

Norfolk Astronomical Society



<http://norfolkastronomical.org>

November 2014

Monthly Sky Calendar
Prepared Specifically For
The Hampton Roads Area

Upcoming Regular Meetings

DATE	Monday, November 3, 2014
TIME	6 - 8 PM EDT
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	Telescopes (Galileo continued)

DATE	Thursday, December 11, 2014
TIME	6 - 8 PM EDT
WHERE	Lockside Bar & Grill (http://www.LocksideBarandGrill.com)
TOPIC	Annual Dinner Meeting

The Great Sunspot of 2014 (AR2192)

Photo By Kent Blackwell



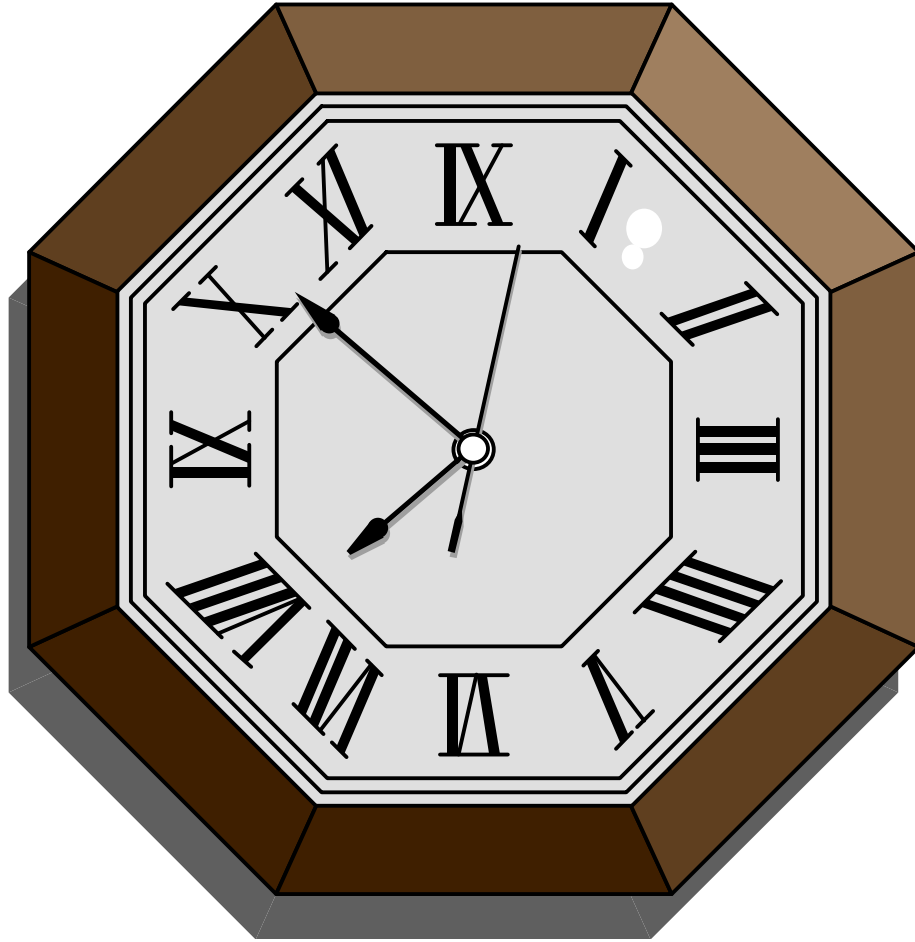
Kent photographed the largest sunspot so far this solar cycle on October 21, 2014, through his 8-cm TMB telescope. The sunspot was large enough to be seen by the naked eye. Unfortunately, even though the sunspot spouted several X-class flares, none produced significant coronal mass ejections (CMEs) that would have caused an auroral display.

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
1 Nov 2014	1:08 AM	1:08 AM	Jupiter	Jupiter rises
	1:33 AM	1:33 AM	Moon	Moonset
	1:37 AM	1:37 AM	Jup Sats	III.Sh.I
	2:39 AM	2:39 AM	Jup Sats	I.Oc.R
	5:12 AM	5:12 AM	Jup Sats	III.Sh.E
	5:19 AM	5:19 AM	Jup Sats	IV.Sh.I
	6:03 AM	6:03 AM	Twilight	Astronomical Twilight begins
	6:36 AM	6:36 AM	Jup Sats	III.Tr.I
	7:30 AM	7:30 AM	Sun	Sunrise
	2:45 PM	2:45 PM	Jupiter	Jupiter sets
	2:54 PM	2:54 PM	Moon	Moonrise
	5:00 PM	5:00 PM	Diary	Mercury greatest elong W(19)
	6:03 PM	6:03 PM	Lunar Occult	Moon occults 4.2 mag. star ZC3269(m)
	6:04 PM	6:04 PM	Lunar Occult	Moon grazes 4.2 mag. star ZC3269(Gr)
6:11 PM	6:11 PM	Sun	Sunset	
7:38 PM	7:38 PM	Twilight	Astronomical Twilight ends	
9:00 PM	9:00 PM	Diary	Neptune 4.4S of Moon	
2 Nov 2014	1:05 AM	1:05 AM	Jupiter	Jupiter rises
	2:00 AM	2:00 AM	DST	Fall back to EST
	2:40 AM	2:40 AM	Moon	Moonset
	6:04 AM	6:04 AM	Twilight	Astronomical Twilight begins
	7:31 AM	7:31 AM	Sun	Sunrise
	2:42 PM	2:42 PM	Jupiter	Jupiter sets
	3:33 PM	3:33 PM	Moon	Moonrise
	6:10 PM	6:10 PM	Sun	Sunset
	7:37 PM	7:37 PM	Twilight	Astronomical Twilight ends
	10:00 PM	10:00 PM	Diary	Moon at perigee
11:14 PM	11:14 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)	



2 AM Sunday, November 2, 2014

Fall Back To EST

(Set clocks back 1 hour)

DAYLIGHT SAVING TIME

Year	DST Begins 2 a.m. (Second Sunday in March)	DST Ends 2 a.m. (First Sunday in November)
2007	Sun 11 March 2007	Sun 04 November 2007
2008	Sun 09 March 2008	Sun 02 November 2008
2009	Sun 08 March 2009	Sun 01 November 2009
2010	Sun 14 March 2010	Sun 07 November 2010
2011	Sun 13 March 2011	Sun 06 November 2011
2012	Sun 11 March 2012	Sun 04 November 2012
2013	Sun 10 March 2013	Sun 03 November 2013
2014	Sun 09 March 2014	Sun 02 November 2014
2015	Sun 08 March 2015	Sun 01 November 2015
2016	Sun 13 March 2016	Sun 06 November 2016
2017	Sun 12 March 2017	Sun 05 November 2017
2018	Sun 11 March 2018	Sun 04 November 2018
2019	Sun 10 March 2019	Sun 03 November 2019
2020	Sun 08 March 2020	Sun 01 November 2020
2021	Sun 14 March 2021	Sun 07 November 2021
2022	Sun 13 March 2022	Sun 06 November 2022
2023	Sun 12 March 2023	Sun 05 November 2023
2024	Sun 10 March 2024	Sun 03 November 2024
2025	Sun 09 March 2025	Sun 02 November 2025

*By the rules enacted in Energy Policy Act of 2005, beginning in 2007, DST begins on the second Sunday in March and ends on the first Sunday in November. Time changes at 2 AM local time.
<http://www.greenwichmeantime.com/time-zone/rules/usa/>*

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

Calendar

	Start	End	Category	Description	
1 Nov 2014	12:08 AM	12:08 AM	Jupiter	Jupiter rises	
	12:33 AM	12:33 AM	Moon	Moonset	
	12:37 AM	12:37 AM	Jup Sats	III.Sh.I	
	1:39 AM	1:39 AM	Jup Sats	I.Oc.R	
	4:12 AM	4:12 AM	Jup Sats	III.Sh.E	
	4:19 AM	4:19 AM	Jup Sats	IV.Sh.I	
	5:03 AM	5:03 AM	Twilight	Astronomical Twilight begins	
	5:36 AM	5:36 AM	Jup Sats	III.Tr.I	
	6:09 AM	6:09 AM	Jup GRS	GRS Transit (CML=227)	
	6:30 AM	6:30 AM	Sun	Sunrise	
	1:45 PM	1:45 PM	Jupiter	Jupiter sets	
	1:54 PM	1:54 PM	Moon	Moonrise	
	4:00 PM	4:00 PM	Diary	Mercury greatest elong W(19)	
	4:05 PM	4:05 PM	Jup GRS	GRS Transit (CML=227)	
2 Nov 2014	5:03 PM	5:03 PM	Lunar Occult	Moon occults 4.2 mag. star ZC3269(m)	
	5:04 PM	5:04 PM	Lunar Occult	Moon grazes 4.2 mag. star ZC3269(Gr)	
	5:11 PM	5:11 PM	Sun	Sunset	
	6:38 PM	6:38 PM	Twilight	Astronomical Twilight ends	
	8:00 PM	8:00 PM	Diary	Neptune 4.4S of Moon	
	2	12:05 AM	12:05 AM	Jupiter	Jupiter rises
	1:00 AM	1:00 AM	DST	Fall back to EST	
	1:40 AM	1:40 AM	Moon	Moonset	
	2:01 AM	2:01 AM	Jup GRS	GRS Transit (CML=227)	
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 20 Flares at mag.-4.0 (Azm 182 Alt 31)	
	5:04 AM	5:04 AM	Twilight	Astronomical Twilight begins	
	6:31 AM	6:31 AM	Sun	Sunrise	
	11:56 AM	11:56 AM	Jup GRS	GRS Transit (CML=227)	
	1:42 PM	1:42 PM	Jupiter	Jupiter sets	
2:33 PM	2:33 PM	Moon	Moonrise		
5:10 PM	5:10 PM	Sun	Sunset		
5:13 PM	5:13 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 182.3 Alt 26)		
6:37 PM	6:37 PM	Twilight	Astronomical Twilight ends		
6:54 PM	6:54 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 194.9 Alt 17)		
9:00 PM	9:00 PM	Diary	Moon at perigee		
9:52 PM	9:52 PM	Jup GRS	GRS Transit (CML=227)		
10:14 PM	10:14 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)		
3 Nov 2014	12:01 AM	12:01 AM	Jupiter	Jupiter rises	
	2:47 AM	2:47 AM	Moon	Moonset	
	4:57 AM	4:57 AM	Meteor Shower	S Taurids (Encke) meteor peak (zhr=15)	
	5:05 AM	5:05 AM	Twilight	Astronomical Twilight begins	

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

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	Start	End	Category	Description
3 Nov 2014	6:32 AM	6:32 AM	Sun	Sunrise
	7:48 AM	7:48 AM	Jup GRS	GRS Transit (CML=227)
	8:27 AM	8:27 AM	Iridium Flare	CHES:Iridium 34 Flares at mag.-6.3 (Azm 109 Alt 40)
	1:38 PM	1:38 PM	Jupiter	Jupiter sets
	3:11 PM	3:11 PM	Moon	Moonrise
	5:07 PM	5:07 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 153.4 Alt 20)
	5:09 PM	5:09 PM	Sun	Sunset
	5:43 PM	5:43 PM	Jup GRS	GRS Transit (CML=227)
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	6:36 PM	6:36 PM	Twilight	Astronomical Twilight ends
	11:58 PM	11:58 PM	Jupiter	Jupiter rises
4 Nov 2014	3:39 AM	3:39 AM	Jup GRS	GRS Transit (CML=227)
	3:54 AM	3:54 AM	Moon	Moonset
	5:06 AM	5:06 AM	Twilight	Astronomical Twilight begins
	6:33 AM	6:33 AM	Sun	Sunrise
	8:21 AM	8:21 AM	Iridium Flare	CHES:Iridium 5 Flares at mag.-6.4 (Azm 107 Alt 40)
	10:00 AM	10:00 AM	Diary	Mercury 4.2N of Spica
	1:00 PM	1:00 PM	Diary	Uranus 1.2S of Moon Occn
	1:34 PM	1:34 PM	Jupiter	Jupiter sets
	1:35 PM	1:35 PM	Jup GRS	GRS Transit (CML=227)
	3:49 PM	3:49 PM	Moon	Moonrise
	5:08 PM	5:08 PM	Sun	Sunset
	6:35 PM	6:35 PM	Twilight	Astronomical Twilight ends
	6:51 PM	6:51 PM	Iridium Flare	CHES:Iridium 29 Flares at mag.-5.0 (Azm 026 Alt 40)
	11:30 PM	11:30 PM	Jup GRS	GRS Transit (CML=227)
	11:55 PM	11:55 PM	Jupiter	Jupiter rises
5 Nov 2014	12:21 AM	12:21 AM	Lunar Occult	Moon occults 5.2 mag. double star 180(D)
	12:22 AM	12:22 AM	Lunar Occult	Moon occults 6.3 mag. double star 181(d)
	2:35 AM	2:35 AM	Jup Sats	II.Ec.D
	5:01 AM	5:01 AM	Moon	Moonset
	5:07 AM	5:07 AM	Twilight	Astronomical Twilight begins
	6:13 AM	6:13 AM	Iridium Flare	CHES:Iridium 32 Flares at mag.-6.3 (Azm 143 Alt 24)
	6:34 AM	6:34 AM	Sun	Sunrise
	9:26 AM	9:26 AM	Jup GRS	GRS Transit (CML=227)
	1:31 PM	1:31 PM	Jupiter	Jupiter sets
	4:29 PM	4:29 PM	Moon	Moonrise
	5:07 PM	5:07 PM	Sun	Sunset
	6:34 PM	6:34 PM	Twilight	Astronomical Twilight ends
	7:00 PM	7:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	7:22 PM	7:22 PM	Jup GRS	GRS Transit (CML=227)

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

Calendar

	Start	End	Category	Description
5 Nov 2014	11:51 PM	11:51 PM	Jupiter	Jupiter rises
6 Nov 2014	4:40 AM	4:40 AM	Iridium Flare	CHES:Iridium 11 Flares at mag.-0.4 (Azm 189 Alt 27)
	5:08 AM	5:08 AM	Twilight	Astronomical Twilight begins
	5:18 AM	5:18 AM	Jup GRS	GRS Transit (CML=227)
	5:30 AM	5:30 AM	Jup Sats	I.Ec.D
	6:06 AM	6:06 AM	Moon	Moonset
	6:24 AM	6:24 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 133.1 Alt 32)
	6:35 AM	6:35 AM	Sun	Sunrise
	1:27 PM	1:27 PM	Jupiter	Jupiter sets
	3:13 PM	3:13 PM	Jup GRS	GRS Transit (CML=227)
	5:06 PM	5:06 PM	Sun	Sunset
	5:11 PM	5:11 PM	Moon	Moonrise
	6:00 PM	6:00 PM	Diary	FULL MOON
	6:34 PM	6:34 PM	Twilight	Astronomical Twilight ends
	6:42 PM	6:42 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-7.9 (Azm 027 Alt 42)
	11:48 PM	11:48 PM	Jupiter	Jupiter rises
7 Nov 2014	1:09 AM	1:09 AM	Jup GRS	GRS Transit (CML=227)
	2:17 AM	2:17 AM	Jup Sats	II.Tr.E
	2:51 AM	2:51 AM	Jup Sats	I.Sh.I
	4:05 AM	4:05 AM	Jup Sats	I.Tr.I
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 94 Flares at mag.-2.8 (Azm 188 Alt 27)
	5:07 AM	5:07 AM	Jup Sats	I.Sh.E
	5:08 AM	5:08 AM	Twilight	Astronomical Twilight begins
	5:35 AM	5:35 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 129.5 Alt 17)
	6:21 AM	6:21 AM	Jup Sats	I.Tr.E
	6:36 AM	6:36 AM	Sun	Sunrise
	7:10 AM	7:10 AM	Moon	Moonset
	11:05 AM	11:05 AM	Jup GRS	GRS Transit (CML=227)
	1:23 PM	1:23 PM	Jupiter	Jupiter sets
	5:05 PM	5:05 PM	Sun	Sunset
	5:57 PM	5:57 PM	Moon	Moonrise
	6:33 PM	6:33 PM	Twilight	Astronomical Twilight ends
	6:36 PM	6:36 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-8.0 (Azm 028 Alt 45)
	9:00 PM	9:00 PM	Jup GRS	GRS Transit (CML=227)
	11:44 PM	11:44 PM	Jupiter	Jupiter rises
	11:58 PM	11:58 PM	Jup Sats	I.Ec.D
8 Nov 2014	3:33 AM	3:33 AM	Jup Sats	I.Oc.R
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 23 Flares at mag.-0.2 (Azm 189 Alt 26)
	4:34 AM	4:34 AM	Jup Sats	III.Sh.I

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

Calendar

	Start	End	Category	Description
8 Nov 2014	5:09 AM	5:09 AM	Twilight	Astronomical Twilight begins
	6:22 AM	6:22 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 320.4 Alt 77)
	6:37 AM	6:37 AM	Sun	Sunrise
	6:56 AM	6:56 AM	Jup GRS	GRS Transit (CML=227)
	8:11 AM	8:11 AM	Moon	Moonset
	1:20 PM	1:20 PM	Jupiter	Jupiter sets
	3:00 PM	3:00 PM	Diary	Aldebaran 1.5S of Moon
	3:52 PM	3:52 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:34 PM	4:34 PM	Iridium Flare	CHES:Iridium 3 Flares at mag.-8.4 (Azm 052 Alt 83)
	4:52 PM	4:52 PM	Jup GRS	GRS Transit (CML=227)
	5:04 PM	5:04 PM	Sun	Sunset
	6:30 PM	6:30 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-1.0 (Azm 030 Alt 45)
	6:32 PM	6:32 PM	Twilight	Astronomical Twilight ends
	6:45 PM	6:45 PM	Moon	Moonrise
	11:41 PM	11:41 PM	Jupiter	Jupiter rises
9 Nov 2014	12:49 AM	12:49 AM	Jup Sats	I.Tr.E
	2:47 AM	2:47 AM	Jup GRS	GRS Transit (CML=227)
	5:10 AM	5:10 AM	Twilight	Astronomical Twilight begins
	5:33 AM	5:33 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 136.3 Alt 53)
	5:58 AM	5:58 AM	Iridium Flare	CHES:Iridium 57 Flares at mag.-6.5 (Azm 151 Alt 25)
	6:38 AM	6:38 AM	Sun	Sunrise
	9:07 AM	9:07 AM	Moon	Moonset
	12:43 PM	12:43 PM	Jup GRS	GRS Transit (CML=227)
	1:16 PM	1:16 PM	Jupiter	Jupiter sets
	4:28 PM	4:28 PM	Iridium Flare	CHES:Iridium 76 Flares at mag.-6.5 (Azm 062 Alt 84)
	5:03 PM	5:03 PM	Sun	Sunset
	6:23 PM	6:23 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-1.0 (Azm 031 Alt 47)
	6:31 PM	6:31 PM	Twilight	Astronomical Twilight ends
	7:36 PM	7:36 PM	Moon	Moonrise
	10:39 PM	10:39 PM	Jup GRS	GRS Transit (CML=227)
	11:37 PM	11:37 PM	Jupiter	Jupiter rises
	11:50 PM	11:50 PM	Jup Sats	IV.Oc.D
10 Nov 2014	4:43 AM	4:43 AM	Jup Sats	IV.Oc.R
	4:44 AM	4:44 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 131.9 Alt 27)
	5:11 AM	5:11 AM	Twilight	Astronomical Twilight begins
	5:52 AM	5:52 AM	Iridium Flare	CHES:Iridium 60 Flares at mag.-1.9 (Azm 152 Alt 25)
	6:21 AM	6:21 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 327.1 Alt 28)
	6:39 AM	6:39 AM	Sun	Sunrise
	8:34 AM	8:34 AM	Jup GRS	GRS Transit (CML=227)
	9:59 AM	9:59 AM	Moon	Moonset

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

Calendar

	Start	End	Category	Description
10 Nov 2014	1:12 PM	1:12 PM	Jupiter	Jupiter sets
	5:02 PM	5:02 PM	Sun	Sunset
	6:30 PM	6:30 PM	Jup GRS	GRS Transit (CML=227)
	6:31 PM	6:31 PM	Twilight	Astronomical Twilight ends
	7:00 PM	7:00 PM	Diary	Mars 3.7S of Pluto
	8:29 PM	8:29 PM	Moon	Moonrise
	10:15 PM	10:15 PM	Lunar Occult	Moon occults 5.2 mag. double star ZC1029(R)
	11:34 PM	11:34 PM	Jupiter	Jupiter rises
11 Nov 2014	12:00 AM	12:00 AM	Public Holiday	Veterans Day holiday
	4:26 AM	4:26 AM	Jup GRS	GRS Transit (CML=227)
	5:12 AM	5:12 AM	Twilight	Astronomical Twilight begins
	5:31 AM	5:31 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Az _m 323.3 Alt 47)
	6:40 AM	6:40 AM	Sun	Sunrise
	10:45 AM	10:45 AM	Moon	Moonset
	12:41 PM	12:41 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	1:09 PM	1:09 PM	Jupiter	Jupiter sets
	2:21 PM	2:21 PM	Jup GRS	GRS Transit (CML=227)
	5:02 PM	5:02 PM	Sun	Sunset
	6:30 PM	6:30 PM	Twilight	Astronomical Twilight ends
	9:23 PM	9:23 PM	Moon	Moonrise
	10:14 PM	10:14 PM	Lunar Occult	Moon occults 5.3 mag. double star ZC1147(r)
	11:30 PM	11:30 PM	Jupiter	Jupiter rises
12 Nov 2014	12:17 AM	12:17 AM	Jup GRS	GRS Transit (CML=227)
	3:20 AM	3:20 AM	Jup Sats	III.Oc.R
	4:43 AM	4:43 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Az _m 49.4 Alt 38)
	5:08 AM	5:08 AM	Jup Sats	II.Ec.D
	5:13 AM	5:13 AM	Twilight	Astronomical Twilight begins
	6:42 AM	6:42 AM	Sun	Sunrise
	10:13 AM	10:13 AM	Jup GRS	GRS Transit (CML=227)
	11:26 AM	11:26 AM	Moon	Moonset
	1:05 PM	1:05 PM	Jupiter	Jupiter sets
	5:01 PM	5:01 PM	Sun	Sunset
	6:29 PM	6:29 PM	Twilight	Astronomical Twilight ends
	8:00 PM	8:00 PM	Diary	Venus 1.5S of Saturn
	8:09 PM	8:09 PM	Jup GRS	GRS Transit (CML=227)
	10:17 PM	10:17 PM	Moon	Moonrise
	11:27 PM	11:27 PM	Jupiter	Jupiter rises
13 Nov 2014	4:01 AM	4:01 AM	Meteor Shower	N Taurids (Encke) meteor peak (zhr=15)
	5:14 AM	5:14 AM	Twilight	Astronomical Twilight begins

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

Calendar

	Start	End	Category	Description
13 Nov 2014	5:20 AM	5:20 AM	Lunar Occult	Moon occults 6.3 mag. double star ZC1281(r)
	5:30 AM	5:30 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (AzM 330.6 Alt 20)
	5:43 AM	5:43 AM	Iridium Flare	CHES:Iridium 59 Flares at mag.-1.8 (AzM 159 Alt 26)
	6:04 AM	6:04 AM	Jup GRS	GRS Transit (CML=227)
	6:43 AM	6:43 AM	Sun	Sunrise
	7:17 AM	7:17 AM	Iridium Flare	CHES:Iridium 96 Flares at mag.-4.9 (AzM 088 Alt 31)
	12:03 PM	12:03 PM	Moon	Moonset
	1:01 PM	1:01 PM	Jupiter	Jupiter sets
	4:00 PM	4:00 PM	Jup GRS	GRS Transit (CML=227)
	5:00 PM	5:00 PM	Sun	Sunset
	6:29 PM	6:29 PM	Twilight	Astronomical Twilight ends
	11:11 PM	11:11 PM	Moon	Moonrise
	11:23 PM	11:23 PM	Jupiter	Jupiter rises
14 Nov 2014	1:56 AM	1:56 AM	Jup GRS	GRS Transit (CML=227)
	2:00 AM	2:00 AM	Jup Sats	II.Tr.I
	2:20 AM	2:20 AM	Jup Sats	II.Sh.E
	4:43 AM	4:43 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (AzM 24.4 Alt 15)
	4:44 AM	4:44 AM	Jup Sats	I.Sh.I
	4:53 AM	4:53 AM	Jup Sats	II.Tr.E
	5:15 AM	5:15 AM	Twilight	Astronomical Twilight begins
	5:37 AM	5:37 AM	Iridium Flare	CHES:Iridium 95 Flares at mag.-2.0 (AzM 159 Alt 25)
	5:58 AM	5:58 AM	Jup Sats	I.Tr.I
	6:44 AM	6:44 AM	Sun	Sunrise
	9:30 AM	9:30 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	10:00 AM	10:00 AM	Diary	Jupiter 5.0N of Moon
	11:00 AM	11:00 AM	Diary	LAST QUARTER
	11:51 AM	11:51 AM	Jup GRS	GRS Transit (CML=227)
	12:14 PM	12:14 PM	Iridium Flare	CHES:Iridium 18 Flares at mag.-4.9 (AzM 192 Alt 55)
	12:38 PM	12:38 PM	Moon	Moonset
	12:58 PM	12:58 PM	Jupiter	Jupiter sets
	4:59 PM	4:59 PM	Sun	Sunset
	6:28 PM	6:28 PM	Twilight	Astronomical Twilight ends
	9:47 PM	9:47 PM	Jup GRS	GRS Transit (CML=227)
	10:00 PM	10:00 PM	Diary	Moon at apogee
	11:19 PM	11:19 PM	Jupiter	Jupiter rises
15 Nov 2014	12:06 AM	12:06 AM	Moon	Moonrise
	1:52 AM	1:52 AM	Jup Sats	I.Ec.D
	3:00 AM	3:00 AM	Diary	Regulus 4.3N of Moon
	5:15 AM	5:15 AM	Twilight	Astronomical Twilight begins
	5:27 AM	5:27 AM	Jup Sats	I.Oc.R

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
15 Nov 2014	6:45 AM	6:45 AM	Sun	Sunrise
	7:43 AM	7:43 AM	Jup GRS	GRS Transit (CML=227)
	12:08 PM	12:08 PM	Iridium Flare	CHES:Iridium 39 Flares at mag.-4.6 (AzM 190 Alt 56)
	12:54 PM	12:54 PM	Jupiter	Jupiter sets
	1:10 PM	1:10 PM	Moon	Moonset
	4:59 PM	4:59 PM	Sun	Sunset
	5:38 PM	5:38 PM	Jup GRS	GRS Transit (CML=227)
	5:56 PM	5:56 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-0.5 (AzM 032 Alt 60)
	6:28 PM	6:28 PM	Twilight	Astronomical Twilight ends
	11:16 PM	11:16 PM	Jupiter	Jupiter rises
11:48 PM	11:48 PM	Jup Sats	I.Oc.R	
16 Nov 2014	12:26 AM	12:26 AM	Jup Sats	I.Tr.I
	1:00 AM	1:00 AM	Moon	Moonrise
	1:28 AM	1:28 AM	Jup Sats	I.Sh.E
	2:43 AM	2:43 AM	Jup Sats	I.Tr.E
	3:07 AM	3:07 AM	Lunar Occult	Moon occults 7.2 mag. star ZC1577(r)
	3:34 AM	3:34 AM	Jup GRS	GRS Transit (CML=227)
	5:00 AM	5:00 AM	Diary	Neptune stationary
	5:16 AM	5:16 AM	Twilight	Astronomical Twilight begins
	5:28 AM	5:28 AM	Iridium Flare	CHES:Iridium 33 Flares at mag.-0.9 (AzM 163 Alt 24)
	6:46 AM	6:46 AM	Sun	Sunrise
	12:50 PM	12:50 PM	Jupiter	Jupiter sets
	1:30 PM	1:30 PM	Jup GRS	GRS Transit (CML=227)
	1:41 PM	1:41 PM	Moon	Moonset
	4:58 PM	4:58 PM	Sun	Sunset
	5:50 PM	5:50 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-0.2 (AzM 033 Alt 62)
	6:27 PM	6:27 PM	Twilight	Astronomical Twilight ends
11:12 PM	11:12 PM	Jupiter	Jupiter rises	
11:25 PM	11:25 PM	Jup GRS	GRS Transit (CML=227)	
11:55 PM	11:55 PM	Jup Sats	I.Oc.R	
17 Nov 2014	1:54 AM	1:54 AM	Moon	Moonrise
	5:17 AM	5:17 AM	Twilight	Astronomical Twilight begins
	6:07 AM	6:07 AM	Lunar Occult	Moon occults 7.2 mag. star SAO138346(r)
	6:19 AM	6:19 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:45 AM	6:45 AM	Iridium Flare	CHES:Iridium 4 Flares at mag.-4.5 (AzM 080 Alt 27)
	6:47 AM	6:47 AM	Sun	Sunrise
	9:21 AM	9:21 AM	Jup GRS	GRS Transit (CML=227)
	12:47 PM	12:47 PM	Jupiter	Jupiter sets
	2:12 PM	2:12 PM	Moon	Moonset
4:57 PM	4:57 PM	Sun	Sunset	

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
17 Nov 2014	5:37 PM	5:37 PM	Meteor Shower	Leonids (Temple-Tut) meteor peak (zhr=12)
	5:44 PM	5:44 PM	Iridium Flare	CHES:Iridium 57 Flares at mag.-4.3 (Azm 037 Alt 62)
	6:27 PM	6:27 PM	Twilight	Astronomical Twilight ends
	7:17 PM	7:17 PM	Jup GRS	GRS Transit (CML=227)
	11:09 PM	11:09 PM	Jupiter	Jupiter rises
18 Nov 2014	2:50 AM	2:50 AM	Moon	Moonrise
	3:04 AM	3:04 AM	Jup Sats	IV.Sh.E
	4:00 AM	4:00 AM	Diary	Saturn at conjunction
	4:59 AM	4:59 AM	Lunar Occult	Moon occults 7.8 mag. double star SAO138777(r)
	5:12 AM	5:12 AM	Jup GRS	GRS Transit (CML=227)
	5:18 AM	5:18 AM	Twilight	Astronomical Twilight begins
	5:22 AM	5:22 AM	Iridium Flare	CHES:Iridium 31 Flares at mag.-1.6 (Azm 169 Alt 25)
	6:15 AM	6:15 AM	Lunar Occult	Moon occults 6.2 mag. double star ZC1787(r)
	6:37 AM	6:37 AM	Iridium Flare	CHES:Iridium 19 Flares at mag.-4.6 (Azm 078 Alt 25)
	6:48 AM	6:48 AM	Sun	Sunrise
	11:47 AM	11:47 AM	Iridium Flare	CHES:Iridium 42 Flares at mag.-6.5 (Azm 181 Alt 58)
	12:43 PM	12:43 PM	Jupiter	Jupiter sets
	2:44 PM	2:44 PM	Moon	Moonset
	3:08 PM	3:08 PM	Jup GRS	GRS Transit (CML=227)
	4:57 PM	4:57 PM	Sun	Sunset
5:37 PM	5:37 PM	Iridium Flare	CHES:Iridium 60 Flares at mag.-4.2 (Azm 038 Alt 64)	
6:26 PM	6:26 PM	Twilight	Astronomical Twilight ends	
11:05 PM	11:05 PM	Jupiter	Jupiter rises	
19 Nov 2014	1:04 AM	1:04 AM	Jup GRS	GRS Transit (CML=227)
	2:08 AM	2:08 AM	Jup Sats	III.Ec.R
	3:36 AM	3:36 AM	Jup Sats	III.Oc.D
	3:47 AM	3:47 AM	Moon	Moonrise
	5:19 AM	5:19 AM	Twilight	Astronomical Twilight begins
	6:30 AM	6:30 AM	Iridium Flare	CHES:Iridium 97 Flares at mag.-6.2 (Azm 076 Alt 24)
	6:39 AM	6:39 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 209.1 Alt 10)
	6:49 AM	6:49 AM	Sun	Sunrise
	10:59 AM	10:59 AM	Jup GRS	GRS Transit (CML=227)
	12:39 PM	12:39 PM	Jupiter	Jupiter sets
	2:00 PM	2:00 PM	Diary	Spica 2.6S of Moon
	3:18 PM	3:18 PM	Moon	Moonset
	3:35 PM	3:35 PM	Iridium Flare	CHES:Iridium 22 Flares at mag.-6.0 (Azm 175 Alt 78)
	4:56 PM	4:56 PM	Sun	Sunset
	6:26 PM	6:26 PM	Twilight	Astronomical Twilight ends
8:55 PM	8:55 PM	Jup GRS	GRS Transit (CML=227)	
11:01 PM	11:01 PM	Jupiter	Jupiter rises	

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
20 Nov 2014	3:00 AM	3:00 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:46 AM	4:46 AM	Moon	Moonrise
	5:20 AM	5:20 AM	Twilight	Astronomical Twilight begins
	6:34 AM	6:34 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 168.7 Alt 21)
	6:50 AM	6:50 AM	Sun	Sunrise
	6:51 AM	6:51 AM	Jup GRS	GRS Transit (CML=227)
	12:35 PM	12:35 PM	Jupiter	Jupiter sets
	3:55 PM	3:55 PM	Moon	Moonset
	4:46 PM	4:46 PM	Jup GRS	GRS Transit (CML=227)
	4:56 PM	4:56 PM	Sun	Sunset
	5:25 PM	5:25 PM	Iridium Flare	CHES:Iridium 32 Flares at mag.-0.1 (Azm 046 Alt 64)
	6:26 PM	6:26 PM	Twilight	Astronomical Twilight ends
	10:58 PM	10:58 PM	Jupiter	Jupiter rises
21 Nov 2014	2:03 AM	2:03 AM	Jup Sats	II.Sh.I
	2:42 AM	2:42 AM	Jup GRS	GRS Transit (CML=227)
	4:34 AM	4:34 AM	Jup Sats	II.Tr.I
	4:55 AM	4:55 AM	Jup Sats	II.Sh.E
	5:21 AM	5:21 AM	Twilight	Astronomical Twilight begins
	5:46 AM	5:46 AM	Moon	Moonrise
	6:09 AM	6:09 AM	Iridium Flare	CHES:Iridium 4 Flares at mag.-6.0 (Azm 071 Alt 20)
	6:09 AM	6:09 AM	Iridium Flare	CHES:Iridium 96 Flares at mag.-1.1 (Azm 071 Alt 19)
	6:26 AM	6:26 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 171.7 Alt 23)
	6:37 AM	6:37 AM	Jup Sats	I.Sh.I
	6:51 AM	6:51 AM	Sun	Sunrise
	12:32 PM	12:32 PM	Jupiter	Jupiter sets
	12:38 PM	12:38 PM	Jup GRS	GRS Transit (CML=227)
	2:00 PM	2:00 PM	Diary	Mercury 1.9S of Moon
	4:37 PM	4:37 PM	Moon	Moonset
4:55 PM	4:55 PM	Sun	Sunset	
6:25 PM	6:25 PM	Twilight	Astronomical Twilight ends	
7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)	
10:33 PM	10:33 PM	Jup GRS	GRS Transit (CML=227)	
10:54 PM	10:54 PM	Jupiter	Jupiter rises	
22 Nov 2014	1:00 AM	1:00 AM	Diary	Saturn 1.2S of Moon
	3:45 AM	3:45 AM	Jup Sats	I.Ec.D
	5:21 AM	5:21 AM	Twilight	Astronomical Twilight begins
	5:56 AM	5:56 AM	Iridium Flare	CHES:Iridium 36 Flares at mag.-1.6 (Azm 068 Alt 17)
	6:03 AM	6:03 AM	Iridium Flare	CHES:Iridium 19 Flares at mag.-3.4 (Azm 070 Alt 19)
	6:19 AM	6:19 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 174.2 Alt 24)
	6:47 AM	6:47 AM	Moon	Moonrise

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
22 Nov 2014	6:52 AM	6:52 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	NEW MOON
	8:29 AM	8:29 AM	Jup GRS	GRS Transit (CML=227)
	12:28 PM	12:28 PM	Jupiter	Jupiter sets
	3:17 PM	3:17 PM	Iridium Flare	CHES:Iridium 11 Flares at mag.-4.2 (Azm 178 Alt 73)
	4:55 PM	4:55 PM	Sun	Sunset
	5:23 PM	5:23 PM	Moon	Moonset
	6:25 PM	6:25 PM	Twilight	Astronomical Twilight ends
	6:25 PM	6:25 PM	Jup GRS	GRS Transit (CML=227)
	10:00 PM	10:00 PM	Diary	Venus 3.9S of Moon
	10:50 PM	10:50 PM	Jupiter	Jupiter rises
	11:57 PM	11:57 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
23 Nov 2014	1:05 AM	1:05 AM	Jup Sats	I.Sh.I
	2:18 AM	2:18 AM	Jup Sats	I.Tr.I
	2:19 AM	2:19 AM	Jup Sats	II.Oc.R
	3:21 AM	3:21 AM	Jup Sats	I.Sh.E
	4:20 AM	4:20 AM	Jup GRS	GRS Transit (CML=227)
	4:31 AM	4:31 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 164.1 Alt 17)
	4:35 AM	4:35 AM	Jup Sats	I.Tr.E
	5:01 AM	5:01 AM	Iridium Flare	CHES:Iridium 58 Flares at mag.-6.8 (Azm 176 Alt 22)
	5:02 AM	5:02 AM	Iridium Flare	CHES:Iridium 33 Flares at mag.-1.6 (Azm 178 Alt 22)
	5:22 AM	5:22 AM	Twilight	Astronomical Twilight begins
	5:47 AM	5:47 AM	Iridium Flare	CHES:Iridium 35 Flares at mag.-2.5 (Azm 066 Alt 15)
	5:56 AM	5:56 AM	Iridium Flare	CHES:Iridium 97 Flares at mag.-0.6 (Azm 068 Alt 18)
	6:11 AM	6:11 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 177.1 Alt 26)
	6:19 AM	6:19 AM	Iridium Flare	CHES:Iridium 6 Flares at mag.-4.8 (Azm 135 Alt 13)
	6:19 AM	6:19 AM	Iridium Flare	CHES:Iridium 51 Flares at mag.-4.8 (Azm 135 Alt 13)
	6:53 AM	6:53 AM	Sun	Sunrise
	7:47 AM	7:47 AM	Moon	Moonrise
	12:24 PM	12:24 PM	Jupiter	Jupiter sets
	2:16 PM	2:16 PM	Jup GRS	GRS Transit (CML=227)
	4:54 PM	4:54 PM	Sun	Sunset
	6:15 PM	6:15 PM	Moon	Moonset
	6:25 PM	6:25 PM	Twilight	Astronomical Twilight ends
	10:47 PM	10:47 PM	Jupiter	Jupiter rises
24 Nov 2014	12:12 AM	12:12 AM	Jup GRS	GRS Transit (CML=227)
	1:48 AM	1:48 AM	Jup Sats	I.Oc.R
	4:24 AM	4:24 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 151.9 Alt 18)
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 55 Flares at mag.-2.3 (Azm 177 Alt 21)
	5:23 AM	5:23 AM	Twilight	Astronomical Twilight begins

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
24 Nov 2014	5:41 AM	5:41 AM	Iridium Flare	CHES:Iridium 6 Flares at mag.-5.2 (Azm 064 Alt 15)
	5:41 AM	5:41 AM	Iridium Flare	CHES:Iridium 51 Flares at mag.-5.7 (Azm 064 Alt 14)
	6:04 AM	6:04 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 179.9 Alt 26)
	6:11 AM	6:11 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 32.1 Alt 26)
	6:54 AM	6:54 AM	Sun	Sunrise
	8:45 AM	8:45 AM	Moon	Moonrise
	10:07 AM	10:07 AM	Jup GRS	GRS Transit (CML=227)
	12:20 PM	12:20 PM	Jupiter	Jupiter sets
	1:00 PM	1:00 PM	Diary	Venus 4.5N of Antares
	4:54 PM	4:54 PM	Sun	Sunset
	6:24 PM	6:24 PM	Twilight	Astronomical Twilight ends
	7:13 PM	7:13 PM	Moon	Moonset
	8:03 PM	8:03 PM	Jup GRS	GRS Transit (CML=227)
	10:43 PM	10:43 PM	Jupiter	Jupiter rises
11:02 PM	11:02 PM	Jup Sats	I.Tr.E	
25 Nov 2014	4:17 AM	4:17 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 141.1 Alt 18)
	5:21 AM	5:21 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 27.3 Alt 17)
	5:24 AM	5:24 AM	Twilight	Astronomical Twilight begins
	5:25 AM	5:25 AM	Iridium Flare	CHES:Iridium 8 Flares at mag.-2.4 (Azm 061 Alt 11)
	5:56 AM	5:56 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 182.7 Alt 26)
	5:58 AM	5:58 AM	Jup GRS	GRS Transit (CML=227)
	6:16 AM	6:16 AM	Iridium Flare	CHES:Iridium 34 Flares at mag.-2.1 (Azm 140 Alt 16)
	6:55 AM	6:55 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	Pluto 2.8S of Moon
	9:39 AM	9:39 AM	Moon	Moonrise
	12:16 PM	12:16 PM	Jupiter	Jupiter sets
	3:54 PM	3:54 PM	Jup GRS	GRS Transit (CML=227)
	4:54 PM	4:54 PM	Sun	Sunset
	6:24 PM	6:24 PM	Twilight	Astronomical Twilight ends
8:15 PM	8:15 PM	Moon	Moonset	
8:46 PM	8:46 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)	
10:00 PM	10:00 PM	Diary	Mercury 1.6S of Saturn	
10:39 PM	10:39 PM	Jupiter	Jupiter rises	
26 Nov 2014	1:50 AM	1:50 AM	Jup GRS	GRS Transit (CML=227)
	2:27 AM	2:27 AM	Jup Sats	III.Ec.D
	4:10 AM	4:10 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 132.4 Alt 16)
	5:25 AM	5:25 AM	Twilight	Astronomical Twilight begins
	5:44 AM	5:44 AM	Jup Sats	IV.Ec.D
	5:49 AM	5:49 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 185.8 Alt 24)
6:06 AM	6:06 AM	Jup Sats	III.Ec.R	

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

Calendar

	Start	End	Category	Description
26 Nov 2014	6:09 AM	6:09 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 39.7 Alt 70)
	6:10 AM	6:10 AM	Iridium Flare	CHES:Iridium 5 Flares at mag.-1.4 (Azm 141 Alt 14)
	6:56 AM	6:56 AM	Sun	Sunrise
	10:29 AM	10:29 AM	Moon	Moonrise
	11:45 AM	11:45 AM	Jup GRS	GRS Transit (CML=227)
	12:13 PM	12:13 PM	Jupiter	Jupiter sets
	4:53 PM	4:53 PM	Sun	Sunset
	6:24 PM	6:24 PM	Twilight	Astronomical Twilight ends
	9:20 PM	9:20 PM	Moon	Moonset
	9:41 PM	9:41 PM	Jup GRS	GRS Transit (CML=227)
10:36 PM	10:36 PM	Jupiter	Jupiter rises	
27 Nov 2014	12:00 AM	12:00 AM	Public Holiday	Thanksgiving Day holiday
	4:03 AM	4:03 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 126.7 Alt 14)
	5:20 AM	5:20 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 35.6 Alt 37)
	5:26 AM	5:26 AM	Twilight	Astronomical Twilight begins
	5:41 AM	5:41 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 188.6 Alt 23)
	6:10 AM	6:10 AM	Iridium Flare	CHES:Iridium 4 Flares at mag.-1.9 (Azm 145 Alt 17)
	6:57 AM	6:57 AM	Sun	Sunrise
	7:37 AM	7:37 AM	Jup GRS	GRS Transit (CML=227)
	11:14 AM	11:14 AM	Moon	Moonrise
	12:09 PM	12:09 PM	Jupiter	Jupiter sets
	4:48 PM	4:48 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-8.3 (Azm 063 Alt 77)
	4:53 PM	4:53 PM	Sun	Sunset
	5:00 PM	5:00 PM	Diary	Moon at perigee
	5:32 PM	5:32 PM	Jup GRS	GRS Transit (CML=227)
6:24 PM	6:24 PM	Twilight	Astronomical Twilight ends	
10:26 PM	10:26 PM	Moon	Moonset	
10:32 PM	10:32 PM	Jupiter	Jupiter rises	
28 Nov 2014	3:28 AM	3:28 AM	Jup GRS	GRS Transit (CML=227)
	3:56 AM	3:56 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 123.5 Alt 11)
	4:32 AM	4:32 AM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 69.1 Alt 17)
	4:39 AM	4:39 AM	Jup Sats	II.Sh.I
	5:27 AM	5:27 AM	Twilight	Astronomical Twilight begins
	5:33 AM	5:33 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 191.3 Alt 21)
	6:07 AM	6:07 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 226.8 Alt 35)
	6:07 AM	6:07 AM	Iridium Flare	CHES:Iridium 19 Flares at mag.-1.8 (Azm 146 Alt 18)
	6:58 AM	6:58 AM	Sun	Sunrise
	11:55 AM	11:55 AM	Moon	Moonrise
	12:05 PM	12:05 PM	Jupiter	Jupiter sets
	1:24 PM	1:24 PM	Jup GRS	GRS Transit (CML=227)

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
28 Nov 2014	4:45 PM	4:45 PM	Iridium Flare	CHES:Iridium 58 Flares at mag.-8.5 (Azm 067 Alt 77)
	4:53 PM	4:53 PM	Sun	Sunset
	5:35 PM	5:35 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:24 PM	6:24 PM	Twilight	Astronomical Twilight ends
	6:41 PM	6:41 PM	Iridium Flare	CHES:Iridium 37 Flares at mag.-1.5 (Azm 034 Alt 44)
	9:32 PM	9:32 PM	Lunar Occult	Moon occults 6.5 mag. star ZC3248(d)
	10:28 PM	10:28 PM	Jupiter	Jupiter rises
	11:19 PM	11:19 PM	Jup GRS	GRS Transit (CML=227)
	11:32 PM	11:32 PM	Moon	Moonset
29 Nov 2014	2:00 AM	2:00 AM	Diary	Neptune 4.2S of Moon
	5:00 AM	5:00 AM	Diary	FIRST QUARTER
	5:18 AM	5:18 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 221.7 Alt 72)
	5:26 AM	5:26 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 193.9 Alt 18)
	5:27 AM	5:27 AM	Twilight	Astronomical Twilight begins
	5:39 AM	5:39 AM	Jup Sats	I.Ec.D
	6:01 AM	6:01 AM	Iridium Flare	CHES:Iridium 97 Flares at mag.-1.9 (Azm 146 Alt 16)
	6:58 AM	6:58 AM	Sun	Sunrise
	9:15 AM	9:15 AM	Jup GRS	GRS Transit (CML=227)
	12:01 PM	12:01 PM	Jupiter	Jupiter sets
	12:34 PM	12:34 PM	Moon	Moonrise
	4:52 PM	4:52 PM	Sun	Sunset
	6:23 PM	6:23 PM	Twilight	Astronomical Twilight ends
	6:35 PM	6:35 PM	Iridium Flare	CHES:Iridium 34 Flares at mag.-3.8 (Azm 035 Alt 46)
7:11 PM	7:11 PM	Jup GRS	GRS Transit (CML=227)	
10:24 PM	10:24 PM	Jupiter	Jupiter rises	
11:32 PM	11:32 PM	Jup Sats	II.Ec.D	
30 Nov 2014	12:38 AM	12:38 AM	Moon	Moonset
	12:57 AM	12:57 AM	Jup Sats	III.Tr.E
	2:58 AM	2:58 AM	Jup Sats	I.Sh.I
	4:09 AM	4:09 AM	Jup Sats	I.Tr.I
	4:31 AM	4:31 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 115.3 Alt 17)
	4:48 AM	4:48 AM	Jup Sats	II.Oc.R
	5:06 AM	5:06 AM	Jup GRS	GRS Transit (CML=227)
	5:14 AM	5:14 AM	Jup Sats	I.Sh.E
	5:18 AM	5:18 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 196.7 Alt 16)
	5:28 AM	5:28 AM	Twilight	Astronomical Twilight begins
	6:26 AM	6:26 AM	Jup Sats	I.Tr.E
	6:59 AM	6:59 AM	Sun	Sunrise
	11:57 AM	11:57 AM	Jupiter	Jupiter sets
	1:11 PM	1:11 PM	Moon	Moonrise

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
30 Nov 2014	3:02 PM	3:02 PM	Jup GRS	GRS Transit (CML=227)
	4:52 PM	4:52 PM	Sun	Sunset
	6:23 PM	6:23 PM	Twilight	Astronomical Twilight ends
	6:28 PM	6:28 PM	Iridium Flare	CHES:Iridium 5 Flares at mag.-0.6 (Azm 038 Alt 45)
	10:20 PM	10:20 PM	Jupiter	Jupiter rises