

Norfolk Astronomical Society



<http://norfolkastronomical.org>

June 2014

Monthly Sky Calendar
Prepared Specifically For
The Hampton Roads Area

Upcoming Regular Meetings

DATE	Monday, June 16, 2014
TIME	6 - 8 PM EDT
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	Hubble Repair Mission

DATE	Monday, July 14, 2014
TIME	6 - 8 PM EDT
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	Our Sun

Iridium 95 Passes Through Cygnus And Lyra

Photo By Kent Blackwell



Kent Blackwell took this image showing an Iridium satellite flare about 10:43 PM on May 19, taken over the Currituck Sound. The satellite, Iridium 95, flared as it moved through Lyra, moving from north to south. Kent used his Canon 20Da set to ISO 800. Exposure was 65-seconds, taken with a 28-85mm f/2.8 Sigma zoom at 28mm f/3.2. The image was tracked using an iOptron SkyTracker.

ORB-2 Night Launch Rescheduled From Wallops

The next resupply mission to the International Space Station, once scheduled for 2:07 AM June 10 had been postponed approximately 1 week while a rocket engine failure on a similar rocket is investigated. That moves the next launch opportunity to no earlier than June 16 or 17.

While the time of launch has not been specified, this delay could be good news for those of us who enjoy watching them, by bringing the launch window much earlier into the evening. By my estimate, if the launch were June 16, the launch window will be around 10:17 PM, and would be around 9:55 PM July 17. Just a day or so later, the launch window quickly moves into evening twilight and finally daylight, making the launch harder but perhaps not impossible to see.

Camelopardalid Reports: Weak Shower, No Storm

Compiled by Glendon L. Howell

Several NAS members made attempts to observe the first predicted display of the Camelopardalid Meteor Shower, the debris left in the orbit of Comet 209P/Linear. Here is a compilation of the reports received.

Scott Justis and Glen Howell drove via Suffolk, through torrential downpours and frequent vivid lightning to arrive in Gates County, NC. All night the sky would clear off then cloud back in, but was cloudy most of the time. Glen saw one possible shower member around 3 AM through the clouds. The sky finally cleared off after 3:30 AM moon rise, but no other meteors were observed.

Kent Blackwell and Stu Beaber both reported seeing nothing. Kent attempted to observe the shower from his driveway in Kempsville between 3-4 AM under clear skies. Stu reported he got up at 2:50 AM and observed the sky for maybe 10 minutes but saw nothing but stars, observing from his home in Churchland.

Chuck Sawyer had much better luck. He observed from West Augusta, VA (located on US250 near the West Virginia line). With absolutely clear skies, he saw an outburst of Camelopardalid meteors about 2:50 AM of 14 meteors in an 8 minute period. Thereafter he only saw sporadic meteors until dawn.

Dave Kratz also had luck, observing from near Frederick, MD. He reported his sky as transparent with extremely poor seeing. With some sky obstruction in the NE, and most of the north and west clear of obstruction he was able to see 3 to 4 meteors. A friend he talked to later that day reported seeing about a dozen.

Similar reports can be found on the International Meteor Organization site (<http://www.imo.net>), and on the Sky and Telescope magazine website (<http://www.skyandtelescope.com/astronomy-news/>). No one reported seeing a storm, with meteor counts reported were quite low, but did confirm the existence of a new meteor shower.

Best Time To Observe Earth Satellites

When is the best time of year to observe artificial satellites of the Earth? A satellite must be sun-lit to be seen, and the observer must be in sufficient darkness to be able to see it. The accepted value for when the sky is dark enough is when the sun is 10 degrees or more below the horizon. This falls during Nautical Twilight when the Sun is 6 to 12 degrees below the horizon. A satellite is typically sun-lit and the observer in darkness usually only a few hours before sun rise and a few hours after sunset. This period is maximized for the northern hemisphere when the Sun is at the Summer Solstice.

There are a few higher inclination satellites that certain time of the year the geometry of the orbit allows them to stay sun-lit all night long. One such satellite is the International Space Station (ISS), which also happens to be the brightest.

Predictions for the International Space Station (ISS), the Hubble Space Telescope (HST), and Iridium flares are included in the calendar part of this publication. There are plenty of free applications available for iPhone and Android to do such predictions, as well as downloadable free software, and free websites. One of my favorites sites for online predictions is Heavens Above (<http://heavens-above.com>) where once you select your location on Earth will generate lists of passes and you can also generate star charts for the specific pass. For those of us who like to generate our own, orbital elements along with a list of available software to generate your own can be found on T. S. Kelso's Celestrak website (<http://celestrak.com>). One of my favorites is STS Orbit Plus, which unfortunately is a MS DOS program that may no longer run on newer operating systems.

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May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
1 Jun 2014	3:00 AM	3:00 AM	Diary	Jupiter 5.4N of Moon
	3:00 AM	3:00 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:16 AM	3:16 AM	Iridium Flare	CHES:Iridium 83 Flares at mag.-7.6 (Azm 281 Alt 34)
	4:03 AM	4:03 AM	Twilight	Astronomical Twilight begins
	4:31 AM	4:31 AM	Jup GRS	GRS Transit (CML=207)
	5:15 AM	5:15 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 35.1 Alt 37)
	5:51 AM	5:51 AM	Sun	Sunrise
	8:43 AM	8:43 AM	Jupiter	Jupiter rises
	9:17 AM	9:17 AM	Moon	Moonrise
	2:26 PM	2:26 PM	Jup GRS	GRS Transit (CML=207)
	8:19 PM	8:19 PM	Sun	Sunset
	9:18 PM	9:18 PM	Jup Sats	II.Ec.R
	9:46 PM	9:46 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 171.2 Alt 19)
	9:50 PM	9:50 PM	Iridium Flare	CHES:Iridium 60 Flares at mag.-1.5 (Azm 071 Alt 46)
	9:51 PM	9:51 PM	Iridium Flare	CHES:Iridium 33 Flares at mag.-7.8 (Azm 071 Alt 47)
	9:56 PM	9:56 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 134.8 Alt 41)
	10:07 PM	10:07 PM	Twilight	Astronomical Twilight ends
	11:04 PM	11:04 PM	Iridium Flare	CHES:Iridium 8 Flares at mag. 0.9 (Azm 039 Alt 10)
	11:08 PM	11:08 PM	Jupiter	Jupiter sets
11:14 PM	11:14 PM	Iridium Flare	CHES:Iridium 96 Flares at mag. 0.3 (Azm 041 Alt 13)	
11:17 PM	11:17 PM	Moon	Moonsset	
11:33 PM	11:33 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 330.4 Alt 21)	
2 Jun 2014	12:22 AM	12:22 AM	Jup GRS	GRS Transit (CML=207)
	3:10 AM	3:10 AM	Iridium Flare	CHES:Iridium 56 Flares at mag. 0.2 (Azm 282 Alt 35)
	4:02 AM	4:02 AM	Twilight	Astronomical Twilight begins
	4:26 AM	4:26 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 30.6 Alt 23)
	4:57 AM	4:57 AM	Iridium Flare	CHES:Iridium 63 Flares at mag. 0.5 (Azm 078 Alt 11)
	5:50 AM	5:50 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Iridium Flare	CHES:Iridium 26 Flares at mag.-6.0 (Azm 065 Alt 41)
	8:40 AM	8:40 AM	Jupiter	Jupiter rises
	10:11 AM	10:11 AM	Moon	Moonrise
	10:18 AM	10:18 AM	Jup GRS	GRS Transit (CML=207)
	8:14 PM	8:14 PM	Jup GRS	GRS Transit (CML=207)
	8:20 PM	8:20 PM	Sun	Sunset
	9:07 PM	9:07 PM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 130.6 Alt 22)
	9:40 PM	9:40 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 170.2 Alt 22)
	10:08 PM	10:08 PM	Twilight	Astronomical Twilight ends
	10:44 PM	10:44 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 325.4 Alt 33)
	11:05 PM	11:05 PM	Jupiter	Jupiter sets
	11:08 PM	11:08 PM	Iridium Flare	CHES:Iridium 19 Flares at mag.-6.2 (Azm 042 Alt 14)
	11:53 PM	11:53 PM	Moon	Moonsset

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S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
3 Jun 2014	12:00 AM	12:00 AM	Diary	Moon at apogee
	3:04 AM	3:04 AM	Iridium Flare	CHES:Iridium 84 Flares at mag. 1.1 (Azm 284 Alt 34)
	3:13 AM	3:13 AM	Iridium Flare	CHES:Iridium 10 Flares at mag. 1.1 (Azm 285 Alt 28)
	3:37 AM	3:37 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 26.1 Alt 16)
	4:02 AM	4:02 AM	Twilight	Astronomical Twilight begins
	4:50 AM	4:50 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 2.0 (Azm 256 Alt 57)
	4:51 AM	4:51 AM	Iridium Flare	CHES:Iridium 66 Flares at mag.-5.2 (Azm 080 Alt 12)
	5:00 AM	5:00 AM	Iridium Flare	CHES:Iridium 67 Flares at mag. 1.0 (Azm 082 Alt 14)
	5:14 AM	5:14 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 222.4 Alt 72)
	5:50 AM	5:50 AM	Sun	Sunrise
	6:10 AM	6:10 AM	Jup GRS	GRS Transit (CML=207)
	8:37 AM	8:37 AM	Jupiter	Jupiter rises
	11:05 AM	11:05 AM	Moon	Moonrise
	4:06 PM	4:06 PM	Jup GRS	GRS Transit (CML=207)
	5:17 PM	5:17 PM	Iridium Flare	CHES:Iridium 42 Flares at mag.-6.0 (Azm 281 Alt 48)
	8:20 PM	8:20 PM	Sun	Sunset
	9:33 PM	9:33 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 172.8 Alt 24)
	9:47 PM	9:47 PM	Iridium Flare	CHES:Iridium 91 Flares at mag. 0.6 (Azm 071 Alt 53)
	9:54 PM	9:54 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 320.8 Alt 59)
	10:09 PM	10:09 PM	Twilight	Astronomical Twilight ends
	11:01 PM	11:01 PM	Jupiter	Jupiter sets
	11:02 PM	11:02 PM	Iridium Flare	CHES:Iridium 97 Flares at mag. 0.1 (Azm 043 Alt 14)
	11:12 PM	11:12 PM	Iridium Flare	CHES:Iridium 5 Flares at mag. 1.0 (Azm 045 Alt 18)
	11:56 PM	11:56 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
4 Jun 2014	12:26 AM	12:26 AM	Moon	Moonsset
	2:02 AM	2:02 AM	Jup GRS	GRS Transit (CML=207)
	3:07 AM	3:07 AM	Iridium Flare	CHES:Iridium 13 Flares at mag.-1.8 (Azm 286 Alt 29)
	3:07 AM	3:07 AM	Iridium Flare	CHES:Iridium 90 Flares at mag. 1.0 (Azm 286 Alt 27)
	4:01 AM	4:01 AM	Twilight	Astronomical Twilight begins
	4:25 AM	4:25 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 38.1 Alt 59)
	4:44 AM	4:44 AM	Iridium Flare	CHES:Iridium 81 Flares at mag. 1.2 (Azm 258 Alt 57)
	4:44 AM	4:44 AM	Iridium Flare	CHES:Iridium 74 Flares at mag. 1.6 (Azm 081 Alt 10)
	4:44 AM	4:44 AM	Iridium Flare	CHES:Iridium 21 Flares at mag.-0.3 (Azm 081 Alt 11)
	4:53 AM	4:53 AM	Iridium Flare	CHES:Iridium 72 Flares at mag.-2.7 (Azm 083 Alt 14)
	5:06 AM	5:06 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. 0.1 (Azm 085 Alt 17)
	5:50 AM	5:50 AM	Sun	Sunrise
	8:34 AM	8:34 AM	Jupiter	Jupiter rises
	11:00 AM	11:00 AM	Diary	Regulus 4.8N of Moon
	11:57 AM	11:57 AM	Jup GRS	GRS Transit (CML=207)
	12:00 PM	12:00 PM	Moon	Moonrise
	8:21 PM	8:21 PM	Sun	Sunset

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				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
4 Jun 2014	9:05 PM	9:05 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azim 138.2 Alt 72)
	9:26 PM	9:26 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 175.8 Alt 25)
	9:41 PM	9:41 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-0.4 (Azim 072 Alt 54)
	9:53 PM	9:53 PM	Jup GRS	GRS Transit (CML=207)
	10:10 PM	10:10 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azim 334.0 Alt 16)
	10:58 PM	10:58 PM	Jupiter	Jupiter sets
	11:06 PM	11:06 PM	Iridium Flare	CHES:Iridium 8 Flares at mag.-2.1 (Azim 047 Alt 18)
5 Jun 2014	12:58 AM	12:58 AM	Moon	Moonset
	3:01 AM	3:01 AM	Iridium Flare	CHES:Iridium 50 Flares at mag.-4.4 (Azim 287 Alt 29)
	3:36 AM	3:36 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azim 34.2 Alt 33)
	4:01 AM	4:01 AM	Twilight	Astronomical Twilight begins
	4:38 AM	4:38 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-3.9 (Azim 258 Alt 59)
	4:38 AM	4:38 AM	Iridium Flare	CHES:Iridium 70 Flares at mag. 2.0 (Azim 083 Alt 11)
	4:47 AM	4:47 AM	Iridium Flare	CHES:Iridium 62 Flares at mag.-2.4 (Azim 085 Alt 14)
	4:56 AM	4:56 AM	Iridium Flare	CHES:Iridium 63 Flares at mag. 0.2 (Azim 086 Alt 17)
	5:13 AM	5:13 AM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azim 229.2 Alt 22)
	5:27 AM	5:27 AM	Iridium Flare	CHES:Iridium 66 Flares at mag.-5.2 (Azim 032 Alt 17)
	5:50 AM	5:50 AM	Sun	Sunrise
	7:49 AM	7:49 AM	Jup GRS	GRS Transit (CML=207)
	8:31 AM	8:31 AM	Jupiter	Jupiter rises
	12:54 PM	12:54 PM	Moon	Moonrise
	5:00 PM	5:00 PM	Diary	FIRST QUARTER
	5:45 PM	5:45 PM	Jup GRS	GRS Transit (CML=207)
	8:22 PM	8:22 PM	Sun	Sunset
	9:20 PM	9:20 PM	Sat Pass (HST)	CHES:HST Passes W to E (Azim 178.8 Alt 26)
9:35 PM	9:35 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-8.0 (Azim 073 Alt 53)	
9:53 PM	9:53 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azim 329.1 Alt 23)	
10:10 PM	10:10 PM	Twilight	Astronomical Twilight ends	
10:55 PM	10:55 PM	Jupiter	Jupiter sets	
11:00 PM	11:00 PM	Iridium Flare	CHES:Iridium 61 Flares at mag.-2.1 (Azim 048 Alt 18)	
6 Jun 2014	1:29 AM	1:29 AM	Moon	Moonset
	2:47 AM	2:47 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azim 29.7 Alt 21)
	2:55 AM	2:55 AM	Iridium Flare	CHES:Iridium 53 Flares at mag. 0.0 (Azim 289 Alt 29)
	3:04 AM	3:04 AM	Iridium Flare	CHES:Iridium 84 Flares at mag. 1.8 (Azim 289 Alt 23)
	3:41 AM	3:41 AM	Jup GRS	GRS Transit (CML=207)
	4:00 AM	4:00 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azim 225.8 Alt 41)
	4:32 AM	4:32 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-3.6 (Azim 259 Alt 59)
	4:41 AM	4:41 AM	Iridium Flare	CHES:Iridium 65 Flares at mag. 0.9 (Azim 086 Alt 14)

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				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
6 Jun 2014	4:50 AM	4:50 AM	Iridium Flare	CHES:Iridium 66 Flares at mag.-3.6 (Azm 088 Alt 17)
	4:58 AM	4:58 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-4.3 (Azm 089 Alt 18)
	5:00 AM	5:00 AM	Iridium Flare	CHES:Iridium 74 Flares at mag. 1.2 (Azm 089 Alt 20)
	5:49 AM	5:49 AM	Sun	Sunrise
	8:28 AM	8:28 AM	Jupiter	Jupiter rises
	1:37 PM	1:37 PM	Jup GRS	GRS Transit (CML=207)
	1:50 PM	1:50 PM	Moon	Moonrise
	8:22 PM	8:22 PM	Sun	Sunset
	8:45 PM	8:45 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	9:04 PM	9:04 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 325.0 Alt 37)
	9:13 PM	9:13 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 182.0 Alt 26)
	9:29 PM	9:29 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-2.5 (Azm 074 Alt 54)
	10:11 PM	10:11 PM	Twilight	Astronomical Twilight ends
	10:51 PM	10:51 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 232.4 Alt 12)
	10:52 PM	10:52 PM	Jupiter	Jupiter sets
	10:54 PM	10:54 PM	Iridium Flare	CHES:Iridium 35 Flares at mag. 1.1 (Azm 049 Alt 19)
	11:03 PM	11:03 PM	Iridium Flare	CHES:Iridium 97 Flares at mag. 0.3 (Azm 050 Alt 23)
11:32 PM	11:32 PM	Jup GRS	GRS Transit (CML=207)	
7 Jun 2014	2:00 AM	2:00 AM	Moon	Moonset
	2:49 AM	2:49 AM	Iridium Flare	CHES:Iridium 54 Flares at mag. 1.9 (Azm 290 Alt 30)
	2:57 AM	2:57 AM	Iridium Flare	CHES:Iridium 12 Flares at mag.-0.3 (Azm 291 Alt 24)
	3:33 AM	3:33 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 308.4 Alt 24)
	4:00 AM	4:00 AM	Twilight	Astronomical Twilight begins
	4:26 AM	4:26 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-0.7 (Azm 261 Alt 59)
	4:44 AM	4:44 AM	Iridium Flare	CHES:Iridium 21 Flares at mag.-2.0 (Azm 089 Alt 17)
	4:53 AM	4:53 AM	Iridium Flare	CHES:Iridium 72 Flares at mag. 1.1 (Azm 091 Alt 21)
	5:07 AM	5:07 AM	Iridium Flare	CHES:Iridium 75 Flares at mag. 0.3 (Azm 031 Alt 11)
	5:49 AM	5:49 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	Mercury stationary
	8:25 AM	8:25 AM	Jupiter	Jupiter rises
	9:28 AM	9:28 AM	Jup GRS	GRS Transit (CML=207)
	1:35 PM	1:35 PM	Meteor Shower	Arietids (day) meteor peak (zhr=60)
	2:47 PM	2:47 PM	Moon	Moonrise
	7:24 PM	7:24 PM	Jup GRS	GRS Transit (CML=207)
	7:38 PM	7:38 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-4.9 (Azm 155 Alt 86)
8:00 PM	8:00 PM	Diary	Mars 1.5N of Moon	
8:23 PM	8:23 PM	Sun	Sunset	
9:06 PM	9:06 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 184.9 Alt 25)	
9:23 PM	9:23 PM	Iridium Flare	CHES:Iridium 57 Flares at mag. 1.2 (Azm 076 Alt 53)	
10:12 PM	10:12 PM	Twilight	Astronomical Twilight ends	
10:13 PM	10:13 PM	Jup Sats	I.Tr.I	

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May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
7 Jun 2014	10:49 PM	10:49 PM	Jupiter	Jupiter sets
	10:51 PM	10:51 PM	Iridium Flare	CHES:Iridium 36 Flares at mag. 0.8 (Azm 052 Alt 21)
	10:54 PM	10:54 PM	Iridium Flare	CHES:Iridium 4 Flares at mag.-1.5 (Azm 052 Alt 22)
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 51 Flares at mag.-6.8 (Azm 051 Alt 23)
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 7 Flares at mag.-6.1 (Azm 052 Alt 23)
8 Jun 2014	2:33 AM	2:33 AM	Moon	Moonset
	2:43 AM	2:43 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 320.8 Alt 11)
	2:51 AM	2:51 AM	Iridium Flare	CHES:Iridium 86 Flares at mag.-4.4 (Azm 293 Alt 23)
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	4:38 AM	4:38 AM	Iridium Flare	CHES:Iridium 70 Flares at mag. 1.1 (Azm 090 Alt 16)
	4:47 AM	4:47 AM	Iridium Flare	CHES:Iridium 62 Flares at mag.-1.7 (Azm 092 Alt 20)
	4:50 AM	4:50 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-3.9 (Azm 093 Alt 20)
	5:01 AM	5:01 AM	Iridium Flare	CHES:Iridium 63 Flares at mag.-4.9 (Azm 030 Alt 10)
	5:20 AM	5:20 AM	Jup GRS	GRS Transit (CML=207)
	5:49 AM	5:49 AM	Sun	Sunrise
	8:22 AM	8:22 AM	Jupiter	Jupiter rises
	3:16 PM	3:16 PM	Jup GRS	GRS Transit (CML=207)
	3:46 PM	3:46 PM	Moon	Moonrise
	8:00 PM	8:00 PM	Diary	Spica 1.8S of Moon
	8:23 PM	8:23 PM	Sun	Sunset
	8:59 PM	8:59 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 187.8 Alt 23)
	9:03 PM	9:03 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 333.0 Alt 17)
	9:20 PM	9:20 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-4.2 (Azm 075 Alt 59)
	10:13 PM	10:13 PM	Twilight	Astronomical Twilight ends
	10:27 PM	10:27 PM	Jup Sats	I.Ec.R
10:45 PM	10:45 PM	Jupiter	Jupiter sets	
10:51 PM	10:51 PM	Iridium Flare	CHES:Iridium 37 Flares at mag.-1.2 (Azm 053 Alt 23)	
9 Jun 2014	1:12 AM	1:12 AM	Jup GRS	GRS Transit (CML=207)
	1:54 AM	1:54 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 334.4 Alt 13)
	2:45 AM	2:45 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-0.7 (Azm 293 Alt 24)
	2:54 AM	2:54 AM	Iridium Flare	CHES:Iridium 53 Flares at mag. 1.2 (Azm 295 Alt 20)
	3:08 AM	3:08 AM	Moon	Moonset
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	4:41 AM	4:41 AM	Iridium Flare	CHES:Iridium 65 Flares at mag.-6.1 (Azm 094 Alt 20)
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 66 Flares at mag. 1.8 (Azm 029 Alt 10)
	5:49 AM	5:49 AM	Sun	Sunrise
	8:19 AM	8:19 AM	Jupiter	Jupiter rises
	11:07 AM	11:07 AM	Jup GRS	GRS Transit (CML=207)
	3:47 PM	3:47 PM	Meteor Shower	zeta-Perseids (day) meteor peak (zhr=40)
	4:48 PM	4:48 PM	Moon	Moonrise

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
9 Jun 2014	5:34 PM	5:34 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:24 PM	8:24 PM	Sun	Sunset
	8:52 PM	8:52 PM	Sat Pass (HST)	CHES:HST Passes W to SE (AzM 190.5 Alt 21)
	9:03 PM	9:03 PM	Jup GRS	GRS Transit (CML=207)
	10:14 PM	10:14 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Jupiter	Jupiter sets
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 34 Flares at mag. 1.4 (AzM 054 Alt 23)
	10:55 PM	10:55 PM	Iridium Flare	CHES:Iridium 35 Flares at mag. 1.3 (AzM 054 Alt 29)
10 Jun 2014	1:06 AM	1:06 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (AzM 356.5 Alt 15)
	2:39 AM	2:39 AM	Iridium Flare	CHES:Iridium 10 Flares at mag. 1.1 (AzM 295 Alt 24)
	2:41 AM	2:41 AM	Iridium Flare	CHES:Iridium 16 Flares at mag. 0.3 (AzM 294 Alt 24)
	2:48 AM	2:48 AM	Iridium Flare	CHES:Iridium 54 Flares at mag. -1.3 (AzM 296 Alt 20)
	3:00 AM	3:00 AM	Diary	Neptune stationary
	3:48 AM	3:48 AM	Moon	Moonset
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	4:17 AM	4:17 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 0.1 (AzM 266 Alt 50)
	4:35 AM	4:35 AM	Iridium Flare	CHES:Iridium 68 Flares at mag. -0.4 (AzM 095 Alt 19)
	4:42 AM	4:42 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. -1.2 (AzM 096 Alt 21)
	4:44 AM	4:44 AM	Iridium Flare	CHES:Iridium 21 Flares at mag. 0.8 (AzM 097 Alt 24)
	5:49 AM	5:49 AM	Sun	Sunrise
	6:59 AM	6:59 AM	Jup GRS	GRS Transit (CML=207)
	8:16 AM	8:16 AM	Jupiter	Jupiter rises
	3:00 PM	3:00 PM	Diary	Saturn 0.6N of Moon Occn
	4:55 PM	4:55 PM	Jup GRS	GRS Transit (CML=207)
	5:51 PM	5:51 PM	Moon	Moonrise
	8:24 PM	8:24 PM	Sun	Sunset
	8:46 PM	8:46 PM	Sat Pass (HST)	CHES:HST Passes W to SE (AzM 193.4 Alt 19)
	9:14 PM	9:14 PM	Iridium Flare	CHES:Iridium 91 Flares at mag. -2.8 (AzM 076 Alt 61)
9:31 PM	9:31 PM	Jup Sats	III.Sh.E	
10:14 PM	10:14 PM	Twilight	Astronomical Twilight ends	
10:39 PM	10:39 PM	Jupiter	Jupiter sets	
10:49 PM	10:49 PM	Iridium Flare	CHES:Iridium 6 Flares at mag. -2.4 (AzM 056 Alt 29)	
10:49 PM	10:49 PM	Iridium Flare	CHES:Iridium 36 Flares at mag. 0.1 (AzM 056 Alt 30)	
11 Jun 2014	2:42 AM	2:42 AM	Iridium Flare	CHES:Iridium 83 Flares at mag. -6.7 (AzM 298 Alt 19)
	2:51 AM	2:51 AM	Jup GRS	GRS Transit (CML=207)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:06 AM	4:06 AM	Iridium Flare	CHES:Iridium 17 Flares at mag. -1.9 (AzM 268 Alt 52)
	4:10 AM	4:10 AM	Iridium Flare	CHES:Iridium 81 Flares at mag. -1.7 (AzM 268 Alt 50)
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 75 Flares at mag. 1.6 (AzM 097 Alt 19)
	4:33 AM	4:33 AM	Moon	Moonset

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
11 Jun 2014	4:38 AM	4:38 AM	Iridium Flare	CHES:Iridium 70 Flares at mag.-2.7 (Azm 098 Alt 23)
	5:49 AM	5:49 AM	Sun	Sunrise
	8:13 AM	8:13 AM	Jupiter	Jupiter rises
	12:47 PM	12:47 PM	Jup GRS	GRS Transit (CML=207)
	6:55 PM	6:55 PM	Moon	Moonrise
	8:25 PM	8:25 PM	Sun	Sunset
	8:39 PM	8:39 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 196.3 Alt 16)
	9:07 PM	9:07 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-6.1 (Azm 078 Alt 62)
	10:15 PM	10:15 PM	Twilight	Astronomical Twilight ends
	10:36 PM	10:36 PM	Jupiter	Jupiter sets
	10:42 PM	10:42 PM	Jup GRS	GRS Transit (CML=207)
	10:42 PM	10:42 PM	Iridium Flare	CHES:Iridium 96 Flares at mag.-2.8 (Azm 057 Alt 29)
12 Jun 2014	1:03 AM	1:03 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 323.6 Alt 11)
	2:30 AM	2:30 AM	Iridium Flare	CHES:Iridium 90 Flares at mag. 1.5 (Azm 298 Alt 21)
	2:36 AM	2:36 AM	Iridium Flare	CHES:Iridium 56 Flares at mag. 0.0 (Azm 299 Alt 20)
	2:44 AM	2:44 AM	Iridium Flare	CHES:Iridium 52 Flares at mag. 0.2 (Azm 300 Alt 16)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:04 AM	4:04 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-2.5 (Azm 269 Alt 52)
	4:31 AM	4:31 AM	Iridium Flare	CHES:Iridium 64 Flares at mag.-6.5 (Azm 100 Alt 23)
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-0.1 (Azm 100 Alt 22)
	5:25 AM	5:25 AM	Moon	Moonset
	5:49 AM	5:49 AM	Sun	Sunrise
	8:10 AM	8:10 AM	Jupiter	Jupiter rises
	8:38 AM	8:38 AM	Jup GRS	GRS Transit (CML=207)
	2:23 PM	2:23 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:34 PM	6:34 PM	Jup GRS	GRS Transit (CML=207)
	7:58 PM	7:58 PM	Moon	Moonrise
	8:25 PM	8:25 PM	Sun	Sunset
	9:01 PM	9:01 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-0.5 (Azm 079 Alt 61)
	9:04 PM	9:04 PM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.8 (Azm 077 Alt 68)
	10:16 PM	10:16 PM	Twilight	Astronomical Twilight ends
	10:33 PM	10:33 PM	Jupiter	Jupiter sets
	10:37 PM	10:37 PM	Iridium Flare	CHES:Iridium 19 Flares at mag. 0.3 (Azm 058 Alt 29)
13 Jun 2014	12:00 AM	12:00 AM	Diary	FULL MOON
	12:15 AM	12:15 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 350.8 Alt 19)
	2:29 AM	2:29 AM	Iridium Flare	CHES:Iridium 84 Flares at mag. 1.7 (Azm 301 Alt 19)
	2:35 AM	2:35 AM	Iridium Flare	CHES:Iridium 16 Flares at mag.-1.8 (Azm 300 Alt 18)
	2:38 AM	2:38 AM	Iridium Flare	CHES:Iridium 10 Flares at mag.-3.8 (Azm 302 Alt 15)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	3:58 AM	3:58 AM	Iridium Flare	CHES:Iridium 40 Flares at mag. 0.3 (Azm 271 Alt 52)

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
				1	2	3	1	2	3	4	5	6	7					1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12		
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19		
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26		
25	26	27	28	29	30	31	29	30						27	28	29	30	31				

Calendar

	Start	End	Category	Description
13 Jun 2014	4:25 AM	4:25 AM	Iridium Flare	CHES:Iridium 67 Flares at mag.-1.1 (Azm 102 Alt 22)
	4:30 AM	4:30 AM	Jup GRS	GRS Transit (CML=207)
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 68 Flares at mag. 1.6 (Azm 103 Alt 27)
	5:49 AM	5:49 AM	Sun	Sunrise
	6:23 AM	6:23 AM	Moon	Moonset
	8:07 AM	8:07 AM	Jupiter	Jupiter rises
	2:26 PM	2:26 PM	Jup GRS	GRS Transit (CML=207)
	5:23 PM	5:23 PM	Iridium Flare	CHES:Iridium 14 Flares at mag.-4.5 (Azm 266 Alt 51)
	8:26 PM	8:26 PM	Sun	Sunset
	8:57 PM	8:57 PM	Moon	Moonrise
	10:16 PM	10:16 PM	Twilight	Astronomical Twilight ends
	10:29 PM	10:29 PM	Jupiter	Jupiter sets
	10:40 PM	10:40 PM	Iridium Flare	CHES:Iridium 5 Flares at mag. 0.3 (Azm 059 Alt 35)
	11:27 PM	11:27 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 27.6 Alt 18)
14 Jun 2014	12:22 AM	12:22 AM	Jup GRS	GRS Transit (CML=207)
	1:00 AM	1:00 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 305.1 Alt 6)
	2:32 AM	2:32 AM	Iridium Flare	CHES:Iridium 13 Flares at mag.-1.6 (Azm 304 Alt 15)
	2:41 AM	2:41 AM	Iridium Flare	CHES:Iridium 83 Flares at mag. 0.8 (Azm 306 Alt 11)
	3:52 AM	3:52 AM	Iridium Flare	CHES:Iridium 77 Flares at mag. 1.6 (Azm 272 Alt 51)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:19 AM	4:19 AM	Iridium Flare	CHES:Iridium 72 Flares at mag. 0.9 (Azm 103 Alt 22)
	4:22 AM	4:22 AM	Iridium Flare	CHES:Iridium 74 Flares at mag. 0.8 (Azm 103 Alt 22)
	4:26 AM	4:26 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. 0.4 (Azm 104 Alt 23)
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 75 Flares at mag.-0.2 (Azm 104 Alt 27)
	5:49 AM	5:49 AM	Sun	Sunrise
	7:27 AM	7:27 AM	Moon	Moonset
	8:04 AM	8:04 AM	Jupiter	Jupiter rises
	10:00 AM	10:00 AM	Diary	Pluto 2.2S of Moon
	10:18 AM	10:18 AM	Jup GRS	GRS Transit (CML=207)
	8:13 PM	8:13 PM	Jup GRS	GRS Transit (CML=207)
	8:26 PM	8:26 PM	Sun	Sunset
	9:52 PM	9:52 PM	Moon	Moonrise
	10:17 PM	10:17 PM	Twilight	Astronomical Twilight ends
	10:26 PM	10:26 PM	Jupiter	Jupiter sets
	10:34 PM	10:34 PM	Iridium Flare	CHES:Iridium 8 Flares at mag.-1.7 (Azm 060 Alt 36)
15 Jun 2014	12:00 AM	12:00 AM	Diary	Moon at perigee
	12:13 AM	12:13 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 316.6 Alt 16)
	2:26 AM	2:26 AM	Iridium Flare	CHES:Iridium 50 Flares at mag. 1.4 (Azm 305 Alt 15)
	2:35 AM	2:35 AM	Iridium Flare	CHES:Iridium 56 Flares at mag.-3.7 (Azm 307 Alt 12)
	3:55 AM	3:55 AM	Iridium Flare	CHES:Iridium 41 Flares at mag. 1.2 (Azm 273 Alt 43)

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
				1	2	3	1	2	3	4	5	6	7					1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12		
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19		
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26		
25	26	27	28	29	30	31	29	30						27	28	29	30	31				

Calendar

	Start	End	Category	Description
15 Jun 2014	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:22 AM	4:22 AM	Iridium Flare	CHES:Iridium 63 Flares at mag.-4.4 (Azm 106 Alt 26)
	5:49 AM	5:49 AM	Sun	Sunrise
	6:09 AM	6:09 AM	Jup GRS	GRS Transit (CML=207)
	6:47 AM	6:47 AM	Iridium Flare	CHES:Iridium 11 Flares at mag.-5.9 (Azm 045 Alt 32)
	8:01 AM	8:01 AM	Jupiter	Jupiter rises
	8:35 AM	8:35 AM	Moon	Moonset
	11:13 AM	11:13 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:05 PM	4:05 PM	Jup GRS	GRS Transit (CML=207)
	8:26 PM	8:26 PM	Sun	Sunset
	9:28 PM	9:28 PM	Jup Sats	I.Oc.D
	10:17 PM	10:17 PM	Twilight	Astronomical Twilight ends
	10:23 PM	10:23 PM	Jupiter	Jupiter sets
	10:28 PM	10:28 PM	Iridium Flare	CHES:Iridium 61 Flares at mag.-3.0 (Azm 061 Alt 35)
	10:40 PM	10:40 PM	Moon	Moonrise
	11:25 PM	11:25 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 357.8 Alt 31)
16 Jun 2014	2:01 AM	2:01 AM	Jup GRS	GRS Transit (CML=207)
	2:28 AM	2:28 AM	Iridium Flare	CHES:Iridium 84 Flares at mag.-2.1 (Azm 309 Alt 11)
	2:28 AM	2:28 AM	Iridium Flare	CHES:Iridium 16 Flares at mag.-1.6 (Azm 308 Alt 12)
	3:49 AM	3:49 AM	Iridium Flare	CHES:Iridium 42 Flares at mag.-1.9 (Azm 275 Alt 44)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:16 AM	4:16 AM	Iridium Flare	CHES:Iridium 66 Flares at mag.-6.8 (Azm 108 Alt 26)
	4:17 AM	4:17 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. 0.5 (Azm 107 Alt 25)
	5:49 AM	5:49 AM	Sun	Sunrise
	7:59 AM	7:59 AM	Jupiter	Jupiter rises
	9:44 AM	9:44 AM	Moon	Moonset
	11:57 AM	11:57 AM	Jup GRS	GRS Transit (CML=207)
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	8:27 PM	8:27 PM	Sun	Sunset
	9:02 PM	9:02 PM	Jup Sats	I.Tr.E
	9:38 PM	9:38 PM	Jup Sats	I.Sh.E
	9:53 PM	9:53 PM	Jup GRS	GRS Transit (CML=207)
	10:18 PM	10:18 PM	Twilight	Astronomical Twilight ends
	10:20 PM	10:20 PM	Jupiter	Jupiter sets
	10:22 PM	10:22 PM	Iridium Flare	CHES:Iridium 35 Flares at mag. 0.2 (Azm 063 Alt 35)
	10:37 PM	10:37 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 31.0 Alt 24)
	11:24 PM	11:24 PM	Moon	Moonrise
17 Jun 2014	12:10 AM	12:10 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 293.5 Alt 10)
	2:19 AM	2:19 AM	Iridium Flare	CHES:Iridium 90 Flares at mag. 1.6 (Azm 310 Alt 12)
	2:22 AM	2:22 AM	Iridium Flare	CHES:Iridium 12 Flares at mag. 1.3 (Azm 311 Alt 11)

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
17 Jun 2014	3:43 AM	3:43 AM	Iridium Flare	CHES:Iridium 80 Flares at mag.-4.9 (Azm 276 Alt 44)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:10 AM	4:10 AM	Iridium Flare	CHES:Iridium 21 Flares at mag.-0.5 (Azm 109 Alt 25)
	5:49 AM	5:49 AM	Sun	Sunrise
	7:49 AM	7:49 AM	Jup GRS	GRS Transit (CML=207)
	7:56 AM	7:56 AM	Jupiter	Jupiter rises
	10:53 AM	10:53 AM	Moon	Moonset
	5:44 PM	5:44 PM	Jup GRS	GRS Transit (CML=207)
	8:27 PM	8:27 PM	Sun	Sunset
	8:40 PM	8:40 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-6.6 (Azm 083 Alt 71)
	9:03 PM	9:03 PM	Jup Sats	ILSh.E
	9:47 PM	9:47 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 26.1 Alt 16)
	10:17 PM	10:17 PM	Jupiter	Jupiter sets
	10:17 PM	10:17 PM	Iridium Flare	CHES:Iridium 4 Flares at mag. 0.3 (Azm 064 Alt 37)
	10:18 PM	10:18 PM	Twilight	Astronomical Twilight ends
	10:25 PM	10:25 PM	Iridium Flare	CHES:Iridium 51 Flares at mag. 1.3 (Azm 062 Alt 42)
	10:25 PM	10:25 PM	Iridium Flare	CHES:Iridium 7 Flares at mag. 1.6 (Azm 062 Alt 42)
11:23 PM	11:23 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 299.2 Alt 30)	
18 Jun 2014	12:04 AM	12:04 AM	Moon	Moonrise
	3:37 AM	3:37 AM	Iridium Flare	CHES:Iridium 81 Flares at mag.-1.0 (Azm 277 Alt 44)
	3:40 AM	3:40 AM	Jup GRS	GRS Transit (CML=207)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:00 AM	4:00 AM	Diary	Neptune 4.6S of Moon
	4:04 AM	4:04 AM	Iridium Flare	CHES:Iridium 70 Flares at mag. 1.6 (Azm 111 Alt 24)
	4:09 AM	4:09 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. 0.4 (Azm 111 Alt 26)
	4:13 AM	4:13 AM	Iridium Flare	CHES:Iridium 62 Flares at mag. 0.8 (Azm 113 Alt 30)
	5:49 AM	5:49 AM	Sun	Sunrise
	7:53 AM	7:53 AM	Jupiter	Jupiter rises
	8:00 AM	8:00 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	12:00 PM	12:00 PM	Moon	Moonset
	1:36 PM	1:36 PM	Jup GRS	GRS Transit (CML=207)
	5:03 PM	5:03 PM	Iridium Flare	CHES:Iridium 74 Flares at mag.-4.3 (Azm 270 Alt 43)
	5:04 PM	5:04 PM	Iridium Flare	CHES:Iridium 66 Flares at mag.-4.4 (Azm 271 Alt 42)
	8:27 PM	8:27 PM	Sun	Sunset
	8:34 PM	8:34 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-6.6 (Azm 085 Alt 72)
10:14 PM	10:14 PM	Jupiter	Jupiter sets	
10:18 PM	10:18 PM	Twilight	Astronomical Twilight ends	
10:19 PM	10:19 PM	Iridium Flare	CHES:Iridium 37 Flares at mag.-0.2 (Azm 063 Alt 43)	
10:35 PM	10:35 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 39.5 Alt 60)	
11:32 PM	11:32 PM	Jup GRS	GRS Transit (CML=207)	

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
19 Jun 2014	12:41 AM	12:41 AM	Moon	Moonrise
	3:31 AM	3:31 AM	Iridium Flare	CHES:Iridium 43 Flares at mag. 1.8 (Azm 279 Alt 45)
	3:40 AM	3:40 AM	Iridium Flare	CHES:Iridium 18 Flares at mag. 2.0 (Azm 278 Alt 37)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:07 AM	4:07 AM	Iridium Flare	CHES:Iridium 65 Flares at mag.-1.2 (Azm 114 Alt 30)
	4:12 AM	4:12 AM	Iridium Flare	CHES:Iridium 74 Flares at mag. 1.3 (Azm 114 Alt 32)
	5:20 AM	5:20 AM	Lunar Occult	Moon occults 6.9 mag. star ZC3460(r)
	5:49 AM	5:49 AM	Sun	Sunrise
	6:23 AM	6:23 AM	Iridium Flare	CHES:Iridium 3 Flares at mag.-6.0 (Azm 040 Alt 28)
	7:50 AM	7:50 AM	Jupiter	Jupiter rises
	9:28 AM	9:28 AM	Jup GRS	GRS Transit (CML=207)
	1:06 PM	1:06 PM	Moon	Moonset
	3:00 PM	3:00 PM	Diary	LAST QUARTER
	7:00 PM	7:00 PM	Diary	Mercury inferior conjunction
	7:24 PM	7:24 PM	Jup GRS	GRS Transit (CML=207)
	8:28 PM	8:28 PM	Sun	Sunset
	9:46 PM	9:46 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 34.5 Alt 33)
	10:10 PM	10:10 PM	Jupiter	Jupiter sets
	10:13 PM	10:13 PM	Iridium Flare	CHES:Iridium 34 Flares at mag.-5.0 (Azm 065 Alt 43)
	10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends
	11:21 PM	11:21 PM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azm 268.2 Alt 15)
20 Jun 2014	1:17 AM	1:17 AM	Moon	Moonrise
	3:27 AM	3:27 AM	Iridium Flare	CHES:Iridium 38 Flares at mag.-2.7 (Azm 281 Alt 37)
	3:34 AM	3:34 AM	Iridium Flare	CHES:Iridium 39 Flares at mag.-0.2 (Azm 279 Alt 37)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:01 AM	4:01 AM	Iridium Flare	CHES:Iridium 68 Flares at mag.-7.1 (Azm 116 Alt 28)
	4:01 AM	4:01 AM	Iridium Flare	CHES:Iridium 14 Flares at mag. 0.1 (Azm 115 Alt 27)
	5:20 AM	5:20 AM	Jup GRS	GRS Transit (CML=207)
	5:49 AM	5:49 AM	Sun	Sunrise
	7:47 AM	7:47 AM	Jupiter	Jupiter rises
	2:10 PM	2:10 PM	Moon	Moonset
	3:15 PM	3:15 PM	Jup GRS	GRS Transit (CML=207)
	8:28 PM	8:28 PM	Sun	Sunset
	8:57 PM	8:57 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 29.9 Alt 21)
	10:00 PM	10:00 PM	Diary	Uranus 1.6S of Moon
	10:07 PM	10:07 PM	Jupiter	Jupiter sets
	10:07 PM	10:07 PM	Iridium Flare	CHES:Iridium 5 Flares at mag.-0.4 (Azm 066 Alt 42)
	10:08 PM	10:08 PM	Iridium Flare	CHES:Iridium 36 Flares at mag.-4.1 (Azm 066 Alt 45)
	10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends
	10:33 PM	10:33 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 225.7 Alt 40)
	11:29 PM	11:29 PM	Iridium Flare	CHES:Iridium 90 Flares at mag. 1.4 (Azm 036 Alt 10)

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May 2014							June 2014							July 2014							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
21 Jun 2014	1:11 AM	1:11 AM	Jup GRS	GRS Transit (CML=207)
	1:54 AM	1:54 AM	Moon	Moonrise
	3:22 AM	3:22 AM	Iridium Flare	CHES:Iridium 17 Flares at mag.-0.6 (Azm 281 Alt 39)
	3:28 AM	3:28 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-2.6 (Azm 281 Alt 37)
	3:29 AM	3:29 AM	Iridium Flare	CHES:Iridium 98 Flares at mag. 0.4 (Azm 280 Alt 36)
	3:54 AM	3:54 AM	Iridium Flare	CHES:Iridium 75 Flares at mag.-1.1 (Azm 117 Alt 27)
	3:58 AM	3:58 AM	Twilight	Astronomical Twilight begins
	4:47 AM	4:47 AM	Lunar Occult	Moon occults 5.2 mag. double star 180(R)
	4:48 AM	4:48 AM	Lunar Occult	Moon occults 6.3 mag. double star 181(R)
	4:51 AM	4:51 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:50 AM	5:50 AM	Sun	Sunrise
	6:11 AM	6:11 AM	Iridium Flare	CHES:Iridium 46 Flares at mag.-5.2 (Azm 038 Alt 25)
	7:00 AM	7:00 AM	Diary	Solstice
	7:44 AM	7:44 AM	Jupiter	Jupiter rises
	11:07 AM	11:07 AM	Jup GRS	GRS Transit (CML=207)
	3:12 PM	3:12 PM	Moon	Moonset
	6:31 PM	6:31 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-7.0 (Azm 256 Alt 70)
	8:28 PM	8:28 PM	Sun	Sunset
	9:03 PM	9:03 PM	Jup GRS	GRS Transit (CML=207)
	9:44 PM	9:44 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 219.2 Alt 83)
	10:01 PM	10:01 PM	Iridium Flare	CHES:Iridium 8 Flares at mag. 0.8 (Azm 067 Alt 42)
	10:04 PM	10:04 PM	Jupiter	Jupiter sets
	10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends
	11:25 PM	11:25 PM	Iridium Flare	CHES:Iridium 54 Flares at mag. 0.6 (Azm 035 Alt 10)
22 Jun 2014	2:31 AM	2:31 AM	Moon	Moonrise
	3:22 AM	3:22 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-3.0 (Azm 282 Alt 37)
	3:23 AM	3:23 AM	Lunar Occult	Moon occults 6.5 mag. star 301(r)
	3:48 AM	3:48 AM	Iridium Flare	CHES:Iridium 63 Flares at mag. 0.9 (Azm 119 Alt 26)
	3:53 AM	3:53 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-0.6 (Azm 119 Alt 29)
	3:58 AM	3:58 AM	Iridium Flare	CHES:Iridium 64 Flares at mag. 1.9 (Azm 121 Alt 34)
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	5:09 AM	5:09 AM	Iridium Flare	CHES:Iridium 76 Flares at mag. 0.4 (Azm 075 Alt 11)
	5:50 AM	5:50 AM	Sun	Sunrise
	6:59 AM	6:59 AM	Jup GRS	GRS Transit (CML=207)
	7:41 AM	7:41 AM	Jupiter	Jupiter rises
	4:13 PM	4:13 PM	Moon	Moonset
	4:54 PM	4:54 PM	Jup GRS	GRS Transit (CML=207)
	8:28 PM	8:28 PM	Sun	Sunset
	8:55 PM	8:55 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 37.7 Alt 51)
10:01 PM	10:01 PM	Jupiter	Jupiter sets	
10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends	

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014						
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				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5		
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

Calendar

	Start	End	Category	Description
22 Jun 2014	11:19 PM	11:19 PM	Iridium Flare	CHES:Iridium 83 Flares at mag.-3.8 (Azm 038 Alt 11)
23 Jun 2014	2:51 AM	2:51 AM	Jup GRS	GRS Transit (CML=207)
	3:10 AM	3:10 AM	Moon	Moonrise
	3:15 AM	3:15 AM	Iridium Flare	CHES:Iridium 42 Flares at mag. 0.8 (Azm 283 Alt 38)
	3:42 AM	3:42 AM	Iridium Flare	CHES:Iridium 66 Flares at mag. 1.5 (Azm 121 Alt 26)
	3:51 AM	3:51 AM	Iridium Flare	CHES:Iridium 67 Flares at mag. 0.6 (Azm 123 Alt 33)
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	5:02 AM	5:02 AM	Iridium Flare	CHES:Iridium 46 Flares at mag.-4.9 (Azm 075 Alt 10)
	5:11 AM	5:11 AM	Iridium Flare	CHES:Iridium 47 Flares at mag. 0.9 (Azm 078 Alt 14)
	5:50 AM	5:50 AM	Sun	Sunrise
	5:59 AM	5:59 AM	Iridium Flare	CHES:Iridium 22 Flares at mag.-5.8 (Azm 036 Alt 23)
	7:38 AM	7:38 AM	Jupiter	Jupiter rises
	12:46 PM	12:46 PM	Jup GRS	GRS Transit (CML=207)
	5:12 PM	5:12 PM	Moon	Moonset
	8:29 PM	8:29 PM	Sun	Sunset
	9:16 PM	9:16 PM	Jup Sats	I.Sh.I
	9:42 PM	9:42 PM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azm 228.3 Alt 25)
	9:58 PM	9:58 PM	Jupiter	Jupiter sets
	9:58 PM	9:58 PM	Iridium Flare	CHES:Iridium 97 Flares at mag. 0.2 (Azm 067 Alt 50)
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Jup GRS	GRS Transit (CML=207)
	11:13 PM	11:13 PM	Iridium Flare	CHES:Iridium 56 Flares at mag.-0.4 (Azm 038 Alt 11)
	11:22 PM	11:22 PM	Iridium Flare	CHES:Iridium 52 Flares at mag. 1.6 (Azm 041 Alt 15)
24 Jun 2014	1:40 AM	1:40 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:18 AM	3:18 AM	Iridium Flare	CHES:Iridium 77 Flares at mag. 0.9 (Azm 285 Alt 30)
	3:45 AM	3:45 AM	Iridium Flare	CHES:Iridium 72 Flares at mag.-1.5 (Azm 124 Alt 32)
	3:45 AM	3:45 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-1.7 (Azm 123 Alt 30)
	3:52 AM	3:52 AM	Moon	Moonrise
	3:59 AM	3:59 AM	Twilight	Astronomical Twilight begins
	4:15 AM	4:15 AM	Lunar Occult	Moon occults 7.2 mag. star SAO93615(r)
	4:56 AM	4:56 AM	Iridium Flare	CHES:Iridium 49 Flares at mag.-0.5 (Azm 078 Alt 11)
	5:05 AM	5:05 AM	Iridium Flare	CHES:Iridium 11 Flares at mag.-2.9 (Azm 079 Alt 13)
	5:50 AM	5:50 AM	Sun	Sunrise
	7:35 AM	7:35 AM	Jupiter	Jupiter rises
	8:38 AM	8:38 AM	Jup GRS	GRS Transit (CML=207)
	10:00 AM	10:00 AM	Diary	Venus 1.3N of Moon
	6:08 PM	6:08 PM	Moon	Moonset
	6:34 PM	6:34 PM	Jup GRS	GRS Transit (CML=207)
	8:07 PM	8:07 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-5.6 (Azm 098 Alt 81)
	8:29 PM	8:29 PM	Sun	Sunset

Norfolk Astronomical Society Astronomical Calendar

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S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

Calendar

	Start	End	Category	Description
24 Jun 2014	8:50 PM	8:50 PM	Jup Sats	II.Sh.I
	8:53 PM	8:53 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 224.8 Alt 49)
	9:52 PM	9:52 PM	Iridium Flare	CHES:Iridium 51 Flares at mag.-6.2 (Azm 069 Alt 50)
	9:52 PM	9:52 PM	Iridium Flare	CHES:Iridium 7 Flares at mag.-3.5 (Azm 069 Alt 50)
	9:55 PM	9:55 PM	Jupiter	Jupiter sets
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	11:07 PM	11:07 PM	Iridium Flare	CHES:Iridium 84 Flares at mag. 1.7 (Azm 041 Alt 12)
	11:17 PM	11:17 PM	Iridium Flare	CHES:Iridium 10 Flares at mag.-0.5 (Azm 043 Alt 16)
25 Jun 2014	3:00 AM	3:00 AM	Diary	Aldebaran 1.9S of Moon
	3:12 AM	3:12 AM	Iridium Flare	CHES:Iridium 82 Flares at mag.-5.0 (Azm 286 Alt 31)
	3:39 AM	3:39 AM	Iridium Flare	CHES:Iridium 62 Flares at mag.-7.3 (Azm 126 Alt 30)
	4:00 AM	4:00 AM	Twilight	Astronomical Twilight begins
	4:30 AM	4:30 AM	Jup GRS	GRS Transit (CML=207)
	4:37 AM	4:37 AM	Moon	Moonrise
	4:59 AM	4:59 AM	Iridium Flare	CHES:Iridium 94 Flares at mag.-2.1 (Azm 080 Alt 13)
	5:00 AM	5:00 AM	Iridium Flare	CHES:Iridium 26 Flares at mag.-3.1 (Azm 081 Alt 13)
	5:08 AM	5:08 AM	Iridium Flare	CHES:Iridium 76 Flares at mag. 0.3 (Azm 083 Alt 16)
	5:51 AM	5:51 AM	Sun	Sunrise
	7:32 AM	7:32 AM	Jupiter	Jupiter rises
	2:25 PM	2:25 PM	Jup GRS	GRS Transit (CML=207)
	7:02 PM	7:02 PM	Moon	Moonset
	7:59 PM	7:59 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-8.4 (Azm 104 Alt 82)
	8:01 PM	8:01 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-7.5 (Azm 102 Alt 82)
	8:29 PM	8:29 PM	Sun	Sunset
	9:46 PM	9:46 PM	Iridium Flare	CHES:Iridium 37 Flares at mag.-3.6 (Azm 071 Alt 50)
	9:51 PM	9:51 PM	Jupiter	Jupiter sets
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	11:11 PM	11:11 PM	Iridium Flare	CHES:Iridium 13 Flares at mag.-5.7 (Azm 044 Alt 16)
26 Jun 2014	12:22 AM	12:22 AM	Jup GRS	GRS Transit (CML=207)
	3:06 AM	3:06 AM	Iridium Flare	CHES:Iridium 18 Flares at mag.-2.0 (Azm 287 Alt 32)
	3:33 AM	3:33 AM	Iridium Flare	CHES:Iridium 65 Flares at mag.-1.9 (Azm 127 Alt 29)
	3:37 AM	3:37 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-3.9 (Azm 127 Alt 31)
	4:00 AM	4:00 AM	Twilight	Astronomical Twilight begins
	4:53 AM	4:53 AM	Iridium Flare	CHES:Iridium 23 Flares at mag. 0.6 (Azm 083 Alt 13)
	5:02 AM	5:02 AM	Iridium Flare	CHES:Iridium 46 Flares at mag.-5.3 (Azm 083 Alt 16)
	5:26 AM	5:26 AM	Moon	Moonrise
	5:51 AM	5:51 AM	Sun	Sunrise
	7:29 AM	7:29 AM	Jupiter	Jupiter rises
	9:00 AM	9:00 AM	Diary	Mercury 0.3S of Moon Occn
	10:17 AM	10:17 AM	Jup GRS	GRS Transit (CML=207)

Norfolk Astronomical Society Astronomical Calendar

May 2014							June 2014							July 2014						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7	6	7	8	9	10	11	12
4	5	6	7	8	9	10	8	9	10	11	12	13	14	13	14	15	16	17	18	19
11	12	13	14	15	16	17	15	16	17	18	19	20	21	20	21	22	23	24	25	26
18	19	20	21	22	23	24	22	23	24	25	26	27	28	27	28	29	30	31		
25	26	27	28	29	30	31	29	30												

Calendar

	Start	End	Category	Description
26 Jun 2014	6:10 PM	6:10 PM	Iridium Flare	CHES:Iridium 22 Flares at mag.-7.4 (Azm 260 Alt 64)
	7:51 PM	7:51 PM	Moon	Moonset
	8:13 PM	8:13 PM	Jup GRS	GRS Transit (CML=207)
	8:29 PM	8:29 PM	Sun	Sunset
	8:51 PM	8:51 PM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azm 231.0 Alt 16)
	9:40 PM	9:40 PM	Iridium Flare	CHES:Iridium 34 Flares at mag. 0.2 (Azm 072 Alt 50)
	9:48 PM	9:48 PM	Jupiter	Jupiter sets
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	10:29 PM	10:29 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	11:05 PM	11:05 PM	Iridium Flare	CHES:Iridium 50 Flares at mag. 0.6 (Azm 046 Alt 16)
11:14 PM	11:14 PM	Iridium Flare	CHES:Iridium 56 Flares at mag. 1.1 (Azm 047 Alt 21)	
27 Jun 2014	3:00 AM	3:00 AM	Iridium Flare	CHES:Iridium 39 Flares at mag. 1.1 (Azm 288 Alt 32)
	3:09 AM	3:09 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.1 (Azm 289 Alt 26)
	3:27 AM	3:27 AM	Iridium Flare	CHES:Iridium 68 Flares at mag. 0.8 (Azm 129 Alt 28)
	3:35 AM	3:35 AM	Iridium Flare	CHES:Iridium 74 Flares at mag.-0.8 (Azm 130 Alt 34)
	4:00 AM	4:00 AM	Twilight	Astronomical Twilight begins
	4:56 AM	4:56 AM	Iridium Flare	CHES:Iridium 49 Flares at mag.-2.9 (Azm 086 Alt 16)
	5:00 AM	5:00 AM	Diary	NEW MOON
	5:05 AM	5:05 AM	Iridium Flare	CHES:Iridium 11 Flares at mag. 1.0 (Azm 087 Alt 19)
	5:51 AM	5:51 AM	Sun	Sunrise
	6:09 AM	6:09 AM	Jup GRS	GRS Transit (CML=207)
	6:17 AM	6:17 AM	Moon	Moonrise
	7:27 AM	7:27 AM	Jupiter	Jupiter rises
	7:46 AM	7:46 AM	Iridium Flare	CHES:Iridium 32 Flares at mag.-5.7 (Azm 060 Alt 39)
	4:05 PM	4:05 PM	Jup GRS	GRS Transit (CML=207)
7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)	
8:29 PM	8:29 PM	Sun	Sunset	
8:36 PM	8:36 PM	Moon	Moonset	
9:45 PM	9:45 PM	Jupiter	Jupiter sets	
10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends	
11:08 PM	11:08 PM	Iridium Flare	CHES:Iridium 84 Flares at mag.-1.0 (Azm 049 Alt 22)	
28 Jun 2014	2:01 AM	2:01 AM	Jup GRS	GRS Transit (CML=207)
	3:03 AM	3:03 AM	Iridium Flare	CHES:Iridium 81 Flares at mag.-1.3 (Azm 290 Alt 26)
	3:29 AM	3:29 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-7.6 (Azm 131 Alt 33)
	3:30 AM	3:30 AM	Iridium Flare	CHES:Iridium 70 Flares at mag. 0.3 (Azm 132 Alt 34)
	4:01 AM	4:01 AM	Twilight	Astronomical Twilight begins
	4:49 AM	4:49 AM	Iridium Flare	CHES:Iridium 22 Flares at mag. 0.8 (Azm 086 Alt 15)
	4:57 AM	4:57 AM	Iridium Flare	CHES:Iridium 26 Flares at mag.-2.5 (Azm 089 Alt 19)
	4:58 AM	4:58 AM	Iridium Flare	CHES:Iridium 94 Flares at mag.-2.0 (Azm 088 Alt 19)
5:03 AM	5:03 AM	Iridium Flare	CHES:Iridium 45 Flares at mag. 0.2 (Azm 078 Alt 13)	

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				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

Calendar

	Start	End	Category	Description
28 Jun 2014	5:52 AM	5:52 AM	Sun	Sunrise
	7:09 AM	7:09 AM	Moon	Moonrise
	7:24 AM	7:24 AM	Jupiter	Jupiter rises
	11:56 AM	11:56 AM	Jup GRS	GRS Transit (CML=207)
	12:18 PM	12:18 PM	Meteor Shower	beta-Taurids (day) meteor peak (zhr=25)
	8:29 PM	8:29 PM	Sun	Sunset
	9:16 PM	9:16 PM	Moon	Moonsset
	9:42 PM	9:42 PM	Jupiter	Jupiter sets
	9:52 PM	9:52 PM	Jup GRS	GRS Transit (CML=207)
	10:00 PM	10:00 PM	Diary	Jupiter 5.4N of Moon
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	11:02 PM	11:02 PM	Iridium Flare	CHES:Iridium 12 Flares at mag.-6.6 (Azm 050 Alt 22)
29 Jun 2014	2:53 AM	2:53 AM	Iridium Flare	CHES:Iridium 98 Flares at mag. 0.4 (Azm 290 Alt 29)
	2:57 AM	2:57 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-4.3 (Azm 291 Alt 26)
	3:24 AM	3:24 AM	Iridium Flare	CHES:Iridium 64 Flares at mag.-0.9 (Azm 134 Alt 33)
	4:01 AM	4:01 AM	Twilight	Astronomical Twilight begins
	4:43 AM	4:43 AM	Iridium Flare	CHES:Iridium 25 Flares at mag. 1.9 (Azm 089 Alt 15)
	4:52 AM	4:52 AM	Iridium Flare	CHES:Iridium 23 Flares at mag.-6.0 (Azm 091 Alt 19)
	5:52 AM	5:52 AM	Sun	Sunrise
	7:21 AM	7:21 AM	Jupiter	Jupiter rises
	7:48 AM	7:48 AM	Jup GRS	GRS Transit (CML=207)
	8:03 AM	8:03 AM	Moon	Moonrise
	5:44 PM	5:44 PM	Jup GRS	GRS Transit (CML=207)
	7:18 PM	7:18 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:29 PM	8:29 PM	Sun	Sunset
	9:31 PM	9:31 PM	Iridium Flare	CHES:Iridium 19 Flares at mag. 1.7 (Azm 073 Alt 61)
	9:39 PM	9:39 PM	Jupiter	Jupiter sets
	9:54 PM	9:54 PM	Moon	Moonsset
	10:20 PM	10:20 PM	Twilight	Astronomical Twilight ends
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 86 Flares at mag.-0.7 (Azm 052 Alt 23)
	11:06 PM	11:06 PM	Iridium Flare	CHES:Iridium 50 Flares at mag. 1.6 (Azm 052 Alt 27)
30 Jun 2014	2:51 AM	2:51 AM	Iridium Flare	CHES:Iridium 40 Flares at mag. 0.0 (Azm 293 Alt 26)
	3:00 AM	3:00 AM	Iridium Flare	CHES:Iridium 39 Flares at mag. 0.7 (Azm 293 Alt 22)
	3:18 AM	3:18 AM	Iridium Flare	CHES:Iridium 67 Flares at mag.-5.6 (Azm 136 Alt 32)
	3:21 AM	3:21 AM	Iridium Flare	CHES:Iridium 14 Flares at mag.-2.4 (Azm 136 Alt 34)
	3:40 AM	3:40 AM	Jup GRS	GRS Transit (CML=207)
	4:02 AM	4:02 AM	Twilight	Astronomical Twilight begins
	4:46 AM	4:46 AM	Iridium Flare	CHES:Iridium 20 Flares at mag.-1.9 (Azm 092 Alt 19)
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 49 Flares at mag. 1.4 (Azm 094 Alt 23)
	5:52 AM	5:52 AM	Sun	Sunrise

