



Select start of calculation:

Date: 17 August 2012 ☀

Time: 23:20:00 in TDT **Now**

Select duration:

30 Minutes

geipan
narnhac, France 🏠

Easting: 2.7784
Northing: 44.928
Time zone: CET/CEST

Astronomer

Weather · Sat-Image

Local Sponsors: Your name?

The Calendar-Sky

The astronomical calendar contains **thousands of events per day** for every point on Earth. We know that you only care for a very few of these events and hence we let you personalize your own Astro-Calendar. You may primarily do so by switching to your appropriate user level, and by selecting some of the three dozens categories.























In parentheses are forced limits for the maximum calculation interval. The celestial calendar is to be found further below on this page and will appear within some seconds after pressing the *Go!*-Button (depending on the complexity of your selections). The calendar is created especially for you. The higher your user level, the more complex objects you selected, the longer it does take to calculate. *Please do not press the reload-button*; the calculations will take significantly longer.





















<p>Calendar and Timekeeping</p> <ul style="list-style-type: none"> <input type="checkbox"/> Space Calendar: Birthdays, Rocket Launches <input type="checkbox"/> Local Events (Talks, Exhibitions) <input type="checkbox"/> NASA TV Guide <input type="checkbox"/> Local Telescope Dealers <input type="checkbox"/> Public Holidays <input type="checkbox"/> Saint's Day <input type="checkbox"/> Zodiac of today. Change of Zodiac <input type="checkbox"/> Islamic, Indian, Persian and Hebrew Calendar <input type="checkbox"/> Week Number <input type="checkbox"/> Sundials / GPS Time / Current Time Definitions <input type="checkbox"/> Julian Day Number <input type="checkbox"/> Sidereal Time <input type="checkbox"/> Local Magnetic Field 	<p>General events</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lunar Occultations (2 months) <input checked="" type="checkbox"/> Planetary Conjunctions <input type="checkbox"/> Lunar Eclipses <input type="checkbox"/> Solar Eclipses and Transits <input type="checkbox"/> Meteor Streams <input checked="" type="checkbox"/> Planetary Phenomena <input checked="" type="checkbox"/> Lunar Phenomena <input type="checkbox"/> The Sun <input checked="" type="checkbox"/> Asteroids (6 months) <input type="checkbox"/> Comets 	<p>Earth orbiting satellites</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Space Station ISS (1 month) <input checked="" type="checkbox"/> short duration Flares of Iridium satellites (14 days) <input checked="" type="checkbox"/> Passes of other bright satellites (1 day, slow!) <p>Daily reoccurring events</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Sun and Moon <input checked="" type="checkbox"/> Planets <input type="checkbox"/> Asteroids <input type="checkbox"/> Comets <input type="checkbox"/> Meteor Streams <input type="checkbox"/> Polar Star Transits <input type="checkbox"/> Weather Balloons 	<p>Dimmer and more difficult objects</p> <ul style="list-style-type: none"> <input type="checkbox"/> Jupiter: Great Red Spot and satellite events <input type="checkbox"/> Jupiter's Satellites: position <input type="checkbox"/> Saturn: Satellite events and storms <input type="checkbox"/> Saturn's Satellites: position <input type="checkbox"/> Zodiacal light/Gegenschein <input type="checkbox"/> Variable Stars (3 months) <input type="checkbox"/> Supernovae <input type="checkbox"/> Binary Stars <p>Deep sky objects</p> <ul style="list-style-type: none"> <input type="checkbox"/> Milky Way <input type="checkbox"/> Galaxies <input type="checkbox"/> Open Star Clusters <input type="checkbox"/> Globular Star Clusters <input type="checkbox"/> Nebula
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Friday 17 August 2012

Time (24-hour clock)	Object (Link)	Event
	Observer Site	narnhac, France WGS84: Lon: +2d46m42.39s Lat: +44d55m41.00s Alt: 1047m All times in CET or CEST (during summer)
23h20m00s	 ARGOS (25634) 1999-008-A →Ground track →Star chart	<p>Appears 23h11m49s 4.8mag az:187.8° S h:28.4°</p> <p>Culmination 23h14m35s 4.3mag az:258.4° WSW h:61.0°</p> <p>distance: 944.9km height above Earth: 841.8km elevation of Sun: -22° angular velocity: 0.46°/s</p> <p>Disappears 23h22m23s 9.2mag az:343.0° NNW horizon</p>

23h20m00s	 Cosmos 2441 (33272 2008-037-A) →Ground track →Star chart	Appears 23h16m40s 4.4mag az:198.4° SSW h:31.9° Culmination 23h18m40s 4.2mag az:259.8° W h:54.3° distance: 864.4km height above Earth: 720.9km elevation of Sun: -22° angular velocity: 0.51°/s Disappears 23h25m43s 9.0mag az:342.9° NNW horizon	
23h20m00s	 Cosmos 1328 Rocket (12988 1981-117-B) →Ground track →Star chart	Appears 23h15m54s 4.5mag az: 85.6° E h:49.4° Disappears 23h22m21s 8.7mag az: 14.2° NNE horizon	
23h20m00s	 Terra (25994 1999-068-A) →Ground track →Star chart	Appears 23h17m12s 2.8mag az: 94.6° E h:46.2° Culmination 23h17m46s 2.8mag az: 70.7° ENE h:49.0° distance: 905.2km height above Earth: 708.9km elevation of Sun: -22° angular velocity: 0.48°/s at Meridian 23h21m35s 5.8mag az: 0.0° N h:14.7° Disappears 23h24m40s 7.6mag az:352.2° N horizon	
23h20m00s	 Cosmos 2084 Rocket (20666 1990-055-D) →Ground track →Star chart	Appears 23h17m57s 4.2mag az: 99.9° E h:60.3° Disappears 23h24m15s 7.9mag az: 41.7° NE horizon	
23.3h	 Uranus	Magnitude= 5.8mag Best seen from 22.9h - 5.7h (h _{top} =48° at S at 4.5h) (in constellation Cetus) RA= 0h30m05s Dec= +2°26.3' (J2000) Distance=19.309AU Elongation=137° Diameter=3.6"	
23.3h	 Neptune	Magnitude= 7.8mag Best seen from 23.2h - 5.4h (h _{top} =34° at S at 2.3h) (in constellation Aquarius) RA=22h15m53s Dec=-11°26.0' (J2000) Distance=28.989AU Elongation=173° Diameter=2.3"	
23.3h	 Pluto	Magnitude=14.0mag Best seen from 22.3h - 0.5h (h _{top} =26° at S at 22.5h) (in constellation Sagittarius) RA=18h29m42s Dec=-19°31.5' (J2000) Distance=31.600AU Elongation=132° Diameter=0.1"	
23.3h	 Deep-Sky Observing	Best time interval for observing dim objects: 22.4h- 5.4h (7.0 hours) Prior to midnight	
23h20m48s	 ISS →Ground track →Star chart	Appears 23h15m40s 2.1mag az:300.0° WNW horizon Disappears 23h20m48s -2.9mag az: 9.6° N h:41.4°	
23h20m51s	 HTV-3 (KOUNOTORI 38706 2012-038-A) →Ground track →Star chart	Appears 23h15m42s 9.1mag az:299.9° WNW horizon Disappears 23h20m51s 4.1mag az: 9.6° N h:41.4°	
23h20m51s	 PROGRESS-M 16M (38738 2012-042-A) →Ground track →Star chart	Appears 23h15m42s 9.1mag az:299.9° WNW horizon Disappears 23h20m51s 4.1mag az: 9.6° N h:41.4°	
23h21m35s	 Cosmos 1633 Rocket (15593 1985-020-B) →Ground track →Star chart	Appears 23h15m04s 9.1mag az:346.7° NNW horizon Culmination 23h21m35s 4.3mag az:265.7° W h:55.3° distance: 736.2km height above Earth: 618.7km elevation of Sun: -23° angular velocity: 0.58°/s Disappears 23h22m48s 4.4mag az:213.3° SSW h:40.3°	
23h21m43s	 Cosmos 2322 Rocket (23705 1995-058-B)	Appears 23h13m38s 8.6mag az:333.9° NNW horizon at Meridian 23h21m36s 2.8mag az: 0.0° N h:85.8°	

		<p>→Ground track →Star chart</p>	<p>Culmination 23h21m43s 2.8mag az: 65.1° ENE h:88.2° distance: 840.7km height above Earth: 841.4km elevation of Sun: -23° angular velocity: 0.50°/s Disappears 23h23m15s 2.9mag az:153.2° SSE h:50.6°</p>	
☉	23h22m29s	 Cosmos 1833 Rocket (17590 1987-027-B) →Ground track →Star chart	<p>Appears 23h14m28s 6.4mag az:213.7° SSW horizon Culmination 23h22m29s 3.9mag az:298.7° WNW h:63.0° distance: 931.2km height above Earth: 843.2km elevation of Sun: -23° angular velocity: 0.47°/s at Meridian 23h24m14s 4.7mag az: 0.0° N h:42.4° Disappears 23h30m33s 7.3mag az: 24.0° NNE horizon</p>	
☉	23h23m58s	 Cosmos 1933 Rocket (18959 1988-020-B) →Ground track →Star chart	<p>Appears 23h17m18s 9.5mag az:351.2° N horizon at Meridian 23h23m27s 4.5mag az: 0.0° N h:69.3° Culmination 23h23m58s 4.1mag az: 81.9° E h:86.9° distance: 621.7km height above Earth: 621.9km elevation of Sun: -23° angular velocity: 0.68°/s Disappears 23h24m21s 4.0mag az:161.3° SSE h:73.8°</p>	
☉	23h24m52s	 Cosmos 1315 Rocket (12904 1981-103-B) →Ground track →Star chart	<p>Appears 23h19m03s 8.8mag az:352.6° N horizon Disappears 23h24m52s 3.8mag az: 52.5° NE h:55.7°</p>	
☉	23h25m20s	 Cosmos 1689 Rocket (16111 1985-090-B) →Ground track →Star chart	<p>Appears 23h25m20s 4.2mag az: 42.9° NE h:40.9° Disappears 23h30m28s 8.7mag az:353.9° N horizon</p>	
☉	23h27m51s	 Cosmos 1470 Rocket (14148 1983-061-B) →Ground track →Star chart	<p>Appears 23h21m10s 9.4mag az:352.4° N horizon at Meridian 23h25m40s 6.4mag az: 0.0° N h:29.7° Culmination 23h27m51s 4.1mag az: 80.8° E h:75.2° distance: 653.0km height above Earth: 634.4km elevation of Sun: -23° angular velocity: 0.65°/s Disappears 23h28m01s 4.1mag az:104.8° ESE h:73.9°</p>	
☉	23h28m14s	 Cartosat 1 (28649 2005-017-A) →Ground track →Star chart	<p>Appears 23h28m14s 4.3mag az: 71.8° ENE h:59.9° Disappears 23h34m42s 9.6mag az:350.9° N horizon</p>	
☉	23h30m14s	 USA 122/NOSS 2-3E (23936 1996-029-E) →Ground track →Star chart	<p>Appears 23h22m27s 8.0mag az:227.4° SW horizon Culmination 23h30m14s 5.5mag az:312.7° NW h:63.0° distance: 988.2km height above Earth: 895.4km elevation of Sun: -24° angular velocity: 0.45°/s at Meridian 23h31m22s 5.9mag az: 0.0° N h:52.8° Disappears 23h39m26s 8.7mag az: 37.7° NE horizon</p>	
☉	23h30m51s	 NOSS 3 (C) (11731 1980-019-C) →Ground track →Star chart	<p>Appears 23h30m51s 6.4mag az: 34.5° NE h:54.7° Disappears 23h37m16s 10.3mag az: 38.4° NE horizon</p>	
☉	23h32m53s	 Cosmos 1400 Rocket (13403 1982-079-B) →Ground track →Star chart	<p>Appears 23h26m30s 9.0mag az:349.7° N horizon Disappears 23h32m53s 3.5mag az: 49.8° NE h:81.2°</p>	
☉	23h38m13s	 USA 120/NOSS 2-3C (23908 1996-029-C) →Ground track →Star chart	<p>Appears 23h30m26s 8.1mag az:231.1° SW horizon Culmination 23h38m13s 5.8mag az:314.6° NW h:56.3° distance: 1053.4km height above Earth: 901.1km elevation of Sun: -24° angular velocity: 0.42°/s at Meridian 23h39m36s 6.2mag az: 0.0° N h:45.9°</p>	

		Disappears 23h47m25s 8.8mag az: 37.6° NE horizon	
23h40m00s	 Cosmos 1680 Rocket (16012 1985-079-B) -Ground track -Star chart	Appears 23h32m24s 9.9mag az:337.2° NNW horizon Culmination 23h40m00s 4.1mag az:251.3° WSW h:78.4° distance: 782.6km height above Earth: 769.3km elevation of Sun: -25° angular velocity: 0.54°/s Disappears 23h40m45s 4.1mag az:187.1° S h:64.4°	
23h41m14s	 Cosmos 2322 (23704) 1995-058-A) -Ground track -Star chart	Appears 23h33m03s 10.0mag az:336.2° NNW horizon at Meridian 23h39m16s 5.9mag az: 0.0° N h:39.0° Culmination 23h41m14s 4.6mag az: 60.6° ENE h:59.9° distance: 972.5km height above Earth: 858.5km elevation of Sun: -25° angular velocity: 0.44°/s Disappears 23h42m06s 4.5mag az: 98.6° E h:53.4°	
23h42m54s	 Cosmos 540 Rocket (06324 1972-104-B) -Ground track -Star chart	Appears 23h35m20s 9.8mag az:339.6° NNW horizon at Meridian 23h41m57s 4.7mag az: 0.0° N h:58.7° Culmination 23h42m54s 4.0mag az: 68.4° ENE h:77.5° distance: 775.9km height above Earth: 760.5km elevation of Sun: -25° angular velocity: 0.55°/s Disappears 23h43m18s 4.0mag az:115.3° ESE h:72.0°	
23h45m05s	 Cosmos 2360 Rocket (25407 1998-045-B) -Ground track -Star chart	Appears 23h37m10s 8.4mag az:338.7° NNW horizon at Meridian 23h41m54s 5.6mag az: 0.0° N h:21.6° Culmination 23h45m05s 3.7mag az: 55.7° NE h:39.0° distance: 1245.9km height above Earth: 850.3km elevation of Sun: -25° angular velocity: 0.34°/s Disappears 23h45m58s 3.6mag az: 77.5° ENE h:36.7°	
23h48m54s	 USA 194/NOSS 3-4A (31701 2007-027-A) -Ground track -Star chart	Appears 23h39m31s 7.3mag az:228.9° SW horizon Culmination 23h48m54s 4.9mag az:313.0° NW h:60.9° distance: 1187.0km height above Earth: 1060.3km elevation of Sun: -26° angular velocity: 0.37°/s at Meridian 23h50m21s 5.3mag az: 0.0° N h:50.3° Disappears 23h58m19s 7.8mag az: 37.6° NE horizon	
23h49m00s	 USA 194-2/NOSS 3-4C (31708 2007-027-C) -Ground track -Star chart	Appears 23h39m35s 7.3mag az:228.7° SW horizon Culmination 23h49m00s 4.9mag az:312.9° NW h:61.3° distance: 1184.7km height above Earth: 1062.3km elevation of Sun: -26° angular velocity: 0.37°/s at Meridian 23h50m26s 5.3mag az: 0.0° N h:50.8° Disappears 23h58m26s 7.8mag az: 37.6° NE horizon	
23h49m07s	 Cosmos 1515 Rocket (14552 1983-122-B) -Ground track -Star chart	Appears 23h49m04s 4.4mag az:272.8° W h:73.5° Culmination 23h49m07s 4.4mag az:279.4° W h:73.6° distance: 663.2km height above Earth: 639.6km elevation of Sun: -26° angular velocity: 0.67°/s at Meridian 23h51m31s 6.6mag az: 0.0° N h:27.1° Disappears 23h55m52s 9.1mag az: 7.4° N horizon	
23h49m43s	 Cosmos 2221 (22236) 1992-080-A) -Ground track -Star chart	Appears 23h48m39s 4.4mag az:246.8° WSW h:34.9° Culmination 23h49m43s 4.5mag az:283.5° WNW h:41.7° distance: 872.2km height above Earth: 611.2km elevation of Sun: -26° angular velocity: 0.51°/s at Meridian 23h55m07s 7.9mag az: 0.0° N h:4.2° Disappears 23h56m10s 8.2mag az: 2.7° N horizon	

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

Used satellite data set is from 18 August 2012

 Hide glossary

Glossary:

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.

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.

Azimuth/az

Azimuth direction of the object is given in degrees counting from geographic north (0°) clockwise to the east direction. East is 90°, south 180°, and west 270°. The three-character direction code is given as well. For example, NNW stands for north-north-west.



Best seen between / hmax

This is the best visibility time interval of the object, and the time is rounded to the next decimal hour; e.g. 6.4h corresponds to about 6:15 (hh:mm) to 6:20, and 18.9h to about 18:50 to 18:55. The calculation takes into account the magnitude of the object (required elevation above horizon), and the elevation of the Sun. The time is given in local civil time (LCT), i.e., the time zone and definitions as selected by you. h_{max} is the maximum altitude over the horizon, that the object reaches during this time period.

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.

Dec., declination, DE

One coordinate used to indicate the position on the sky. It is the angular distance of the object from the celestial equator. North pole, close to Polaris, is 90° north.

Diameter

Diameter is the geocentric apparent angular diameter of a celestial object (topocentric for artificial satellites). The value is given in seconds of arc for planets and satellites, and in minutes of arc for Sun and Moon.

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.

Elongation

The elongation is the angular separation a celestial body and the central body (Sun, for moons: Jupiter or Saturn), as seen from the Earth mass center.

International Space Station ISS

The manned ISS is according to NASA the biggest and most complex scientific project in history. During twilight passed, the space station is easily seen by everyone as a strikingly bright and silently running star. It crosses the sky in a few minutes basically from west to east.

J2000, precession, nutation

The plains of ecliptic and equator shift with time by perturbations from the Sun, Moon and planets. The long-term shift is called precession; the short periodic variations are called nutation. The given celestial coordinates are referred to the true direction of the vernal equinox and the true obliquity of the ecliptic to the standard reference time 1 January 2000. For this date many star charts and coordinate tables are printed.

Magnitude/Mag

Brightness of an object considered as a point source of light, on a logarithmic scale. Visual limiting magnitude is about 6mag, whereas the brightest star Sirius reaches -1.4mag. The Hubble Space Telescope can image objects as dim as 29mag.

R.A., right ascension, RA

One coordinate used to indicate the position on the sphere. It is the angular distance of the object from the spring equinox measured along the celestial equator, expressed in hours of arc.

Time and Date

Date of validity of calculated output in local time and date, taking into account daylight saving time as well (see the current time zone on the left of the Earth icon on top right of almost all pages). The time is given as hours:minutes:seconds, or 00h00m00s. The time may also be rounded and given in decimal form, in order to correspond to the accuracy of the calculation: e.g., 10.1h means that the event will take place at about 5 minutes past 10 o'clock. This may also happen for days: 4.3d corresponds to the fourth day at around 7 o'clock. The start time is taken as selected by you, i.e., this is *not* necessarily at midnight. For intervals shorter than one day, decimal days are given. Times are given in 24 hour format (0h00m is midnight, 12h: noon, 18h: 6 pm.)

WGS84 / Geographical Coordinates

Geographical coordinates are given by the angles longitude (Lon), latitude (Lat), and altitude in meters (Alt). A place north of the equator at marked by N or +, places south of the equator by S or -. The longitude from the meridian of Greenwich is counted positive towards east (E). Places west from Greenwich are marked W or by -. The geographical coordinates refer to an ellipsoid, which fits the true shape of the Earth (geoid). The geoid corresponds to calm sea surface. The keyword "Geographic:" uses the local ellipsoid as reference system. WGS84 mark coordinates referring to the WGS84 ellipsoid. The difference in altitude to the geoid sums up to 100 meters and is called geoid undulation. This is corrected for when tagged "MSL" (mean sea level), such that the origin of the height system is at sea level.



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Software Version: 23 January 2014
Database updated 12 min ago
Current Users: 170

29 Jan 2014, 15:44 UTC
598 minutes left for this session / Mode for our
sponsors

