

Norfolk Astronomical Society



<http://norfolkastronomical.org>

July 2014

Monthly Sky Calendar
Prepared Specifically For
The Hampton Roads Area

Upcoming Regular Meetings

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

DATE	Monday, August 11, 2014
TIME	6 - 8 PM EDT
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	Amateur Astronomy

Dual Iridium Pass Near Polaris

Photo By Glendon L. Howell



Glen Howell took this image of Iridium 90 and 50, flaring about 1 minute apart, between 8:23 to 8:24 PM on April 4, 2014. Both satellites were moving south to north. Iridium 90 (right) flared first at -5.3 magnitude, followed by Iridium 50 (left) at -7.2. Predictions were listed in the April NAS Calendar. The image is a 108 second exposure, tracked on an iOptron Skytracker. A Canon EFS 75-300 zoom was set to 75mm f/8. Camera was a Canon Digital Rebel Xti, set to ISO 200. The bright star to the right of the flares is Polaris.

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
1 Jul 2014	4:03 AM	4:03 AM	Twilight	Astronomical Twilight begins
	5:53 AM	5:53 AM	Sun	Sunrise
	7:15 AM	7:15 AM	Jupiter	Jupiter rises
	9:00 AM	9:00 AM	Diary	Mercury stationary
	9:27 AM	9:27 AM	Jup GRS	GRS Transit (CML=207)
	9:52 AM	9:52 AM	Moon	Moonrise
	6:00 PM	6:00 PM	Diary	Regulus 4.6N of Moon
	6:00 PM	6:00 PM	Diary	Venus 4.1N of Aldebaran
	7:23 PM	7:23 PM	Jup GRS	GRS Transit (CML=207)
	8:29 PM	8:29 PM	Sun	Sunset
	9:32 PM	9:32 PM	Jupiter	Jupiter sets
10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends	
11:00 PM	11:00 PM	Moon	Moonset	
2 Jul 2014	4:03 AM	4:03 AM	Twilight	Astronomical Twilight begins
	5:19 AM	5:19 AM	Jup GRS	GRS Transit (CML=207)
	5:53 AM	5:53 AM	Sun	Sunrise
	7:12 AM	7:12 AM	Jupiter	Jupiter rises
	10:46 AM	10:46 AM	Moon	Moonrise
	3:15 PM	3:15 PM	Jup GRS	GRS Transit (CML=207)
	4:00 PM	4:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:29 PM	8:29 PM	Sun	Sunset
	9:29 PM	9:29 PM	Jupiter	Jupiter sets
	10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends
11:30 PM	11:30 PM	Moon	Moonset	
3 Jul 2014	1:11 AM	1:11 AM	Jup GRS	GRS Transit (CML=207)
	4:04 AM	4:04 AM	Twilight	Astronomical Twilight begins
	5:54 AM	5:54 AM	Sun	Sunrise
	7:09 AM	7:09 AM	Jupiter	Jupiter rises
	11:07 AM	11:07 AM	Jup GRS	GRS Transit (CML=207)
	11:41 AM	11:41 AM	Moon	Moonrise
	8:07 PM	8:07 PM	Lunar Occult	Moon occults 4.3 mag. double star ZC1685(d)
	8:29 PM	8:29 PM	Sun	Sunset
	9:02 PM	9:02 PM	Jup GRS	GRS Transit (CML=207)
	9:15 PM	9:15 PM	Lunar Occult	Moon occults 4.3 mag. double star ZC1685(r)
9:26 PM	9:26 PM	Jupiter	Jupiter sets	
10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends	
4 Jul 2014	12:00 AM	12:00 AM	Public Holiday	Independence Day holiday
	12:01 AM	12:01 AM	Moon	Moonset
	4:05 AM	4:05 AM	Twilight	Astronomical Twilight begins

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
4 Jul 2014	5:00 AM	5:00 AM	Diary	Pluto at opposition
	5:54 AM	5:54 AM	Sun	Sunrise
	6:58 AM	6:58 AM	Jup GRS	GRS Transit (CML=207)
	7:06 AM	7:06 AM	Jupiter	Jupiter rises
	12:36 PM	12:36 PM	Moon	Moonrise
	4:54 PM	4:54 PM	Jup GRS	GRS Transit (CML=207)
	8:29 PM	8:29 PM	Sun	Sunset
	9:04 PM	9:04 PM	Iridium Flare	CHES:Iridium 4 Flares at mag.-8.3 (Azm 080 Alt 64)
	9:23 PM	9:23 PM	Jupiter	Jupiter sets
	10:19 PM	10:19 PM	Twilight	Astronomical Twilight ends
10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 10 Flares at mag. 0.2 (Azm 059 Alt 34)	
5 Jul 2014	12:32 AM	12:32 AM	Moon	Moonset
	2:38 AM	2:38 AM	Iridium Flare	CHES:Iridium 82 Flares at mag. 0.0 (Azm 301 Alt 17)
	2:47 AM	2:47 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-0.3 (Azm 303 Alt 13)
	2:50 AM	2:50 AM	Jup GRS	GRS Transit (CML=207)
	3:00 AM	3:00 AM	Diary	Earth at aphelion
	4:05 AM	4:05 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Iridium Flare	CHES:Iridium 94 Flares at mag. 1.4 (Azm 102 Alt 20)
	4:28 AM	4:28 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 163.5 Alt 16)
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 76 Flares at mag.-0.2 (Azm 103 Alt 25)
	5:55 AM	5:55 AM	Sun	Sunrise
	7:04 AM	7:04 AM	Jupiter	Jupiter rises
	8:00 AM	8:00 AM	Diary	FIRST QUARTER
	12:46 PM	12:46 PM	Jup GRS	GRS Transit (CML=207)
	12:56 PM	12:56 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	1:33 PM	1:33 PM	Moon	Moonrise
	8:29 PM	8:29 PM	Sun	Sunset
	9:20 PM	9:20 PM	Jupiter	Jupiter sets
10:00 PM	10:00 PM	Diary	Mars 0.2S of Moon Occn	
10:18 PM	10:18 PM	Twilight	Astronomical Twilight ends	
10:39 PM	10:39 PM	Iridium Flare	CHES:Iridium 13 Flares at mag.-6.7 (Azm 060 Alt 33)	
10:41 PM	10:41 PM	Jup GRS	GRS Transit (CML=207)	
6 Jul 2014	1:06 AM	1:06 AM	Moon	Moonset
	2:31 AM	2:31 AM	Iridium Flare	CHES:Iridium 38 Flares at mag. 1.2 (Azm 305 Alt 14)
	2:40 AM	2:40 AM	Iridium Flare	CHES:Iridium 42 Flares at mag.-6.2 (Azm 304 Alt 13)
	2:49 AM	2:49 AM	Iridium Flare	CHES:Iridium 40 Flares at mag. 1.9 (Azm 306 Alt 10)
	4:06 AM	4:06 AM	Twilight	Astronomical Twilight begins
	4:18 AM	4:18 AM	Iridium Flare	CHES:Iridium 23 Flares at mag. 1.8 (Azm 104 Alt 20)
	4:21 AM	4:21 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 166.3 Alt 18)
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 46 Flares at mag.-6.6 (Azm 104 Alt 24)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
6 Jul 2014	5:00 AM	5:00 AM	Diary	Spica 2.0S of Moon
	5:55 AM	5:55 AM	Sun	Sunrise
	7:01 AM	7:01 AM	Jupiter	Jupiter rises
	8:37 AM	8:37 AM	Jup GRS	GRS Transit (CML=207)
	2:32 PM	2:32 PM	Moon	Moonrise
	6:33 PM	6:33 PM	Jup GRS	GRS Transit (CML=207)
	8:29 PM	8:29 PM	Sun	Sunset
	9:17 PM	9:17 PM	Jupiter	Jupiter sets
	10:18 PM	10:18 PM	Twilight	Astronomical Twilight ends
10:33 PM	10:33 PM	Iridium Flare	CHES:Iridium 50 Flares at mag.-1.0 (Azm 062 Alt 33)	
7 Jul 2014	1:42 AM	1:42 AM	Moon	Moonset
	2:30 AM	2:30 AM	Iridium Flare	CHES:Iridium 17 Flares at mag. 1.5 (Azm 306 Alt 13)
	2:34 AM	2:34 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 0.1 (Azm 306 Alt 13)
	2:43 AM	2:43 AM	Iridium Flare	CHES:Iridium 77 Flares at mag. 1.9 (Azm 306 Alt 10)
	4:07 AM	4:07 AM	Twilight	Astronomical Twilight begins
	4:14 AM	4:14 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 168.8 Alt 21)
	4:21 AM	4:21 AM	Iridium Flare	CHES:Iridium 49 Flares at mag.-6.7 (Azm 107 Alt 24)
	4:29 AM	4:29 AM	Jup GRS	GRS Transit (CML=207)
	5:56 AM	5:56 AM	Sun	Sunrise
	6:58 AM	6:58 AM	Jupiter	Jupiter rises
	2:25 PM	2:25 PM	Jup GRS	GRS Transit (CML=207)
	3:33 PM	3:33 PM	Moon	Moonrise
	8:28 PM	8:28 PM	Sun	Sunset
	9:13 PM	9:13 PM	Jupiter	Jupiter sets
10:17 PM	10:17 PM	Twilight	Astronomical Twilight ends	
10:27 PM	10:27 PM	Iridium Flare	CHES:Iridium 53 Flares at mag. 1.4 (Azm 063 Alt 33)	
11:00 PM	11:00 PM	Diary	Saturn 0.4N of Moon Occn	
8 Jul 2014	12:21 AM	12:21 AM	Jup GRS	GRS Transit (CML=207)
	2:24 AM	2:24 AM	Moon	Moonset
	2:37 AM	2:37 AM	Iridium Flare	CHES:Iridium 82 Flares at mag.-1.0 (Azm 308 Alt 10)
	4:07 AM	4:07 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 171.8 Alt 23)
	4:08 AM	4:08 AM	Twilight	Astronomical Twilight begins
	4:15 AM	4:15 AM	Iridium Flare	CHES:Iridium 22 Flares at mag.-0.1 (Azm 107 Alt 22)
	4:17 AM	4:17 AM	Iridium Flare	CHES:Iridium 26 Flares at mag.-6.8 (Azm 109 Alt 25)
	4:24 AM	4:24 AM	Iridium Flare	CHES:Iridium 94 Flares at mag. 1.6 (Azm 110 Alt 28)
	4:29 AM	4:29 AM	Iridium Flare	CHES:Iridium 45 Flares at mag.-1.1 (Azm 098 Alt 19)
	5:45 AM	5:45 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 233.6 Alt 14)
	5:56 AM	5:56 AM	Sun	Sunrise
	6:55 AM	6:55 AM	Jupiter	Jupiter rises
	9:45 AM	9:45 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
8 Jul 2014	10:17 AM	10:17 AM	Jup GRS	GRS Transit (CML=207)
	4:35 PM	4:35 PM	Moon	Moonrise
	8:12 PM	8:12 PM	Jup GRS	GRS Transit (CML=207)
	8:28 PM	8:28 PM	Sun	Sunset
	9:10 PM	9:10 PM	Jupiter	Jupiter sets
	10:17 PM	10:17 PM	Twilight	Astronomical Twilight ends
	10:30 PM	10:30 PM	Iridium Flare	CHES:Iridium 12 Flares at mag. 1.5 (Azm 063 Alt 41)
9 Jul 2014	2:31 AM	2:31 AM	Iridium Flare	CHES:Iridium 98 Flares at mag. 1.2 (Azm 308 Alt 10)
	2:31 AM	2:31 AM	Iridium Flare	CHES:Iridium 18 Flares at mag. 2.0 (Azm 309 Alt 10)
	3:11 AM	3:11 AM	Moon	Moonset
	4:01 AM	4:01 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 165.6 Alt 24)
	4:09 AM	4:09 AM	Twilight	Astronomical Twilight begins
	4:09 AM	4:09 AM	Iridium Flare	CHES:Iridium 25 Flares at mag. 0.3 (Azm 110 Alt 23)
	4:18 AM	4:18 AM	Iridium Flare	CHES:Iridium 23 Flares at mag. 1.3 (Azm 112 Alt 29)
	5:57 AM	5:57 AM	Sun	Sunrise
	6:08 AM	6:08 AM	Jup GRS	GRS Transit (CML=207)
	6:52 AM	6:52 AM	Jupiter	Jupiter rises
	12:37 PM	12:37 PM	Meteor Shower	Pegasids meteor peak (zhr= 8)
	4:04 PM	4:04 PM	Jup GRS	GRS Transit (CML=207)
	5:38 PM	5:38 PM	Moon	Moonrise
	8:28 PM	8:28 PM	Sun	Sunset
9:07 PM	9:07 PM	Jupiter	Jupiter sets	
10:16 PM	10:16 PM	Twilight	Astronomical Twilight ends	
10:23 PM	10:23 PM	Iridium Flare	CHES:Iridium 16 Flares at mag.-2.7 (Azm 065 Alt 38)	
10:24 PM	10:24 PM	Iridium Flare	CHES:Iridium 86 Flares at mag. 0.4 (Azm 065 Alt 42)	
10:51 PM	10:51 PM	Lunar Occult	Moon occults 6.6 mag. double star ZC2436(d)	
10 Jul 2014	2:00 AM	2:00 AM	Jup GRS	GRS Transit (CML=207)
	3:54 AM	3:54 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 157.0 Alt 24)
	4:03 AM	4:03 AM	Iridium Flare	CHES:Iridium 47 Flares at mag. 1.3 (Azm 112 Alt 22)
	4:05 AM	4:05 AM	Moon	Moonset
	4:09 AM	4:09 AM	Twilight	Astronomical Twilight begins
	4:12 AM	4:12 AM	Iridium Flare	CHES:Iridium 20 Flares at mag.-0.3 (Azm 113 Alt 28)
	5:34 AM	5:34 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 190.6 Alt 21)
	5:58 AM	5:58 AM	Sun	Sunrise
	6:49 AM	6:49 AM	Jupiter	Jupiter rises
	8:39 AM	8:39 AM	Iridium Flare	CHES:Iridium 97 Flares at mag.-5.7 (Azm 076 Alt 42)
	11:56 AM	11:56 AM	Jup GRS	GRS Transit (CML=207)
	6:39 PM	6:39 PM	Moon	Moonrise
	8:28 PM	8:28 PM	Sun	Sunset
9:04 PM	9:04 PM	Jupiter	Jupiter sets	

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
10 Jul 2014	9:52 PM	9:52 PM	Jup GRS	GRS Transit (CML=207)
	10:16 PM	10:16 PM	Twilight	Astronomical Twilight ends
	10:18 PM	10:18 PM	Iridium Flare	CHES:Iridium 52 Flares at mag.-4.8 (Azm 066 Alt 40)
11 Jul 2014	3:48 AM	3:48 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 147.8 Alt 21)
	4:06 AM	4:06 AM	Iridium Flare	CHES:Iridium 3 Flares at mag.-5.6 (Azm 114 Alt 26)
	4:10 AM	4:10 AM	Twilight	Astronomical Twilight begins
	5:06 AM	5:06 AM	Moon	Moonset
	5:27 AM	5:27 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 193.5 Alt 19)
	5:58 AM	5:58 AM	Sun	Sunrise
	6:34 AM	6:34 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:46 AM	6:46 AM	Jupiter	Jupiter rises
	7:48 AM	7:48 AM	Jup GRS	GRS Transit (CML=207)
	5:43 PM	5:43 PM	Jup GRS	GRS Transit (CML=207)
	7:00 PM	7:00 PM	Diary	Pluto 2.3S of Moon
	7:37 PM	7:37 PM	Moon	Moonrise
	8:27 PM	8:27 PM	Sun	Sunset
	9:01 PM	9:01 PM	Jupiter	Jupiter sets
10:12 PM	10:12 PM	Iridium Flare	CHES:Iridium 10 Flares at mag.-1.4 (Azm 068 Alt 41)	
10:15 PM	10:15 PM	Twilight	Astronomical Twilight ends	
12 Jul 2014	3:39 AM	3:39 AM	Jup GRS	GRS Transit (CML=207)
	3:42 AM	3:42 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 139.7 Alt 17)
	4:00 AM	4:00 AM	Iridium Flare	CHES:Iridium 76 Flares at mag.-6.8 (Azm 117 Alt 26)
	4:11 AM	4:11 AM	Twilight	Astronomical Twilight begins
	5:21 AM	5:21 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 196.0 Alt 16)
	5:59 AM	5:59 AM	Sun	Sunrise
	6:13 AM	6:13 AM	Moon	Moonset
	6:44 AM	6:44 AM	Jupiter	Jupiter rises
	8:00 AM	8:00 AM	Diary	FULL MOON
	1:35 PM	1:35 PM	Jup GRS	GRS Transit (CML=207)
	4:00 PM	4:00 PM	Diary	Mercury greatest elong W(21)
	6:38 PM	6:38 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-5.9 (Azm 250 Alt 71)
	8:27 PM	8:27 PM	Sun	Sunset
	8:30 PM	8:30 PM	Moon	Moonrise
8:58 PM	8:58 PM	Jupiter	Jupiter sets	
10:06 PM	10:06 PM	Iridium Flare	CHES:Iridium 13 Flares at mag. 1.5 (Azm 069 Alt 40)	
10:14 PM	10:14 PM	Twilight	Astronomical Twilight ends	
11:31 PM	11:31 PM	Jup GRS	GRS Transit (CML=207)	
13 Jul 2014	3:36 AM	3:36 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 133.8 Alt 11)
	3:54 AM	3:54 AM	Iridium Flare	CHES:Iridium 46 Flares at mag.-0.2 (Azm 118 Alt 24)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
13 Jul 2014	4:12 AM	4:12 AM	Twilight	Astronomical Twilight begins
	5:26 AM	5:26 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 133.3 Alt 34)
	6:00 AM	6:00 AM	Sun	Sunrise
	6:00 AM	6:00 AM	Diary	Moon at perigee
	6:41 AM	6:41 AM	Jupiter	Jupiter rises
	7:24 AM	7:24 AM	Moon	Moonset
	9:27 AM	9:27 AM	Jup GRS	GRS Transit (CML=207)
	7:22 PM	7:22 PM	Jup GRS	GRS Transit (CML=207)
	8:26 PM	8:26 PM	Sun	Sunset
	8:54 PM	8:54 PM	Jupiter	Jupiter sets
	9:18 PM	9:18 PM	Moon	Moonrise
	10:09 PM	10:09 PM	Iridium Flare	CHES:Iridium 56 Flares at mag. 1.1 (Azm 069 Alt 48)
	10:14 PM	10:14 PM	Twilight	Astronomical Twilight ends
	11:00 PM	11:00 PM	Diary	Mars 1.3N of Spica
	11:24 PM	11:24 PM	Iridium Flare	CHES:Iridium 41 Flares at mag. 0.9 (Azm 037 Alt 10)
14 Jul 2014	3:23 AM	3:23 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:47 AM	3:47 AM	Iridium Flare	CHES:Iridium 49 Flares at mag. 0.0 (Azm 120 Alt 24)
	3:57 AM	3:57 AM	Iridium Flare	CHES:Iridium 11 Flares at mag. 1.2 (Azm 121 Alt 30)
	4:13 AM	4:13 AM	Twilight	Astronomical Twilight begins
	4:37 AM	4:37 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 129.8 Alt 18)
	5:18 AM	5:18 AM	Jup GRS	GRS Transit (CML=207)
	6:00 AM	6:00 AM	Sun	Sunrise
	6:38 AM	6:38 AM	Jupiter	Jupiter rises
	8:35 AM	8:35 AM	Moon	Moonset
	3:14 PM	3:14 PM	Jup GRS	GRS Transit (CML=207)
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	8:26 PM	8:26 PM	Sun	Sunset
	8:51 PM	8:51 PM	Jupiter	Jupiter sets
	10:01 PM	10:01 PM	Moon	Moonrise
	10:03 PM	10:03 PM	Iridium Flare	CHES:Iridium 84 Flares at mag. 0.9 (Azm 071 Alt 50)
	10:13 PM	10:13 PM	Twilight	Astronomical Twilight ends
	11:18 PM	11:18 PM	Iridium Flare	CHES:Iridium 42 Flares at mag.-3.3 (Azm 038 Alt 10)
15 Jul 2014	1:10 AM	1:10 AM	Jup GRS	GRS Transit (CML=207)
	3:41 AM	3:41 AM	Iridium Flare	CHES:Iridium 22 Flares at mag. 1.9 (Azm 121 Alt 22)
	3:51 AM	3:51 AM	Iridium Flare	CHES:Iridium 94 Flares at mag.-0.7 (Azm 123 Alt 29)
	4:14 AM	4:14 AM	Twilight	Astronomical Twilight begins
	5:25 AM	5:25 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 319.3 Alt 72)
	6:01 AM	6:01 AM	Sun	Sunrise
	6:35 AM	6:35 AM	Jupiter	Jupiter rises
	9:45 AM	9:45 AM	Moon	Moonset

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
15 Jul 2014	11:00 AM	11:00 AM	Diary	Neptune 4.4S of Moon
	11:06 AM	11:06 AM	Jup GRS	GRS Transit (CML=207)
	8:26 PM	8:26 PM	Sun	Sunset
	8:48 PM	8:48 PM	Jupiter	Jupiter sets
	9:02 PM	9:02 PM	Jup GRS	GRS Transit (CML=207)
	9:57 PM	9:57 PM	Iridium Flare	CHES:Iridium 12 Flares at mag.-2.6 (Azm 072 Alt 49)
	10:12 PM	10:12 PM	Twilight	Astronomical Twilight ends
	10:41 PM	10:41 PM	Moon	Moonrise
	11:12 PM	11:12 PM	Iridium Flare	CHES:Iridium 80 Flares at mag.-1.8 (Azm 040 Alt 11)
11:16 PM	11:16 PM	Iridium Flare	CHES:Iridium 98 Flares at mag.-3.0 (Azm 041 Alt 11)	
16 Jul 2014	3:35 AM	3:35 AM	Iridium Flare	CHES:Iridium 25 Flares at mag. 2.0 (Azm 124 Alt 22)
	3:44 AM	3:44 AM	Iridium Flare	CHES:Iridium 23 Flares at mag.-1.2 (Azm 125 Alt 29)
	4:15 AM	4:15 AM	Twilight	Astronomical Twilight begins
	4:36 AM	4:36 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 136.0 Alt 58)
	6:02 AM	6:02 AM	Sun	Sunrise
	6:32 AM	6:32 AM	Jupiter	Jupiter rises
	6:58 AM	6:58 AM	Jup GRS	GRS Transit (CML=207)
	10:54 AM	10:54 AM	Moon	Moonset
	4:53 PM	4:53 PM	Jup GRS	GRS Transit (CML=207)
	6:21 PM	6:21 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-5.9 (Azm 253 Alt 66)
	8:25 PM	8:25 PM	Sun	Sunset
	8:45 PM	8:45 PM	Jupiter	Jupiter sets
	9:51 PM	9:51 PM	Iridium Flare	CHES:Iridium 86 Flares at mag.-8.1 (Azm 074 Alt 50)
10:11 PM	10:11 PM	Twilight	Astronomical Twilight ends	
11:06 PM	11:06 PM	Iridium Flare	CHES:Iridium 81 Flares at mag. 1.0 (Azm 043 Alt 12)	
11:16 PM	11:16 PM	Iridium Flare	CHES:Iridium 82 Flares at mag.-0.7 (Azm 045 Alt 15)	
11:18 PM	11:18 PM	Moon	Moonrise	
17 Jul 2014	12:12 AM	12:12 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	2:49 AM	2:49 AM	Jup GRS	GRS Transit (CML=207)
	3:38 AM	3:38 AM	Iridium Flare	CHES:Iridium 20 Flares at mag.-5.6 (Azm 127 Alt 27)
	3:47 AM	3:47 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 122.1 Alt 29)
	4:16 AM	4:16 AM	Twilight	Astronomical Twilight begins
	4:53 AM	4:53 AM	Iridium Flare	CHES:Iridium 33 Flares at mag.-1.6 (Azm 081 Alt 10)
	4:58 AM	4:58 AM	Iridium Flare	CHES:Iridium 32 Flares at mag. 0.5 (Azm 082 Alt 12)
	5:23 AM	5:23 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 327.8 Alt 26)
	6:02 AM	6:02 AM	Sun	Sunrise
	6:29 AM	6:29 AM	Jupiter	Jupiter rises
	12:00 PM	12:00 PM	Moon	Moonset
	12:45 PM	12:45 PM	Jup GRS	GRS Transit (CML=207)
	8:25 PM	8:25 PM	Sun	Sunset

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
17 Jul 2014	8:42 PM	8:42 PM	Jupiter	Jupiter sets
	9:45 PM	9:45 PM	Iridium Flare	CHES:Iridium 52 Flares at mag. 1.1 (Azm 075 Alt 47)
	10:11 PM	10:11 PM	Twilight	Astronomical Twilight ends
	10:41 PM	10:41 PM	Jup GRS	GRS Transit (CML=207)
	11:10 PM	11:10 PM	Iridium Flare	CHES:Iridium 18 Flares at mag.-6.3 (Azm 046 Alt 15)
	11:55 PM	11:55 PM	Moon	Moonrise
18 Jul 2014	3:00 AM	3:00 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 90.2 Alt 11)
	3:32 AM	3:32 AM	Iridium Flare	CHES:Iridium 3 Flares at mag.-2.3 (Azm 128 Alt 25)
	3:38 AM	3:38 AM	Iridium Flare	CHES:Iridium 26 Flares at mag. 0.9 (Azm 130 Alt 30)
	3:55 AM	3:55 AM	Iridium Flare	CHES:Iridium 45 Flares at mag.-1.4 (Azm 118 Alt 26)
	4:17 AM	4:17 AM	Twilight	Astronomical Twilight begins
	4:34 AM	4:34 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 323.0 Alt 44)
	4:52 AM	4:52 AM	Iridium Flare	CHES:Iridium 58 Flares at mag.-2.1 (Azm 083 Alt 11)
	4:53 AM	4:53 AM	Lunar Occult	Moon occults 6.1 mag. double star 136(R)
	5:00 AM	5:00 AM	Diary	Uranus 1.4S of Moon
	5:01 AM	5:01 AM	Iridium Flare	CHES:Iridium 59 Flares at mag. 1.8 (Azm 085 Alt 14)
	6:03 AM	6:03 AM	Sun	Sunrise
	6:26 AM	6:26 AM	Jupiter	Jupiter rises
	8:37 AM	8:37 AM	Jup GRS	GRS Transit (CML=207)
	1:04 PM	1:04 PM	Moon	Moonset
	6:32 PM	6:32 PM	Jup GRS	GRS Transit (CML=207)
	8:24 PM	8:24 PM	Sun	Sunset
	8:39 PM	8:39 PM	Jupiter	Jupiter sets
	9:39 PM	9:39 PM	Iridium Flare	CHES:Iridium 10 Flares at mag. 1.9 (Azm 077 Alt 48)
	9:48 PM	9:48 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 173.6 Alt 17)
	9:48 PM	9:48 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 173.5 Alt 17)
10:10 PM	10:10 PM	Twilight	Astronomical Twilight ends	
11:00 PM	11:00 PM	Diary	LAST QUARTER	
11:04 PM	11:04 PM	Iridium Flare	CHES:Iridium 39 Flares at mag.-0.5 (Azm 048 Alt 15)	
11:14 PM	11:14 PM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.4 (Azm 050 Alt 20)	
19 Jul 2014	12:33 AM	12:33 AM	Moon	Moonrise
	3:26 AM	3:26 AM	Iridium Flare	CHES:Iridium 76 Flares at mag.-1.0 (Azm 130 Alt 24)
	3:46 AM	3:46 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 28.1 Alt 70)
	4:18 AM	4:18 AM	Twilight	Astronomical Twilight begins
	4:29 AM	4:29 AM	Jup GRS	GRS Transit (CML=207)
	4:46 AM	4:46 AM	Iridium Flare	CHES:Iridium 55 Flares at mag.-5.4 (Azm 085 Alt 12)
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 29 Flares at mag. 0.4 (Azm 087 Alt 14)
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 95 Flares at mag. 0.4 (Azm 086 Alt 14)
	5:42 AM	5:42 AM	Lunar Occult	Moon occults 6.8 mag. star SAO92688(r)
	6:04 AM	6:04 AM	Sun	Sunrise

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
19 Jul 2014	6:24 AM	6:24 AM	Jupiter	Jupiter rises
	2:07 PM	2:07 PM	Moon	Moonset
	2:24 PM	2:24 PM	Jup GRS	GRS Transit (CML=207)
	8:24 PM	8:24 PM	Sun	Sunset
	8:35 PM	8:35 PM	Jupiter	Jupiter sets
	9:00 PM	9:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	9:42 PM	9:42 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 168.2 Alt 20)
	10:09 PM	10:09 PM	Twilight	Astronomical Twilight ends
	10:58 PM	10:58 PM	Iridium Flare	CHES:Iridium 15 Flares at mag. 1.5 (Azm 050 Alt 16)
	11:08 PM	11:08 PM	Iridium Flare	CHES:Iridium 81 Flares at mag.-0.5 (Azm 052 Alt 21)
20 Jul 2014	12:20 AM	12:20 AM	Jup GRS	GRS Transit (CML=207)
	1:11 AM	1:11 AM	Moon	Moonrise
	2:59 AM	2:59 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 66.1 Alt 19)
	3:19 AM	3:19 AM	Iridium Flare	CHES:Iridium 46 Flares at mag. 1.2 (Azm 131 Alt 22)
	3:29 AM	3:29 AM	Iridium Flare	CHES:Iridium 47 Flares at mag. 1.5 (Azm 134 Alt 31)
	4:19 AM	4:19 AM	Twilight	Astronomical Twilight begins
	4:33 AM	4:33 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 331.7 Alt 19)
	4:40 AM	4:40 AM	Iridium Flare	CHES:Iridium 31 Flares at mag.-1.4 (Azm 087 Alt 11)
	4:49 AM	4:49 AM	Iridium Flare	CHES:Iridium 30 Flares at mag.-1.6 (Azm 088 Alt 14)
	4:56 AM	4:56 AM	Iridium Flare	CHES:Iridium 33 Flares at mag. 2.0 (Azm 089 Alt 17)
	6:04 AM	6:04 AM	Sun	Sunrise
	6:21 AM	6:21 AM	Jupiter	Jupiter rises
	10:16 AM	10:16 AM	Jup GRS	GRS Transit (CML=207)
	3:06 PM	3:06 PM	Moon	Moonset
	8:12 PM	8:12 PM	Jup GRS	GRS Transit (CML=207)
	8:23 PM	8:23 PM	Sun	Sunset
8:32 PM	8:32 PM	Jupiter	Jupiter sets	
9:35 PM	9:35 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 170.9 Alt 22)	
9:36 PM	9:36 PM	Iridium Flare	CHES:Iridium 56 Flares at mag.-1.1 (Azm 078 Alt 56)	
10:08 PM	10:08 PM	Twilight	Astronomical Twilight ends	
11:02 PM	11:02 PM	Iridium Flare	CHES:Iridium 43 Flares at mag.-6.7 (Azm 053 Alt 20)	
11:07 PM	11:07 PM	Iridium Flare	CHES:Iridium 98 Flares at mag.-1.6 (Azm 054 Alt 22)	
11:12 PM	11:12 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 244.5 Alt 7)	
21 Jul 2014	1:53 AM	1:53 AM	Moon	Moonrise
	3:23 AM	3:23 AM	Iridium Flare	CHES:Iridium 11 Flares at mag.-0.4 (Azm 135 Alt 29)
	3:44 AM	3:44 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 326.6 Alt 29)
	4:20 AM	4:20 AM	Twilight	Astronomical Twilight begins
	4:33 AM	4:33 AM	Iridium Flare	CHES:Iridium 91 Flares at mag. 0.5 (Azm 088 Alt 10)
	4:37 AM	4:37 AM	Iridium Flare	CHES:Iridium 28 Flares at mag.-1.3 (Azm 090 Alt 12)
	4:43 AM	4:43 AM	Iridium Flare	CHES:Iridium 57 Flares at mag.-5.7 (Azm 090 Alt 14)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
21 Jul 2014	4:52 AM	4:52 AM	Iridium Flare	CHES:Iridium 58 Flares at mag. 1.4 (Azm 091 Alt 17)
	5:23 AM	5:23 AM	Iridium Flare	CHES:Iridium 55 Flares at mag.-1.4 (Azm 029 Alt 15)
	6:05 AM	6:05 AM	Sun	Sunrise
	6:08 AM	6:08 AM	Jup GRS	GRS Transit (CML=207)
	6:18 AM	6:18 AM	Jupiter	Jupiter rises
	7:42 AM	7:42 AM	Iridium Flare	CHES:Iridium 5 Flares at mag.-6.5 (Azm 056 Alt 41)
	11:00 AM	11:00 AM	Diary	Saturn stationary
	4:03 PM	4:03 PM	Jup GRS	GRS Transit (CML=207)
	4:04 PM	4:04 PM	Moon	Moonset
	8:22 PM	8:22 PM	Sun	Sunset
	8:29 PM	8:29 PM	Jupiter	Jupiter sets
	9:28 PM	9:28 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 173.9 Alt 24)
	9:30 PM	9:30 PM	Iridium Flare	CHES:Iridium 84 Flares at mag.-1.1 (Azm 080 Alt 58)
	10:07 PM	10:07 PM	Twilight	Astronomical Twilight ends
	10:55 PM	10:55 PM	Iridium Flare	CHES:Iridium 17 Flares at mag.-0.9 (Azm 055 Alt 22)
	10:56 PM	10:56 PM	Iridium Flare	CHES:Iridium 40 Flares at mag.-0.8 (Azm 054 Alt 21)
	11:05 PM	11:05 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 242.4 Alt 9)
	11:05 PM	11:05 PM	Iridium Flare	CHES:Iridium 39 Flares at mag. 1.7 (Azm 055 Alt 25)
22 Jul 2014	1:59 AM	1:59 AM	Jup GRS	GRS Transit (CML=207)
	2:36 AM	2:36 AM	Moon	Moonrise
	2:57 AM	2:57 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 29.1 Alt 23)
	3:17 AM	3:17 AM	Iridium Flare	CHES:Iridium 94 Flares at mag. 1.8 (Azm 133 Alt 29)
	4:14 AM	4:14 AM	Lunar Occult	Moon occults 6.9 mag. star SAO93963(r)
	4:18 AM	4:18 AM	Lunar Occult	Moon occults 7.0 mag. star SAO93962(r)
	4:22 AM	4:22 AM	Twilight	Astronomical Twilight begins
	4:27 AM	4:27 AM	Iridium Flare	CHES:Iridium 59 Flares at mag. 1.5 (Azm 090 Alt 10)
	4:36 AM	4:36 AM	Lunar Occult	Moon occults 7.8 mag. double star SAO93967(r)
	4:36 AM	4:36 AM	Iridium Flare	CHES:Iridium 60 Flares at mag.-3.6 (Azm 092 Alt 14)
	4:45 AM	4:45 AM	Iridium Flare	CHES:Iridium 55 Flares at mag. 0.4 (Azm 094 Alt 17)
	5:00 AM	5:00 AM	Diary	Uranus stationary
	5:17 AM	5:17 AM	Iridium Flare	CHES:Iridium 31 Flares at mag.-0.1 (Azm 028 Alt 14)
	6:06 AM	6:06 AM	Sun	Sunrise
	6:15 AM	6:15 AM	Jupiter	Jupiter rises
	7:36 AM	7:36 AM	Iridium Flare	CHES:Iridium 8 Flares at mag.-6.5 (Azm 053 Alt 41)
	8:00 AM	8:00 AM	Diary	Aldebaran 1.8S of Moon
	11:55 AM	11:55 AM	Jup GRS	GRS Transit (CML=207)
	4:58 PM	4:58 PM	Moon	Moonset
	5:50 PM	5:50 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	7:39 PM	7:39 PM	Iridium Flare	CHES:Iridium 7 Flares at mag.-8.4 (Azm 168 Alt 83)
	8:22 PM	8:22 PM	Sun	Sunset
	8:26 PM	8:26 PM	Jupiter	Jupiter sets

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
22 Jul 2014	9:21 PM	9:21 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 176.8 Alt 26)
	9:24 PM	9:24 PM	Iridium Flare	CHES:Iridium 12 Flares at mag. -5.6 (Azm 082 Alt 57)
	9:26 PM	9:26 PM	Iridium Flare	CHES:Iridium 16 Flares at mag. -1.4 (Azm 082 Alt 55)
	9:51 PM	9:51 PM	Jup GRS	GRS Transit (CML=207)
	10:06 PM	10:06 PM	Twilight	Astronomical Twilight ends
	10:50 PM	10:50 PM	Iridium Flare	CHES:Iridium 77 Flares at mag. 1.3 (Azm 056 Alt 21)
	10:59 PM	10:59 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 239.4 Alt 11)
	10:59 PM	10:59 PM	Iridium Flare	CHES:Iridium 15 Flares at mag. 0.2 (Azm 057 Alt 26)
23 Jul 2014	2:10 AM	2:10 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 50.1 Alt 9)
	3:23 AM	3:23 AM	Moon	Moonrise
	4:23 AM	4:23 AM	Twilight	Astronomical Twilight begins
	4:39 AM	4:39 AM	Iridium Flare	CHES:Iridium 31 Flares at mag. -1.5 (Azm 095 Alt 16)
	5:11 AM	5:11 AM	Iridium Flare	CHES:Iridium 91 Flares at mag. -0.5 (Azm 027 Alt 13)
	6:07 AM	6:07 AM	Sun	Sunrise
	6:12 AM	6:12 AM	Jupiter	Jupiter rises
	7:47 AM	7:47 AM	Jup GRS	GRS Transit (CML=207)
	5:42 PM	5:42 PM	Jup GRS	GRS Transit (CML=207)
	5:48 PM	5:48 PM	Moon	Moonset
	8:21 PM	8:21 PM	Sun	Sunset
	8:23 PM	8:23 PM	Jupiter	Jupiter sets
	9:14 PM	9:14 PM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 179.7 Alt 26)
	9:18 PM	9:18 PM	Iridium Flare	CHES:Iridium 86 Flares at mag. -2.0 (Azm 084 Alt 57)
	10:05 PM	10:05 PM	Twilight	Astronomical Twilight ends
	10:48 PM	10:48 PM	Iridium Flare	CHES:Iridium 38 Flares at mag. -4.5 (Azm 060 Alt 27)
	10:52 PM	10:52 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 236.0 Alt 12)
	10:53 PM	10:53 PM	Iridium Flare	CHES:Iridium 41 Flares at mag. -4.0 (Azm 058 Alt 26)
24 Jul 2014	2:55 AM	2:55 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 358.2 Alt 18)
	3:39 AM	3:39 AM	Jup GRS	GRS Transit (CML=207)
	4:13 AM	4:13 AM	Moon	Moonrise
	4:24 AM	4:24 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Iridium Flare	CHES:Iridium 32 Flares at mag. 0.5 (Azm 096 Alt 13)
	4:26 AM	4:26 AM	Iridium Flare	CHES:Iridium 33 Flares at mag. -0.6 (Azm 096 Alt 13)
	4:33 AM	4:33 AM	Iridium Flare	CHES:Iridium 91 Flares at mag. -5.9 (Azm 096 Alt 15)
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 28 Flares at mag. -2.5 (Azm 097 Alt 17)
	5:47 AM	5:47 AM	Lunar Occult	Moon occults 6.6 mag. double star 951(r)
	6:07 AM	6:07 AM	Sun	Sunrise
	6:09 AM	6:09 AM	Jupiter	Jupiter rises
	1:34 PM	1:34 PM	Jup GRS	GRS Transit (CML=207)
	2:00 PM	2:00 PM	Diary	Venus 4.4N of Moon
	5:00 PM	5:00 PM	Diary	Jupiter at conjunction

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
24 Jul 2014	6:34 PM	6:34 PM	Moon	Moonset
	8:20 PM	8:20 PM	Sun	Sunset
	8:20 PM	8:20 PM	Jupiter	Jupiter sets
	9:07 PM	9:07 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azim 182.4 Alt 26)
	10:04 PM	10:04 PM	Twilight	Astronomical Twilight ends
	10:46 PM	10:46 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azim 231.8 Alt 12)
	10:47 PM	10:47 PM	Iridium Flare	CHES:Iridium 42 Flares at mag. -2.0 (Azim 060 Alt 25)
	10:52 PM	10:52 PM	Iridium Flare	CHES:Iridium 17 Flares at mag. 1.4 (Azim 061 Alt 31)
	11:30 PM	11:30 PM	Jup GRS	GRS Transit (CML=207)
25 Jul 2014	2:08 AM	2:08 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azim 30.8 Alt 11)
	3:21 AM	3:21 AM	Iridium Flare	CHES:Iridium 45 Flares at mag. -6.6 (Azim 131 Alt 23)
	4:18 AM	4:18 AM	Iridium Flare	CHES:Iridium 58 Flares at mag. 1.4 (Azim 097 Alt 12)
	4:25 AM	4:25 AM	Twilight	Astronomical Twilight begins
	4:27 AM	4:27 AM	Iridium Flare	CHES:Iridium 59 Flares at mag. -5.3 (Azim 098 Alt 15)
	4:36 AM	4:36 AM	Iridium Flare	CHES:Iridium 60 Flares at mag. 1.3 (Azim 100 Alt 20)
	5:05 AM	5:05 AM	Moon	Moonrise
	6:07 AM	6:07 AM	Jupiter	Jupiter rises
	6:08 AM	6:08 AM	Sun	Sunrise
	9:26 AM	9:26 AM	Jup GRS	GRS Transit (CML=207)
	11:00 AM	11:00 AM	Diary	Mercury 5.0N of Moon
	2:39 PM	2:39 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)
	7:16 PM	7:16 PM	Moon	Moonset
	7:22 PM	7:22 PM	Jup GRS	GRS Transit (CML=207)
	8:16 PM	8:16 PM	Jupiter	Jupiter sets
	8:20 PM	8:20 PM	Sun	Sunset
	9:00 PM	9:00 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azim 185.5 Alt 25)
	10:03 PM	10:03 PM	Twilight	Astronomical Twilight ends
	10:41 PM	10:41 PM	Iridium Flare	CHES:Iridium 80 Flares at mag. 0.9 (Azim 061 Alt 25)
10:50 PM	10:50 PM	Iridium Flare	CHES:Iridium 77 Flares at mag. 1.9 (Azim 062 Alt 32)	
26 Jul 2014	4:11 AM	4:11 AM	Iridium Flare	CHES:Iridium 55 Flares at mag. 1.8 (Azim 100 Alt 12)
	4:20 AM	4:20 AM	Iridium Flare	CHES:Iridium 29 Flares at mag. -1.4 (Azim 100 Alt 15)
	4:21 AM	4:21 AM	Iridium Flare	CHES:Iridium 95 Flares at mag. -1.7 (Azim 100 Alt 15)
	4:26 AM	4:26 AM	Twilight	Astronomical Twilight begins
	5:18 AM	5:18 AM	Jup GRS	GRS Transit (CML=207)
	5:58 AM	5:58 AM	Moon	Moonrise
	6:04 AM	6:04 AM	Jupiter	Jupiter rises
	6:09 AM	6:09 AM	Sun	Sunrise
	3:13 PM	3:13 PM	Jup GRS	GRS Transit (CML=207)
	4:00 PM	4:00 PM	Diary	Jupiter 5.3N of Moon

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
26 Jul 2014	7:00 PM	7:00 PM	Diary	NEW MOON
	7:54 PM	7:54 PM	Moon	Moonset
	8:13 PM	8:13 PM	Jupiter	Jupiter sets
	8:19 PM	8:19 PM	Sun	Sunset
	8:53 PM	8:53 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 188.5 Alt 23)
	10:02 PM	10:02 PM	Twilight	Astronomical Twilight ends
	10:44 PM	10:44 PM	Iridium Flare	CHES:Iridium 82 Flares at mag.-1.1 (Azm 063 Alt 31)
27 Jul 2014	1:09 AM	1:09 AM	Jup GRS	GRS Transit (CML=207)
	2:05 AM	2:05 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 11.9 Alt 11)
	4:14 AM	4:14 AM	Iridium Flare	CHES:Iridium 30 Flares at mag.-0.6 (Azm 102 Alt 14)
	4:24 AM	4:24 AM	Iridium Flare	CHES:Iridium 32 Flares at mag.-1.2 (Azm 103 Alt 18)
	4:27 AM	4:27 AM	Twilight	Astronomical Twilight begins
	4:29 AM	4:29 AM	Iridium Flare	CHES:Iridium 33 Flares at mag. 1.8 (Azm 104 Alt 21)
	6:01 AM	6:01 AM	Jupiter	Jupiter rises
	6:10 AM	6:10 AM	Sun	Sunrise
	6:52 AM	6:52 AM	Moon	Moonrise
	11:05 AM	11:05 AM	Jup GRS	GRS Transit (CML=207)
	8:10 PM	8:10 PM	Jupiter	Jupiter sets
	8:18 PM	8:18 PM	Sun	Sunset
	8:29 PM	8:29 PM	Moon	Moonset
	8:46 PM	8:46 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 191.2 Alt 21)
	9:01 PM	9:01 PM	Jup GRS	GRS Transit (CML=207)
	9:03 PM	9:03 PM	Iridium Flare	CHES:Iridium 56 Flares at mag.-2.8 (Azm 091 Alt 64)
10:00 PM	10:00 PM	Twilight	Astronomical Twilight ends	
10:38 PM	10:38 PM	Iridium Flare	CHES:Iridium 18 Flares at mag.-7.4 (Azm 065 Alt 31)	
28 Jul 2014	1:00 AM	1:00 AM	Diary	Moon at apogee
	4:08 AM	4:08 AM	Iridium Flare	CHES:Iridium 57 Flares at mag. 0.4 (Azm 104 Alt 14)
	4:17 AM	4:17 AM	Iridium Flare	CHES:Iridium 58 Flares at mag.-4.6 (Azm 105 Alt 17)
	4:29 AM	4:29 AM	Twilight	Astronomical Twilight begins
	5:58 AM	5:58 AM	Jupiter	Jupiter rises
	6:10 AM	6:10 AM	Sun	Sunrise
	6:57 AM	6:57 AM	Jup GRS	GRS Transit (CML=207)
	7:46 AM	7:46 AM	Moon	Moonrise
	11:28 AM	11:28 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:52 PM	4:52 PM	Jup GRS	GRS Transit (CML=207)
	8:07 PM	8:07 PM	Jupiter	Jupiter sets
	8:17 PM	8:17 PM	Sun	Sunset
	8:39 PM	8:39 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 193.9 Alt 18)
8:57 PM	8:57 PM	Iridium Flare	CHES:Iridium 84 Flares at mag.-2.1 (Azm 093 Alt 66)	
9:02 PM	9:02 PM	Moon	Moonset	

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
28 Jul 2014	9:59 PM	9:59 PM	Twilight	Astronomical Twilight ends
	10:32 PM	10:32 PM	Iridium Flare	CHES:Iridium 98 Flares at mag. 1.7 (Azm 066 Alt 29)
	10:33 PM	10:33 PM	Iridium Flare	CHES:Iridium 39 Flares at mag.-1.5 (Azm 066 Alt 31)
29 Jul 2014	12:00 AM	12:00 AM	Diary	Regulus 4.5N of Moon
	12:20 AM	12:20 AM	Meteor Shower	S delta-Aquarids meteor peak (zhr=20)
	2:48 AM	2:48 AM	Jup GRS	GRS Transit (CML=207)
	4:02 AM	4:02 AM	Iridium Flare	CHES:Iridium 60 Flares at mag. 0.8 (Azm 106 Alt 13)
	4:11 AM	4:11 AM	Iridium Flare	CHES:Iridium 55 Flares at mag.-6.3 (Azm 107 Alt 17)
	4:19 AM	4:19 AM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.3 (Azm 108 Alt 21)
	4:21 AM	4:21 AM	Iridium Flare	CHES:Iridium 95 Flares at mag. 1.5 (Azm 107 Alt 21)
	4:30 AM	4:30 AM	Twilight	Astronomical Twilight begins
	5:55 AM	5:55 AM	Jupiter	Jupiter rises
	6:11 AM	6:11 AM	Sun	Sunrise
	8:40 AM	8:40 AM	Moon	Moonrise
	12:44 PM	12:44 PM	Jup GRS	GRS Transit (CML=207)
	7:06 PM	7:06 PM	Iridium Flare	CHES:Iridium 51 Flares at mag.-6.1 (Azm 219 Alt 77)
	7:06 PM	7:06 PM	Iridium Flare	CHES:Iridium 7 Flares at mag.-5.7 (Azm 222 Alt 76)
	8:04 PM	8:04 PM	Jupiter	Jupiter sets
	8:16 PM	8:16 PM	Sun	Sunset
	8:33 PM	8:33 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 196.5 Alt 16)
	8:51 PM	8:51 PM	Iridium Flare	CHES:Iridium 12 Flares at mag.-2.9 (Azm 095 Alt 65)
	9:34 PM	9:34 PM	Moon	Moonsset
	9:58 PM	9:58 PM	Twilight	Astronomical Twilight ends
	10:26 PM	10:26 PM	Iridium Flare	CHES:Iridium 15 Flares at mag. 0.6 (Azm 068 Alt 31)
	10:40 PM	10:40 PM	Jup GRS	GRS Transit (CML=207)
30 Jul 2014	4:05 AM	4:05 AM	Iridium Flare	CHES:Iridium 31 Flares at mag.-4.5 (Azm 109 Alt 16)
	4:14 AM	4:14 AM	Iridium Flare	CHES:Iridium 30 Flares at mag. 1.0 (Azm 110 Alt 21)
	4:31 AM	4:31 AM	Twilight	Astronomical Twilight begins
	5:52 AM	5:52 AM	Jupiter	Jupiter rises
	6:12 AM	6:12 AM	Sun	Sunrise
	8:36 AM	8:36 AM	Jup GRS	GRS Transit (CML=207)
	9:34 AM	9:34 AM	Moon	Moonrise
	6:32 PM	6:32 PM	Jup GRS	GRS Transit (CML=207)
	8:00 PM	8:00 PM	Jupiter	Jupiter sets
	8:16 PM	8:16 PM	Sun	Sunset
	8:26 PM	8:26 PM	Meteor Shower	alpha-Capricornids meteor peak (zhr= 8)
	9:57 PM	9:57 PM	Twilight	Astronomical Twilight ends
	10:04 PM	10:04 PM	Moon	Moonsset
	10:30 PM	10:30 PM	Iridium Flare	CHES:Iridium 43 Flares at mag. 0.6 (Azm 069 Alt 38)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
31 Jul 2014	3:49 AM	3:49 AM	Iridium Flare	CHES:Iridium 32 Flares at mag. 1.5 (Azm 110 Alt 12)
	3:54 AM	3:54 AM	Iridium Flare	CHES:Iridium 28 Flares at mag. 0.2 (Azm 111 Alt 14)
	3:59 AM	3:59 AM	Iridium Flare	CHES:Iridium 91 Flares at mag.-1.5 (Azm 110 Alt 15)
	3:59 AM	3:59 AM	Iridium Flare	CHES:Iridium 33 Flares at mag.-2.9 (Azm 111 Alt 16)
	4:08 AM	4:08 AM	Iridium Flare	CHES:Iridium 57 Flares at mag. 0.1 (Azm 111 Alt 20)
	4:28 AM	4:28 AM	Jup GRS	GRS Transit (CML=207)
	4:32 AM	4:32 AM	Twilight	Astronomical Twilight begins
	5:17 AM	5:17 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 33.5 Alt 30)
	5:50 AM	5:50 AM	Jupiter	Jupiter rises
	6:13 AM	6:13 AM	Sun	Sunrise
	8:17 AM	8:17 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	10:29 AM	10:29 AM	Moon	Moonrise
	2:23 PM	2:23 PM	Jup GRS	GRS Transit (CML=207)
	8:15 PM	8:15 PM	Sun	Sunset
	9:02 PM	9:02 PM	Lunar Occult	Moon occults 7.0 mag. star ZC1754(d)
	9:55 PM	9:55 PM	Twilight	Astronomical Twilight ends
	10:24 PM	10:24 PM	Iridium Flare	CHES:Iridium 40 Flares at mag.-1.9 (Azm 071 Alt 38)
	10:35 PM	11:59 PM	Moon	Moonset