



## Aspect of the sky from 50° 45' N : 2 00' W at 21:00 UTC

Chart from [www.fourmilab.ch](http://www.fourmilab.ch)

**Lunar Phases:** New: Nov. 1<sup>st</sup> at 12:27; First Qtr: Nov. 9<sup>th</sup> at 05:56; Full: Nov. 15<sup>th</sup> at 21:28 and Last Qtr: Nov. 23<sup>rd</sup> at 01:28

**Apsides:** Apogee (furthest) Nov. 26<sup>th</sup> at 11:55, 405314 Km (29' 28"); Perigee (closest) Nov. 14<sup>th</sup> at 11:15 360109 Km, (32' 36')

**Mercury (♿):** Reaches max eastern elongation (22°) on the 19<sup>th</sup> in the evening sky, mag.-0.2. after which it rapidly moves in toward the Sun. Inferior conjunction is on the 5<sup>th</sup> of next month.

**Venus (♀):** opens the month 38° east of the Sun in the evening sky. It reaches 44° east of the Sun by month's end, mag.-4.2.and will be 10° above the western horizon by dusk.

**Mars (♂):** moves between Gemini and the small constellation Cancer during the month. Mars is visible all night, mag. -0.1. Moon close on the 20<sup>th</sup> at 20:55 just as Mars is rising.

**Jupiter (♃):** is visible all night, rising at 18:30 on the 1<sup>st</sup>, mag. -2.7.and visible till dawn. Moon close on the 17<sup>th</sup>.

**Saturn (♄):** is now in the SW sky, below the right-hand side of the square of Pegasus, and setting at 23:45 by end of month, mag. 0:9. Moon is close on the 10<sup>th</sup>.

**Uranus (♅):** comes to opposition on the 17<sup>th</sup> and is thus visible all night, between Aries and Taurus, 24° west of Jupiter. It is well placed for observation at mag 5.6, presenting a small green disk at 3.77". in a telescope eyepiece. Moon near on the 15<sup>th</sup>.

**Neptune (♆):** is 13° east of Saturn, setting at 01:30 mid-month, mag 7.8, diameter 2.4". Moon near on the 11<sup>th</sup>.

**Sunrise set times:** All times in UTC

Date	Rise	Transit	Set	Date	Rise	Transit	Set
01 Nov 2024	07:00:15	11:51:33	16:42:10	21 Nov 2024	07:33:45	11:53:58	16:13:42
06 Nov 2024	07:08:49	11:51:39	16:33:49	26 Nov 2024	07:41:24	11:55:25	16:09:02
11 Nov 2024	07:17:20	11:52:04	16:26:13	01 Dec 2024	07:48:29	11:57:11	16:05:34
16 Nov 2024	07:25:41	11:52:51	16:19:28				

**Moonrise set times:**

Date	Rise	Transit	Set	Date	Rise	Transit	Set
01 Nov 2024	07:01:54	11:46:02	16:19:21	21 Nov 2024	21:44:01	04:52:07	12:59:33
06 Nov 2024	12:38:32	16:01:59	19:29:02	26 Nov 2024	02:28:55	08:22:13	14:01:54
11 Nov 2024	14:36:07	20:21:29	00:58:17	01 Dec 2024	08:30:43	12:06:14	15:36:49
16 Nov 2024	16:12:13	--:--:--	08:28:53				

**B Persei, (Algol)** (Mag 2.1 to 3.4) – the 2 visible minima are:

3<sup>rd</sup> at 02:35; 5<sup>th</sup> at 23:25; 8<sup>th</sup> at 20:14; 11<sup>th</sup> at 17:00; 23<sup>rd</sup> at 04:15; 26<sup>th</sup> at 01:05 and 28<sup>th</sup> at 21:55.

**RZ Cassiopeiae** (mag 6.2 to 7.7) – the visible minima are:

1<sup>st</sup> at 19:09; 2<sup>nd</sup> at 23:50; 4<sup>th</sup> at 04:30; 7<sup>th</sup> at 18:35; 8<sup>th</sup> at 23:15; 10<sup>th</sup> at 03:55; 13<sup>th</sup> at 18:00; 14<sup>th</sup> at 22:40; 16<sup>th</sup> at 03:20; 20<sup>th</sup> at 22:07; 22<sup>nd</sup> at 02:48; 26<sup>th</sup> at 21:30 and 28<sup>th</sup> at 02:12.

**Lambda Tauri** (mag 3.4 to 3.9) – the visible minima this month are:

3<sup>rd</sup> at 01:04; 7<sup>th</sup> at 00:05; 10<sup>th</sup> at 22:58; 14<sup>th</sup> at 21:50; 18<sup>th</sup> at 20:40; 22<sup>nd</sup> at 19:35; 26<sup>th</sup> at 18:25 and 30<sup>th</sup> at 17:20.

For observation of the ISS during the month, see page 3. For those on the web, log-in to <http://www.heavens-above.com>. Timings for the ACS3 solar sail are also given.

Durlston Update. The next Durlston event was scheduled for the 9<sup>th</sup> of November, but had been cancelled due to a poor weather forecast, so it has now been rescheduled for November 30<sup>th</sup> when Mars, Jupiter Saturn, Uranus and Neptune will be observed together with the Autumn/Winter constellations – weather permitting.

**Solar news**

There were several notable geomagnetic events in October. Cycle 25 is well and truly here. running.

Timings for Jupiter's **Great Red Spot (GRS)**: are as follows,

2<sup>nd</sup> at 02:07 and 22:00; 4<sup>th</sup> at 03:46 and 23:37; 5<sup>th</sup> at 19:29; 7<sup>th</sup> at 01:16 and 21:08; 9<sup>th</sup> at 02:55 and 22:47; 11<sup>th</sup> at 04:34; 12<sup>th</sup> at 00:26 and 20:17; 13<sup>th</sup> at 06:13; 14<sup>th</sup> at 02:05 and 21:56; 16<sup>th</sup> at 03:43 and 23:35; 17<sup>th</sup> at 19:27; 19<sup>th</sup> at 21:06; 21<sup>st</sup> at 02:53 and 22:45; 23<sup>rd</sup> at 04:32; 24<sup>th</sup> at 20:15; 26<sup>th</sup> at 21:54; 28<sup>th</sup> at 23:33 and 29<sup>th</sup> at 19:25.

**Meteor Activity:**

The 'major' shower is the Leonids peaking on 17<sup>th</sup>, but has low activity these days.

Good observing Robert Hatch 01 November 2024 - continued on page 3

## ***Passes of the ISS for November.***

Date	Brightness (mag)	-----Start-----			---- Highest point--			-----End-----			Pass type
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.	

Evening passes:

14 Nov -1.4	18:13:37	10°	S	18:14:27	13°	SSE	18:14:27	13°	SSE	visible
15 Nov -1.3	18:57:56	10°	SW	18:58:58	18°	SSW	18:58:58	18°	SSW	visible
16 Nov -2.5	18:07:43	10°	SSW	18:10:33	26°	SSE	18:10:33	26°	SSE	visible
17 Nov -1.8	17:17:44	10°	S	17:20:02	18°	SE	17:21:59	12°	ESE	visible
17 Nov -2.0	18:52:54	10°	WSW	18:54:45	30°	SW	18:54:45	30°	SW	visible
18 Nov -3.3	18:02:16	10°	SW	18:05:27	47°	SSE	18:06:02	41°	ESE	visible
18 Nov -0.2	19:38:39	10°	W	19:38:47	11°	W	19:38:47	11°	W	visible
19 Nov -2.7	17:11:42	10°	SW	17:14:41	32°	SSE	17:17:12	13°	E	visible
19 Nov -2.4	18:47:45	10°	WSW	18:49:57	39°	W	18:49:57	39°	W	visible
20 Nov -3.8	17:56:48	10°	WSW	18:00:06	76°	SSE	18:01:00	44°	E	visible
20 Nov -0.3	19:33:25	10°	W	19:33:44	12°	W	19:33:44	12°	W	visible
21 Nov -3.4	17:05:51	10°	SW	17:09:05	56°	SSE	17:11:57	13°	E	visible
21 Nov -2.6	18:42:20	10°	W	18:44:41	42°	WNW	18:44:41	42°	WNW	visible
22 Nov -3.9	17:51:09	10°	W	17:54:29	81°	N	17:55:32	40°	ENE	visible
22 Nov -0.5	19:27:49	10°	WNW	19:28:15	13°	WNW	19:28:15	13°	WNW	visible
23 Nov -3.8	16:59:56	10°	WSW	17:03:14	85°	SSE	17:06:19	12°	ENE	visible
23 Nov -2.8	18:36:34	10°	W	18:39:02	46°	WNW	18:39:02	46°	WNW	visible
24 Nov -3.8	17:45:13	10°	W	17:48:31	73°	N	17:49:45	35°	ENE	visible
24 Nov -0.6	19:21:49	10°	WNW	19:22:27	15°	W	19:22:27	15°	W	visible
25 Nov -3.8	16:53:47	10°	W	16:57:05	77°	N	17:00:24	10°	E	visible
25 Nov -3.2	18:30:25	10°	WNW	18:33:06	56°	W	18:33:06	56°	W	visible
26 Nov -3.9	17:38:55	10°	W	17:42:13	80°	N	17:43:44	29°	E	visible
26 Nov -0.8	19:15:31	10°	W	19:16:26	17°	W	19:16:26	17°	W	visible
27 Nov -3.8	16:47:19	10°	W	16:50:37	73°	N	16:53:54	10°	E	visible
27 Nov -3.4	18:23:54	10°	WNW	18:27:02	58°	SSW	18:27:02	58°	SSW	visible
28 Nov -3.8	17:32:13	10°	WNW	17:35:31	79°	SSW	17:37:39	20°	ESE	visible
28 Nov -1.0	19:09:03	10°	W	19:10:21	18°	WSW	19:10:21	18°	WSW	visible
29 Nov -3.8	16:40:28	10°	WNW	16:43:46	85°	N	16:47:03	10°	E	visible
29 Nov -2.4	18:17:06	10°	W	18:20:07	34°	SSW	18:21:01	28°	S	visible
30 Nov -3.0	17:25:11	10°	W	17:28:23	50°	SSW	17:31:34	10°	SE	visible
30 Nov -0.8	19:02:54	10°	WSW	19:04:18	12°	SW	19:04:28	12°	SW	visibl

## ***Passes of the ACS3 for November***

Note: The ACS3 has been reported as being out of Nasa's control, and tumbling in its orbit, so some later timings may not be accurate, and the brightness may well fluctuate.

Date	Brightness (mag)	-----Start-----			---- Highest point--			-----End-----			Pass type
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.	

10 Nov 3.1	17:34:34	13°	E	17:37:42	18°	NE	17:41:44	10°	NNE	visible
10 Nov 1.7	19:19:31	63°	SE	19:20:31	78°	ENE	19:26:43	10°	N	visible

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10 Nov 3.8	21:04:28	22°	W	21:04:55	22°	W	21:09:34	10°	NW	visible
11 Nov 2.7	18:03:46	22°	E	18:06:04	27°	ENE	18:11:07	10°	N	visible
11 Nov 2.0	19:48:43	64°	SW	19:49:20	69°	W	19:55:30	10°	NNW	visible
11 Nov 4.3	21:33:39	13°	W	21:34:12	13°	W	21:36:58	10°	NW	visible
12 Nov 4.6	06:39:05	10°	NE	06:41:51	13°	E	06:44:36	10°	ESE	visible
12 Nov 2.2	18:32:52	35°	E	18:34:29	41°	ENE	18:40:10	10°	N	visible
12 Nov 2.7	20:17:48	43°	WSW	20:18:10	43°	W	20:24:02	10°	NNW	visible
13 Nov 3.3	17:17:03	10°	E	17:20:19	15°	NE	17:23:34	10°	NNE	visible
13 Nov 1.7	19:01:52	55°	ESE	19:02:54	63°	ENE	19:08:58	10°	N	visible
13 Nov 3.5	20:46:47	27°	W	20:47:02	27°	W	20:52:13	10°	NNW	visible
14 Nov 2.9	17:45:48	17°	E	17:48:20	22°	NE	17:52:51	10°	N	visible
14 Nov 1.7	19:30:44	74°	S	19:31:20	86°	WSW	19:37:31	10°	NNW	visible
14 Nov 4.1	21:15:38	17°	W	21:15:55	17°	W	21:19:50	10°	NW	visible
15 Nov 2.4	18:14:34	28°	E	18:16:21	33°	ENE	18:21:42	10°	N	visible
15 Nov 2.3	19:59:28	55°	WSW	19:59:47	55°	W	20:05:50	10°	NNW	visible
16 Nov 3.5	17:00:01	10°	ENE	17:02:05	12°	NE	17:04:09	10°	NNE	visible
16 Nov 1.9	18:43:13	44°	E	18:44:24	49°	ENE	18:50:16	10°	N	visible
16 Nov 3.1	20:28:07	35°	W	20:28:15	35°	W	20:33:51	10°	NNW	visible
17 Nov 3.1	17:26:51	13°	E	17:29:43	18°	NE	17:33:34	10°	NNE	visible
17 Nov 1.6	19:11:44	67°	SE	19:12:28	75°	ENE	19:18:35	10°	N	visible
17 Nov 3.8	20:56:38	22°	W	20:56:45	22°	W	21:01:27	10°	NW	visible
18 Nov 2.7	17:55:17	21°	E	17:57:22	26°	ENE	18:02:16	10°	N	visible
18 Nov 1.9	19:40:10	70°	SW	19:40:32	72°	WSW	19:46:40	10°	NNW	visible
18 Nov 4.3	21:25:03	14°	W	21:25:18	14°	W	21:28:15	10°	NW	visible
19 Nov 4.7	06:30:16	10°	ENE	06:32:38	12°	E	06:35:02	10°	ESE	visible
19 Nov 2.2	18:23:36	34°	E	18:25:02	38°	ENE	18:30:36	10°	N	visible
19 Nov 2.6	20:08:28	46°	W	20:08:37	46°	W	20:14:29	10°	NNW	visible
20 Nov 4.3	06:56:39	10°	NE	07:01:04	20°	E	07:05:27	10°	SE	visible
20 Nov 3.3	17:07:20	10°	ENE	17:10:15	14°	NE	17:13:09	10°	NNE	visible
20 Nov 1.8	18:51:47	53°	ESE	18:52:43	58°	ENE	18:58:41	10°	N	visible
20 Nov 3.4	20:36:39	29°	W	20:36:43	29°	W	20:41:59	10°	NNW	visible
21 Nov 3.0	17:35:01	16°	E	17:37:31	20°	NE	17:41:48	10°	N	visible
21 Nov 1.6	19:19:52	76°	SSE	19:20:24	88°	ENE	19:26:32	10°	NNW	visible
21 Nov 4.0	21:04:44	19°	W	21:04:51	19°	W	21:09:00	10°	NW	visible
22 Nov 2.5	18:02:59	25°	E	18:04:49	30°	ENE	18:09:58	10°	N	visible
22 Nov 2.1	19:47:50	60°	WSW	19:48:05	61°	W	19:54:09	10°	NNW	visible
22 Nov 4.5	21:32:41	11°	W	21:33:02	11°	W	21:34:37	10°	WNW	visible
23 Nov 3.5	16:48:46	10°	NE	16:49:56	11°	NE	16:51:06	10°	NNE	visible
23 Nov 2.0	18:30:50	39°	E	18:32:06	44°	ENE	18:37:50	10°	N	visible
23 Nov 2.9	20:15:40	39°	W	20:15:48	39°	W	20:21:29	10°	NNW	visible
24 Nov 3.2	17:13:44	11°	E	17:16:50	16°	NE	17:20:16	10°	NNE	visible
24 Nov 1.6	18:58:34	60°	ESE	18:59:24	68°	ENE	19:05:27	10°	N	visible
24 Nov 3.6	20:43:24	25°	W	20:43:32	25°	W	20:48:28	10°	NW	visible
25 Nov 2.8	17:41:21	18°	E	17:43:43	23°	ENE	17:48:20	10°	N	visible
25 Nov 1.7	19:26:10	74°	SSW	19:26:42	81°	WSW	19:32:50	10°	NNW	visible
25 Nov 4.2	21:11:00	16°	W	21:11:18	16°	W	21:14:50	10°	NW	visible
26 Nov 2.3	18:08:51	28°	E	18:10:38	34°	ENE	18:16:00	10°	N	visible
26 Nov 2.4	19:53:40	52°	WSW	19:54:02	52°	W	19:59:59	10°	NNW	visible
27 Nov 3.4	16:53:08	10°	ENE	16:55:17	12°	NE	16:57:26	10°	NNE	visible
27 Nov 1.9	18:36:14	43°	ESE	18:37:33	50°	ENE	18:43:23	10°	N	visible

27 Nov 3.2	20:21:02	33°	W	20:21:22	34°	W	20:26:50	10°	NNW	visible
28 Nov 3.1	17:18:41	12°	E	17:21:48	18°	NE	17:25:38	10°	NNE	visible
28 Nov 1.6	19:03:29	62°	SE	19:04:28	76°	ENE	19:10:33	10°	N	visible
28 Nov 3.8	20:48:16	22°	W	20:48:43	22°	W	20:53:18	10°	NW	visible
29 Nov 2.7	17:45:49	20°	E	17:48:20	26°	ENE	17:53:10	10°	N	visible
29 Nov 1.9	19:30:36	64°	SSW	19:31:24	72°	WSW	19:37:29	10°	NNW	visible
29 Nov 4.3	21:15:24	13°	W	21:16:05	13°	W	21:18:59	10°	NW	visible
30 Nov 2.2	18:12:48	29°	ESE	18:14:51	37°	ENE	18:20:21	10°	N	visible
30 Nov 2.6	19:57:36	44°	WSW	19:58:20	46°	W	20:04:11	10°	NNW	visible