
funds for MDA.



11350E. Sat. 11/12 Dec/2030-2100-13-F/Steve + Amelia's house / Moon crescent.

11351S. Sun 12/13/1715-1730/3-F/plane landing in Tucson / Wendee / green flash.

\*11352AN2 1800-0615 / ~~10~~ 3-7-10-F / Airport, then restaurant in N. Tucson, then Jernac / Minerva-Ophelia, Miranda, Pegasus / ~~Wendee~~ Wendee, Bob + Lisa Summerfield / CN3e TV Gro (14.6, CN3 2 hrs. E. CN3F 8 pictures in sq. of fig. Geminid meteors. 309 seen by me, Wendee, Bob + Lisa (Bob saw more earlier.)

30 by Wendee + me prior to 11:45.

1:25-2:25: Bob + David have 65.

2:25-3:25: " " 70.

3:25-4:25 - Mostly Just Bob 60.

since I began to search for comets at 3:50.

4:25-5:25 Mostly Just Bob 50.

5:25-6:00 Mostly Just Bob. 34.

\*11353SAN Monday, 13/14/1700-0600/10-3-F / Jernac / Wendee, Bob + Lisa / 1999 Geminids

Counts: 11-12 to 134

12-1 to 242

1-2 391

750 total!

2-3 506

3-4 599

4-5 709

5-5:37 750

\*11354S. Tues 14/15/1300-1630/3-F / Jernac / Sapphire / Virgil, Wendee, Bob + Lisa / SS2: 3, 8. Photos  
Installation of cornerstone plaque and animal (guayles + gecko lizard) decorations.



11355 S. Thursday, 16 Dec / 1000-1100 B-F / Jarnac / Wendee, Mother / - Telescope Sapphire / SS 2: 3, 14  
Showing Maw the newly done and completed special.

11356 S 2. 1500-1700 B-F / Sparizona / 4" 2 / Dean /  
SS 2: again 2, 41 spots!

11357 E 3. 1900-2100 / 7-Fm / Jarnac / Mintaka, Miranda, Pegasus / Wended alignment of finder with newly comp cleared Mintaka lens.  
Pegasus works fine after aligning + collimation this afternoon.  
Attached Galileo scope to Miranda.

11358 M 4 / 0445-0615 / 10-F / Jarnac / Miranda / - Pegasus  
CN 3 1<sup>h</sup> 05<sup>m</sup> W E. ☺ 3 satellites moving together. CN 3 E TVaw (14.8)

11359 S. Friday, 17 December, 1999 CN 3 34<sup>th</sup>.  
Preparation for Observatory first light /  
- ~~1<sup>h</sup> 05<sup>m</sup>~~ Maw / Telescope testing.  
10am - Noon.

11360 S 2. 1600-1700 / 10-F / beautiful day / Jarnac /  
Wended SS 2: (Echo) 4: 30.

\* 11361 E M 3 1800-0015 / 10-F / Beautiful night.  
CN 3 34<sup>th</sup> and FIRST LIGHT FOR  
OBSERVATORY!! / Jarnac / Miranda,  
Mirerna, (Miranda with first light  
on Galileo telescope, part of 2 - actually  
that was last night) Missi,  
Pegasus, Mike + Elaine, Rick  
Blafely, Nora, Tim Hunter, Michael M,  
Belle + Ralph, the Underwoods,  
Wayne + Arlene Johnson, Virginia, Keith  
+ Julie, Bob + Fabre, an extremely  
successful first light party for  
the extended Jarnac observatory

11362 M 4. 0445-0630 / 10-F / Jarnac / Miranda, Miranda,  
Pegasus / CN 3 E TVaw (4.6. CN 3 1<sup>h</sup> 15<sup>m</sup> E.  
v. minor betw. Polaris + Cassio. Then E w/ Miranda



Rick Blakeley wrote: May you always have comets in your pocket.

Uncle Mike: You never cease to amaze me. May you find 1000 more comets. Love.

Cassie Underwood: I was amazed at everything that I saw.

Virgil: Thank you both for your friendship and the chance to perform my LABOR OF LOVE.

Michael M: Thank you both for being such wonderful friends, and for inviting me to this special occasion. With a little luck we may be neighbors someday. Enjoy your new observatory and have many clear skies.

Keith + Julia: We are so happy to see your new and improved observatory. Thank you for inviting us to share this event.

Tim: Fabulous D, Congratulations on a wonderful observatory! Have lots of ~~stars~~ discoveries!

Bob + Valerie: Even more reason to wear our N. pins with pride + admiration.

11363 EP Saturday, 18 December: 1200-2210 / 1-F / New Orleans / Uncle Geek's house, looking N. of Lake Borchart run.

11364 S. Sun. 19 Dec / 1500-1515 / 2-F / New Orleans / - / Michael Sandras / Sun through clouds.

\*11365 S. Tuesday, 21 Dec / 1400-1530 / 10-F / Jarmac / Wendee, Maw / SS 2: 3: 6.3. ... spot.

\*11366 E2 2130-2200 / 7-Fm / Jarmac / Wendee, Maw / Full Moon and Moon at perigee. Wonderful, bright landscape.

11367 S. Wed 22 Dec / 1630-1645 / 10-3-F / Jarmac /

11368 E2 Echo / - / SS 2: 3: 4 / Wendee, guests / Moon rise.

11369 E3. 2300-2300 / 7-Fm / Jarmac / Wendee / Very bright full Moon - pictures.



- 11370E Thurs 23 December | 1840-1900 | 7-Fm / Jarnac / Mom, Wendee / Moonrise.
- 11371S. Fri 24 Dec | 13:25-13:40 | 3-F, windy / Jarnac / Ophelia - / SS2: 3, 26.
- 11372E2\$ 1900-2030 | 3-F + windy / Jarnac / ~~Op~~ Minerva and Miranda. which had been left on since session 11362 - morning of 18th i.e. 6 1/2 days, - it was still accurately tracking. CN3 1/4, NGC 7793 (Cat # 43.) Mv 9.1 23 57.8 -32 35.
- 11373S. Sat. Dec 25 | 1600-1700 | 10-F, windy / Jarnac + walk / Mother / Pollux / SS2: 15. Very windy.
- 11374E2 1815-2130 | 10<sup>3</sup>-F / Jarnac / Minerva - Ophelia / Wendee | CN3F 8pics thru E wind + clouds from SW. Somehow did 8!
- 11375S. Sun 26 | 1600-1620 | 10-F / Jarnac / Pollux / Sun SS2: 4, 27. Winds finally calming down.
- 11376E2 1915-2200 | 10-F / Jarnac / Minerva - Oph / Wendee | CN3F 10pics
- 11377\$M. ~~Tues~~ <sup>Mon / Tues</sup> 27/28 | 13-Fm / Jarnac / Miranda / +, & CN3 15m. Very windy!
- 11378S Tues 28 Dec. | ~~10~~ 3-F / Jarnac G / Eclat - / ~~Et~~ SS2: 3, 26. Windy morning.
- 11379S. Thurs 30 Dec | 1100-1115 | 10-3-F / Jarnac / Castor - / SS2: 3, 7.
- 11380E2, 1915-2200 | 10-F / Jarnac / Minerva - freshly cleaned + waxed tube + Ophelia / - / # Wendee phlower / CN3F 8pics in sq of Pegasus.
- 11381S. Fri 31 Dec | 1200-1:15 | ~~10~~ 3-2-F / Jarnac Obs / Dad / Mine / SS2: 3, 16.
- 11382E2. 1600-1700 | 2-F / Jarnac - / David + Linda Freund, Wendee



11383E3. 1900-2200/3-2-F/Jarmac/Wendee, Lant  
Annette/Jupiter, Saturn, M42.

11384EM4. 2345-0015/2-1-F/Jarmac/Wendee, Annette/  
Welcoming 2000!

11385M5. 0445-0630/10-7-F/Jarmac/Minerva, Pegasus,  
-1CN3 1<sup>h</sup>20<sup>m</sup>E. CN3e TVGw (14.8).

11386S. January 1, 2000/1600-1650/10-F/Jarmac F/  
Pollux/David Freund/SS2: 5, 17.

11387E2. 1930-2200/10-definitely 10!-F/Jarmac/  
Minerva and Ophelia/Wendee, Annette/  
CN3F 8pics NGC 7331.

11388M3. 10440-0620/10-F/Jarmac/Miranda, Pegasus/  
CN3 1<sup>h</sup>15<sup>m</sup>E. CN3e TVGw (14.6. Clear,  
28°F, no wind.

11389S. Sunday, January 2, 2000/1430-1630/3-F-  
yes, after storm with hail moved through/Echo/-  
SS2: 5, 18.

\* 11390E2. 1850-2130/10-3-F/Jarmac/Minerva-  
Ophelia/Wendee/CN3F 8pics. Discovery  
of Wendee's Ring - a ring of 11-13 magnitude  
stars open at the south. Levy Wallace J2204.4+450.

11391M3. 0450-0615/10-F/Jarmac/Pegasus, Miranda/  
CN3e TVGw (14.6, CN3 4<sup>h</sup>E.

11392S. Monday, January 3, 2000/1720-1740/10-F/  
Jarmac/Echo/-SS2: 4, 14.

Really weird stuff  
with Sun so low.



11393E2. 1920-2130/10-F/Jarmac/Miranda-Ophelia/  
Wendee/CN3E F 8 pictures - 2nd disc. P/Machpoly 2.

11394M. 0435-0615/10-F - very windy/Jarmac/  
Miranda, Pegasus/0-1 TVGw (14.6?  
CN3e, CN3 0<sup>h</sup>55<sup>m</sup>E. Telescope shaking.  
Lifted west bubble and closed it partially.



- 11395S. ~~#29~~ Tues, Jan 4, 2000/10-F/Jarnac/Echo/-/  
 EA-SS2: 3, 8. 1720-1735.
- 11396E2. 2130-2145/10-F/Jarnac/Echo/-/. Jupiter,  
 Saturn.
- 11397M3. 0450-0610/10-F/Jarnac/Miranda,  
 Pegasus/CN3eTVGw (14.6, CN3 145m  
 E. less wind
- 11398S. Wed Jan 5, 2000/1550-1605/10-F/Jarnac/  
 Echo/-/CS2: 3, 7.
- 11399E2. 2100-2200/10-F-3-F/Jarnac/Echo  
 with Lanthanum 20mm eyepiece/Wanda/  
 Jupiter + Saturn.
- 11400M3. 0440-0615/10-F/Jarnac/Miranda, Pegasus  
 -/CN3eTVGw (14.6. CN3 145m E. No wind.
- 11401S. Thursday, Jan 6, 2000/1430-1500/10-F/  
 Jarnac/Echo/Wanda/SS2: 3, 5.
- 11402E2. 1830-2040/10-F/Jarnac Minerva-  
 Ophelia/Wanda/CN3e 8pics.
- 11403M3 0440-0610/10-F, breeze/Jarnac/  
 Miranda, Pegasus/-/CN3eTVGw  
 (14.6. CN3 145E. Rice session.
- \*11404S. Fri Jan 7, 2000/1600-1615/10-F/Jarnac/  
 New MDA ETX Telescope first light!  
 SS2: 4, 21.
- 11405M2. 0445-0630/10-F/Jarnac/Pegasus, Min-  
 anda/-/CN3eTVGw (14.6, CN3 1420m E.
- 11406S. Saturday, Jan 8, 2000/1400-1630/10-F/  
 Jarnac/Echo, Castor, and Ophelia/SS2:  
 3, 15. actually Castor was best performer.  
 also installed Clyde's satellite camera.



11383E3. 1900-2200/3-2-F/Jarnac/Wendee, Lant  
Annette/Jupiter, Saturn, M42.

11384EM4. 2345-0015/2-1-F/Jarnac/Wendee, Annette/  
Welcoming 2000!

11385M5. 0445-0630/10-7-F/Jarnac/Minerva, Pegasus,  
-1CN3 1<sup>h</sup>20<sup>m</sup>E. CN3e TVCw (14.8).

11386S. January 1, 2000/1600-1650/10-F/Jarnac F/  
Pollux/David Freund/SS2: 5, 17.

11387E2. 1930-2200/10-definitely 10!-F/Jarnac/  
Minerva and Ophelia/Wendee, Annette/  
CN3F 8pics NGC 7331.

11388M3. 10440-0620/10-F/Jarnac/Miranda, Pegasus/  
CN3 1<sup>h</sup>15<sup>m</sup>E. CN3e TVCw (14.6. Clear,  
28°F, no wind.

11389S. Sunday, January 2, 2000/1430-1630/3-F-  
yes, after storm with hail moved through/Echo/  
SS2: 5, 18.

\* 11390E2. 1850-2130/10-3-F/Jarnac/Miranda-  
Ophelia/Wendee/CN3F 8pics. Discovery  
of Wendee's Ring - a ring of 11-13 magnitude  
stars open at the south. Levy Wallace J 2204.4+4501

11391M3. 0450-0615/10-F/Jarnac/Pegasus, Miranda/  
CN3e TVCw (14.6, CN3 4<sup>h</sup>E.

11392S. Monday, January 3, 2000/1720-1740/10-F/  
Jarnac/Echo/SS2: 4, 14.

Really weird stuff  
with Sun so low.



11393E2. 1920-2130/10-F/Jarnac/Miranda-Ophelia/  
Wendee/CN3E F 8 pictures - 2nd disc  
P/Mach 2.

11394M. 0435-0615/10-F-very windy/Jarnac/  
Miranda, Pegasus/10-1 TVCw (14.6?  
CN3e, CN3 0<sup>h</sup>55<sup>m</sup>E. Telescope shaking,  
lifted west bubble and closed self partially.



- 11395S. ~~#29~~ Tues, Jan 4, 2000/10-F/Jamaica/Echo/-/  
 EA SS2: 3, 8. 1720-1735.
- 11396E2. 2130-2145/10-F/Jamaica/Echo/-/Jupiter,  
 Saturn.
- 11397M3. 0450-0610/10-F/Jamaica/Miranda,  
 Pegasus/CN3eTVGw (13.14.6, CN3 145m  
 E. less wind
- 11398S. Wed Jan 5, 2000/1550-1605/10-F/Jamaica/  
 Echo/-/SS2: 3, 7.
- 11399E2. 2100-2200/10-F/3-F/Jamaica/Echo  
 with Lanthanum 20mm eyepiece/Wanda/  
 Jupiter + Saturn.
- 11400M3. 0440-0615/10-F/Jamaica/Miranda, Pegasus  
 -/CN3eTVGw (14.6. CN3 145m E. No wind.
- 11401S. Thursday, Jan 6, 2000/1430-1500/10-F/  
 Jamaica/Echo/Wanda/SS2: 3, 5.
- 11402E2. 1830-2040/10-F/Jamaica Mimerwa-  
 Ophelia/Wanda/CN3e 8pics.
- 11403M3 0440-0610/10-F, breezy/Jamaica/  
 Miranda, Pegasus/-/CN3eTVGw  
 (14.6. CN3 145m E. Rice session.
- \*11404S. Fri Jan 7, 2000/1600-1615/10-F/Jamaica/  
 New MDT ETX Telescope first light!  
 SS2: 4, 21.
- 11405M2. 0445-0630/10-F/Jamaica/Pegasus, Mi-  
 randa/-/CN3eTVGw (14.6, CN3 1420m E.
- 11406S. Saturday, Jan 8, 2000/1400-1630/10-F/  
 Jamaica/Echo, Castor, and Ophelia/SS2:  
 3, 15. actually Castor was best performer.  
 also installed Clyde's satellite camera.



11407AN2: 1735-0645 / 10-3-10-F / Jarnac / ~~Miranda~~ - Oph.  
14", other telescopes, Miranda, Pegasus, Clyde's  
camera / Wendee, Starizona group - Ken G, Jim  
Scotti, Scott T., Virginia W. Michael Magee,  
Sheldon Marks. / CN3e TVCw (14.8, CN3F, 16 pictures  
plus 2 + 2 test on Clyde's camera. CN3 2 1/2 hrs.  
Possible ind. discovery of Clyde's galaxy stratum.

11408S. Sunday, January 9, 2000 / 1300-1300 / 10-F /  
Jarnac / Echo 1-1 / SS 2: 4, 21. Removal of  
Clyde's camera due to failure of balancing it.

\* 11409E2 1730-1745, then 1900 to 1930 / ~~12~~ 7-F /  
Mike's & Elaine's house / Pollux / Mike, Wendee,  
Joanne W., Maw / M42, Jupiter, Saturn, Moon.  
Wendee's first lunar occultation! 7th  
magnitude star. Wendee reported the  
star seemed to brighten instantaneously  
just before ~~dis~~ ingress. DIM, DIM, DIM,  
BRIGHT - GONE.

11410 M3. 0445-0610. / 10-F / Jarnac / Pegasus,  
~~Ophelia~~ / Miranda / - / CN3E, TVCw (14.6.  
CN3 1 1/2 10" E.

11411S. Monday, January 10, 2000 / 1-3:45 pm /  
10-F / Jarnac / ~~Miranda~~ - Ophelia / Echo 1  
Reworking of Ophelia's mount, SS 2: 3, 29.

11412 M2. 445-6:20 / 10-F / Jarnac / ~~to~~ <sup>Miranda</sup> ~~Miranda~~  
Pegasus / - / CN3e TVCw (14.6, CN3 1 1/2 5" E

11413 SETuesday, January 11, 2000 / 1:45-<sup>7</sup> 3 pm / 10-F /  
Jarnac / Wendee / ~~Miranda~~ - Ophelia, Mini,  
Cordelia / ~~to~~ SS 2: 4, 44, completion of  
work on Ophelia's & Cordelia's mount /  
SS 2 with Mini.

\* 11414E2. 2100-2300 / 10-F / Jarnac / Alex Schallig, Wendee,  
~~Miranda~~ / ~~Miranda~~ / Cordelia / M42, DB Cl / Moon, 7, 11.



11416M3. 0440-0620/10-F/Jarnac/Minerva, Pegasus/  
-1CN3e TVCw (14.6) CN3 1<sup>h</sup> E.

11417S. January 12/14-1600/10-F/Jarnac/-Wendee/  
Echo/S. walk. SS2: 5, 74.

11418EP2 2100-2110/10-7-F/Jarnac Front/-Wendee.

11419M3 - 0430-0610/10-F/Jarnac/Pegasus, Minerva,  
Miranda/-1CN3e TVCw (14.6) CN3 1<sup>h</sup> 5<sup>m</sup> E.

11415G. Thursday, January 13, 2000/1530-1730/  
3-f/Jarnac + S. walk/Echo/-1SS2: 5, 21.  
Clouds. Also cleaning (vacuuming) in  
observatory, and more work on Ophelia.


11420E2. 2000-2100/3-f/Jarnac/Minerva-  
Ophelia, Cordelia/final testing and MDA  
moon photographs.

11421S. Friday, Jan 14, 2000/1100-1230/3-F/Jarnac/  
1-f completion of Minerva-Ophelia's mount for  
additional cameras. Mini - SS2: 7, 46.  
R=116.

11422E2. 2100-2105/3-F/Jarnac/Cordelia, Ophelia/  
-135mm camera pictures of M. in "MDA"  
phase

11423S. Saturday, January 15, 2000/1130-1150/3-F/  
Jarnac/Ophelia 3/-1SS2: 7, 48. R=118.

11424M2. 10430-0610/10-F/Jarnac/Miranda, Pegasus,  
Minerva/-1CN3e TVCw (14.6) CN3 1<sup>h</sup> 20<sup>m</sup> E.

11425S Sunday, January 16/1600-1650/3-F/  
Starizona 4", 6" / Dean, Wendee/SS2: 5, 65.  
R=115. Several big prominences. 

11426M2 0400-0620/10-f/Jarnac/Pegasus, Miranda,  
Minerva/CN3e TVCw (14.6) CN3 2<sup>h</sup> E.

11427S. Mon, Jan 17/12-3/3-f/J. Tyle/Wendee/Beautiful Day.  
SS2: 6, 58.



- 11428 E2. 1900-2000/3-F/Jarnac/Miranda/-/CN3 15<sup>m</sup>W.
- 11429 M. Tuesday, 18/19/0530-0620/10-F/Jarnac/Miranda,  
Pegasus, Miranda/-/CN3eTUCw (14.6. CN3 215<sup>m</sup>E.
- 11430 S. Wednesday, 19/20/11:30-2:30pm/3-F/Jarnac/Mini,  
Capella/Wendee/SS2: 6, 55. Capella axis framing.
- \*11431 E Monday, Jan 17/18 (before 11429) /2/15-22/15/  
3-F/Jarnac - south table/Wendee/Capella  
first light session. Nice telescope, great  
optics, good alignment - Jupiter was first  
object. Saturn, Mon.
- \*11432 E2. 19/20/2100-22:45 /~~10~~3-Fm/Jarnac/south  
table/Capella/Capella, Jupiter, Saturn, M31, M42
- 11433 S. Thursday 20/21/0145-0200pm/3-F/Jarnac/  
Ophelia 31 - /SS2: 4, 35.
- \*11434 EM2 1730-0200/3-10-F/Jarnac/Miranda,  
Minerva, Echo, Mini, Sapphire, Ophelia,  
Cordelia, and Pegasus/Neighborhood  
Party - many people / Total Eclipse of the  
Moon. L = 3 1/2 - beautiful eclipse with  
Mon between d + B Gem + Cancer.  
Wendee saw sun in grey occultation  
during totality - her second.
- 11435 S. Friday 21/22/1045-1100/3-F/Jarnac/  
Ophelia 31 - /SS2: 4, 13.
- 11436 E2. 2330-0000/2-F/Jarnac/Pollux, ~~A~~ Capella/  
- /Moon w/row 40m Ploss eyepiece.
- 11437 S. Saturday 22/23/1400-1500/2-F/Jarnac/  
Echo + Mini/Wendee/SS2: 0. Sun  
barely visible - no spots seen.
- 11438 E2. 1900-2000/10-3-F/Jarnac/Minerva -  
Ophelia/-/CN3 20<sup>m</sup>W.
- 11439 S. Sun 23/24/3-F/Jarnac/Echo?/SS2: 10<sup>~</sup> spots.



11440S. Monday 24/25/10-3-F/Jarnae/Echo?/-/SS2: 5, 51.

11441E2. 1900-2330int/3-F/Jarnae/-/Carolyn, Wendee,  
CN3F - no pics

11442S. Tuesday, 25/26/10-F/Starizona/4", 6"/Larsy,  
Scott, Wendee, Carolyn/-/SS2: 5, 45. Beautiful  
prominences.

11443E2. 1840-2330/3-F/Jarnae/Wendee + Carolyn/  
Minerva - Ophelia 1, Esther - Ophelia 2/CN3F: 25p.

11444S. Wednesday, 26/27/10-3-F/Jarnae/10-10:30/  
Carolyn/Training on Esther. Also Miri: SS2:  
5, ? sunspots.

11445E2M 1800-~~23~~0030/10-F/Jarnae/~~Wendee~~ +  
Carolyn/Esther, Ophelia 2, Minerva, Ophelia 1/  
CN3F 18 pict. roll of 350. Possible comet.

11446S. Thursday, 27/28/10-F/Jarnae/Lastor/  
4:10.

11447E2. 1830-2300/10-F/Jarnae/Wendee + Carolyn/  
Esther, Ophelia 2, Minerva - Ophelia 1. 24 pics.

11448ES. Friday, 28/29/1600-1700/~~10~~<sup>3</sup>-F/Jarnae/  
Wendee + Carolyn/Ophelia mount/SS2:  
15 spots.

11449E2 1830-2300/3-F/Jarnae/Minerva -  
Ophelia 4/Esther - Ophelia 2/Carolyn +  
Wendee/CN3e 7pics.

11450S. Sat. 29/30/1500-1700/3-F/Jarnae/  
Cordelia/Wendee/CSS2: 3, 19.

11451M2. 0430-0530/~~10~~<sup>3-2</sup>-F/Jarnae/Miranda/  
-/CN3e TV Gw (14.6. CN3 20m E. clouds  
Sun 30/31

11452S. 1600-1630/3-F/Jarnae/Echo 1/-  
SS2: 2, 15. Repair, sort of, of  
Echo's eyepiece.



11453 AN2. 1830 to 0615, intermittent until 0430/  
3-F/Jarnac, airport, then Jarnac. Echo for most of  
session, then Pegasus, Miranda/Wendee, Art + Jeff/  
M42, Moon with Echo. CN3e TVGw (14.6, w/Pegasus,  
CN3 1 hour East w/ Miranda

11454 S. Monday, 31/1/12-3 pm/10-3-F/Jarnac/Wendee/  
Echo - repair of focuser successful!  
SS2: 3, 20.

11455 E2. 1930-2030/3-F/Jarnac/evening session.

11456 M3. 0440-0615/10-F/Jarnac/Pegasus, Miranda/  
-CN3e TVGw (14.6, CN3 1<sup>h</sup>15<sup>m</sup>E

11457 S E Tues February 1, 2008/1200-2100/10-F/  
Jarnac/Wendee, Dean/Echo, etc/SS2: 4, #9.  
25. Collimation + replacement of focuser  
on Miranda. Collimation of Pegasus +  
Minerva. CN3 25 min with Minerva  
with new link to computer - actually old  
link but newly used. Very successful.

11458 M2. 0440-0710/10-F/Jarnac/Miranda,  
Opelia/Wendee/CN3 1<sup>h</sup>E. CN3e TVGw  
(14.8 with Pegasus! Photos of beautiful  
conjunction of Moon + Venus!



- 11459S. Wed Feb 2 / 1130-1150 / 10-F / Jarnac / 3" Pumpkin  
 Celestron, formerly Ophelia 3 / Wendee. guest / SS2: 3, 19.
- 11460 E2. 2000-0000 / 10-F-windy / Jarnac / Ophelia  
 1, 2, and 3 - 3 being the mount! / Wendee,  
 Mario Motta + Moe Cricasia / CN3 F 6 pics.
- 11461 M3. 0440-0630 / 10-F / Jarnac / Miranda,  
 Minerva with NEC / - / CN3e with Pagurus:  
 TVGW 14.8; CN3 1<sup>h</sup> 05<sup>m</sup> E
- 11462 S. ① Thu Feb 3 / 1700-1715 / 3-F / Jarnac / Mini / -  
 SS2: 5, 17.
- 11463 E2. 171900-1940 / 3-F / Jarnac / Ophelia / -  
 installation of Ophelia 3 plaque on Ophelia's  
 mount.
- 11464 E3. 2000-2345 / 3-10-F / Jarnac / Miranda  
 Miranda / Dean + Kris Koenig + Kevin and  
 Wendee / - / CN3 20m W - 3 satellites following  
 one another while comet hunting.  
 M51, R Leporis, Mu Cep,  $\epsilon$  28 / 6 / 9 / Cap,  $\gamma$  42  
 Wendee saw, need petition for Ophelia 3 plaque.
- 11465 M4. 0430-0600 / 10-F / Jarnac / Miranda / -  
 CN3 1<sup>h</sup> E
- 11466 S. Friday, Feb 4 / 1500-1600 / 10-F / Jarnac /  
 Pumpkin - new name for Celestron 90 / Wendee /  
 SS2: 4, 20. Inst. of NEC Monitor.
- 11467 E2 2001930-2015 / 10-F / Jarnac / Minerva  
 with NEC + monitor. CN3 20m. W.
- 11468 M3. 0435-0610 / 3-F / Jarnac / Miranda / -  
 CN3 1<sup>h</sup> E
- 11469 S. Sat Feb 5 / 0720-0735 / 3-F / Jarnac /  
 Echo / SS2 at sunrise: 8, 15.
- 11470 E2. 2215-2230 / 3-F / Redway Inn, Phoenix -
- 11471 E. Sunday, Feb 6 / 1840-1900 / 3-F / over El  
 Salvador, plane / - / Carolyn / Moon +  
 Mercury
- 11472 E2 2000-2030 / 8-F / Road from airport to  
 El Salvador / Ana Ruiz Payer, ~~Steve~~ Carolyn,  
 others / view of S. sky from car.



11473E3. 2100-2230/8-F/ Home in El Salvador  
Association Party / Carolyn, Steve O'Meara, others/  
False cross, Orion overhead - Log of everything  
... else at strange aspect, and Polaris  $13^\circ$  above  
N. horizon.

\* 11474M4 12:00-12:45/8-7-F/ Radisson Hotel, El Salvador/  
Castor / - / Jewell Box, Acrux, Eta Carinae Nebula

\* 11475M5. 0400-0600/8-F/ Radisson Hotel, El Salvador/  
Castor / - / CN3  $1^h 25^m$  E to S. 16 25.8 - 71 15 lowest  
point. NGC 5986 (G) M19, M62, NGC 6242 (G)  
CR 316? (G) NGC 6231 (Beautiful OC)  
NGC 6388 (G) NGC 6397 (G).

11476M. Monday Feb 7/8/ 0400-0500/7-8-F/ Radisson  
Hotel, El Salvador / Castor / CN3  $1^h$  E to S.  
Fundamentally convenient. We just sit at the  
table - Castor peers out, and we hunt  
for comets with a constant RAT Dec  
readout - In full view of  $\alpha + \beta$  Cen +  
the Southern Cross.

\* 11477E Tuesday, Feb 8/9/ 1800-2100/8-9-F/  
Official opening of the new Asociacion  
Salvadorense de Astronomia Observatory  
With Carolyn, Ana, many people, govt.  
officials. I said how, when I started,  
that the 20" was said to be the most  
important telescope on Earth. Not so, I thought  
in 1960, Echo is! "Tonight ladies and  
gentlemen, ground the world, THIS telescope  
(pointed & looked toward obs.) is the world's  
most important telescope." Then -  
may ~~it be~~ you know only happy hours,  
clear nights - many of our covers take place  
here, & many children be inspired here."



11478 E2. 2200-0000/7-8-F/Radiation Hotel, San Salvador/  
Castor/Carolyn/CN3 1<sup>h</sup> S. Jewel Box, E Carinae,  
Uela, the false cross. Pice Open Cluster  
NGC 3766 at 1135.9 -6144, and a big  
nearby one, IC 2602. at 1043.4 -6422.

\*11479 M. Wednesday, February 9/10/0100-0540/10-F/  
Asociacion Salvadoreña de Astronomia  
Observatory/20" Obsession, other telescopes/  
Ana & Arturo, + people from Asociacion, +  
Panama/CN3 2<sup>h</sup> 30<sup>m</sup> E and South from  
E Carinae to Scorpis, through the Southern  
Cross. Beautiful, four through Southern  
sky mostly invisible from home. CN3 TV  
Orb 14.8.

11480 S. Thurs Feb 10/11/1-3pm/9-F/Volcano  
Castor/Ana/ broad volcano Iztacc from  
Cerro Verde - also a large green lizard.

11481 E2. 2000-2200/6-7/State Dept. party, at San  
Salvador/members of government, ambass-  
adors, ASDA members. Outdoor party

11482 M3. 0455 to 0530/10-8-F/Radiation  
Hotel, San Salvador/-/CN3 0<sup>h</sup> 20<sup>m</sup> E, S.

11483 E. 1930-2230/Fri Feb 11/12/3-F/Phoenix to  
Tucson/Carolyn, then Wanda/Jupiter,  
Saturn & Moon in conjunction.

11484 M2. 0510-0600/3-F/Jamaac/Mercurial/-/  
CN3 20<sup>m</sup> S, E.

11485 S. Saturday, February 12/13/1600-1700/3-F/  
Jamaac/Mini 1-SS 2: 7, 36.

11486 S. Sunday, Feb 13/14/10-3-F/Jamaac/  
The Pumpkin 1-SS 2: 8, 32.

\*11487 E2 2000-2100/3-F/Jamaac/Mercurial,  
Mercurial/-/CA Test with new  
Nagler 31mm eyepiece. Beautiful!



11488 M 3. 0440-0615/10-F/Jarnac/Minerva,  
Miranda, Pegasus/CN3e TVGw (14.8, CN3  
1<sup>h</sup> 10<sup>m</sup> E.

11489 S. Monday, February 14/1330-1430/3-F/  
Jarnac/The Pumpkin/Wendee/SS2: 6, 21.

\*11490 S. Tuesday, Feb-15/1330-1420/10-F/Jarnac  
+ walk on street named today Sky-  
watcher's Drive! / Echo/Wendee/SS2: 7, 30

11491 M 2. 0440-0610/10-3-F/Jarnac/Pegasus, Miranda/  
Wendee, who saw her Dandelion (Scorpio)  
rising / CN3e TVGw (14.6. CN3 1<sup>h</sup> E.

11492 S. Wed Feb-16/1000-1015/3-F/Jarnac/Echo/SS2:  
8, 56.

11493 E 2. 2200-2300 EST/3-F/Montreal/Voyager/  
Carl Jorgensen/Moon. VERY COLD.

11494 E Thurs Feb-17/1700-2200 int/7-F/McGill/  
Dr H. Veli/Very cold + clear - full Moon.  
Evening lecture.

11495 S. Sat Feb-18/19/20/1500-1600/8-F/Jarnac, but  
LCP-818/CN5 Sun knot 818.

11496 E 2 2000-2300/7-F/Very clear for Montreal, but  
some high clouds / RASC/Moon.

11497 S. Monday, Feb-21/1500-1515/3-F/Jarnac/  
~~Ophelia~~ /-/SS2 7; 42. N.B. Hail storm  
The Pumpkin this night.

11498 S. 1510-1525 Tues Feb-22/3-F/Jarnac/  
Pollux/SS2: 6, 39. And Beethoven's  
Somerset Symphony.

11499 E 2 Tues Feb-22/2000-2140/10-3-F/Jarnac/  
Ophelia 2 and Esther/Wendee/CN3e F  
3 pics - all out of focus unfortunately.



- 11500S. Wed Feb 23/1030-1045/3-F/Jarnac/Echo  
-/SS2: 6, 39.
- 11501E Thu Feb 24/2300-2330/10-3-F/Jarnac/Wendee
- \*11502B. Fri 25 Feb 2000/1000-1300/10-F/Jarnac/  
Echo, Minerva/Wendee, NBC Nightly News Crew/  
SS2: 7, 69. Coming of age from a lifelong  
sun observing program at last - national  
television ~~at~~ for my work + knowledge of the Sun.
- 11503E2. 1930-2235/10-3-F/Jarnac/Minerva-Ophelia/  
Wendee/CN3F: 8 pics same as 11499E2.  
CN3e with Pegasus, TV crew (14.6).
- 11504S. Sat 26 Feb/1300-1500/10-F/Jarnac,  
and drive to Fedex to send a copy of  
Starlight Nights to Miss Williamson. /Wendee/  
SS2: 9, 78 through Mini.
- 11505ER. 2000-2030/10-F/Jarnac/Wendee/  
Minerva-Ophelia/Pegasus, Miranda/CN3F,  
E# 8 pics. CN3e TV crew (14.8).
- 11506S. Sun 27 Feb/1615-1645/10-F/Jarnac/Wendee/  
Pallux/ -/SS2: 11: 68<sup>1710</sup> Magnificent grouping.
- 11507E2. 2100-2330/10-3-F/Jarnac/Wendee/  
Minerva-Ophelia/Pegasus, Miranda/  
CN3F 8 pics, one mostly clouded out.  
CN3e TV crew (14.6).
- 11508S. Monday, February 28, 2000/1700-1730/  
2-F/Jarnac/Echo/ -/SS2 through  
clouds 4, 30 spots about.
- 11509B. Tues, Feb 29/1430-1600/3-F/Jarnac/Wendee, Dean/Echo/  
SS2
- 11510M2. 0400-0600/10-3-F/Jarnac/Pegasus, Mir-  
anda with Dean's new altar bearing/  
-/CN3e TV crew (14.6) CN3 1420m E.
- 11511S Wed, March 1/1500-1515/10-F/Jarnac/  
Pallux/ -/SS2: 7, 67.



11500S. Wed Feb 23/1030-1045/3-F/Jarnac/Echo  
-/SS2: 6, 39.

11501E Thu Feb 24/2300-2330/10-3-F/Jarnac/Wendee

\*11502B. Fri 25 Feb 2000/1000-1300/10-F/Jarnac/  
Echo, Minerva/Wendee, NBC Nightly News Crew/  
SS2: 7, 69. Coming of age from a lifelong  
sun observing program at last - national  
television for my work + knowledge of the Sun.

11503E2. 1930-2235/10-3-F/Jarnac/Minerva-Ophelia/  
Wendee/CN3F 8 pics same as 11499E2.  
CN3e with Pegasus, TV crew (14.6).

11504S. Sat 26 Feb/1300-1500/10-F/Jarnac,  
and drive to Fedex to send a copy of  
Starlight Nights to Miss Williamson. /Wendee/  
SS2: 9, 78 through Mini.

11505ER. 2000-2030/10-F/Jarnac/Wendee/  
Minerva-Ophelia/Pegasus, Miranda/CN3F,  
E 8 pics. CN3e TV crew (14.8).

11506S. Sun 27 Feb/1615-1640/10-F/Jarnac/Wendee/  
Pallux/-/SS2: 11: 68<sup>1710</sup> Magnificent grouping.

11507E2. 2100-2330/10-3-F/Jarnac/Wendee/  
Minerva-Ophelia/Pegasus, Miranda/  
CN3F 8 pics, one mostly clouded out.  
CN3e TV crew (14.6).

11508S. Monday February 28, 2000/1700-1730/  
2-F/Jarnac/Echo/-/SS2 through  
clouds 4, 30 spots about.

11509S. Tues, Feb 29/1430-1600/3-F/Jarnac/Wendee, Dean/Echo/  
SS2

11510M2. 0400-0600/10-3-F/Jarnac/Pegasus, Mir-  
anda with Dean's new altaz bearing/  
-/CN3e TV crew (14.6) CN3 1420<sup>th</sup> E.

11511S Wed, March 1/1500-1515/10-F/Jarnac/  
Pallux/-/SS2: 7, 67.



- 11512 E2. Wed 1/2 Mar. 2000 / 2000-2200/3-F/Jarnac /  
 Minerva - Ophelia // Wendee / CN3F: 4 pics
- 11513 M3. 0415-0610 / 10-F/Jarnac / Pegasus, Miranda /  
 CN3e TV Gw C14.6. CN3 1h 20m E.
- 11514 S. Thurs March 2/2000 / 1515-1535 / 10-F/Jarnac /  
 The Pumpkin / SS2: 5,55.
- 11515 E2. 1915-2210 / 10-F/Jarnac / Minerva, Ophelia //  
 CN3F = 10 pics. with Wendee.
- 11516 EP3 2210-2220 / 7-F / (near the airport) - / Wendee /  
 Fireball, MV = -5. Falling towards SW.
- 11517 M4 0415-0615 / 10-F / Jarnac / Pegasus, Miranda /  
 CN3e TV Gw C14.8. CN3 1h 20m E.
- 11518 S. Fri Mar 3 / 1700-1735 / 10-F / Jarnac /  
 The Pumpkin / Wendee, Gail, Marc /  
 SS2: 5,40.
- 11519 E2. 2000-2235 / 10-F / Jarnac / Ophelia /  
 Minerva / Wendee, Gail, Marc / 5 CN3F:  
 8 pics.
- 11520 M3. 0410-0600 / 10-F / Jarnac / Pegasus,  
 Miranda. 1-1 CN3e TV Gw C14.6. CN3 1h 30m  
 (Neb 6188  
 superimp) NGC 6193, beautiful OC in Ara, 16 41.2  
 NGC 6541, Grb Clm Cr A. 18 08.0  
 -48 45
- 11521 E. Saturday, March 4/5 / - 43 42  
 1800-1945 / 3-F windy / Jarnac / Minerva /  
 Wendee, Gail + Marc, Carol + Don /  
 Jupiter, Saturn, Mars.
- 11522 S. Sunday, March 5/6 / 1200-1230 / 2-F /  
 Jarnac / Castor / SS2: 4,50.
- 11523 SE2. 1600-1800 / 1-F / Jarnac / Wendee,  
 Clark + Lynda.



11524 EP Mon March 6/7, 1945-1955/0-F(Snow)/Jarnac /  
Wendee + Beagle.

11525 S. Tuesday, March 7/8, 2000/3-F/Jarnac H600-1615- /  
@ The Pumpkin /-/SS2: 4, 38. Some clouds.

11526 M.2. 0400-0600/3-F - cold + humid /Jarnac /  
Pegasus/Miranda /- / Could not find TV or field  
through clouds. CN3 14.5 mE.

11527 S. Wednesday, March 8/9, 2000/10-11:30 /  
10-F/Jarnac + Sualk / Echo, Mintaka / Wendee  
Hedgehog cactus moving + transplanting.  
Echo: SS2: 12, 51.  
Mintaka SS2: 12, 75.

11528 SS2. @ 1630-1730/3-F/Jarnac / Myriara /  
Wendee, \* Raymond Aebler + Claude Fairman  
Moon.

11529 E3. / 2300-2330/10-F/Jarnac / Pegasus /- /  
CN3e TV or (14.6.

11530 M4. 0400-0550/10-F/Cold, humid / Pegasus,  
Miranda /- / CN3e TV or again (14.6.  
CN3 14.20 mE.

\* 11531 E. Thursday, the 9/10 of March, 2000. /  
~~20~~ 1900-2200/3-F/on Oracle Highway /  
2 Celestron Telescopes / Sean + Starizona /  
March 9, 1962 Westmount High Star Party  
all over again. I gave a brief before, and  
then there was a star party. Only this 1962,  
it was clear mostly! Moon, 4, 2, H6-M16.

11532 M2. 0500-0600/10-F/Jarnac / Pegasus  
Miranda /- / CN3e TV or (#13.3, CN3  
14.5 mE.

11533. S. Friday, 10/11 March H700-1730-10-F /  
Jarnac / Mintaka / @ SS2: 11, 118.

11534 M2. 0400-0550/10-F/Jarnac / Pegasus,  
Miranda / CN3e TV or (13.14.6 CN3 14.15 mE.



11535 S. Saturday, March 11/12/10-F/Jarnac/Mintaka  
-1 SS 2: 11, 102 1600-1630.

11536 E 2/ 2000-2130/10-Fm/Biosphere 2/Wendee,  
many others, David Harper, Joe Patterson,  
24" telescope + other telescopes. 8" Celestrons,  
1 Dob. Moon, Jupiter, Saturn.

11537 M 3. 0430-0545/10-F/Jarnac/Pegasus, Miranda  
-1 CN 3e TV Gw (14.6. CN 3 1<sup>h</sup> E.

11538 S. Sunday, March 13/14 12/13/4 1645-1710/  
3-10-F/Jarnac/Mintaka/Wendee/SS 2: 8, 96.

11539 M Monday, March 13/14/0415-0545/10-F/Jarnac/  
Pegasus, Miranda -1 CN 3e TV Gw (14.6.  
CN 3 1<sup>h</sup> 5m E.

11540 S. Tuesday, March 14/15, Summer's birthday  
Mintaka/1700-1730/3-F/Jarnac/  
SS 2: 7, 71.

11541 E 2. 2100-2200/3-Fm/Jarnac/Miranda, Minerva/  
-unsuccessful search for Comet? Philippe.  
CN 3 15<sup>m</sup> NE.

11542 M 3. 0415-0545/10-F/Jarnac/Pegasus, Minerva,  
Miranda -1 CN 3e TV Gw (14.6, CN 3 1<sup>h</sup> 5m E.

11543 S Wednesday, March 15, the Ides of March/  
1530-1630/3-F/Jarnac/Mintaka/Wendee,  
Seria 1 SS 2: 5, 76.

11544 E 2 2300-2315/7-Fm/Jarnac-F/-

11545 S. Thuro. 16 March/1630-1700/10-F/Jarnac/  
Mintaka/SS 2: 6, 82.

11546 E 2. 1945-2030/10-Fm/Jarnac/Minerva/  
& CN 3 15m W.

11547 M 3 0015-0100/7-Fm/Jarnac/Minerva/  
Wendee, David Currier/Moon.

11548 S. Friday, 17 March/1130-1330/10-F/Jarnac/



Mintaka/David Currier, Wendea/SS2: 6, 62.

11549M4. Thurs. 16/17, before 11548/5:00-5:40/7-Fm,  
then 10/Jamaica/Minerva, Miranda -/CN3e,  
TVow (14.6, CN3 20m E.

11550SE/Saturday, March 18/1100-1900/10-F/

Jamaica/Mintaka/Wendea, David/SS2: 6, 104.

Then drive to Mount Jermon, Moon rising then  
Sunset + Green Flash at Sugarloaf Mt Park

11551E2. 2100-2230/7-Fm/Jamaica/Miranda/  
David C, Wendea/Jupiter, Saturn, M42, Sirius.

11552S. Sunday, March 19/10:00-10:25/10-F/Jamaica/  
Mintaka -/SS2: 7, 94.

11553E2. 2200-2215/107-Fm/Jamaica/.

11554S. Monday, March 20/12:30-13:00/10-F/  
Jamaica -/Mintaka -/SS2: 6, 83.

11555E2. 2300-2315/10-F/Jamaica/The Pumpkin/  
Wendea/Sky clearing after wind + drizzle -  
Moon.

11556S. Tuesday, March 21, 2000/Noon-1/3-F/Jamaica.  
?Mintaka. Too cloudy.

11557E. Wednesday, March 22, 2000/2000-2115/10-F/  
Jamaica/Minerva. -/Wendea/CN3 15 W.  
CN3e TVow at 2100, (14.6.

11558S. Thursday, March 23, 2000/1030-1100/  
310-F/Jamaica/SS2: ? 92 spots with Mintaka.

11559E2 2000-2330/10-F/Jamaica/Minerva -  
Orion, Pegasus, Miranda, Echo/Wendea/  
w Third Anniversary Session w  
Min/Orion: CN3F 8 pics.

Pegasus: CN3e T. Vow 2205 13.8 Outburst!

59 years to the day since the 1931 first Tombaugh one  
10 years to the day since my 1990 discovery.



11560 S. Friday, March 24, 2000 / 1500-1515 /  
10-3-F / Jarnac / Mintaka / Wendee / SS2: 16, 108.  
Sunspot activity very strong.

11561 S2 1630-1730 / 10-F / Starizona / 6" re / Dean,  
Tom Bopp, Wendee / Sun - beautiful prominences.

Dean has  
a phenomenal  
telescope!



Wendee & I were  
flabbergasted with the  
big prominence & the  
structural detail in  
the smallest ones.

11562 E2: 1900-2330 / 10-F / Jarnac / Minerva-  
Ophelial, Esther - Ophelia 2, Pegasus, Miranda, Feld  
Wendee, Bob Goff / CN3e TV Cur 14.4,  
CN3F 11 pics. Oph 2 still out of focus.  
Bob came to help with focus problem.

11563 S. Saturday, March 25, 2000 / 1500-1615 / 10-F /  
Jarnac / Mintaka / Wendee / SS2: 18, 157.

11564 E2. 1900-190000 / 3-F / Jarnac / Esther - Ophelia 2 /  
Bob Goff / Aligning + focusing of Schmidt  
camera; 8 test pics.

11565 S. Sunday, March 26, 2000 / 10:30-11:30 / 3-F /  
Jarnac / Mintaka / Wendee, Bruce  
Greenberg / SS2: 11, 145.

11566 E2. 1950-2300 / 10-F / Jarnac / Minerva, Esther,  
both Ophelias / -Wendee / CN3F, 9 pics.

11567 S. Monday, March 27, 2000 / 12-2 pm ~ / 3-F /  
Jarnac / Mintaka / Wendee / lunch, and  
SS2: 11, 132.

11568 E Tuesday, March 28 / 1930-2330 / 3-F /  
Jarnac / Wendee, Bob G. Marilyn Hurd / Echo  
Esther - Ophelia 2 / Focus + speeding ticket.

• 11569 S. Wed Mar 29 1530-1600 / 10-F / Jarnac / Mintaka / SS2: 12, 120.