

Norfolk Astronomical Society



<http://norfolkastronomical.org>

May 2013

Monthly Sky Calendar
Prepared Specifically For
The Hampton Roads Area

Upcoming Regular Meetings

DATE	Monday, May 20, 2013
TIME	6 - 8 PM EST
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	The Planet Saturn

DATE	Monday, June 17, 2013
TIME	6 - 8 PM EST
WHERE	Chesapeake Public Library, Major Hillard branch Conf. Room
TOPIC	Observing Earth Satellites

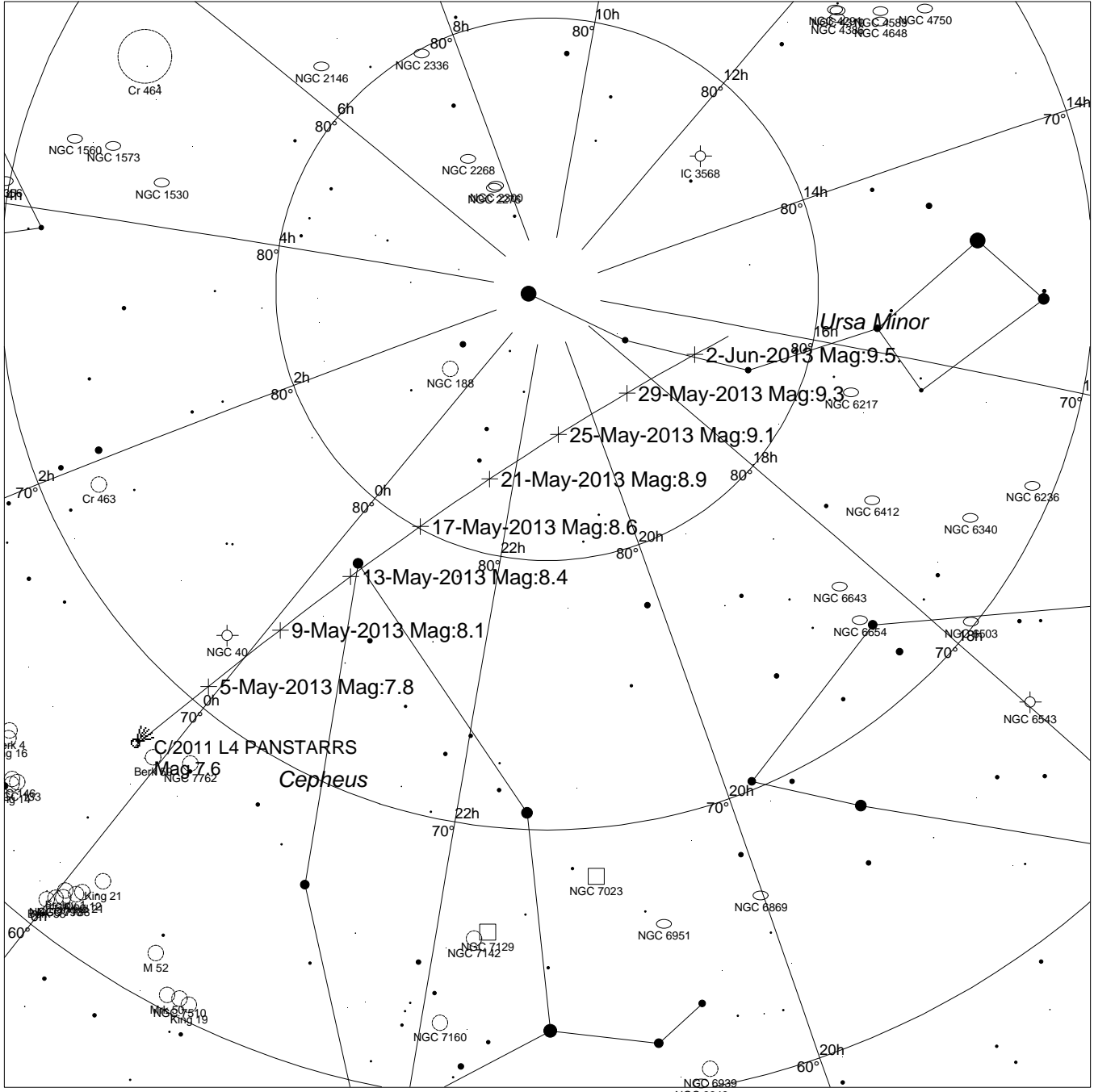
Summer Milky Way Photo By Kent Blackwell



The photo above was taken at 4 AM on April 12, 2013 by Kent Blackwell from Tuckahoe State Park, Maryland. Kent took this 91-second exposure at ISO 800, using his Canon 20Da DSLR and Leica 180mm f/2.8 lens. Tracking was done with an iOptron SkyTracker on a Manfrotto medium-duty tripod.

Many deep sky objects can be seen in this photo of the Sagittarius region. How many can you identify?

Comet C/2011 L4 PanSTARRS in May



<p>STARS</p> <ul style="list-style-type: none"> ● <2 ● 2.5 ● 3 ● 3.5 ● 4 ● 4.5 ● 5 ● 5.5 ● >6 	<p>SYMBOLS</p> <ul style="list-style-type: none"> ☄ Comet ☾ Asteroid ☾ Galaxy ○ Open Cluster □ Bright Nebula ⊕ Globular Cluster ⊕ Planetary Nebula ⊕ Quasar ○ Other Object 	<p><i>The comet is now circumpolar and visible all night, passing through Cepheus and Ursa Minor.</i></p>
<p>Local Time: 00:00:00 1-May-2013 Location: 36° 49' 48" N 76° 16' 48" W</p>	<p>UTC: 03:59:59 1-May-2013 RA: 21h20m01s Dec: +80° 36' Field: 40.0°</p>	<p>Sidereal Time: 13:31:53 Julian Day: 2456413.6667</p>

Planetariums In Hampton Roads

NAME	Chesapeake Planetarium
ADDRESS	308 Cedar Road, Chesapeake
DIRECTOR	Dr. Robert J. Hitt, Jr.
WEBSITE	http://www.cpschools.com/departments/planetarium/
SHOWS	Thursdays 8 PM (free) / reservations (757) 547-0153

NAME	Virginia Beach City Public Schools Planetarium
ADDRESS	3080 S. Lynnhaven Road
DIRECTOR	Charles Dibbs
WEBSITE	http://www.planetarium.vbschools.com/
SHOWS	Tuesdays 7 PM (free) / reservations (757) 648-4940

NAME	Tidewater Community College Planetarium (VB campus)
ADDRESS	Sciennce Bldg, 1700 College Crescent, Va Beach
DIRECTOR	Kenny Broun
WEBSITE	http://www.tcc.edu/academics/divisions/ms/planetarium.htm
SHOWS	one Friday each month / free tickets (757) 822-1122

NAME	ODU Pretlow Planetarium
ADDRESS	45th Street near Hampton Blvd, Norfolk
DIRECTOR	Dr. Declan De Paor
WEBSITE	http://sci.odu.edu/physics/about/pretlow.shtml
SHOWS	(757) 683-4619

NAME	Virginia Living Museum Abbitt Planetarium
ADDRESS	524 J. Clyde Morris Blvd, Newport News
DIRECTOR	Kelly Herbst
WEBSITE	http://www.thevlm.org/planetarium.aspx
SHOWS	admission charge; (757) 595-1900 x256

NAME	Jones Magnet Middle School Planetarium
ADDRESS	1819 Nickerson Blvd, Hampton
DIRECTOR	Lawrence "Bird" Taylor
WEBSITE	http://jon.hampton.k12.va.us/
SHOWS	once per month

**2013 EAST COAST STAR PARTY-MAY 9, 10, 11, 2013
(The Star Party Ends Sunday morning May 12)**

**Star Party Registration – One time fee of \$20/per person
Pay Kent at the star party registration desk in the observing area**

Camping Rates:

Pay camping fees at the campground store

Primitive Camping (includes tents and trailers NOT requiring Electric, Water or Sewage)
\$20/night, per campsite

R/V Units with Electric & Water but no Sewage
\$30/night, per campsite

R/V Units requiring Electric, Water & Sewage
\$40/night, per campsite

Hampton Lodge Camping Resort – Coinjock, NC (252-453-2732)

Portable restrooms conveniently located near observing area

Showers and country store located on the campground site

You may camp near your telescope

No AC is available in the observing field

**NOTE: THE SKY IS 6TH- MAGNITUDE BUT CEDAR TREES OBSTRUCT THE HORIZON
OBSERVING AREA IS 100' TO THE LEFT AFTER CAMPGROUND ENTRANCE GATE
JUST FOLLOW THE “TELESCOPES” SIGNS
PLEASE OBEY CAMPGROUND 10 MPH SPEED LIMIT AT ALL TIMES**

AGENDA

THURSDAY MAY 10:

REGISTRATION: BEGINS AT 2:00 PM & CONTINUES ALL WEEKEND
Coffee & snacks served all night

FRIDAY

RELAX ALL DAY & OBSERVE ALL NIGHT

SATURDAY:

OPTIONAL: BRUNCH AT MEL'S DINER AT 10:00AM

5:30 PM COOKOUT AT OBSERVING SITE

KENT WILL SUPPLY HAMBURGERS, HOT DOGS, AND SOFT DRINKS - BRING A DISH IF YOU
WOULD LIKE

6:30 PM DOOR PRIZE DRAWINGS

DOOR PRIZES TO BE ANNOUNCED

Kent Blackwell, Organizer, kent@exis.net

NAS At RRR Ranch May 14

NAS has been invited once again to setup telescopes for the 7th grade science class of John Gorman of Norfolk Christian Schools (about 60 students). They plan a retreat at RRR Ranch in Chesapeake the week of May 12 and we have been invited to set up telescopes one night during the week. The date we are targeting is Tuesday, May 14 but this may change, depending on weather forecast to a day before or after.

We need telescopes and bodies! Right now I have the following who have volunteered to help: Kent Blackwell, Bob Olson, Glen Howell, and Dennis Rowley. More are welcome to help out.

I plan to do a short Power Point presentation on what to expect to see before groups from his class come out to view through the telescopes. We should have the Moon 3 days before First Quarter to show plus Jupiter low in the west and Saturn high in the east. Possible deep sky targets may include globular clusters M3 and M13, and perhaps open cluster M44 the Beehive (Praesepe). Below are additional events we may be able to show.

May 13 (MON)

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20:05 - Sunset
20:52 - RRR:Iridium 20 Flares at mag.-2.6 (Azm 346 Alt 23)
21:09 - Moon occults 7.7 mag. star SAO95715(d)
21:18 - II.Oc.D
21:46 - Astronomical Twilight ends
22:12 - Jupiter sets
23:13 - Moonset

May 14 (TUE)

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20:06 - Sunset
20:46 - RRR:Iridium 3 Flares at mag.-6.0 (Azm 346 Alt 25)
21:41 - CHES:HST Passes SW to E (Azm 193.5 Alt 10)
21:47 - Astronomical Twilight ends
21:47 - GRS Transit (CML=190)
22:10 - Jupiter sets
23:54 - Moonset

May 15 (WED)

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20:06 - Sunset
20:39 - RRR:Iridium 76 Flares at mag.-6.3 (Azm 345 Alt 26)
21:37 - CHES:HST Passes SW to E (Azm 182.5 Alt 16)
21:48 - Astronomical Twilight ends
22:07 - Jupiter sets

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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	...	...	...	...	...	...	...	...	...	...	30	...	...	...	...	...	...

Calendar

	Start	End	Category	Description
1 May 2013	1:03 AM	1:03 AM	Moon	Moonrise
	4:37 AM	4:37 AM	Twilight	Astronomical Twilight begins
	5:36 AM	5:36 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 169.0 Alt 21)
	5:39 AM	5:39 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-5.8 (Azim 026 Alt 23)
	6:04 AM	6:04 AM	Jup GRS	GRS Transit (CML=190)
	6:14 AM	6:14 AM	Sun	Sunrise
	7:04 AM	7:04 AM	Iridium Flare	CHES:Iridium 75 Flares at mag.-4.5 (Azim 139 Alt 64)
	8:20 AM	8:20 AM	Jupiter	Jupiter rises
	8:41 AM	8:41 AM	Iridium Flare	CHES:Iridium 23 Flares at mag.-4.3 (Azim 098 Alt 37)
	10:25 AM	10:25 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	11:50 AM	11:50 AM	Moon	Moonset
	4:00 PM	4:00 PM	Jup GRS	GRS Transit (CML=190)
7:55 PM	7:55 PM	Sun	Sunset	
8:39 PM	8:39 PM	Jup Sats	III.Ec.D	
9:31 PM	9:31 PM	Twilight	Astronomical Twilight ends	
10:48 PM	10:48 PM	Jupiter	Jupiter sets	
2 May 2013	1:46 AM	1:46 AM	Moon	Moonrise
	1:56 AM	1:56 AM	Jup GRS	GRS Transit (CML=190)
	3:51 AM	3:51 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 135.6 Alt 10)
	4:36 AM	4:36 AM	Twilight	Astronomical Twilight begins
	5:31 AM	5:31 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 172.1 Alt 23)
	5:33 AM	5:33 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-5.9 (Azim 026 Alt 22)
	6:13 AM	6:13 AM	Sun	Sunrise
	8:00 AM	8:00 AM	Diary	LAST QUARTER
	8:17 AM	8:17 AM	Jupiter	Jupiter rises
	11:52 AM	11:52 AM	Jup GRS	GRS Transit (CML=190)
	12:55 PM	12:55 PM	Moon	Moonset
	7:56 PM	7:56 PM	Sun	Sunset
9:32 PM	9:32 PM	Twilight	Astronomical Twilight ends	
9:47 PM	9:47 PM	Jup GRS	GRS Transit (CML=190)	
10:45 PM	10:45 PM	Jupiter	Jupiter sets	
3 May 2013	2:24 AM	2:24 AM	Moon	Moonrise
	3:47 AM	3:47 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 132.4 Alt 12)
	4:34 AM	4:34 AM	Twilight	Astronomical Twilight begins
	5:23 AM	5:23 AM	Iridium Flare	CHES:Iridium 17 Flares at mag.-5.4 (Azim 025 Alt 19)
	5:26 AM	5:26 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azim 175.2 Alt 25)
	5:27 AM	5:27 AM	Iridium Flare	CHES:Iridium 42 Flares at mag.-1.1 (Azim 025 Alt 20)
	6:11 AM	6:11 AM	Sun	Sunrise
	7:43 AM	7:43 AM	Jup GRS	GRS Transit (CML=190)
8:14 AM	8:14 AM	Jupiter	Jupiter rises	

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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	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												30						

Calendar

	Start	End	Category	Description
3 May 2013	1:59 PM	1:59 PM	Moon	Moonset
	5:00 PM	5:00 PM	Meteor Shower	alpha-Scorpidis meteor peak (zhr=10)
	5:39 PM	5:39 PM	Jup GRS	GRS Transit (CML=190)
	7:57 PM	7:57 PM	Sun	Sunset
	9:33 PM	9:33 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Jupiter	Jupiter sets
4 May 2013	12:00 AM	12:00 AM	Diary	Neptune 5.6S of Moon
	2:59 AM	2:59 AM	Moon	Moonrise
	3:35 AM	3:35 AM	Jup GRS	GRS Transit (CML=190)
	3:42 AM	3:42 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 129.3 Alt 13)
	4:33 AM	4:33 AM	Twilight	Astronomical Twilight begins
	5:21 AM	5:21 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 178.3 Alt 26)
	5:22 AM	5:22 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.1 (Azm 025 Alt 19)
	6:10 AM	6:10 AM	Sun	Sunrise
	7:14 AM	7:14 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:11 AM	8:11 AM	Jupiter	Jupiter rises
	8:31 AM	8:31 AM	Iridium Flare	CHES:Iridium 22 Flares at mag.-5.9 (Azm 100 Alt 41)
	1:31 PM	1:31 PM	Jup GRS	GRS Transit (CML=190)
	3:02 PM	3:02 PM	Moon	Moonset
7:58 PM	7:58 PM	Sun	Sunset	
9:35 PM	9:35 PM	Twilight	Astronomical Twilight ends	
10:39 PM	10:39 PM	Jupiter	Jupiter sets	
11:27 PM	11:27 PM	Jup GRS	GRS Transit (CML=190)	
5 May 2013	3:32 AM	3:32 AM	Moon	Moonrise
	3:38 AM	3:38 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 126.3 Alt 13)
	4:32 AM	4:32 AM	Twilight	Astronomical Twilight begins
	5:07 AM	5:07 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-3.8 (Azm 025 Alt 14)
	5:16 AM	5:16 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 181.7 Alt 26)
	6:09 AM	6:09 AM	Sun	Sunrise
	8:08 AM	8:08 AM	Jupiter	Jupiter rises
	9:23 AM	9:23 AM	Jup GRS	GRS Transit (CML=190)
	4:03 PM	4:03 PM	Moon	Moonset
	7:18 PM	7:18 PM	Jup GRS	GRS Transit (CML=190)
	7:59 PM	7:59 PM	Sun	Sunset
	8:14 PM	8:14 PM	Meteor Shower	eta-Aquarids(Halley) meteor peak (zhr=30)
9:36 PM	9:36 PM	Twilight	Astronomical Twilight ends	
10:36 PM	10:36 PM	Jupiter	Jupiter sets	
6 May 2013	3:33 AM	3:33 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 123.8 Alt 13)
	4:04 AM	4:04 AM	Moon	Moonrise

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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	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	...	...	...	...								30						

Calendar

	Start	End	Category	Description	
6 May 2013	4:10 AM	4:10 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.2 (Azm 096 Alt 11)	
	4:14 AM	4:14 AM	Iridium Flare	CHES:Iridium 98 Flares at mag. 0.6 (Azm 096 Alt 11)	
	4:30 AM	4:30 AM	Twilight	Astronomical Twilight begins	
	4:47 AM	4:47 AM	Lunar Occult	Moon occults 7.4 mag. star SAO109052(r)	
	5:01 AM	5:01 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-1.6 (Azm 024 Alt 13)	
	5:11 AM	5:11 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 184.7 Alt 25)	
	5:14 AM	5:14 AM	Jup GRS	GRS Transit (CML=190)	
	6:08 AM	6:08 AM	Sun	Sunrise	
	8:05 AM	8:05 AM	Jupiter	Jupiter rises	
	3:10 PM	3:10 PM	Jup GRS	GRS Transit (CML=190)	
	5:02 PM	5:02 PM	Moon	Moonset	
	6:00 PM	6:00 PM	Diary	Uranus 3.8S of Moon	
	7:20 PM	7:20 PM	Iridium Flare	CHES:Iridium 63 Flares at mag.-7.4 (Azm 333 Alt 46)	
	8:00 PM	8:00 PM	Sun	Sunset	
	9:37 PM	9:37 PM	Twilight	Astronomical Twilight ends	
	10:33 PM	10:33 PM	Jupiter	Jupiter sets	
	7 May 2013	1:06 AM	1:06 AM	Jup GRS	GRS Transit (CML=190)
		3:28 AM	3:28 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 121.8 Alt 12)
		4:00 AM	4:00 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
		4:04 AM	4:04 AM	Iridium Flare	CHES:Iridium 81 Flares at mag.-1.1 (Azm 098 Alt 10)
4:13 AM		4:13 AM	Iridium Flare	CHES:Iridium 82 Flares at mag. 1.6 (Azm 099 Alt 13)	
4:29 AM		4:29 AM	Twilight	Astronomical Twilight begins	
4:37 AM		4:37 AM	Moon	Moonrise	
4:55 AM		4:55 AM	Iridium Flare	CHES:Iridium 42 Flares at mag. 1.7 (Azm 024 Alt 12)	
5:06 AM		5:06 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 187.9 Alt 24)	
5:37 AM		5:37 AM	C/2011L4	Comet Pan-STARRS at naked-eye threshold (observed)	
	6:07 AM	6:07 AM	Sun	Sunrise	
	8:02 AM	8:02 AM	Jupiter	Jupiter rises	
	11:02 AM	11:02 AM	Jup GRS	GRS Transit (CML=190)	
	5:32 PM	5:32 PM	Iridium Flare	CHES:Iridium 80 Flares at mag.-6.7 (Azm 255 Alt 52)	
	6:01 PM	6:01 PM	Moon	Moonset	
	7:14 PM	7:14 PM	Iridium Flare	CHES:Iridium 66 Flares at mag.-5.9 (Azm 331 Alt 47)	
	8:00 PM	8:00 PM	Sun	Sunset	
	8:00 PM	8:00 PM	Diary	Mercury 0.4S of Mars	
	8:58 PM	8:58 PM	Jup GRS	GRS Transit (CML=190)	
	9:38 PM	9:38 PM	Twilight	Astronomical Twilight ends	
10:30 PM	10:30 PM	Jupiter	Jupiter sets		
8 May 2013	3:24 AM	3:24 AM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 120.5 Alt 10)	
	3:58 AM	3:58 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-1.6 (Azm 098 Alt 10)	
	4:07 AM	4:07 AM	Iridium Flare	CHES:Iridium 18 Flares at mag.-0.3 (Azm 100 Alt 13)	

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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	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												30						

Calendar

	Start	End	Category	Description	
8 May 2013	4:08 AM	4:08 AM	Iridium Flare	CHES:Iridium 17 Flares at mag. 0.3 (Azm 101 Alt 14)	
	4:27 AM	4:27 AM	Twilight	Astronomical Twilight begins	
	5:01 AM	5:01 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 190.8 Alt 21)	
	5:11 AM	5:11 AM	Moon	Moonrise	
	6:06 AM	6:06 AM	Sun	Sunrise	
	6:54 AM	6:54 AM	Jup GRS	GRS Transit (CML=190)	
	7:59 AM	7:59 AM	Jupiter	Jupiter rises	
	4:49 PM	4:49 PM	Jup GRS	GRS Transit (CML=190)	
	6:59 PM	6:59 PM	Moon	Moonset	
	8:01 PM	8:01 PM	Sun	Sunset	
	9:23 PM	9:23 PM	Iridium Flare	CHES:Iridium 25 Flares at mag.-0.1 (Azm 350 Alt 15)	
	9:40 PM	9:40 PM	Twilight	Astronomical Twilight ends	
	9:53 PM	9:53 PM	Jup Sats	III.Oc.D	
	10:27 PM	10:27 PM	Jupiter	Jupiter sets	
	9 May 2013	2:45 AM	2:45 AM	Jup GRS	GRS Transit (CML=190)
		3:20 AM	3:20 AM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 119.9 Alt 7)
		4:01 AM	4:01 AM	Iridium Flare	CHES:Iridium 39 Flares at mag.-5.7 (Azm 102 Alt 12)
		4:10 AM	4:10 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.0 (Azm 103 Alt 16)
		4:26 AM	4:26 AM	Twilight	Astronomical Twilight begins
		4:57 AM	4:57 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 194.0 Alt 19)
5:48 AM		5:48 AM	Moon	Moonrise	
6:05 AM		6:05 AM	Sun	Sunrise	
7:56 AM		7:56 AM	Jupiter	Jupiter rises	
11:00 AM		11:00 AM	Diary	Mars 0.4S of Moon Occn	
	12:41 PM	12:41 PM	Jup GRS	GRS Transit (CML=190)	
	2:00 PM	2:00 PM		ECSP registration begins	
	3:59 PM	3:59 PM	Lunar Occult	Moon occults -2.0 mag. planet Mercury(D)	
	4:00 PM	4:00 PM	Diary	Mercury 0.2S of Moon Occn	
	5:32 PM	5:32 PM	Lunar Occult	Moon occults -2.0 mag. planet Mercury(R)	
	7:56 PM	7:56 PM	Moon	Moonset	
	8:01 PM	8:01 PM	Sun	Sunset	
	9:00 PM	9:00 PM	Diary	NEW MOON Eclipse	
	9:17 PM	9:17 PM	Iridium Flare	CHES:Iridium 47 Flares at mag.-3.1 (Azm 349 Alt 16)	
	9:41 PM	9:41 PM	Twilight	Astronomical Twilight ends	
10 May 2013	10:24 PM	10:24 PM	Jupiter	Jupiter sets	
	10:37 PM	10:37 PM	Jup GRS	GRS Transit (CML=190)	
	12:52 AM	12:52 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)	
	3:54 AM	3:54 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-2.7 (Azm 104 Alt 12)	
	4:04 AM	4:04 AM	Iridium Flare	CHES:Iridium 81 Flares at mag.-1.0 (Azm 105 Alt 16)	
	4:25 AM	4:25 AM	Twilight	Astronomical Twilight begins	

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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	5	6				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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
10 May 2013	4:52 AM	4:52 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 196.7 Alt 16)
	6:05 AM	6:05 AM	Sun	Sunrise
	6:27 AM	6:27 AM	Moon	Moonrise
	7:53 AM	7:53 AM	Jupiter	Jupiter rises
	8:33 AM	8:33 AM	Jup GRS	GRS Transit (CML=190)
	6:29 PM	6:29 PM	Jup GRS	GRS Transit (CML=190)
	7:00 PM	7:00 PM	Meetings	NAS Observing Session (Gates Co., NC)
	8:02 PM	8:02 PM	Sun	Sunset
	8:50 PM	8:50 PM	Moon	Moonset
	9:10 PM	9:10 PM	Iridium Flare	CHES:Iridium 26 Flares at mag.-2.7 (Azm 349 Alt 18)
	9:11 PM	9:11 PM	Iridium Flare	CHES:Iridium 11 Flares at mag.-1.8 (Azm 349 Alt 18)
9:42 PM	9:42 PM	Twilight	Astronomical Twilight ends	
10:00 PM	10:00 PM	Diary	Venus 1.4N of Moon	
10:21 PM	10:21 PM	Jupiter	Jupiter sets	
11 May 2013	3:44 AM	3:44 AM	Iridium Flare	CHES:Iridium 38 Flares at mag. 1.0 (Azm 107 Alt 11)
	3:48 AM	3:48 AM	Iridium Flare	CHES:Iridium 41 Flares at mag. 0.2 (Azm 105 Alt 11)
	3:58 AM	3:58 AM	Iridium Flare	CHES:Iridium 43 Flares at mag.-6.1 (Azm 106 Alt 15)
	4:04 AM	4:04 AM	Iridium Flare	CHES:Iridium 98 Flares at mag.-6.2 (Azm 106 Alt 16)
	4:06 AM	4:06 AM	Iridium Flare	CHES:Iridium 17 Flares at mag. 1.2 (Azm 108 Alt 19)
	4:07 AM	4:07 AM	Iridium Flare	CHES:Iridium 18 Flares at mag. 1.1 (Azm 107 Alt 19)
	4:23 AM	4:23 AM	Twilight	Astronomical Twilight begins
	4:25 AM	4:25 AM	Jup GRS	GRS Transit (CML=190)
	4:47 AM	4:47 AM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 191.7 Alt 13)
	6:04 AM	6:04 AM	Sun	Sunrise
	7:10 AM	7:10 AM	Moon	Moonrise
	7:49 AM	7:49 AM	Jupiter	Jupiter rises
	2:00 PM	2:00 PM	Diary	Aldebaran 3.4S of Moon
	2:20 PM	2:20 PM	Jup GRS	GRS Transit (CML=190)
	5:00 PM	5:00 PM	Diary	Mercury superior conjunction
	5:30 PM	5:30 PM		EAST COAST STARPARTY COOKOUT
	8:03 PM	8:03 PM	Sun	Sunset
9:04 PM	9:04 PM	Iridium Flare	CHES:Iridium 94 Flares at mag.-1.5 (Azm 348 Alt 20)	
9:05 PM	9:05 PM	Iridium Flare	CHES:Iridium 23 Flares at mag.-2.2 (Azm 347 Alt 19)	
9:41 PM	9:41 PM	Moon	Moonset	
9:41 PM	9:41 PM	Jup Sats	I.Oc.D	
9:43 PM	9:43 PM	Twilight	Astronomical Twilight ends	
10:18 PM	10:18 PM	Jupiter	Jupiter sets	
12 May 2013	12:16 AM	12:16 AM	Jup GRS	GRS Transit (CML=190)
	3:42 AM	3:42 AM	Iridium Flare	RRR:Iridium 42 Flares at mag. 1.5 (Azm 107 Alt 11)
	3:42 AM	3:42 AM	Iridium Flare	CHES:Iridium 42 Flares at mag. 1.7 (Azm 107 Alt 11)

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
12 May 2013	3:51 AM	3:51 AM	Iridium Flare	RRR:Iridium 40 Flares at mag.-2.1 (Azm 108 Alt 14)
	3:51 AM	3:51 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-1.6 (Azm 108 Alt 14)
	4:01 AM	4:01 AM	Iridium Flare	RRR:Iridium 39 Flares at mag.-0.8 (Azm 109 Alt 18)
	4:01 AM	4:01 AM	Iridium Flare	CHES:Iridium 39 Flares at mag.-1.1 (Azm 108 Alt 18)
	4:22 AM	4:22 AM	Twilight	Astronomical Twilight begins
	6:03 AM	6:03 AM	Sun	Sunrise
	7:46 AM	7:46 AM	Jupiter	Jupiter rises
	7:57 AM	7:57 AM	Moon	Moonrise
	10:00 AM	10:00 AM	Diary	Jupiter 2.6N of Moon
	10:12 AM	10:12 AM	Jup GRS	GRS Transit (CML=190)
	5:10 PM	5:10 PM	Iridium Flare	CHES:Iridium 41 Flares at mag.-5.7 (Azm 262 Alt 44)
	8:04 PM	8:04 PM	Sun	Sunset
	8:08 PM	8:08 PM	Jup GRS	GRS Transit (CML=190)
	8:58 PM	8:58 PM	Iridium Flare	CHES:Iridium 45 Flares at mag.-6.2 (Azm 347 Alt 21)
	8:58 PM	8:58 PM	Iridium Flare	RRR:Iridium 45 Flares at mag.-3.5 (Azm 347 Alt 21)
	9:14 PM	9:14 PM	Jup Sats	I.Tr.E
	9:41 PM	9:41 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
9:45 PM	9:45 PM	Twilight	Astronomical Twilight ends	
9:51 PM	9:51 PM	Jup Sats	I.Sh.E	
10:15 PM	10:15 PM	Jupiter	Jupiter sets	
10:29 PM	10:29 PM	Moon	Moonset	
13 May 2013	3:45 AM	3:45 AM	Iridium Flare	RRR:Iridium 77 Flares at mag. 0.2 (Azm 110 Alt 14)
	3:45 AM	3:45 AM	Iridium Flare	CHES:Iridium 77 Flares at mag. 0.5 (Azm 110 Alt 14)
	3:54 AM	3:54 AM	Iridium Flare	RRR:Iridium 15 Flares at mag.-4.6 (Azm 111 Alt 18)
	3:55 AM	3:55 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-6.2 (Azm 110 Alt 18)
	4:21 AM	4:21 AM	Twilight	Astronomical Twilight begins
	6:02 AM	6:02 AM	Sun	Sunrise
	6:04 AM	6:04 AM	Jup GRS	GRS Transit (CML=190)
	7:00 AM	7:00 AM	Diary	Moon at apogee
	7:43 AM	7:43 AM	Jupiter	Jupiter rises
	8:46 AM	8:46 AM	Moon	Moonrise
	4:00 PM	4:00 PM	Jup GRS	GRS Transit (CML=190)
	8:05 PM	8:05 PM	Sun	Sunset
	8:52 PM	8:52 PM	Iridium Flare	RRR:Iridium 20 Flares at mag.-2.6 (Azm 346 Alt 23)
	8:52 PM	8:52 PM	Iridium Flare	CHES:Iridium 20 Flares at mag.-4.5 (Azm 346 Alt 23)
	9:09 PM	9:09 PM	Lunar Occult	Moon occults 7.7 mag. star SAO95715(d)
	9:18 PM	9:18 PM	Jup Sats	II.Oc.D
	9:46 PM	9:46 PM	Twilight	Astronomical Twilight ends
10:12 PM	10:12 PM	Jupiter	Jupiter sets	
11:13 PM	11:13 PM	Moon	Moonset	

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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												30						

Calendar

	Start	End	Category	Description
14 May 2013	1:56 AM	1:56 AM	Jup GRS	GRS Transit (CML=190)
	3:39 AM	3:39 AM	Iridium Flare	RRR:Iridium 82 Flares at mag. 1.8 (Azm 111 Alt 13)
	3:39 AM	3:39 AM	Iridium Flare	CHES:Iridium 82 Flares at mag. 2.0 (Azm 111 Alt 13)
	3:41 AM	3:41 AM	Iridium Flare	RRR:Iridium 38 Flares at mag. 0.4 (Azm 114 Alt 15)
	3:41 AM	3:41 AM	Iridium Flare	CHES:Iridium 38 Flares at mag. 0.7 (Azm 114 Alt 15)
	3:48 AM	3:48 AM	Iridium Flare	RRR:Iridium 41 Flares at mag.-2.8 (Azm 112 Alt 17)
	3:48 AM	3:48 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-2.2 (Azm 112 Alt 17)
	3:58 AM	3:58 AM	Iridium Flare	RRR:Iridium 43 Flares at mag. 0.7 (Azm 113 Alt 22)
	3:58 AM	3:58 AM	Iridium Flare	CHES:Iridium 43 Flares at mag. 0.5 (Azm 113 Alt 21)
	4:20 AM	4:20 AM	Twilight	Astronomical Twilight begins
	5:32 AM	5:32 AM	Sat Pass (ISS)	CHES:ISS Passes S to NE (Azm 131.3 Alt 24)
	6:01 AM	6:01 AM	Sun	Sunrise
	7:40 AM	7:40 AM	Jupiter	Jupiter rises
	9:39 AM	9:39 AM	Moon	Moonrise
	11:51 AM	11:51 AM	Jup GRS	GRS Transit (CML=190)
	8:00 PM	8:00 PM		NAS AT RRR RANCH
	8:06 PM	8:06 PM	Sun	Sunset
	8:46 PM	8:46 PM	Iridium Flare	RRR:Iridium 3 Flares at mag.-6.0 (Azm 346 Alt 25)
	8:46 PM	8:46 PM	Iridium Flare	CHES:Iridium 3 Flares at mag.-3.1 (Azm 346 Alt 25)
	9:41 PM	9:41 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 193.5 Alt 10)
	9:47 PM	9:47 PM	Twilight	Astronomical Twilight ends
	9:47 PM	9:47 PM	Jup GRS	GRS Transit (CML=190)
	10:10 PM	10:10 PM	Jupiter	Jupiter sets
	11:54 PM	11:54 PM	Moon	Moonsset
15 May 2013	3:42 AM	3:42 AM	Iridium Flare	RRR:Iridium 42 Flares at mag. 0.1 (Azm 114 Alt 16)
	3:42 AM	3:42 AM	Iridium Flare	CHES:Iridium 42 Flares at mag. 0.4 (Azm 114 Alt 16)
	3:51 AM	3:51 AM	Iridium Flare	RRR:Iridium 40 Flares at mag.-1.5 (Azm 115 Alt 21)
	3:51 AM	3:51 AM	Iridium Flare	CHES:Iridium 40 Flares at mag.-2.0 (Azm 114 Alt 21)
	4:18 AM	4:18 AM	Twilight	Astronomical Twilight begins
	6:00 AM	6:00 AM	Sun	Sunrise
	7:37 AM	7:37 AM	Jupiter	Jupiter rises
	7:43 AM	7:43 AM	Jup GRS	GRS Transit (CML=190)
	7:43 AM	7:43 AM	Iridium Flare	CHES:Iridium 76 Flares at mag.-4.4 (Azm 113 Alt 57)
	7:43 AM	7:43 AM	Iridium Flare	RRR:Iridium 76 Flares at mag.-7.1 (Azm 113 Alt 58)
	10:33 AM	10:33 AM	Moon	Moonrise
	5:39 PM	5:39 PM	Jup GRS	GRS Transit (CML=190)
	6:30 PM	6:30 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:06 PM	8:06 PM	Sun	Sunset
	8:39 PM	8:39 PM	Iridium Flare	RRR:Iridium 76 Flares at mag.-6.3 (Azm 345 Alt 26)
	8:39 PM	8:39 PM	Iridium Flare	CHES:Iridium 76 Flares at mag.-6.6 (Azm 345 Alt 27)
	9:37 PM	9:37 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 182.5 Alt 16)

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
15 May 2013	9:48 PM	9:48 PM	Twilight	Astronomical Twilight ends
	10:07 PM	10:07 PM	Jupiter	Jupiter sets
16 May 2013	12:31 AM	12:31 AM	Moon	Moonset
	3:35 AM	3:35 AM	Jup GRS	GRS Transit (CML=190)
	3:36 AM	3:36 AM	Iridium Flare	RRR:Iridium 80 Flares at mag. 1.5 (Azm 116 Alt 15)
	3:36 AM	3:36 AM	Iridium Flare	CHES:Iridium 80 Flares at mag. 1.7 (Azm 115 Alt 15)
	3:45 AM	3:45 AM	Iridium Flare	RRR:Iridium 77 Flares at mag.-6.6 (Azm 116 Alt 20)
	3:45 AM	3:45 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-6.6 (Azm 116 Alt 20)
	3:53 AM	3:53 AM	Iridium Flare	RRR:Iridium 98 Flares at mag.-0.9 (Azm 116 Alt 23)
	3:53 AM	3:53 AM	Iridium Flare	CHES:Iridium 98 Flares at mag.-1.3 (Azm 116 Alt 23)
	4:17 AM	4:17 AM	Twilight	Astronomical Twilight begins
	5:26 AM	5:26 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 137.5 Alt 73)
	5:59 AM	5:59 AM	Sun	Sunrise
	7:34 AM	7:34 AM	Jupiter	Jupiter rises
	11:28 AM	11:28 AM	Moon	Moonrise
	1:31 PM	1:31 PM	Jup GRS	GRS Transit (CML=190)
	6:28 PM	6:28 PM	Iridium Flare	RRR:Iridium 70 Flares at mag.-7.1 (Azm 312 Alt 52)
	6:28 PM	6:28 PM	Iridium Flare	CHES:Iridium 70 Flares at mag.-7.1 (Azm 313 Alt 52)
	8:07 PM	8:07 PM	Sun	Sunset
9:33 PM	9:33 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 168.5 Alt 20)	
9:49 PM	9:49 PM	Twilight	Astronomical Twilight ends	
10:04 PM	10:04 PM	Jupiter	Jupiter sets	
11:18 PM	11:18 PM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.7 (Azm 245 Alt 17)	
11:26 PM	11:26 PM	Jup GRS	GRS Transit (CML=190)	
17 May 2013	1:05 AM	1:05 AM	Moon	Moonset
	3:38 AM	3:38 AM	Iridium Flare	RRR:Iridium 38 Flares at mag.-4.1 (Azm 120 Alt 21)
	3:38 AM	3:38 AM	Iridium Flare	CHES:Iridium 38 Flares at mag.-3.1 (Azm 120 Alt 21)
	3:39 AM	3:39 AM	Iridium Flare	RRR:Iridium 82 Flares at mag.-1.1 (Azm 118 Alt 19)
	3:39 AM	3:39 AM	Iridium Flare	CHES:Iridium 82 Flares at mag.-0.7 (Azm 117 Alt 19)
	3:48 AM	3:48 AM	Iridium Flare	RRR:Iridium 41 Flares at mag. 0.9 (Azm 119 Alt 25)
	3:49 AM	3:49 AM	Iridium Flare	CHES:Iridium 41 Flares at mag. 0.7 (Azm 119 Alt 25)
	4:16 AM	4:16 AM	Twilight	Astronomical Twilight begins
	4:35 AM	4:35 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 133.2 Alt 34)
	5:59 AM	5:59 AM	Sun	Sunrise
	7:31 AM	7:31 AM	Jupiter	Jupiter rises
	9:22 AM	9:22 AM	Jup GRS	GRS Transit (CML=190)
	12:24 PM	12:24 PM	Moon	Moonrise
	2:00 PM	2:00 PM	Diary	Venus 5.8N of Aldebaran
6:21 PM	6:21 PM	Iridium Flare	RRR:Iridium 64 Flares at mag.-7.2 (Azm 310 Alt 52)	
6:21 PM	6:21 PM	Iridium Flare	CHES:Iridium 64 Flares at mag.-5.4 (Azm 310 Alt 52)	

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
17 May 2013	7:18 PM	7:18 PM	Jup GRS	GRS Transit (CML=190)
	8:08 PM	8:08 PM	Sun	Sunset
	8:27 PM	8:27 PM	Iridium Flare	RRR:Iridium 49 Flares at mag.-6.6 (Azm 343 Alt 30)
	9:28 PM	9:28 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 170.7 Alt 22)
	9:51 PM	9:51 PM	Twilight	Astronomical Twilight ends
	10:01 PM	10:01 PM	Jupiter	Jupiter sets
	11:11 PM	11:11 PM	Iridium Flare	RRR:Iridium 32 Flares at mag. 0.8 (Azm 244 Alt 16)
	11:11 PM	11:11 PM	Iridium Flare	CHES:Iridium 32 Flares at mag. 0.7 (Azm 244 Alt 17)
	11:20 PM	11:20 PM	Iridium Flare	RRR:Iridium 91 Flares at mag.-0.7 (Azm 245 Alt 13)
	11:20 PM	11:20 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-2.3 (Azm 245 Alt 13)
	11:25 PM	11:25 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-2.5 (Azm 246 Alt 11)
11:25 PM	11:25 PM	Iridium Flare	RRR:Iridium 28 Flares at mag.-0.1 (Azm 247 Alt 11)	
18 May 2013	1:00 AM	1:00 AM	Diary	FIRST QUARTER
	1:37 AM	1:37 AM	Moon	Moonset
	3:33 AM	3:33 AM	Iridium Flare	RRR:Iridium 18 Flares at mag. 0.8 (Azm 119 Alt 18)
	3:33 AM	3:33 AM	Iridium Flare	CHES:Iridium 18 Flares at mag. 1.0 (Azm 119 Alt 18)
	3:42 AM	3:42 AM	Iridium Flare	RRR:Iridium 42 Flares at mag.-1.5 (Azm 120 Alt 24)
	3:42 AM	3:42 AM	Iridium Flare	CHES:Iridium 42 Flares at mag.-2.0 (Azm 120 Alt 24)
	4:15 AM	4:15 AM	Twilight	Astronomical Twilight begins
	5:14 AM	5:14 AM	Jup GRS	GRS Transit (CML=190)
	5:21 AM	5:21 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 324.5 Alt 40)
	5:58 AM	5:58 AM	Sun	Sunrise
	6:00 AM	6:00 AM	Diary	Regulus 5.6N of Moon
	7:28 AM	7:28 AM	Jupiter	Jupiter rises
	1:22 PM	1:22 PM	Moon	Moonrise
	3:10 PM	3:10 PM	Jup GRS	GRS Transit (CML=190)
	3:19 PM	3:19 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	8:09 PM	8:09 PM	Sun	Sunset
	9:23 PM	9:23 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 173.6 Alt 24)
	9:52 PM	9:52 PM	Twilight	Astronomical Twilight ends
	9:58 PM	9:58 PM	Jupiter	Jupiter sets
11:00 PM	11:00 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 245.5 Alt 7)	
11:05 PM	11:05 PM	Iridium Flare	RRR:Iridium 58 Flares at mag. 1.4 (Azm 246 Alt 18)	
11:06 PM	11:06 PM	Iridium Flare	CHES:Iridium 58 Flares at mag. 1.4 (Azm 246 Alt 18)	
11:14 PM	11:14 PM	Iridium Flare	RRR:Iridium 59 Flares at mag.-2.0 (Azm 246 Alt 13)	
11:14 PM	11:14 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-2.4 (Azm 247 Alt 14)	
11:23 PM	11:23 PM	Iridium Flare	CHES:Iridium 60 Flares at mag.-0.9 (Azm 249 Alt 10)	
11:23 PM	11:23 PM	Iridium Flare	RRR:Iridium 60 Flares at mag. 0.5 (Azm 249 Alt 10)	
19 May 2013	1:06 AM	1:06 AM	Jup GRS	GRS Transit (CML=190)
	2:09 AM	2:09 AM	Moon	Moonset

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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												30						

Calendar

	Start	End	Category	Description
19 May 2013	3:36 AM	3:36 AM	Iridium Flare	CHES:Iridium 80 Flares at mag.-6.8 (Azm 122 Alt 23)
	4:14 AM	4:14 AM	Twilight	Astronomical Twilight begins
	4:29 AM	4:29 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 320.7 Alt 80)
	5:57 AM	5:57 AM	Sun	Sunrise
	7:25 AM	7:25 AM	Jupiter	Jupiter rises
	11:02 AM	11:02 AM	Jup GRS	GRS Transit (CML=190)
	2:22 PM	2:22 PM	Moon	Moonrise
	8:10 PM	8:10 PM	Sun	Sunset
	8:57 PM	8:57 PM	Jup GRS	GRS Transit (CML=190)
	9:03 PM	9:03 PM	Jup Sats	I.Tr.I
	9:18 PM	9:18 PM	Sat Pass (HST)	CHES:HST Passes SW to E (Azm 177.1 Alt 26)
	9:24 PM	9:24 PM	Jup Sats	III.Sh.E
	9:33 PM	9:33 PM	Jup Sats	I.Sh.I
	9:53 PM	9:53 PM	Twilight	Astronomical Twilight ends
	9:55 PM	9:55 PM	Jupiter	Jupiter sets
	10:56 PM	10:56 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 243.1 Alt 9)
	11:00 PM	11:00 PM	Iridium Flare	CHES:Iridium 55 Flares at mag. 1.6 (Azm 248 Alt 18)
	11:08 PM	11:08 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-1.5 (Azm 248 Alt 15)
	11:17 PM	11:17 PM	Iridium Flare	CHES:Iridium 29 Flares at mag.-6.0 (Azm 249 Alt 10)
20 May 2013	2:42 AM	2:42 AM	Moon	Moonset
	3:30 AM	3:30 AM	Iridium Flare	CHES:Iridium 81 Flares at mag.-1.8 (Azm 124 Alt 22)
	3:35 AM	3:35 AM	Iridium Flare	CHES:Iridium 38 Flares at mag. 1.2 (Azm 126 Alt 28)
	3:39 AM	3:39 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 102.0 Alt 43)
	3:39 AM	3:39 AM	Iridium Flare	CHES:Iridium 82 Flares at mag. 1.4 (Azm 124 Alt 28)
	4:13 AM	4:13 AM	Twilight	Astronomical Twilight begins
	5:57 AM	5:57 AM	Sun	Sunrise
	6:53 AM	6:53 AM	Jup GRS	GRS Transit (CML=190)
	7:22 AM	7:22 AM	Jupiter	Jupiter rises
	3:24 PM	3:24 PM	Moon	Moonrise
	4:49 PM	4:49 PM	Jup GRS	GRS Transit (CML=190)
	6:00 PM	6:00 PM	Meetings	NAS Regular Meeting at Chesapeake Public Library Major Hillard branch
	8:10 PM	8:10 PM	Sun	Sunset
	8:56 PM	8:56 PM	Jup Sats	I.Ec.R
	9:13 PM	9:13 PM	Sat Pass (HST)	CHES:HST Passes W to E (Azm 180.3 Alt 26)
	9:52 PM	9:52 PM	Jupiter	Jupiter sets
	9:54 PM	9:54 PM	Twilight	Astronomical Twilight ends
	10:51 PM	10:51 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 240.1 Alt 10)
	11:02 PM	11:02 PM	Iridium Flare	CHES:Iridium 33 Flares at mag.-0.4 (Azm 250 Alt 16)
	11:03 PM	11:03 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-0.8 (Azm 251 Alt 15)
	11:11 PM	11:11 PM	Iridium Flare	CHES:Iridium 32 Flares at mag.-6.1 (Azm 251 Alt 11)

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
21 May 2013	2:45 AM	2:45 AM	Jup GRS	GRS Transit (CML=190)
	3:16 AM	3:16 AM	Moon	Moonset
	3:24 AM	3:24 AM	Iridium Flare	CHES:Iridium 43 Flares at mag. 0.8 (Azm 125 Alt 21)
	3:24 AM	3:24 AM	Iridium Flare	CHES:Iridium 17 Flares at mag.-0.7 (Azm 126 Alt 22)
	3:33 AM	3:33 AM	Iridium Flare	CHES:Iridium 18 Flares at mag.-0.3 (Azm 126 Alt 27)
	4:12 AM	4:12 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 326.6 Alt 31)
	5:56 AM	5:56 AM	Sun	Sunrise
	7:19 AM	7:19 AM	Jupiter	Jupiter rises
	12:00 PM	12:00 PM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	12:41 PM	12:41 PM	Jup GRS	GRS Transit (CML=190)
	4:28 PM	4:28 PM	Moon	Moonrise
	8:11 PM	8:11 PM	Sun	Sunset
	9:09 PM	9:09 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 183.4 Alt 26)
	9:49 PM	9:49 PM	Jupiter	Jupiter sets
	9:55 PM	9:55 PM	Twilight	Astronomical Twilight ends
	10:36 PM	10:36 PM	Jup GRS	GRS Transit (CML=190)
	10:47 PM	10:47 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 236.7 Alt 10)
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 57 Flares at mag. 0.1 (Azm 252 Alt 16)
	11:06 PM	11:06 PM	Iridium Flare	CHES:Iridium 58 Flares at mag.-6.1 (Azm 253 Alt 12)
	11:25 PM	11:25 PM	Lunar Occult	Moon occults 5.2 mag. star ZC1884(D) 49 Vir
22 May 2013	3:17 AM	3:17 AM	Iridium Flare	CHES:Iridium 40 Flares at mag. 1.9 (Azm 127 Alt 20)
	3:27 AM	3:27 AM	Iridium Flare	CHES:Iridium 39 Flares at mag.-5.4 (Azm 127 Alt 26)
	3:33 AM	3:33 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 358.0 Alt 51)
	3:53 AM	3:53 AM	Moon	Moonset
	4:11 AM	4:11 AM	Twilight	Astronomical Twilight begins
	5:55 AM	5:55 AM	Sun	Sunrise
	7:00 AM	7:00 AM	Diary	Spica 0.1S of Moon Occn
	7:16 AM	7:16 AM	Jupiter	Jupiter rises
	8:33 AM	8:33 AM	Jup GRS	GRS Transit (CML=190)
	5:36 PM	5:36 PM	Moon	Moonrise
	6:28 PM	6:28 PM	Jup GRS	GRS Transit (CML=190)
	8:12 PM	8:12 PM	Sun	Sunset
	9:00 PM	9:00 PM	Jup Sats	II.Tr.E
	9:04 PM	9:04 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 186.6 Alt 24)
	9:46 PM	9:46 PM	Jupiter	Jupiter sets
	9:57 PM	9:57 PM	Twilight	Astronomical Twilight ends
	10:42 PM	10:42 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 232.9 Alt 9)
	10:51 PM	10:51 PM	Iridium Flare	CHES:Iridium 60 Flares at mag. 0.7 (Azm 254 Alt 16)
	11:00 PM	11:00 PM	Iridium Flare	CHES:Iridium 55 Flares at mag.-5.8 (Azm 255 Alt 12)
	11:09 PM	11:09 PM	Iridium Flare	CHES:Iridium 95 Flares at mag. 0.0 (Azm 257 Alt 10)

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
23 May 2013	3:21 AM	3:21 AM	Iridium Flare	CHES:Iridium 15 Flares at mag.-4.7 (Azm 129 Alt 25)
	4:00 AM	4:00 AM	Diary	Saturn 3.5N of Moon
	4:10 AM	4:10 AM	Twilight	Astronomical Twilight begins
	4:24 AM	4:24 AM	Jup GRS	GRS Transit (CML=190)
	4:35 AM	4:35 AM	Moon	Moonset
	5:18 AM	5:18 AM	Iridium Flare	CHES:Iridium 63 Flares at mag. 1.1 (Azm 226 Alt 72)
	5:55 AM	5:55 AM	Sun	Sunrise
	7:13 AM	7:13 AM	Jupiter	Jupiter rises
	2:20 PM	2:20 PM	Jup GRS	GRS Transit (CML=190)
	6:45 PM	6:45 PM	Moon	Moonrise
	8:13 PM	8:13 PM	Sun	Sunset
	8:59 PM	8:59 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 189.6 Alt 22)
	9:43 PM	9:43 PM	Jupiter	Jupiter sets
	9:58 PM	9:58 PM	Twilight	Astronomical Twilight ends
	10:37 PM	10:37 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 229.3 Alt 8)
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 29 Flares at mag. 1.5 (Azm 256 Alt 17)
	10:54 PM	10:54 PM	Iridium Flare	CHES:Iridium 31 Flares at mag.-2.5 (Azm 257 Alt 13)
11:03 PM	11:03 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-3.1 (Azm 258 Alt 10)	
24 May 2013	12:16 AM	12:16 AM	Jup GRS	GRS Transit (CML=190)
	3:15 AM	3:15 AM	Iridium Flare	CHES:Iridium 41 Flares at mag.-0.3 (Azm 131 Alt 24)
	3:17 AM	3:17 AM	Iridium Flare	CHES:Iridium 98 Flares at mag. 1.0 (Azm 130 Alt 23)
	3:23 AM	3:23 AM	Iridium Flare	CHES:Iridium 17 Flares at mag. 1.9 (Azm 133 Alt 32)
	3:24 AM	3:24 AM	Iridium Flare	CHES:Iridium 43 Flares at mag. 1.8 (Azm 133 Alt 31)
	3:26 AM	3:26 AM	Sat Pass (ISS)	CHES:ISS Passes W to NE (Azm 328.9 Alt 24)
	4:09 AM	4:09 AM	Twilight	Astronomical Twilight begins
	5:12 AM	5:12 AM	Iridium Flare	CHES:Iridium 66 Flares at mag. 1.5 (Azm 230 Alt 71)
	5:13 AM	5:13 AM	Iridium Flare	CHES:Iridium 74 Flares at mag. 0.7 (Azm 231 Alt 71)
	5:23 AM	5:23 AM	Moon	Moonset
	5:54 AM	5:54 AM	Sun	Sunrise
	7:02 AM	7:02 AM	Iridium Flare	CHES:Iridium 26 Flares at mag.-4.1 (Azm 133 Alt 70)
	7:10 AM	7:10 AM	Jupiter	Jupiter rises
	8:42 AM	8:42 AM	Iridium Flare	CHES:Iridium 59 Flares at mag.-5.2 (Azm 092 Alt 40)
	8:57 AM	8:57 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	10:12 AM	10:12 AM	Jup GRS	GRS Transit (CML=190)
	7:54 PM	7:54 PM	Moon	Moonrise
8:00 PM	8:00 PM	Diary	Mercury 1.4N of Venus	
8:07 PM	8:07 PM	Jup GRS	GRS Transit (CML=190)	
8:14 PM	8:14 PM	Sun	Sunset	
8:54 PM	8:54 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 192.6 Alt 20)	
9:40 PM	9:40 PM	Jupiter	Jupiter sets	
9:44 PM	9:44 PM	Lunar Occult	Moon occults 2.6 mag. double star ZC2302(d) beta Sco [Acraab]	

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
24 May 2013	9:59 PM	9:59 PM	Twilight	Astronomical Twilight ends
	10:27 PM	10:27 PM	Lunar Occult	Moon occults 2.6 mag. double star ZC2302(r) beta Sco [Acrab]
	10:48 PM	10:48 PM	Iridium Flare	CHES:Iridium 91 Flares at mag.-0.9 (Azm 258 Alt 14)
	10:48 PM	10:48 PM	Iridium Flare	CHES:Iridium 28 Flares at mag.-1.7 (Azm 259 Alt 14)
	10:57 PM	10:57 PM	Iridium Flare	CHES:Iridium 57 Flares at mag.-5.7 (Azm 260 Alt 11)
25 May 2013	1:00 AM	1:00 AM	Diary	FULL MOON
	2:36 AM	2:36 AM	Sat Pass (ISS)	CHES:ISS Passes SW to NE (Azm 24.2 Alt 21)
	3:08 AM	3:08 AM	Iridium Flare	CHES:Iridium 42 Flares at mag. 1.5 (Azm 132 Alt 22)
	3:18 AM	3:18 AM	Iridium Flare	CHES:Iridium 40 Flares at mag. 0.3 (Azm 134 Alt 30)
	4:08 AM	4:08 AM	Twilight	Astronomical Twilight begins
	5:54 AM	5:54 AM	Sun	Sunrise
	6:04 AM	6:04 AM	Jup GRS	GRS Transit (CML=190)
	6:18 AM	6:18 AM	Moon	Moonset
	7:07 AM	7:07 AM	Jupiter	Jupiter rises
	3:59 PM	3:59 PM	Jup GRS	GRS Transit (CML=190)
	8:14 PM	8:14 PM	Sun	Sunset
	8:49 PM	8:49 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 195.5 Alt 17)
	9:01 PM	9:01 PM	Moon	Moonrise
	9:37 PM	9:37 PM	Jupiter	Jupiter sets
	10:00 PM	10:00 PM	Twilight	Astronomical Twilight ends
	10:00 PM	10:00 PM	Diary	Moon at perigee
	10:42 PM	10:42 PM	Iridium Flare	CHES:Iridium 59 Flares at mag. 0.2 (Azm 260 Alt 15)
	10:51 PM	10:51 PM	Iridium Flare	CHES:Iridium 60 Flares at mag.-5.9 (Azm 262 Alt 11)
26 May 2013	1:55 AM	1:55 AM	Jup GRS	GRS Transit (CML=190)
	3:12 AM	3:12 AM	Iridium Flare	CHES:Iridium 77 Flares at mag.-1.8 (Azm 136 Alt 29)
	4:07 AM	4:07 AM	Twilight	Astronomical Twilight begins
	4:19 AM	4:19 AM	Lunar Occult	Moon occults 4.4 mag. star ZC2498(R) xi Oph
	5:53 AM	5:53 AM	Sun	Sunrise
	7:04 AM	7:04 AM	Jupiter	Jupiter rises
	7:19 AM	7:19 AM	Moon	Moonset
	11:51 AM	11:51 AM	Jup GRS	GRS Transit (CML=190)
	5:36 PM	5:36 PM	Iridium Flare	CHES:Iridium 72 Flares at mag.-6.6 (Azm 289 Alt 51)
	8:15 PM	8:15 PM	Sun	Sunset
	8:44 PM	8:44 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 198.5 Alt 14)
	8:44 PM	8:44 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 198.4 Alt 14)
	9:10 PM	9:10 PM	Jup Sats	III.Tr.I
	9:35 PM	9:35 PM	Jupiter	Jupiter sets
	9:47 PM	9:47 PM	Jup GRS	GRS Transit (CML=190)
	10:01 PM	10:01 PM	Twilight	Astronomical Twilight ends
	10:02 PM	10:02 PM	Moon	Moonrise

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
26 May 2013	10:36 PM	10:36 PM	Iridium Flare	CHES:Iridium 95 Flares at mag. 1.2 (Azm 262 Alt 15)
	10:45 PM	10:45 PM	Iridium Flare	CHES:Iridium 29 Flares at mag.-3.6 (Azm 264 Alt 12)
	11:13 PM	11:13 PM	Iridium Flare	CHES:Iridium 96 Flares at mag.-1.0 (Azm 238 Alt 22)
27 May 2013	12:00 AM	12:00 AM	Public Holiday	Memorial Day holiday
	3:06 AM	3:06 AM	Iridium Flare	CHES:Iridium 82 Flares at mag.-1.9 (Azm 135 Alt 27)
	4:06 AM	4:06 AM	Twilight	Astronomical Twilight begins
	5:03 AM	5:03 AM	Iridium Flare	CHES:Iridium 65 Flares at mag. 1.1 (Azm 248 Alt 61)
	5:23 AM	5:23 AM	C/2011L4	Comet Pan-STARRS near Polaris
	5:46 AM	5:46 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	5:53 AM	5:53 AM	Sun	Sunrise
	6:00 AM	6:00 AM	Diary	Mercury 2.3N of Jupiter
	7:01 AM	7:01 AM	Jupiter	Jupiter rises
	7:43 AM	7:43 AM	Jup GRS	GRS Transit (CML=190)
	8:26 AM	8:26 AM	Moon	Moonset
	12:00 PM	12:00 PM	Diary	Pluto 0.9S of Moon Occn
	5:38 PM	5:38 PM	Jup GRS	GRS Transit (CML=190)
	8:16 PM	8:16 PM	Sun	Sunset
	8:39 PM	8:39 PM	Sat Pass (HST)	CHES:HST Passes W to SE (Azm 201.3 Alt 11)
	9:32 PM	9:32 PM	Jupiter	Jupiter sets
	10:02 PM	10:02 PM	Twilight	Astronomical Twilight ends
	10:30 PM	10:30 PM	Iridium Flare	CHES:Iridium 30 Flares at mag. 1.9 (Azm 264 Alt 15)
	10:38 PM	10:38 PM	Iridium Flare	CHES:Iridium 33 Flares at mag.-1.0 (Azm 265 Alt 13)
	10:39 PM	10:39 PM	Iridium Flare	CHES:Iridium 32 Flares at mag.-1.3 (Azm 265 Alt 12)
	10:48 PM	10:48 PM	Iridium Flare	CHES:Iridium 91 Flares at mag. 0.9 (Azm 268 Alt 10)
10:56 PM	10:56 PM	Moon	Moonrise	
28 May 2013	12:24 AM	12:24 AM	Lunar Occult	Moon occults 5.8 mag. star ZC2828(r) 45 Sgr
	3:35 AM	3:35 AM	Jup GRS	GRS Transit (CML=190)
	4:05 AM	4:05 AM	Twilight	Astronomical Twilight begins
	4:57 AM	4:57 AM	Iridium Flare	CHES:Iridium 68 Flares at mag.-3.5 (Azm 248 Alt 63)
	5:52 AM	5:52 AM	Sun	Sunrise
	6:58 AM	6:58 AM	Jupiter	Jupiter rises
	9:35 AM	9:35 AM	Moon	Moonset
	1:30 PM	1:30 PM	Jup GRS	GRS Transit (CML=190)
	4:00 PM	4:00 PM	Diary	Venus 1.0N of Jupiter
	8:16 PM	8:16 PM	Sun	Sunset
	9:29 PM	9:29 PM	Jupiter	Jupiter sets
	10:03 PM	10:03 PM	Twilight	Astronomical Twilight ends
	10:33 PM	10:33 PM	Iridium Flare	CHES:Iridium 58 Flares at mag. 0.3 (Azm 267 Alt 13)
10:42 PM	10:42 PM	Iridium Flare	CHES:Iridium 59 Flares at mag.-3.1 (Azm 269 Alt 10)	
11:26 PM	11:26 PM	Jup GRS	GRS Transit (CML=190)	

Norfolk Astronomical Society Astronomical Calendar

April 2013							May 2013							June 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	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					26	27	28	29	30	31		30						

Calendar

	Start	End	Category	Description
28 May 2013	11:43 PM	11:43 PM	Moon	Moonrise
	11:56 PM	11:56 PM	Lunar Occult	Moon occults 3.0 mag. double star ZC2969(r) beta Cap [Dabih Major]
29 May 2013	4:05 AM	4:05 AM	Twilight	Astronomical Twilight begins
	4:51 AM	4:51 AM	Iridium Flare	CHES:Iridium 75 Flares at mag.-1.5 (Azm 249 Alt 64)
	5:52 AM	5:52 AM	Sun	Sunrise
	6:55 AM	6:55 AM	Jupiter	Jupiter rises
	9:22 AM	9:22 AM	Jup GRS	GRS Transit (CML=190)
	10:44 AM	10:44 AM	Moon	Moonset
	7:18 PM	7:18 PM	Jup GRS	GRS Transit (CML=190)
	7:22 PM	7:22 PM	Iridium Flare	CHES:Iridium 94 Flares at mag.-7.1 (Azm 328 Alt 43)
	8:17 PM	8:17 PM	Sun	Sunset
	9:26 PM	9:26 PM	Jupiter	Jupiter sets
	10:04 PM	10:04 PM	Twilight	Astronomical Twilight ends
	10:27 PM	10:27 PM	Iridium Flare	CHES:Iridium 55 Flares at mag. 1.2 (Azm 269 Alt 13)
10:36 PM	10:36 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-2.2 (Azm 270 Alt 10)	
11:08 PM	11:08 PM	Iridium Flare	CHES:Iridium 96 Flares at mag.-2.3 (Azm 244 Alt 18)	
30 May 2013	12:24 AM	12:24 AM	Moon	Moonrise
	2:35 AM	2:35 AM	Algol Minima	Algol at mag. +3.4 minimum (+/-5 hours)
	4:04 AM	4:04 AM	Twilight	Astronomical Twilight begins
	4:45 AM	4:45 AM	Iridium Flare	CHES:Iridium 63 Flares at mag. 1.3 (Azm 250 Alt 65)
	5:14 AM	5:14 AM	Jup GRS	GRS Transit (CML=190)
	5:51 AM	5:51 AM	Sun	Sunrise
	6:52 AM	6:52 AM	Jupiter	Jupiter rises
	11:51 AM	11:51 AM	Moon	Moonset
	3:09 PM	3:09 PM	Jup GRS	GRS Transit (CML=190)
	8:18 PM	8:18 PM	Sun	Sunset
	9:23 PM	9:23 PM	Jupiter	Jupiter sets
	9:41 PM	9:41 PM	Iridium Flare	CHES:Iridium 59 Flares at mag. 0.4 (Azm 346 Alt 10)
10:05 PM	10:05 PM	Twilight	Astronomical Twilight ends	
10:30 PM	10:30 PM	Iridium Flare	CHES:Iridium 30 Flares at mag.-0.2 (Azm 272 Alt 11)	
31 May 2013	1:01 AM	1:01 AM	Moon	Moonrise
	1:06 AM	1:06 AM	Jup GRS	GRS Transit (CML=190)
	4:03 AM	4:03 AM	Twilight	Astronomical Twilight begins
	4:38 AM	4:38 AM	Iridium Flare	CHES:Iridium 66 Flares at mag. 1.7 (Azm 253 Alt 65)
	5:51 AM	5:51 AM	Sun	Sunrise
	6:00 AM	6:00 AM	Diary	Neptune 5.6S of Moon
	6:49 AM	6:49 AM	Jupiter	Jupiter rises
	11:01 AM	11:01 AM	Jup GRS	GRS Transit (CML=190)
12:55 PM	12:55 PM	Moon	Moonset	

Norfolk Astronomical Society Astronomical Calendar

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

Calendar

	Start	End	Category	Description
31 May 2013	4:00 PM	4:00 PM	Diary	LAST QUARTER
	7:10 PM	7:10 PM	Iridium Flare	CHES:Iridium 20 Flares at mag.-7.1 (Azm 324 Alt 44)
	8:19 PM	8:19 PM	Sun	Sunset
	8:57 PM	8:57 PM	Jup GRS	GRS Transit (CML=190)
	9:20 PM	9:20 PM	Jupiter	Jupiter sets
	9:35 PM	9:35 PM	Iridium Flare	CHES:Iridium 95 Flares at mag.-4.8 (Azm 346 Alt 11)
	10:06 PM	10:06 PM	Twilight	Astronomical Twilight ends
	10:25 PM	10:25 PM	Iridium Flare	CHES:Iridium 57 Flares at mag. 1.1 (Azm 274 Alt 11)