

Volume
30

**January 27, 2008
to
May 10, 2008**

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- Heavyweight paper
- Papier épais

Leo Enright

Observing Log 2008 Jan. 27-
2008 May 10.

80

Pages

26.7x20.3 cm

MATHS/SCIENCES



13220

0 65800 13220 7

B-101

Observing Log

Code:
 Year Day Date Time Place Sky Conditions Instruments
 S=Seeing T=Transparency

Time:

UT = Universal Time

Places:

OO = Oso Observatory
 nd = north deck
 sd = south deck
 sh = shoreline of lake
 ss = solar station
 .t = table at solar station
 in = indoors
 r = roof of house
 ice = ice on lake
 y = yard
 la = laneway by = backyard
 FL = Florida pl = pool

Instruments:

C14 = Celestron 14 - 35.5 cm SCT

C8 = Celestron 8 - 20 cm SCT

As-t = Astroscan 2001 - 10.5 cm RFT

12 1/2" = Denise's 32 cm Meade Dobsonian

20x100b = Celestron 20x100 binoculars

11x80b = 11x80 binoculars

9x63b = 9x63 binoculars

7x35b = 7x35 binoculars

18x50ISb = Canon 18x50 IMAGE STABILIZED binoculars

P.S.T. = Coronado Personal Solar Telescope

32 = 32 mm ocular

32-2 = 32 mm 2" ocular

E = Erfle

K = Kellner

O = Orthoscopic

Ko = König

WA = Wide Angle

P = Plössl

ph = photography

pl/b = piggyback

o/a = off axis

Ba = Barlow

APF = Astrophysics Solar Filter

T.O.F. = Thousand Oaks Solar Filter

Objects:

PN = Planetary Nebula

GC = Globular Cluster

OC = Open Cluster

SG = Spiral Galaxy

LPV = Long Period Variable

DS = Double Star.

Atlases:

U = Uranometria 2000.0

U210 = Uranometria 2000.0 Chart 210.

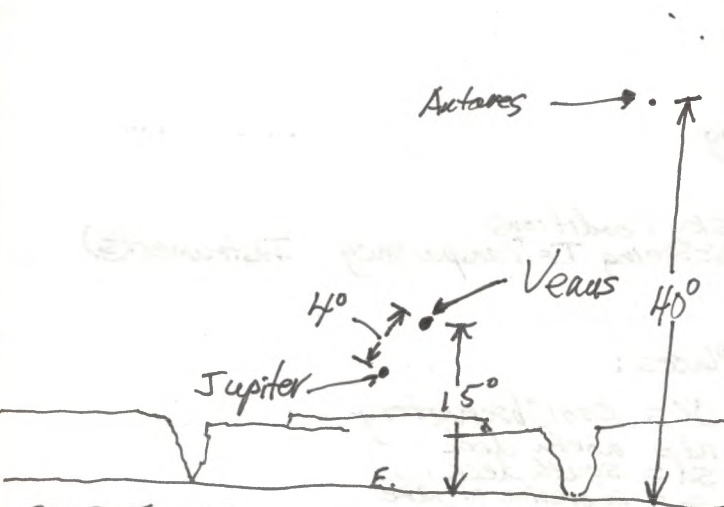
AAUSO = AAUSO Variable Star Atlas

Cam = Cambridge Star Atlas (2000.0)

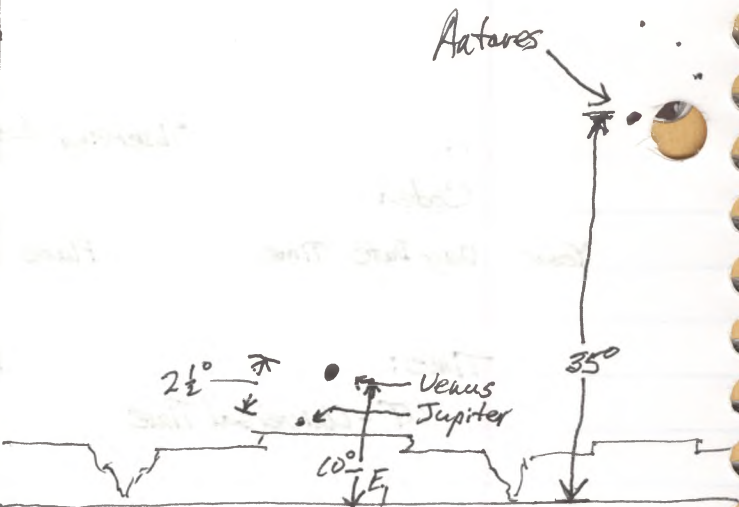
MSA = Millennium Star Atlas

USDA = Uranometria 2000.0 Deep Sky Atlas

USDA210 = Uranometria 2000.0 Deep Sky Atlas Chart 210.



2008, Jan. 28, 11:00 UT: View to E showing brilliant Venus and Jupiter 4° apart.



2008, Jan. 29 10:50 UT: View to E. showing Venus and Jupiter now only $2\frac{1}{2}^\circ$ apart.

2008 S.-M. Jan. 27-28 03:00-03:30 UT FL: la S?T5 (1/p) ne; 18X50ISb

(cont'd) - 18X50ISb: Pleiades, Hyades, areas of Orion, M42, M43, area of R Lep, NGC 2244, Paskett's Star, S Mon and the Christmas Tree cluster, M35, M36, M37, M38, & Persei Association of stars, Double Cluster in Perseus, Stock 2, Mars, Saturn, Regulus and area, R Leonis - at about mag. 6.0.

m. ^{5:58-6:03 a.m. E.S.T.} 10:58-11:03 UT FL: in & outside lanai twl ne

- After the beginning of astronomical twilight which was at 10:55 UT, I observed briefly seeing brilliant Venus up 15° in the E and Jupiter only 4° to its lower left with Antares and some of the bright stars of Scorpius in the ESE. (See diagram.) Also seen were the Big Dipper high in the N. and Polaris and Kochab in the N. and Arcturus about 5° E. of the zenith and Spica. West of the zenith were Regulus, Saturn, and Denebola.

M.-T. Jan. 28-29 01:10-03:00 UT ^{FL: la} S?T5 (1/p) ne; 12 $\frac{1}{2}$ " 32, 25, 12, 9

ne: stars of winter; Mars very high 20° to 50° E. of the zenith; Saturn rising during the session

18X50ISb: Mars, Pleiades, Hyades, M41, M42, M43, NGC 1981, NGC 1977, NGC 1980, M44, Saturn and Titan, R Leonis - at about mag. 6.0. (Not all objects were observed under all magnifications. The Pleiades and Hyades were too large even for the field of the

^{32 mm ocular.}
m. ^(5:43-5:53 a.m. E.S.T.) 10:43-10:53 UT FL: in & outside lanai S?T5 (1/p; gml) ne

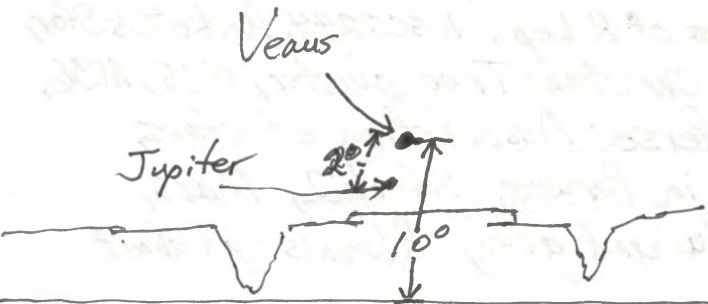
Shortly before the beginning of astronomical twilight (which began at 10:56 UT) I observed brilliant Venus up 10° in the E. and Jupiter as it came up over the roof of the house to the E., as well as Antares in the ESE

Last Quarter
Moon → ☾

Antares →

Venus

Jupiter



2008, January 30: 10:50 UT View to E showing
Venus and Jupiter only 2° apart.

2008

35° above the horizon along with other stars of Scorpius. Also seen were the Big Dipper high in the N., and Polaris and Kochab in the N., and Vega at 40° altitude in the NE. Arcturus was about 10° E. of the zenith. The gibbous moon was in Virgo about 8° from Spica and at about 60° altitude. West of the zenith were Regulus, Saturn, and Denebola.

T.-W. Jan. 29-30 02:45-03:30 UT FL: 1a SRTS (1/p) ne; 18x50 ISb

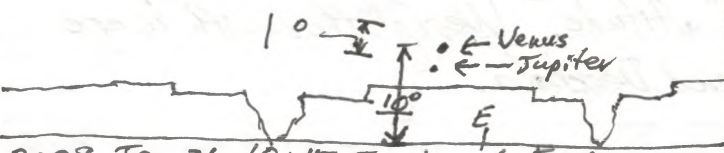
ne: stars of winter, Mars in Taurus about 2° from β Tauri and very near the zenith, Saturn up about 15° in the E; a brief short meteor in the SE at about magnitude 1.

18x50 ISb: Hyades, Pleiades, NGC 1647, NGC 1746, areas of Orion, M42, M43, R Lep - seen with difficulty and at about mag. 7.5, NGC 2244, Plaskett's Star, S Mon and The Christmas Tree Cluster, M46, M47, M50, M41, Mars, M35, M36, M37, M38, α Persei Association of stars, Comet 17P/Holmes - extremely nebulous and with very low surface brightness - about 2° from β Persei - and at about mag. 7.0, Double Cluster in Perseus, Stock 2, Kemble's Cascade, Saturn, R Leonis - bright at about mag. 5.5, M44.

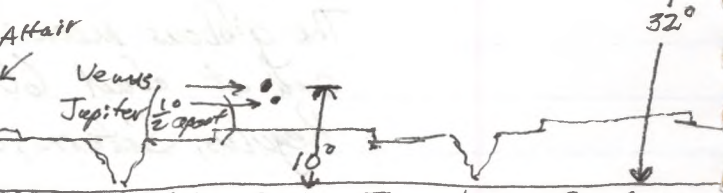
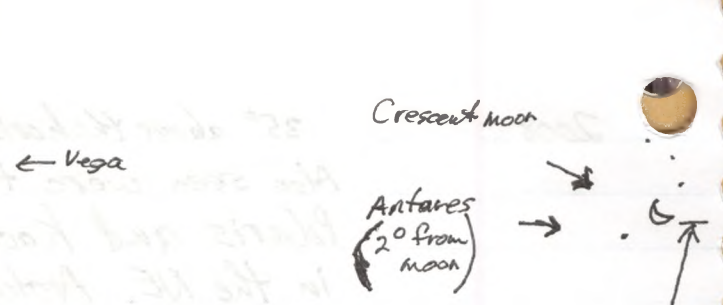
5:36-5:56 am EST.
m. 10:36-10:56 UT FL in & outside lanai SRTS (1/p; clouds) ne

Amid numerous clouds I managed to observe brilliant Venus about 10° above the E. horizon and Jupiter just 2° below it. Antares was 30° above the ESE horizon and the Last Quarter Moon 50° above the SE horizon. Amid clouds some stars of the Big Dipper were seen in the N. Arcturus was near the zenith and Spica was SSE of it. Regulus and the triangle of the constellation Leo and Saturn were SW of the zenith. (See diagram for the Eastern sky.)

Comet 17P/Holmes
(35) mag 7.0



2008, Jan 31: 10:45 UT - View to E. showing Venus and Jupiter only 1° apart.



2008, Feb. 1: 10:45 UT - View to E. showing the spectacular Venus-Jupiter conjunction - 1/2° apart.

2008 W.-Th. Jan. 30-31 02:20-03:20 UT FL: 1a S9T5 (1/p) ne; 18X5015b.

ne: stars of winter, Mars in Taurus very near the zenith, Saturn below Regulus in the E.

18X5015b: Hyades, Pleiades, NGC 1647, NGC 1746, Mars, areas of Orion, M42, M43, NGC 1977, NGC 1980, NGC 1981, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, area of R Lep, M35, M36, M37, M38, M46, M47, M50, Saturn, R Leonis - bright at about mag. 6.0, α Persei Association of stars, Double Cluster in Perseus, Kemble's Cascade.

^{5:24-5:54 a.m. E.S.T.}
m. 10:24-10:54 UT FL: in & outside lanai S9T5 (1/p; 1gm) ne

I watched Venus rise over the roof of the house across the pond at 10:33 UT (5:33 a.m. E.S.T.) and Jupiter at 10:39 UT (5:39 a.m. E.S.T.). Antares and some bright stars of Scorpius were in the ESE up 35° and to their right the moon $29\frac{1}{2}$ hours past Last Quarter. Vega was at about altitude 40° in the NE. In the N. were the Big Dipper and Polaris and Kochab. Arcturus was near the zenith and Spica south of it. West of the zenith were Regulus and the triangle of the constellation Leo and also Saturn. (See diagram for view to E. of Venus and Jupiter only 1° apart.)

Th.-F Jan 31-Feb. 1 02:25-03:05 UT FL: 1a S9T4 (1/p; clouds) ne; 18X5015b

ne: Amid the clouds I saw the stars of winter in the S and E, Mars near the zenith and Saturn below Regulus in the E.

18X5015b: Hyades, areas of Orion, CK Orionis, M42, M43, NGC 1977, NGC 1980, NGC 1981, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, Mars, M35, M36, M37, M38, M44, Saturn, R Leonis - bright at about mag. 6.2, M46, M47, M50.

m. 10:32-11:02 UT FL: in & outside lanai S9T5 (1/p cont) ne; 18X5015b

ne: spectacular Venus-Jupiter conjunction after Venus rose over the roof of a house at 10:35 UT and Jupiter at 10:38 UT.

spectacular
Venus-Jupiter
conjunction

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2008

Jupiter was only about $\frac{1}{2}^\circ$ below and to the right from Venus. Venus was at mag. -3.8 and Jupiter at mag. -1.9. Also seen were the crescent moon up 32° above the ESE horizon and amid the stars of the claw of Scorpius - just 2° from Antares. Vega was up 35° in the NE. Deneb was seen low in the NNE and Altair in the ENE. The Big Dipper was seen high in the N., and lower were the stars Kochab and Polaris. Arcturus was near the zenith and south-southeast of it Spica. West of it were Regulus, Algieba, and the triangle of stars in the constellation Leo, and among them was Saturn.

18X50ISb: Venus and Jupiter in the same field of view.

The moons of Jupiter were not seen - probably because of slight atmospheric haze. Crescent moon and its craters and the star Antares in the same field of view.

F.-S. Feb. 12 01:30 - 01:55 UT FL: Ia S8T4 (1/p; mist or haze; ^{cloud} cirrus) ne; 18X50ISb.

ne: Under a sky that had a mist or haze and some scattered cloud, I found naked-eye and binocular observing difficult in some parts of the sky. The stars of winter were in the SE, Mars very high in the E and not far from the zenith.

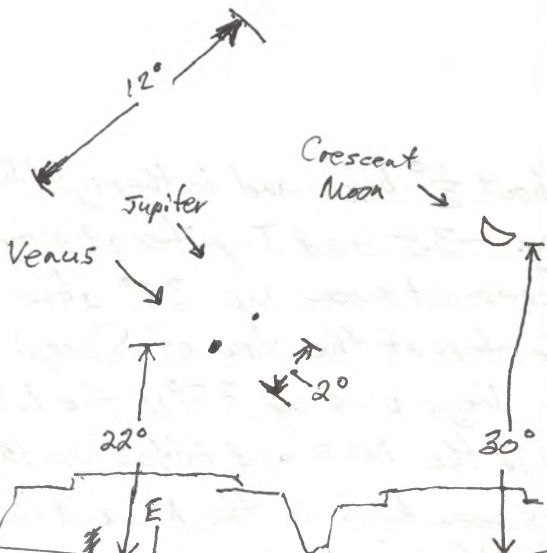
18X50ISb: M42, M43, NGC 1977, NGC 1980, NGC 1981, κ Ori, areas of Orion, λ Orionis area, area of R Lep, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, Pleiades, Hyades, Mars, M35, M36, M37, M38, M44, Regulus.

5:30 - 5:45 a.m. E.S.T.
M. 10:30 - 10:45 UT FL: in lanai S?T0.5 (clouds) ne

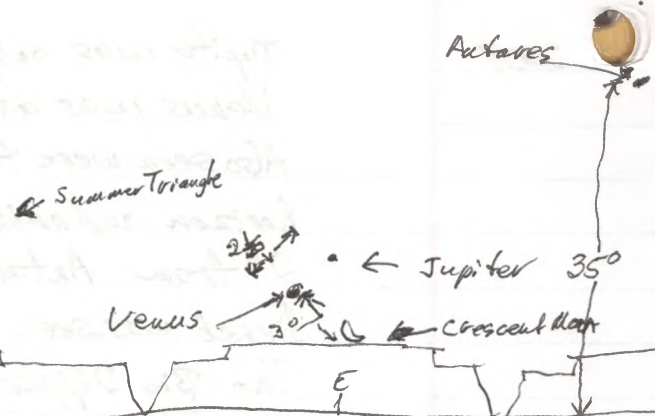
- almost totally overcast; crescent moon, 20° above ESE horizon, occasionally seen among the dense clouds.

Feb. 12-13
S-S-N

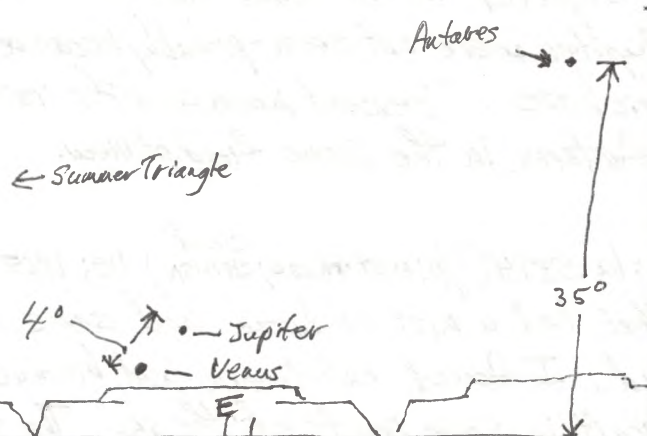
03:30 - 04:30 UT FL: Ia S?T3 (1/p; clouds) ne; 12 $\frac{1}{2}$ "
- Dense and I observed with our guests,



2008, Feb. 3 11:45 UT view to E. in twilight showing Venus, Jupiter and Crescent Moon.



2008, Feb. 4: 11:00 UT View to E showing grouping of Venus, Jupiter and Crescent Moon.



2008, Feb. 5, 10:45 UT View to E showing Venus and Jupiter 4° apart.

2008, Feb. 3 11:45 UT View to E showing Venus, Jupiter and Crescent Moon.

2008

Larry and Marge Salow, who had been visiting us. We were hindered by clouds in finding objects and observing them for very long. However, we did manage to observe Mars and Saturn, M42, NGC 1977, NGC 1981.

Saturn's moon Titan, was also seen.

^{6:42 - 6:45 a.m. E.S.T.}
M. 11:42 - 11:45 UT FL: inside lanai twl ne

During bright twilight, since sunrise would be at 12:11 UT, just 29 minutes after beginning to observe, I saw Venus, Jupiter, and the Crescent Moon in the E (See diagram.) Venus and Jupiter were 2° apart.

^{5:55 - 6:00 a.m. E.S.T.}
S-M. Feb. 34 M. 10:55 - 11:00 UT FL: inside lanai early twilight ne

Just after the beginning of astronomical twilight which was at 10:55 UT, I saw the spectacular grouping of Venus, Jupiter and the crescent moon in the E. just above the roof of a house to the E. (See diagram.)

spectacular
Venus-Jup, for
Crescent Moon
grouping.

Venus and Jupiter were about $2\frac{1}{2}^\circ$ apart; the Moon was about 3° from Venus. (See diagram.)

M.-T. Feb 45 04:20 - 04:25 UT FL: la S9T5 (1/p) ne

- stars of winter in the S and SE, Mars about 20° W. of the zenith, Saturn and Regulus very well up in the E., Caopus clearly seen in the SE.

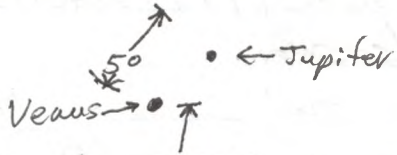
^{5:30 - 5:45 a.m. E.S.T.}
M. 10:30 - 10:45 UT FL: in + outside lanai S9T5 (1/p) ne

Venus and Jupiter separated by 4° in the E, Antares in the ESE up 35° , the Summer Triangle in the NE, Big Dipper and Polaris and Kochab in the N, Arcturus about 5° E. of the zenith, Spica SSE of the zenith, Regulus, Algreba and triangle of the constellation of Leo W. of the zenith, Saturn within the stars of the constellation Leo. (See diagram for the view of the E. sky.) Venus rose over the roof of the condo across the pond at 10:40 UT.

Venus and Jupiter
4 degrees apart

As far as

← Summer Triangle



2008 Feb. 6, 11:05 UT View to E showing
Venus and Jupiter 5 degrees apart.

2008 T.-W. Feb. 5-6 03:10-03:40 UT FL: la S9T5 (1/p) ne; 18X50ISb

ne: stars of winter, Mars about 12° W. of the zenith, Saturn up in the E.

18X50ISb: Plerades, Hyades, areas of Orion, M42, M43, NGC 1977, NGC 1980, NGC 1981, M46, M47, NGC 2244, Plaskett's Star, Christmas Tree Cluster, Mars, M44, M35, M36, M37, M38, NGC 1746 and NGC 1647 in Taurus, Keble's Cascade, α Persei Association of stars.

6:04-6:10 a.m. E.S.T.
m. 11:04-11:10 UT FL: in + outside lanai twl ne

Venus and Jupiter 5° apart in the E, Antares, the Summer Triangle in the NE, Arcturus very near the zenith, Spica S. of the zenith, Saturn W. of the zenith, some stars of the Big Dipper in the N. as well as Polaris and Kochab. (See diagram for Venus and Jupiter.)

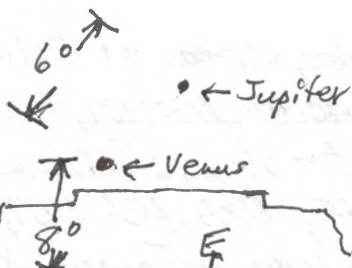
W.-Th. Feb. 6-7 00:40-01:55 UT FL: la S9T4-5 (1/p; haze; clouds) ne; 18X50ISb

ne: Under somewhat hazy skies with some cirrus and other scattered clouds, I observed the stars of winter with Mars high and near the zenith and Saturn high enough to see in the E. before the end of the session.

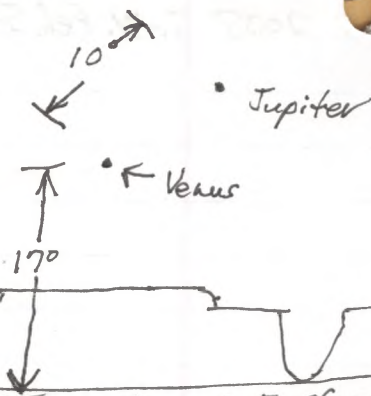
18X50ISb: Plerades, Hyades, areas of NGC 1647 and NGC 1746 in Taurus, M42, M43, areas of Orion, NGC 1977, NGC 1980, NGC 1981, NGC 2244, Plaskett's Star, Simon and the Christmas Tree Cluster, area of R Lep, M35, M36, M37, M38, M44, R Leonis - bright at about mag. 6.5, α Persei Association of Stars, Keble's Cascade, Double Cluster in Perseus, area of Stock 2, Saturn; looked for evidence of Comet 19P/Holmes, but was not sure of seeing it, possibly because of the light pollution and the hazy or cirrus clouds.

Antares → •

← Vega



2008, Feb. 7, 10:45 UT: View to E showing Venus and Jupiter 6° apart



2008 Feb. 9, 11:25 UT View to E. showing Venus and Jupiter now about 10° apart

2008

5:30 - 5:45 a.m. E.S.T.
M. 10:30 - 10:45 UT FL: in lanai S? T1-3 (1/p; clouds) ne
- Amid scattered clouds, I saw Venus rising above the roof of a condo at 10:41 UT. Jupiter was seen briefly 6° away from Venus. (See diagram.) Also seen were Antares and some stars of Scorpius, Vega up 40° in the NE, and some of the stars of the Big Dipper high in the N.

Th.-F. Feb. 7-8. 03:20 - 03:45 UT FL: 1a S? T4-4½ (1/p; haze) ne; 18X50ISb
ne: stars of winter, Mars about 15° W. of the zenith, Saturn well up in the E.

18X50ISb: Plerades, Hyades, M42, M43, areas of Orion, area of R Lep, M46, M47, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, Saturn, R Leonis bright and at about mag. 6.8, M44.

5:26 - 5:56 a.m. E.S.T.
M. 10:26 - 10:56 UT FL: inside lanai S? T0.5 (1/p; clouds) ne

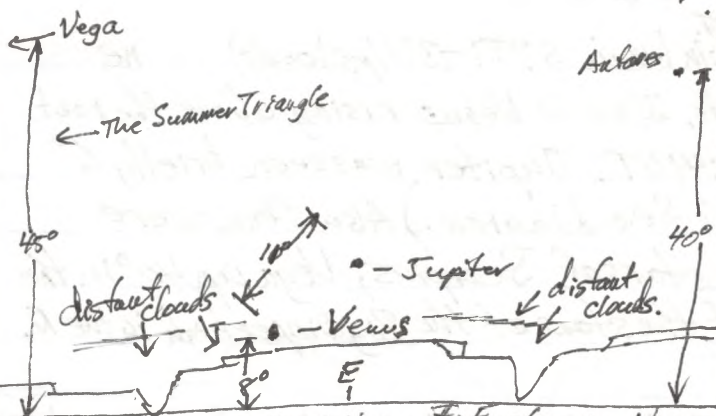
- Under very cloudy conditions, I observed for a ½-hour and temporarily saw Vega well up in the NE, but did not knowingly see Venus or Jupiter in the E.

F.-S. Feb. 8-9 03:20 - 04:25 UT FL: 1a S? T5 (1/p; slight haze) ne; 18X50ISb
ne: stars of winter, Mars Very high, near zenith; Saturn in the E. sky.

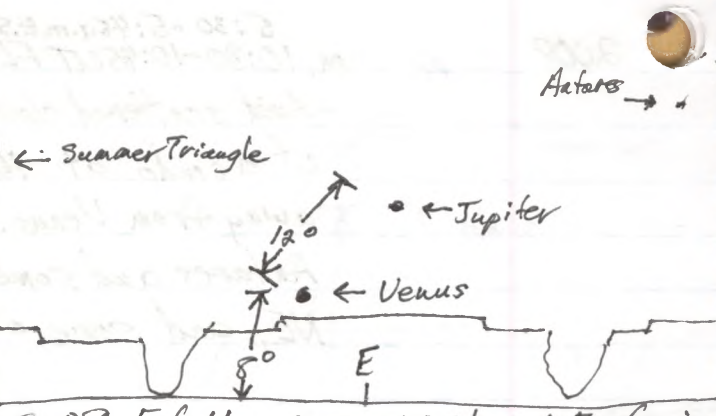
18X50ISb: Plerades, Hyades, Mars, M42, M43, NGC 1977, 1980, 1981, 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, M35, M36, M37, M38, M46, M47, area of R Lep, R Leonis - at about mag. 6.5, α Persei Association of Stars, Keble's Cascade, M44, M67, areas of Orion.

6:22 - 6:27 a.m. E.S.T.
M. 11:22 - 11:27 UT FL: in livingroom twl ne

Well into twilight I saw Venus and Jupiter in the E. The two bright planets were about 10° apart above the roof of the condo across the pond. (See diagram.)



2008, Feb. 10, 10:45 UT: View to E showing Venus and Jupiter 11 degrees apart.



2008, Feb. 11, 10:50 UT View to E showing Venus and Jupiter 12 degrees apart.

2008

S.-S. Feb. 7-10 03:05-03:25 UT FL: 1a S?T1 (1/p; cloud) ne; 18X5015b

ne: Amid the clouds, I saw a few stars and Mars - Betelgeuse, Rigel, Aldebaran, and a few others.

18X5015b: M42, NGC 1977, 1980, 1981, Hyades, some areas in Orion area of λ Orionis.

5:42 - 5:52 a.m. E.S.T.
m. 10:42-10:52 UT FL: in living room S?T5 (1/p; clouds) ne

- There were clouds, but I managed to see Jupiter at first, and then at 10:45 UT Venus rose over the roof of the condo across the pond. After appearing Venus then disappeared periodically because of distant low storm clouds. Distant lightning was seen also very low in the E. Venus and Jupiter were about 11 degrees apart (See diagram.)

S.-M. Feb. 10-11 02:50-03:50 UT FL: 1a S?T5 (1/p) ne; 18X5015b

ne: stars of winter; Mars about 15° W. of the zenith; Saturn well up in the E.

18X5015b: Pleiades, Hyades, areas of Orion, M42, M43, NGC 1977, 1980, 1981, V1045 and V1046 in the area of NGC 1981, M35, M36, M37, M38, area of R Lep, M44, M67, & Perseid Association of Stars, Kenble's Cascade, Mars, Saturn, R Leonis at about mag. 7.0, NGC 1847 in Taurus, and NGC 1746 in Taurus.

5:39 - 5:54 a.m. E.S.T.
m. 10:39-10:54 UT FL: in + outside larai S?T5 (1/p) ne

- Jupiter, and Venus rising over the roof to the E at 10:44 UT, also Antares and some stars of Scorpius, the Summer Triangle in the NE, the Big Dipper and Polaris and Kochab in the N, Arcturus near the zenith and Spica S. of the zenith, west of the zenith some bright stars of the constellation Leo and also the planet Saturn. (See diagram for the E. sky.)

The first part of the report is a general introduction to the project. It describes the objectives and the scope of the work. The second part is a detailed description of the methodology used. This includes a list of the equipment and materials used, and a description of the experimental procedure. The third part is a discussion of the results. This includes a comparison of the results with the theoretical predictions, and a discussion of the sources of error. The final part is a conclusion and a list of references.

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2008 M.-T. Feb. 11-12 03:00-03:40 UT FL: Ia S? T $\frac{1}{2}$ (1/p; clouds) ne; 18X5015b
ne: Amid dense clouds, I saw Sirius, and in the E. Regulus
and Saturn, and a few other stars.

18X5015b: Sirius and several other stars in the S. and
SE. among the clouds, and in the E, Regulus
and Saturn.

5:37-5:57 a.m. EST
m. 10:37-10:57 UT FL: in lanai S? T \approx 0 (cloud) ne

The sky appeared to be completely overcast at first
but Venus appeared for about 4 minutes - from
10:48 UT to 10:52 UT - just $\frac{1}{2}^{\circ}$ to 1° above
the roof of the condo across the pond. Other
celestial objects were not knowingly seen.

5:03-5:27 & 5:44-6:15 a.m. EST
T.-W. Feb. 12-13 m. 10:03-10:27 & 10:44-11:15 UT FL: in lanai S? T \approx 2 (1/p; clouds) ne

Hoping to see Jupiter and Venus I observed the E.
sky, and saw the Summer Triangle in the NE, Antares
and some stars of Scorpius in the ESE, the stars of the
Big Dipper and Polaris and Kochab in the N., and for a
while Jupiter in the E, among the clouds, but did not
knowingly see Venus among the dense clouds to the E.

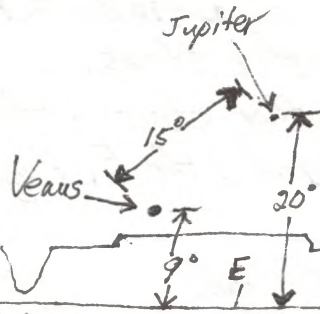
W.-Th. Feb. 13-14 03:20-03:50 UT FL: Ia S? T \approx 4 (1/p; some cloud; ^{Pam}) ne; 18X5015b
ne: First Quarter Moon well up in the W., stars of winter,
Saturn in the E, below Regulus, Mars 20° W. of the
zenith

18X5015b: Pleiades, Hyades, M42, M43, M41, NGC 1980, NGC 1981,
NGC 2244, Plaskett's Star, S Mon and The
Christmas Tree Cluster, M35, M36, M37, M38,
M44, M67, Saturn, R Leonis - at about mag. 7.0,
area of γ Leonis and S Leonis, area of M65
and M66, but not sure of seeing these two galaxies,
M46, M47, area of R Lep, but not the star itself

m. 11:02-11:07 UT FL: in & outside lanai tws ne.

← Summer Triangle

Arcturus →



2008, Feb. 14, 11:05 UT View to E showing Venus and Jupiter 15° apart.

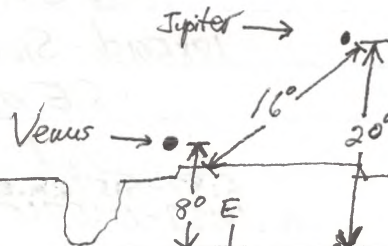
← 20ph 50ph →

50ph -

70ph -

Arcturus →

← Summer Triangle



2008, Feb. 15, 10:50 UT View to E. showing Venus and Jupiter 16° apart.

During twilight, which began at 10:48 UT, I observed Venus and Jupiter in the E., separated by 15° (See diagram.) as well as Antares and some stars of Scorpius in the ESE and the Summer Triangle in the NE. Arcturus was seen W. of the Zenith and Spica to its S. Saturn was seen in the W. sky.

Th.-F. Feb. 14-15 04:32-04:38 UT FL: 1a S?T5 (1/p; fgm) ne

- Orion and stars of winter in the S.; Saturn and Regulus high in the E.; Castor and Pollux very near the zenith; Mars about 25° W. of the zenith and the First Quarter Moon still 18° further west from Mars.

5:30-6:00 a.m. E.S.T.
M. 10:30-11:00 UT FL: in+outside (aaai) S7-8 T5-6 (1/p) ne

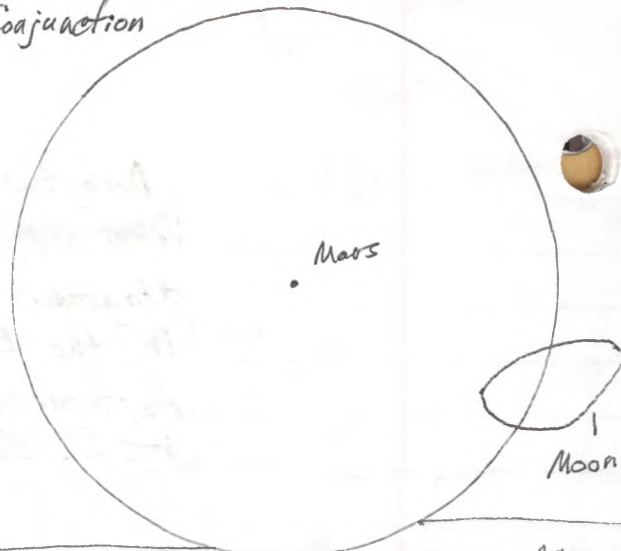
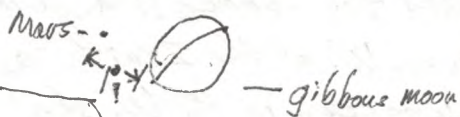
- Transparency was better than usual; I could see considerably more stars naked-eye than usual. Astronomical twilight began at 10:47 UT. Venus appeared over the roof of the condo across the pond at 10:46 UT. Venus and Jupiter were separated by 16° . (See diagram.) Also seen were the Big Dipper and Kochab and Polaris in the N. and some stars of Draco, the Summer Triangle in the NE, Saturn and some stars of the constellation Leo W. of the zenith; Arcturus near the zenith and Spica S. of it; Antares and more than the usual number of stars in Scorpius in the ESE, and to their left a number of stars in Ophiuchus.

F.-S. Feb. 15-16 03:40-04:50 UT FL: 1a S?T4-5 (1/p; gml) ne; 18X50ISb

ne: stars of winter in the S.; Saturn and Regulus well up in the E. gibbous moon and Mars W. of the zenith and about $2\frac{1}{2}^\circ$ apart.

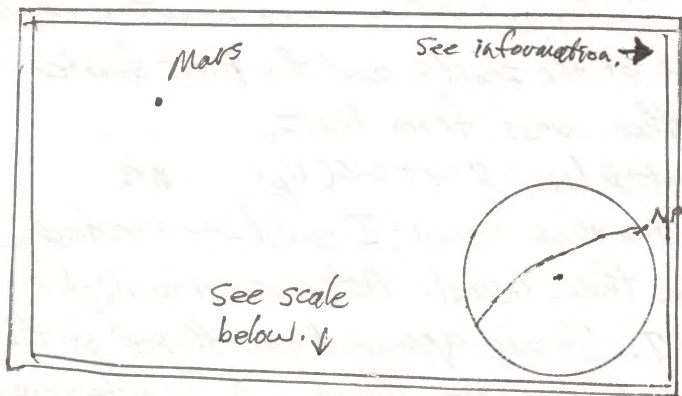
18X50ISb: lunar craters, Mars about $2\frac{1}{2}^\circ$ to the left and up from the moon, Hyades, M42, NGC 1980, NGC 1981, M41, M46, M47, Saturn, NGC 2244, Pleiades Star, Christmas Tree Cluster with S Mon,

The 2008, Feb. 16 Moon-Mars Conjunction



2008, Feb. 16, 07:30 UT View to W. showing Moon and Mars 30 min. before time of conjunction

2008, Feb. 16, 7:30 UT View of Moon and Mars in binoculars with 3.7° field.



Scale: $50 \text{ mm} = 1^\circ = 60'$
 $25 \text{ mm} = \frac{1}{2}^\circ = 30'$
 $12.5 \text{ mm} = \frac{1}{4}^\circ = 15'$

2008 Feb. 16:
 → View of Moon and Mars at 7:30 UT, 30 minutes before listed time of conjunction.

- Moon: 2d 4h past First Quarter.

 Azimuth: 280° (10° to right of W.)

 Altitude: 10°

- Mars appeared at 10 o'clock position as oriented from the centre of the lunar disk.

- Mars to limb (naked-eye) $0.9^\circ - 54'$ (45 mm)

- (Binocular view seemed to indicate a distance of 1.6° from Mars to the lunar limb.)

2008

Regulus, γ Leonis and δ Leonis, κ Leonis - at about mag. 7.0, area of R Lep, but not the star itself.

^{2:20 - 2:45 a.m. E.S.T.}
M. 07:20 - 07:45 UT FL: la SPT5 (1/p; gal) ne; 18X50ISb

Moon-Mars
Conjunction,
for possible
parallax study

I observed the gibbous moon above the W. horizon by about 10° until it disappeared at about 07:41 UT. As seen on the sky the N.P. was at about the 2 o'clock position and the S.P. at about the 8 o'clock position and Mars at about the 10 o'clock position. The Moon-Mars conjunction was listed as being at 08:00 UT, but it seemed that they would not be in conjunction until the moon had moved further upward so that Mars appeared at the 8 o'clock position and that might not be for about 2 more hours. That appeared puzzling. Naked-eye the separation appeared to be about 0.9 to 1.0 degrees from Mars to the near limb of the moon - possibly 0.8 degrees. In the binoculars (with a 3.7° field of view) the planet Mars appeared at the centre of the field and the centre of the lunar disk at the edge at the 4 o'clock position. That would make the separation, as seen in the binoculars, about 1.85° for Mars-to-centre of the lunar disk or 1.6° for Mars to nearest lunar limb. There appeared to be a discrepancy between naked-eye and binocular views, with the binoculars showing a wider separation.

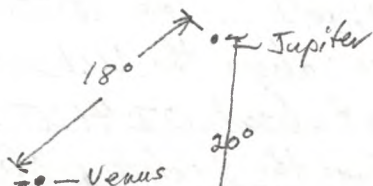
^{5:45 - 5:46 a.m. E.S.T.}
M. 11:45 - 11:46 UT FL: in living room twl ne

During bright twilight I saw Venus about 20° above the E. horizon, but I did not knowingly see Jupiter in the bright glow of twilight.

S-S Feb. 16-17 02:55 - 03:20 UT FL: la SPT4 (1/p; gal) ne; 18X50ISb.

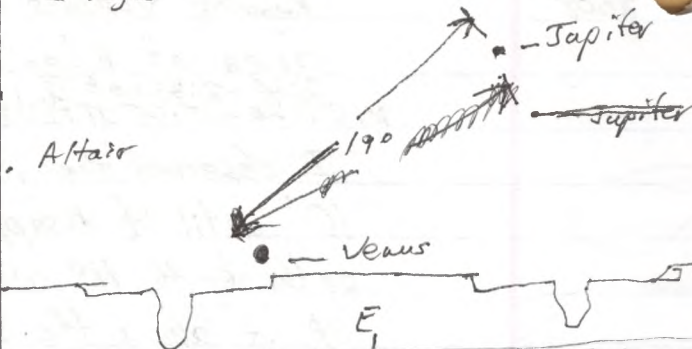
ne: stars of winter in the S.; bright gibbous moon very near the zenith in the central area of Gemini with Mars about 12° to the W. and Castor and Pollux about 12° to the E.; Regulus and Saturn well up in the E.

← Summer Triangle



2008, Feb. 17, 10:50UT View to E showing Venus and Jupiter 18° apart.

← Vega



2008, Feb. 18, 11:00UT View to E showing Venus and Jupiter 19° apart

2008

18X5015b: M42, NGC 1980, NGC 1981, areas of Orion, area of R Lep, but the star itself was not seen, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, M44, M47, M41, Saturn, area of Regulus and γ Leonis and δ Leonis, R Leonis - at about mag. 7.0.

M. 10:42-11:00 UT FL: inside lanai S?T 4-5 (1/p; cloud/haze) ne
- I observed Venus coming into view above the roof of a coado to the E at 10:48 UT. The Venus-Jupiter separation was 18° . Also seen were the Summer Triangle of stars in the NE. Astronomical twilight began at 10:46 UT (See diagram.)

S-M. Feb. 17-18 02:50-03:40 UT FL: la S?T 4 (1/p; ^{cloud} some) ne; 18X5015b
ne: stars of winter in the S.; very bright gibbous moon - about 3° from Castor and during the session moving from about 8° to about 2° E. of the Zenith; Saturn and Regulus in the E.

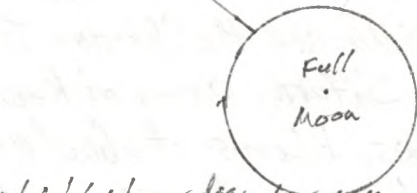
18X5015b: Hyades, Pleiades, areas of Orion, M42, M43, NGC 1977, 1980, 1981, area of R Lep, though the star itself was not seen; NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, M41, M46, M47, M36, M37, areas of Regulus, γ Leonis, and δ Leonis, R Leonis - at about mag. 7.0.

5:26-6:06 am EST.
M. 10:26-11:06 UT FL: in + outside lanai S?T 1 (1/p; clouds) ne
Amid dense clouds, I occasionally saw Jupiter and barely glimpsed Venus, but could see that they were 19° approximately in separation from each other. Also seen were Vega and Altair. (See diagram.) Astronomical twilight began at 10:45 UT.

T-W. Feb. 19-20 02:52-03:32 UT FL: la S?T $\frac{1}{2}$ (clouds; 1/p) ne; 18X5015b
ne: Very bright almost Full Moon seen through clouds; among the clouds - the star Sirius.

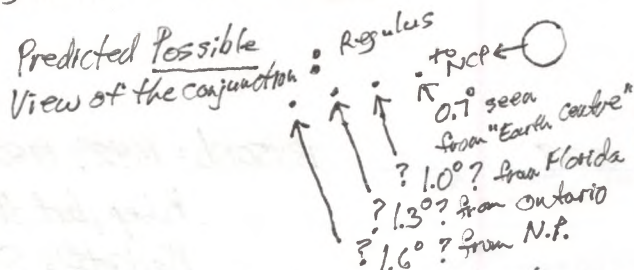
Regulus

Moon-Regulus Conjunction at Oh UT Feb. 21



Regulus to limb = 1.6 x lunar diameter (40mm)

Approximate appearance of the Full Moon and Regulus at Oh UT at predicted time of conjunction.

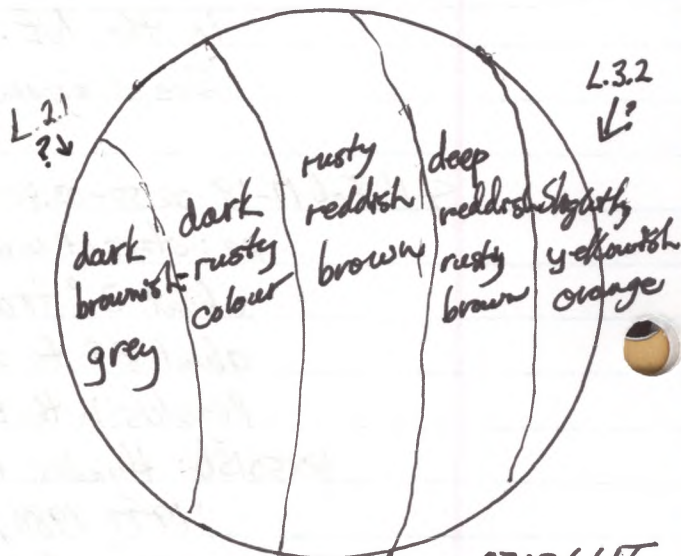


In fact, the position angle on the sky seemed to be different from what was expected. With the NCP up 26° and the Moon up only 15° to 20°, Regulus appeared to be "too high", as if the Moon had "moved past" the conjunction point.

Regulus-to-limb: $1.6 \text{ l.d.} = 48'' = 40 \text{ mm}$ on drawing
 Regulus-to-lunar centre = $1.85 \text{ l.d.} = 55.5'' = 65 \text{ mm}$ on drawing

Total Lunar Eclipse of 2008 Feb 21:

P1: 00:34.9 UT	7:35pm. E.S.T
U1: 01:42.9	8:43
U2: 03:00.5	10:00
Mid: 03:26.0	10:26
U3: 03:51.5	10:52
U4: 05:09.1	12:09
P4: 06:17.2	1:17a.m.



View of lunar disk at 03:26 UT or Mid-Eclipse in the Total Lunar Eclipse

2008

18x5015b: Amid the clouds: M42, NGC 1981, other stars near the Orion Nebula; lunar craters - seen through the clouds.

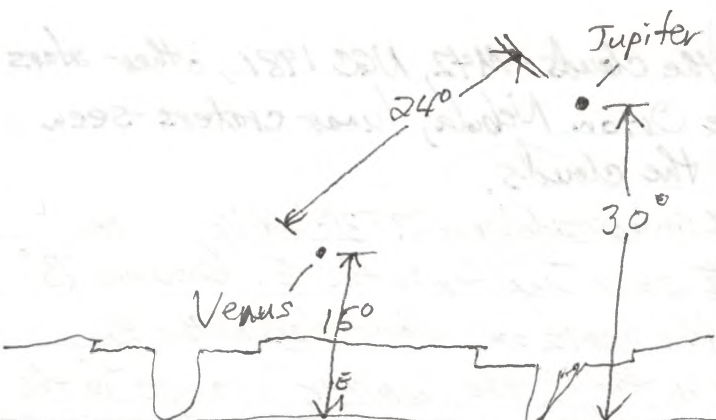
5:43-6:03^{m.} EST
M. 10:43-11:03 UT FL: in & outside lanai S? T3 (cloud; 1/p) ne
Amid many clouds I saw Jupiter in the E. between 23° and 25° above the horizon. Some stars of the Big Dipper were visible in the N, the Summer Triangle in the NE, Arcturus near the zenith and Spica south of the zenith, and a glimpse of the Full Moon in the W. among the trees. Astronomical Twilight began just about the time I started observing - at 10:43 UT. I did not knowingly see Venus, because of the clouds.

W.-Th. Feb. 20-21 23:50-05:15 UT FL: la twl; (1/p: Full) also 1/23/32 ne; 18x5015b

ne: At first I observed the Full Moon rising near Regulus and hoped to make a "Parallax Observation". I observed the star Regulus to be about 1.6x the lunar diameter away from the nearest lunar limb. That would mean 55.5 arc minutes from the centre of the lunar disk or 48.0 arc minutes from the nearest limb of the moon. Using the scale $\frac{1}{2} \text{ } \approx 25 \text{ mm}$, I drew Regulus as 40mm from the nearest limb and 65mm from the centre of the disk. It was very interesting to note that Ottowell's Calendar stated that the Moon was 0.67° SSW of Regulus at the same time, 0h UT. I would have said perhaps, from my observation, that the moon appeared SSE of Regulus.

I set up Denise's Dobsonian Telescope and we eventually had about 35 people as guests. Most were very interested and viewed either the moon, or Saturn and Titan, or M42 with the telescope. Larry Salow also set up his spotting scope and some people used it at 65x. Denise used the 32mm

Moon-Regulus
Conjunction



2008, Feb. 23. 11:20UT View to E showing Venus and Jupiter about 24° apart.

Venus - Jupiter
 2008 Feb 23

I set up a 10" Dobsonian telescope and was
 eventually had about 25 people as guests that were
 very interested and I showed them the moon, Saturn
 and Jupiter or Mars with the telescope.
 Larry Galun also set up his spotting scope
 and some people used that. Venus was the 32nd

At first I observed the full moon rising near
 Jupiter and had to make a "parallax correction"
 to get the true position of the planet.
 The observation was made on Feb 23, 2008.
 The observation was made on Feb 23, 2008.
 The observation was made on Feb 23, 2008.

2008

Total
Lunar Eclipse

eyepiece for 48X. It appeared to be a "moderately bright eclipse with Danjon luminosity # ranging from L 2.1 on the left to L 3.2 on the right since the moon passed through the southern half of the umbra. By mid-eclipse, at 03:26 UT, most of the guests had left, and soon thereafter all of them left. I continued to observe until just after 04 - end of the partial phase of the eclipse - which was at 05:09 UT. (See diagram for drawing showing colours of the eclipsed moon.)

Th-F. Feb. 21-22 04:30-04:35 UT FL: la s? T3 (1/p; fml) ne
- Castor and Pollux about 10° W. of the zenith, Mars about 25° W. of Castor and Pollux, Regulus about 20° E. of the zenith with Saturn a further 5° E. of Regulus and the very bright moon, only 1 day after Full Moon, a further 10° below Saturn, the stars of Orion slanting down toward the SW with Sirius in the S.

F.-S. Feb. 22-23 01:40-02:00 UT FL: la s? T1 (1/p; clouds) ne; 18x50sb
ne: a few stars amid the clouds - Sirius, Rigel, and the almost Full Moon about 20° above the E. horizon

18x50sb: M42 and nearby stars, the Belt Stars of Orion, Hyades, Rigel and area.

6:16 - 6:21 a.m. EST
M. 11:16 - 11:21 UT FL: inside living room twl ne
Beginning 35 minutes after astronomical twilight began at 10:41 UT, I observed Jupiter at first 30° above the horizon to the E, and then Venus appeared about 15° above the horizon. They were about 24° apart. I did not notice any stars though some may possibly have been visible. (See diagram.)

2008

Total Eclipse
Lunar

... It appeared to be a "mystery"
bright eclipse with major luminosity at rising
from L31 on the left to L32 on the right since
the sun passed through the southern part of the
... by mid-eclipse, at 03:00 UT, most of the
... and soon thereafter all other
left. I continued to observe until just after
... of the partial phase of the eclipse -
... which was at 03:09 UT. (see diagram)

for showing showing colours at the eclipsed sun.

... (see diagram)
... about 25° W. of center and below, ... about
... of the sun with ...
... and the very bright sun, only
... Full Moon, a further 10° below
... the star of ...
... the SW with ... in the S.

... (see diagram)

... the almost Full Moon about 20° above the E.
horizon

... and nearly stars, the left stars of
... Hades, Rigel and ...

... beginning 32 minutes after astronomical twilight began
... I observed together at first 30 minutes
... the horizon to the E, and then Venus appeared
... about 5° above the horizon. They were about
... apart. I did not notice any stars that I saw
... have been visible. (see diagram.)

2008 S.-S. Feb. 23-24 02:35-02:55 UT ST1 (1/p; clouds!) ne; 18x50 ISB
ne: Full Moon amid the clouds up 20° in the E, Sirius
and several other stars amid dense clouds.

18x50 ISB: M42, NGC 1981 and several other stars near the
Orion Nebula, the three Belt Stars of Orion

M.-T. Feb. 25-26 04:25-04:30 FL: la S? T4 $\frac{1}{2}$ (1/p; gulf E) ne
- Orion in the SSW, Sirius in the S., Regulus about
 20° E. of the zenith, with Saturn about 40° E.
of Regulus, Mars about 12° W. of the zenith;
Capella in the WNW.

^{5:42-5:56 a.m. E.S.T.}
M. 10:42-10:56 UT FL: in lanai twl ne
Shortly after the beginning of astronomical twilight, I saw
amid the fog and clouds Jupiter up about 28° in
the E, and the Summer Triangle of stars in the NE.
Venus was not knowingly seen

T.-W. Feb. 26-27 01:55-02:00 UT FL: la S? T2 (1/p; clouds) ne
Amid the clouds, I saw most of the bright stars of
Orion in the S., Mars near the zenith, Capella,
Sirius, Procyon, and well up in the E. Regulus
and Saturn.

W.-Th. Feb. 27-28 03:20-03:40 UT FL: la S? T4 (1/p; some cloud) ne; 18x50 ISB
ne: stars of winter in the S.; Castor and Pollux near the
zenith, Mars high in the W.; Regulus and Saturn
high in the E.

18x50 ISB: M42, M43, NGC 1981, NGC 2244, Plaskett's
Star, the Christmas Tree Cluster and S Mon,
2 Orionis area, M44, M46, M47, Saturn,
Regulus, R Leonis - at about mag. 7.5.

^{6:21-6:27 a.m. E.S.T.}
M. 11:21-11:27 UT FL: in livingroom twl ne; 10x25 B
ne: Well into twilight Denise and I saw Venus about

Jupiter

Mercury
(seen in binoculars)

Venus

29°

12°

Jupiter

Mercury
(seen in binoculars)

Venus

30°

2008, February 28, 11:25 UT Twilight view
of the sky to the E.

2008, Feb. 29, 11:25 UT Twilight view to
the E. showing Venus and Jupiter

Crescent Moon

Jupiter

Clouds

35°

30°

2008, Mar. 1, 10:45 UT View to E about
10 min after the beginning of astronomical twilight

2008

12° above the E. horizon and Jupiter about 29° above and to the right from Venus. (See diagram.)

Mercury was not knowingly seen naked-eye.

10X25b: Mercury was easily seen in the binoculars about 1° above Venus.

Th.-F. Feb. 28-29 03:25-03:30 UT FL: la S?T5 (1/p) ne

I observed for a short while seeing the bright stars of Orion in the SSW, Sirius, Procyon, Castor and Pollux near the zenith, and Aldebaran in the W. Regulus and Saturn were very high in the E. Capella was in the WNW.

M. 11:21-11:26 UT FL: in livingroom twl ne; 18X50ISb

ne: Well into twilight I could easily see Venus and Jupiter, but did not see Mercury knowingly, with the naked-eye.

18X50ISb: Mercury was easily seen about $1\frac{1}{2}^\circ$ above Venus - using the binoculars.

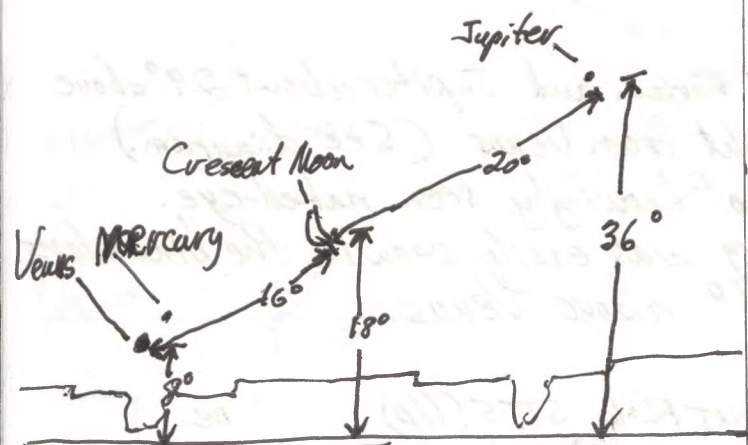
F.-S. Feb. 29-Mar. 1 02:10-03:30 UT FL: la S?T3-4 (1/p; clouds) ne; ^{18X50ISb} ne; \wedge

ne: In an observing session of slightly more than 20 minutes, I saw amid the cirrus clouds the brightest stars of winter in the S. with Regulus and Saturn high in the E and Mars W. of the zenith.

18X50ISb: areas of Orion, M42, NGC1981 and other nearby areas of Orion, M41, M44, M35, R Leonis - at about mag. 7.0, M47.

M. 5:45-5:48 p.m. E.S.T. 10:45-10:48 UT FL: in livingroom twl ne

About 10 minutes after the beginning of astronomical twilight I observed the E. sky and amid clouds, I saw Jupiter about 30° above the horizon and the crescent moon about $32\frac{1}{2}$ hours after Third Quarter - about 35° above the horizon. (See diagram)



2008, Mar. 4, 11:00 UT. View to E showing Crescent Moon, Venus, Jupiter, and Mercury

2008 S.-S. Mar. 1-2 m 5:50 - 6:00 a.m. E.S.T.
10:50 - 11:00 UT FL: la twl ne

After twilight which had begun at 10:34 UT, I observed the E. sky but it was fairly cloudy, but I did manage to see Jupiter about 25° above the horizon and the crescent moon slightly above and about 8° to its right. I did not see Venus or Mercury.

S.-M. Mar. 2-3 01:55 - 02:15 UT FL: la S?T5 (1/p) ne

- stars of winter in the S.; Mars about 10° WSW of the zenith; Castor and Pollux about 10° E. of the zenith; Regulus and Saturn about 45° up in the E.

m. 6:06 - 6:07 a.m. E.S.T.
11:06 - 11:07 UT FL: in lanai twl ne

In twilight in the ESE I saw the Crescent Moon up about 25° and about 7° above it and slightly to the right Jupiter. Later by about 15 minutes I saw Venus up about 10° in the E., while looking out the livingroom window.

M.-T. Mar. 3-4 02:00 - 02:45 UT FL: la S9T5 (1/p) ne; 18X50 ISb

ne: stars of winter in the S.; Mars near the zenith; Regulus and Saturn high in the E.

18X50 ISb: M42, M43, NGC 1981, other object near Orion Nebula, CK Orionis and other objects in Orion, NGC 2244, Plaskett's Star, Simon and the Christmas Tree Cluster, M35, M36, M37, M38, Mars, M46, M47, M50, M41, M44, stars in the area of the "Head of Hydra", Saturn, area of Regulus, and γ Leonis, R Leonis - at about mag. 7.0.

m. 5:43 - 6:03 a.m. E.S.T.
10:43 - 11:03 UT FL: in outside lanai twl ne; 18X50 ISb

ne: After the beginning of morning astronomical twilight which was at 10:32 UT, I saw Jupiter

2008

2.5 Mar 12 M 10:30-11:00 AM

After twilight which had been at 11:34 AM. I checked the E. sky. But it was fairly cloudy but I did manage to see Jupiter about 25° above the horizon and the crescent moon. Slightly above and about 8° to the right. I did not see Venus or Mercury.

NE

2.5 Mar 12 M 10:30-11:00 AM

After twilight which had been at 11:34 AM. I checked the E. sky. But it was fairly cloudy but I did manage to see Jupiter about 25° above the horizon and the crescent moon. Slightly above and about 8° to the right. I did not see Venus or Mercury.

2008

3.7 Mar 12 M 03:00-03:30 AM

While looking at the twilight window I noticed I saw Venus about 10° in the E. sky. I saw the crescent moon up about 25° and about 7° above it and slightly to the right. Jupiter is in the E. sky about 10° above the horizon. I saw Venus about 10° in the E. sky. I saw the crescent moon up about 25° and about 7° above it and slightly to the right. Jupiter is in the E. sky about 10° above the horizon.

NE

3.7 Mar 12 M 03:00-03:30 AM

While looking at the twilight window I noticed I saw Venus about 10° in the E. sky. I saw the crescent moon up about 25° and about 7° above it and slightly to the right. Jupiter is in the E. sky about 10° above the horizon. I saw Venus about 10° in the E. sky. I saw the crescent moon up about 25° and about 7° above it and slightly to the right. Jupiter is in the E. sky about 10° above the horizon.

2008

3.10 Mar 12 M 03:00-03:30 AM

After the beginning of morning twilight which was at sunset, I saw Jupiter

NE

3.10 Mar 12 M 03:00-03:30 AM

After the beginning of morning twilight which was at sunset, I saw Jupiter

2008

and the Crescent Moon at first, and then at 10:48 UT Venus was seen above the roof of a condo to the E. Mercury was also seen about 2° above and to the right from Venus. (See diagram back one page.) At 11:00 UT Venus was up about 8° , the Crescent Moon about 18° and Jupiter about 36° . Also seen were the Summer Triangle in the NE and Arcturus W. of the zenith.

18X50isb: Craters on the Crescent Moon, and Jupiter and at least 2 of its moons.

[Daylight Saving Time: Sun. Mar. 9, 7:00 UT (2:00 a.m. E.S.T.)]

S.-M. Mar. 9-10 02:35-03:10 UT FL: la S?TS (1/p) ne; 18X50isb

ne: stars of winter in the S. and SW. Mars about 20° W. of the zenith. Saturn about 30° E. of the zenith, Castor and Pollux near the zenith. Saturn was about 4° E. of Regulus

18X50isb: M46, M47, M41, M42, M43, NGC1981 and other objects near the Orion Nebula, NGC2244, SMon and the Christmas Tree Cluster, Plaskett's Star, M35 with Mars now less than 2 degrees away, M36, M37, M38, Pleiades, Hyades; area of R Lep, but the star itself was not seen, Saturn about 4° from Regulus, Rheonis - about mag 7.0.

T.-W. Mar. 11-12 01:40-02:00 UT FL: la S9T4 (1/p; ^{cloud} crml; some) ne; 18X50isb
ne: I observed for a short while under skies that were not ideal - light pollution, a crescent moon of over $4\frac{1}{2}$ days old, and some cirrus clouds. Mars was W. of the zenith; Castor and Pollux were near the zenith and Saturn and Regulus were well up in the E. Orion was in the S.
18X50isb: M42 and areas of Orion, CK Orionis,

2008

M41, M44, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree Cluster, M47, Saturn and Regulus about 3.8° apart, R Leonis at about mag. 7.0.

5:27 - 5:32 a.m. E.D.T.
m. 9:27 - 9:32 UT FL: in lanai S? T 0.5 (cloud) ne

On a very cloudy morning, the third morning after the switch to Daylight Saving Time, I observed briefly (~~on a very cloudy morning~~) ^{Astronomical} twilight was not scheduled to begin until about 1 hour later, that is, at 10:24 UT (6:24 a.m. E.D.T.). I briefly saw Jupiter amid the clouds, about 20° above the E. horizon.

5:42 - 5:52 a.m. E.D.T.
W-Th. Mar. 12-13 m 9:42 - 9:52 UT FL: in outside lanai S? T 5 (1/p) ne

- Jupiter up 24° above the E. horizon at the beginning of the session, Summer Triangle in the NE, 6 of the stars of the Big Dipper in the NNW, Polaris and Kochab in the N, Arcturus W. of the zenith.

Th.-F. Mar. 13-14 01:40 - 02:20 UT FL: la S? T 5 (1/p; f q ml) ne; 18X50 SB

ne: stars of winter in the SSE, Mars in Gemini near the zenith, moon about 9 hours short of First Quarter about 12° W. of Mars, Regulus and Saturn well up in the E.

18X50 SB: M42, M43, areas near the Orion Nebula, other areas of Orion, area of R Lep but the star itself was not seen, M41, M46, M47, NGC 2244, Plaskett's Star, S Mon and the Christmas Tree cluster, the Hyades cluster, craters on the 'almost First Quarter Moon, M44, Saturn, Regulus, R Leonis - at about mag. 7.0.

5:35 - 5:40 a.m. E.D.T.
m. 9:35 - 9:40 UT FL: in outside lanai S? T 4 (1/p; haze) ne

- Jupiter up about 23° in the E; the Summer Triangle

M. 12-13 8:45-9:15 PM EST
 Jupiter up about 33° in the SE, the Saturn
 cluster on the about 2nd cluster
 Christmas Tree cluster, the 1st cluster
 Star field was not seen with this
 other cases of Orion area of 1st and 2nd
 12:20 PM - 1:45 PM, 1st case from the Orion cluster
 Saturn well up in the E.

Th. 7 Mar 1945 8:45-9:15 PM EST
 No. 2 star of winter in the SE, was in Orion now
 the 2nd, near about 1st star of first
 M. 12-13 9:45-10:15 PM EST
 Jupiter up about the E horizon at the beginning
 of the session. Saturn to right in the SE, 2 of
 the stars of the 1st Dipper in the NW, Mars and
 Rigel in the W, the 1st star of the 1st
 M. 12-13 9:45-10:15 PM EST
 Jupiter up about 33° in the SE, the Saturn
 cluster on the about 2nd cluster
 Christmas Tree cluster, the 1st cluster
 Star field was not seen with this
 other cases of Orion area of 1st and 2nd
 12:20 PM - 1:45 PM, 1st case from the Orion cluster
 Saturn well up in the E.

M. 12-13 9:45-10:15 PM EST
 Jupiter up about 33° in the SE, the Saturn
 cluster on the about 2nd cluster
 Christmas Tree cluster, the 1st cluster
 Star field was not seen with this
 other cases of Orion area of 1st and 2nd
 12:20 PM - 1:45 PM, 1st case from the Orion cluster
 Saturn well up in the E.

M. 12-13 9:45-10:15 PM EST
 Jupiter up about 33° in the SE, the Saturn
 cluster on the about 2nd cluster
 Christmas Tree cluster, the 1st cluster
 Star field was not seen with this
 other cases of Orion area of 1st and 2nd
 12:20 PM - 1:45 PM, 1st case from the Orion cluster
 Saturn well up in the E.

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of stars in the NE, 3 of the stars of the Big Dipper in the NNW, Polaris and Kochab in the N.

Sa-Sun. Mar. 15-16 02:00-02:20 UT FL: 1a S8T4 (1/p; gm) ne

- Castor and Pollux near the zenith; bright gibbous moon about 40 hours past First Quarter - 6 degrees approximately SW of Castor and Pollux; Mars about 12° W. of the gibbous moon; stars of winter in the S. sky; Big Dipper in the NNE, Polaris about 26° above the N. Horizon; Regulus and Saturn high in the E.; Capella high in the WNW.

S-M. Mar. 16-17 02:00-02:05 UT FL: 1a S?T4 (1/p; gm) ne

- Castor and Pollux very near the zenith; very bright gibbous moon about 6° ESE of Pollux, stars of Winter in the S.; Regulus and Saturn high in the E.; Polaris about 26° above the N. horizon; some stars of the Big Dipper in the NNE.

6:43-6:45 a.m. E.D.T.
M. 18:43-10:45 UT FL: in lanai twl ne

After the beginning of astronomical twilight which was at 10:18 UT, I observed the E. sky which was somewhat cloudy, but I saw Jupiter amid the clouds - up about 30° in the E.

M-T. Mar. 17-18 03:00-03:03 UT FL: 1a S?T3 (1/p; gm) ne

Under a very bright gibbous moon, I briefly observed, seeing many of the stars of winter in the S., the moon near the zenith, ~~Mars~~ ^{Castor and Pollux} about 15° W. of the moon and Regulus about 12° E. of the moon, with Saturn about 2° E. of Regulus.

6:01-6:11 a.m. E.D.T.
M. 18:01-18:11 UT FL: in outside lanai S?T5 (1/p) ne

- Jupiter up about 32° in the E, the Summer Triangle in

2002

of stars in the NE, 3 of the stars of the Big Dipper
in the NW, Vega and Rigel in the SE.

20-21 Mar 12-16 02:00-02:30 UT File 2274 (10; 9m) AS
Cantor and Pollux very near the zenith; bright dipper now
about 45 degrees past First Quarter - 4 degrees remaining
SW of Lactor and Pollux; stars about 12° W of
the dipper now; stars of water in the 2 sky;
Big Dipper in the NW, below about 20° above
the N. horizon. Rigel and Zosma high in the
E; Capella high in the NW.

20-21 Mar 12-17 02:00-02:30 UT File 2274 (10; 9m) AS
Cantor and Pollux very near the zenith; very bright
dipper now about 2° ESE of Pollux, stars of
water in the 2; Rigel and Zosma high in
the E; Vega about 20° above the N. horizon;
some stars of the Big Dipper in the NW.

20-21 Mar 12-18 02:00-02:30 UT File 2274 (10; 9m) AS
After the beginning of astronomical twilight
which was at 10:18 UT, I observed the E sky
which was somewhat cloudy, but I saw
Jupiter and the clouds - up about 30° in
the E.

20-21 Mar 17-18 03:00-03:30 UT File 2274 (10; 9m) AS
Under a very bright stars now, I briefly
observed, seeing many of the stars of water in
the 2, the stars near the zenith, stars about 2°
W of the water and Rigel about 12° E of
the moon light. Stars about 2° E of Rigel.

20-21 Mar 18-19 03:00-03:30 UT File 2274 (10; 9m) AS
Jupiter up about 35° in the E. The stars in the
E.

2008

the NE, the Big Dipper in the NNW, Polaris and Kochab in the N; Arcturus W. of the zenith; Antares and some of the stars of Scorpius in the SE.

T.-W. Mar. 18-19 02:30 - 02:35 UT FL: la S? T4 (1/p; gml) ne

- Under a very bright gibbous moon, I observed the stars of winter high in the SSE, Castor and Pollux very near the zenith, Mars in Gemini about 14° SW of Castor and Pollux, Regulus high in the E. about 2° below the gibbous moon and Saturn about 3° below

Regulus.
5:38 - 5:48 a.m. E.D.T.
m. 9:38 - 9:48 UT FL: in & outside lanai S? T4 (1/p) ne

- Jupiter up about 30° in the E., the Summer Triangle in the NE, Polaris and Kochab in the N., and some of the stars of the Big Dipper in the NNW.

W.-Th. Mar. 19-20 02:34 - 02:40 UT FL: la S? T4 (1/p; gml) ne

With the Moon almost Full (about 40 hours before Full Moon), I observed the stars of winter in the S. sky, and Castor and Pollux and Mars W. of the zenith, and Regulus and Saturn high in the E., with the moon about 11° below Regulus and about 8° below

Saturn.
6:03 - 6:08 a.m. E.D.T.
m. 10:03 - 10:08 UT FL: inside lanai S? T3 (1/p; some cloud) ne

- Amid some clouds I saw Jupiter up about 35° in the E., and the Summer Triangle in the NE.

Th.-F. Mar. 20-21 02:52 - 03:02 UT FL: la S? T1-2 (1/p; clouds) ne

Under very cloudy skies I observed the bright Full Moon very high in the E. (The moon was only about 15 hours and 40 minutes before the time of Full Moon which was listed as 18:40 UT.) Some of the stars of Orion and Sirius and Procyon were seen in the S.

table, the Big Dipper in the NW. Above and below
in the N. Asteroid W of the stars. Asteroid and
some of the stars of Sagitta in the SE.

W-Tu Mar 19-19 02:32-02:57 (P: 2174/10; Gnd) no
- looked a very bright yellow star, I observed the
stars of winter light in the NE. Cassiopeia and other
very near the stars. There is a faint star 14° SW of
the stars of winter light in the E. Just SW
below the dipper star and Asteroid about 3° below

W-Wed Mar 20-19 02:34-02:57 (P: 2174/10; Gnd) no
- Jupiter up about 30° in the E, the Summer Triangle
in the NE. Below and below in the N. and some
of the stars of the Big Dipper in the NW.

W-Th Mar 20-19 02:34-02:57 (P: 2174/10; Gnd) no
with the stars about fall (but the stars below fall
then) I observed the stars of winter in the SE. The
and Cassiopeia and other stars in the SE. with the stars
and Jupiter and Asteroid light in the E. with the stars
about 11° SW. Jupiter and about 2° below

W-Fri Mar 20-19 02:34-02:57 (P: 2174/10; Gnd) no
- had some stars in the SE. Jupiter up about 30°
in the E. and the Summer Triangle in the NE.

W-Sat Mar 20-19 02:34-02:57 (P: 2174/10; Gnd) no
Jupiter very bright star I observed the stars
Fall Asteroid up in the E. (The stars were up and stars
island and the stars below the time of fall stars
which were light as 12:00) some of the stars of
Cassiopeia and other stars were seen in the SE.

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and SSE. Regulus was about 15° SSE of the zenith with Saturn about 2° E of it and the Full Moon about 20° E. of Saturn.

5:45 - 5:55 a.m. E.D.T.
m. 9:45 - 9:55 UT FL: inside lanai S?T1-2 (1/p; clouds) ne

I observed although the sky was very cloudy, but among the clouds I saw temporarily Jupiter up about 32° in the E, and the Summer Triangle in the NE.

F.-S. Mar. 21-22 02:40-02:50 UT FL: la S?T3 (1/p; cloud) ne

- With scattered clouds in the sky, I observed the very bright Full Moon - 6 hours after the instant of Full - listed as 18:40 UT on Feb. 21 - up about 40° in the E.; ~~Jupiter~~ ^{Regulus} about 15° E. of the zenith and Saturn about 2° E. of Regulus; some of the stars of Orion in the SSW and Aldebaran in the SW.; Sirius and Procyon in the SSE

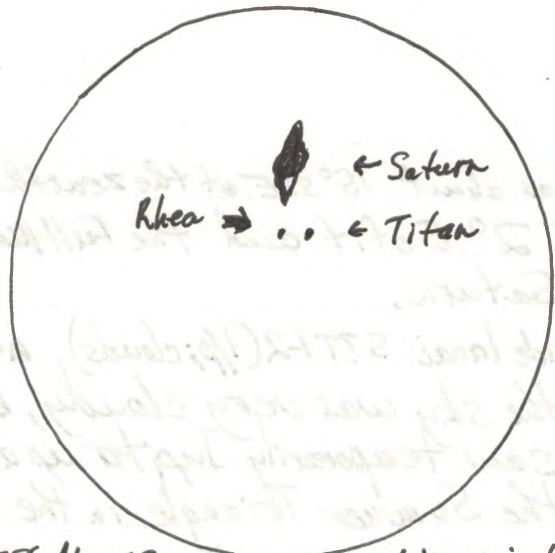
M.-T. Mar. 24-25 01:30-02:00 UT FL: la S?T5 (1/p) ne; 18X501sb

ne: stars of winter in the S. and SSW. Castor and Pollux near the zenith, Mars about 12° SW of Castor in Gemini, Regulus and Saturn high in the E.

18X501sb: M42, M43, areas of Orion, area of R Lep but not the star itself, NGC 2244, Plaskett's Star, the Christmas Tree Cluster and S Mon, M46, M47, M41, M44, Pleiades, Hyades, M35, M36, M37, M38, Saturn, R Leonis at about mag. 7.0.

5:52 - 6:02 a.m. E.D.T.
m. 9:52 - 10:02 UT FL: inside lanai S?T4 (1/p) ne

I saw Jupiter up about 38° in the E and the Summer Triangle of stars high in the NE.



2008, Mar 27, 01:30 UT View in 12 1/2"
 Observation at 61X of Saturn and 2 moons.

[Faint, mostly illegible handwritten notes on the right side of the page, possibly bleed-through from the reverse side. Some words like 'Saturn', 'Titan', and 'Rhea' are visible.]

2008 T-W Mar. 25-26 02:00-02:05 UT FL: la S? T5 (1/p) ne

- stars of winter in the S.; Castor and Pollux very near the zenith; Mars in Gemini about 12° SW from Castor and Pollux; Regulus about 30° E. of the zenith with Saturn about 3°

E. of Regulus.

6:14-6:24 a.m. E.D.T.
m. 10:14-10:24 UT FL: in + outside lanai twl ne

Shortly after the beginning of astronomical twilight which was at 10:08 UT, I observed the E. sky seeing Jupiter up about 40° in the E. and the Summer Triangle high in the NE. Arcturus was well W. of the zenith. In the SE was Arcturus; to its right by about 12° was the bright gibbous moon.

W-Th. Mar. 26-27 00:30-02:20 UT FL: la twl + S? T5 (1/p) ne; $12\frac{1}{2}''$, 32, 25

ne: stars of winter in the S.; Mars in Gemini and W. of the zenith; Saturn high in the E. At various times, I had people look through the telescope - the woman in the family renting the condo on the second floor, and Wilfred from Chelsea, Quebec from the condo across the street along with his friend Tom also from Chelsea, Quebec.

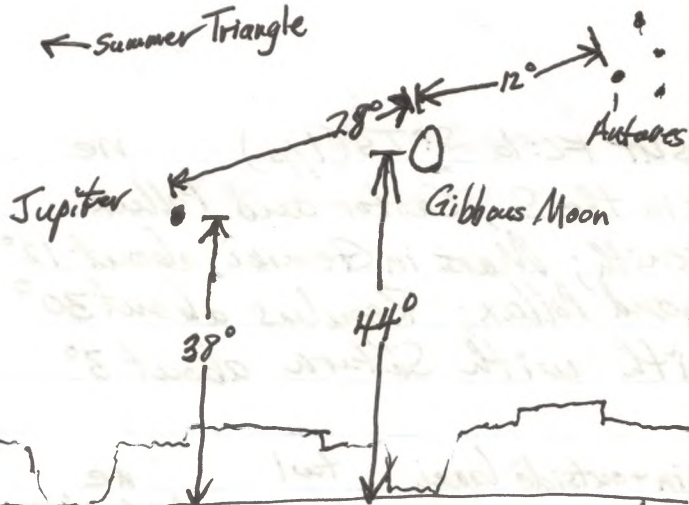
$12\frac{1}{2}''$, 32, 25: M41, M42 and M43, NGC 1981, Saturn and its rings and the two moons Titan and Rhea (See diagram.)

6:26-6:32 a.m. E.D.T.
m. 10:26-10:32 UT FL: inside lanai twl ne

Jupiter up about 40° in the E., the Summer Triangle of stars high in the NE.

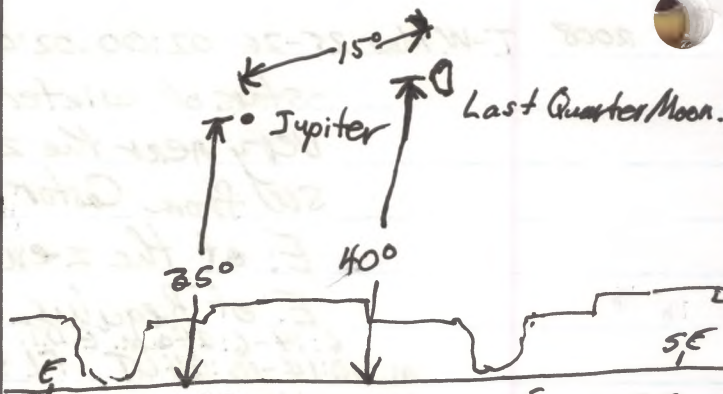
Later, at about 10:44 UT, I observed the waning gibbous moon about 1° below Antares. (The Observer's Handbook listed the conjunction in R.A. as being at 10 UT and the separation only 0.5° - "as viewed from the centre of the earth.")

← Summer Triangle



2008, Mar. 28, 9:45 UT View to E and SE showing Jupiter, Gibbous Moon, and Antares.

← Summer Triangle



2008, Mar. 29, 9:28 UT View to E and SE showing Jupiter and Last Quarter Moon.

2008 Th-F. Mar. 27-28 03:00-03:05 UT FL:la S7T3(1/p; clouds) ne

- After returning from the meeting of the Everglades Astronomical Society, I briefly under a partly cloudy sky. Visible in the SW were the brighter of the bright stars of Orion. Sirius and Procyon were high in the S., Castor and Pollux were W. of the zenith, as was Mars. Regulus and Saturn were about 10° and 12° respectively E. of the zenith. Polaris was visible in the N., and some of the stars of the Big Dipper high in the NE.

m 5:41-5:51 a.m. E.D.T.
9:41-9:51 UT FL:in + outside lanai S7T5(1/p) ne

- Jupiter up 38° in the E, the gibbous moon about $1\frac{1}{2}$ days before Last Quarter up 44° in the ESE, Antares up about 48° in the SE, the Summer Triangle of stars in the NE, Arcturus and some other stars of Bootes W. of the zenith, Polaris and Kochab in the N., some stars of the Big Dipper in the NNW. (See diagram.)

F-S Mar. 28-29 02:15-02:20 UT FL:la S8T3(1/p; clouds) ne

Amid the clouds I observed some stars: Sirius and Procyon in the S., Betelgeuse, Bellatrix, Rigel and the 3 Belt Stars of Orion in the SW, Castor and Pollux and Mars W. of the zenith, and Regulus and Saturn very high in the E.

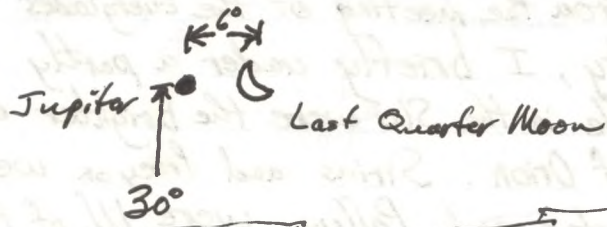
m 5:28-5:29 a.m. E.D.T.
9:28-9:29 UT FL inside bedroom S7T5(1/p; 1 q.m) ne

I briefly observed the bright planet Jupiter in the E. and slightly above it and about 15° to its right the bright Last Quarter Moon. The Summer Triangle was also seen in the NE.

S-S Mar. 29-30 02:55-03:00 UT FL:la S8T4(1/p; clouds) ne

I observed about two hours after the end of "Earth

← Summer Triangle



2008, Mar 30, 9:30 UT: View to E. to SE
Showing bright Jupiter and the Last Quarter Moon.

← Summer Triangle



2008, Mar. 31: 9:35 UT View to E to SE
showing Jupiter and Crescent Moon

Hour" an occasion to mark the importance of protecting the Earth from the effects of wasting energy and adding to Greenhouse gasses - by turning off unneeded lights for one hour. However, in this area "Earth Hour" seemed to have very little evidence of being marked. (On the internet, reports said it had been marked in many cities and places around the world.) I was able to see Sirius and Procyon in the S., most of the very bright stars of Orion in the SSW, Castor and Pollux and Mars W. of the zenith, Capella in the WNW, at least 6 of the 7 bright stars of the Big Dipper in the NNE, Polaris in the N. Saturn and Regulus E. of the zenith.

5:30 - 5:33 a.m. E.D.T.
M. 9:30 - 9:33 UT FL: in livingroom S?T5 (1/p) (q.m) ne

- Jupiter up about 30° in the E with the moon about 12 hours after Last Quarter, about 6° to its right; the Summer Triangle in the NE. (See diagram)

S.-M. Mar. 30-31 02:30 - 02:35 FL: la S?T3 (1/p; clouds) ne

- Sirius and Procyon in the S, 2 or 3 stars of Orion in the SW, Castor and Pollux and Mars W. of the zenith, Aldebaran low in the W, Capella in the W; Regulus and Saturn very high in the E.

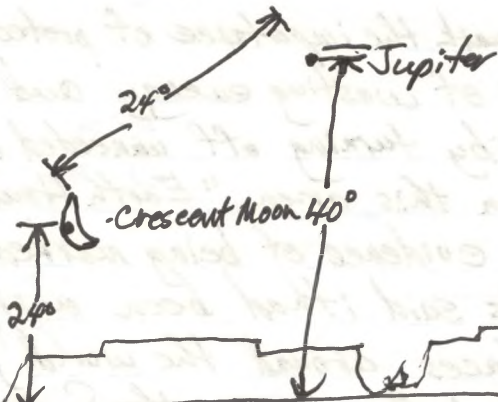
M. 5:53 - 5:58 a.m. E.D.T.
9:53 - 9:58 UT FL: inside la ai S?T5 (1/p) ne

Bright Crescent Moon up about 30° in the E. and Jupiter up about 40° to its right - a beautiful sight; the Summer Triangle high in the NE.

M.-T. Mar. 31-Apr. 1 02:35 - 02:45 UT FL: la S?T5 (1/p) ne

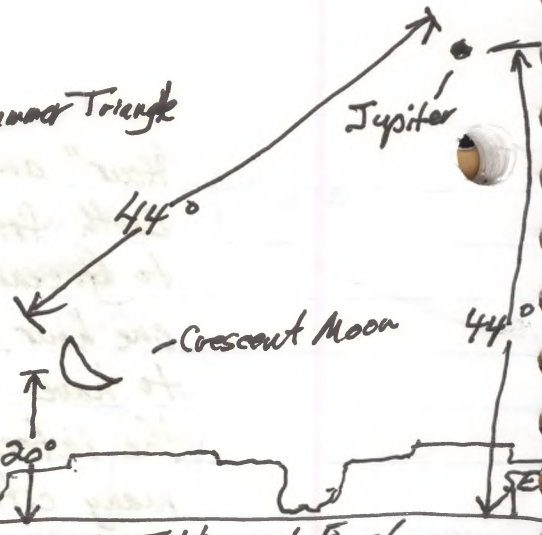
- Bright stars of Orion sinking downward in the SSW, Sirius and Procyon in the S., Castor and Pollux and Mars

← Summer Triangle



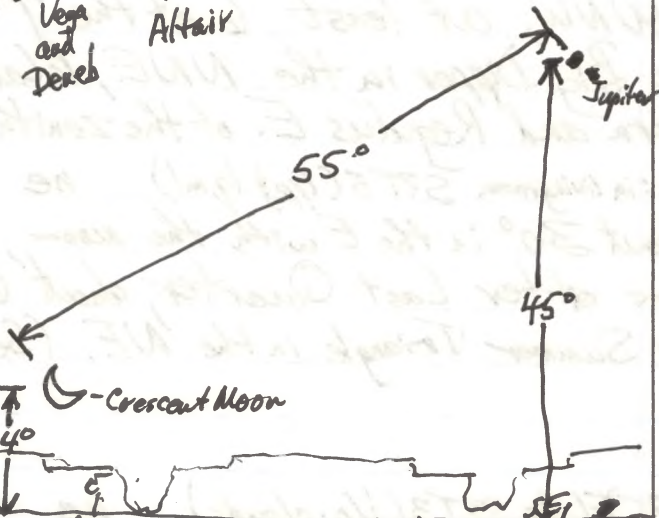
2008, Apr. 19, 48 UT. View to E showing Crescent Moon and Jupiter

← Summer Triangle



2008, Apr. 2, 10:06 UT. View to E showing Crescent Moon and Jupiter

← Vega and Deneb
Altair



2008, Apr. 3, 10:11 UT. View to the E showing Crescent Moon and Jupiter.

W. of the zenith, Capella and the other stars of the pentagon of Auriga in the W., Aldebaran low in the W., Regulus about 15° E. of the zenith and Saturn about 2° E. of Regulus; Polaris in the N; the 7 stars of the Big Dipper high in the NNE, Arcturus well up in the NE, Spica in the E.

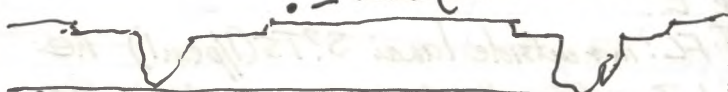
m. ^{5:48-9:58 a.m. E.D.T.} 9:48-9:58 UT FL: into outside lanai S?TS (1/pcml) ne
Crescent Moon and Jupiter about 24° apart in the ESE, Antares and some bright stars of Scorpius in the SSE, the Summer Triangle high in the NNE, Polaris and Kochab in the N, bright stars of Cygnus in the NE, Arcturus and some stars of Bootes W. of the zenith. (See diagram for E. sky.)

Apr. 6:06-6:10 a.m. E.D.T.
T.-W. ~~Apr.~~ 1-2m 10:06-10:10 UT FL: into outside lanai twl ne
Shortly after the beginning of astronomical twilight, which began at 10:00 UT, I observed the E. sky which had a considerable amount of cloud. I observed the Crescent Moon up about 20° in the E., and well up, and to its right, Jupiter. (See diagram.) I also observed the Summer Triangle high in the NE, and Arcturus W. of the zenith.

W.-Th. ~~Apr.~~ 23 m. 10:11-10:16 UT FL: into outside lanai twl ne
Shortly after the beginning of astronomical twilight which began at UT, I observed the E. sky seeing the Crescent Moon about 14° above the horizon, and well to the right in the ESE, Jupiter about 45° above the horizon. The Moon-Jupiter separation was about 55° . Also seen were the Summer Triangle in the NE, along with the bright stars of Cygnus, and Polaris in the N. Altair was above and slightly to the right from the Crescent Moon.

↗
Jupiter

☾ — Crescent Moon
(naked-eye or in binoculars)
• — Venus (in binoculars)



2008, Apr. 4: 10:52 UT Twilight view
to the E. - 22 min before sunrise.

After seeing Venus in the morning twilight,
Denise sent an e-mail to Sky and
Telescope with information about her

observation. She received an e-mail
reply from Tony Flanders of their
editorial staff - saying observers in
Boston had been clouded out and
he invited her to continue trying
to see Venus in the morning twilight.

The April issue of the magazine had had
an article about the uncertainty
regarding whether Venus would
be visible naked eye in the Eastern
morning twilight in early April.

2008 Th.-F. Apr. 3-4 01:50-02:30 UT FL: Ia S?T5(1/p) ne; 18x5015b

ne: Orion in the SSW; Sirius and Procyon in the S, Castor and Pollux and Mars W. of the zenith, Regulus and Saturn E. of the zenith, Spica low in the E, Capella high in the WNW.

18x5015b: M42, areas of Orion, NGC1981, M41, NGC2244, Plaskett's Star, Simon and the Christmas Tree Cluster, M44 near the zenith, Mars in Gemini, Saturn in the constellation Leo, R Leonis - fainter than when previously seen - perhaps at mag. 8.0; M35, M36, M37, the Hyades.

m. ^{5:41-5:46 a.m. EDT} 9:41-9:46 UT FL: inside lanai. S?T5(1/p) ne
Jupiter up about 40° in the ESE, the Summer Triangle high in the NE.

At 10:27 UT (6:27 a.m. EDT) I observed the thin Crescent Moon just above the roof of a condo to the E.

Venus

At 10:52 UT (6:52 a.m. EDT) I observed Venus with binoculars about 8° down and to the left from the Crescent Moon - just above the roof of a condo to the E. Though I thought I may have had very brief "hints" of it naked-eye, I did not see it steadily or for a long time. Denise did see Venus easily both naked-eye and with the 10x25 binoculars, the same binoculars I had used in seeing it. (See diagram.)

F.-S. Apr. 4-5 02:25-02:45 UT FL: Ia S?T5(1/p) ne

I observed the bright stars of Orion slanting downward in the SSW, Sirius and Procyon in the S, Castor and Pollux and Mars W. of the zenith, Regulus and Saturn E. of the zenith, Spica in the E, Capella and some other bright stars of Auriga in the WNW, the Big Dipper high in the NNE, Polaris and Kochab in the N.

M. Apr. 7, 10:58 UT (6:58 a.m. E.D.T.)

While driving to work, Denise spotted Venus in the morning twilight to the E.. Right afterward at a red light stop, she was able to confirm that it was Venus. Later at work, she sent an e-mail to Sky and Telescope regarding her observation.

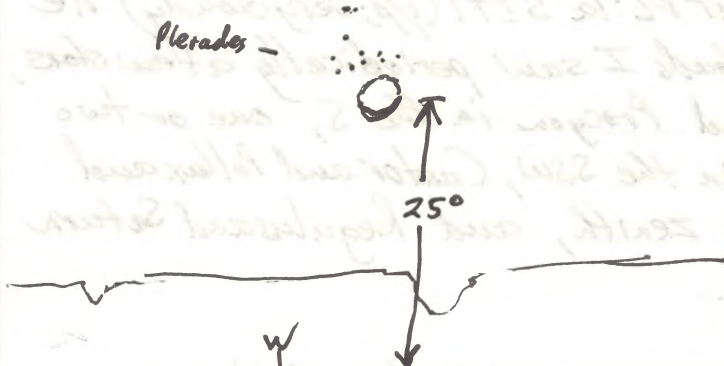
2008 S.-S. Apr. 5-6 02:36-02:41 UT FL: Ia S:T1 (1/p; very cloudy) ne
Among the many clouds I saw periodically a few stars,
namely Sirius and Procyon in the S, one or two
stars of Orion in the SSW, Castor and Pollux and
Mars W. of the zenith, and Regulus and Saturn
E. of the zenith.

S.-M. Apr. 6-7 23:25 - 00:00 UT FL: Bonita Beach daylight; twl ne
Hoping to see a very young moon before its
setting over the Gulf of Mexico, Denise and I
drove over to Bonita Beach. We took lawn chairs
to the beach and sat there watching the W sky,
but there were heavy clouds in the lower
part of the sky in the W and NW. Much of
the sky to the South and SW was clear, but
it soon became evident that we would likely
not see the slender Crescent Moon. We enjoyed
the warm breeze off the Gulf of Mexico, but
because of the clouds, we did not see the crescent
moon. I also scanned parts of the W. sky with the
18x50 IS binoculars.

m 5:58 - 6:08 a.m. E.D.T.
9:58 - 10:08 UT FL: inside lanai S:T 0.5 (1/p clouds) ne
Under very cloudy skies, I was able to see Jupiter
up about 40° in the ESE. It was probably the
only celestial object I was able to glimpse amid
the clouds. Astronomical Twilight actually began at
9:54 UT (5:54 a.m. E.D.T.).

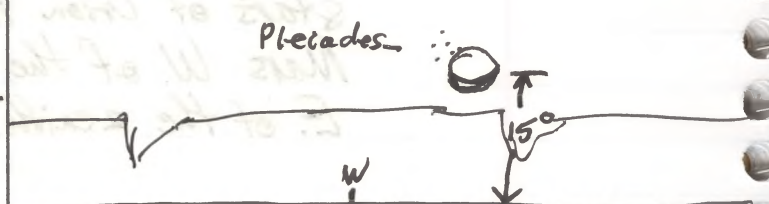
M.-T. Apr. 7-8 3:43-3:49 UT FL: Ia S:T3 (1/p; clouds) ne
Amid the clouds I saw Regulus and Saturn quite near
the zenith, Castor and Pollux and Mars well W. of
the zenith, Canopus very clearly in the S, Arcturus and
Spica in the E. Sirius was also seen in the S.

Pleiades -



2008, Apr. 9, 1:20 UT: View to W showing Moon and Pleiades 40 min. before time of conjunction

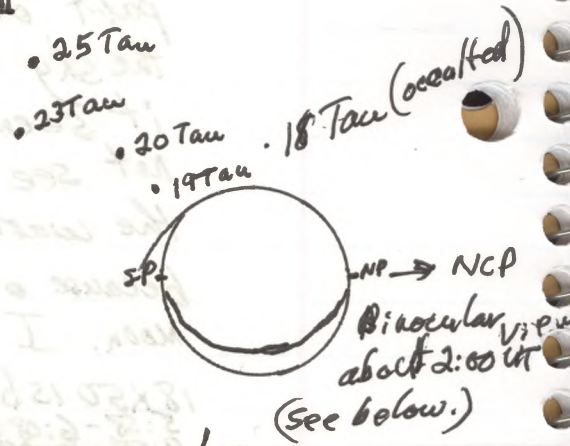
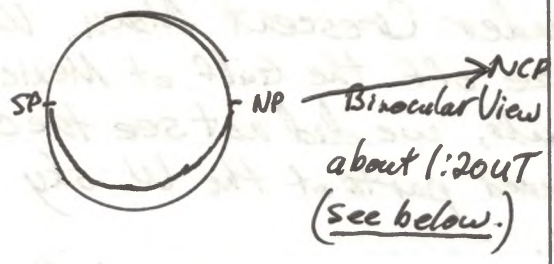
Pleiades -



2008, Apr. 9, 2:00 UT: View to W. showing Moon and Pleiades at listed time of conjunction.

- 25 Tau
- 23 Tau
- 20 Tau
- 17 Tau 19 Tau

Scale of Drawings:
 50 mm = 1° = 60'
 25 mm = 1/2° = 30'
 12.5 mm = 1/4° = 15'



Moon: Slightly less than 3 days old - would be 3 days old at 3:55 UT.

Azimuth: 275°
Altitude: 25°

Moon oriented so that SP → NP axis almost parallel to horizon.

- Maia (20 Tau) → limb: 32' - 27 mm on drawing
- Merope (23 Tau) → limb: 48' → 40 mm " "
- Aleyone (25 Tau) → limb: 58' → 48 mm " "

Aleyone - oriented at about 11:1/2 o'clock position, assuming moon is a clock in the sky.

Azimuth: 277°
Altitude: 15°

Moon oriented so that SP → NP axis almost parallel to the horizon.

- Maia (20 Tau) → limb: 14' - 12 mm on drawing
- Merope (23 Tau) → limb: 29' - 24 mm " "
- Aleyone (25 Tau) → limb: 33' - 28 mm " "

Aleyone - oriented at about the 10 o'clock position - assuming moon is a clock in the sky.

2008 T.-W. Apr. 8-9 00:10-02:25 UT twl+S?T5(1/p) ne; 18x50ISb

ne: Before the end of astronomical twilight (which was at 01:08 UT), I observed the young Crescent Moon (slightly less than 3 days old) about 30° above the W. horizon. The Pleiades were not easily seen with the unaided eye.

Later after the moon set behind a building to the W, I observed (after 02:15 UT) Orion slanting downward in the SW, and Castor and Pollux and Mars in the W, Regulus and Saturn E. of the zenith, Arcturus and Spica in the E, the Big Dipper and Polaris and Kochab in the N, Sirius and other stars of Canis Major and Procyon in the S.

18x50ISb: In order to obtain possible "Parallax drawings for the position of the moon as seen from Ontario and from Florida" I had arranged with Ken Kingdon, Walter MacDonald, and Susan Gagnon to try to "observe and draw" the Moon - Pleiades conjunction scheduled for 02:00 UT. Thinking the moon might be behind a house to the W, I requested that the time of 01:20 UT be used. Then shortly before the event I was fearful of being "clouded out" and requested that we do drawings at 01:20 UT (9:20 p.m. EDT) and 02:00 UT (10:00 p.m. EDT). I did have some clouds at 01:20 UT, but was confident that I was able to get a good enough drawing. (See the diagrams on the left for the binocular observations at both 01:20 UT and 02:00 UT.)

The moon did not appear to be about to occult any of the main stars of the Pleiades from here, but I was able to time a disappearance of 18 Tau (NNW of the centre of the cluster) at 02:10:45 UT (10:10:45 p.m. EDT.)

T-W April 2-9 some observations (1971)
 10: Before the end of astronomical twilight (which
 was at about 17:00) I observed the young
 Crows that (slightly before dawn 05:00) were
 about 30' above the W. horizon. The birds
 were not easily seen with the unaided eye
 later after the moon set behind a building
 to the W. I observed further observations
 later about 18:00 in the old yard

Later and later and later in the W. horizon
 and later in the W. horizon. The birds
 were not easily seen with the unaided eye
 later after the moon set behind a building
 to the W. I observed further observations
 later about 18:00 in the old yard

Later and later and later in the W. horizon
 and later in the W. horizon. The birds
 were not easily seen with the unaided eye
 later after the moon set behind a building
 to the W. I observed further observations
 later about 18:00 in the old yard

2008

(18 Tau is near the top of the diagram on p. 1874 in Burnham's Celestial Handbook.)

W.-Th. Apr. 9-10 01:02-01:17 UT FL: la S?? T4 (1p) ne
- the 4-day old Crescent Moon up about 40° in the W.; Sirius and Procyon in the S.; bright stars of Orion in the SSW; Castor and Pollux and Mars W. of the zenith; Regulus and Saturn E. of the zenith; the stars of the Big Dipper high in the NE; Polaris and Kochab in the N.

m. ^{6:14-6:19 a.m. E.D.T.} 10:14-10:19 UT FL inside lanai twl ne
Jupiter up about 45° in the ESE and the Summer Triangle high in the NE.

Venus in morning twilight

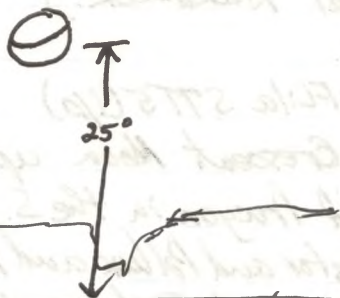
At 10:46 UT (6:46 a.m. EDT) I saw Venus naked-eye Jan inside the living room. Denise also saw it - for her, the third time this month. At about 10:50 (6:50 a.m. EDT) I also saw it naked-eye and with Denise's 8x92 binoculars. Astronomical twilight had begun at 9:50 UT (5:50 a.m. EDT)

Th.-F. Apr. 10-11 02:40-3:20 UT FL: la S?? T4 (1p; some haze & cloud) ne; 18x50sb
ne: Betelgeuse in the SSW; Sirius and Procyon in the S; Castor and Pollux and Mars W. of the zenith; Regulus and Saturn near the zenith; Arcturus and Spica in the E.; 4-day old Crescent Moon up in the W. about 35° .

18x50sb: M41, M44, Saturn and Regulus, R Leonis - quite faint - at perhaps mag. 8.0. I explored some star fields in Pyxis, and some areas somewhat S. of Spica, thinking I might see Omega Centauri (Nac 5139), but I did not knowingly see it.

m. ^{6:28-6:33 a.m. E.D.T.} 10:28-10:33 UT FL: inside lanai twl ne
- I observed Jupiter up about 50° in the ESE and the Summer Triangle ^{high} in the NE.

Mars



2008 Apr. 12, 04:50 UT View to W
showing Moon and Mars before conj. predicted
for 6 hours UT.

Mars

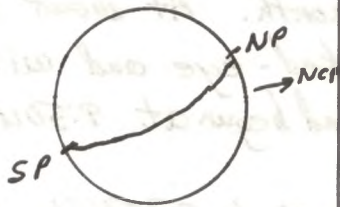
Sec
Scale →

Scale of Drawing:

$$50 \text{ mm} = 1^\circ = 60'$$

$$25 \text{ mm} = \frac{1}{2}^\circ = 30'$$

$$12.5 \text{ mm} = \frac{1}{4}^\circ = 15'$$



Moon: Slightly more than 6 days old -
6 days and 55 minutes old

Azimuth: 273°

Altitude: 25°

Moon oriented so that SP → NP axis
inclined about from 8 o'clock to 2 o'clock
position when compared to a clock.

Mars → lunar limb: 60° - 50 mm on drawing

Later, from about 10:40 to 10:50 UT (6:40 to 6:50 a.m. EDT) Denise and I tried to see Venus low in the E sky from inside and outside the lanai. Then later at 10:55 UT (6:55 a.m. EDT) she saw Venus clearly naked-eye from inside the livingroom. I did not knowingly see it

F.-S. Apr. 11-12 03:50-05:30 UT FL: la + garage S¹⁵T5-71 (1/p; clouds) ne; 18x50q^{15b}
ne: Castor and Pollux and Mars W. of the zenith, Sirius in the S.; Regulus and Saturn near the zenith; Arcturus and Spica in the E.; the Big Dipper high in the ENE.
Clouds started to move in from the SE at about 04:30 UT. I wanted to observe the moon-Mars conjunction listed for 6h UT (2:00 a.m. EDT). With the clouds they were only intermittently visible between 4:30 and 5:00 UT. By 5:00 UT the sky was "socked in", and I did not see both of them together thereafter, though the outline of the moon was occasionally discernible through the clouds. Once Mars was visible by itself for a few seconds. By about 5:20 UT the lunar disk, or most of it, had sunk below the roofline of the condo to the W. The drawing is ~~for~~ from naked-eye and binocular views at about 04:50 UT. Mars was about 1° from the nearest lunar limb in a 10 o'clock position from the centre of the lunar disk - assuming the disk as a clock in the sky. Strangely it appeared as if the conjunction might not occur for about another 2 hours since the moon appeared to be well below the 'line joining the NCP and Mars.

2008

18x50 ISB: Craters on the Moon; Moon and Mars until "clouded out"; M44.

S.-S. Apr. 12-13 02:12-02:18 UT FL:la S7T5 (1/p;fgml) ne
First Quarter Moon - about 8 hours after the exact time of First Quarter - W. of the zenith and almost on a line with Castor and Pollux and perhaps about 40° to the left from Pollux; Mars in Gemini; Regulus and Saturn E. of the zenith; Sirius in the S.; Big Dipper high in the ENE; Polaris and Kochab in the N.; Arcturus and Spica in the E.

^{16:16-6:18 a.m. EDT}
M. 10:16-10:18 UT FL:in livingroom twl ne

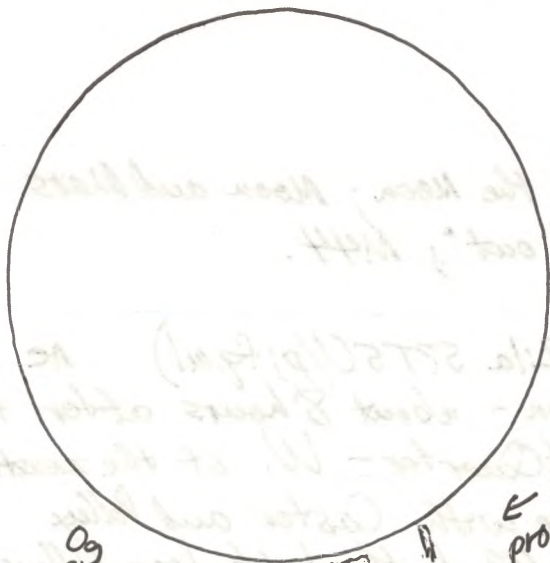
In the morning twilight I saw the planet Jupiter up about 45° in the ESE.

S.-M. Apr. 13-14 02:48-02:53 UT FL:la S7T4 (1/p;gml) ne

I observed the bright gibbous moon - over 1 day past First Quarter - about 70° SW of the zenith. Castor and Pollux and Mars were further W. of the zenith. Regulus and Saturn were E. of the zenith, Arcturus and Spica were well up in the E. Capella was in the WNW. Sirius and Procyon were in the S. with Betelgeuse in the SW. Some stars of the Big Dipper were seen in the NNE.

M. 9:53-9:58 UT FL:inside & outside laai twl ne

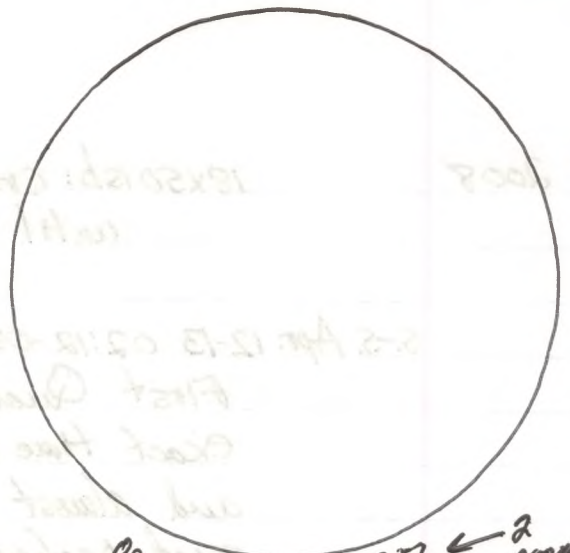
I saw Jupiter up about 45° in the ESE and some of the stars of Sagittarius to the right of it, the Summer Triangle very high in the NE. with Vega very near the zenith. Some of the stars of Cygnus were visible. Arcturus was well W. of the zenith. Some of the stars of the handle of the Big Dipper were visible high in the N. Polaris also was seen.



09
05
RSNO

Apr. 19
17:00-17:05 UT

← 2
prominences



09
05
RSNO

Apr. 20
17:17-19:19 UT

← 2
prominences

SC

2008

Venus seen
in binoculars

At 10:43 UT (6:43 a.m. EDT) Denise spotted Venus as it came above the roofline, near or in the "U" where two roof lines were separated, of contours to the ENE. She saw it both naked-eye and with the 8x32 binoculars. I did not knowingly see it naked-eye, but saw it with the 10x25 binoculars. Astronomical twilight had begun at 9:46 UT (5:46 a.m. EDT.) and ~~sun~~ sunrise would be at 11:04 (7:04 a.m. EDT).

M.-T. Apr. 14-15 01:58-02:08 UT FL: Ia S7 T 0.5 (U/p; clouds) ne
Among the dense clouds I briefly saw Arcturus well up in the ENE, and the gibbous moon was discernible through the clouds near the zenith.

F. Apr. 18 18:20-18:25 UT t C-8, 32, 28, 20, 15.5
sun O_g O_s RSNO T.O.F.

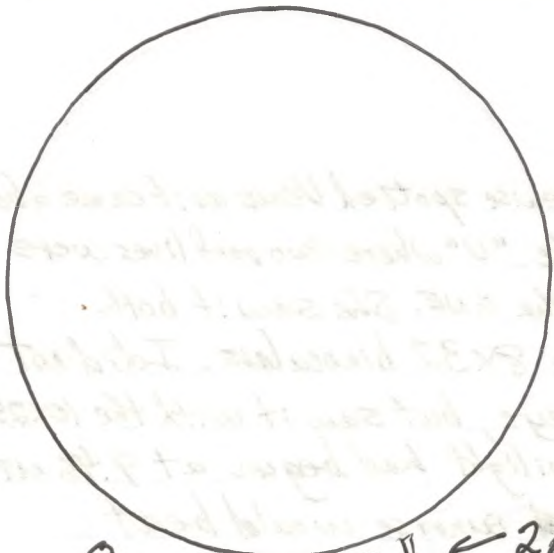
F. Apr. 18 18:25-18:30 UT rd P.S.T.; 20, 28, 20E, 15.5
sun in Hx - hints of prominences on the solar disk.

Sa. Apr. 19 17:00-17:05 UT t C-8, 32, 28, 20, 15.5
sun O_g O_s RSNO T.O.F.

Sa. Apr. 19 17:05-17:10 UT rd P.S.T., 20, 28, 20E, 15.5
sun in Hx - 2 definite prominences - one thin one at the 5 o'clock position and a thick one at the 5 1/2 o'clock position - assuming the sun as a clock in standard eyepiece orientation

Su. Apr. 20 17:17-17:19 UT t C-8, 32, 28, 20, 15.5
sun O_g O_s RSNO T.O.F.

Su. Apr. 20 17:19-17:24 UT rd P.S.T., 20, 28, 20E, 15.5
sun in Hx - 2 definite prominences - both at

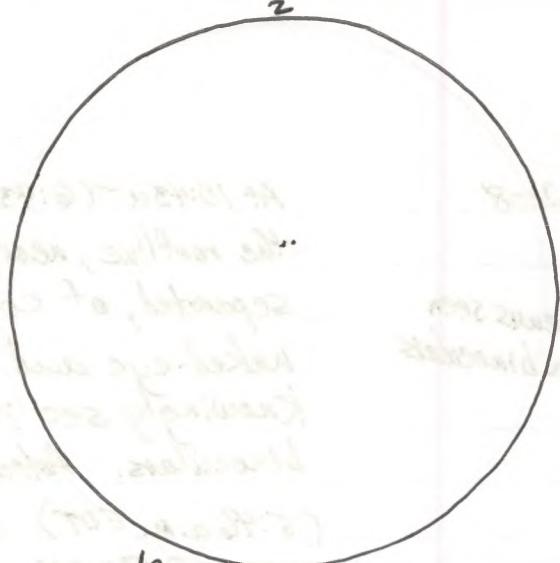


sc

Og
Os
RSNO

Apr. 21 16:50-16:55 UT

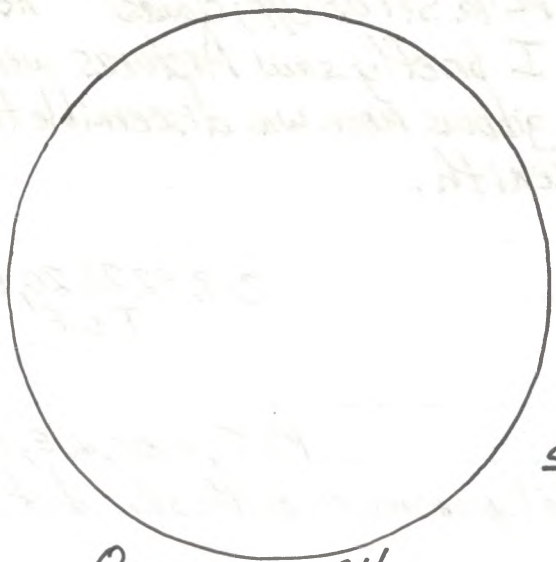
← 2 prominences



sc

1g
2s
RSN12

Apr. 22 17:00-17:05 UT



sc

Og
Os
RSNO

Apr. 24 17:50-17:55 UT

about the 5½ o'clock position - assuming the sun as a clock
in the standard eyepiece orientation.

M. Apr. 21 16:50-16:55 UT t
sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

W. Apr. 21 16:55-17:00 UT nd P.S.T.

sun in Hx - 2 small prominences at the 5 o'clock position
on the solar disk - assuming the sun as a clock in the
eyepiece at the standard orientation. The prominences
were seen in the 20mm E eyepiece.

Tu. Apr. 22 17:00-17:05 UT t
sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Tu. Apr. 22 17:10-17:15 UT nd

P.S.T., 20, 28, 20E, 15.5

sun in Hx - hints of prominences on the solar disk

W-Th. Apr 23-24 03:05-03:40 UT nd v. S T T 7-8 (some haze) ne; 18X50ISB
ne: stars of spring; Saturn near Regulus; Mars and
Castor and Pollux in the WNW.

18X50ISB: M65, M66, star fields in Leo, Virgo, and
Corvus, Saturn, T Cor Bor, M104.

Th. Apr. 24 17:50-17:55 UT t
sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Th. Apr. 24 17:55-18:00 UT nd

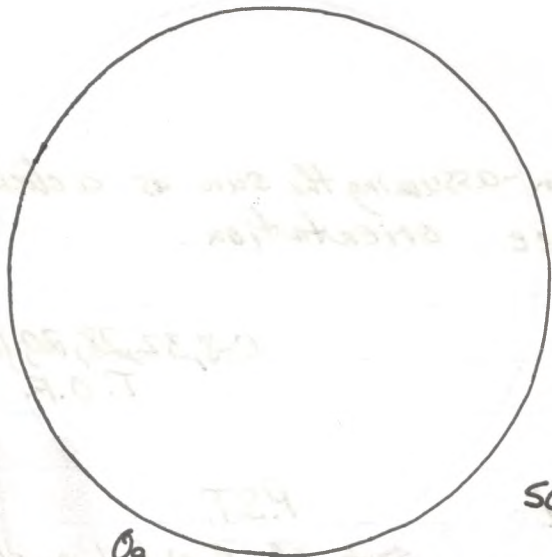
P.S.T., 20, 28, 20E, 15.5

sun in Hx - hints of prominences on the solar disk

Th-F. Apr 24-25 03:00-04:40 UT 00 S X T T 9

ne; 18X50ISB; C-14, 32, 9, 13

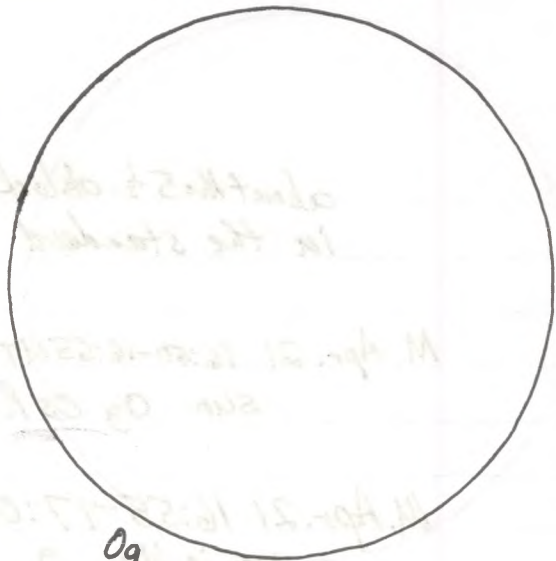
ne: stars of spring; Mars near Castor and Pollux in the NW;
Saturn near Regulus.



09
05
RSNO

Apr. 25
18:10-18:15UT

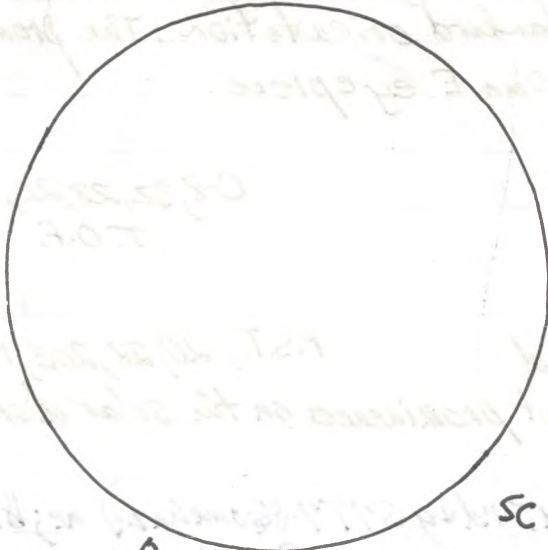
SC



09
05
RSNO

Apr. 27
17:25-17:30UT

SC



09
05
RSNO

Apr. 29
18:55-19:00UT

SC

2008

18x50isb: M104, M65, M66, M95, M96, Saturn, R Leonis - quite faint - perhaps at about mag. 8.5.

C-14, 32: Saturn and at least 3 of its moons - observed at 122X. I also observed Saturn with the 9mm Nagler eyepiece - at 434X and with the 13mm Nagler at 301X. The views were excellent. I also observed M65 and M66 with the 13mm Nagler at 301X.

there was a slight glow in the N. that may have been Auroral.

F. Apr. 25 18:10-18:15 UT t
sun O₉ O₅ RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Su. Apr. 27 17:25-17:30 UT t
sun O₉ O₅ RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Su. Apr. 27 17:30-17:35 UT nd
sun in H α - hints of prominences on the solar disk

P.S.T.; 20, 28, 20E, 15.5

Tu. Apr. 29 18:55-19:00 UT t
sun O₉ O₅ RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Tu. Apr. 29 19:05-19:10 UT nd
sun in H α - hints of prominences on the solar disk.

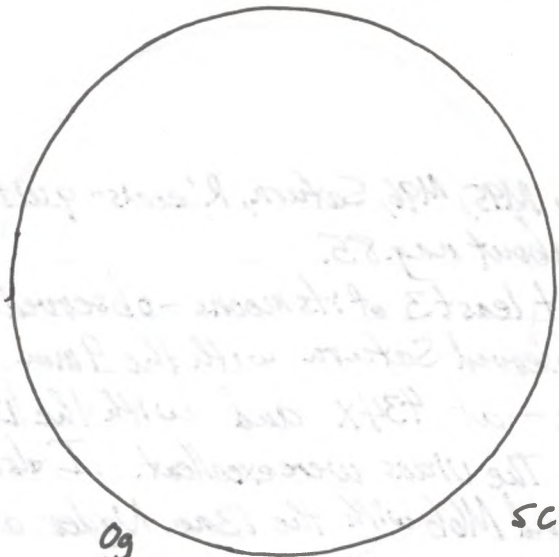
P.S.T., 20, 28, 20E, 15.5

T.W. Apr. 29-30 03:22-04:02 UT y SBT9

ne; 18x50isb

ne: stars of spring; Saturn near Regulus in the W; Mars near Castor and Pollux in the NW.

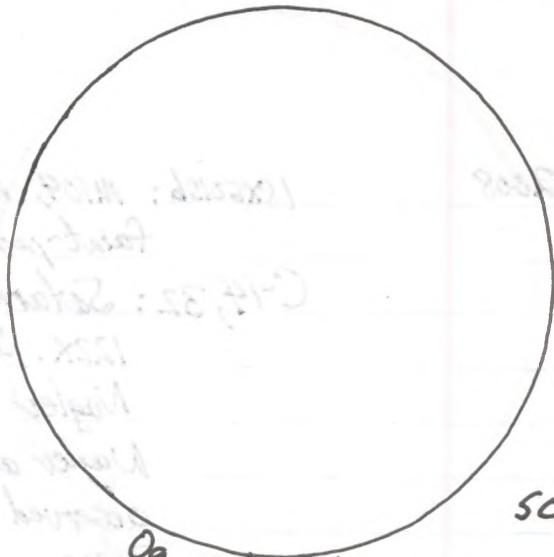
18x50isb: M5, M10, M12, area of Δ Her and Δ Oph, IC4665, M44, M65 and M66, M95 and M96, R Leonis - faint and perhaps at about mag. 8.0, T Cor Bor - seen with some difficulty, area of



Og
05
RSNO

Apr. 30
20:05-20:10 UT

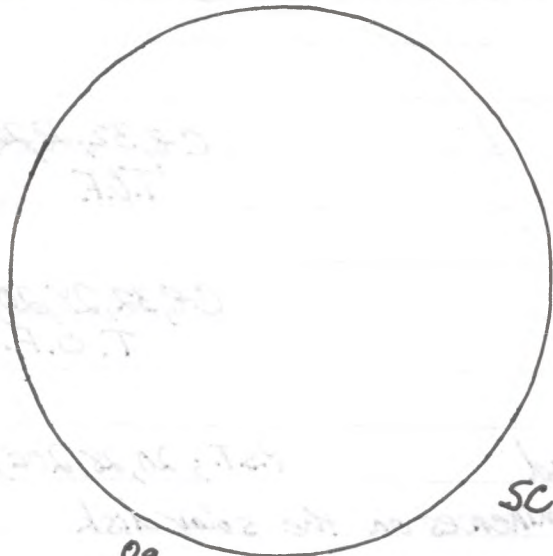
SC



Og
03
RSNO

May 1
17:25-17:30 UT

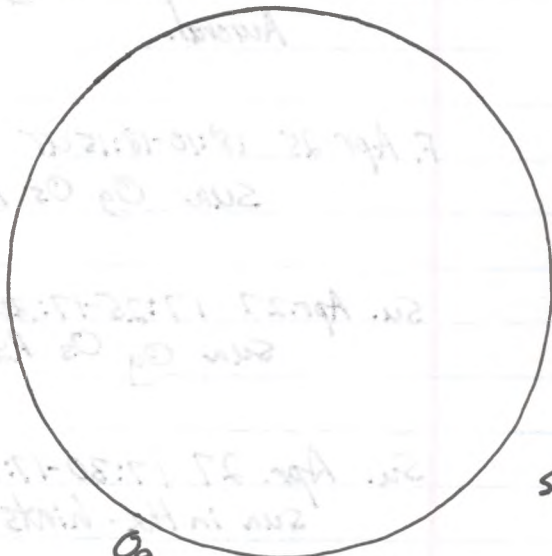
SC



Og
05
RSNO

May 4
21:35-21:40 UT

SC



Og
05
RSNO

May 5
18:05-18:10 UT

SC

2008

α Lib and β Lib.

W. Apr. 30 20:05-20:10 UT t
Sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Th May 1 17:25-17:30 UT t
Sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Th. May 1 17:30-17:35 UT nd
Sun in H α - hints of prominences on the solar disk

P.S.T., 20, 28, 20E, 15.5

S. May 4 21:35-21:40 UT t
Sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

S. May 4 21:40-21:45 UT nd
Sun in H α - hints of prominences on the solar disk.

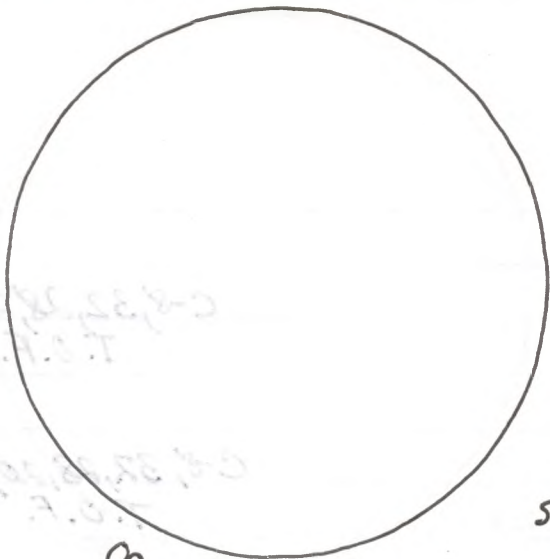
P.S.T., 20, 28, 20E, 15.5

S.-M. May 4-5 02:30-03:10 UT y S7T9
ne: stars of spring. Mars in Gemini in NW; Saturn
near Regulus. Meteor at about mag. 2 in Draco

18X5015b: area of M95 and M96, M65 and M66,
Saturn, R Leonis - Pairi, at perhaps mag.
8.0, M44, Mars and Castor and Pollux,
M104 and area, α Lib and β Lib, M5, M10,
M12, T Cor Bor, R Cor Bor - at perhaps mag. 7.5,
M13, M92, M57, "The Spade" - an asterism in
Ursa Major between δ UMa and θ UMa,
Kemble 2 in Draco, Alcor and Mizar, M101,
"Engagement Ring" asterism near Polaris.

M. May 5 18:05-18:10 UT t
Sun Og Os RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

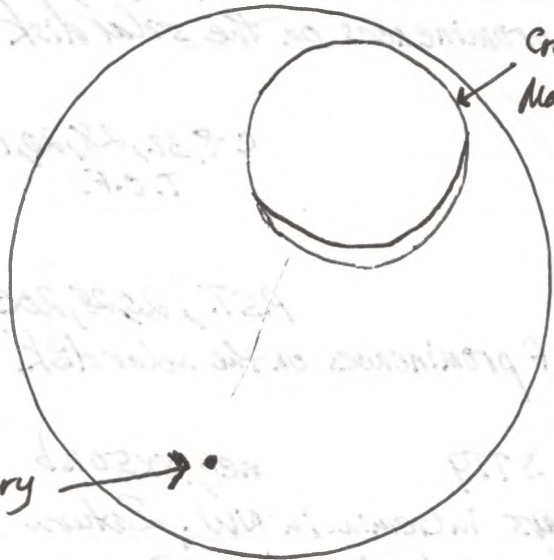
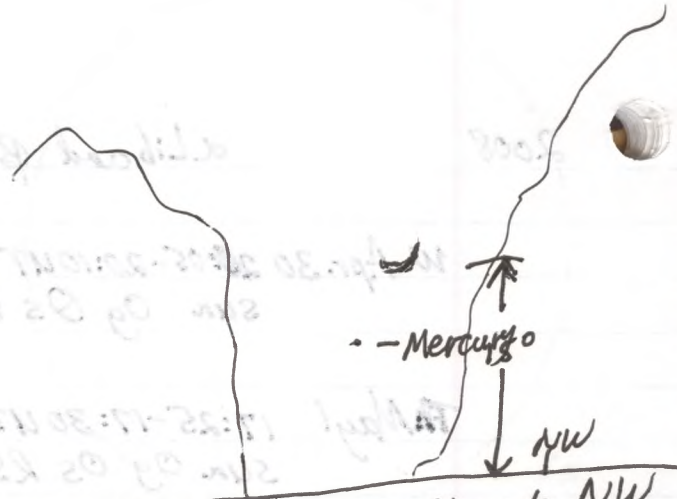


09
05
RSNB

May 6
17:05-17:10 UT

SC

2008, May 7, 1:00 UT View to NW
showing Crescent Moon and Mercury



Crescent
Moon

Mercury

2008, May 7 1:00 UT View of 37-hour
old Crescent Moon and Mercury in 18x50s binoculars

2008 M. May 5 18:10-18:15 UT

P.S.T., 20, 28, 20E, 15.5

Sun in H α - hints of prominences on the solar disk

M.-T. May 5-6 03:10-03:45 UT y S? T5-6 ne; 18X5015b

ne: The skies had rather poor transparency at the start of the session, but they improved later. I saw some of the stars of spring and Mars in the NW and Saturn near Regulus in the W.

18X5015b: M5, M13, M65 and M66; area of M95 and 96 and possibly those two galaxies, R Leonis which was faint - perhaps about mag. 8.2, M44, Mars and Saturn, area of M104, the asterism "The Spade" in Ursa Major, ϵ Lyrae in the E.

Tu. May 6 17:05-17:10 UT t
Sun O γ O δ RSNO

C-8, 32, 28, 20, 15.5
T.O.F.

Tu. May 6 17:15-17:25 UT nd

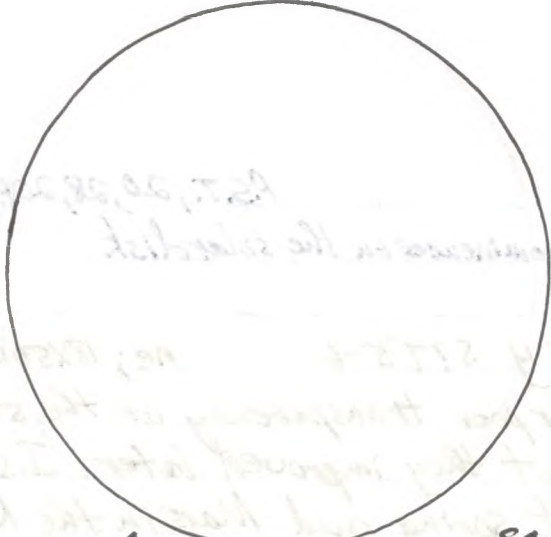
Sun in H α - hints of prominences on the solar disk. Perhaps the atmospheric haze prevented a clearer view of solar prominences

T.-W May 6-7 00:50-01:05 UT y twl ne; 18X5015b

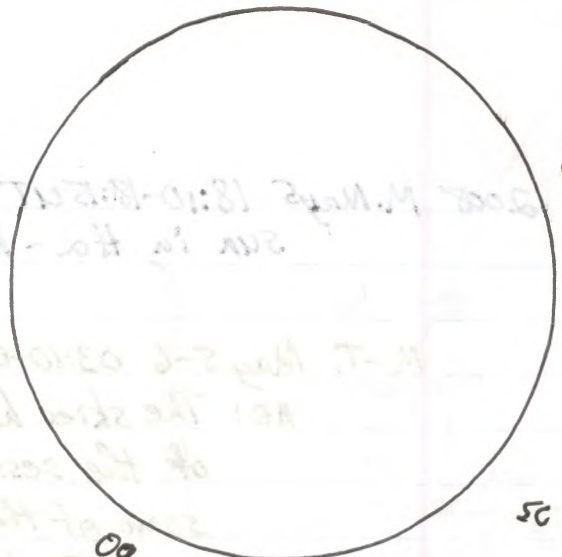
ne: In the NW, about 15° above the horizon, I saw the thin 37-hour old Moon with Mercury just about 1½° down and slightly to its left. Mercury became visible at about 01:00 UT. (See diagram.)

Mercury

18X5015b: Before becoming visible to the naked eye, Mercury was easily seen in the binoculars. Earthshine could be detected in the binoculars within about 10 min. after the session the



Og
OS
RSNO May 8 17:40-17:45UT SC



Og
OS
RSNO May 10 19:55-20:00UT SC

[Faint, mostly illegible handwritten notes in the middle-left section.]

[Faint, mostly illegible handwritten notes in the middle-right section.]

[Faint, mostly illegible handwritten notes in the bottom-left section.]

[Faint, mostly illegible handwritten notes in the bottom-right section.]

2008

earthshine could be easily seen naked-eye.

02:50-04:05 UT y S8T9

ne; 18x5015b

ne: stars of spring, Saturn in the W. near Regulus, Mars in the NW and almost in line with Castor and Pollux.

18x5015b: M5, M10, M12, M13, M82, area of α Her and α Oph, IC4665, Taurus Pontowski, Barnard's Star, area of α and β Lib, searched for Tombaugh's Cluster (NGC 5694) but was not sure of seeing it in the binoculars, Saturn, Mars, R Leonis - faint at perhaps mag 8.2, M65, M66, area of M95 and M96 with the two galaxies possibly seen, Kemble 2, μ Cep - the Garnet Star, the asterism known as "the Spade" in Ursa Major, the "Diamond Ring" of stars near Polaris, M57, M51, Alcor and Mizar.

Th. May 8 17:40-17:45 UT \pm
sun Og Os RSN

C-8, 32, 28, 20, 15.5
T.O.F.

Th. May 8 17:45-17:50 UT nd
sun in HX - hints of prominences on the solar disk

P.S.T., 20, 28, 20E, 15.5

Fri. May 8-9 02:50-03:25 UT y S?T7 (Cal, some) ^{hazy cloud} ne; 18x5015b
ne: stars of spring Saturn, Mars

18x5015b: T Cor Bor seen faintly, area of R Cor Bor, M13, M92, area of M65 & M66, Mars, Saturn
Kemble 2.

Sa. May 10 19:55-20:00 UT Sharbot Lake Beach C-8, 32
sun Og Os RSN at Astronomy Day event T.O.F.

Sa. May 10 20:00-20:05 UT Sharbot Lake Beach P.S.T., 20
sun in HX - only hints of prominences on the solar disk.

Relative Sunspot Numbers.

Date	My
2008	Observations
²⁶²⁰ Apr. 18	0
19	0
20	0
21	0
22	12
24	0
25	0
27	0
29	0
²⁶³⁰ 30	0
May 1	0
4	0
5	0
6	0
8	0
10	0

Relative Supply Numbers

Date	Supply
Apr 12	0
14	0
18	0
21	0
22	15
24	0
25	0
27	0
28	0
30	0
May 1	0
4	0
5	0
6	0
8	0
10	0

