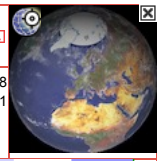
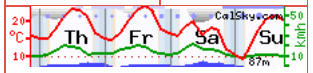
amazon.com and you're done. Sporting Goods 50+ sports Shop now

Select start of calculation:
Date: 1 July 2016
Time: 11 : 51 : 14 Now
Select duration: 10 Seconds
Select interval: 0.2 Seconds go!

mkhan
User Site, Germany
Easting: 8.4418
Northing: 49.8061
Time zone: UTC
Hobby





Weather · Sat-Image

Local Sponsors: Your name?

Central Line of Lunar/Solar Disk Crossing Satellites

Select menu "Sat-Library" to select a distinct satellite.

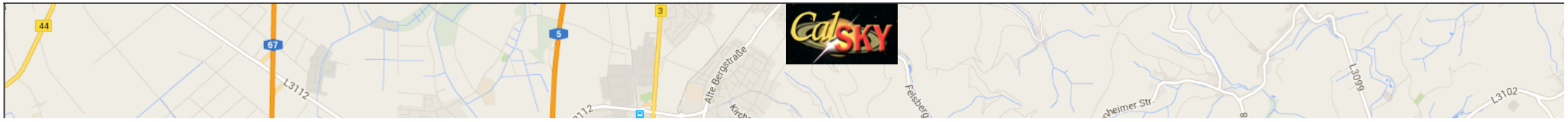
The Satellite passes in front of:	◉ **Sun** ○ Moon ○ Mercury ○ Venus ○ Mars ○ Jupiter ○ Saturn ○ Uranus ○ Neptune ○ Pluto
Maximum distance to center line:	Global calculations: ◉ no restriction restrict to regional predictions within a certain distance to observer (produces less data points): ○ 15 ○ 25 ○ 50 ○ 100 ○ 161 ○ 250 ○ 500 km
Output format:	☐ show compact data table with fewer data
Only show the map:	☐ only the map containing center lines are shown, but no data table (thus longer duration possible)

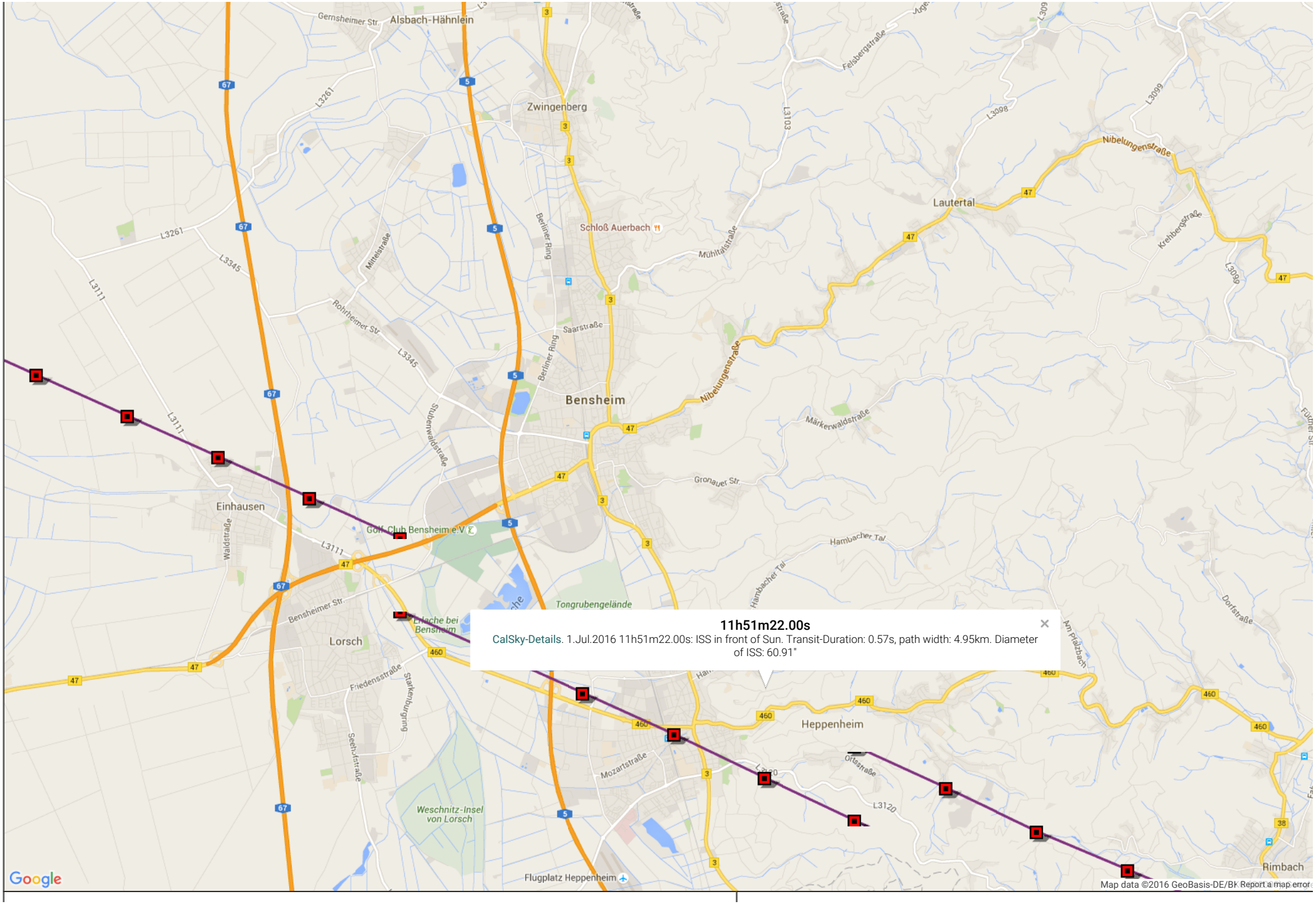
go!

```
Name:          ISS
Launched:      20 Nov 1998
Dimensions:    109 m x 73 m x 27.5 m
Brightness:    -2.0 mag (at 1000 km, 50% illuminated)
               -4.7 mag (at perigee, full illumination)
               Mean magnitude from visual observations
RCS:           402m² (Radar cross section)
USSPACECOM Nr: 25544  Internat. Designator: 1998-067A
Orbit:         403 x 404 km, 92.6min  Inclination: 51.6°
Age Elements:  1.2 days
```

Satellite Menu
- Info
- Orbit History/Zoom
- Sighting Opportunities
- Data & view of the Earth
- Finder Chart
- Ground Track Map
- Transit Centerline
- Orbit Elements (TLE)
- Predicted TLEs

Orbit calculations are based on the valid segment of 146 different orbital segments (orbital data above shown for the beginning of the segment containing the selected start time).





11h51m22.00s

CalSky-Details. 1.Jul.2016 11h51m22.00s: ISS in front of Sun. Transit-Duration: 0.57s, path width: 4.95km. Diameter of ISS: 60.91"

Google Earth GE kml-Download Click on the icon to the left and press "Open" in Windows "File Download" dialog. Zoom in to see the track close to e.g., roads. Different time tags mark visible/invisible (eclipsed) satellite. Click on the popping up CalSky logo to get local circumstances. Change interval/duration on this page to select a different part of the transit line. Delete a track from GE in the "Temporary Places.

GPS Route File for **GARtrip**: Click on the following logos and save file onto your computer. Open file ("**F6**") as format "**IMPORT GARtrip Text**" format. Afterwards upload to GPS receiver with key "**F8**". Select at least "Routes" and remember the Garmin route number. In the GPS receiver **activate this uploaded route**.

Friday 1 July 2016

Time (24-hour clock)	Object (Link)	Event
	Observer Site	User Site, Germany WGS84: Lon: +8d26m30.48s Lat: +49d48m22.28s Alt: 135m Geoid Alt: 87m All times in UTC
11h51m14.2s	ISS on center point of disk of Sun	Lon: 7°55m14sE Lat: +49°51m19s Alt: 116m asl →MapIt Path direction=113.4° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.6° h=62.9° dist=454.5 km
11h51m14.4s	ISS on center point of disk of Sun	Lon: 7°56m22sE Lat: +49°50m59s Alt: 128m asl →MapIt Path direction=113.4° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.7° h=63.0° dist=454.5 km
11h51m14.6s	ISS on center point of disk of Sun	Lon: 7°57m30sE Lat: +49°50m40s Alt: 119m asl →MapIt Path direction=113.4° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.7° h=63.0° dist=454.5 km
11h51m14.8s	ISS on center point of disk of Sun	Lon: 7°58m38sE Lat: +49°50m21s Alt: 126m asl →MapIt Path direction=113.5° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.8° h=63.0° dist=454.4 km
11h51m15.0s	ISS on center point of disk of Sun	Lon: 7°59m46sE Lat: +49°50m02s Alt: 138m asl →MapIt Path direction=113.5° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.8° h=63.0° dist=454.4 km
11h51m15.2s	ISS on center point of disk of Sun	Lon: 8°00m54sE Lat: +49°49m42s Alt: 155m asl →MapIt Path direction=113.5° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.8° h=63.0° dist=454.4 km
11h51m15.4s	ISS on center point of disk of Sun	Lon: 8°02m02sE Lat: +49°49m23s Alt: 152m asl →MapIt Path direction=113.5° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.9° h=63.0° dist=454.4 km
11h51m15.6s	ISS on center point of disk of Sun	Lon: 8°03m10sE Lat: +49°49m04s Alt: 131m asl →MapIt Path direction=113.5° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.8" Satellite at az=189.9° h=63.0° dist=454.4 km
11h51m15.8s	ISS on center point of disk of Sun	Lon: 8°04m17sE Lat: +49°48m45s Alt: 149m asl →MapIt Path direction=113.5° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.0° h=63.0° dist=454.3 km
11h51m16.0s	ISS on center point of disk of Sun	Lon: 8°05m25sE Lat: +49°48m25s Alt: 178m asl →MapIt Path direction=113.5° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.0° h=63.0° dist=454.3 km
11h51m16.2s	ISS on center point of disk of Sun	Lon: 8°06m33sE Lat: +49°48m06s Alt: 182m asl →MapIt Path direction=113.5° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.0° h=63.0° dist=454.3 km
11h51m16.4s	ISS on center point of disk of Sun	Lon: 8°07m41sE Lat: +49°47m47s Alt: 177m asl →MapIt Path direction=113.5° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.1° h=63.0° dist=454.3 km
11h51m16.6s	ISS on center point of disk of Sun	Lon: 8°08m49sE Lat: +49°47m28s Alt: 165m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.1° h=63.0° dist=454.3 km
11h51m16.8s	ISS on center point of disk of Sun	Lon: 8°09m56sE Lat: +49°47m08s Alt: 173m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.2° h=63.0° dist=454.3 km
11h51m17.0s	ISS on center point of disk of Sun	Lon: 8°11m04sE Lat: +49°46m49s Alt: 159m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.2° h=63.0° dist=454.3 km
11h51m17.2s	ISS on center point of disk of Sun	Lon: 8°12m12sE Lat: +49°46m30s Alt: 150m asl →MapIt Path direction=113.6° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.3° h=63.0° dist=454.3 km
11h51m17.4s	ISS on center point of disk of Sun	Lon: 8°13m20sE Lat: +49°46m11s Alt: 152m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.3° h=63.0° dist=454.2 km
11h51m17.6s	ISS on center point of disk of Sun	Lon: 8°14m27sE Lat: +49°45m52s Alt: 155m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.3° h=63.0° dist=454.2 km

	11h51m17.8s	ISS on center point of disk of Sun	Lon: 8°15m35sE Lat: +49°45m32s Alt: 173m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.4° h=63.0° dist=454.2 km
	11h51m18.0s	ISS on center point of disk of Sun	Lon: 8°16m43sE Lat: +49°45m13s Alt: 190m asl →MapIt Path direction=113.6° ESE ground speed=7.385 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.4° h=63.0° dist=454.2 km
	11h51m18.2s	ISS on center point of disk of Sun	Lon: 8°17m50sE Lat: +49°44m54s Alt: 169m asl →MapIt Path direction=113.7° ESE ground speed=7.385 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.5° h=63.0° dist=454.2 km
	11h51m18.4s	ISS on center point of disk of Sun	Lon: 8°18m58sE Lat: +49°44m35s Alt: 149m asl →MapIt Path direction=113.7° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.5° h=63.0° dist=454.2 km
	11h51m18.6s	ISS on center point of disk of Sun	Lon: 8°20m06sE Lat: +49°44m16s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.5° h=63.0° dist=454.2 km
	11h51m18.8s	ISS on center point of disk of Sun	Lon: 8°21m14sE Lat: +49°43m57s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.6° h=63.0° dist=454.2 km
	11h51m19.0s	ISS on center point of disk of Sun	Lon: 8°22m21sE Lat: +49°43m38s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.6° h=63.0° dist=454.2 km
	11h51m19.2s	ISS on center point of disk of Sun	Lon: 8°23m29sE Lat: +49°43m18s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.7° h=63.0° dist=454.2 km
	11h51m19.21s	ISS	**Close to Sun.** Separation=1.125° Position Angle=199.2°, Position angle vertex=191.6° Angular diameter=60.3" size=109.0m x 73.0m x 27.5m Satellite at Azimuth=191.2° S Altitude= 61.8° Distance=458.8 km In a clock-face concept, the satellite will seem to move toward 8:37 Angular Velocity=55.0'/s **Centerline, closest point** →Map: Longitude= 8°23'06"E Latitude=+49°43'25" (WGS84) **Distance=10.05 km** Azimuth=204.0° SSW Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km max. duration=0.6 s
	11h51m19.4s	ISS on center point of disk of Sun	Lon: 8°24m36sE Lat: +49°42m59s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.7° h=63.0° dist=454.2 km
	11h51m19.6s	ISS on center point of disk of Sun	Lon: 8°25m44sE Lat: +49°42m39s Alt: 87m asl →MapIt Path direction=113.8° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.8° h=63.0° dist=454.2 km
	11h51m19.8s	ISS on center point of disk of Sun	Lon: 8°26m51sE Lat: +49°42m20s Alt: 87m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.8° h=63.0° dist=454.2 km
	11h51m20.0s	ISS on center point of disk of Sun	Lon: 8°27m59sE Lat: +49°42m01s Alt: 87m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.8° h=63.0° dist=454.2 km
	11h51m20.2s	ISS on center point of disk of Sun	Lon: 8°29m07sE Lat: +49°41m41s Alt: 87m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.9° h=63.0° dist=454.1 km
	11h51m20.4s	ISS on center point of disk of Sun	Lon: 8°30m14sE Lat: +49°41m22s Alt: 87m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=190.9° h=63.0° dist=454.1 km
	11h51m20.6s	ISS on center point of disk of Sun	Lon: 8°31m21sE Lat: +49°41m02s Alt: 94m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.0° h=63.0° dist=454.1 km
	11h51m20.8s	ISS on center point of disk of Sun	Lon: 8°32m29sE Lat: +49°40m43s Alt: 94m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.0° h=63.0° dist=454.1 km
	11h51m21.0s	ISS on center point of disk of Sun	Lon: 8°33m36sE Lat: +49°40m23s Alt: 95m asl →MapIt Path direction=113.9° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.0° h=63.1° dist=454.1 km
	11h51m21.2s	ISS on center point of disk of Sun	Lon: 8°34m44sE Lat: +49°40m04s Alt: 94m asl →MapIt Path direction=114.0° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.1° h=63.1° dist=454.1 km
	11h51m21.4s	ISS on center point of disk of Sun	Lon: 8°35m51sE Lat: +49°39m44s Alt: 94m asl →MapIt Path direction=114.0° ESE ground speed=7.387 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.1° h=63.1° dist=454.1 km
	11h51m21.6s	ISS on center point of disk	Lon: 8°36m59sE Lat: +49°39m25s Alt: 95m asl →MapIt Path direction=114.0° ESE ground speed=7.387 km/s width=5.0 km

	of Sun	Transit duration=0.57 s diameter=60.9" Satellite at az=191.2° h=63.1° dist=454.0 km
11h51m21.8s	ISS on center point of disk of Sun	Lon: 8°38m06sE Lat: +49°39m05s Alt: 110m asl →MapIt Path direction=114.0° ESE ground speed=7.386 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.2° h=63.1° dist=454.0 km
11h51m22.0s	ISS on center point of disk of Sun	Lon: 8°39m13sE Lat: +49°38m44s Alt: 189m asl →MapIt Path direction=113.9° ESE ground speed=7.384 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.2° h=63.1° dist=453.9 km
11h51m22.2s	ISS on center point of disk of Sun	Lon: 8°40m20sE Lat: +49°38m24s Alt: 247m asl →MapIt Path direction=113.9° ESE ground speed=7.383 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.3° h=63.1° dist=453.8 km
11h51m22.4s	ISS on center point of disk of Sun	Lon: 8°41m27sE Lat: +49°38m04s Alt: 269m asl →MapIt Path direction=113.9° ESE ground speed=7.383 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.3° h=63.1° dist=453.8 km
11h51m22.6s	ISS on center point of disk of Sun	Lon: 8°42m34sE Lat: +49°37m43s Alt: 339m asl →MapIt Path direction=113.9° ESE ground speed=7.381 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.4° h=63.1° dist=453.7 km
11h51m22.8s	ISS on center point of disk of Sun	Lon: 8°43m42sE Lat: +49°37m25s Alt: 272m asl →MapIt Path direction=113.9° ESE ground speed=7.383 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.4° h=63.1° dist=453.8 km
11h51m23.0s	ISS on center point of disk of Sun	Lon: 8°44m50sE Lat: +49°37m06s Alt: 194m asl →MapIt Path direction=114.0° ESE ground speed=7.384 km/s width=5.0 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.5° h=63.1° dist=453.9 km
11h51m23.2s	ISS on center point of disk of Sun	Lon: 8°45m57sE Lat: +49°36m47s Alt: 204m asl →MapIt Path direction=114.0° ESE ground speed=7.384 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.5° h=63.1° dist=453.8 km
11h51m23.4s	ISS on center point of disk of Sun	Lon: 8°47m04sE Lat: +49°36m26s Alt: 288m asl →MapIt Path direction=114.0° ESE ground speed=7.382 km/s width=4.9 km Transit duration=0.57 s diameter=60.9" Satellite at az=191.5° h=63.1° dist=453.7 km
11h51m23.6s	ISS on center point of disk of Sun	Lon: 8°48m10sE Lat: +49°36m02s Alt: 516m asl →MapIt Path direction=113.8° ESE ground speed=7.377 km/s width=4.9 km Transit duration=0.56 s diameter=61.0" Satellite at az=191.6° h=63.1° dist=453.5 km
11h51m23.8s	ISS on center point of disk of Sun	Lon: 8°49m17sE Lat: +49°35m44s Alt: 451m asl →MapIt Path direction=113.9° ESE ground speed=7.379 km/s width=4.9 km Transit duration=0.56 s diameter=61.0" Satellite at az=191.6° h=63.1° dist=453.5 km
11h51m24.0s	ISS on center point of disk of Sun	Lon: 8°50m25sE Lat: +49°35m25s Alt: 388m asl →MapIt Path direction=113.9° ESE ground speed=7.380 km/s width=4.9 km Transit duration=0.56 s diameter=61.0" Satellite at az=191.7° h=63.1° dist=453.6 km

52 Items/Events: Export to Outlook/iCal Print E-mail

Hide glossary

Glossary:

Time

The local time in 24-hour format at which the satellite is visible at its best. The satellite may be observable *before* this time. 0:00 or 0h00m is midnight, 12h is noon, 18h is 6 pm. The time zone is the one indicated on the left of the Earth icon on top of (almost) each page. Daylight saving is applied automatically.

Appears

Local time at which the satellite appears visually. The first figure indicates the **visual brightness** of the object. The smaller the number, the brighter and more eye-catching it appears to an observer. The units are astronomical magnitudes [m]. **Azimuth** is given in degrees counting from geographic north clockwise to the east direction. The three-character direction code is given as well. In case the satellite exits from the Earth shadow and comes into the glare of the Sun, the elevation above horizon is given in degrees for this event. If this figure is omitted, the satellite is visible straight from the horizon.

Culmination

Time at which the satellite reaches his highest point in the sky as seen from the observer. For description of the figures see **Appears**.
Visually "better" passes of satellites are indicated by highlighting the information. The selection within the list of all possible transits is coupled with the observer level, the daylight, and several other conditions.

at Meridian

Time of the transit of the meridian, i.e. the satellite is due South or due North. At this time, the satellite will not reach its highest point of the pass. Look for culmination.

Disappears

Local time of visual disappearance of the satellite. This may either be the time at which the satellite moves below the observer's horizon or the entry of the object in the shadow of Earth (the elevation is given for this event). The low Earth orbiting (LEO) satellites are usually visible for about 10 seconds more than the listed time, when they start fading rapidly.

Magnitude/Mag:

The magnitude indicates the **visual brightness** of an object. The brightest star (Sirius) reaches -1.4m, whereas 6m is the limit of the unaided eye. Venus, the brightest planet, reaches -4m. The Moon at first quarter is -8m, about the same magnitude that the brightest Iridium flares can produce.

Object
The name and identification information of the satellite. Besides the name, the number in the catalog of the USSPACECOM is given (5-digits code, called Satellite, NORAD or NASA Catalog Number and USSPACECOM object number), and the International Designator Code in the form launch year - launch number of the year - launch part (usually one launch produces several orbiting objects). The laster is also called COSPAR designation and NSSDC ID.

Spy Satellites:
Satellites with name **USA** are US military satellites (common names e.g., Keyhole KH, Lacrosse).

Close to Moon/Sun
The satellite is closer than 1.5 degrees from the center of the Moon or the Sun, but the satellite does not cross in front of the Moon/Sun. The direction and distance to the center line on Earth is given. *For the Sun, move to the indicated center line position and observer with proper equipment. By no means observe the Sun without special filters!*

Crosses the disk of Moon/Sun:
The satellite passes in front of the Moon or the Sun; the event may be observed using a small telescope (equipped with special mylar filters for the Sun only!), especially if the event takes place in broad daylight. The direction and distance to the center line on Earth is given. Moon phases are not checked for. The timing may slightly change due to the quality and age of the used orbital elements and active orbit maintenance. *By no means observe the Sun without special filters!* Please feel free to report successful observations!

Separation
Angular distance of an object (e.g., star) with regard of the reference object (e.g., main star or center of moon), measured among the center of figures. Often, this value is given for the closest distance among two objects.

Position Angle / PA
Angle, defining a position on an apparent disk or the position of e.g. a dimmer star (or the anti-solar point for lunar eclipses) with regard of the main star or the center of disk. It is counted around the reference points (center of disk/brighter star) from *celestial north* direction 0° to east (left) 90°, south 180° to west (right) 270° in counter clockwise direction.

Position Angle rel. Vertex / Vertical Position Angle
Angle, defining a position on an apparent disk. It is counted around the reference points (center of disk) from local up, *zenith* direction 0° to east (left) 90°, south 180° to west (right) 270° in counter clockwise direction.

Clock-face Direction
In a simple clock-face coordinate system with the clock face superimposed on the satellite itself, with 12:00 o'clock being at the top and 9:00 o'clock being at the left, the satellite will seem to move toward the given direction. This number is helpful when observing with binoculars.

Daylight pass
This satellite pass over the observer is taking place on broad daylight and cannot be observed without special equipment (automated guided telescope or radio ham equipment).

Radio pass
The satellite is not outside the shadow of Earth during the whole pass (hence not lighted by the Sun) and is therefore not visible. However, using radio equipment, the satellite can be detected.

Ascending/descending Orbit:
Satellites are orbiting around the earth center. Therefore the point on the Earth surface "below" the satellite (i.e., the sub-satellite point) crosses the equator twice every orbit. The part of the orbit with northernbound motion component is called ascending, and a southernbound motion is called descending.

Rise
The satellites rises above the horizon of the observer (cf. **Appear** for visual rising of the satellite).

Set
The satellites sets below the horizon of the observer, but may not have been visible before (cf. **Disappear**).

Side-look
Time at which the observer is passing exactly at the side of the satellite (as seen from the satellite).

Off-Nadir
Angle at which the observer appears from the nadir (down direction) as seen from the satellite.

Squint angle
Angle relative to the satellite orbit; flight direction is 0°. The angle is counted clockwise, with right looking at 90° and left looking at 270°.

Range
Distance to the satellite.

0-Doppler / Zero-Doppler
Time at which the range between satellite and observer does not change, i.e., the range rate is zero.

Forecasted Decay:
All Earth orbiting satellites are exposed to atmospheric drag, which lowers the orbit. Usually, this is countermeasured by frequent firings of the rocket engines - as long there is propulsion available. At an altitude of about 120 km, the objects are destroyed in the atmosphere by a fiery play; the over 100 km long light trace is visible even at daylight. Predications however are difficult. CalSky calculates the evolution of the satellite elements and the time of final decay based on SatEvo by Alan Pickup.

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Database updated 22 min ago

30 Jun 2016, 10:24 UTC

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