

PROJECT LOG

NAME OF PROJECT Moon: Occultation

Project Begun 9/10/2001 Project Ended 11/30/2001

Seeing Conditions Clear

Binocular Size 20x80

Telescope: Type _____

Aperture _____

Focal Length _____

Eyepiece Focal Length _____

Observational Notes, Comments and Impressions:

I remember seeing Saturn going behind the Moon twice, a couple of years ago or so. I know that this will not count for credit for this program, but I wish to record it here for completeness sake.

The first time was early in the morning. The Sun was up and the Moon was visible overhead, so it was in a waning gibbous phase. I laid on my back on the front walk and watch Saturn approach the edge of the Moon and then disappear. It was a weekday, for I then went back into the house and got ready for work.

The second time was within a couple of months of the previous event. As I remember, there were two Saturn events in very close order. This time it was a Friday night. I remember this for we ate at Red Lobster, which is my wife's and my night out together. We finished dinner in to for me to step out into the parking lot, get my 20x80 binocs out from the car and watch the Saturn approach the edge of the Moon and disappear. My wife and her sister went shopping at Best Buy while I waited for Saturn to reappear from behind the Moon, which is did in about 30 –45 minutes, as I remember. I was amazed at the speed of the Moon as it travels across our sky. It was neat to see Saturn being "eaten" by the Moon, and finally disappear. Then to reappear, bit by bit from the other side of the Moon, that was too cool! I remember the moon phase was not yet 1st quarter on this night.

Using google.com and searching for Saturn Occultation, the first occultation matches the conditions (time and moon phase) for September 10, 2001 and the second occultation matches the conditions (time and moon phase) for November, 30, 2001.

PROJECT LOG

NAME OF PROJECT Mercury - Evening Sky observation

Project Begun 3/19/04 Project Ended 3/20/04

Seeing Conditions 3/19 Poor 3/20 Good

Binocular Size 20x80 on tripod

Telescope: Type 12.5" f/8 Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 19mm

Observational Notes, Comments and Impressions:

3/19/04 - Cloud bands in west. At 6:58 P MST, Mercury was seen under clouds & above horizon. About 7° or so. Observed it naked eye, with 20x80 binocs & telescope. Was boiling alot, but could tell it was a disc, not a point source, & it was not circular, but in some gibbous phase

3/20/04 - Observed much higher in sky, about 10-14°. Boiling & twinkling alot in western sky when viewed through telescope.

PROJECT LOG

NAME OF PROJECT Mercury - Morning Sky Observation

Project Begun 5/23/04 Project Ended 5/23/04

Seeing Conditions Good • Some haze & couple clouds
on eastern horizon.

Binocular Size 7x35

Telescope: Type _____

Aperture _____

Focal Length _____

Eyepiece Focal Length _____

Observational Notes, Comments and Impressions:

Saw naked eye. About 4:39A looked to the eastern sky & picked Mercury out of horizon haze. About same magnitude as when I saw it in the evening sky. Drove to the NE of my town to get a clear view of horizon. With 7x35 binoculars, could easily see it boiling about 5° above horizon, if that much.

PROJECT LOG

NAME OF PROJECT Venus: Daytime Observation

Project Begun 03/30/04 Project Ended 03/30/04

Seeing Conditions Great

Binocular Size _____

Telescope: Type Classical Cassegrain

Aperture 18"

Focal Length f/14.2

Eyepiece Focal Length 40 mm Nagler

Observational Notes, Comments and Impressions:

I took a 2 hr lunch and drove from Boulder, CO to Berthoud, CO to use the Little Thompson Observatory's telescope (www.starkids.org) to see Venus in the daytime.

I observed Venus at 10:45 AM MST, and it was crisp and clear against a light blue background. Venus was much easier to see than after sunset, for it was not so brilliantly bright. It was a first quarter "moon" phase and easily stood out in the field of view.

For the fun of it, I slewed the telescope to Mercury. It was much dimmer and about half the size of Venus, but it was still very easy to see in the field of view. It was a crescent phase, about half way between a "new moon" and first quarter "moon" phase. Very nice. I had previously looked at Mercury at sunset, but the atmosphere in the west was too turbulent to see any detail. But today, it was steady, crisp and clear and easy to see the crescent phase it was in.

PROJECT LOG

NAME OF PROJECT Venus: Phases

Project Begun 3/22/04 Project Ended 5/30/04

Seeing Conditions Good

Binocular Size _____

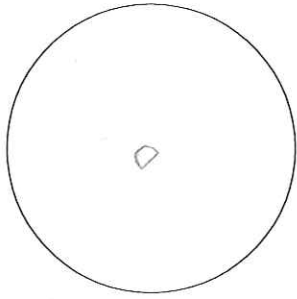
Telescope: Type Reflector

Aperture 8"

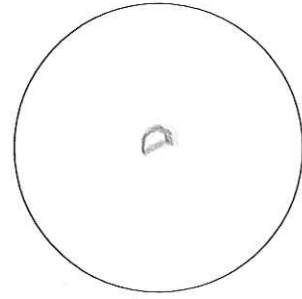
Focal Length f/8

Eyepiece Focal Length 10 mm

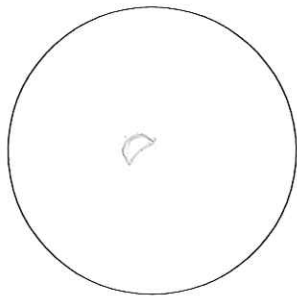
Observational Notes, Comments and Impressions:



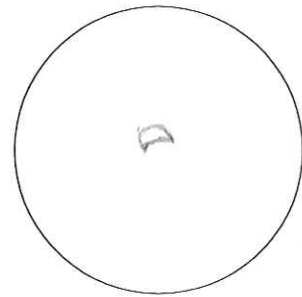
3/22/04
6:30P



3/29/04
7:26P



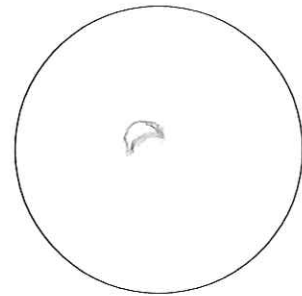
3/4/04
7:44P



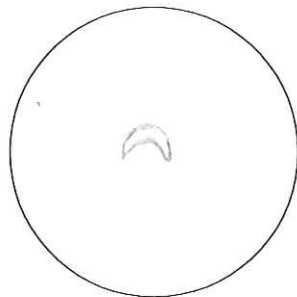
4/12/04
9:23P



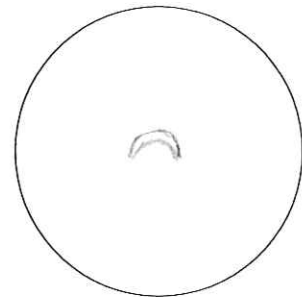
4/18/04
8:31P



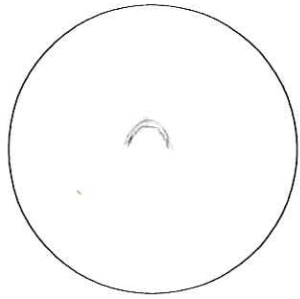
4/25/04
8:12P



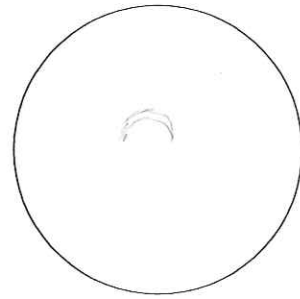
5/2/04
9:06P



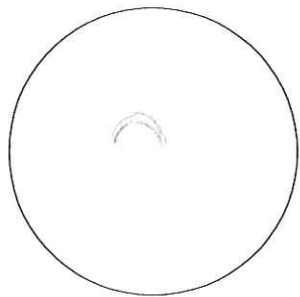
5/9/04
8:38P



5/17/04
9:02 PM

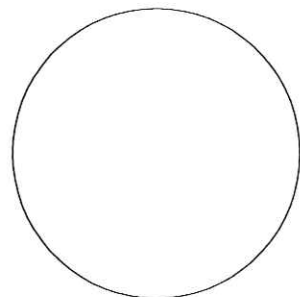
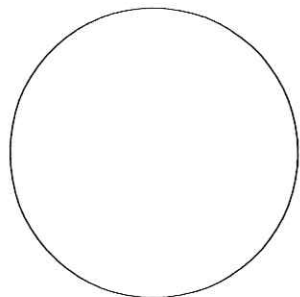
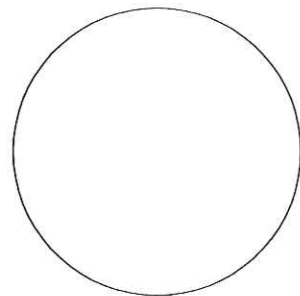
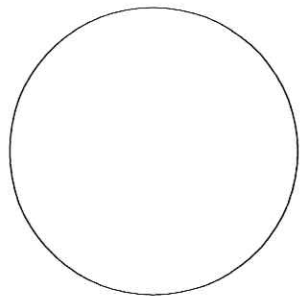
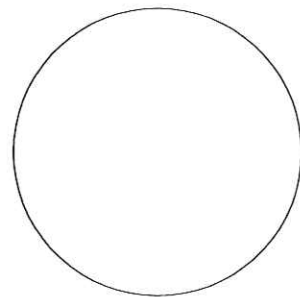


5/25/04
8:39 P



5/30/04
8:45 P

Really low
on horizon
Boiling alot
Fist 2 fingers



PROJECT LOG

NAME OF PROJECT Venus: Low Power Crescent

Project Begun 3/19/04 Project Ended 3/19/04

Seeing Conditions High Thick Clouds

Binocular Size 20x80

Telescope: Type _____

Aperture _____

Focal Length _____

Eyepiece Focal Length _____

Observational Notes, Comments and Impressions:

Looking at Venus through this high cloud deck really helped. Could see it was about $\frac{1}{2}$ crescent.

Used tripod to hold big binocs steady. Did this at 6:33 PM MST.

PROJECT LOG

NAME OF PROJECT Mars: Albedo Features

Project Begun 8/7/03 Project Ended 10/7/03

Seeing Conditions Great

Binocular Size _____

Telescope: Type Reflector - Newtonian

Aperture 12.5"

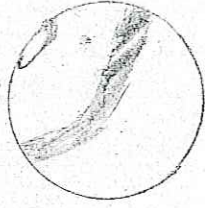
Focal Length f/8

Eyepiece Focal Length 9mm

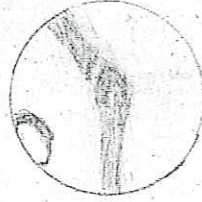
Observational Notes, Comments and Impressions:

Included are several sketches I made of Mars last year. Almost all were done w/my 12.5" f/8, but one set was done looking thru Gary Garzone's 30" f/14.5 at a good magnification. These sketches are copies from my logbook.

My Impressions: I love sketching Mars. I have several sets of sketches corresponding to past oppositions. I love the fact that you can see this much detail on another planets' surface with MY telescope.



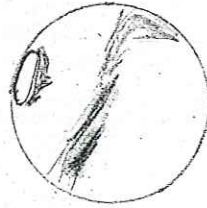
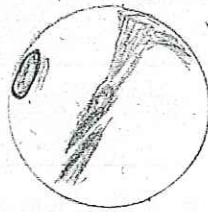
8-10-03
12:34 AM



Gauge 30"

1000 min
12 min

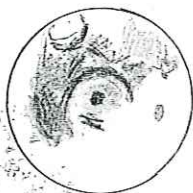
8-11-03
12:00 AM



8-7-03

10 min Red Filter

12:10 AM

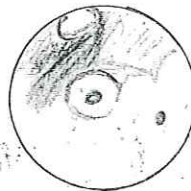


Clear

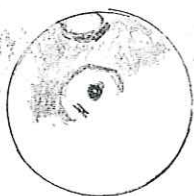
10:37P

10-9 mm

8/22/03



Green



Yellow

9mm

10:54



Red

9mm

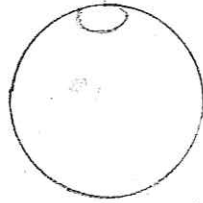
10:59

@ 11:01P
won't take
6 mm
slight breeze from
south
high clouds
drifting thru

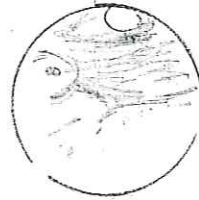
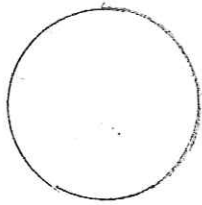
Gaija 30"



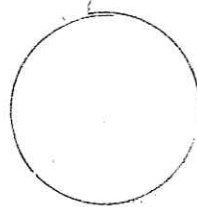
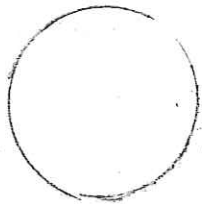
16mm

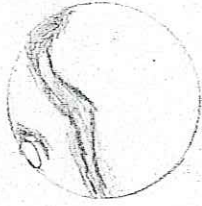


6mm



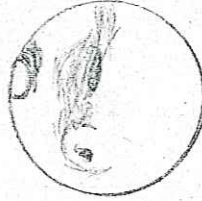
140A





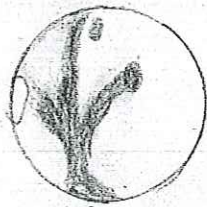
8-13-03

11115P



8-19-03

11145P



9:04P



9:45P

Yellow-
Green
Filter

8-31-03

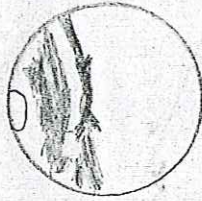
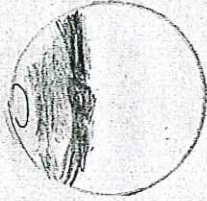
WMB

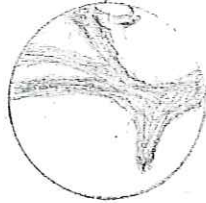
Very Cloudy

8:39 P

9-22-03

9:15 P





LTO 18" ϕ 14.2

10-7-03

6:40P

PROJECT LOG

NAME OF PROJECT Asteroids: Course Plotting

Project Begun 3/30/04 Project Ended 4/1/04

Seeing Conditions Great 1st 2 nights - High Clouds 3rd night

Binocular Size _____

Telescope: Type Newtonian

Aperture 8"

Focal Length f/19

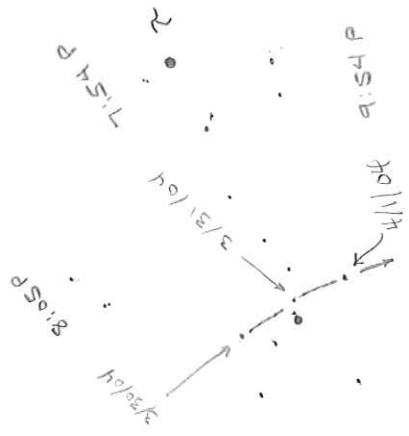
Eyepiece Focal Length 10mm

Observational Notes, Comments and Impressions:

I observed Ceres for 3 nights. On 4/1, an approaching weather system put lots of high clouds in area. I got lucky by waiting for seeing to steady (ie a sucker hole) and got the 3rd reading of Ceres's position. It was cloudy & raining on 4/2 (4th day) & 4/3 (5th day).

Plot of Caves

3/30/04 - 4/1/04



3/30/04



3/31/04

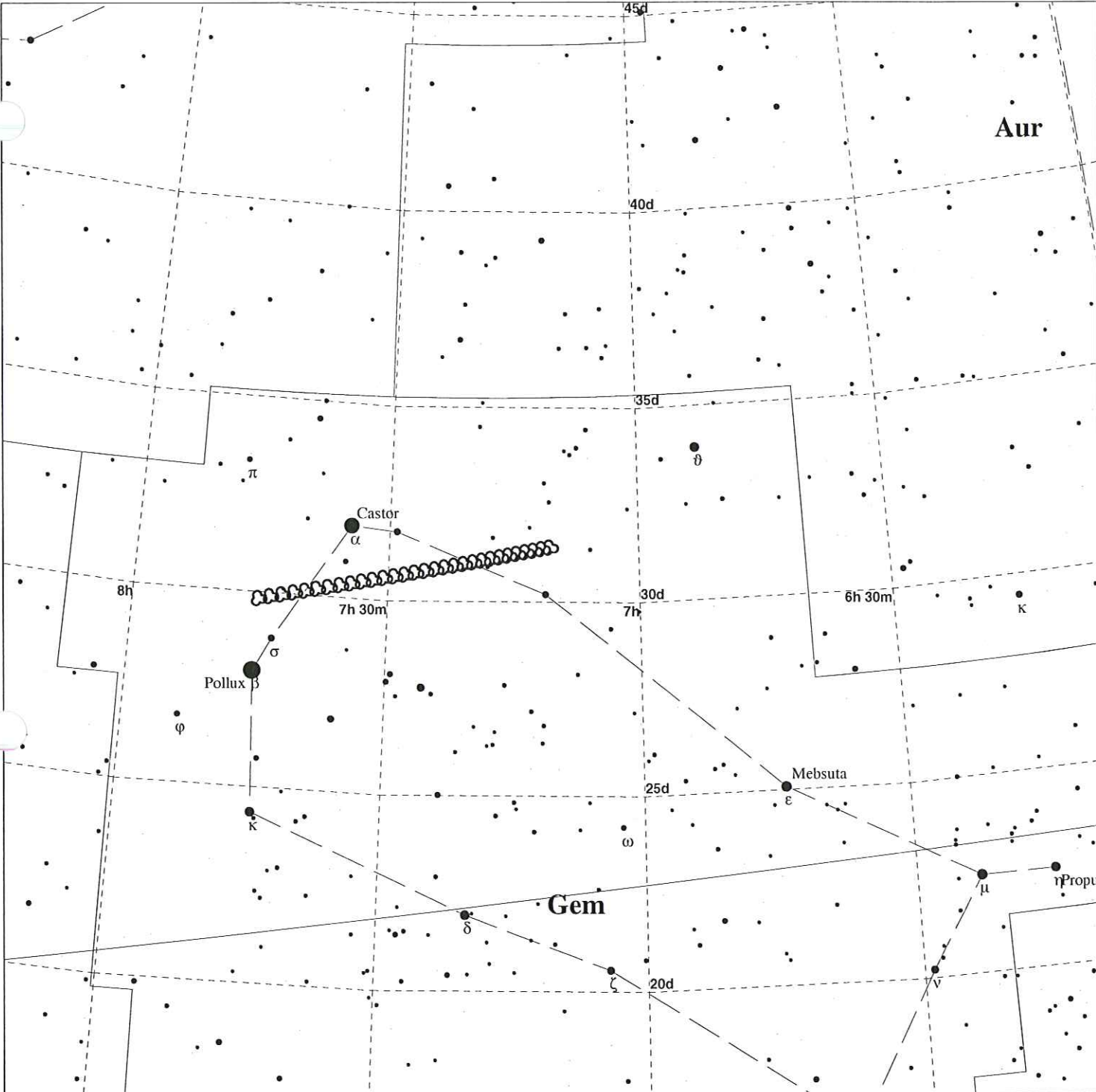
16 mm

It is cloudy
4/2/04

↑
More
detail of
this area

3/31/04

starts 3/30/04

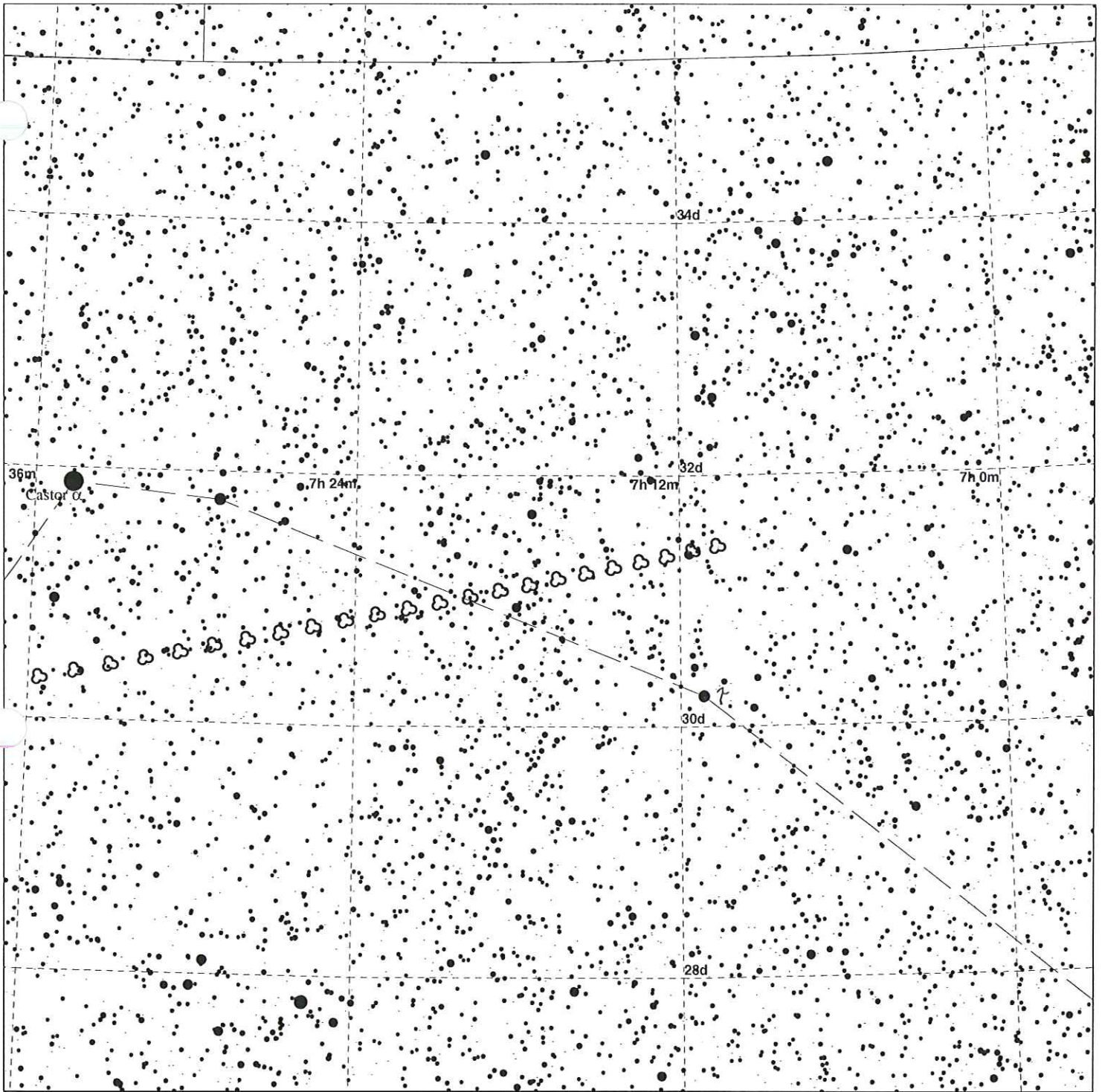


Deepsky 2003 RA: 7h 10m, Dec: 31d 25m, FOV: 26d, Mag: 6

Star Charts By Dean Williams

- | | | | |
|-------------|--------------------|-----------|------------|
| ● ≤ 1.0 | ○ Galaxy | ♿ Mercury | ♃ Pluto |
| ● 1.0 - 2.0 | ○ Open Cluster | ♀ Venus | ☉ Sun |
| ● 2.0 - 3.0 | ⊕ Globular Cluster | ♂ Mars | ☾ Moon |
| ● 3.0 - 4.0 | □ Diffuse Nebula | ♃ Jupiter | ♁ Asteroid |
| ● 4.0 - 5.0 | ◻ Planetary Nebula | ♄ Saturn | ☄ Comet |
| ● 5.0 - 6.0 | ⊙ Variable Star | ♅ Uranus | ♁ Unknown |
| ● > 6.0 | —○ Double Star | ♆ Neptune | |

Path of Ceres - 3/30/04 to 4/21/04



Deepsky 2003 RA: 7h 16m, Dec: 31d 25m, FOV: 8d, Mag: 11

Star Charts By Dean Williams

- ≤ 1.7
- 1.7 - 3.4
- 3.4 - 5.1
- 5.1 - 6.9
- 6.9 - 8.6
- 8.6 - 10.3
- > 10.3

- Galaxy
- Open Cluster
- ⊕ Globular Cluster
- Diffuse Nebula
- ▣ Planetary Nebula
- ⊙ Variable Star
- ⊖ Double Star

- ♿ Mercury
- ♀ Venus
- ♂ Mars
- ♃ Jupiter
- ♄ Saturn
- ♅ Uranus
- ♆ Neptune

- ♇ Pluto
- ☼ Sun
- ☾ Moon
- ♁ Asteroid
- ☄ Comet
- ♁ Unknown



(1) Ceres--Daily Ephemeris

The following daily ephemeris is from the orbital elements on *MPC 24219*:

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V	
2003	12	07	07 50.90	+26 28.5	1.797	2.625	139.4	14.1	7.5
2003	12	08	07 50.56	+26 34.6	1.788	2.624	140.5	13.8	7.5
2003	12	09	07 50.19	+26 40.8	1.779	2.623	141.6	13.5	7.5
2003	12	10	07 49.79	+26 47.1	1.771	2.623	142.7	13.2	7.5
2003	12	11	07 49.36	+26 53.5	1.762	2.622	143.8	12.8	7.4
2003	12	12	07 48.90	+26 59.9	1.754	2.621	144.9	12.5	7.4
2003	12	13	07 48.42	+27 06.4	1.746	2.621	146.0	12.1	7.4
2003	12	14	07 47.90	+27 12.9	1.738	2.620	147.1	11.8	7.4
2003	12	15	07 47.35	+27 19.5	1.731	2.619	148.2	11.4	7.4
2003	12	16	07 46.77	+27 26.2	1.724	2.619	149.3	11.1	7.3
2003	12	17	07 46.17	+27 32.9	1.716	2.618	150.5	10.7	7.3
2003	12	18	07 45.54	+27 39.6	1.710	2.617	151.6	10.3	7.3
2003	12	19	07 44.88	+27 46.4	1.703	2.617	152.7	9.9	7.3
2003	12	20	07 44.19	+27 53.2	1.697	2.616	153.9	9.5	7.2
2003	12	21	07 43.48	+28 00.0	1.691	2.615	155.0	9.2	7.2
2003	12	22	07 42.74	+28 06.9	1.685	2.615	156.1	8.8	7.2
2003	12	23	07 41.97	+28 13.7	1.679	2.614	157.2	8.4	7.2
2003	12	24	07 41.19	+28 20.6	1.674	2.614	158.4	8.0	7.1
2003	12	25	07 40.38	+28 27.4	1.669	2.613	159.5	7.6	7.1
2003	12	26	07 39.54	+28 34.3	1.664	2.612	160.6	7.2	7.1
2003	12	27	07 38.69	+28 41.1	1.660	2.612	161.7	6.8	7.1
2003	12	28	07 37.81	+28 47.9	1.655	2.611	162.8	6.4	7.0
2003	12	29	07 36.92	+28 54.6	1.651	2.610	163.9	6.0	7.0
2003	12	30	07 36.01	+29 01.4	1.648	2.610	164.9	5.6	7.0
2003	12	31	07 35.08	+29 08.0	1.644	2.609	166.0	5.2	7.0
2004	01	01	07 34.13	+29 14.7	1.641	2.609	167.0	4.9	6.9
2004	01	02	07 33.17	+29 21.2	1.638	2.608	167.9	4.5	6.9
2004	01	03	07 32.20	+29 27.7	1.636	2.607	168.8	4.2	6.9
2004	01	04	07 31.22	+29 34.1	1.634	2.607	169.6	3.9	6.9
2004	01	05	07 30.22	+29 40.5	1.632	2.606	170.4	3.6	6.8
2004	01	06	07 29.21	+29 46.7	1.630	2.606	171.0	3.4	6.8
2004	01	07	07 28.20	+29 52.9	1.629	2.605	171.5	3.2	6.8
2004	01	08	07 27.18	+29 59.0	1.627	2.604	171.8	3.1	6.8
2004	01	09	07 26.15	+30 04.9	1.627	2.604	171.9	3.0	6.8
2004	01	10	07 25.11	+30 10.8	1.626	2.603	171.9	3.1	6.8
2004	01	11	07 24.08	+30 16.5	1.626	2.603	171.6	3.1	6.8
2004	01	12	07 23.04	+30 22.1	1.626	2.602	171.2	3.3	6.8
2004	01	13	07 22.00	+30 27.6	1.626	2.602	170.7	3.5	6.8
2004	01	14	07 20.97	+30 33.0	1.627	2.601	170.0	3.8	6.8
2004	01	15	07 19.93	+30 38.3	1.628	2.600	169.2	4.1	6.9
2004	01	16	07 18.90	+30 43.4	1.629	2.600	168.3	4.4	6.9
2004	01	17	07 17.88	+30 48.3	1.630	2.599	167.4	4.7	6.9
2004	01	18	07 16.86	+30 53.2	1.632	2.599	166.4	5.1	6.9
2004	01	19	07 15.85	+30 57.9	1.634	2.598	165.4	5.5	6.9
2004	01	20	07 14.85	+31 02.4	1.636	2.598	164.4	5.9	7.0
2004	01	21	07 13.86	+31 06.8	1.639	2.597	163.3	6.2	7.0
2004	01	22	07 12.88	+31 11.0	1.642	2.596	162.2	6.6	7.0
2004	01	23	07 11.91	+31 15.1	1.645	2.596	161.1	7.0	7.0
2004	01	24	07 10.97	+31 19.1	1.648	2.595	160.0	7.4	7.1
2004	01	25	07 10.03	+31 22.9	1.652	2.595	158.9	7.8	7.1
2004	01	26	07 09.12	+31 26.5	1.656	2.594	157.8	8.3	7.1

2004 01 27	07 08.22	+31 30.0	1.660	2.594	156.7	8.7	7.1
2004 01 28	07 07.35	+31 33.3	1.665	2.593	155.5	9.1	7.1
2004 01 29	07 06.49	+31 36.5	1.669	2.593	154.4	9.4	7.2
2004 01 30	07 05.66	+31 39.5	1.674	2.592	153.3	9.8	7.2
2004 01 31	07 04.85	+31 42.4	1.679	2.591	152.1	10.2	7.2
2004 02 01	07 04.07	+31 45.1	1.685	2.591	151.0	10.6	7.2
2004 02 02	07 03.31	+31 47.7	1.690	2.590	149.9	11.0	7.3
2004 02 03	07 02.58	+31 50.1	1.696	2.590	148.8	11.4	7.3
2004 02 04	07 01.87	+31 52.4	1.703	2.589	147.6	11.8	7.3
2004 02 05	07 01.19	+31 54.6	1.709	2.589	146.5	12.1	7.3
2004 02 06	07 00.54	+31 56.6	1.715	2.588	145.4	12.5	7.3
2004 02 07	06 59.92	+31 58.5	1.722	2.588	144.3	12.9	7.4
2004 02 08	06 59.32	+32 00.2	1.729	2.587	143.2	13.2	7.4
2004 02 09	06 58.76	+32 01.8	1.736	2.587	142.1	13.6	7.4
2004 02 10	06 58.22	+32 03.3	1.744	2.586	141.0	13.9	7.4
2004 02 11	06 57.72	+32 04.7	1.752	2.586	139.9	14.2	7.5
2004 02 12	06 57.25	+32 05.9	1.759	2.585	138.8	14.6	7.5
2004 02 13	06 56.81	+32 07.0	1.767	2.585	137.8	14.9	7.5
2004 02 14	06 56.40	+32 08.0	1.776	2.584	136.7	15.2	7.5
2004 02 15	06 56.02	+32 08.9	1.784	2.584	135.6	15.5	7.5
2004 02 16	06 55.68	+32 09.6	1.792	2.583	134.6	15.8	7.6
2004 02 17	06 55.37	+32 10.3	1.801	2.583	133.5	16.1	7.6
2004 02 18	06 55.09	+32 10.8	1.810	2.582	132.5	16.4	7.6
2004 02 19	06 54.84	+32 11.3	1.819	2.582	131.4	16.7	7.6
2004 02 20	06 54.63	+32 11.6	1.828	2.581	130.4	17.0	7.6
2004 02 21	06 54.45	+32 11.8	1.838	2.581	129.4	17.2	7.7
2004 02 22	06 54.31	+32 12.0	1.847	2.580	128.4	17.5	7.7
2004 02 23	06 54.20	+32 12.0	1.857	2.580	127.4	17.7	7.7
2004 02 24	06 54.12	+32 12.0	1.867	2.579	126.3	18.0	7.7
2004 02 25	06 54.08	+32 11.9	1.877	2.579	125.4	18.2	7.7
2004 02 26	06 54.07	+32 11.6	1.887	2.579	124.4	18.5	7.8
2004 02 27	06 54.09	+32 11.3	1.897	2.578	123.4	18.7	7.8
2004 02 28	06 54.14	+32 10.9	1.907	2.578	122.4	18.9	7.8
2004 02 29	06 54.23	+32 10.5	1.918	2.577	121.4	19.1	7.8
2004 03 01	06 54.35	+32 09.9	1.928	2.577	120.5	19.4	7.8
2004 03 02	06 54.51	+32 09.3	1.939	2.576	119.5	19.6	7.9
2004 03 03	06 54.69	+32 08.6	1.950	2.576	118.6	19.8	7.9
2004 03 04	06 54.91	+32 07.8	1.961	2.575	117.7	19.9	7.9
2004 03 05	06 55.16	+32 07.0	1.972	2.575	116.7	20.1	7.9
2004 03 06	06 55.43	+32 06.0	1.983	2.574	115.8	20.3	7.9
2004 03 07	06 55.74	+32 05.1	1.994	2.574	114.9	20.5	7.9
2004 03 08	06 56.08	+32 04.0	2.005	2.574	114.0	20.6	8.0
2004 03 09	06 56.45	+32 02.9	2.017	2.573	113.1	20.8	8.0
2004 03 10	06 56.85	+32 01.7	2.028	2.573	112.2	20.9	8.0
2004 03 11	06 57.28	+32 00.5	2.040	2.572	111.3	21.1	8.0
2004 03 12	06 57.74	+31 59.1	2.051	2.572	110.4	21.2	8.0
2004 03 13	06 58.23	+31 57.8	2.063	2.572	109.5	21.4	8.0
2004 03 14	06 58.74	+31 56.3	2.074	2.571	108.6	21.5	8.1
2004 03 15	06 59.29	+31 54.8	2.086	2.571	107.8	21.6	8.1
2004 03 16	06 59.86	+31 53.3	2.098	2.570	106.9	21.7	8.1
2004 03 17	07 00.46	+31 51.7	2.110	2.570	106.1	21.8	8.1
2004 03 18	07 01.08	+31 50.0	2.122	2.569	105.2	21.9	8.1
2004 03 19	07 01.73	+31 48.2	2.134	2.569	104.4	22.0	8.1
2004 03 20	07 02.41	+31 46.5	2.146	2.569	103.5	22.1	8.2
2004 03 21	07 03.11	+31 44.6	2.158	2.568	102.7	22.2	8.2
2004 03 22	07 03.84	+31 42.7	2.170	2.568	101.9	22.3	8.2
2004 03 23	07 04.60	+31 40.7	2.182	2.568	101.1	22.4	8.2
2004 03 24	07 05.38	+31 38.7	2.195	2.567	100.3	22.5	8.2
2004 03 25	07 06.18	+31 36.6	2.207	2.567	99.5	22.5	8.2
2004 03 26	07 07.01	+31 34.5	2.219	2.566	98.7	22.6	8.2

2004 03 27	07 07.86	+31 32.3	2.231	2.566	97.9	22.7	8.3
2004 03 28	07 08.73	+31 30.1	2.244	2.566	97.1	22.7	8.3
2004 03 29	07 09.63	+31 27.7	2.256	2.565	96.3	22.8	8.3
2004 03 30	07 10.55	+31 25.4	2.268	2.565	95.5	22.8	8.3
2004 03 31	07 11.49	+31 23.0	2.281	2.565	94.8	22.8	8.3
2004 04 01	07 12.45	+31 20.5	2.293	2.564	94.0	22.9	8.3
2004 04 02	07 13.43	+31 18.0	2.305	2.564	93.2	22.9	8.3
2004 04 03	07 14.43	+31 15.4	2.318	2.564	92.5	22.9	8.3
2004 04 04	07 15.46	+31 12.7	2.330	2.563	91.7	23.0	8.4
2004 04 05	07 16.50	+31 10.0	2.343	2.563	91.0	23.0	8.4

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PROJECT LOG

NAME OF PROJECT Asteroids: Measuring their Movement

Project Begun 3/30/04 Project Ended 4/1/04

Seeing Conditions _____

Binocular Size _____

Telescope: Type _____

Aperture _____

Focal Length _____

Eyepiece Focal Length _____

Observational Notes, Comments and Impressions:

To calibrate my drawing, the difference between my ϵ Gemini & close bright star is 1.495". The difference on Deepsky 2003 chart is 1.020". On DS 2003 chart, a degree is 0.888", so a degree on my drawing is:

$$\frac{1.020}{0.888} = \frac{1.495}{x} \Rightarrow 1.020x = (1.495)(0.888) \Rightarrow x = 1.302''$$

$$\Delta 1^{\text{st}} \rightarrow 2^{\text{nd}} \text{ observation} = 0.330'' \Rightarrow \div 24 = 0.01375 \text{ inch/hr}$$

$$\Delta 2^{\text{nd}} \rightarrow 3^{\text{rd}} \text{ observation} = 0.296'' \Rightarrow \div 24 = 0.0123 \text{ inch/hr}$$

$$\text{Avg movement of Ceres /hr} = 0.01304''$$

it will take Ceres 99.85 hours
or 4.16 days

I used calipers to measure my drawings & not a mm ruler.

PROJECT LOG

NAME OF PROJECT Jupiter: The Great Red Spot

Project Begun 03/29/04 Project Ended 03/29/04

Seeing Conditions Good-Great

Binocular Size _____

Telescope: Type Newtonian

Aperture 8"

Focal Length f/8

Eyepiece Focal Length 9 mm Nagler

Observational Notes, Comments and Impressions:

This was a neat project. I have never looked at the GRS like this before. There was a haze drift across Jupiter most of the evening.

At 7:37 PM, I first looked at Jupiter and saw two moon shadows on the planet's surface. I could see the GRS on the right hand side of the planet. I tried several filters to see if it enhanced the spot, but the extra glass cut down the intensity of the spot, so I didn't use any filters.



Throughout the observation, the seeing would steady for several seconds, allowing me to easily see the GRS. At other times, the GRS was invisible. It was hard to tell when the edges of the GRS was on the meridian. I noted several times and then looked again, and it seemed like the next time was a better choice. I used the two moons to help me identify when the GRS was centered on the meridian.



At 8:14:16 PM, I noted the best orientation to the left hand side of the GRS touching the Meridian.

At 8:32:10 PM, I noted the GRS was equidistant from each side of the planet. The predicted time for the GRS being centered on the meridian was 8:36 PM. But at this time, it was definitely past half way across the planet.

At 8:50:40, I noted the right hand side of the GRS was touching the meridian.

Other Jupiter events I noticed this evening. I detected 7 red bands and 6 white zones on the planet's surface. The band where the GRS was located was a nice double band. The seeing was really good at times.

At 9:02:30 PM, I noted the following configuration of tonight's Jupiter events



The moon shadows: At 8:38:45, I could see the 1st moon (Europa) emerging from the edge of the planet. The 3rd contact for this moon's shadow was at 9:11:30 PM and was completed off the disc of the planet at 9:14:36 PM. I also noted that the shadow at the edge of the disc was a tiny pinpoint of light as compared to the jet-black disc when it was in the center of the planet.

The second moon (Io) emerged from the disk of the planet at 8:54 PM. I didn't wait for the moon to exit the planet's surface.

PROJECT LOG

NAME OF PROJECT Jupiter: The Galilean Satellites

Project Begun 3/19/04 Project Ended 3/24/04

Seeing Conditions Good - Fair

Binocular Size _____

Telescope: Type Newtonian

Aperture 8"

Focal Length f/8

Eyepiece Focal Length 19mm

Observational Notes, Comments and Impressions:

This exercise was difficult to do because of all the P/c → cloudy evenings, but I got 6 nights in a row.

3/19/04
6:40P
• • O • •
E I C G

3/20/04
6:52P
• O • •
E G I C

3/21/04
7:10P
• O • •
G I E C

3/22/04
7:11P
• O • •
G I E C

8:03P
• O • •
G E C

3/23/04
8:37P
• • O • •
E G I C

3/24/04
9:49P
• O • •
I G E C

↖ drift

← Io in occultation

PROJECT LOG

NAME OF PROJECT Jupiter: The Cloud Belts

Project Begun 3/20/04 Project Ended 3/20/04

Seeing Conditions Good

Binocular Size _____

Telescope: Type Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 10mm & 19mm

Observational Notes, Comments and Impressions:

This is what I
saw at 6:52 PM MST.



PROJECT LOG

NAME OF PROJECT Jupiter: Satellite Discovery

Project Begun 3/19/04 Project Ended 3/24/04

Seeing Conditions Good for the most part

Binocular Size 20x80

Telescope: Type _____

Aperture _____

Focal Length _____

Eyepiece Focal Length _____

Observational Notes, Comments and Impressions:

In looking at Jupiter with my binoculars, I am very impressed as to what Galileo did with his observations, deducing that they "orbited" Jupiter and were very much like our Sun and solar system. Through my binoculars, I could clearly see the moons, and then went to my telescope to capture the moons positions for another section of this observing club.

Galileo must have had good eyes to discern which moon was which, from night to night. I am assuming that he plotted their positions and then deduced which moon was which from night to night. Callisto is easy for it doesn't move much from night to night, but the other three do. Io would be easy to deduce, for it moves the fastest, and he/I could see this if I waited an hour and looked again.

I wonder what Galileo thought with the transit and occultation of the moons? He would have been hard pressed to see the moon on the surface of Jupiter, but the disappearance and reappearance of the moons must have blown his mind. Especially an occultation, when the moon disappeared behind the planets' edge, to reappear, not at the planets' edge on the other side, but some distance from the disc.

I prefer a telescope with magnification ;-) when looking at Jupiter. I am so spoiled.

PROJECT LOG

NAME OF PROJECT Jupiter: Satellite and Shadow Transits

Project Begun 3/20/04 Project Ended 3/20/04

Seeing Conditions Great, sky clearing and became steady

Telescope: Type Newtonian

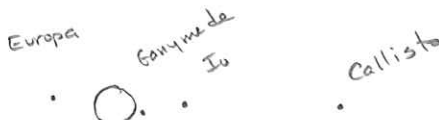
Aperture 12.5 inch

Focal Length f/8

Eyepiece Focal Length 19mm (133x) and 10mm (254x)

Observational Notes, Comments and Impressions:

Early in the evening, lower power showed the event the best, but as the evening progressed, higher power could be used. Up at Pawnee Grasslands, where a large group of people observed this event. The views were seen in everyone's telescope I looked through, but I will describe what I saw in my telescope. At 6:51 PM MST, the moons looked like:



First contact of Ganymede was at 7:27:51. At 7:54 PM MST, can see Ganymede on surface of Jupiter. It's on the white part of Jupiter, just under (Newtonian image inverted) the main red band. It is a *darker* circle on inside edge of planet disc where it just went onto the disc from the edge of the planet.

8:05 PM MST, my eye is easily drawn to Ganymede on the surface. Seeing is poor but it makes Jupiter viewing great. High thin clouds everywhere with large sucker holes coming and going. Dropped down to 19mm and can easily see Ganymede on the surface of Jupiter.

At 9:15:44, Europa just disappeared behind Jupiter. Ganymede can be seen on planet's surface, with shadow now on disc. The shadow is a jet-black dot and larger than the dark dot of Ganymede.

At 10:47 PM MST, Ganymede just left planet's surface. Can see its starlike appearance just next to Jupiter's disc. Ganymede and Io's shadow easily seen on planet's disc. Can't see Io. Io's shadow is just at top of large red band while Ganymede's shadow is well under this band in white part of Jupiter.

At 1:15 PM MST, can see Io just ahead of its shadow. It is leading the shadow, positioned at about 8 o'clock position. Io is in the main red band, but is off color enough to be easily seen. The color difference is subtle, yet easy to spot Io itself. Both shadows are large jet-black dots, much larger than the dots of the moons.

It was strange to see Jupiter with only 1 moon against the dark sky.

While waiting for Europa to reappear, I noticed that now both Ganymede and Io are on the left hand side of Jupiter and I watched Io's shadow leave the disc of the planet. Then a bit later, Europa reappeared from behind Jupiter's shadow.



PROJECT LOG

NAME OF PROJECT Jupiter: Satellite Occultation

Project Begun 3/20/04 Project Ended 3/21/04

Seeing Conditions Great

Binocular Size _____

Telescope: Type Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 19mm

Observational Notes, Comments and Impressions:

I watched Europa disappear behind Jupiter's disc at 9:15:44 PM MST & reappear from Jupiter's shadow at 00:52:07 AM MST.

The web site www.projectpluto.com/event.com indicates occultation start at 9:16 PM & eclipse end at 00:52 AM. I synced my watch with WWV 2.5 KHz (?) before event started. Tom Tetens had a radio that received WWV.

I didn't realize the Jupiter shadow part of this occultation until Europa "appeared" way away from the planet. How cool! I noted a occultation ending at 12:00 AM or so, but watch intently for next 52 minutes for I thought I had calculated the UT \rightarrow MST wrong (reappear at 1:00 AM MST). I watched 2 moons "lead" their shadows tonight, and I did add 2+2 to realize Europa would do the same thing.

PROJECT LOG

NAME OF PROJECT Saturn: The Rings

Project Begun 3/20/04 Project Ended 3/20/04

Seeing Conditions High Clouds

Binocular Size _____

Telescope: Type Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 10mm (254x)

Observational Notes, Comments and Impressions:



← drift

PROJECT LOG

NAME OF PROJECT Saturn: The Cassini Division

Project Begun 3/20/04 Project Ended 3/20/04

Seeing Conditions Good

Binocular Size _____

Telescope: Type Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 19mm & 10mm

Observational Notes, Comments and Impressions:

Cassini's Division is easily seen in my telescope. Tonight, the division was crisp & jet-black. It jumped right out at me. It circled the entire ring & was obscured only by Saturn's disc blocking the ring in that part.

PROJECT LOG

NAME OF PROJECT Saturn: Disk Markings

Project Begun 3/20/04 Project Ended 3/20/04

Seeing Conditions Good

Binocular Size _____

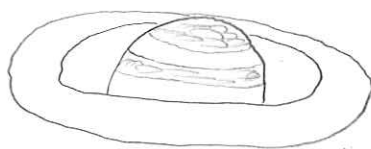
Telescope: Type Newtonian

Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 10 mm

Observational Notes, Comments and Impressions:



My telescope inverts the image. Can tell "southern" hemisphere is darker. Saturn has a creme color to the disc, & these bands were brown in color. They were easy to see both colorations.

I only saw the southern hemisphere coloration & one nice band.

PROJECT LOG

NAME OF PROJECT Saturn: The Satellites

Project Begun 3/20/04 6:45P Project Ended 3/20/04

Seeing Conditions Good

Binocular Size _____

Telescope: Type Newtonian

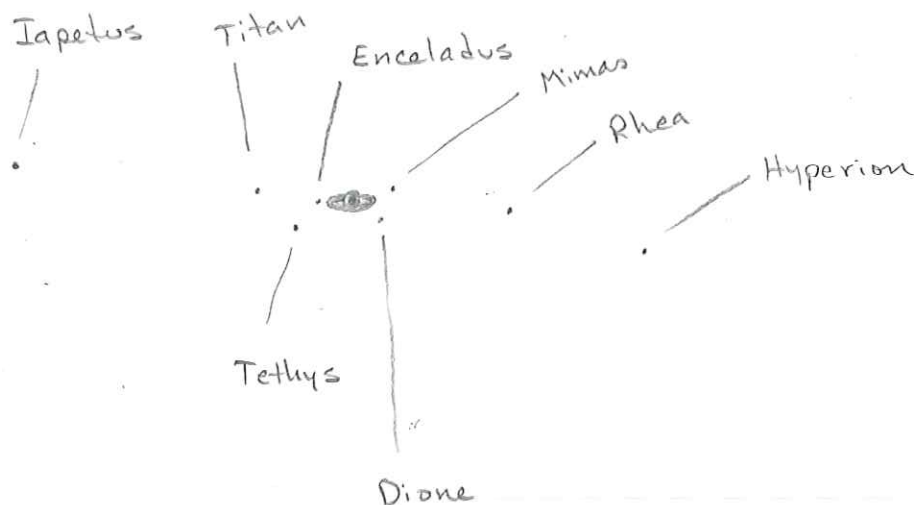
Aperture 12.5"

Focal Length f/8

Eyepiece Focal Length 19mm

Observational Notes, Comments and Impressions:

I made the following observation from the
Pawnee Grasslands, CO at 6:45 PM MST. I saw
8 moons.



PROJECT LOG

NAME OF PROJECT Uranus: Location

Project Begun 2/16/2004 Project Ended 2/16/2004

Seeing Conditions Good

Binocular Size _____

Telescope: Type Classical Cass

Aperture 18"

Focal Length f/14.2

Eyepiece Focal Length 40mm

Observational Notes, Comments and Impressions:

While hosting a group of high school students at the LTD observatory (www.startkids.org), we swung the telescope to Uranus. I like this view, for you can tell it is a disc, not a point source. I looked at Uranus many years ago, I remember a green tint, but on this night, it had a very light blue sheen. It was positioned over the Denver, CO light dome. The disc was small, but very easy to see.

PROJECT LOG

NAME OF PROJECT Neptune: Identifying

Project Begun 2/16/2004 Project Ended 2/16/2004

Seeing Conditions Good

Binocular Size _____

Telescope: Type Classical Cass

Aperture 18"

Focal Length f/14.2

Eyepiece Focal Length 40mm

Observational Notes, Comments and Impressions:

While hosting a group of high school students at the LTO observatory (www.starkids.org) we swung the telescope to Neptune.

You can tell it was a disc, not a point source.

A bit smaller than Uranus's disc, it was easy to see this planet had a nice blue color.