

Volume 20

September 7, 2002
to
February 6, 2003

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Hilroy

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Leo Enright

Observing Sept. 7, 2002 - Feb. 6, 2003

80 PAGES

26.7 x 20.3 cm

HEAVYWEIGHT PAPER ▼ PAPIER ÉPAIS

MATHS ▼ SCIENCES



13220

Calendar for 2002

JANUARY							FEBRUARY							MARCH							APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
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													31																				30								
JULY							AUGUST							SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6			1	2	3		1	2	3	4	5	6	7			1	2	3	4	5						1	2	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					27	28	29	30	31			24	25	26	27	28	29	30	29	30	31					

2002 S.S. Sept 7-8 02:15-03:45UT Huronia Star Party S8T 7.5-8.5^(Some cloud) ne; 16" f/4.6

ne: an active Aurora seen easily right after the end of the featured Saturday night talk by Dr. Paul Delaney.

The Aurora was in the NW to NE and up to 60° in some places with spikes and vertical columns and some hints of yellowish and pinkish colours. It was fairly active.

16": Once again I had a chance to look through the 16" StarMaster f/4.6 GOTO Dobsonian reflector. This time I observed M13, the Hercules Cluster.

S.-M. Sept 8-9 01:45-02:45UT y ne; 18x501sb
ne: stars of autumn

18x501sb: M2, M15, M22, M28, M11 and R. Scuti, M16, M17, M18, M24, M25, M31, M32, M110, M33, Double Cluster in Per., NGC 7789, Uranus, Neptune.

M. Sept. 9 14:45-14:50UT t C-8, 32
sun Tg 675 RSN 137 T.O.F.

M.-T. Sept. 9-10 03:30-04:55UT y S8T 8-8.5^(haze) ne; 18x501sb
ne: stars of autumn

18x501sb: Uranus, Neptune, M11 and R. Scuti, M15, M2, M31, M32, M110, M33, Double Cluster in Per., α Per area, M45, Hyades, \circ Cat. (Mira) - bright, U. Del. and E. U. Del.

T. Sept. 10 15:10-15:15UT t C-8, 32
sun 69 755 RSN 135 T.O.F.

2002 W. Sept. 11 15:55-16:05 UT t C-8, 32
sun 5g 48s RSN 98 T.O.F.

W.-Th. Sept. 11-12 01:15-02:00 UT at Driscoll's yard (cml) across road, S8(?) T8A ne
ne: stars in the NW sky

ph: photographed the NW sky

02:10-03:10 UT 00 S8(?) T9 18x50 ISB

- Uranus near μ Cap., Neptune, M11 and R Scuti,
M26, Barnard's Star, T Cor Bor, M2,
Double Cluster in Per., M31, M32, M110, M33,
NGC 7789.

- glow in N. that may have been Auroral.

Th. Sept. 12 17:55-18:00 UT t C-8, 32
sun 5g 78s RSN 128 T.O.F.

Th.-F. Sept. 12-13 02:20-03:30 UT y (some haze; partly before moonset) S8(?) T8-8.5A ne; 18x50 ISB
ne: stars of autumn

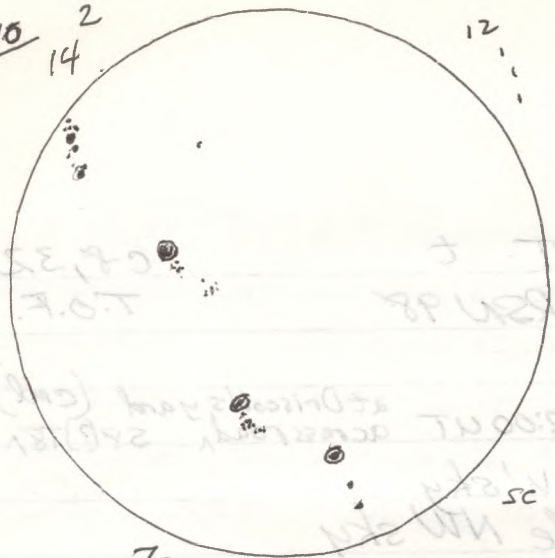
18x50 ISB: Uranus, Neptune, M11 and R Scuti, M15, M2,
M92, M13, M31, M32, M110, M33, Double Cluster in Per.,
& Persei group; NGC 7789.

Sa.-Su. Sept. 02:40-02:45 UT y S8(?) T5 (3gml; some cloud) 18x50 ISB
- lunar craters on a moon viewed through some
hazy cloud.

M. Sept. 16 14:40-14:45 UT t C-8, 32
sun 7g 44s RSN 114 T.O.F.

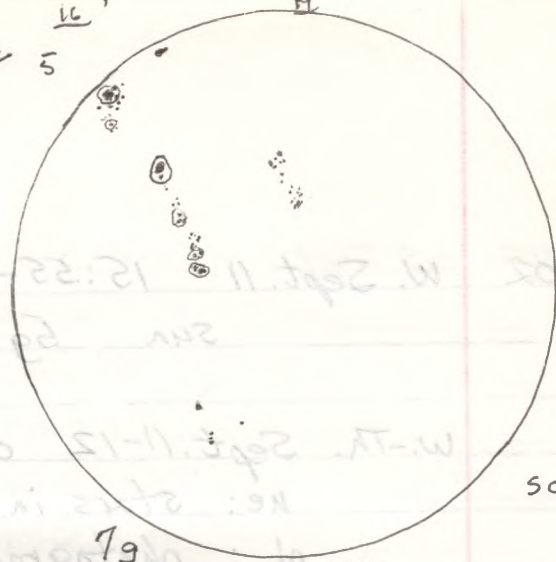
T. Sept. 17 15:10-15:20 UT t C-8, 32
sun 8g 66s RSN 146 T.O.F.

10 2
14



79
415
RSN111
Sept 18
16:45-16:50UT

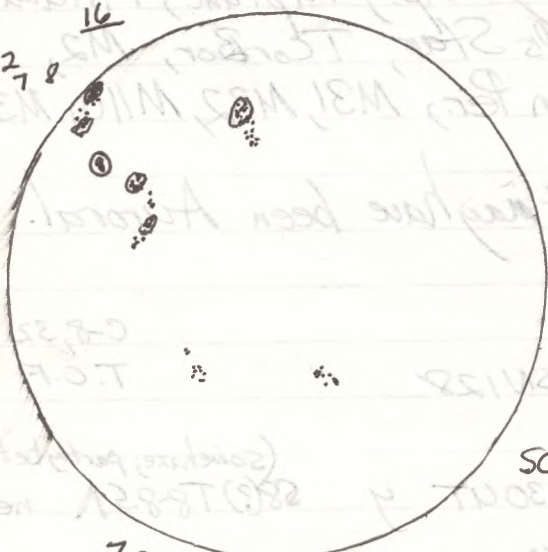
16
5
30 21



79
625
RSN132
Sept. 23
15:10-15:15UT

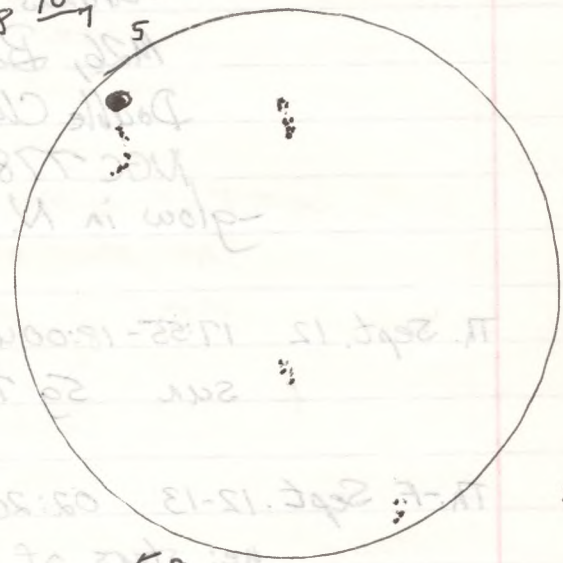
12
15
1 2 7 8

16



79
615
RSN131
Sept. 24
14:55-15:00UT

18 10 7 5



59
315
RSN81
Sept. 25

2002 W. Sept. 18 16:45-16:50 UT t (some haze) C-8, 32
sun 7g 415 RSN 111 T.O.F.

M. Sept. 23 15:10-15:15 UT t C-8, 32
sun 7g 625 RSN 132 T.O.F.

M.-T. Sept. 23-24 00:35-00:40 UT y 5-8(?) T 7-8 (ml.) ne; 18x50 ISB
ne: stars of autumn, "harvest moon" had been seen
after rising while I was driving a few minutes before.
18x50 ISB: M1 and R Scuti, M26, M16, M17, M18, M23,
M24, M25, M8, M20, M21, M22, M28,
the recently discovered nova in Sagittarius
(N Sgr 02 #3) now at about mag 6.5.

Nova Sgr 2002 #3
(mag. 6.5)

It had been discovered on Fri, Sept.
20, 2002 by Katsumi Haseda in Japan
at mag. 5 on a photograph of the area. It is
WSW from α Sgr at $\alpha: 18^{\text{h}} 55^{\text{m}} 10^{\text{s}}$, $\delta: -22^{\circ} 08' \text{S}$
(1900) or $\alpha: 19^{\text{h}} 01^{\text{m}} 09^{\text{s}}$, $\delta: -22^{\circ} 00' \text{S}$ (2000.0)

Tu. Sept. 24 14:55-15:00 UT t C-8, 32
sun g S RSN T.O.F.

W. Sept. 25 14:35-14:40 UT t C-8, 32
sun 5g 315 RSN 81 T.O.F.

W.-Th. Sept. 25-26 00:35-01:35 UT y 5-8 T 9 (until moon rise) ^{at 00:58 UT} ne; 18x50 ISB
ne: stars of late summer and autumn.

18x50 ISB: Uranus, Neptune, M8, M20, M21, M22, M28,
M16, M17, M18, M23, M24, M25, M26, M1 and R Scuti,
Col 399, M39, β Cyg, M27, M57, M71,
M13, M92, Barnard's Star, T Cor Bor, R Cor Bor,

(42 objects)

2002

Nova Sgr 02 #3
(mag. 8)

M2, M15, M31, M32, M110, M33, NGC 7789,
Double Cluster, α Persei group, β Persei, δ Cephei,
 μ Cep (the Garnet Star), U Del and EU Del, M39,
area of North America Nebula and Pelican Nebula.
Nova Sagittarius 2002 #3 was estimated to be
at mag. 6.8.

Th. Sept. 26 14:50-14:55 UT t

Sun 5g 405 RSN 90

C-8, 32
T.O.F.

Sa. Sept. 28 13:35-13:40 UT t

Sun 4g 235 RSN 63

C-8, 32
T.O.F.

Sa-Su. Sept. 28-29 01:05-02:35 UT y Sd: T9 ne; 18x50 ISB

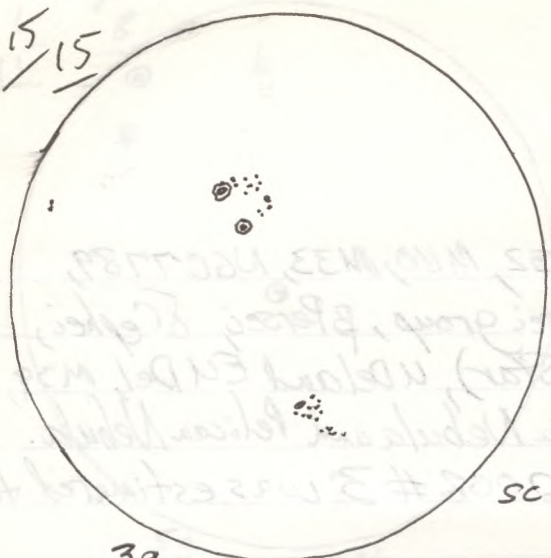
ne: stars of autumn; 2 meteors appearing to go
from left to right in the S. sky, meteors that could
possibly have had a radiant in Aries or Taurus;
the variable stars: β Pyrae, β Persei, δ Cephei.

(24 objects)

Nova Sgr 02 #3
(mag. 7.5)

18x50 ISB: M11 and R Scuti, M26, M22, Uranus and
area, Neptune and area, M2, M15, M31, M32,
M110, M33, Nova Sagittarii 2002 #3 estimated
to be at mag. 7.5 from the stellar magnitudes
given on a map provided from a site connected to the
Sky and Telescope website; R Cor Bor, T Cor Bor,
M13, M92, Barnard's Star, M45, Double Cluster
in Perseus, α Persei group of stars, μ Cep,
 δ Cephei. The variable star SU Sgr shown on
the map prepared for the nova was estimated
at mag. 8.8. In Burnham's handbook, it was
listed as ranging from mag. 8.0 to 8.9 and having a
period of 88 days.

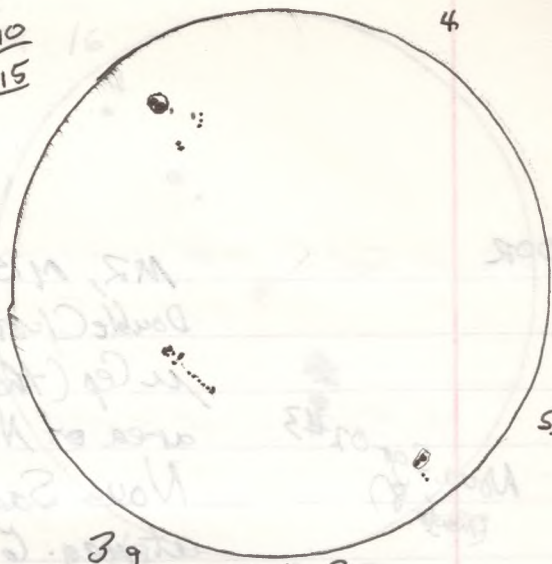
2 15 / 15



39
325
RSN 62 16:55-17:00 UT

SC

01/51



39
295
RSN 59 Oct. 3
15:50-16:00 UT

SC

the map prepared for the new was aimed
in the star 21 Apr shown on
M13, M25, Double Star, M75 Double Cluster
sky and telescope website, R. Carlin, Toronto,
pilot or a map provided for site connected to the
to be at mag 12 from the stellar magnitude
M10, M33, Nova Sagittarii 2008 #3 estimated
area, light in the area, M13 and M25
revised: M11 and R. Scott, M20, M25, M33 and
the variable stars: R. Payne, B. Payne, G. Payne
possibly have had a radiant in the area or stars:
from left to right in the 2.5 mag, stars that can
be stars of our own: 2 meters appearing to go
21 Oct 2010

period of 88 days
listed as ranging from mag. 8.0 to 8.4 and having
at mag. 8.8. In Burrows's handbook, it was
the map prepared for the new was aimed
in the star 21 Apr shown on
M13, M25, Double Star, M75 Double Cluster
sky and telescope website, R. Carlin, Toronto,
pilot or a map provided for site connected to the
to be at mag 12 from the stellar magnitude
M10, M33, Nova Sagittarii 2008 #3 estimated
area, light in the area, M13 and M25
revised: M11 and R. Scott, M20, M25, M33 and
the variable stars: R. Payne, B. Payne, G. Payne
possibly have had a radiant in the area or stars:
from left to right in the 2.5 mag, stars that can
be stars of our own: 2 meters appearing to go
21 Oct 2010

2002 M.-T. Sept. 30-Oct. 1 01:15-02:50 UT 578T6-^{Moisture} T_{atmospheric} ne; 18x50 ISB
ne: stars of autumn; bright meteor (mag. 1) going from left to right in constellation Aquarius at about 01:32 UT

(20 objects) 18x50 ISB: Nova Sagittarii 2002 #3 now down to mag. 7.8. - seems to be decreasing in brightness fairly rapidly; Uranus and area, Neptune and area, M11 and R Scuti, Barnard's Star, M92, M13, R Cor Bor, M2, M15, M31, M32, M110, M33, Double Cluster in Per, & Persei group, NGC 7789, & Cephei at mag. 3.9, μ Cep., M45.

Tu. Oct. 1, 16:55-17:00 UT t C-8, 32
Sun 3g 32s RSN 62 T.O.F.

T.-W. Oct. 1-2 04:25-04:50 UT nd 58P) T 4-7 (^{brightness} auroral) ne

Aurora!

After returning from the astronomy class in Perth, I observed a very active and extensive Auroral display. The Aurora filled the northern half of the sky and was active in the zenith and extended well down into the southern sky. There was widespread pulsation and "flaming activity" in many parts of the sky. At one time the "flaming activity" was very pronounced in the east. In general, the colours were not prominent or pronounced. The Aurora appeared slightly yellowish and very slightly greenish, with almost no hints of pink, or red, or purple. A few thin vertical spikes were present, but thick vertical bars and "vertical clouds" of Auroral activity were much more prevalent, and they washed out the view of the stars in very large areas of the sky.

Th. Oct. 3. 15:50-16:00 UT t C-8, 32
Sun 3g 29s RSN 59 T.O.F.

51

51

2002

M.T. Sept 30-Oct 1 01:15-02:30 UT 24776 (transmission) NO: 182502B

no: stars of bottom; bright meteor (mag 1) going from left to right in constellation Aquarius at about 01:30 UT
18x20isp: Now Sept 2002 #3 row down to mag 7.8 - seems to be decreasing in brightness fairly rapidly; Name and area, lighting out over
Barbara's Star, M32, M13, R136A1

(photo) 18x20isp
Mag 7.8
Name

M3, M10, M13, Double Cluster stars, NGC 7789, 8 spikes at mag 3.0
M3, M10, M13, Double Cluster stars, NGC 7789, 8 spikes at mag 3.0

C-8, 32
T.O.F.

Tu Oct 1, 16:25-17:00 UT
Sun 3d 325 R2N162

Tu Oct 2 04:25-04:50 UT
Sun 3d 325 R2N162

After returning from the astronomy class in Port, I observed a very active and extensive Auroral display. The Aurora filled the northern half of the sky and extended well down into the southern sky. There was widespread auroral activity and many parts of the sky. At one time the "flaming activity" was very pronounced in the east. In general the colors were not prominent or pronounced. The Aurora appeared slightly yellowish and very slightly greenish, with almost no hints of pink or red or purple. A few thin vertical spikes were present, but thick vertical bars and vertical bands of Auroral activity were much more prevalent, and they washed out the view of the stars in very large areas of the sky.

C-8, 32
T.O.F.

Tu Oct 3 12:20-13:00 UT
Sun 3d 325 R2N162

2002 Oct. 3-4 00:20-03:30 UT y 5-8(?) T8-9 ne; 18x50 ISB
ne: stars of autumn; Aurora. In the early part of
the session, there was a bright glow in the N, and
it extended to the NW and was up about 25°. By
times there were vertical spikes and bands
extending up about 40°. The brightness in the yard
was noticeable. At about 01:50 to 02:00 the Aurora
became quite active extending to the E and W
and up about 60° in the sky with faint hints
of pink and green colours. There vertical and inclined
bands and active pulsations and flaring. After
I brought out the camera and prepared to take
some photographs, the Aurora became less active
and I took only 2 or 3 photographs. Though
the Aurora remained, it was less active and it
was a glow in the N extending to the NW and
up about 30°. oCet (Mira) was seen ne at mag. 5 approx.

18x50 ISB: Uranus, Neptune, M11 and R Scuti, M22, M28,
Barnard's Star, R Cor Bor, M92, M13, M2, M15, M31,
M32, M10, M33, Double Cluster in Per, α Per group,
M45, part of the Hyades amid the trees,
oCet (Mira) and area, though it was also seen
naked-eye and estimated at mag. 5.; the nova,
Nova Sagittarii 2002 #3 estimated at mag. 8.0

oCet (Mira)
Mag. 5
Nova Sgr 2002 #3
(mag. 8.0)

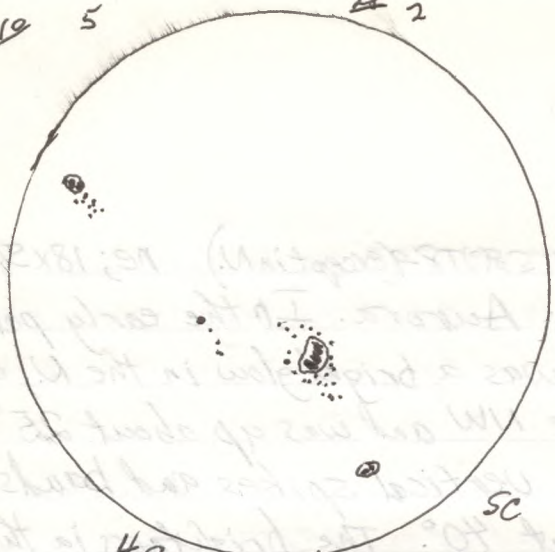
Sa.-Su. Oct. 5-6 00:40-02:25 UT y 5-8(?) T8-9 ne; 18x50 ISB
ne: stars of autumn; glow in N, not strong but
noticeable and up about 20° - that may have
been Auroral.

Nova Sgr 2002 #3
(mag. 8.2)

18x50 ISB: Nova Sgr 2002 #3, at mag. 8.2, still
continuing to fade (and now known also as

10 5

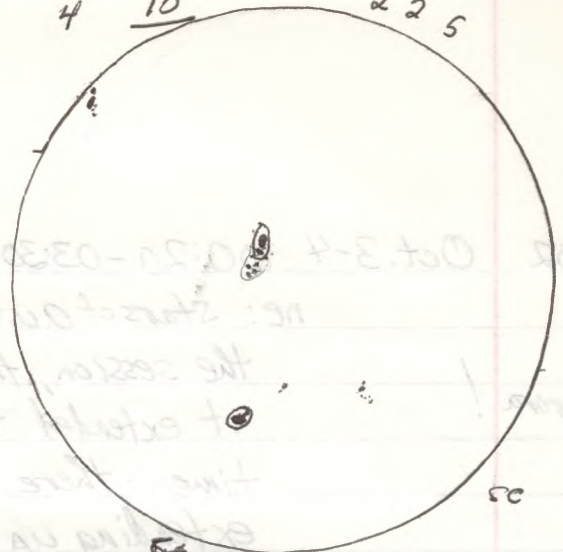
22 2



49
45s
RSN 85 16:30-16:35 UT

4 10

2 2 5



59
23s
RSN 73 15:55-16:00 UT

Oct 3-4 0:50-03:30 UT (approximate) 15:18:30 UT
 nr: stars of outburst. The stars are in the NW and extend to the SW and are up about 50°. By time was the stars and bands extending up about 40°. At about 15:55-16:00 UT the stars were visible.

Oct (Mars) was at mag 2.0. I brought out the camera and prepared to take some photographs. The Auror became less active and I took only 2 or 3 photographs. Although the Auror remained, it was less active and it was a glow in the N extending to the NW and up about 30°. I brought out the camera and prepared to take some photographs. The Auror became less active and I took only 2 or 3 photographs. Although the Auror remained, it was less active and it was a glow in the N extending to the NW and up about 30°. I brought out the camera and prepared to take some photographs. The Auror became less active and I took only 2 or 3 photographs. Although the Auror remained, it was less active and it was a glow in the N extending to the NW and up about 30°.

Oct (Mars) was at mag 2.0. I brought out the camera and prepared to take some photographs. The Auror became less active and I took only 2 or 3 photographs. Although the Auror remained, it was less active and it was a glow in the N extending to the NW and up about 30°. I brought out the camera and prepared to take some photographs. The Auror became less active and I took only 2 or 3 photographs. Although the Auror remained, it was less active and it was a glow in the N extending to the NW and up about 30°.

2002

V4743 Sgr according to information given on the website of AAUSO); Uranus, Neptune, M11 and R Scuti, R Cor Bor, T Cor Bor, Barnard's Star, M2, M15, M31, M32, M110, M33, Double Cluster in Perseus, NGC 789, α Per group, δ Cephei and area, μ Per, M45, \circ Ceti (Mira) at about mag. 5.

Su. Oct. 6 16:30-16:35 UT t C-8, 32
Sun 4g 45s RSN 85 T.O.F.

S-M. Oct. 6-7 01:10-01:20 UT S5(?) T1 (cloud and haze) ne

Under extremely poor conditions, I was able to see the 7 stars of the Big Dipper and the Summer Triangle and a very few other stars.

M-T. Oct. 7 01:15-02:35 UT y S-8(?) T 8-9 ne; 18X5015b

Aurora

ne: stars of autumn; two bright meteors in the Aquarius area; Auroral glow in N. up about 25° amid clouds.

Nova Sgr. 2002 #3
(V4743 - mag. 8.4)

18X5015b: M11 and R Scuti; Nova Sagittaric, now called V4743, at mag. 8.4, and the variable SU Sgr in the same area at mag. 8.7; Uranus, Neptune, M2, M15, Barnard's Star, M92, M13, M27, M71, M31, M32, M110, M33, Double Cluster, α Per group, M45, \circ Ceti (Mira) and area.

Near the end of the session, clouds moved in from the North.

05:00-05:45 UT y S-8(?) T 9 (where Aurora was) ne

Aurora!

I observed and photographed an excellent Aurora. It spread up from the N to the zenith or almost that far and from NW to ENE. The colour was only slightly

2002

reddish or pinkish but more yellowish and very slightly greenish. There was considerable pulsation, often at the rate of about one per second, but sometimes about one every two seconds. The "flaming" was quite extensive in the N to NW and by times in the NE. Near the end of the session, at about 05:45 UT, it died down to a bright glow in the N, up to about 25° above the horizon.

Tu. Oct. 8 15:55-16:00 UT t C-8, 32
Sun 5g 23s RSN 73 T.O.F.

W-Th. Oct. 9-10 00:35-02:00 UT 58(?) T 8-9 ne; 18x50sb
ne: stars of autumn

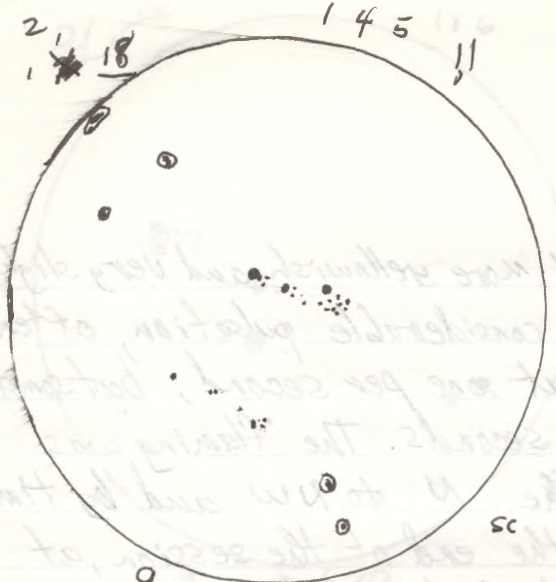
Nova Sgr 2002 #3
Mag. 8.7

18x50sb: M22, M11 and R Scuti, M16, M17, M18, M24, M25, Uranus, Neptune, Nova Sgr 2002 #3 (now called V4743 Sgr) at mag. 8.7; M2, M15, R Cor Bor, T Cor Bor, Barnard's Star, ~~4~~ and EU Del, M31, M32, M10, M33, NGC 7789, Double Cluster in Per, Stock 2, M45, area of δ Cephei, M27, β Cyg, area of α Ceti (Mira)

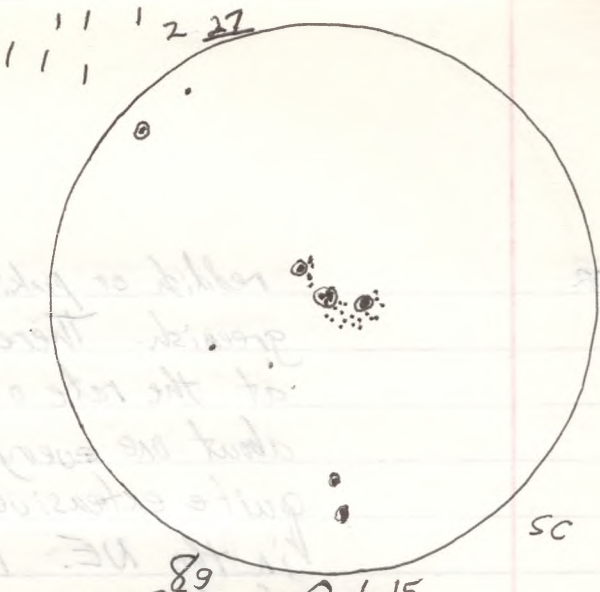
Th. Oct. 10 18:40-18:45 UT t C-8, 32
Sun 6g 47s RSN 107 T.O.F.

Th.-F. Oct. 10-11 00:20-02:20 UT 00 58(?) T 6-7 (From haze + moisture sometimes poor) ne; 18x50sb
ne: stars of autumn

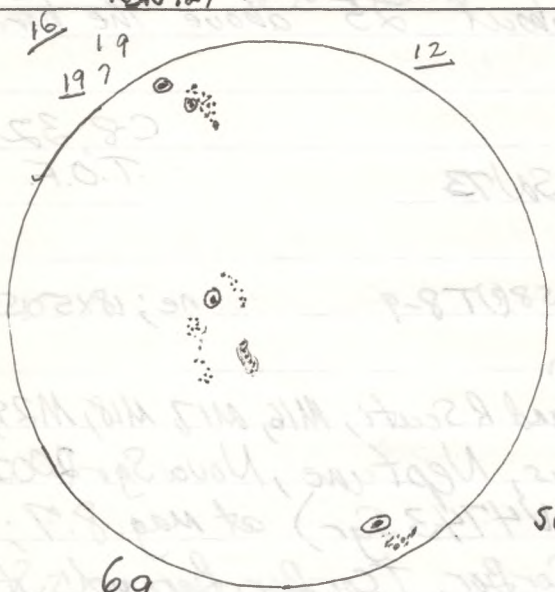
18x50sb: Nova Sgr 2002 #3 (V4743 Sgr) at mag. 8.8, Uranus, Neptune, M2, M15, M11 and R Scuti, M31, M32, M10, M33, Double Cluster in Per, Stock 2, α Per group, M45.



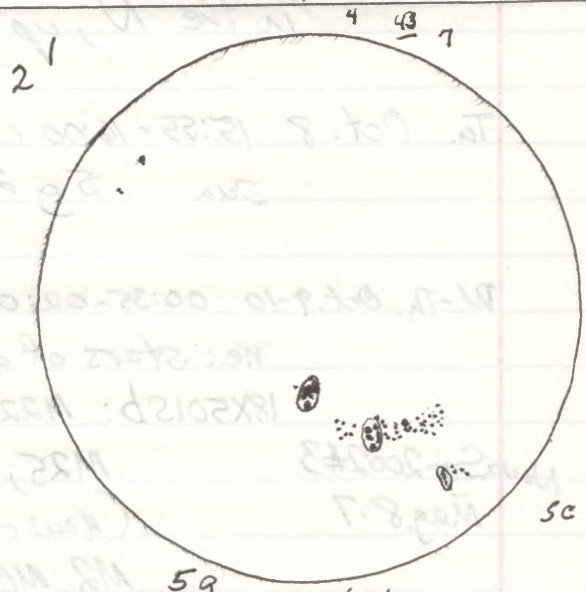
9
345
RSN 124 Oct. 14
15:25-15:30 UT



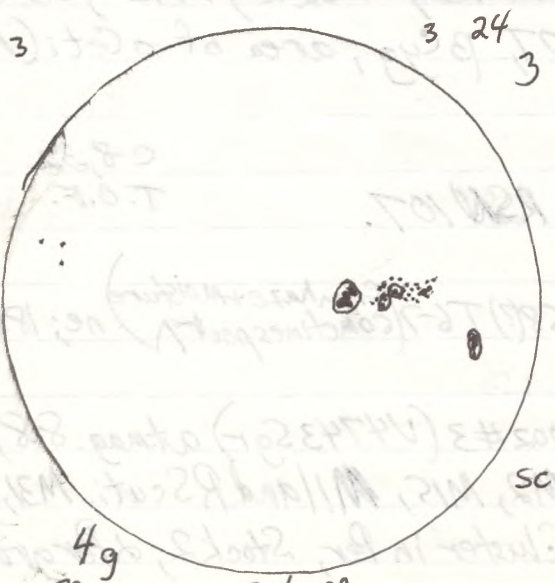
89
355
RSN 115 Oct. 15
14:50-15:00 UT



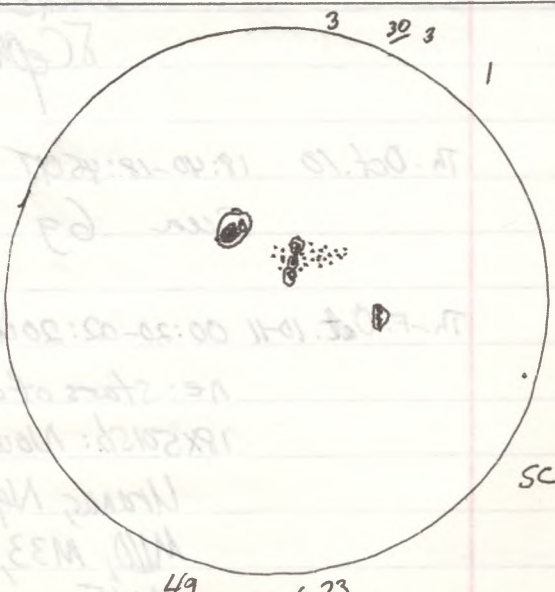
69
645
RSN 124 Oct. 18
15:00-15:05 UT



59
575
RSN 107 Oct. 21



49
335
RSN 73 Oct. 22
17:30-17:34 UT



49
375
RSN 77 Oct. 23
16:05-16:10 UT

2002 M. Oct. 14 15:25-15:30 UT t C-8, 32
Sun 9g 34s RSN 124 T.O.F.

Wed. Oct. 14¹⁵ 01:20-01:25 UT nd 58(?)T 5 (gml.) 18X5015b
- Alcor and Mizar, & Per area, Double Cluster in Per,
M45, lunar crater

Tu. Oct. 15 14:50-15:00 UT t (Cirrus cloud; hazy) C-8, 32
Sun 8g 35s RSN 115 T.O.F.

F. Oct. 18 15:00-15:05 UT t C-8, 32
Sun 6g 64s RSN 124 T.O.F.

M. Oct. 21 15:25-15:30 UT t C-8, 32
Sun 5g 57s RSN 107 T.O.F.

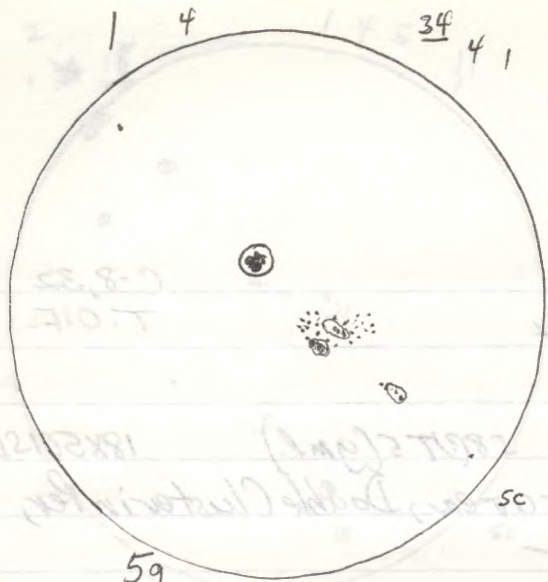
Tu. Oct. 22 17:30-17:34 UT t C-8, 32
Sun 4g 33s RSN 73 T.O.F.

W. Oct. 23 16:05-16:10 UT t C-8, 32
Sun 4g 37s RSN 77 T.O.F.

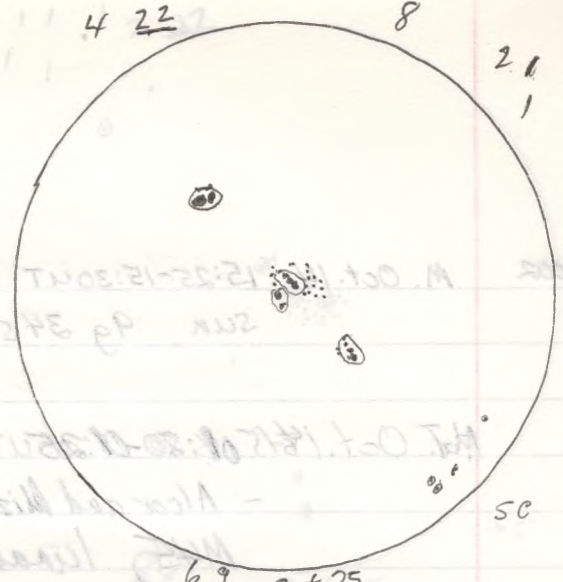
Th. Oct. 24 15:15-15:20 UT t C-8, 32
Sun 5g 44s RSN 94 T.O.F.

Th.-F. Oct. 24-25 02:40-02:50 UT nd 58(?)T 6 (gml.) ne

possible Auroral activity I observed the northern sky brightened by a bright gibbous moon. I thought there might have been a faint Auroral display with possibly a vertical band and possibly a bit of "Pleming." About 10 minutes before I had been almost certain of seeing some Aurora with an "inclined spike" in the



59
445
RSN94 Oct. 24
15:15-15:20UT



69 Oct. 25
385
RSN98 15:35-15:40UT

At 20:00 some Aurora with our infrared camera in the
About 10 minutes before I had been almost certain
with possibly a vertical band and possibly a bit of "flaring"
moon I thought that might have been a faint Auroral display
I observed the northern sky brightened by a bright glimmer
of stars (and)

2002

NNW and a glow in the N. I was more sure then (i.e. 10 minutes earlier, or so) of seeing real activity than during the time of this short session.

F. Oct. 25 15:35 - 15:40 UT t

C-8, 32

sun 6 g 38s RSN98

T.O.F.

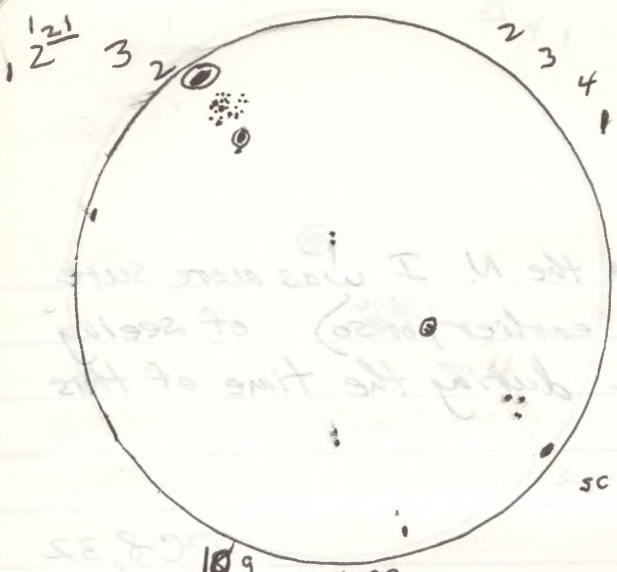
S-M Oct. 27-28 23:00 - 02:30 UT 00 S-8T7-8 ne; 20x100b

ne: Earlier in the day I had given a tour of the Halletford Crater to most of the members of the class and some others who accompanied them, in all about 16 people. Then the group came to the observatory and I talked about it and opened the roof, since the weather looked somewhat promising. At about 22:30 UT (about 5:30 p.m. E.S.T.) most of the group left for home, but four of us went to Grandma's Country Kitchen (restaurant) in Sharbot Lake, but finding it closed, we went to the hotel in Sharbot Lake and ate.

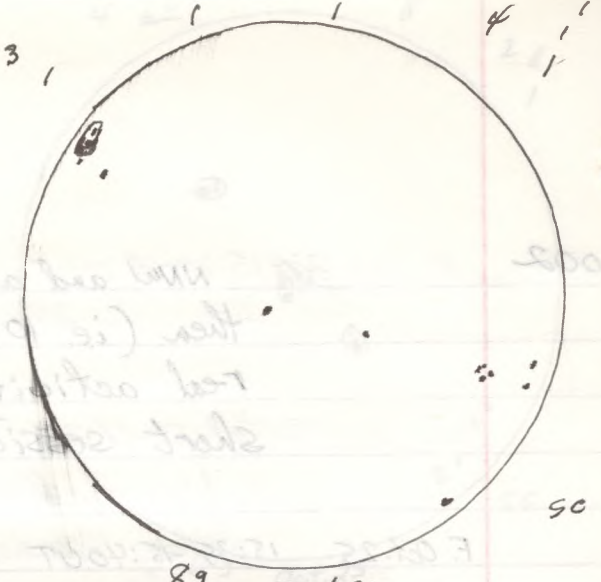
The four were Dale Nugent, Norma and Knox Thompson and I. Dale came back ^{to the observatory} with me and we observed together for a couple of hours. At first the weather was not ideal for observing with clouds covering most of the sky and only a few stars visible. Later more stars appeared and I was able to set up the 20x100 binoculars. Naked-eye we observed the stars of autumn, as the clouds permitted.

20x100b: M13, M92, M15, Pleiades, Hyades.

Variable stars observed naked-eye: δ Cephei, β Lyrae, β Persei.



109
405
RSN140
Oct. 29
16:10-16:15 UT



89
135
RSN93
Sept. 30
17:45-17:50 UT

Nova Sgr 2002 #3 (V47439)		
M.-T.		
Sept. 23-24	00:35 UT	Mag. 6.5
25-26	01:30 UT	6.8
28-29	01:30 UT	7.5
Sept. 30-Oct. 1	01:20 UT	7.8
Oct. 3-4	01:00 UT	8.0
Oct. 5-6	00:50 UT	8.2
Oct. 7-8	01:20 UT	8.4
Oct. 9-10	01:00 UT	8.7

2002 M-T. Oct. 28-29 03:25-03:50 UT y S-8(?) T7-8 ne; 18X50 ISB

ne: stars of autumn

18X50 ISB: M36, M37, M38, M42, M43, Saturn, Pleiades, Hyades.

Tu. Oct. 29 16:10-16:15 UT t C-8, 32
Sun 10g 40S RSN140 T.O.F.

W. Oct. 30 17:45-17:50 UT t (some haze) C-8, 32
Sun 8g 13S RSN93 T.O.F.

W.-Th. Oct. 30-31 00:15-02:30 UT y SPT9 ne; 18X50 ISB

ne: stars of autumn; M31; Double Cluster in Per. 3
steady glow in N that was probably Auroral.

18X50 ISB: Uranus and area, Neptune and area, U and
EU Del, M11 and R. Scuti, M81 and M82, M92,
M13, ^{naked-eye} β Lyrae - bright at mag. 3.1, δ Cephei -
^{naked-eye} faint at mag. 4.4, α Ceti (Mira) and area,
 β Persei - naked-eye - mag. 2.1, M31, M32, M110,
M33, M2, M15, M13, M92, NGC 253 - a galaxy
S. of β Ceti, M36, M37, M38, Pleiades, Hyades,
Saturn.

ne: β Lyrae - mag. 3.1
 δ Cephei - mag. 4.4

F.-S. Nov. 1-2 01:50-02:30 UT y SPT8 ne; 18X50 ISB

ne: stars of autumn, Saturn; β Lyrae - mag. 3.6;
 δ Cephei - mag. 4.4

18X50 ISB: Uranus and area, NGC 253, M2, M15, Double
Cluster in Per. and Stock 2, α Persei group, M31,
M32, M110, M33, Hyades, Pleiades, Saturn, M36,
M37, M38, α Ceti (Mira) and area.

2002 Th. Nov. 7 15:15-15:20 UT t C-8, 32
Sun 6g 57s RSN 107 T.O.F.

Sa. Nov. 9 17:25-17:35 UT t C-8, 32
Sun 8g 78s RSN 158 T.O.F.

5:40 - 5:55 pm. EST
M.-T. Nov. 18-19(1) 22:40-22:55 UT sh ful. twl ne

With the sky spectacularly clear, I watched for ~~Leaids~~ ^{Leaids} Meteors on the night of the predicted peak of the shower. An early peak shortly after ^{11:00 pm. EST} 4:00 UT was predicted, and another possible outburst was predicted between ^{5:00 am. EST} 10:00 and ^{6:00 pm. EST} 11:00 UT with the Z.H.R. numbers being possibly 3000 and 6000 respectively, and with one source listing "?25000" as the Z.H.R. number for the second burst. The bright almost Full Moon was in or near Aries and Betelgeuse and Bellatrix were above the E. ¹⁷Horizon. Saturn was the brightest planet seen.

(2) ^{8:55} 00:55 - ^{9:15 pm. EST} 01:15 UT sh ful ne

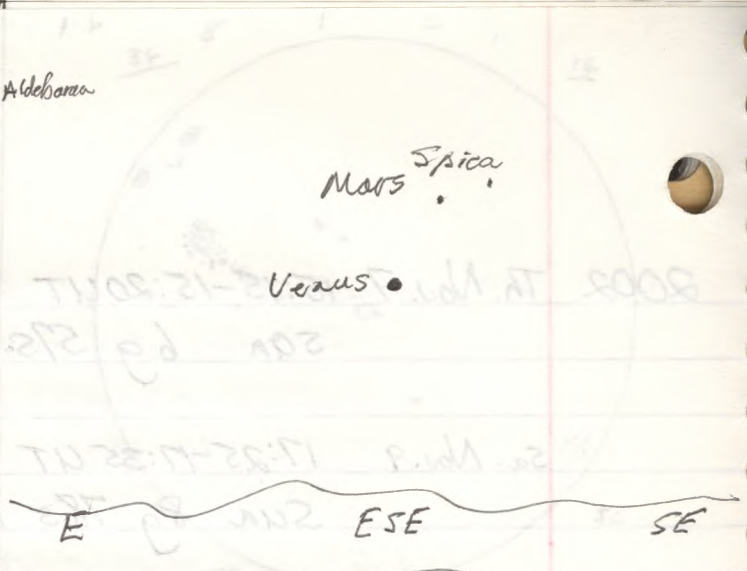
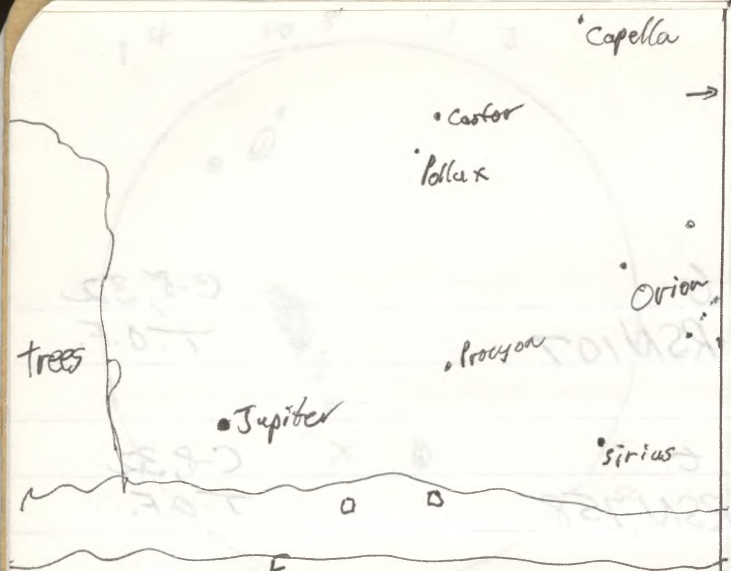
Standing in the shade of a tree at the shore, I looked for Leaids. ~~Jupiter was now above the~~ Saturn was bright, and the stars of Cassiopeia, 3 stars of Cepheus, Polarix and Kochab, Sirius, Procyon, Castor and Pollux, Capella, and Aldebaran, and Rigel completed the Winter ~~Hexagon~~ ^{Sextet} of Stars in the E. sky. No Leaids were clearly seen.

8:15 - 8:48 pm. EST
(3) 01:15 - 01:48 UT y ful ne

Sitting near the observatory, I looked for Leaids, but did not see any clearly. The radiant, in the 'Sickle of Leo' was still at or below the horizon.

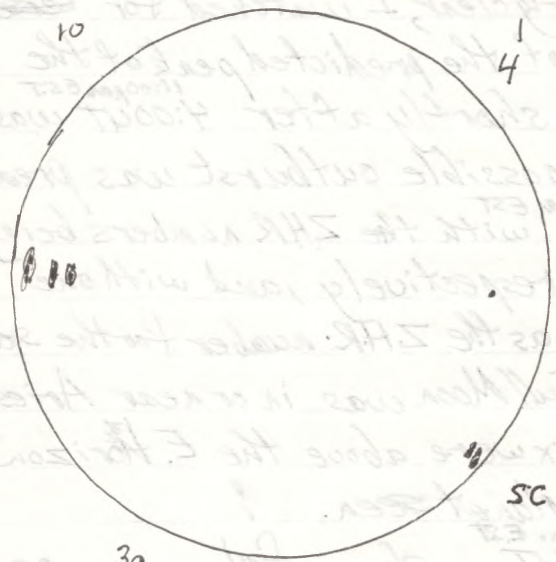
(4) 10:37 - 11:38 UT
03:37 - 04:38 UT sh and y ful ne

I observed at the shore for about 53 ^{minutes, i.e.,}



View to E during "Leaid Watch" 04:00 UT on Nov. 20.

View to ESE at 10:50 UT on Nov. 26



3g
15s
RSN 45

Nov. 27
15:25-15:30 UT

[Faint, mostly illegible handwritten notes, likely bleed-through from the reverse side of the page.]

2002

Looking for
Leonids.

8
2120
from about 03:37 to 04:30, with Jupiter now up in the E. and much brighter than Saturn. The E sky was still quite clear, but there was no clear evidence of Leonid Meteors. See diagram.

02:05 - 02:25 a.m. EST.
(5) 07:05 - 07:25 UT y mainly cloudy

With only a few stars seen among the thickening clouds I observed, hoping to see a few Leonids, but again I did not see any clearly. The Moon was visible among the clouds. It was now past the meridian and in the western part of the sky.

Later I glanced out the window, but the sky was overcast.

2:37 a.m. EST.
M.-T. Nov. 25-26 07:37 UT in gml ne

-glanced out the bedroom window and saw the waning gibbous moon very near its conjunction with Jupiter being about 3 to 4 degrees N. of Jupiter. Sirius, Regulus and other bright stars were evident.

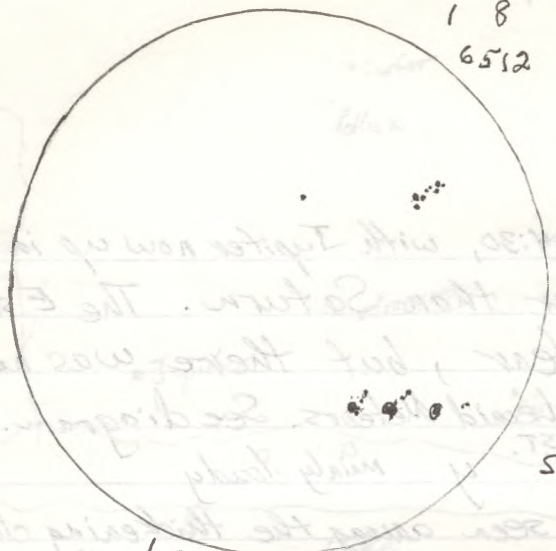
5:50 - 5:55 a.m. EST.
10:50 - 10:55 UT in gml ne

-observed in the ESE the planets Venus and Mars near the star Spica. Venus was extremely brilliant and about 15 degrees above the horizon. (See diagram.)

W. Nov. 27 15:25-15:30 UT t C-8, 32
sun 3g 15s RSN 45 T.O.F.

W.-Th. Nov. 27-28 01:40-02:20 UT y some clouds at first ne; 18x50 ISb
ne: I began observing with the sky partially clouded, and observed some of the winter stars. Then the clouds increased.
18x50 ISb: M42 and area, M45, Saturn, bright

18
6512



69 Dec. 1
RSU 83 18:15-18:20 UT

F. and much brighter than Saturn. The E. side was still quite clear, but there was a clear evidence of Venus's secondary.

SC

Later I cleared out the window but the sky was overcast.

about 3 to 4 hours E. of Jupiter. Some regular and other bright stars were evident.

brilliant and about 12 degrees above the horizon. (See diagram.)

C-7
T.O.F.

Some of the winter stars. Then the clouds increased.

Looking for
lewis

was overcast.

about 3 to 4 hours E. of Jupiter. Some regular and other bright stars were evident.

brilliant and about 12 degrees above the horizon. (See diagram.)

W. Nov 27 18:25-18:30 UT
200 3 g 18:25-18:30

W. Nov 27-28 01:40-02:30 UT
no: I have observed with the sky partially cloudy and clear.

8002

11005

2002

stars of Aries and area. Cloudiness increased until the sky was almost completely and I stopped observing for the session.

6:00 a.m. E.S.T.
m. F.-S. Nov. 29-30 11:00 UT in twl

I briefly looked out the window during morning twilight, and though there was ~~some~~ cloud, I saw Venus, very bright, in the SE, and Mars, above and slightly to the right from Venus.

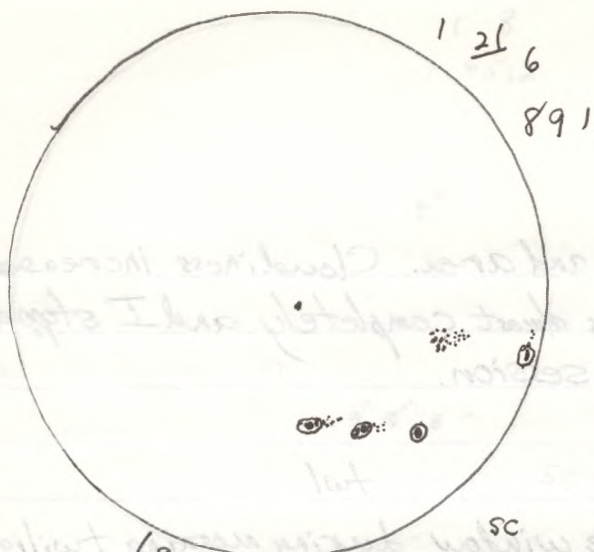
6:53 a.m. E.S.T.
m. Sa.-Su. Nov. 30-Dec. 1 11:53 UT in twl

I briefly looked out the window during morning twilight and though there was some cloud I saw the crescent moon and Venus about 2° below it, both about 20° above the S.E. horizon. I did not see Mars.

Su. Dec. 1 18:15-18:20 UT t C-8, 32
Sun 6923 S RSN83 T.O.F.

Sa. M. Dec. 1-2 23:15-23:40 UT y 58(?) T4 (partly cloudy) ne

Although the sky was partly cloudy and seemed to be getting increasingly cloudy, I tried to observe the passage of the International Space Station and the space shuttle which had been joined since last Monday, November 25. From Terrence Dickinson's column in *The Sunday Star* (Dec. 1, 2002) they were to appear in the SW at 23:21 UT (6:21 p.m. E.S.T.) By that time the sky was quite cloudy in the S.W. I saw it appear near Vega in Cygnus at about 23:23 UT (6:23 p.m. E.S.T.), but I saw it for only about



69
465
RSN106

Dec. 2
16:10-16:15 UT

2005

0:00 AEST
TU 00:11 25-Nov-93 11:00 UT

I briefly looked out the window during evening twilight and though there was some cloud there was a bright light in the SE over Mars, about 2° above the horizon. I did not see the right from Mars.

0:20 AEST
TU 00:21 25-Nov-93 11:23 UT

I briefly looked out the window during evening twilight and though there was some cloud I saw the crescent moon and Venus about 2° below it, both about 30° above the SE horizon. I did not see Mars.

2 M Dec 1 18:15-18:20 UT
2 M 0932 RSN183

25 M Dec 1 23:12-23:14 UT

Although the sky was partly cloudy and seemed to be getting increasingly cloudy, I tried to observe the passage of the International Space Station and the space shuttle which had been joined since last Monday, December 27. From Toronto Dickman's column in the Sunday Star (Dec 1, 2002) they were to appear in the SW at 23:21 UT (6:21 p.m. EST) by that time the sky was quite cloudy in the SW. I saw it appear near Venus in Cygnus at about 23:12 UT (6:23 p.m. EST), but I saw it for only about

in the SW at 23:21 UT (6:21 p.m. EST) by that time the sky was quite cloudy in the SW. I saw it appear near Venus in Cygnus at about 23:12 UT (6:23 p.m. EST), but I saw it for only about

Although the sky was partly cloudy and seemed to be getting increasingly cloudy, I tried to observe the passage of the International Space Station and the space shuttle which had been joined since last Monday, December 27. From Toronto Dickman's column in the Sunday Star (Dec 1, 2002) they were to appear in the SW at 23:21 UT (6:21 p.m. EST) by that time the sky was quite cloudy in the SW. I saw it appear near Venus in Cygnus at about 23:12 UT (6:23 p.m. EST), but I saw it for only about

2002

15 seconds or so, since it probably went into the earth's shadow at about that time. The short time that I had seen it meant that it had appeared and disappeared fairly near the zenith. I also had tried to photograph the combined ISS-space shuttle which was quite bright - probably magnitude -1 or brighter.

At about 23:33 UT (6:33 p.m. EST.) I saw a very bright object in the NE and up about 40°, not far from the star Capella. It was probably about magnitude -3 and lasted about 4 or 5 seconds. It was probably a point-meteor.

m. s.-m. Dec. 1-2 ^(7:00 a.m. EST.) 12:00 UT in twl ne

Venus and Moon in twilight.

On a beautifully clear morning, about a 1/2 hour before sunrise I looked out and saw Venus very bright (listed as mag. -4.7 for Dec. 1 in The Observer's Handbook) about 30° up in the S.E., and about 12°-15° below it and to the left I saw the slim crescent moon, less than 2 days before New Moon

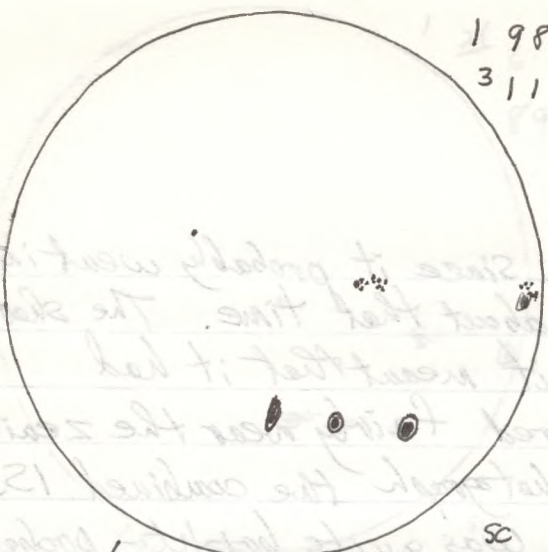
M. Dec. 2 16:10-16:15 UT € C-8,32
sun 6g 46s RSN 106 T.O.F.

M.-T. Dec. 2-3 ^{5:15 - 5:33 p.m. E.S.T.} 22:15-22:33 UT y twl ne

ISS and Shuttle passage 1° apart.

Having read in Terrence Dickinson's column that the International Space Station and the Space Shuttle Endeavour would be visible close to each other, I saw them at about 22:27 UT, appearing about 30° above the SW horizon and down and to the left from Altair.

198
311



69
735
RSD 83

Dec. 3
17:45-17:50 UT

5005

At about 17:45 UT I saw a very bright object in the NE and up about 40° alt from the star Capella. It was probably about magnitude -3 and lasted about 4 or 5 seconds. It was probably a point-meteor.

At about 17:45 UT I saw a very bright object in the NE and up about 40° alt from the star Capella. It was probably about magnitude -3 and lasted about 4 or 5 seconds. It was probably a point-meteor.

On a beautiful clear morning, about a hour before sunrise I looked out and saw Venus very bright (listed as mag. -4.7 for Dec. 1 in The Observer's Handbook) about 30° up in the SE and about 15-20° below it and to the left I saw the thin crescent moon for the first time before New Moon.

On a beautiful clear morning, about a hour before sunrise I looked out and saw Venus very bright (listed as mag. -4.7 for Dec. 1 in The Observer's Handbook) about 30° up in the SE and about 15-20° below it and to the left I saw the thin crescent moon for the first time before New Moon.

M.T. Dec. 3 16:10-16:12 UT
2m 6g No. 2 RSD 106
M.T. Dec. 3 16:10-16:12 UT
2m 6g No. 2 RSD 106

M.T. Dec. 3 16:10-16:12 UT
2m 6g No. 2 RSD 106
M.T. Dec. 3 16:10-16:12 UT
2m 6g No. 2 RSD 106

2002.

They moved across the sky about 1° apart with the Space Shuttle in the lead and about magnitude -2, and the I.S.S. following at about magnitude -4. They passed near the Tower stars of the square of Pegasus and in the ENE sky they disappeared into the earth's shadow to the left of the Pleiades. It was a remarkable sight in mid-twilight.

01:05 - 01:20 UT y SPT9

ne

- stars of late autumn and winter, M45, M42, M31, 5 Cep

"Faint" at mag. 4.4, β Lyr at mag. 3.6

5:50 a.m. EST.

10:50 UT

in

twl

ne

In twilight I looked out under clear conditions to see Venus and Mars in the SE about 30° above the horizon. Venus was now only about 1° from Mars.

Tu. Dec. 3 17:45 - 17:50 UT t

C-8, 32

Sun 6 g 235 RSN 83

T.O.F.

Tu.-W. Dec. 3-4 00:45 - 02:20 UT Last Duell Park, Perth s-TT6-7 ne; Ast, ^{28, 8}N

ne: I took the Astronomy II class that I had been teaching at Algonquin College to the Last Duell Park for their observing session. The skies were clear and the weather was cold. I pointed out the bright stars and a good number of constellations. The students seemed to appreciate having the stars and constellations pointed out to confirm what they may have seen, and wondered at, previously. Though there were some trees interfering, the views to the E

2002

They moved across the sky about 1° per min. The stars scattered in the field and about magnitude -1, and the I.S. following at about magnitude -4. They passed near the lower stars of the sword of Pegasus and in the ENE sky they disappeared into the earth's shadow to the left of the Pleiades. It was a view to the right.



01:02-01:40 UT V 2578
stars of late autumn
part of mag. 4th. Plot of mag. 3.2
in
D: 2002
E: 2002

01:02-01:40 UT V 2578
stars of late autumn
part of mag. 4th. Plot of mag. 3.2
in
D: 2002
E: 2002

In twilight I looked out under clear conditions to see Venus and Mars in the SE about 30° above the horizon. Venus was now only about 1° from Mars.

Tu. Dec. 3 17:45-17:50 UT
Sun 2578
2578

Tu. Dec. 3 17:45-17:50 UT
Sun 2578
2578

Tu. Dec. 3 00:45-02:00 UT
re: I took the Astronomy II class that I had been teaching at Algonquin College to the last dark part for their observing session. The skies were clear and the weather was cool. I pointed out the bright stars and good number of constellations. The students seemed to appreciate having the stars and constellations pointed out to confirm what they may have seen, and wondered at precisely. They were in the E, the stars in the E, the stars in the E.

2002.

and SE and S were not too bad. There was considerable light pollution to the S and W and NW. In the NW there was a bright light, but by standing close to the building, which served as a washroom in the summertime, we were able to avoid the effects of some of the light pollution from a bright light on a pole not too far away. The students were Orion and Sheila Clark, Lisa Mauro, Dale Nugent, and Stephen Scott.

Ast: I set up the Astroscan on the Manfrotto tripod and was able to show the Pleiades at 158X using the 28mm ocular. I also showed the planet Saturn at 55.6X using the 8mm ocular. We did not wait until Jupiter rose, or was high enough above the trees to see it, because we decided that it was getting cold and we would go back to the college, and perhaps view some slides. When we got there we found that we could not get in, because the doors were locked. We went to Tim Horton's on Highway #7 to get warm and have something to eat.

- Pleiades
- Saturn

1:15 - 2:40 a.m. E.S.T.
F-S Dec. 13-14 06:15 - 07:40 UT FL: la s-8T5 (light pollution) ne

— only
3 Geminids
though the
radiant was
high.

- In spite of the light pollution and some light clouds, I observed periodically for over an hour hoping to see some bright Geminid Meteors. I saw 3. There were also possibly 2 more, but I was uncertain if they were Geminids. Jupiter and Saturn were very high and Orion was very high in the SSW. Gemini was near the zenith. The moon was

2002

and SE and 2 were not too bad. There was considerable light pollution to the S and W and NW. In the NW there was a bright light but by standing close to the building which served as a washroom in the summertime, we were able to avoid the effects of some of the light pollution from a bright light over the hill and the sky. The students were Orion and Stella Clark, Lisa Mann, Dale Nugent, and Stephen Scott.

At 1: T set up the telescope on the Westford road and was able to scan the Pleiades at 12.8 X using the 38 mm ocular. I also scanned the planet Saturn at 25.6 X using the 38 mm ocular. We did not wait until Jupiter rose, or was high enough above the trees to see it because we decided that it was getting cold and we would go back to the college, and perhaps view some slides. When we got there we found that we could not get in because the doors were locked. We went to Tim Horton's on Highway #1 to get warm and have something to eat.

- Pleiades
- Saturn

11:5 - 2:00 AM EST
F-2 Do-17-14 10:15-10:30 AM EST
- In part of the light pollution and some light clouds, I observed periodically for over an hour hoping to see some bright Geminid Meteors. I saw 3. There were also possibly 2 more, but I was uncertain if they were Geminids. Jupiter and Saturn were very high and Orion was very high in the SW. Geminids were the south. The sun was

only
3 Geminids
found the
brightest was
high.

2002

to set at 7:28 (2:28 a.m. E.S.T.) but the light from the moon low in the west before setting did not seem to be a problem.

M.-T. Dec. 16-17 ^{5:30 - 5:50 a.m. E.S.T.} 10:30 - 10:50 UT FL: by S-8(?) T 6-7 ne; 18x50 Sb

- ne: bright stars in E and Venus and Mars about 2° apart about 20°-25° up in the E., and Jupiter near the zenith.

18x50 Sb: - looked for the newly discovered comet, C/2002 X5 which had been discovered on Dec. 14 by Japanese amateur, Tetuo Kudo, using 20x120 binoculars. I saw an object that looked comet-like, but I did not have the maps at hand to confirm that it was the comet.

possible sighting of the newly-discovered Comet Kudo (C/2002 X5)

- also saw Venus, Mars, and Jupiter.

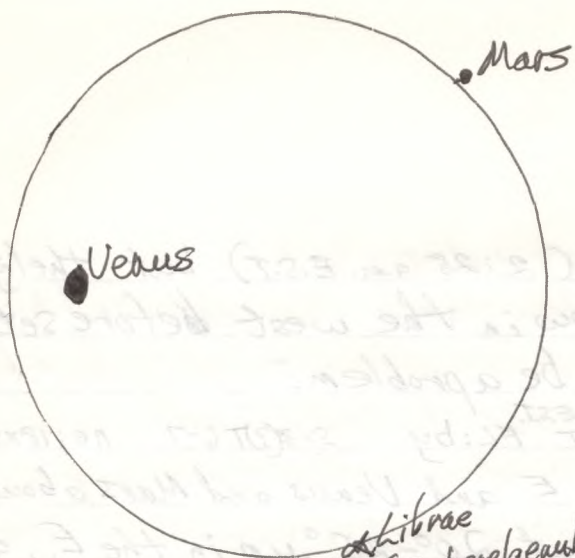
m w.-Th. Dec. 18-19

^{5:35 - 6:00 a.m. E.S.T.} 10:35 - 11:00 UT FL: by S-8(?) T 5-6 ne; 18x50 Sb

ne: bright stars in E, and Venus and Mars about 2° apart and up about 25° in E, Jupiter near zenith and Full Moon and Saturn in W. part of the sky

18x50 Sb: looked for the comet, C/2002 X5 (or as it may be known, Comet Kudo-Fujikawa), and may have seen it near the stars, θ Her and 30 Her, NNW of M13, but was not certain of it. I was definitely able to see and identify M13 and two stars near it. Sky brightness from the moon and light pollution may have prevented seeing it with certainty. - also observed Venus, Mars, and Jupiter.

possible sighting of Comet Kudo-Fujikawa



Dec. 20, 10:35 UT:
 - binocular view of area of Venus.

possible sighting
 of the newly discovered
 Comet Kudo (C/2003 X2)

m.w.t. Dec. 18-19

possible sighting
 of Comet Kudo (C/2003 X2)

revised: looked for the comet, C/2003 X2 (or
 as it may be known, Comet Kudo-Fujikawa),
 and may have seen it near the stars,
 and 30 Her. NW of M13, but was
 not certain of it. I was definitely
 able to see and identify M13 and the
 stars near it. Sky brightness from the moon
 and light pollution may have prevented
 seeing with certainty. - also observed
 Venus, Mars, and Jupiter.

2002. Th.-F. Dec. 19-20 ^{5:35 - 5:40 a.m. EST.} ^{10:35 - 10:40 UT} FL: by S(2)T3 (cloudy) ne; 18X50 ISB

ne: On a morning when I hoped to be able to see the newly-discovered comet, I found cloudy skies that allowed viewing of only the bright objects.

- Venus in E. sky and the Full Moon in the W. sky.

18X50 ISB: Venus, Mars, and α Librae (Zubenelgeubani) forming a triangle of 3° per side, at about 25° .
(See diagram)

- \otimes 02:00-02:30 UT FL - ^{president near Naples} ^{at home of E.A.S.} ^{Intl.} 16" Newtonian

Earlier in the evening Denise and I attended a meeting of the Everglades Astronomical Society at the home of the president Devi Melko. There was a slide show and talk about Extrasolar Planets by the wife of an astronomy professor (I believe), but whose name I did not know. After the talk we "socialized" with various people, had a chance to have some cookies that were offered as lunch and I was able to sell a copy of The Beginner's Observing Guide. After that we went outside to observe with a number of telescopes that had been setup. In one of the telescopes I observed the Trapezium within the Orion Nebula. Saturn could be seen in another scope. The outstanding view that I had for the evening was in a 16" Newtonian Dobsonian telescope owned by Rick Pipher of the E.A.S. (whom Denise thought had made the telescope). The image of Saturn was very clear and sharp with at least 5 of the moons visible. Cassini's Division was very distinct as were the bands on the surface of the planet. It was a great view.

2002 F.-S. Dec. 20-21 ^{5:45-5:50am E.S.T.} 10:45-10:50 UT FL: by 5-7T3 ne: 18x50sb.

ne: Venus and bright almost Full Moon ^{giving a} ~~fairly thick clouds~~ very bright sky.

18x50sb: Venus, Mars, & Jovian still forming a fairly compact triangle, but the sky was so bright that it was very difficult to see many stars, to say nothing of the newly discovered comet which was not at about mag. 7.0.

Looked for the comet.

S.-S. Dec. 21-22 ^{5:40-6:10pm E.S.T.} 22:40-23:10 UT FL: Naples Pier twl ne

Denise and I, along with her cousin Candee and Joe, went to Naples Pier and looked for Mercury low in the W. sky during twilight beginning about 20 minutes after sunset. After about 15 minutes Denise saw Mercury and I saw it about 10 minutes later, about 12° above the W. horizon over the Gulf of Mexico. Later in the E., we saw Rigel, Saturn, and other bright stars of Orion.

Mercury.

S.-M. Dec. 22-23 ^{6:22-6:24pm EST} at Wiltshire Estates 23:22-23:24 UT FL: in car on Vanderbilt Rd. twl ne

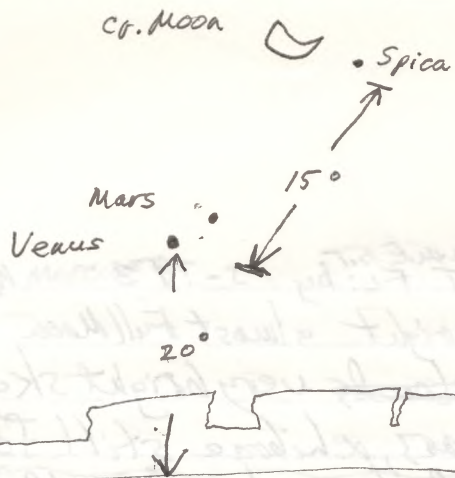
While we were in the car going to Candee and Joe's place, at the entrance to Wiltshire Estates on Vanderbilt Road, we saw Mercury in the W. twilight about 10° above the horizon, as we had seen it the previous evening from Naples Pier.

Mercury

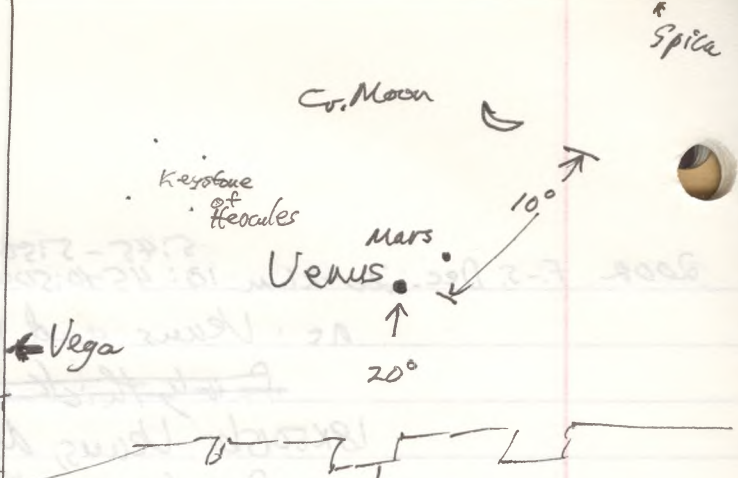
Th.-F. Dec. 26-27 02:30-03:00 UT FL: 1a ^{pollution} 58(?) T6 (light) ne: $12\frac{1}{2}''$

ne: Some bright stars including those of Orion, Saturn, Jupiter.

$12\frac{1}{2}''$: With Denise's $12\frac{1}{2}''$ Meade Newtonian Dobsonian



2002
Dec. 28, 10:50 UT: - View across road to the E, from backyard in Florida.



2002
Dec. 29, 10:50 UT: - View to E across road from backyard in Florida.

2002

telescope, I observed Saturn, and Titan, Jupiter and the 4 Galilean Moons, and M42 and M43 including the Trapezium in M42. On each of the 3 objects I tried 4 oculars; the Meade 32mm Plössl, the Meade MA 25mm and 9mm, and the Televue 12mm Radian. The views were crisp and excellent at low power, with the 32mm and 25mm oculars, but less sharp with the 12mm and 9mm oculars.

(5:30 - 5:35 a.m. E.S.T.)
- m 10:30 - 10:35 UT FL: by S(?) T 4-5 (lqml; light pollution) ne; 18X50ISb
ne: Venus - very brilliant; several bright stars; the last quarter moon.

18X50ISb: look for the comet (C/2002 X5) but was not sure of seeing it, probably mainly because of sky brightness and light pollution in the area.

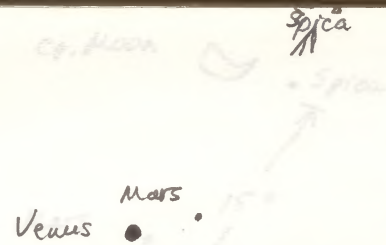
looked for the comet.

5:50 - 6:00 a.m. E.S.T.
F-S Dec. 27-28 m 10:50 - 11:00 UT FL: by S-8(?) T 5-6 (light pollution) ne; 18X50ISb
ne: Cr. Moon; Venus, Mars, in E. (See diagram.)

18X50ISb: Cr. Moon, Venus, Mars, searched below and to the left from the star Alpha Ecca and other stars of Corona Borealis for the comet - in the area of the constellation Hercules, but was unsure of seeing it, probably mainly because of sky brightness and local light pollution.

looked for comet

5:40 - 6:00 a.m. E.S.T.
Sa-Su Dec 28-29 m 10:40 - 11:00 UT FL: by S-8(?) T 5-6 (light pollution) ne; 18X50ISb
ne: Cr. Moon, Venus, Mars, Spica, Vega, other stars (see diagram.)
18X50ISb: Cr. Moon in E, Venus, Mars nearby, Vega and other bright stars of the keystone of Hercules, searched the area below the keystone (or the part of



Vega

2002 Dec. 30, 10:50 UT^E - view to E across pond from backyard in Florida



Vega

2002, Dec. 31, 10:40 UT^E View to E across pond from backyard in Florida.

2002

-looked for comet.

it on the left side) and to the right from Vega, in the hope of seeing the comet, but was not sure of seeing it. I was somewhat puzzled at not being sure of seeing it, since I was able to see M13 with certainty.

S.-M. Dec. 29-30 m. 5:40-6:00 AM E.S.T. FL: by S8(?) T 5-6 (light pollution) ne; 18X50ISb

ne: Crescent Moon, Venus, Mars, Jupiter near the zenith, Vega, and other bright stars. (See diagram.)

18X50ISb: Crescent Moon, Venus, Mars, Vega and area, M13 and keystone stars of Hercules; searched area of the stars ν Her, ξ Her, η Her, and other for Comet Kudo-Fujikawa (C/2002 X5), but was not sure of seeing it. Again, it was somewhat puzzling not to have seen it with certainty since I was able to see M13 with certainty and relatively easily, and the comet was listed as being at mag. 5.7 from the information given at the Sky and Telescope website.

-looked for comet.

ph: photographed Moon, Venus, Mars

M.F. Dec. 30-31 m. 10:20-10:45 UT FL: by S8(?) T 6 (light pollution) (same cloud, N) ne; 18X50ISb

ne: Cr. Moon as it rose above the building across the pond and afterward, Venus, Mars, Vega, Spica, and Jupiter (near the zenith). (See diagram.)

18X50ISb: Cr. Moon and earthshine, Venus, Mars, M13 in Her., searched area of the stars near ν Her, for Comet Kudo-Fujikawa (C/2002 X5), but was not sure of seeing it.

ph: photographed area of Cr. Moon, Venus, and Mars.

Venus

3003

-label for comet

it on the left side of seeing the comet, but was not sure of seeing it. I was somewhat puzzled at it being seen at seeing it since I was able to see M13 with certainty.

2-M13-30-11:00 UT
12:40-1:00 UT
10:40 UT

and to the right from Venus in the top of seeing the comet, but was not sure of seeing it. I was somewhat puzzled at it being seen at seeing it since I was able to see M13 with certainty.

12:40-1:00 UT
10:40 UT

-label for comet

area, M13 and Kaptejian stars of Hercules, searched area of the stars. Other stars, other for Comet Kulu-Fujikura (3003 x2), but was not sure of seeing it. Again, it was somewhat puzzling not to have seen it with certainty since I was able to see M13 with certainty and relatively easily, and the comet was listed as being at mag. 2.7 from the information given at the sky and telescope website.

12:40-1:00 UT
10:40 UT

area, M13 and Kaptejian stars of Hercules, searched area of the stars. Other stars, other for Comet Kulu-Fujikura (3003 x2), but was not sure of seeing it. Again, it was somewhat puzzling not to have seen it with certainty since I was able to see M13 with certainty and relatively easily, and the comet was listed as being at mag. 2.7 from the information given at the sky and telescope website.

12:40-1:00 UT
10:40 UT

12:40-1:00 UT

area, M13 and Kaptejian stars of Hercules, searched area of the stars. Other stars, other for Comet Kulu-Fujikura (3003 x2), but was not sure of seeing it. Again, it was somewhat puzzling not to have seen it with certainty since I was able to see M13 with certainty and relatively easily, and the comet was listed as being at mag. 2.7 from the information given at the sky and telescope website.

12:40-1:00 UT
10:40 UT

area, M13 and Kaptejian stars of Hercules, searched area of the stars. Other stars, other for Comet Kulu-Fujikura (3003 x2), but was not sure of seeing it. Again, it was somewhat puzzling not to have seen it with certainty since I was able to see M13 with certainty and relatively easily, and the comet was listed as being at mag. 2.7 from the information given at the sky and telescope website.

12:40-1:00 UT
10:40 UT

2003

W-Th Jan. 1-2 5:55 - 6:10 a.m. E.S.T. 10:55 - 11:10 UT FL: by 58(?) T 5-6 (light pollution, some clouds, A) ne; 18X50 ISB

- looked for the comet.

ne: Venus, Mars, Spica, Vega in E. sky; Jupiter near zenith
18X50 ISB: bright stars of Corona Borealis, M13 and some stars in Hercules, Venus, Mars, Vega, eLyrae; looked for the comet in the area of the NE. sky to the right of Vega, but was not sure of seeing the comet.

- one bright Quadrantid

F-S Jan. 3-4 12:25 - 1:00 a.m. E.S.T. 05:25 - 06:00 UT FL: in lanai 58(?) T 6 (light pollution) ne

- Jupiter, bright stars of constellation Leo in E, UMa in NNE; one bright Quadrantid Meteor below UMa in NNE, a meteor that was probably of mag. -4 and going from right to left

- one bright Quadrantid

4:00 - 4:45 a.m. E.S.T. 09:00 - 9:45 UT FL: by and in lanai. 58(?) T 5-6 (clouds + light pollution, few light, A) ne

- Venus rising above the roof of a house across the pond, Mars about 5° from Venus, bright stars near the zenith, one bright Quadrantid in the NE of about mag. -3 and going from right to left.

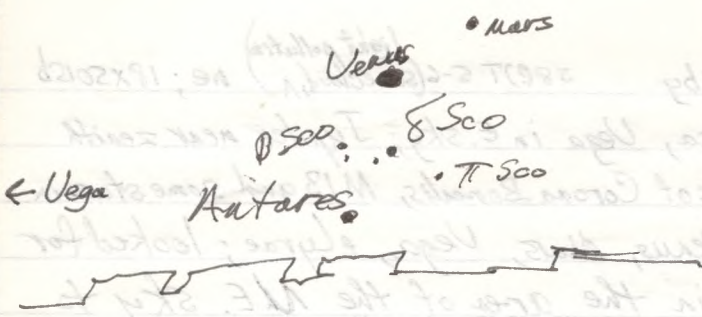
ph: photographed the eastern sky showing Venus rising

S-S Jan. 4-5 10:30 - 11:00 p.m. E.S.T. 03:30 - 04:00 UT FL: la 58(?) T 6-7 (light pollution) ne; 12 1/2"

ne: bright stars of the Orion area of the sky; Saturn (which from information given in Astronomy Magazine and elsewhere was actually moving through the Crab Nebula), Jupiter.

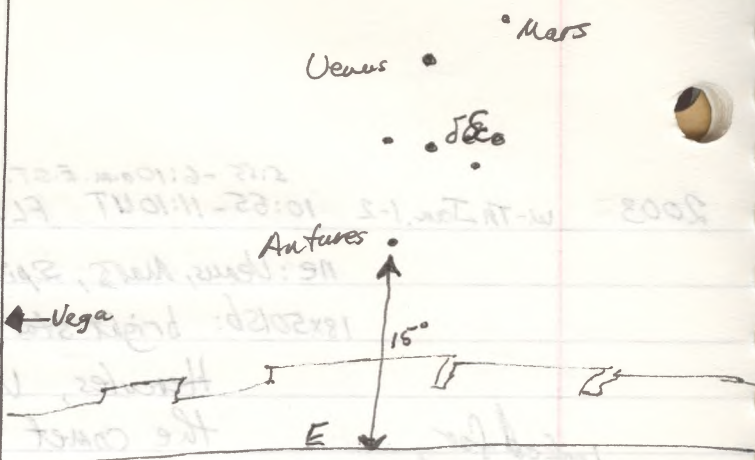
12 1/2": With Denise's telescope we observed Jupiter and its 4 moons and Saturn and 2 of its moons. In addition, Denise saw two moons of Saturn that I was not sure of seeing. The Crab Nebula could not be

Lib Lib



2003, Jan. 5 11:00 UT view to E after beginning of twilight.

Lib Lib



2003, Jan. 7 11:00 UT - view to E after the beginning of twilight

2003, Jan. 5 11:00 UT view to E after beginning of twilight.

in the eastern sky showing
 3 and going from right to left.
 one bright Quabunth in the
 part, Mars about 2° from Venus bright stars
 Venus rising above the roof of a house across the
 and was from right to left
 in the, a meter that was probably of mag. - 4

2003, Jan. 7 11:00 UT - view to E after the beginning of twilight

one bright
 Quabunth
 Venus rising
 of about mag. 3 and going from right to left.
 near the zenith, one bright Quabunth in the
 part, Mars about 2° from Venus bright stars
 Venus rising above the roof of a house across the
 and was from right to left
 in the, a meter that was probably of mag. - 4

2003, Jan. 5 11:00 UT view to E after beginning of twilight.

two hours of Saturn that I was not sure
 of seeing. The Crab Nebula could not be
 Jupiter and its 4 moons and Saturn
 12". With Peris telescope we observed
 moving through the Crab Nebula, Jupiter.
 Astronomy magazine and elsewhere was actually
 Saturn (which from information given in
 bright stars in the Orion area of the sky;
 2003, Jan. 5 11:00 UT

2003, Jan. 7 11:00 UT - view to E after the beginning of twilight

two hours of Saturn that I was not sure
 of seeing. The Crab Nebula could not be
 Jupiter and its 4 moons and Saturn
 12". With Peris telescope we observed
 moving through the Crab Nebula, Jupiter.
 Astronomy magazine and elsewhere was actually
 Saturn (which from information given in
 bright stars in the Orion area of the sky;
 2003, Jan. 7 11:00 UT

2003

detected at all, though Saturn was moving across it. (Saturn was reported to be 2800 X brighter than the Crab Nebula!) The views of both planets were excellent with both the 32mm and the 25mm eyepieces, but much less clear and sharp with the 12mm and 9mm eyepieces. With the former two, the bands were quite clear.

5:55 - 6:15 a.m. E.S.T.
- M. 10:55 - 11:15 UT FL: by S8(?)T6 (light pollution) ne; 18x501sb

~~10:55-11:15~~

ne: Right after the beginning of astronomical twilight I observed the E. sky under cloudless conditions. Venus, Mars, the ^{brightest} stars of Scorpius were visible. (see diagram.)

- looked for the comet (C/2002 X5)

18x501sb: Venus, Mars, Vega, Elyrae, some stars of Hercules, M13, searched below the "keystone of Hercules" to try to see the comet, but once again, I was not sure of seeing it, even though I searched the area of the low north-eastern sky.

Jan. 5-6m
S-M, M 10:25 - 10:45 UT FL: by S8(?)T6 (l.p) ne; 18x501sb

ne: Venus, Mars, some stars of Libra and Scorpius, Antares, Arcturus, and Jupiter W. of the zenith

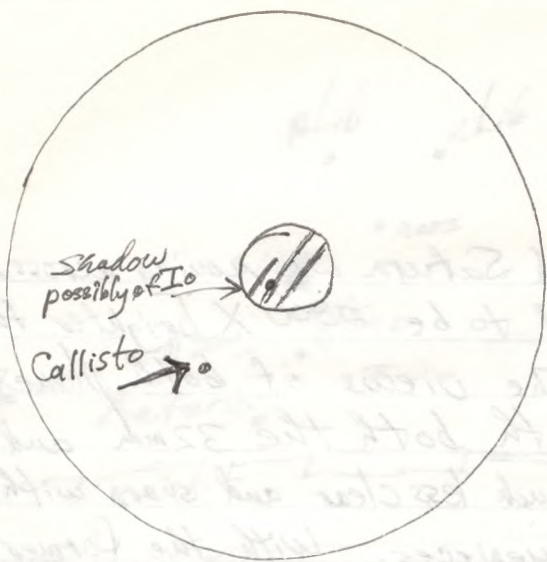
18x501sb: searched in area to the right from Vega in N.E. for the comet but again was not sure of seeing it.

looked for the comet (C/2002 X5)

Jan. 6-7m
M-T, M 11:00 - 11:15 UT FL: by S8(?)T6 (l.p) ne; 18x501sb

ne: Venus, Mars, Jupiter W. of the zenith, Vega in NE, Arcturus, bright stars of Libra and Scorpius (see diagram)

18x501sb: searched in area to the right of Vega for the comet, but was not sure of seeing it;



2003, Jan 9, 4:00UT View of Jupiter
with one shadow transit clearly visible

detected at all, though
Callisto was reported to be
the Callisto shadow. The
I was excellent with both
32mm eyepiece, but not
20mm eyepiece. I saw
Callisto shadow transit
Callisto shadow transit

Me: right after twilight I
of Scorpis were visible (see diagram)
stars of Hercules, M13, coronal below the
"Kepler of Hercules" to try to see the
comet, but as again, I was not sure of
seeing it, even though I searched the
area of the low north-eastern sky.

looked for
the comet
(2003 X2)

Jan. 2:58 - 2:45 AM EST
2-M 10:22 - 10:42 UT

Me: Venus, Mars, some stars of Libra and Scorpis,
Antares, Arcturus and Jupiter W. in the
18:20:15: searched in area to the right from top
in NE for the comet but again was not
sure of seeing it.

looked for
the comet
(2003 X2)

Me: Venus, Mars, 2 after W of the zenith, 1 in NE,
Antares bright stars of Libra and Scorpis
18:20:15: searched in area to the right of top bar
the comet, but was not sure of seeing it.

2003

Venus, Mars, M13, M92, and M4, the last one quite faintly

5:40-5:50 a.m. E.S.T.

T.-W. Jan. 7-8 10:40-10:50 UT FL: by SPT 5-6 (l.p.) ne; 18X50SB

ne: Venus, Mars, bright stars of Scorpius, in E, Jupiter W. of the zenith.

18X50SB: bright stars of Lyra, M13, some stars of Hercules, Venus, Mars; looked for the comet, but was not sure of seeing it

-looked for the comet

W.-Th. Jan. 8-9 10:30-11:45 pm. E.S.T. 03:30-04:45 UT FL: la SPT 6 (l.p.) ne; 12 1/2"

ne: bright stars of Orion, CMa, CMi, Gem, Cr. Moon in W.

12 1/2: Using the 32mm Plossl, the MA25mm, 12mm Radian, and MA 9mm oculars, I observed Saturn and Titan, Jupiter and Callisto with the other three Galilean moons transitting or in the shadow of the planet. (Ganymede (III) had its shadow ingress begin at 1:27 UT and transit ingress begin at 3:46 UT. Io (I) had its shadow ~~transit~~ ^{ingress} begin at 2:09 UT and its transit ingress begin at 2:44 UT. Europa (II) had its eclipse disappearance begin at 1:52 UT and its occultation reappearance would not be until 5:53 UT. Doing a rough calculation, I found that, at 4:00 UT the shadow of Io (I) would have been about 81% of the distance across the disk and the shadow of Ganymede III would have been about 71% of the distance across the disk.) (The shadow egress times would be 4:26 UT for Io and 5:03 UT for Ganymede)

Saturn

Jupiter

M42

I also observed M42 (and M43 in the low power eyepiece) especially the Trapezium and the

2003

the three stars near the Trapezium, and the Pleiades.
- m. 5:45 - 6:05 a.m. EST FL: by ~~S8(?)~~ T6 (ff.) ne; 18X5015b

ne: Venus, Mars, bright stars of Scorpius in E., Jupiter
W. of the zenith (See diagram.)

18X5015b: bright stars of Lyra, M13, M92, M4, Venus,
Mars; looked for the comet but was not
sure of seeing it.

- looked for
comet.

Th.-F. Jan. 9-10 00:30 - 01:40 UT FL: FGCU S8(?) T7-8 ne; 16^{Cassgrain} Ritchey-Chretien

ne: Denise and I went to the Florida Gulf Coast University campus for the January meeting of the Southwest Florida Astronomical Society (the club based in Fort Myers). On walking from the parking lot to the buildings we saw the new observatory, a two-storey structure on the right. We went into one of the classrooms in one of the university buildings, called Whitaker Hall, I believe. About 30 people were there for the meeting. The chairman invited people to volunteer for three executive positions on the club and eventually had people to fill the positions. The astronomy teacher or professor at the university, who teaches two courses to ^{undergraduate} arts students, gave a talk about the Cassini spacecraft. We then walked over to the observatory and joined with the first of the groups to go up into the dome to observe with the telescope. Through the dome, the bright stars of Orion could be seen. With some of the lights in the area out, it was possible to see a good number of stars in the sky and after observing in the dome, we noticed that Jupiter was well up in the East.

β Lib • • α Lib

• Mars

Venus •

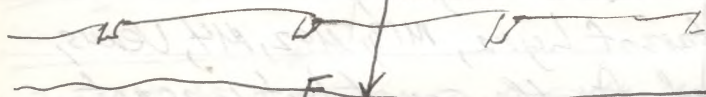
• ε Sco

- stars of
Scorpius.

• Antares

about
20°

← Vega



2003, Jan. 10, 11:00 UT view to the E
after the beginning of astronomical twilight.

2003

Saturn!

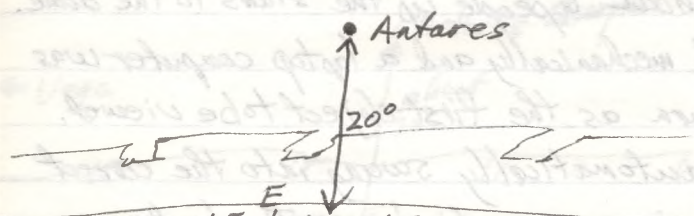
M42.

16" Ritchey-Chretien Cassegrain: A very knowledgeable member of the club led a group of about 6 people up the stairs to the dome. The dome was rotated mechanically and a laptop computer was used to select Saturn as the first object to be viewed. The telescope then automatically swung into the correct position. A 17mm eyepiece was put in place. The leader explained the financing of the observatory and answered other questions. A bequest of \$125,000 had been matched by an equal grant from the state; those monies payed for the building. \$50,000 was the cost of the telescope, mount and accessories. The telescope was an f/8.4 system with a focal length of 3440 mm. The 17mm eyepiece would give 202X. The view of Saturn was magnificent! The rings were very distinct. At least 4 moons were visible. We were also shown M42, but the view was not so good. Though I tried to focus, the stars seemed to be slightly out of focus. Our group went down from the dome to allow another group to go up and observe. We then saw computer software being used on two of the computers in a room on the first floor of the observatory. We also spent about 10 minutes viewing astronomy photographs on the second floor of the building in which we had attended the meeting. They were excellent photographs, taken with a 12" telescope, similar to the one in the observatory, but located in Naples at a private observatory (operated, I believe by a person named Thomas Wolfe). It had been a worthwhile trip, especially the superb view of Saturn.

5:55 - 6:10 a.m. E.S.T.
m. 10:55 - 11:10 UT FL: by twj58@T6 ne; 18x50 15b
ne: Venus, Mars, bright stars of Scorpius, Vega, Arcturus;
Jupiter W. of the zenith. (See diagram)

Lib . Lib

Maos
δ Sco
Venus



2003, Jan 15, 10:40 UT view to E.
Venus is now noticeably lower in the constellation
Scorpius than it was 5 and 10 days ago

2003

looked for
the comet.

18x50 ISb: Venus, Mars, Vega and some stars of Lyra, some stars of Corona Borealis, M13, M92; looked for the comet in the NE, but was not surprised at not seeing it, because by now it would be quite low at this time, or even at, or below, the horizon.

6:00-6:05 a.m. E.S.T.
F.-S. Jan. 10-11m 11:00-11:05 UT FL: by S 8(?) T 1 (clouds) ne; 18x50 ISb
ne: Venus very bright in the E, but very little ~~else~~ visible because of the clouds in that part of the sky.
18x50 ISb: Very few stars seen because of the clouds

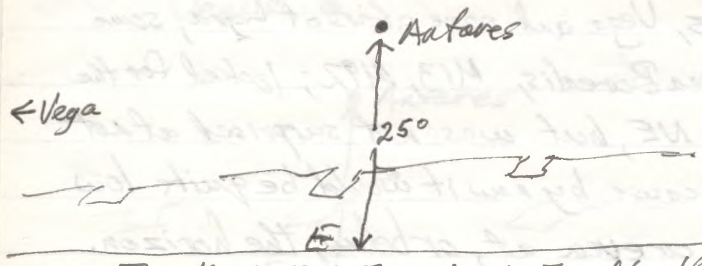
5:45-5:50 a.m. E.S.T.
S.-S. Jan. 11-12m 10:45-10:50 UT FL: by S 8(?) T 5-6 (few light clouds) ne; 18x50 ISb
ne: Venus, Mars, some stars of Scorpius in E; Jupiter W. of the zenith
18x50 ISb: Venus, Mars, some stars of Scorpius, Vega and some stars of Lyra, M13, looked briefly for the comet, not expecting to see it.

6:00-6:10 a.m. E.S.T.
S.-M. Jan. 12-13m 11:00-11:10 UT FL: by S 8(?) T 4 (scattered cloud) ne; 18x50 ISb
ne: Venus, Mars, some stars of Scorpius in E., Jupiter W. of the zenith, Vega, Arcturus.
18x50 ISb: Venus, Mars, some stars of Scorpius and of Lyra, M13, searched briefly for the comet, but did not expect to see it.

5:40-5:55 UT
T.-W. Jan. 14-15m 10:40-10:55 UT FL: by S 8(?) T 6 ne; 18x50 ISb
ne: Venus, Mars, some stars of Scorpius, Vega, Arcturus, Alphecca, Big Dipper stars, α and β Lib, some stars of the constellation Leo and the planet Jupiter W. of the zenith.
(See diagram.)

• β Lib • δ Lib

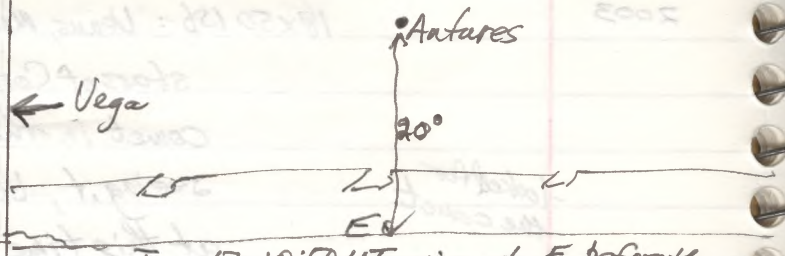
• Mars
• δ Sco
Venus •



2003, Jan. 16, 11:15 UT. - View to E. after the beginning of astronomical twilight. Venus is getting progressively lower in the constellation Scorpius.

B Lib • δ Lib

• Mars
• δ Sco
Venus •



2003, Jan. 17, 10:50 UT. view to E before the beginning of astronomical twilight, which was at about 10:55 UT. Venus continues to get lower in the constellation Scorpius.

2003

18x50ISb: Venus, Mars, some stars of Scorpius, bright stars of Lyra, M13, M92, bright stars of Corona Borealis; looked briefly for the comet, not expecting to see it.

W-Th. Jan. 15-16 ^{6:15-6:20 a.m. E.S.T.} ^{very clear} 11:15-11:20 UT FL: by S-8(?) T6-6.5 (twl, butt) ne; 18x50ISb

ne: Venus brilliant in E, Mars, some stars of Scorpius, Jupiter W. of the zenith, Vega in NE, Arcturus, stars of the Big Dipper. (See diagram) There may also have been a "point meteor" in Scorpius, just below the star ϵ Scorpii.

18x50ISb: Venus, Mars, some stars of Scorpius, Corona Borealis, Hercules, Lyra, M13, M92, M4, the last of which was quite faint; looked briefly for the comet, not expecting to see it.

Jan. 16-17
Th-F. Jan. 16-17 ^{5:45-5:55 a.m. E.S.T.} 10:45-10:55 UT FL: by S 8(?) T5 (1/p; pm) ^{Scorpius} ne; 18x50ISb

ne: Venus, Mars, some stars of ~~Scorpius~~ ^{Scorpius}, Vega, Arcturus, stars of the Big Dipper, Jupiter W. of the zenith, Full Moon about 20° above the W. horizon.

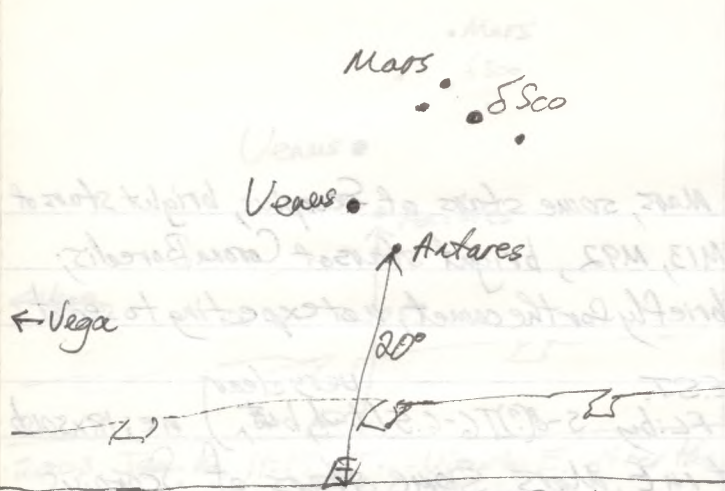
(See diagram for E. sky.)

18x50ISb: Venus, Mars, some stars of Scorpius, Corona Borealis, Hercules, Lyra, M13, M92; looked briefly for the comet low in the sky, not expecting to see it.

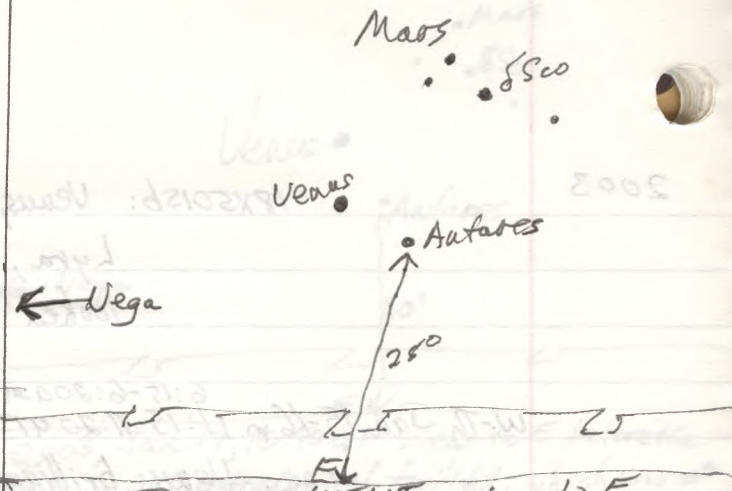
Jan. 17-18
F-S. Jan. 17-18 11:10-11:15 UT FL: by S 8(?) T4-5 (1/p; pm; some cloud) ne; 18x50ISb

ne: Venus, Mars, some stars of Scorpius, Vega, Big Dipper, Arcturus, Jupiter W. of the zenith, Full Moon in W. sky W. of Jupiter.

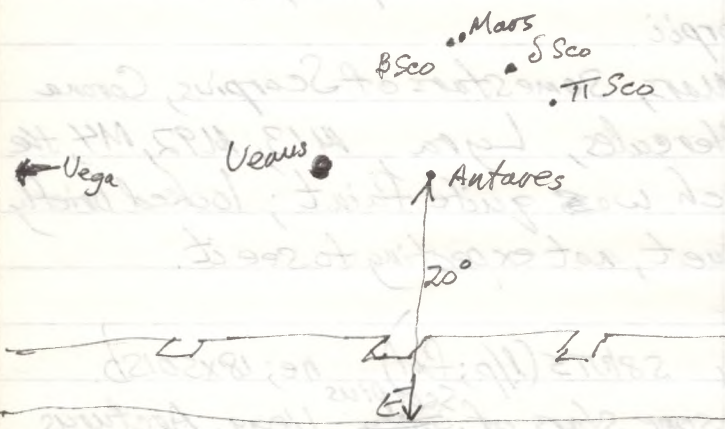
18x50ISb: Venus, Mars, some stars of Scorpius, Corona Borealis, ^{and} Lyra, M13, scanned the low N.E. sky



2003, Jan 19, 10:30 UT - view to E. Venus is progressively lower in the constellation Scorpius.



2003, Jan. 20, 11:15 UT - view to E. Venus is almost N. of Antares



2003, Jan. 21, 10:35 UT - View to E. Venus is almost down to the same altitude above horizon as Antares is. Mars is only about $\frac{1}{3}^\circ$ from β Scorpius.

19: Venus, Mars, some stars of Scorpius, Vega, Antares, Jupiter W. of the zenith, Full Moon in W. sky W. of Jupiter.

18:20: Venus, Mars, some stars of Scorpius, Vega, Antares, Jupiter W. of the zenith, Full Moon in W. sky W. of Jupiter.

17:18

11:10-11:50 UT Feb 19

19: Venus, Mars, some stars of Scorpius, Vega, Antares, Jupiter W. of the zenith, Full Moon in W. sky W. of Jupiter.

18:20: Venus, Mars, some stars of Scorpius, Vega, Antares, Jupiter W. of the zenith, Full Moon in W. sky W. of Jupiter.

17:18

2003

but not expecting to see the comet.

Sa-Su^{W.} Jan. 18-19 10:30-10:35 UT FL: Lanai & by S8(?)T4-5 (l/p; fml; n^{some cirrus}) ne; 18X50ISB

ne: Venus, Mars, some stars of Scorpius, Vega, Alphecca, Arcturus, Jupiter and Full Moon 5° apart about 30° - 40° W. of the zenith. (See diagram for E. sky.)

18X50ISB: Venus, Mars, bright stars of Scorpius, and Corona Borealis; briefly scanned the lower N.E. sky, not expecting to see the comet.

S.-M. Jan. 19-20m. 6:15-6:20a.m. E.S.T. 11:15-11:20 UT S8(?)T5 (l/p; fml; n^{twl}) ne; 18X50ISB

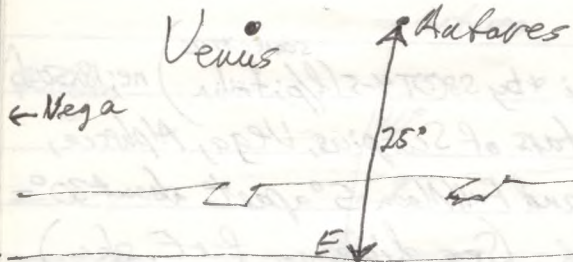
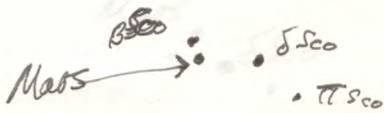
ne: Venus, Mars, some stars of Scorpius, Vega, Alphecca, Arcturus, Jupiter and Full Moon about 10° apart in the W. half of the sky (See diagram for E. sky.)

18X50ISB: Venus, Mars, bright stars of Scorpius; bright stars of Corona Borealis and of Lyra; scanned the lower N.E. sky

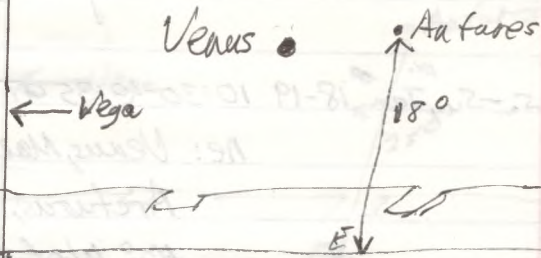
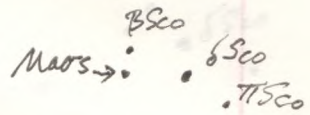
M.-T. Jan. 20-21m 5:35-5:50a.m. E.S.T. 10:35-10:50 UT FL: by S8(?)T4-5 (l/p; gml; n^{some fog}) ne; 18X50ISB

ne: Venus, Mars, some stars of Scorpius, Vega, Arcturus, 6 of the stars of the Big Dipper, Alphecca, Arcturus, bright gibbous moon W. of zenith and Jupiter about 20° W. of it. (See diagram for E. sky.)

18X50ISB: Venus, Mars, Antares, stars in "claws of Scorpius", bright stars of Lyra, M13 and some stars of Uter., bright stars of Corona Borealis. Mars was only about $\frac{1}{3}^\circ$ from β Scorpii



2003, Jan. 22, 11:15 UT: View to E. Venus is at or below the altitude of Antares; Mars is about $\frac{1}{4}$ below, and to right from, β Scorpii.



2003, Jan. 24 10:30 UT: View to E. Venus is below the altitude of Antares; Mars is about 1° below β Scorpii.

2003

6:15-6:20 a.m. E.S.T.
T.-W. Jan. 21-22 m 11:15-11:20 UT FL: by S8PT 5-6 (1/p; gml; slight fog) ne; 18X5015b

ne: Venus, Mars now about $\frac{1}{2}^\circ$ below and to right from β Scorpii, bright stars of Scorpius, Vega, Alphecca, Arcturus, Full Gibbous Moon about 20° S of zenith, Jupiter in W. sky, Big Dipper high in the N. (See diagram for E. sky)

18X5015b: Venus, Mars, bright stars in Scorpius, Corona Borealis and Lyra, some stars of Hercules, M13.

5:35-5:40 a.m. E.S.T. overcast
W.-Th. Jan. 22-23 m 10:35-10:40 UT FL: by S7T (almost total) ne; 18X5015b

ne: Venus in E. about 20° above horizon and waning gibbous moon visible among clouds about 20° - 30° SE from the zenith.

18X5015b: Venus and Antares, to its right, visible among the clouds in the E.

5:30-5:35 a.m. E.S.T.
Th.-F. Jan. 23-24 m 10:30-10:35 UT FL: by S8T6 (1/p; gml) ne; 18X5015b

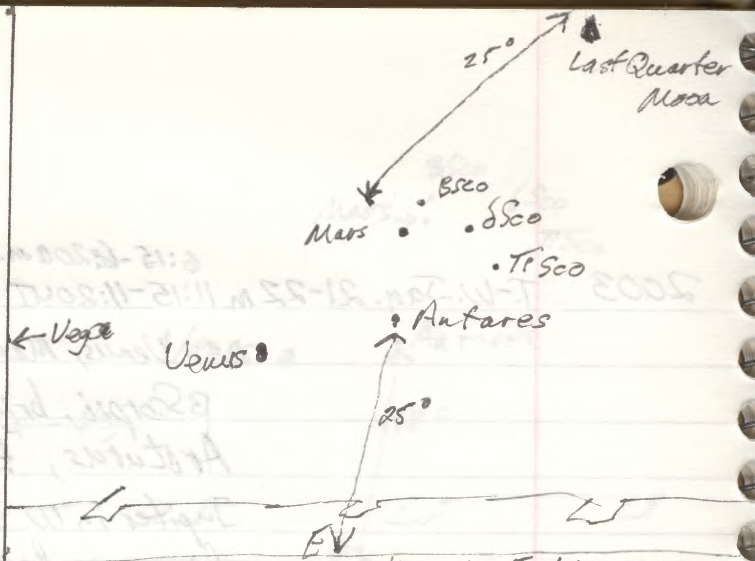
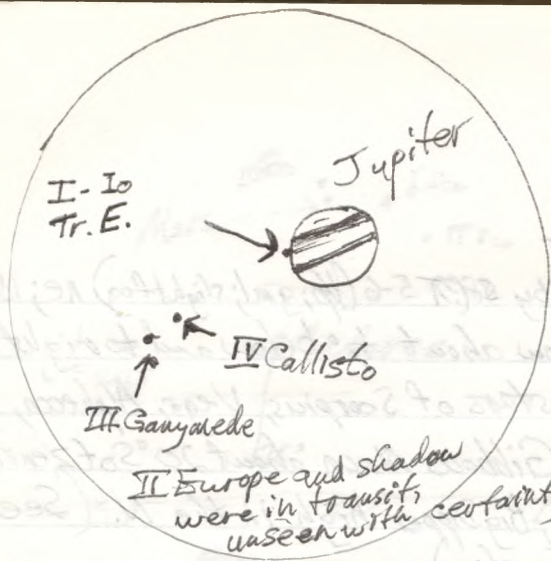
ne: Venus in E., Mars now about 1° below β Scorpii, bright stars of Scorpius, Vega, Alphecca, Arcturus, Big Dipper high in N., gibbous moon high in SSE and about 4° from Spica, Jupiter in W. sky. (See diagram for E. sky.)

18X5015b: Venus, Mars, bright stars of Scorpius, Corona Borealis, and Lyra, some stars of Hercules, M4, M13.

F.-S. Jan. 24-25 02:00-03:10 UT FL: la S8T6 (1/p) ne; $12\frac{1}{2}$

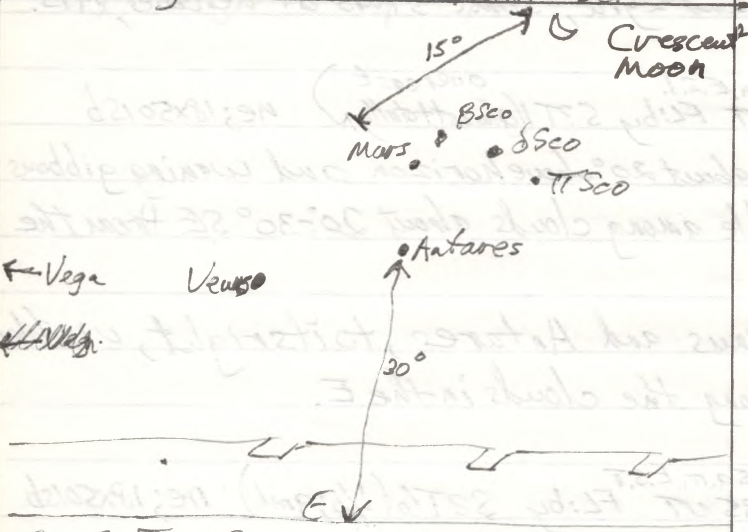
ne: bright stars of Orion (Ma, Mi, Gem, Aur, Tau), Jupiter, Saturn.

$12\frac{1}{2}$ " : Using the 37mm, 25mm, 12mm and 9mm oculars, I observed Jupiter and 2 moons and



2003, Jan. 25, 02:54 UT at the time of the Transit Egress of Galilean Moon I-Io. The Shadow Egress had ended 12 minutes before.

2003, Jan. 25, 11:00 UT - View to E. Venus is definitely below the altitude of Antares. Mars is about $1\frac{1}{2}^\circ$ below β Scorpii



2003, Jan. 26, 11:05 UT - View to E. Mars is now about 2° below β Scorpii. Antares was about 30° above the horizon. β Lib and α Lib were seen above the crescent moon.

2003


at 2:54 UT I observed the transit egress of I-Io as it emerged to appear clearly at the ^{W.} side of the planet. (See ~~photos~~ ^{diagram}). From 1:42 UT until 2:42 UT there had been a "double shadow transit" on Jupiter, but I did not clearly see it. I also observed Saturn along with Titan and one other satellite, using the 4 oculars mentioned above. With the 32mm Plössl eyepiece, I observed the open cluster M41 in CMa, and the Pleiades.

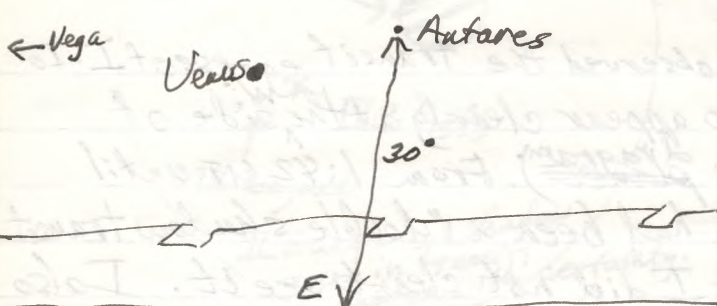
^{6:00-6:05 a.m. EST}
- m. 11:00-11:05 UT FL: by s-8 (T 5-6 (1/p; tw)) ne; 18x501sb
ne: Venus, Mars about $1\frac{1}{3}^\circ$ below β Sco, bright stars of Sco, Vega, Vega, Arcturus, Big Dipper, for about 2-3 seconds a bright, magnitude -2 to -3 object that was probably a point-meteor, last quarter moon about 25° to upper right from Mars, Jupiter in W. sky. (See diagram.)

18x501sb: Venus, Mars, bright stars of Sco., Corona Borealis, ^{and} γ , and some stars of Hercules, M4 and M13.

^{6:05-6:15 a.m. EST}
Sa.-Su. Jan. 25-26 m. 11:05-11:15 UT FL: by s-8 T 5-6 (right Hwl; 1/p; 1x) ^{crul} ne; 18x501sb
ne: Venus in E., Mars 2° below β Scorpii, stars of Scorpius, Vega, Alpheratz, Big Dipper stars and satellite moving near Alioth in the Big Dipper, Arcturus, crescent moon about 15° up from Mars. (See diagram.)

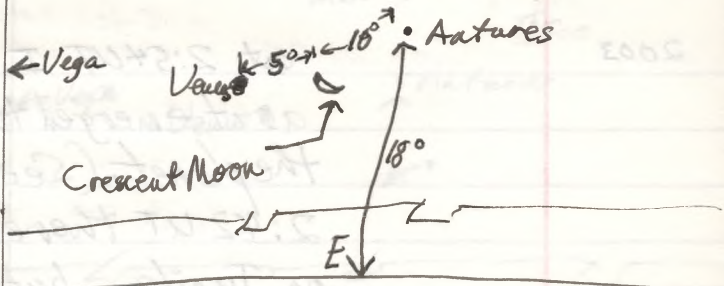
18x501sb: M4, bright stars of Scorpius, Lyra, and Corona Borealis, some stars of Hercules and Ophiuchus, M13, Venus, Mars, crescent moon (which formed an almost equilateral triangle below β Lib and α Lib which were seen naked-eye)

β Sco (binoc)
 δ Sco (binoc)
 π Sco (binoc)
 Mars (binoc) •  Crescent moon



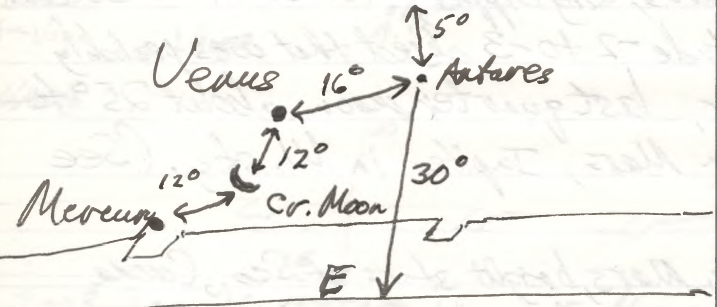
2003, Jan. 27, 10:55 UT: view to E.
 There was some light cloud in area of Crescent Moon. Mars and β , δ , and π Sco. Were seen in binoculars.

β Sco
 δ Sco
 π Sco
 Mars



2003, Jan. 28 9:55 UT view to E. which was much clearer than the previous morning

β Sco
 δ Sco
 π Sco
 Mars



2003, Jan. 29, 10:20 UT - View to E. Crescent moon was about 12° from both Venus and Mercury which came into view at about 10:55 UT

2003

S.-M. Jan. 26-27 m. 5:55 - 6:10 a.m. EST.
10:55 - 11:10 UT FL: by S 8 T 4 (1/p; cml; some cloud) ne; 18x50LSB

ne; crescent moon in Scorpius, Venus, Antares, Vega, Arcturus,
but clouds prevented a good view of some stars in
Scorpius, and possibly the light of the moon did so also
18x50LSB: Venus, Antares, crescent moon in Scorpius, Mars,
β, δ, and π Scorpii, Vega and the bright stars of
Lyra, some stars of Hercules, M13, some craters on
the moon.

p/h: photographed the area of the cr. moon even though
there was some cloud in that area.

M.-T. Jan. 27-28 m. 4:55 - 5:20 a.m. EST.
9:55 - 10:20 UT FL: by S-8(?) T 6-7 (1/p; cml) ne; 18x50LSB

ne: crescent moon, Venus, Mars, some stars of Scorpius,
Antares, Vega, Big Dipper, Polaris, Kochab, and
γ UMi, ^{several stars of Draco,} Denebola not far from the zenith, Regulus
and Jupiter to the W. of the zenith. (See
diagram.)

18x50LSB: Venus, cr. moon, Mars, bright stars in
upper part of Scorpius, some lunar craters,
Vega and bright stars of Lyra, some stars of
Hercules, M13, ^{M92} bright stars of Cor Bor and
R Cor Bor, M4, area near Barnard's Star. in Oph.

p/h: photographed area of cr. moon.

I thought I may have seen Mercury with
binoculars, to the left and down from Venus, but
I was not certain.

T.-W. Jan. 28-29 m. 5:20 - 6:00 a.m. EST.
10:20 - 11:00 UT FL: by S 8 T 6 (1/p; cml) ne; 18x50LSB

ne: Antares and other stars of Scorpius, Mars now
only about 5° from Antares, Venus, Crescent moon,
Mercury which came into view at about 10:55 UT when

Mercury

2003

it appeared above a roof across the pond, the Big Dipper, Polaris, Kochab, γ UMi, some stars of Draco and of Hercules, Vega, α Ophiuchi, and in the latter part of the session Deneb, and some stars of Cygnus, and Altair. (See diagram.)

18X50 ISB: Venus, Crescent moon and some craters, Mars and some stars of Scorpius, stars of Lyra, and of Hercules, M4, M13, M92; in latter part of the session some stars of Cygnus.

W.-Th. Jan. 29-30 m. 5:10-5:30 a.m. E.S.T. 10:10-10:30 UT FL: by S&T 4-5 (1p; scattered ^{cloud}) ne; 18X50 ISB ne: Venus, Mars, some stars of Scorpius, most of the stars of the Big Dipper, Arcturus near the zenith, Vega, Alphecca, Jupiter in the W. sky, but some scattered cloud prevented a good view of the eastern sky.

18X50 ISB: Venus, Mars, Antares, Vega and the bright stars of Lyra, the bright stars of Corona Borealis including R Cor Bor, scanned the lower part of the eastern sky for Mercury but did not see it at this time.

Mercury
6:00-6:05 a.m. E.S.T.
- 11:00-11:05 UT FL: by S&T 4-5 (1p; some cloud) ne; 18X50 ISB ne: spotted Mercury about 1° above the roof of a house across the pond
18X50 ISB: saw Mercury in the binoculars as well

Th.-F. Jan. 30-31e 7:10-7:35 p.m. E.S.T. along the Gulf 00:10-00:35 UT FL: Lowdermilk Park ^{cloud} twf; some ne; 18X50 ISB ne: Hoping to see Comet NEAT (C/2002 VI), Denise and I drove to Lowdermilk Park in Naples to view it over the Gulf of Mexico. It was well up in the Wia Pisces and listed as mag. 5.2. There was considerable cloud in the sky, but there was also a clearing trend in

Area of
Comet NEAT
(C/2002 V1)

about 25°

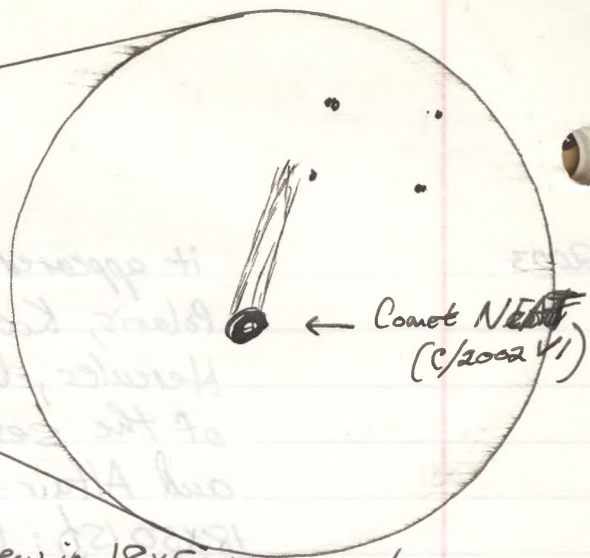
W ↓

horizon

Gulf of Mexico

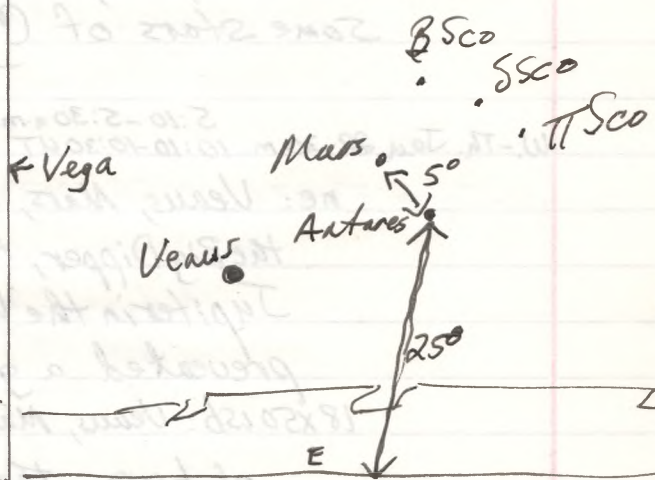
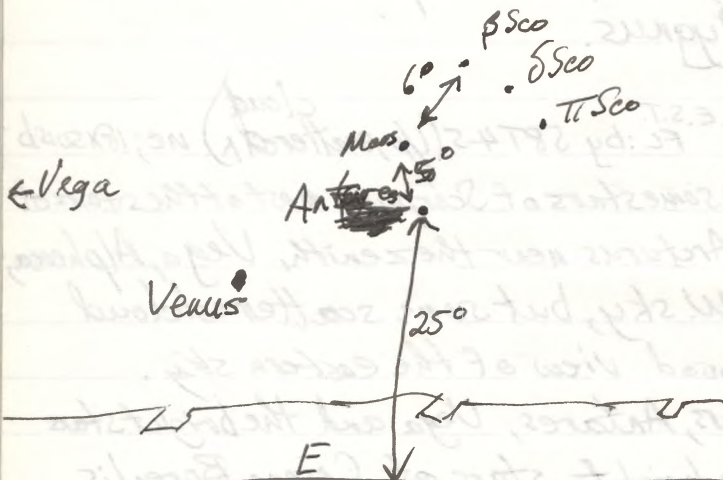
2003, Jan. 31 00:15 UT. The comet
was not seen naked-eye.

Square
of
Pegasus



← Comet NEAT
(C/2002 V1)

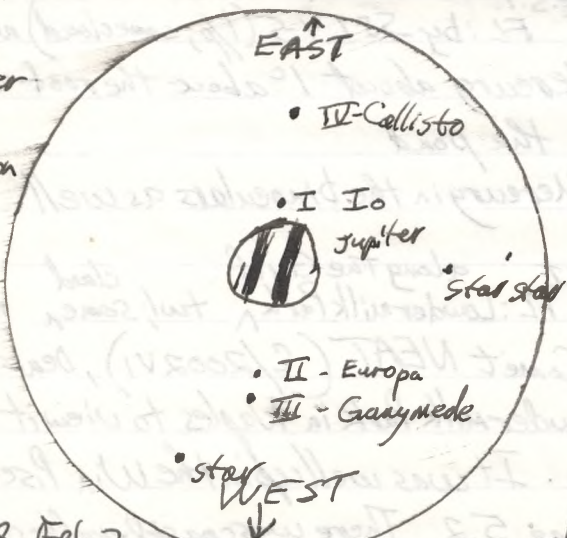
View in 18X50 IS binoculars.
The tail of about a degree or so was visible.



2003, Jan. 31, 10:30 UT: View to E.
Mars was now about 5° from Antares
and about 6° from β Scorpii.

2003, Feb. 1, 10:40 UT: - View to E.
Mars is about 5° from Antares.

Jupiter
at
Opposition



2002, Feb. 2, about 4:00 UT, about 5 hours
before the time of Jupiter's opposition.

2003

certain areas of the sky. I did not see it naked eye and neither did Denise.

Comet NEAT
(C/2002 V1)

18X5015b: Using the binoculars I saw it fairly easily and it appeared to have a tail of perhaps a degree or so in length and going upward and very slightly to the right. Though listed as mag. 5.2 and it was easy to find in the binoculars about 10 to 12 minutes before the listed time of end of astronomical twilight (which was 00:28 UT), it still was not seen naked eye.

5:30 - 5:40 a.m. E.S.T.
- 10:30 - 10:40 UT FL: by S8T4 (l/p; hazy clouds) ne; 18X5015b

ne: Venus, Mars, some stars of Scorpius in E, Jupiter in W, Arcturus near zenith, Vega. (See diagram.)

18X5015b: Venus, Mars, stars in Scorpius, Vega and stars in Lyra.

F.-S. Jan. 31 - Feb. 1^m 5:40 - 5:50 a.m. E.S.T.
10:40 - 10:50 UT FL: by S8T45 (l/p; clouds) ne; 18X5015b

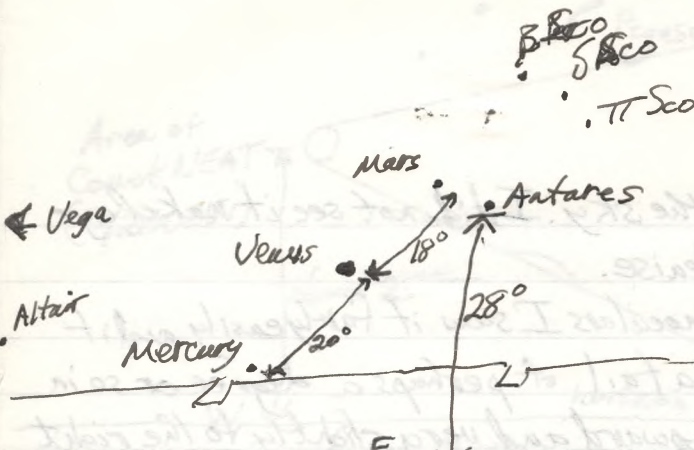
ne: Venus, Mars, some stars of Scorpius, Vega, Arcturus near the zenith, Jupiter in W. sky. (See diagram.)

18X5015b: Venus, Mars, some stars of Scorpius, Vega and some stars of Lyra, M4 seen faintly.

S.-S. Feb. 1-2ⁿ 10:40 - 11:25 p.m. E.S.T.
3:40 - 4:25 UT FL: 1a S8-9 T7 (some l/p) ne; 12 1/2"

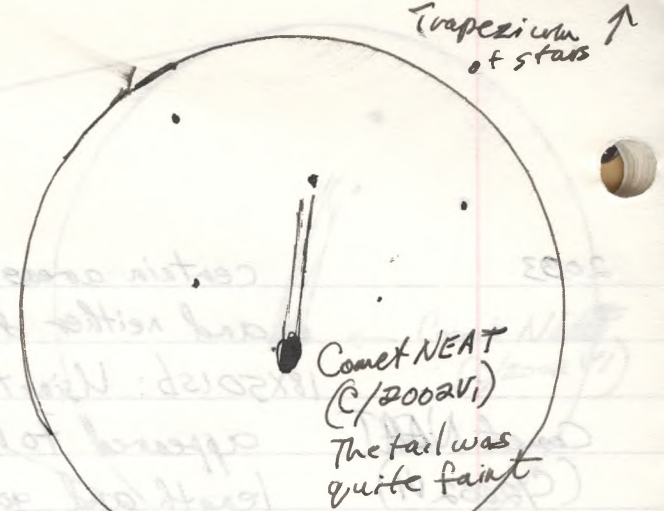
ne: bright stars of winter high in the S., Canopus about 12° above the SSE horizon, the middle of Gemini occupying the zenith, Jupiter very, very bright and high in the E. about 1/2 way between Pollux and Regulus, Saturn high in the W. about 1 1/2° W. of the star 5 Tau, Pleiades high in the W.

12 1/2": Jupiter and 4 moons, Saturn and Titan, Pleiades - each seen in the 32mm Plossl



2003, Feb. 2, 11:00 UT. view to E. Mars and Antares are still about 5° apart.

β Sco
γ Sco
TT Sco



2003, Feb. 3, 00:15 UT
View in 8X50IS binoculars. Comet NEAT was near the border between Piseis and Pegasis at about R.A. 22h 54m. Dec. $+6^\circ 48'$.

2003

the MA25mm, the 12mm Radian, and the MA9mm ocular. (See diagram for view of Jupiter and its 4 moons.) Jupiter was very near opposition, the precise time being given as Feb. 2, at 9^h UT which was about 5 hours later.

5:55-6:10 a.m. EST
m. 10:55-11:10 UT FL: by S8T6-7 (l/p; slight twilight) ne; 18x50ISB

4 planets

ne; Mars, Venus, Mercury, some stars of Scorpius, including Antares, Big Dipper stars, Polaris, Kochab, γ -UMi, the stars of the Summer Triangle, Arcturus near the zenith, Jupiter in the W. (See diagram.)

18x50ISB: Mars, Venus, Mercury, some stars of Scorpius, Lyra, and Corona Borealis, M4, M13, M92, some stars of Hercules

7:15-7:35 p.m. EST FL: end of street
S.-M. Feb. 2-3 00:15-00:35 UT, S8T6-7 (l/p) ne; 18x50ISB

ne: Hoping to see the comet, I walked to the end of the street, to the junction of Village View Blvd. and Lake Amelia Drive and was able to see the stars of the Square of Pegasus, the Pleiades, the bright stars of Orion, Gemini, Andromeda, Cassiopeia and some other stars.

18x50ISB: Comet NEAT (C/2002 V1) which was quite easy to spot a little further S and W from the bright trapezium of stars near which it was located on Jan 30-31, 3 days ago. The comet was listed as about mag. 4.8 on Feb 2 at 0h UT and mag. 4.4 on Feb. 4 at 0h UT; therefore it should have been about mag. 4.6 at this time. The tail was quite faint and indistinct. (See diagram.)

Comet NEAT
(C/2002 V1)

10:10-11:05 p.m. EST
03:10-04:05 UT FL: la S8T7 (l/p) ne; 12 1/2"
ne: bright winter stars high in the S., Canopus up

2003

about 12° above the SSE horizon, Jupiter in Cancer about $\frac{1}{2}$ way between Pollux and Regulus, Saturn near δ Tauri.

Jupiter
and
Saturn

12^h: Using the 32mm Plossl, the MA 25mm, the 12mm Radian, and the ^{MA} 11mm oculars, I observed Jupiter and 4, later 3, moons, and Saturn and Titan and one other moon of Saturn in at least one of the oculars. (See diagram for the view of Jupiter.) The diagram shows the 4 Galilean moons, with III-Ganymede very close to the disk, just moments before it disappeared in an occultation listed for 3:20 UT, but I thought it had disappeared about a minute or two before that time.

(S.-M. Feb. 2-3) ^{beginning}
6:00-6:15 a.m. EST FL: by S-88T7 (1/p; tw) ne; 18x50LSb
ne: Venus, Mars, Mercury about $1-2^\circ$ above roof of house, bright stars of Scorpius, Summer Triangle, Alphecca and Arcturus near zenith, Jupiter in W. sky. (See diagram.)

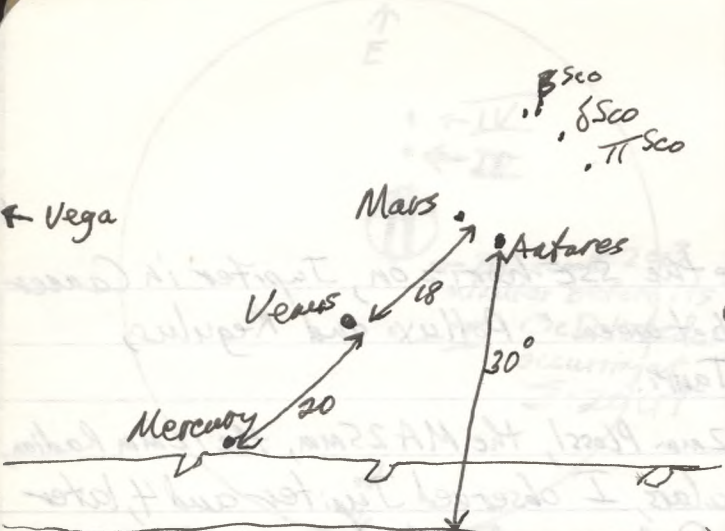
18x50LSb: Venus, Mars, Mercury, bright stars of Scorpius, Corona Borealis, Lyra, and Hercules, M4, M13, M92.

ph^g photographed the E. sky using 35-105mm lens.

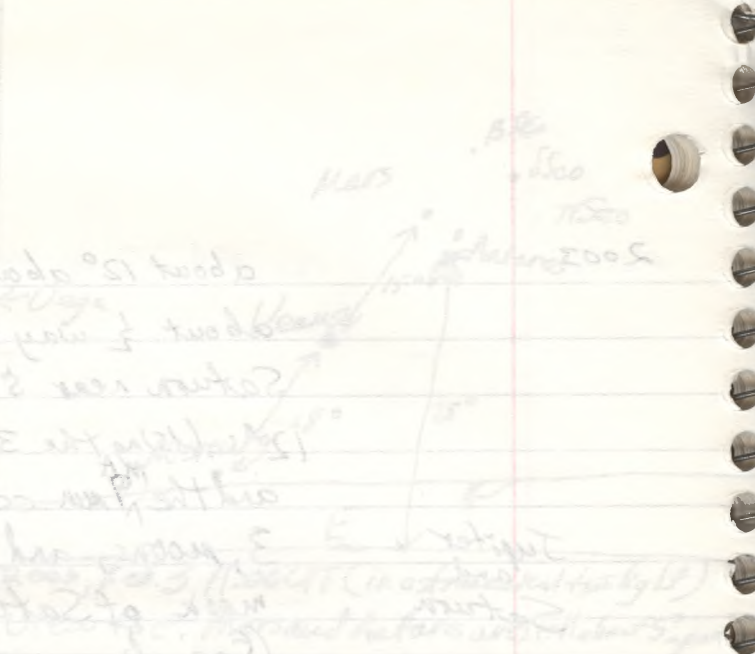
M.-T. Feb. 3-4 7:15-7:35 p.m. EST.
00:15-00:35 UT FL: end of street S8T7 (1/p; tw) ne; 18x50LSb
ne: stars of winter high in the S., Jupiter in E., Saturn in Taurus, Square of Pegasus descending in W., crescent moon about 12° above W. horizon (moon about $2\frac{1}{2}^d$ old)

18x50LSb: Comet NEAT (listed as being in Pegasus at RA: $22^h 50.8^m$, Dec: $+6^\circ 21'$ and mag. 4.4) seen easily about $1\frac{1}{2}$ binocular fields below a distinctive

Comet NEAT
(C/2002V1)



2003, Feb. 4 11:00UT (in astronomical twilight)
 View to E. Mars and Antares are still about 5°
 apart.



clear the 42
 close to the dis
 in an occult
 tion listed for 3:50UT but I
 thought it had
 appeared about a minute or two
 before that time.

clear the 42
 close to the dis
 in an occult
 tion listed for 3:50UT but I
 thought it had
 appeared about a minute or two
 before that time.

the E. sky using 35mm f/5.6 lens
 M.T. Feb 3-4 00:15-00:35UT
 no: stars within magnitude 2, Jupiter in E, Saturn in
 Taurus; Spica of Virgo descending in W, crescent
 moon about 12° above W horizon (moon about 25' old)
 Const NEAT (listed as being fainter at RA.
 Dec: +41° 21' and mag. +4.7) seen easily
 about 1/2

the E. sky using 35mm f/5.6 lens
 M.T. Feb 3-4 00:15-00:35UT
 no: stars within magnitude 2, Jupiter in E, Saturn in
 Taurus; Spica of Virgo descending in W, crescent
 moon about 12° above W horizon (moon about 25' old)
 Const NEAT (listed as being fainter at RA.
 Dec: +41° 21' and mag. +4.7) seen easily
 about 1/2

2003

trapezium of stars, but the tail was not as clearly seen as previously; the tail was very faint and only a hint, compared with the more defined view on two previous occasions. It seemed to go upward from the comet and to be only about $\frac{1}{2}$ a degree or so in length.

m 5:45 - 6:00 a.m. E.S.T. FL: by 58T6-T (1p; slight tw; ^{some slight cloud}) ne; 18x5015b

4 planets (including Jupiter in W.)

ne: Mars, Venus, Mercury (the latter seen just barely above a roof in the last 5 minutes of the session), some stars of Scorpius, ~~Lyra~~ ^{Vega}, ~~Corona Borealis~~ ^{Alphecca}, and Hercules, Vega, Arcturus, Jupiter in W. (See diagram.)

18x5015b: Mars, Venus, Mercury, M4 (faintly) M13, M92, some stars of Scorpius, Lyra, Corona Borealis, and Hercules.

T-W. Feb. 4-5 m. 6:10 - 6:30 a.m. E.S.T. FL: by 11:10 - 11:30 UT \wedge A: 110.5 (98% overcast; slight drizzle) ne; 18x5015b

ne: Arcturus near the zenith, seen briefly, Vega up about 40° in the NE, seen for a minute or so, Venus up about 20° in the ESE seen for about a minute or so.

Venus

18x5015b: Vega and only a few other stars of Lyra, Venus, very bright in the ESE.

W.-Th. Feb. 5-6 7:15 - 7:30 p.m. E.S.T. ^{edd of street} FL: by 11:15 - 11:30 UT \wedge ^{Fl: twl}; some haze and cloud ne; 18x5015b

ne: $4\frac{1}{2}$ -day-old crescent moon about 35° above W. horizon, Orion and 'stars of winter' high in the SE, Jupiter, Saturn, Pleiades and Hyades near the zenith.

18x5015b: looked for Comet NEAT in the W, but was not sure of seeing it, even though I saw the trapezium that I had previously used to starhop to it; Pleiades, Hyades.

6:10 - 6:45 a.m. E.S.T. FL: by 11:10 - 11:15 UT \wedge ^{S750.5} ^{Fl: twl}; 98% overcast) ne; 18x5015b

Venus

ne: Venus in E., but generally sky was very cloudy
18x5015b: Venus amid clouds and 3 other stars near Venus.

Relative Sunspot Numbers

Dates: My
2002 Observation

Sept. 9	137
2120 - 10	135
11	98
12	128
16	114
17	146
18	111
23	132
24	131
25	81
26	90
28	63
2130 - Oct. 1	62
3	59
6	85
8	73
10	107
14	124
15	115
18	124
21	107
2140 - 22	73
23	77
24	94
25	98
29	140
30	93
Nov. 7	107
9	158
27	45
Dec. 1	83
2150 - 2	106
3	83

