

Norfolk Astronomical Society



<http://norfolkastronomical.org>

August 2013

Monthly Sky Calendar
Prepared Specifically For
The Hampton Roads Area

Norfolk Astronomical Society Astronomical Calendar

July 2013							August 2013							September 2013						
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					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
1 Aug 2013	1:49 AM	1:49 AM	Moon	Moonrise
	2:29 AM	2:29 AM	Lunar Occult	Moon occults 6.0 mag. double star 654(r)
	3:27 AM	3:27 AM	Lunar Occult	Moon occults 3.5 mag. star 668(d) epsilon Tau [Ain]
	3:45 AM	3:45 AM	Jupiter	Jupiter rises
	4:23 AM	4:23 AM	Lunar Occult	Moon occults 3.5 mag. star 668(R) epsilon Tau [Ain]
	4:33 AM	4:33 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:34 AM	4:34 AM	Twilight	Astronomical Twilight begins
	6:14 AM	6:14 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	Aldebaran 3.1S of Moon
	4:19 PM	4:19 PM	Moon	Moonset
6:16 PM	6:16 PM	Jupiter	Jupiter sets	
8:14 PM	8:14 PM	Sun	Sunset	
9:54 PM	9:54 PM	Twilight	Astronomical Twilight ends	
2 Aug 2013	2:35 AM	2:35 AM	Moon	Moonrise
	3:42 AM	3:42 AM	Jupiter	Jupiter rises
	4:35 AM	4:35 AM	Twilight	Astronomical Twilight begins
	5:01 AM	5:01 AM	Lunar Occult	Moon occults 6.7 mag. star 796(R)
	5:04 AM	5:04 AM	Lunar Occult	Moon occults 6.2 mag. double star 798(R)
	5:36 AM	5:36 AM	Jup Sats	I.Sh.I
	6:15 AM	6:15 AM	Sun	Sunrise
	5:07 PM	5:07 PM	Moon	Moonset
	6:13 PM	6:13 PM	Jupiter	Jupiter sets
	7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)
8:13 PM	8:13 PM	Sun	Sunset	
9:53 PM	9:53 PM	Twilight	Astronomical Twilight ends	
3 Aug 2013	3:24 AM	3:24 AM	Moon	Moonrise
	3:39 AM	3:39 AM	Jupiter	Jupiter rises
	4:36 AM	4:36 AM	Twilight	Astronomical Twilight begins
	5:42 AM	5:42 AM	Jup Sats	I.Oc.R
	6:15 AM	6:15 AM	Sun	Sunrise
	7:00 AM	7:00 AM	Diary	Moon at apogee
	5:51 PM	5:51 PM	Moon	Moonset
	6:00 PM	6:00 PM	Diary	Jupiter 4.0N of Moon
	6:10 PM	6:10 PM	Jupiter	Jupiter sets
	8:12 PM	8:12 PM	Sun	Sunset
9:51 PM	9:51 PM	Twilight	Astronomical Twilight ends	
4 Aug 2013	1:22 AM	1:22 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:36 AM	3:36 AM	Jupiter	Jupiter rises
	4:16 AM	4:16 AM	Moon	Moonrise

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July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
4 Aug 2013	4:37 AM	4:37 AM	Twilight	Astronomical Twilight begins
	5:59 AM	5:59 AM	Lunar Occult	Moon occults 6.0 mag. double star ZC1072(r) NP Gem
	6:00 AM	6:00 AM	Diary	Mars 5.1N of Moon
	6:16 AM	6:16 AM	Sun	Sunrise
	6:07 PM	6:07 PM	Jupiter	Jupiter sets
	6:32 PM	6:32 PM	Moon	Moonset
	8:11 PM	8:11 PM	Sun	Sunset
	9:50 PM	9:50 PM	Twilight	Astronomical Twilight ends
5 Aug 2013	3:00 AM	3:00 AM	Diary	Mercury 4.3N of Moon
	3:33 AM	3:33 AM	Jupiter	Jupiter rises
	4:38 AM	4:38 AM	Twilight	Astronomical Twilight begins
	5:10 AM	5:10 AM	Moon	Moonrise
	6:17 AM	6:17 AM	Sun	Sunrise
	6:04 PM	6:04 PM	Jupiter	Jupiter sets
	7:09 PM	7:09 PM	Moon	Moonset
	8:10 PM	8:10 PM	Sun	Sunset
	9:21 PM	9:21 PM	Iridium Flare	CHES:Iridium 38 Flares at mag.-6.1 (Azm 350 Alt 18)
	9:42 PM	9:42 PM	Iridium Flare	CHES:Iridium 68 Flares at mag.-1.0 (Azm 083 Alt 47)
	9:48 PM	9:48 PM	Twilight	Astronomical Twilight ends
9:53 PM	9:53 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 324.8 Alt 36)	
	10:58 PM	10:58 PM	Iridium Flare	CHES:Iridium 20 Flares at mag.-6.3 (Azm 051 Alt 14)
6 Aug 2013	3:30 AM	3:30 AM	Jupiter	Jupiter rises
	4:23 AM	4:23 AM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 223.6 Alt 81)
	4:39 AM	4:39 AM	Twilight	Astronomical Twilight begins
	4:49 AM	4:49 AM	Iridium Flare	CHES:Iridium 34 Flares at mag.-1.1 (Azm 248 Alt 53)
	6:06 AM	6:06 AM	Moon	Moonrise
	6:18 AM	6:18 AM	Sun	Sunrise
	6:00 PM	6:00 PM	Diary	NEW MOON
	6:01 PM	6:01 PM	Jupiter	Jupiter sets
	7:44 PM	7:44 PM	Moon	Moonset
	8:09 PM	8:09 PM	Sun	Sunset
	9:04 PM	9:04 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 321.6 Alt 66)
	9:17 PM	9:17 PM	Iridium Flare	CHES:Iridium 40 Flares at mag. 1.0 (Azm 351 Alt 20)
	9:27 PM	9:27 PM	Iridium Flare	CHES:Iridium 39 Flares at mag. 1.9 (Azm 349 Alt 14)
	9:36 PM	9:36 PM	Iridium Flare	CHES:Iridium 75 Flares at mag. 1.5 (Azm 084 Alt 46)
	9:41 PM	9:41 PM	Iridium Flare	CHES:Iridium 74 Flares at mag.-8.3 (Azm 085 Alt 50)
9:47 PM	9:47 PM	Twilight	Astronomical Twilight ends	
10:11 PM	10:11 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)	
	10:52 PM	10:52 PM	Iridium Flare	CHES:Iridium 3 Flares at mag.-0.5 (Azm 052 Alt 13)

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

Calendar

	Start	End	Category	Description
7 Aug 2013	3:27 AM	3:27 AM	Jupiter	Jupiter rises
	4:41 AM	4:41 AM	Twilight	Astronomical Twilight begins
	4:43 AM	4:43 AM	Iridium Flare	CHES:Iridium 5 Flares at mag.-2.9 (Azm 248 Alt 55)
	4:45 AM	4:45 AM	Iridium Flare	CHES:Iridium 4 Flares at mag. 1.1 (Azm 251 Alt 50)
	5:44 AM	5:44 AM	Jup Sats	II.Ec.D
	6:19 AM	6:19 AM	Sun	Sunrise
	7:02 AM	7:02 AM	Moon	Moonrise
	5:58 PM	5:58 PM	Jupiter	Jupiter sets
	8:08 PM	8:08 PM	Sun	Sunset
	8:16 PM	8:16 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 137.3 Alt 65)
8:17 PM	8:17 PM	Moon	Moonset	
9:11 PM	9:11 PM	Iridium Flare	CHES:Iridium 77 Flares at mag.-2.1 (Azm 350 Alt 21)	
9:46 PM	9:46 PM	Twilight	Astronomical Twilight ends	
9:53 PM	9:53 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 333.2 Alt 17)	
10:46 PM	10:46 PM	Iridium Flare	CHES:Iridium 76 Flares at mag. 1.4 (Azm 054 Alt 14)	
8 Aug 2013	12:00 AM	12:00 AM	Diary	Regulus 5.2N of Moon
	3:24 AM	3:24 AM	Jupiter	Jupiter rises
	4:37 AM	4:37 AM	Iridium Flare	CHES:Iridium 8 Flares at mag.-0.6 (Azm 249 Alt 54)
	4:42 AM	4:42 AM	Twilight	Astronomical Twilight begins
	6:19 AM	6:19 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Moon	Moonrise
	8:08 AM	8:08 AM	Iridium Flare	CHES:Iridium 82 Flares at mag.-7.1 (Azm 112 Alt 51)
	5:55 PM	5:55 PM	Jupiter	Jupiter sets
	8:07 PM	8:07 PM	Sun	Sunset
	8:49 PM	8:49 PM	Moon	Moonset
9:04 PM	9:04 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 328.4 Alt 25)	
9:04 PM	9:04 PM	Iridium Flare	CHES:Iridium 82 Flares at mag.-0.2 (Azm 351 Alt 23)	
9:34 PM	9:34 PM	Iridium Flare	CHES:Iridium 67 Flares at mag. 1.8 (Azm 088 Alt 57)	
9:44 PM	9:44 PM	Twilight	Astronomical Twilight ends	
9 Aug 2013	3:21 AM	3:21 AM	Jupiter	Jupiter rises
	4:11 AM	4:11 AM	Jup Sats	II.Tr.E
	4:43 AM	4:43 AM	Twilight	Astronomical Twilight begins
	6:20 AM	6:20 AM	Sun	Sunrise
	8:58 AM	8:58 AM	Moon	Moonrise
	5:52 PM	5:52 PM	Jupiter	Jupiter sets
	6:00 PM	6:00 PM	Diary	Venus 4.9N of Moon
	7:00 PM	7:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:06 PM	8:06 PM	Sun	Sunset
	8:15 PM	8:15 PM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 324.6 Alt 40)
8:58 PM	8:58 PM	Iridium Flare	CHES:Iridium 18 Flares at mag.-2.3 (Azm 350 Alt 25)	

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

Calendar

	Start	End	Category	Description
9 Aug 2013	9:20 PM	9:20 PM	Moon	Moonset
	9:28 PM	9:28 PM	Iridium Flare	CHES:Iridium 72 Flares at mag. 0.2 (Azm 090 Alt 57)
	9:43 PM	9:43 PM	Twilight	Astronomical Twilight ends
10 Aug 2013	3:18 AM	3:18 AM	Jupiter	Jupiter rises
	4:33 AM	4:33 AM	Jup Sats	III.Ec.D
	4:34 AM	4:34 AM	Iridium Flare	CHES:Iridium 97 Flares at mag. 1.4 (Azm 253 Alt 46)
	4:37 AM	4:37 AM	Jup Sats	I.Ec.D
	4:44 AM	4:44 AM	Twilight	Astronomical Twilight begins
	6:21 AM	6:21 AM	Sun	Sunrise
	9:57 AM	9:57 AM	Moon	Moonrise
	5:49 PM	5:49 PM	Jupiter	Jupiter sets
	8:04 PM	8:04 PM	Sun	Sunset
	8:52 PM	8:52 PM	Iridium Flare	CHES:Iridium 39 Flares at mag.-2.3 (Azm 350 Alt 27)
	9:11 PM	9:11 PM	Lunar Occult	Moon occults 7.4 mag. star SAO138688(d)
11 Aug 2013	9:21 PM	9:21 PM	Iridium Flare	CHES:Iridium 62 Flares at mag.-4.3 (Azm 092 Alt 56)
	9:41 PM	9:41 PM	Twilight	Astronomical Twilight ends
	9:53 PM	9:53 PM	Moon	Moonset
	3:15 AM	3:15 AM	Jupiter	Jupiter rises
	4:12 AM	4:12 AM	Jup Sats	I.Sh.E
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 51 Flares at mag.-2.1 (Azm 253 Alt 47)
	4:28 AM	4:28 AM	Iridium Flare	CHES:Iridium 7 Flares at mag.-1.1 (Azm 254 Alt 46)
	4:45 AM	4:45 AM	Twilight	Astronomical Twilight begins
	5:01 AM	5:01 AM	Jup Sats	I.Tr.E
	6:22 AM	6:22 AM	Sun	Sunrise
	10:57 AM	10:57 AM	Moon	Moonrise
5:46 PM	5:46 PM	Jupiter	Jupiter sets	
8:03 PM	8:03 PM	Sun	Sunset	
8:15 PM	8:15 PM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 332.5 Alt 18)	
8:46 PM	8:46 PM	Iridium Flare	CHES:Iridium 15 Flares at mag.-3.5 (Azm 349 Alt 28)	
9:15 PM	9:15 PM	Iridium Flare	CHES:Iridium 65 Flares at mag.-3.0 (Azm 093 Alt 55)	
9:40 PM	9:40 PM	Twilight	Astronomical Twilight ends	
10:27 PM	10:27 PM	Moon	Moonset	
12 Aug 2013	3:12 AM	3:12 AM	Jupiter	Jupiter rises
	4:22 AM	4:22 AM	Iridium Flare	CHES:Iridium 37 Flares at mag.-8.1 (Azm 254 Alt 47)
	4:47 AM	4:47 AM	Twilight	Astronomical Twilight begins
	6:00 AM	6:00 AM	Diary	Spica 0.5S of Moon Occn
	6:23 AM	6:23 AM	Sun	Sunrise
	6:32 AM	6:32 AM	Meteor Shower	N delta-Aquarids meteor peak (zhr=20)
11:59 AM	11:59 AM	Moon	Moonrise	

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July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
12 Aug 2013	2:02 PM	2:02 PM	Meteor Shower	Perseids (Swift-Tuttle) meteor peak (zhr=95)
	3:49 PM	3:49 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:42 PM	5:42 PM	Jupiter	Jupiter sets
	8:02 PM	8:02 PM	Sun	Sunset
	8:37 PM	8:37 PM	Iridium Flare	CHES:Iridium 98 Flares at mag. 1.6 (Azm 351 Alt 32)
	8:39 PM	8:39 PM	Iridium Flare	CHES:Iridium 41 Flares at mag.-5.2 (Azm 348 Alt 30)
	9:09 PM	9:09 PM	Iridium Flare	CHES:Iridium 68 Flares at mag. 1.0 (Azm 095 Alt 54)
	9:38 PM	9:38 PM	Twilight	Astronomical Twilight ends
11:04 PM	11:04 PM	Moon	Moonset	
13 Aug 2013	3:00 AM	3:00 AM	Diary	Saturn 2.8N of Moon
	3:09 AM	3:09 AM	Jupiter	Jupiter rises
	4:48 AM	4:48 AM	Twilight	Astronomical Twilight begins
	6:23 AM	6:23 AM	Sun	Sunrise
	1:02 PM	1:02 PM	Moon	Moonrise
	5:39 PM	5:39 PM	Jupiter	Jupiter sets
	8:01 PM	8:01 PM	Sun	Sunset
	8:33 PM	8:33 PM	Iridium Flare	CHES:Iridium 42 Flares at mag.-6.8 (Azm 348 Alt 32)
	9:37 PM	9:37 PM	Twilight	Astronomical Twilight ends
11:46 PM	11:46 PM	Moon	Moonset	
14 Aug 2013	3:06 AM	3:06 AM	Jupiter	Jupiter rises
	4:49 AM	4:49 AM	Twilight	Astronomical Twilight begins
	6:24 AM	6:24 AM	Sun	Sunrise
	7:00 AM	7:00 AM	Diary	FIRST QUARTER
	2:06 PM	2:06 PM	Moon	Moonrise
	5:36 PM	5:36 PM	Jupiter	Jupiter sets
	7:59 PM	7:59 PM	Sun	Sunset
	8:27 PM	8:27 PM	Iridium Flare	CHES:Iridium 80 Flares at mag.-7.0 (Azm 348 Alt 34)
	9:05 PM	9:05 PM	Iridium Flare	CHES:Iridium 74 Flares at mag.-0.8 (Azm 101 Alt 61)
9:35 PM	9:35 PM	Twilight	Astronomical Twilight ends	
10:57 PM	10:57 PM	Lunar Occult	Moon occults 6.0 mag. double star ZC2275(d)	
15 Aug 2013	12:34 AM	12:34 AM	Moon	Moonset
	3:03 AM	3:03 AM	Jupiter	Jupiter rises
	4:50 AM	4:50 AM	Twilight	Astronomical Twilight begins
	5:49 AM	5:49 AM	Iridium Flare	CHES:Iridium 13 Flares at mag.-2.1 (Azm 204 Alt 66)
	6:25 AM	6:25 AM	Sun	Sunrise
	12:38 PM	12:38 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	3:09 PM	3:09 PM	Moon	Moonrise
	5:33 PM	5:33 PM	Jupiter	Jupiter sets
	7:57 PM	7:57 PM	Sun	Sunset

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July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

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	Start	End	Category	Description
15 Aug 2013	9:00 PM	9:00 PM	Iridium Flare	CHES:Iridium 67 Flares at mag. 1.6 (Azm 104 Alt 65)
	9:34 PM	9:34 PM	Twilight	Astronomical Twilight ends
	9:54 PM	9:54 PM	Lunar Occult	Moon occults 5.9 mag. star ZC2425(d)
	11:28 PM	11:28 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 329.3 Alt 8)
16 Aug 2013	1:29 AM	1:29 AM	Moon	Moonset
	3:00 AM	3:00 AM	Jupiter	Jupiter rises
	4:22 AM	4:22 AM	Jup Sats	II.Tr.I
	4:51 AM	4:51 AM	Twilight	Astronomical Twilight begins
	5:08 AM	5:08 AM	Jup Sats	II.Sh.E
	5:43 AM	5:43 AM	Iridium Flare	CHES:Iridium 50 Flares at mag. 1.7 (Azm 201 Alt 67)
	6:26 AM	6:26 AM	Sun	Sunrise
	9:09 AM	9:09 AM	Iridium Flare	CHES:Iridium 62 Flares at mag.-6.4 (Azm 086 Alt 51)
	4:10 PM	4:10 PM	Moon	Moonrise
	5:30 PM	5:30 PM	Jupiter	Jupiter sets
	7:56 PM	7:56 PM	Sun	Sunset
	8:15 PM	8:15 PM	Iridium Flare	CHES:Iridium 43 Flares at mag.-7.2 (Azm 347 Alt 37)
	8:54 PM	8:54 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-0.3 (Azm 106 Alt 64)
17 Aug 2013	12:11 AM	12:11 AM	Lunar Occult	Moon occults 6.2 mag. double star ZC2591(d)
	2:30 AM	2:30 AM	Moon	Moonset
	2:57 AM	2:57 AM	Jupiter	Jupiter rises
	4:52 AM	4:52 AM	Twilight	Astronomical Twilight begins
	6:27 AM	6:27 AM	Sun	Sunrise
	3:00 PM	3:00 PM	Diary	Pluto 1.2S of Moon Occn
	5:00 PM	5:00 PM	Diary	Mars 5.8S of Pollux
	5:06 PM	5:06 PM	Moon	Moonrise
	5:27 PM	5:27 PM	Jupiter	Jupiter sets
	7:55 PM	7:55 PM	Sun	Sunset
	8:08 PM	8:08 PM	Iridium Flare	CHES:Iridium 40 Flares at mag.-7.2 (Azm 347 Alt 39)
	8:48 PM	8:48 PM	Iridium Flare	CHES:Iridium 62 Flares at mag.-8.2 (Azm 108 Alt 63)
	9:31 PM	9:31 PM	Twilight	Astronomical Twilight ends
10:39 PM	10:39 PM	Lunar Occult	Moon occults 6.5 mag. double star ZC2763(d)	
11:26 PM	11:26 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 313.5 Alt 7)	
18 Aug 2013	2:54 AM	2:54 AM	Jupiter	Jupiter rises
	3:37 AM	3:37 AM	Moon	Moonset
	3:52 AM	3:52 AM	Jup Sats	I.Sh.I
	4:47 AM	4:47 AM	Jup Sats	I.Tr.I
	4:54 AM	4:54 AM	Twilight	Astronomical Twilight begins

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July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
18 Aug 2013	6:05 AM	6:05 AM	Jup Sats	I.Sh.E
	6:28 AM	6:28 AM	Sun	Sunrise
	9:27 AM	9:27 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:24 PM	5:24 PM	Jupiter	Jupiter sets
	5:57 PM	5:57 PM	Moon	Moonrise
	7:54 PM	7:54 PM	Sun	Sunset
	8:42 PM	8:42 PM	Iridium Flare	CHES:Iridium 65 Flares at mag.-1.6 (AzM 109 Alt 62)
	9:29 PM	9:29 PM	Twilight	Astronomical Twilight ends
	10:00 PM	10:00 PM	Diary	Moon at perigee
10:39 PM	10:39 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (AzM 332.5 Alt 18)	
19 Aug 2013	2:51 AM	2:51 AM	Jupiter	Jupiter rises
	4:12 AM	4:12 AM	Jup Sats	I.Oc.R
	4:46 AM	4:46 AM	Moon	Moonset
	4:55 AM	4:55 AM	Twilight	Astronomical Twilight begins
	6:28 AM	6:28 AM	Sun	Sunrise
	5:20 PM	5:20 PM	Jupiter	Jupiter sets
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	6:42 PM	6:42 PM	Moon	Moonrise
	7:52 PM	7:52 PM	Sun	Sunset
8:36 PM	8:36 PM	Iridium Flare	CHES:Iridium 68 Flares at mag. 1.6 (AzM 110 Alt 60)	
9:27 PM	9:27 PM	Twilight	Astronomical Twilight ends	
9:52 PM	9:52 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (AzM 21.4 Alt 24)	
20 Aug 2013	2:48 AM	2:48 AM	Jupiter	Jupiter rises
	4:56 AM	4:56 AM	Twilight	Astronomical Twilight begins
	5:28 AM	5:28 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-2.6 (AzM 222 Alt 59)
	5:56 AM	5:56 AM	Moon	Moonset
	6:29 AM	6:29 AM	Sun	Sunrise
	5:17 PM	5:17 PM	Jupiter	Jupiter sets
	7:23 PM	7:23 PM	Moon	Moonrise
	7:51 PM	7:51 PM	Sun	Sunset
	8:50 PM	8:50 PM	Sat Pass (HST)	CHES:HST Passes SW to E (AzM 164.3 Alt 17)
	9:04 PM	9:04 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (AzM 26.6 Alt 17)
	9:26 PM	9:26 PM	Twilight	Astronomical Twilight ends
10:27 PM	10:27 PM	Sat Pass (HST)	CHES:HST Passes SW to E (AzM 237.3 Alt 8)	
10:38 PM	10:38 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (AzM 303.1 Alt 16)	
11:00 PM	11:00 PM	Diary	FULL MOON	
21 Aug 2013	2:45 AM	2:45 AM	Jupiter	Jupiter rises
	4:57 AM	4:57 AM	Twilight	Astronomical Twilight begins
	5:22 AM	5:22 AM	Iridium Flare	CHES:Iridium 10 Flares at mag.-8.4 (AzM 223 Alt 59)

Norfolk Astronomical Society Astronomical Calendar

July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
21 Aug 2013	5:27 AM	5:27 AM	Jup Sats	III.Tr.E
	6:16 AM	6:16 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	6:30 AM	6:30 AM	Sun	Sunrise
	7:06 AM	7:06 AM	Moon	Moonset
	8:00 AM	8:00 AM	Diary	Neptune 5.3S of Moon
	5:14 PM	5:14 PM	Jupiter	Jupiter sets
	7:50 PM	7:50 PM	Sun	Sunset
	8:01 PM	8:01 PM	Moon	Moonrise
	8:45 PM	8:45 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 167.3 Alt 20)
	9:24 PM	9:24 PM	Twilight	Astronomical Twilight ends
9:51 PM	9:51 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 341.7 Alt 49)	
10:23 PM	10:23 PM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 237.2 Alt 10)	
22 Aug 2013	2:42 AM	2:42 AM	Jupiter	Jupiter rises
	4:58 AM	4:58 AM	Twilight	Astronomical Twilight begins
	5:16 AM	5:16 AM	Iridium Flare	CHES:Iridium 13 Flares at mag. 0.2 (Azm 221 Alt 60)
	6:31 AM	6:31 AM	Sun	Sunrise
	8:13 AM	8:13 AM	Moon	Moonset
	5:11 PM	5:11 PM	Jupiter	Jupiter sets
	7:49 PM	7:49 PM	Sun	Sunset
	8:37 PM	8:37 PM	Moon	Moonrise
	8:40 PM	8:40 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 170.3 Alt 22)
	9:03 PM	9:03 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 34.7 Alt 36)
9:23 PM	9:23 PM	Twilight	Astronomical Twilight ends	
10:18 PM	10:18 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 236.2 Alt 12)	
10:38 PM	10:38 PM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azm 277.8 Alt 11)	
23 Aug 2013	2:39 AM	2:39 AM	Jupiter	Jupiter rises
	3:01 AM	3:01 AM	Lunar Occult	Moon occults 6.3 mag. double star ZC3515(r)
	4:48 AM	4:48 AM	Jup Sats	IV.Tr.E
	4:59 AM	4:59 AM	Twilight	Astronomical Twilight begins
	5:10 AM	5:10 AM	Jup Sats	II.Sh.I
	6:32 AM	6:32 AM	Sun	Sunrise
	9:19 AM	9:19 AM	Moon	Moonset
	5:08 PM	5:08 PM	Jupiter	Jupiter sets
	7:47 PM	7:47 PM	Sun	Sunset
	8:00 PM	8:00 PM	Diary	Mercury 1.3N of Regulus
	8:15 PM	8:15 PM	Sat Pass (ISS)	CHES:ISS Passes NW to E (Azm 30.7 Alt 23)
	8:21 PM	8:21 PM	Iridium Flare	CHES:Iridium 72 Flares at mag. 0.1 (Azm 132 Alt 69)
	8:35 PM	8:35 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 173.3 Alt 24)
9:13 PM	9:13 PM	Moon	Moonrise	
9:21 PM	9:21 PM	Twilight	Astronomical Twilight ends	

Norfolk Astronomical Society Astronomical Calendar

July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
23 Aug 2013	9:51 PM	9:51 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 252.2 Alt 34)
	10:13 PM	10:13 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 234.3 Alt 14)
24 Aug 2013	1:00 AM	1:00 AM	Diary	Uranus 3.1S of Moon
	2:36 AM	2:36 AM	Jupiter	Jupiter rises
	3:00 AM	3:00 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:00 AM	5:00 AM	Twilight	Astronomical Twilight begins
	5:32 AM	5:32 AM	Lunar Occult	Moon occults 5.9 mag. star 103(r) 62 Psc
	6:32 AM	6:32 AM	Sun	Sunrise
	10:22 AM	10:22 AM	Moon	Moonset
	5:04 PM	5:04 PM	Jupiter	Jupiter sets
	6:00 PM	6:00 PM	Diary	Mercury superior conjunction
	7:46 PM	7:46 PM	Sun	Sunset
	8:15 PM	8:15 PM	Iridium Flare	CHES:Iridium 62 Flares at mag.-6.0 (Azm 131 Alt 68)
	8:30 PM	8:30 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 176.6 Alt 26)
	9:03 PM	9:03 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 222.6 Alt 74)
	9:19 PM	9:19 PM	Twilight	Astronomical Twilight ends
9:48 PM	9:48 PM	Moon	Moonrise	
10:08 PM	10:08 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 231.6 Alt 14)	
25 Aug 2013	2:33 AM	2:33 AM	Jupiter	Jupiter rises
	4:47 AM	4:47 AM	Jup Sats	I.Oc.R
	5:01 AM	5:01 AM	Twilight	Astronomical Twilight begins
	5:07 AM	5:07 AM	Iridium Flare	CHES:Iridium 12 Flares at mag. 1.5 (Azm 234 Alt 50)
	5:08 AM	5:08 AM	Iridium Flare	CHES:Iridium 16 Flares at mag. 0.5 (Azm 232 Alt 52)
	5:46 AM	5:46 AM	Jup Sats	I.Sh.I
	6:33 AM	6:33 AM	Sun	Sunrise
	8:23 AM	8:23 AM	Iridium Flare	CHES:Iridium 68 Flares at mag.-5.3 (Azm 066 Alt 55)
	11:23 AM	11:23 AM	Moon	Moonset
	5:01 PM	5:01 PM	Jupiter	Jupiter sets
	7:45 PM	7:45 PM	Sun	Sunset
	8:14 PM	8:14 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 37.9 Alt 58)
	8:24 PM	8:24 PM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 179.5 Alt 26)
	9:18 PM	9:18 PM	Twilight	Astronomical Twilight ends
10:03 PM	10:03 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 228.3 Alt 14)	
10:25 PM	10:25 PM	Moon	Moonrise	
26 Aug 2013	2:30 AM	2:30 AM	Jupiter	Jupiter rises
	2:54 AM	2:54 AM	Jup Sats	I.Ec.D
	5:01 AM	5:01 AM	Iridium Flare	CHES:Iridium 86 Flares at mag. 0.1 (Azm 234 Alt 50)
	5:02 AM	5:02 AM	Twilight	Astronomical Twilight begins
	6:11 AM	6:11 AM	Jup Sats	I.Oc.R

Norfolk Astronomical Society Astronomical Calendar

July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
26 Aug 2013	6:34 AM	6:34 AM	Sun	Sunrise
	12:22 PM	12:22 PM	Moon	Moonset
	4:58 PM	4:58 PM	Jupiter	Jupiter sets
	7:43 PM	7:43 PM	Sun	Sunset
	8:19 PM	8:19 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 182.9 Alt 26)
	9:02 PM	9:02 PM	Sat Pass (ISS)	CHES:ISS Passes NW to S (Azm 229.2 Alt 22)
	9:16 PM	9:16 PM	Twilight	Astronomical Twilight ends
	9:58 PM	9:58 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 224.4 Alt 14)
	10:00 PM	10:00 PM	Diary	Neptune at opposition
	11:04 PM	11:04 PM	Moon	Moonrise
11:54 PM	11:54 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)	
27 Aug 2013	2:27 AM	2:27 AM	Jupiter	Jupiter rises
	3:29 AM	3:29 AM	Jup Sats	I.Tr.E
	4:55 AM	4:55 AM	Iridium Flare	CHES:Iridium 52 Flares at mag.-1.9 (Azm 232 Alt 53)
	5:03 AM	5:03 AM	Twilight	Astronomical Twilight begins
	6:35 AM	6:35 AM	Sun	Sunrise
	1:18 PM	1:18 PM	Moon	Moonset
	4:55 PM	4:55 PM	Jupiter	Jupiter sets
	7:42 PM	7:42 PM	Sun	Sunset
	8:13 PM	8:13 PM	Sat Pass (ISS)	CHES:ISS Passes NW to SE (Azm 225.3 Alt 42)
	8:14 PM	8:14 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 185.9 Alt 25)
9:14 PM	9:14 PM	Twilight	Astronomical Twilight ends	
11:46 PM	11:46 PM	Moon	Moonrise	
28 Aug 2013	2:24 AM	2:24 AM	Jupiter	Jupiter rises
	2:37 AM	2:37 AM	Jup Sats	III.Sh.I
	3:15 AM	3:15 AM	Lunar Occult	Moon occults 6.6 mag. star 617(r)
	4:49 AM	4:49 AM	Iridium Flare	CHES:Iridium 10 Flares at mag. 0.1 (Azm 233 Alt 52)
	5:05 AM	5:05 AM	Twilight	Astronomical Twilight begins
	5:30 AM	5:30 AM	Jup Sats	III.Sh.E
	6:00 AM	6:00 AM	Diary	LAST QUARTER
	6:34 AM	6:34 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-5.9 (Azm 171 Alt 62)
	6:36 AM	6:36 AM	Sun	Sunrise
	2:11 PM	2:11 PM	Moon	Moonset
	4:00 PM	4:00 PM	Diary	Aldebaran 2.9S of Moon
	4:52 PM	4:52 PM	Jupiter	Jupiter sets
	7:40 PM	7:40 PM	Sun	Sunset
8:09 PM	8:09 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 188.9 Alt 23)	
9:13 PM	9:13 PM	Twilight	Astronomical Twilight ends	

Norfolk Astronomical Society Astronomical Calendar

July 2013							August 2013							September 2013						
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				1	2	3	1	2	3	4	5	6	7	
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

Calendar

	Start	End	Category	Description
29 Aug 2013	12:31 AM	12:31 AM	Moon	Moonrise
	2:20 AM	2:20 AM	Jupiter	Jupiter rises
	5:06 AM	5:06 AM	Twilight	Astronomical Twilight begins
	6:36 AM	6:36 AM	Sun	Sunrise
	3:01 PM	3:01 PM	Moon	Moonset
	4:48 PM	4:48 PM	Jupiter	Jupiter sets
	4:59 PM	4:59 PM	Iridium Flare	CHES:Iridium 84 Flares at mag.-7.1 (Azm 267 Alt 61)
	7:39 PM	7:39 PM	Sun	Sunset
	8:04 PM	8:04 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 192.1 Alt 20)
	8:43 PM	8:43 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	9:11 PM	9:11 PM	Twilight	Astronomical Twilight ends
30 Aug 2013	1:19 AM	1:19 AM	Moon	Moonrise
	2:17 AM	2:17 AM	Jupiter	Jupiter rises
	5:07 AM	5:07 AM	Twilight	Astronomical Twilight begins
	6:37 AM	6:37 AM	Sun	Sunrise
	3:47 PM	3:47 PM	Moon	Moonset
	4:45 PM	4:45 PM	Jupiter	Jupiter sets
	7:38 PM	7:38 PM	Sun	Sunset
	7:58 PM	7:58 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 194.9 Alt 17)
	9:00 PM	9:00 PM	Diary	Moon at apogee
	9:09 PM	9:09 PM	Twilight	Astronomical Twilight ends
31 Aug 2013	2:10 AM	2:10 AM	Moon	Moonrise
	2:14 AM	2:14 AM	Jupiter	Jupiter rises
	5:08 AM	5:08 AM	Twilight	Astronomical Twilight begins
	6:11 AM	6:11 AM	Lunar Occult	Moon occults 6.4 mag. double star ZC1040(r)
	6:38 AM	6:38 AM	Sun	Sunrise
	12:00 PM	12:00 PM	Diary	Jupiter 4.4N of Moon
	4:29 PM	4:29 PM	Moon	Moonset
	4:42 PM	4:42 PM	Jupiter	Jupiter sets
	6:52 PM	6:52 PM	Meteor Shower	alpha-Aurigids meteor peak (zhr=10)
	7:36 PM	7:36 PM	Sun	Sunset
	9:08 PM	9:08 PM	Twilight	Astronomical Twilight ends
	9:27 PM	9:27 PM	Iridium Flare	CHES:Iridium 45 Flares at mag. 1.4 (Azm 101 Alt 51)