

# Norfolk Astronomical Society



*<http://norfolkastronomical.org>*

May 2014

Monthly Sky Calendar  
Prepared Specifically For  
The Hampton Roads Area

## Upcoming Regular Meetings

<b>DATE</b>	Monday, May 12, 2014
<b>TIME</b>	6 - 8 PM EDT
<b>WHERE</b>	Chesapeake Public Library, Major Hillard branch Conf. Room
<b>TOPIC</b>	The Planet Mars

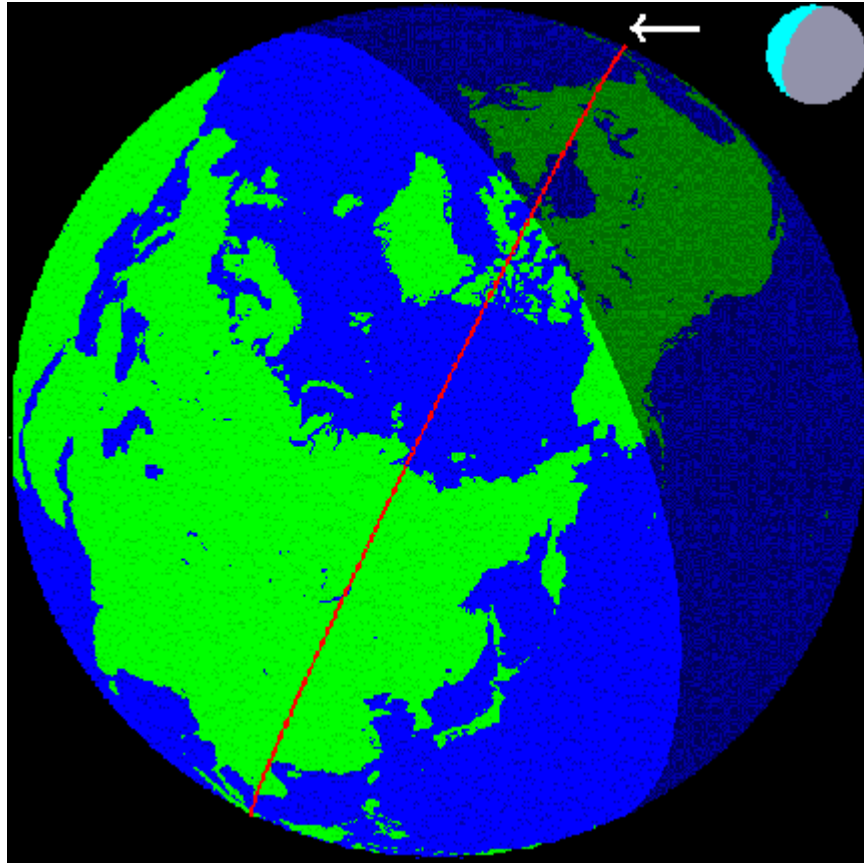
<b>DATE</b>	Monday, June 16, 2014
<b>TIME</b>	6 - 8 PM EDT
<b>WHERE</b>	Chesapeake Public Library, Major Hillard branch Conf. Room
<b>TOPIC</b>	Hubble Repair Mission

## Total Lunar Eclipse of April 15, 2014

Photo By Glendon Howell



Clouds darted in and out as Glen Howell took this image at 2:07 AM EDT, just as totality began the morning of April 15. He used his Canon Digital Rebel XTi and a Canon EFS 75-300 zoom, set to 300mm f/8. Expose was 10 seconds at ISO200. Camera was tracking on an iOptron Skytracker. The bright star at 5 o'clock from the moon is Spica. Look for more of his images on Glen's Universe (<http://www.freewebs.com/howellgl/>)



*North America is favored with the best view of seeing this new meteor shower in darkness. Observers to the left of the red line will have the moon up in the sky which should not seriously interfere with observation.*

### **May 24 Potential Meteor Storm?**

Weather permitting, plan to get up early Saturday morning, May 24, 2014. Between the hours of 3 to 4 AM EDT, the Earth will pass through the orbital plane and be sandblasted by the debris of Comet 209P/Linear in what could become a new meteor shower with the potential to become a meteor storm. Best estimates at present suggest a zenithal hourly rate of between 100 to 400 meteors per hour, but as many as 1000 meteors per hour could occur. Meteors are expected to emanate out of the constellation of Camelopardalis.

North America is favored with the best view of the event. The radiant will lie low in the north-northeastern sky at time of peak. The moon will be a waning crescent, rising at 3:13 AM local time, but should not pose a serious obstacle to observation. Get away from the city lights for the best potential view. Look about 40 degrees away from the radiant for the longest meteor trails.

Comet 209P/Linear was discovered in 2004 by the Lincoln Near Earth Asteroid Research (LINEAR) project automated sky survey. The comet is a member of Jupiter's family of captured comets, with a period of only 5.04 years. The comet passes closest to Earth's orbit May 6, with Earth passing by just 18 days later. The big question now is will it storm or not?

### **Night Launch From NASA Wallops Scheduled for June 9**

After having been rescheduled several times already, the latest news puts the launch of the ORS-2 supply mission to ISS from Wallops to occur no earlier than 2 AM June 9. Further delays are not out of the question. Each day delayed will bring the launch window 23 minutes earlier. A delay of more than about 15 days would thus move the launch window back into daylight hours.

# East Coast Star Party

**What:** East Coast Star Party (ECSP)

**When:** May 29, 30, 31 (Party ends Sunday morning, June 1)

**Where:** Hampton Lodge Campground, Coinjock NC

**Star Party Fee:** One time fee of \$20 for the entire time star party.  
Register with Kent at the observing site

**Camping Fees (If camping, register at the campground store.):**

- \$20/night per campsite for primitive camping. Includes tents and trailers not requiring electricity.
- \$30/night for trailers & R/V requiring electric, water but no sewage. The trailer sites with electricity and water are not in the observing area, but close by.
- \$40/night for trailers requiring electric, water & sewage.

Whether it's clear or not most people that have attended previously think it's one of the most fun star parties of any.

If you need additional information contact:

Kent Blackwell  
kent@exis.net

## COSMOS: A Space Odyssey

*Airs Sunday, March 9 on FOX and National Geographic Channel*



More than three decades after the debut of “Cosmos: A Personal Voyage,” Carl Sagan’s stunning and iconic exploration of the universe as revealed by science, COSMOS: A SPACETIME ODYSSEY sets off on a new voyage for the stars. Seth MacFarlane (FAMILY GUY, AMERICAN DAD) and Sagan’s original creative collaborators – writer/executive producer Ann Druyan and astronomer Steven Soter – have teamed to conceive a 13-part docu-series that will serve as a successor to the Emmy and Peabody Award-winning original series.

Hosted by renowned astrophysicist Neil deGrasse Tyson, the series will explore how we discovered the laws of nature and found our coordinates in space and time. It will bring to life never-before-told stories of the heroic quest for knowledge and transport viewers to new worlds and across the universe for a vision of the cosmos on the grandest scale. COSMOS: A SPACETIME ODYSSEY will invent new modes of scientific storytelling to reveal the grandeur of the universe and re-invent celebrated elements of the legendary original series, including the Cosmic Calendar and the Ship of the Imagination. The most profound scientific concepts will be presented with stunning clarity, uniting skepticism and wonder, and weaving rigorous science with the emotional and spiritual into a transcendent experience.

Episode	Air Date	Title
1	03/09/2014	Standing Up In The Milky Way
2	03/16/2014	The Rivers Of Life
3	03/23/2014	When Knowledge Conquered Fear
4	03/30/2014	Hiding In The Light
5	04/06/2014	A Sky Full Of Ghosts
6	04/13/2014	Deeper, Deeper, Deeper Still
7	04/20/2014	The Clean Room
8	04/27/2014	Sisters Of The Sun
9	05/04/2014	The Electric Boy
10	05/11/2014	The Lost Worlds Of Planet Earth
11	05/18/2014	The Immortals
12	05/25/2014	The World Set Free
13	06/01/2014	Unafraid Of The Dark

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>1</b> May 2014	12:52 AM	12:52 AM	Jupiter	Jupiter sets
	3:43 AM	3:43 AM	Jup GRS	GRS Transit (CML=207)
	4:38 AM	4:38 AM	Twilight	Astronomical Twilight begins
	6:14 AM	6:14 AM	Sun	Sunrise
	8:01 AM	8:01 AM	Moon	Moonrise
	10:19 AM	10:19 AM	Jupiter	Jupiter rises
	12:00 PM	12:00 PM	Diary	Aldebaran 2.0S of Moon
	1:38 PM	1:38 PM	Jup GRS	GRS Transit (CML=207)
	7:55 PM	7:55 PM	Sun	Sunset
	9:08 PM	9:08 PM	Jup Sats	I.Sh.E
	9:31 PM	9:31 PM	Twilight	Astronomical Twilight ends
10:24 PM	10:24 PM	Moon	Moonset	
11:34 PM	11:34 PM	Jup GRS	GRS Transit (CML=207)	
<b>2</b> May 2014	12:49 AM	12:49 AM	Jupiter	Jupiter sets
	4:36 AM	4:36 AM	Twilight	Astronomical Twilight begins
	5:34 AM	5:34 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-1.9 (AzM 218 Alt 65)
	6:13 AM	6:13 AM	Sun	Sunrise
	8:50 AM	8:50 AM	Moon	Moonrise
	9:30 AM	9:30 AM	Jup GRS	GRS Transit (CML=207)
	10:16 AM	10:16 AM	Jupiter	Jupiter rises
	7:26 PM	7:26 PM	Jup GRS	GRS Transit (CML=207)
	7:56 PM	7:56 PM	Sun	Sunset
	9:32 PM	9:32 PM	Twilight	Astronomical Twilight ends
	10:22 PM	10:22 PM	Lunar Occult	Moon occults 7.2 mag. star SAO94874(d)
11:15 PM	11:15 PM	Moon	Moonset	
<b>3</b> May 2014	12:46 AM	12:46 AM	Jupiter	Jupiter sets
	4:35 AM	4:35 AM	Twilight	Astronomical Twilight begins
	5:22 AM	5:22 AM	Jup GRS	GRS Transit (CML=207)
	5:27 AM	5:27 AM	Iridium Flare	CHES:Iridium 10 Flares at mag.-4.5 (AzM 221 Alt 64)
	6:12 AM	6:12 AM	Sun	Sunrise
	7:13 AM	7:13 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-7.9 (AzM 134 Alt 63)
	9:41 AM	9:41 AM	Moon	Moonrise
	10:13 AM	10:13 AM	Jupiter	Jupiter rises
	10:57 AM	10:57 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:17 PM	3:17 PM	Jup GRS	GRS Transit (CML=207)
	7:57 PM	7:57 PM	Sun	Sunset
9:33 PM	9:33 PM	Twilight	Astronomical Twilight ends	
11:39 PM	11:39 PM	Lunar Occult	Moon occults 5.2 mag. double star ZC1029(d)	

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>4</b> May 2014	12:01 AM	12:01 AM	Moon	Moonset
	12:42 AM	12:42 AM	Jupiter	Jupiter sets
	1:14 AM	1:14 AM	Jup GRS	GRS Transit (CML=207)
	4:33 AM	4:33 AM	Twilight	Astronomical Twilight begins
	5:21 AM	5:21 AM	Iridium Flare	CHES:Iridium 13 Flares at mag.-0.6 (Azm 220 Alt 66)
	6:11 AM	6:11 AM	Sun	Sunrise
	9:00 AM	9:00 AM	Diary	Jupiter 5.4N of Moon
	10:09 AM	10:09 AM	Jupiter	Jupiter rises
	10:33 AM	10:33 AM	Moon	Moonrise
	11:09 AM	11:09 AM	Jup GRS	GRS Transit (CML=207)
	2:09 PM	2:09 PM	Lunar Occult	Moon occults 3.6 mag. double star ZC1106(d)
	7:58 PM	7:58 PM	Sun	Sunset
	8:33 PM	8:33 PM	Iridium Flare	CHES:Iridium 67 Flares at mag. 0.1 (Azm 108 Alt 70)
9:05 PM	9:05 PM	Jup GRS	GRS Transit (CML=207)	
9:34 PM	9:34 PM	Twilight	Astronomical Twilight ends	
10:08 PM	10:08 PM	Iridium Flare	CHES:Iridium 49 Flares at mag.-2.8 (Azm 074 Alt 35)	
11:09 PM	11:09 PM	Meteor Shower	alpha-Scorpiids meteor peak (zhr=10)	
<b>5</b> May 2014	12:13 AM	12:13 AM	Lunar Occult	Moon occults 5.3 mag. double star ZC1147(D)
	12:39 AM	12:39 AM	Jupiter	Jupiter sets
	12:42 AM	12:42 AM	Moon	Moonset
	2:23 AM	2:23 AM	Meteor Shower	eta-Aquarids(Halley) meteor peak (zhr=30)
	4:32 AM	4:32 AM	Twilight	Astronomical Twilight begins
	6:10 AM	6:10 AM	Sun	Sunrise
	7:01 AM	7:01 AM	Jup GRS	GRS Transit (CML=207)
	10:06 AM	10:06 AM	Jupiter	Jupiter rises
	11:27 AM	11:27 AM	Moon	Moonrise
	4:57 PM	4:57 PM	Jup GRS	GRS Transit (CML=207)
	7:47 PM	7:47 PM	Iridium Flare	CHES:Iridium 43 Flares at mag.-7.2 (Azm 340 Alt 41)
	7:59 PM	7:59 PM	Sun	Sunset
	8:27 PM	8:27 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-4.9 (Azm 108 Alt 69)
8:50 PM	8:50 PM	Jup Sats	III.Tr.E	
9:36 PM	9:36 PM	Twilight	Astronomical Twilight ends	
10:02 PM	10:02 PM	Iridium Flare	CHES:Iridium 22 Flares at mag. 2.0 (Azm 074 Alt 33)	
10:04 PM	10:04 PM	Jup Sats	III.Sh.I	
10:12 PM	10:12 PM	Iridium Flare	CHES:Iridium 94 Flares at mag. 1.9 (Azm 074 Alt 42)	
<b>6</b> May 2014	12:36 AM	12:36 AM	Jupiter	Jupiter sets
	1:19 AM	1:19 AM	Moon	Moonset
	2:53 AM	2:53 AM	Jup GRS	GRS Transit (CML=207)
	4:30 AM	4:30 AM	Twilight	Astronomical Twilight begins
	6:09 AM	6:09 AM	Sun	Sunrise

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>6</b> May 2014	7:00 AM	7:00 AM	Diary	Moon at apogee
	7:46 AM	7:46 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	10:03 AM	10:03 AM	Jupiter	Jupiter rises
	12:21 PM	12:21 PM	Moon	Moonrise
	12:48 PM	12:48 PM	Jup GRS	GRS Transit (CML=207)
	7:59 PM	7:59 PM	Sun	Sunset
	9:37 PM	9:37 PM	Twilight	Astronomical Twilight ends
	10:05 PM	10:05 PM	Iridium Flare	CHES:Iridium 23 Flares at mag. 1.2 (Azm 075 Alt 43)
	10:44 PM	10:44 PM	Jup GRS	GRS Transit (CML=207)
	11:00 PM	11:00 PM	Diary	FIRST QUARTER
11:28 PM	11:28 PM	Lunar Occult	Moon occults 5.2 mag. double star ZC1359(D)	
<b>7</b> May 2014	12:32 AM	12:32 AM	Jupiter	Jupiter sets
	1:54 AM	1:54 AM	Moon	Moonset
	4:29 AM	4:29 AM	Twilight	Astronomical Twilight begins
	6:08 AM	6:08 AM	Sun	Sunrise
	8:40 AM	8:40 AM	Jup GRS	GRS Transit (CML=207)
	10:00 AM	10:00 AM	Jupiter	Jupiter rises
	1:15 PM	1:15 PM	Moon	Moonrise
	6:36 PM	6:36 PM	Jup GRS	GRS Transit (CML=207)
	8:00 PM	8:00 PM	Sun	Sunset
	9:38 PM	9:38 PM	Twilight	Astronomical Twilight ends
9:59 PM	9:59 PM	Iridium Flare	CHES:Iridium 20 Flares at mag.-2.1 (Azm 076 Alt 42)	
10:28 PM	10:28 PM	Jup Sats	I.Oc.D	
<b>8</b> May 2014	12:05 AM	12:05 AM	Jup Sats	II.Ec.R
	12:29 AM	12:29 AM	Jupiter	Jupiter sets
	2:26 AM	2:26 AM	Moon	Moonset
	3:00 AM	3:00 AM	Diary	Regulus 4.9N of Moon
	4:28 AM	4:28 AM	Twilight	Astronomical Twilight begins
	4:32 AM	4:32 AM	Jup GRS	GRS Transit (CML=207)
	6:07 AM	6:07 AM	Sun	Sunrise
	9:57 AM	9:57 AM	Jupiter	Jupiter rises
	2:10 PM	2:10 PM	Moon	Moonrise
	2:27 PM	2:27 PM	Jup GRS	GRS Transit (CML=207)
	8:00 PM	8:00 PM	Sun	Sunset
	8:47 PM	8:47 PM	Jup Sats	I.Sh.I
	9:39 PM	9:39 PM	Twilight	Astronomical Twilight ends
9:53 PM	9:53 PM	Iridium Flare	CHES:Iridium 3 Flares at mag.-1.3 (Azm 076 Alt 41)	
9:57 PM	9:57 PM	Jup Sats	I.Tr.E	
11:04 PM	11:04 PM	Jup Sats	I.Sh.E	



# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>9</b> May 2014	12:09 AM	12:09 AM	Jup Sats	IV.Oc.R
	12:24 AM	12:24 AM	Jup GRS	GRS Transit (CML=207)
	12:26 AM	12:26 AM	Jupiter	Jupiter sets
	2:58 AM	2:58 AM	Moon	Moonset
	4:26 AM	4:26 AM	Twilight	Astronomical Twilight begins
	4:35 AM	4:35 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:00 AM	5:00 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-3.3 (Azm 239 Alt 60)
	6:06 AM	6:06 AM	Sun	Sunrise
	6:45 AM	6:45 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-6.7 (Azm 151 Alt 69)
	9:54 AM	9:54 AM	Jupiter	Jupiter rises
	10:19 AM	10:19 AM	Jup GRS	GRS Transit (CML=207)
<b>10</b> May 2014	3:06 PM	3:06 PM	Moon	Moonrise
	8:00 PM	8:00 PM	Lunar Occult	Moon occults 6.0 mag. star ZC1649(d)
	8:01 PM	8:01 PM	Sun	Sunset
	8:15 PM	8:15 PM	Jup GRS	GRS Transit (CML=207)
	9:41 PM	9:41 PM	Twilight	Astronomical Twilight ends
	9:47 PM	9:47 PM	Iridium Flare	CHES:Iridium 76 Flares at mag. 0.8 (Azm 078 Alt 41)
	11:02 PM	11:02 PM	Iridium Flare	CHES:Iridium 55 Flares at mag. 1.9 (Azm 044 Alt 10)
	12:22 AM	12:22 AM	Jupiter	Jupiter sets
	3:29 AM	3:29 AM	Moon	Moonset
	4:25 AM	4:25 AM	Twilight	Astronomical Twilight begins
	4:54 AM	4:54 AM	Iridium Flare	CHES:Iridium 10 Flares at mag.-8.4 (Azm 242 Alt 60)
<b>11</b> May 2014	6:05 AM	6:05 AM	Sun	Sunrise
	6:11 AM	6:11 AM	Jup GRS	GRS Transit (CML=207)
	9:50 AM	9:50 AM	Jupiter	Jupiter rises
	2:00 PM	2:00 PM	Diary	Saturn at opposition
	4:03 PM	4:03 PM	Moon	Moonrise
	4:07 PM	4:07 PM	Jup GRS	GRS Transit (CML=207)
	8:02 PM	8:02 PM	Sun	Sunset
	9:42 PM	9:42 PM	Twilight	Astronomical Twilight ends
	10:56 PM	10:56 PM	Iridium Flare	CHES:Iridium 31 Flares at mag. 1.0 (Azm 045 Alt 10)
	12:19 AM	12:19 AM	Jupiter	Jupiter sets
	2:03 AM	2:03 AM	Jup GRS	GRS Transit (CML=207)
4:02 AM	4:02 AM	Moon	Moonset	
4:24 AM	4:24 AM	Twilight	Astronomical Twilight begins	
4:48 AM	4:48 AM	Iridium Flare	CHES:Iridium 13 Flares at mag.-0.1 (Azm 242 Alt 62)	
6:04 AM	6:04 AM	Sun	Sunrise	
8:00 AM	8:00 AM	Diary	Mars 2.8N of Moon	
9:47 AM	9:47 AM	Jupiter	Jupiter rises	
11:58 AM	11:58 AM	Jup GRS	GRS Transit (CML=207)	

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>11</b> May 2014	5:02 PM	5:02 PM	Moon	Moonrise
	5:14 PM	5:14 PM	Iridium Flare	CHES:Iridium 10 Flares at mag.-4.5 (Azm 280 Alt 53)
	8:03 PM	8:03 PM	Sun	Sunset
	9:43 PM	9:43 PM	Twilight	Astronomical Twilight ends
	9:44 PM	9:44 PM	Iridium Flare	CHES:Iridium 11 Flares at mag.-0.5 (Azm 078 Alt 49)
	9:54 PM	9:54 PM	Jup GRS	GRS Transit (CML=207)
	11:00 PM	11:00 PM	Iridium Flare	CHES:Iridium 57 Flares at mag. 0.1 (Azm 046 Alt 13)
<b>12</b> May 2014	12:16 AM	12:16 AM	Jupiter	Jupiter sets
	1:24 AM	1:24 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	1:49 AM	1:49 AM	Lunar Occult	Moon occults 5.6 mag. double star ZC1886(d)
	4:22 AM	4:22 AM	Twilight	Astronomical Twilight begins
	4:36 AM	4:36 AM	Moon	Moonset
	4:45 AM	4:45 AM	Iridium Flare	CHES:Iridium 16 Flares at mag.-0.3 (Azm 244 Alt 61)
	6:03 AM	6:03 AM	Sun	Sunrise
	7:50 AM	7:50 AM	Jup GRS	GRS Transit (CML=207)
	9:44 AM	9:44 AM	Jupiter	Jupiter rises
	11:00 AM	11:00 AM	Diary	Spica 1.7S of Moon
	5:46 PM	5:46 PM	Jup GRS	GRS Transit (CML=207)
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	6:03 PM	6:03 PM	Moon	Moonrise
	7:53 PM	7:53 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-8.5 (Azm 129 Alt 78)
	8:04 PM	8:04 PM	Sun	Sunset
	9:38 PM	9:38 PM	Iridium Flare	CHES:Iridium 94 Flares at mag.-6.0 (Azm 079 Alt 48)
	9:44 PM	9:44 PM	Twilight	Astronomical Twilight ends
	9:50 PM	9:50 PM	Jup Sats	III.Tr.I
	10:54 PM	10:54 PM	Iridium Flare	CHES:Iridium 60 Flares at mag.-6.3 (Azm 048 Alt 13)
<b>13</b> May 2014	12:12 AM	12:12 AM	Jupiter	Jupiter sets
	3:42 AM	3:42 AM	Jup GRS	GRS Transit (CML=207)
	4:21 AM	4:21 AM	Twilight	Astronomical Twilight begins
	5:14 AM	5:14 AM	Moon	Moonset
	6:02 AM	6:02 AM	Sun	Sunrise
	9:41 AM	9:41 AM	Jupiter	Jupiter rises
	1:38 PM	1:38 PM	Jup GRS	GRS Transit (CML=207)
	7:06 PM	7:06 PM	Moon	Moonrise
	8:05 PM	8:05 PM	Sun	Sunset
	9:30 PM	9:30 PM	Iridium Flare	CHES:Iridium 26 Flares at mag. 1.7 (Azm 080 Alt 46)
	9:32 PM	9:32 PM	Iridium Flare	CHES:Iridium 23 Flares at mag.-3.1 (Azm 080 Alt 50)
	9:45 PM	9:45 PM	Twilight	Astronomical Twilight ends
	10:46 PM	10:46 PM	Iridium Flare	CHES:Iridium 28 Flares at mag. 1.5 (Azm 049 Alt 13)
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 31 Flares at mag.-0.1 (Azm 051 Alt 17)

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>13</b> May 2014	11:33 PM	11:33 PM	Jup GRS	GRS Transit (CML=207)
<b>14</b> May 2014	12:09 AM	12:09 AM	Jupiter	Jupiter sets
	4:20 AM	4:20 AM	Twilight	Astronomical Twilight begins
	5:23 AM	5:23 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 135.2 Alt 44)
	5:57 AM	5:57 AM	Moon	Moonset
	6:01 AM	6:01 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	Saturn 0.6N of Moon Occn
	9:29 AM	9:29 AM	Jup GRS	GRS Transit (CML=207)
	9:38 AM	9:38 AM	Jupiter	Jupiter rises
	4:00 PM	4:00 PM	Diary	FULL MOON
	7:25 PM	7:25 PM	Jup GRS	GRS Transit (CML=207)
	8:05 PM	8:05 PM	Sun	Sunset
	8:10 PM	8:10 PM	Moon	Moonrise
	9:26 PM	9:26 PM	Iridium Flare	CHES:Iridium 20 Flares at mag. 0.9 (Azm 081 Alt 49)
	9:47 PM	9:47 PM	Twilight	Astronomical Twilight ends
	9:47 PM	9:47 PM	Jup Sats	II.Oc.D
	10:13 PM	10:13 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	10:51 PM	10:51 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-4.7 (Azm 051 Alt 16)
<b>15</b> May 2014	12:06 AM	12:06 AM	Jupiter	Jupiter sets
	4:19 AM	4:19 AM	Twilight	Astronomical Twilight begins
	4:33 AM	4:33 AM	Iridium Flare	CHES:Iridium 86 Flares at mag. 1.2 (Azm 255 Alt 51)
	4:35 AM	4:35 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 131.2 Alt 24)
	5:21 AM	5:21 AM	Jup GRS	GRS Transit (CML=207)
	6:00 AM	6:00 AM	Sun	Sunrise
	6:45 AM	6:45 AM	Moon	Moonset
	9:35 AM	9:35 AM	Jupiter	Jupiter rises
	3:17 PM	3:17 PM	Jup GRS	GRS Transit (CML=207)
	6:48 PM	6:48 PM	Iridium Flare	CHES:Iridium 38 Flares at mag.-7.2 (Azm 320 Alt 50)
	6:55 PM	6:55 PM	Iridium Flare	CHES:Iridium 82 Flares at mag.-7.0 (Azm 323 Alt 49)
	8:00 PM	8:00 PM	Diary	Venus 1.2S of Uranus
	8:06 PM	8:06 PM	Sun	Sunset
	9:13 PM	9:13 PM	Moon	Moonrise
	9:29 PM	9:29 PM	Iridium Flare	CHES:Iridium 22 Flares at mag. 1.3 (Azm 080 Alt 57)
	9:36 PM	9:36 PM	Iridium Flare	CHES:Iridium 45 Flares at mag.-8.2 (Azm 081 Alt 51)
	9:41 PM	9:41 PM	Jup Sats	I.Tr.I
	9:48 PM	9:48 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Jup Sats	I.Sh.I
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 59 Flares at mag. 0.5 (Azm 053 Alt 17)
	10:55 PM	10:55 PM	Iridium Flare	CHES:Iridium 60 Flares at mag. 0.8 (Azm 055 Alt 22)

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>16</b> May 2014	12:03 AM	12:03 AM	Jupiter	Jupiter sets
	1:13 AM	1:13 AM	Jup GRS	GRS Transit (CML=207)
	4:18 AM	4:18 AM	Twilight	Astronomical Twilight begins
	4:27 AM	4:27 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-8.2 (Azm 255 Alt 54)
	5:23 AM	5:23 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 321.6 Alt 53)
	6:00 AM	6:00 AM	Sun	Sunrise
	6:12 AM	6:12 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-8.4 (Azm 182 Alt 73)
	7:39 AM	7:39 AM	Moon	Moonset
	9:32 AM	9:32 AM	Jupiter	Jupiter rises
	11:08 AM	11:08 AM	Jup GRS	GRS Transit (CML=207)
	8:07 PM	8:07 PM	Sun	Sunset
	9:04 PM	9:04 PM	Jup GRS	GRS Transit (CML=207)
	9:23 PM	9:23 PM	Iridium Flare	CHES:Iridium 25 Flares at mag. 1.5 (Azm 082 Alt 59)
	9:25 PM	9:25 PM	Jup Sats	II.Sh.E
	9:49 PM	9:49 PM	Twilight	Astronomical Twilight ends
	10:13 PM	10:13 PM	Moon	Moonrise
	10:15 PM	10:15 PM	Jup Sats	I.Ec.R
	10:44 PM	10:44 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-0.5 (Azm 055 Alt 20)
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 29 Flares at mag.-1.0 (Azm 055 Alt 20)
	11:59 PM	11:59 PM	Jupiter	Jupiter sets
<b>17</b> May 2014	4:16 AM	4:16 AM	Twilight	Astronomical Twilight begins
	4:20 AM	4:20 AM	Iridium Flare	CHES:Iridium 10 Flares at mag.-2.8 (Azm 257 Alt 54)
	4:35 AM	4:35 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 138.5 Alt 83)
	5:59 AM	5:59 AM	Sun	Sunrise
	7:00 AM	7:00 AM	Jup GRS	GRS Transit (CML=207)
	8:39 AM	8:39 AM	Moon	Moonset
	9:29 AM	9:29 AM	Jupiter	Jupiter rises
	4:56 PM	4:56 PM	Jup GRS	GRS Transit (CML=207)
	7:00 PM	7:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:08 PM	8:08 PM	Sun	Sunset
	9:17 PM	9:17 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-0.4 (Azm 082 Alt 59)
	9:37 PM	9:37 PM	Jup Sats	IV.Sh.E
	9:50 PM	9:50 PM	Twilight	Astronomical Twilight ends
	10:43 PM	10:43 PM	Iridium Flare	CHES:Iridium 32 Flares at mag.-1.3 (Azm 056 Alt 22)
	10:52 PM	10:52 PM	Iridium Flare	CHES:Iridium 91 Flares at mag. 1.5 (Azm 057 Alt 25)
	11:08 PM	11:08 PM	Moon	Moonrise
	11:56 PM	11:56 PM	Jupiter	Jupiter sets
<b>18</b> May 2014	2:36 AM	2:36 AM	Lunar Occult	Moon occults 6.6 mag. star ZC2755(r)
	2:52 AM	2:52 AM	Jup GRS	GRS Transit (CML=207)
	3:00 AM	3:00 AM	Diary	Pluto 2.3S of Moon

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>18</b> May 2014	3:48 AM	3:48 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 120.8 Alt 41)
	4:14 AM	4:14 AM	Iridium Flare	CHES:Iridium 13 Flares at mag. 1.0 (Azm 258 Alt 55)
	4:15 AM	4:15 AM	Twilight	Astronomical Twilight begins
	4:33 AM	4:33 AM	Lunar Occult	Moon occults 6.4 mag. double star ZC2764(r)
	5:24 AM	5:24 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 330.2 Alt 21)
	5:58 AM	5:58 AM	Sun	Sunrise
	7:00 AM	7:00 AM	Diary	Moon at perigee
	7:23 AM	7:23 AM	Iridium Flare	CHES:Iridium 68 Flares at mag.-6.7 (Azm 052 Alt 41)
	9:25 AM	9:25 AM	Jupiter	Jupiter rises
	9:43 AM	9:43 AM	Moon	Moonset
	12:48 PM	12:48 PM	Jup GRS	GRS Transit (CML=207)
	8:09 PM	8:09 PM	Sun	Sunset
	9:11 PM	9:11 PM	Iridium Flare	CHES:Iridium 11 Flares at mag.-2.8 (Azm 083 Alt 57)
	9:52 PM	9:52 PM	Twilight	Astronomical Twilight ends
	10:37 PM	10:37 PM	Iridium Flare	CHES:Iridium 58 Flares at mag. 2.0 (Azm 057 Alt 21)
	10:41 PM	10:41 PM	Iridium Flare	CHES:Iridium 33 Flares at mag.-4.9 (Azm 058 Alt 24)
	10:43 PM	10:43 PM	Jup GRS	GRS Transit (CML=207)
	10:46 PM	10:46 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-0.7 (Azm 058 Alt 26)
	11:53 PM	11:53 PM	Jupiter	Jupiter sets
	11:59 PM	11:59 PM	Moon	Moonrise
<b>19</b> May 2014	3:02 AM	3:02 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 86.3 Alt 14)
	4:14 AM	4:14 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 165.2 Alt 17)
	4:36 AM	4:36 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 326.3 Alt 32)
	5:57 AM	5:57 AM	Sun	Sunrise
	7:17 AM	7:17 AM	Iridium Flare	CHES:Iridium 75 Flares at mag.-4.9 (Azm 051 Alt 40)
	8:39 AM	8:39 AM	Jup GRS	GRS Transit (CML=207)
	9:22 AM	9:22 AM	Jupiter	Jupiter rises
	10:50 AM	10:50 AM	Moon	Moonset
	6:30 PM	6:30 PM	Iridium Flare	CHES:Iridium 17 Flares at mag.-4.1 (Azm 312 Alt 51)
	6:35 PM	6:35 PM	Jup GRS	GRS Transit (CML=207)
	7:20 PM	7:20 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-8.3 (Azm 189 Alt 82)
	8:09 PM	8:09 PM	Sun	Sunset
	9:05 PM	9:05 PM	Iridium Flare	CHES:Iridium 94 Flares at mag. 1.3 (Azm 084 Alt 56)
	9:53 PM	9:53 PM	Twilight	Astronomical Twilight ends
	10:40 PM	10:40 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-5.4 (Azm 059 Alt 26)
	10:42 PM	10:42 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-0.7 (Azm 060 Alt 28)
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.6 (Azm 060 Alt 30)
	11:50 PM	11:50 PM	Jupiter	Jupiter sets

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>20</b> May 2014	12:44 AM	12:44 AM	Moon	Moonrise
	2:56 AM	2:56 AM	Iridium Flare	CHES:Iridium 4 Flares at mag. 1.8 (Azm 297 Alt 13)
	3:48 AM	3:48 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 322.4 Alt 55)
	4:11 AM	4:11 AM	Iridium Flare	CHES:Iridium 84 Flares at mag. 1.9 (Azm 264 Alt 45)
	4:13 AM	4:13 AM	Twilight	Astronomical Twilight begins
	4:17 AM	4:17 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 167.9 Alt 20)
	4:31 AM	4:31 AM	Jup GRS	GRS Transit (CML=207)
	5:57 AM	5:57 AM	Sun	Sunrise
	9:19 AM	9:19 AM	Jupiter	Jupiter rises
	11:57 AM	11:57 AM	Moon	Moonset
	2:27 PM	2:27 PM	Jup GRS	GRS Transit (CML=207)
	3:51 PM	3:51 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:10 PM	8:10 PM	Sun	Sunset
	8:59 PM	8:59 PM	Iridium Flare	CHES:Iridium 23 Flares at mag. 1.6 (Azm 086 Alt 57)
	9:54 PM	9:54 PM	Twilight	Astronomical Twilight ends
	10:34 PM	10:34 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-0.3 (Azm 060 Alt 26)
	11:46 PM	11:46 PM	Jupiter	Jupiter sets
<b>21</b> May 2014	12:23 AM	12:23 AM	Jup GRS	GRS Transit (CML=207)
	1:25 AM	1:25 AM	Moon	Moonrise
	2:45 AM	2:45 AM	Iridium Flare	CHES:Iridium 37 Flares at mag.-6.4 (Azm 297 Alt 15)
	2:54 AM	2:54 AM	Iridium Flare	CHES:Iridium 61 Flares at mag. 1.8 (Azm 299 Alt 12)
	3:02 AM	3:02 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 54.1 Alt 27)
	4:05 AM	4:05 AM	Iridium Flare	CHES:Iridium 12 Flares at mag.-0.3 (Azm 265 Alt 46)
	4:11 AM	4:11 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 170.7 Alt 22)
	4:12 AM	4:12 AM	Twilight	Astronomical Twilight begins
	4:37 AM	4:37 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 334.7 Alt 15)
	5:56 AM	5:56 AM	Sun	Sunrise
	6:00 AM	6:00 AM	Diary	Mars stationary
	9:16 AM	9:16 AM	Jupiter	Jupiter rises
	10:00 AM	10:00 AM	Diary	LAST QUARTER
	10:19 AM	10:19 AM	Jup GRS	GRS Transit (CML=207)
	1:03 PM	1:03 PM	Moon	Moonset
	8:11 PM	8:11 PM	Sun	Sunset
	8:14 PM	8:14 PM	Jup GRS	GRS Transit (CML=207)
	9:55 PM	9:55 PM	Twilight	Astronomical Twilight ends
	10:00 PM	10:00 PM	Diary	Neptune 4.7S of Moon
	10:37 PM	10:37 PM	Iridium Flare	CHES:Iridium 58 Flares at mag.-0.3 (Azm 061 Alt 31)
	11:43 PM	11:43 PM	Jupiter	Jupiter sets
<b>22</b> May 2014	2:03 AM	2:03 AM	Moon	Moonrise
	2:16 AM	2:16 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 62.7 Alt 10)

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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				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				25	26	27	28	29	30	31	29	30					

## Calendar

	Start	End	Category	Description
<b>22</b> May 2014	2:39 AM	2:39 AM	Iridium Flare	CHES:Iridium 34 Flares at mag.-1.3 (Azm 299 Alt 15)
	2:48 AM	2:48 AM	Iridium Flare	CHES:Iridium 35 Flares at mag. 0.0 (Azm 301 Alt 11)
	3:49 AM	3:49 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 330.0 Alt 22)
	3:54 AM	3:54 AM	Iridium Flare	CHES:Iridium 90 Flares at mag. 1.4 (Azm 266 Alt 51)
	3:59 AM	3:59 AM	Iridium Flare	CHES:Iridium 86 Flares at mag.-2.4 (Azm 267 Alt 46)
	4:04 AM	4:04 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 169.8 Alt 24)
	4:11 AM	4:11 AM	Twilight	Astronomical Twilight begins
	5:45 AM	5:45 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 194.4 Alt 24)
	5:55 AM	5:55 AM	Sun	Sunrise
	6:10 AM	6:10 AM	Jup GRS	GRS Transit (CML=207)
	6:59 AM	6:59 AM	Iridium Flare	CHES:Iridium 21 Flares at mag.-6.3 (Azm 046 Alt 37)
	9:13 AM	9:13 AM	Jupiter	Jupiter rises
	2:08 PM	2:08 PM	Moon	Moonset
	4:06 PM	4:06 PM	Jup GRS	GRS Transit (CML=207)
	8:12 PM	8:12 PM	Sun	Sunset
	8:56 PM	8:56 PM	Iridium Flare	CHES:Iridium 22 Flares at mag.-1.4 (Azm 086 Alt 65)
	9:56 PM	9:56 PM	Twilight	Astronomical Twilight ends
	10:32 PM	10:32 PM	Iridium Flare	CHES:Iridium 55 Flares at mag.-2.3 (Azm 063 Alt 33)
	11:40 PM	11:40 PM	Jupiter	Jupiter sets
<b>23</b> May 2014	2:02 AM	2:02 AM	Jup GRS	GRS Transit (CML=207)
	2:33 AM	2:33 AM	Iridium Flare	CHES:Iridium 5 Flares at mag. 1.3 (Azm 300 Alt 15)
	2:39 AM	2:39 AM	Moon	Moonrise
	2:42 AM	2:42 AM	Iridium Flare	CHES:Iridium 6 Flares at mag.-5.9 (Azm 303 Alt 12)
	3:02 AM	3:02 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 1.1 Alt 27)
	3:53 AM	3:53 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-0.4 (Azm 267 Alt 48)
	3:58 AM	3:58 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 163.0 Alt 25)
	4:10 AM	4:10 AM	Twilight	Astronomical Twilight begins
	5:39 AM	5:39 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-8.5 (Azm 219 Alt 72)
	5:55 AM	5:55 AM	Sun	Sunrise
	9:10 AM	9:10 AM	Jupiter	Jupiter rises
	11:58 AM	11:58 AM	Jup GRS	GRS Transit (CML=207)
	12:40 PM	12:40 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:13 PM	3:13 PM	Moon	Moonset
	8:13 PM	8:13 PM	Sun	Sunset
	8:50 PM	8:50 PM	Iridium Flare	CHES:Iridium 25 Flares at mag.-0.3 (Azm 087 Alt 68)
	8:57 PM	8:57 PM	Jup Sats	I.Oc.D
	9:14 PM	9:14 PM	Jup Sats	II.Sh.I
	9:53 PM	9:53 PM	Jup GRS	GRS Transit (CML=207)
	9:57 PM	9:57 PM	Twilight	Astronomical Twilight ends
	10:08 PM	10:08 PM	Jup Sats	II.Tr.E
	10:25 PM	10:25 PM	Iridium Flare	CHES:Iridium 31 Flares at mag.-1.4 (Azm 064 Alt 32)

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>23</b> May 2014	11:37 PM	11:37 PM	Jupiter	Jupiter sets
<b>24</b> May 2014	2:16 AM	2:16 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 38.8 Alt 15)
	2:35 AM	2:35 AM	Iridium Flare	CHES:Iridium 96 Flares at mag.-1.7 (Azm 305 Alt 11)
	3:00 AM	3:00 AM		POTENTIAL METEOR STORM from Comet 209P/Linear (Camelopardalis radiant)
	3:15 AM	3:15 AM	Moon	Moonrise
	3:47 AM	3:47 AM	Iridium Flare	CHES:Iridium 10 Flares at mag. 0.8 (Azm 269 Alt 48)
	3:51 AM	3:51 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 155.7 Alt 23)
	4:09 AM	4:09 AM	Twilight	Astronomical Twilight begins
	5:31 AM	5:31 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 192.4 Alt 20)
	5:54 AM	5:54 AM	Sun	Sunrise
	6:47 AM	6:47 AM	Iridium Flare	CHES:Iridium 64 Flares at mag.-6.4 (Azm 044 Alt 35)
	7:50 AM	7:50 AM	Jup GRS	GRS Transit (CML=207)
	8:49 AM	8:49 AM	Iridium Flare	CHES:Iridium 49 Flares at mag.-5.4 (Azm 082 Alt 43)
	9:07 AM	9:07 AM	Jupiter	Jupiter rises
	4:00 PM	4:00 PM	Diary	Uranus 1.8S of Moon
	4:16 PM	4:16 PM	Moon	Moonset
	5:45 PM	5:45 PM	Jup GRS	GRS Transit (CML=207)
	8:13 PM	8:13 PM	Sun	Sunset
	8:44 PM	8:44 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-5.0 (Azm 089 Alt 68)
	9:24 PM	9:24 PM	Jup Sats	I.Sh.E
	9:59 PM	9:59 PM	Twilight	Astronomical Twilight ends
	10:29 PM	10:29 PM	Iridium Flare	CHES:Iridium 57 Flares at mag. 1.9 (Azm 064 Alt 38)
	11:33 PM	11:33 PM	Jupiter	Jupiter sets
<b>25</b> May 2014	1:29 AM	1:29 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 51.5 Alt 6)
	2:29 AM	2:29 AM	Iridium Flare	CHES:Iridium 19 Flares at mag. 1.1 (Azm 307 Alt 11)
	3:00 AM	3:00 AM	Diary	Mercury greatest elong E(23)
	3:02 AM	3:02 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 334.4 Alt 16)
	3:41 AM	3:41 AM	Jup GRS	GRS Transit (CML=207)
	3:45 AM	3:45 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 148.1 Alt 20)
	3:46 AM	3:46 AM	Iridium Flare	CHES:Iridium 16 Flares at mag.-3.7 (Azm 270 Alt 45)
	3:50 AM	3:50 AM	Iridium Flare	CHES:Iridium 83 Flares at mag. 1.9 (Azm 271 Alt 39)
	3:51 AM	3:51 AM	Moon	Moonrise
	4:08 AM	4:08 AM	Twilight	Astronomical Twilight begins
	5:25 AM	5:25 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 195.2 Alt 17)
	5:54 AM	5:54 AM	Sun	Sunrise
	6:41 AM	6:41 AM	Iridium Flare	CHES:Iridium 67 Flares at mag.-6.5 (Azm 042 Alt 34)
	9:04 AM	9:04 AM	Jupiter	Jupiter rises
	11:00 AM	11:00 AM	Diary	Venus 2.1S of Moon
	1:37 PM	1:37 PM	Jup GRS	GRS Transit (CML=207)
	5:18 PM	5:18 PM	Moon	Moonset



# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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				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				25	26	27	28	29	30	31	29	30					

## Calendar

	Start	End	Category	Description
<b>25</b> May 2014	8:14 PM	8:14 PM	Sun	Sunset
	8:54 PM	8:54 PM	Iridium Flare	CHES:Iridium 45 Flares at mag.-0.3 (Azm 088 Alt 67)
	10:00 PM	10:00 PM	Twilight	Astronomical Twilight ends
	10:16 PM	10:16 PM	Iridium Flare	CHES:Iridium 33 Flares at mag. 0.3 (Azm 065 Alt 34)
	10:22 PM	10:22 PM	Iridium Flare	CHES:Iridium 60 Flares at mag. 0.6 (Azm 065 Alt 39)
	11:30 PM	11:30 PM	Jupiter	Jupiter sets
	11:33 PM	11:33 PM	Jup GRS	GRS Transit (CML=207)
<b>26</b> May 2014	12:00 AM	12:00 AM	Public Holiday	Memorial Day holiday
	2:16 AM	2:16 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 6.0 Alt 17)
	3:39 AM	3:39 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 141.4 Alt 16)
	3:44 AM	3:44 AM	Iridium Flare	CHES:Iridium 56 Flares at mag.-1.3 (Azm 272 Alt 41)
	4:07 AM	4:07 AM	Twilight	Astronomical Twilight begins
	4:30 AM	4:30 AM	Moon	Moonrise
	5:53 AM	5:53 AM	Sun	Sunrise
	6:35 AM	6:35 AM	Iridium Flare	CHES:Iridium 72 Flares at mag.-6.0 (Azm 041 Alt 33)
	9:01 AM	9:01 AM	Jupiter	Jupiter rises
	9:29 AM	9:29 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	9:29 AM	9:29 AM	Jup GRS	GRS Transit (CML=207)
	5:56 PM	5:56 PM	Iridium Flare	CHES:Iridium 41 Flares at mag.-4.3 (Azm 298 Alt 52)
	6:20 PM	6:20 PM	Moon	Moonset
	6:47 PM	6:47 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-8.0 (Azm 238 Alt 76)
	7:24 PM	7:24 PM	Jup GRS	GRS Transit (CML=207)
	8:15 PM	8:15 PM	Sun	Sunset
10:01 PM	10:01 PM	Twilight	Astronomical Twilight ends	
10:12 PM	10:12 PM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.3 (Azm 066 Alt 35)	
11:27 PM	11:27 PM	Jupiter	Jupiter sets	
<b>27</b> May 2014	1:29 AM	1:29 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 32.0 Alt 11)
	3:33 AM	3:33 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 136.4 Alt 10)
	3:38 AM	3:38 AM	Iridium Flare	CHES:Iridium 84 Flares at mag.-3.0 (Azm 274 Alt 40)
	4:06 AM	4:06 AM	Twilight	Astronomical Twilight begins
	5:10 AM	5:10 AM	Moon	Moonrise
	5:20 AM	5:20 AM	Jup GRS	GRS Transit (CML=207)
	5:53 AM	5:53 AM	Sun	Sunrise
	6:29 AM	6:29 AM	Iridium Flare	CHES:Iridium 62 Flares at mag.-5.8 (Azm 040 Alt 31)
	8:58 AM	8:58 AM	Jupiter	Jupiter rises
	3:16 PM	3:16 PM	Jup GRS	GRS Transit (CML=207)
	7:19 PM	7:19 PM	Moon	Moonset
	8:16 PM	8:16 PM	Sun	Sunset
	10:02 PM	10:02 PM	Twilight	Astronomical Twilight ends
10:10 PM	10:10 PM	Iridium Flare	CHES:Iridium 32 Flares at mag.-1.8 (Azm 067 Alt 38)	

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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					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				25	26	27	28	29	30	31	29	30						

## Calendar

	Start	End	Category	Description
<b>27</b> May 2014	11:24 PM	11:24 PM	Jupiter	Jupiter sets
<b>28</b> May 2014	1:12 AM	1:12 AM	Jup GRS	GRS Transit (CML=207)
	3:32 AM	3:32 AM	Iridium Flare	CHES:Iridium 12 Flares at mag.-2.9 (AzM 275 Alt 40)
	4:06 AM	4:06 AM	Twilight	Astronomical Twilight begins
	5:52 AM	5:52 AM	Sun	Sunrise
	5:54 AM	5:54 AM	Moon	Moonrise
	8:55 AM	8:55 AM	Jupiter	Jupiter rises
	11:08 AM	11:08 AM	Jup GRS	GRS Transit (CML=207)
	3:00 PM	3:00 PM	Diary	NEW MOON
	8:00 PM	8:00 PM	Diary	Aldebaran 2.0S of Moon
	8:15 PM	8:15 PM	Moon	Moonset
	8:16 PM	8:16 PM	Sun	Sunset
	9:04 PM	9:04 PM	Jup GRS	GRS Transit (CML=207)
	10:03 PM	10:03 PM	Twilight	Astronomical Twilight ends
	10:04 PM	10:04 PM	Iridium Flare	CHES:Iridium 58 Flares at mag. 1.9 (AzM 068 Alt 37)
	11:21 PM	11:21 PM	Jupiter	Jupiter sets
<b>29</b> May 2014	1:29 AM	1:29 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (AzM 1.2 Alt 13)
	3:25 AM	3:25 AM	Iridium Flare	CHES:Iridium 86 Flares at mag.-0.4 (AzM 277 Alt 40)
	4:05 AM	4:05 AM	Twilight	Astronomical Twilight begins
	5:11 AM	5:11 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-1.2 (AzM 243 Alt 66)
	5:52 AM	5:52 AM	Sun	Sunrise
	6:17 AM	6:17 AM	Iridium Flare	CHES:Iridium 68 Flares at mag.-5.9 (AzM 038 Alt 29)
	6:18 AM	6:18 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:42 AM	6:42 AM	Moon	Moonrise
	7:00 AM	7:00 AM	Jup GRS	GRS Transit (CML=207)
	8:52 AM	8:52 AM	Jupiter	Jupiter rises
	4:55 PM	4:55 PM	Jup GRS	GRS Transit (CML=207)
	8:17 PM	8:17 PM	Sun	Sunset
	8:23 PM	8:23 PM	Iridium Flare	CHES:Iridium 22 Flares at mag.-4.1 (AzM 094 Alt 74)
	9:07 PM	9:07 PM	Moon	Moonset
	10:01 PM	10:01 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-0.7 (AzM 069 Alt 41)
	10:04 PM	10:04 PM	Twilight	Astronomical Twilight ends
	10:07 PM	10:07 PM	Iridium Flare	CHES:Iridium 95 Flares at mag. 0.5 (AzM 068 Alt 45)
	11:17 PM	11:17 PM	Jupiter	Jupiter sets
<b>30</b> May 2014	12:42 AM	12:42 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (AzM 22.4 Alt 11)
	2:51 AM	2:51 AM	Jup GRS	GRS Transit (CML=207)
	3:28 AM	3:28 AM	Iridium Flare	CHES:Iridium 53 Flares at mag. 0.6 (AzM 278 Alt 34)
	4:04 AM	4:04 AM	Twilight	Astronomical Twilight begins
	5:05 AM	5:05 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-8.3 (AzM 244 Alt 66)

# Norfolk Astronomical Society Astronomical Calendar

April 2014							May 2014							June 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				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				25	26	27	28	29	30	31	29	30					

## Calendar

	Start	End	Category	Description
<b>30</b> May 2014	5:33 AM	5:33 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Az <sub>m</sub> 30.0 Alt 22)
	5:51 AM	5:51 AM	Sun	Sunrise
	7:32 AM	7:32 AM	Moon	Moonrise
	8:49 AM	8:49 AM	Jupiter	Jupiter rises
	12:00 PM	12:00 PM	Diary	Mercury 5.8N of Moon
	12:47 PM	12:47 PM	Jup GRS	GRS Transit (CML=207)
	7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)
	8:18 PM	8:18 PM	Sun	Sunset
	9:55 PM	9:55 PM	Moon	Moonset
	10:01 PM	10:01 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-1.2 (Az <sub>m</sub> 069 Alt 46)
	10:05 PM	10:05 PM	Twilight	Astronomical Twilight ends
	10:10 PM	10:10 PM	Jup Sats	II.Tr.I
	10:43 PM	10:43 PM	Jup GRS	GRS Transit (CML=207)
	10:57 PM	10:57 PM	Jup Sats	I.Oc.D
	11:14 PM	11:14 PM	Jupiter	Jupiter sets
	11:55 PM	11:55 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Az <sub>m</sub> 35.9 Alt 8)
<b>31</b> May 2014	3:22 AM	3:22 AM	Iridium Flare	CHES:Iridium 54 Flares at mag.-2.6 (Az <sub>m</sub> 280 Alt 35)
	4:03 AM	4:03 AM	Twilight	Astronomical Twilight begins
	4:45 AM	4:45 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Az <sub>m</sub> 25.3 Alt 16)
	4:59 AM	4:59 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-2.5 (Az <sub>m</sub> 246 Alt 66)
	5:51 AM	5:51 AM	Sun	Sunrise
	8:24 AM	8:24 AM	Moon	Moonrise
	8:39 AM	8:39 AM	Jup GRS	GRS Transit (CML=207)
	8:46 AM	8:46 AM	Jupiter	Jupiter rises
	6:35 PM	6:35 PM	Jup GRS	GRS Transit (CML=207)
	8:11 PM	8:11 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-8.4 (Az <sub>m</sub> 099 Alt 77)
	8:18 PM	8:18 PM	Sun	Sunset
	9:02 PM	9:02 PM	Jup Sats	I.Sh.I
	9:52 PM	9:52 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Az <sub>m</sub> 187.8 Alt 15)
	9:55 PM	9:55 PM	Iridium Flare	CHES:Iridium 57 Flares at mag.-4.7 (Az <sub>m</sub> 070 Alt 45)
	10:06 PM	10:06 PM	Twilight	Astronomical Twilight ends
	10:28 PM	10:28 PM	Jup Sats	I.Tr.E
	10:38 PM	11:59 PM	Moon	Moonset
	11:07 PM	11:07 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Az <sub>m</sub> 44.1 Alt 8)
	11:11 PM	11:11 PM	Jupiter	Jupiter sets