Select start of calculation:

Date: 23 August 2012

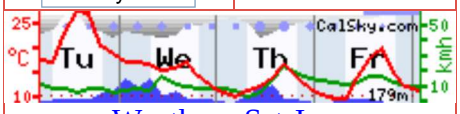
Time: 22 : 30 : 00 Now

Select duration: 1 Hour go!

lyon, France

Easting:	4.8356
Northing:	45.764
Time zone:	CET/ CEST

Hobby



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.

Calendar and Timekeeping

- ☑ Space Calendar: Birthdays, Rocket Launches
- ☐ Local Events (Talks, Exhibitions)
- ☑ NASA TV Guide
- ☐ Local Telescope Dealers
- ☐ Public Holidays
- ☐ Saint's Day
- ☐ Zodiac of today. Change of Zodiac
- ☐ Islamic, Indian, Persian and Hebrew Calendar
- ☐ Week Number

General events

- ☑ Lunar Occultations (2 months)
- ☑ Planetary Conjunctions
- ☑ Lunar Eclipses
- ☑ Solar Eclipses and Transits
- ☑ Meteor Streams
- ☑ Planetary Phenomena
- ☑ Lunar Phenomena
- ☑ The Sun
- ☐ Asteroids (6 months)
- ☐ Comets

Earth orbiting satellites

- ☑ Space Station ISS (1 month)

short duration

- ☑ Flares of Iridium satellites (14 days)
- ☑ Passes of other bright satellites (*7 days*, slow!)

Daily reoccurring events

- ☑ Sun and Moon
- ☑ Planets
- ☑ Asteroids
- ☑ Comets
- ☑ Meteor Streams
- ☐ Polar Star Transits
- ☐ Weather Balloons

Dimmer and more difficult objects

- ☑ Jupiter: Great Red Spot and satellite events
- ☐ Jupiter's Satellites: position
- ☐ Saturn: Satellite events and storms
- ☐ Saturn's Satellites: position
- ☐ Zodiacal light/Gegenschein
- ☐ Variable Stars (3 months)
- ☐ Supernovae
- ☐ Binary Stars

Deep sky objects

- Sundials / GPS
- Time / Current Time Definitions
- Julian Day Number
- Sidereal Time
- Local Magnetic Field
- Milky Way
- Galaxies
- Open Star Clusters
- Globular Star Clusters
- Nebula

go!

Thursday 23 August 2012

Time (24-hour clock)	Object (Link)	Event
	Observer Site	**lyon, France** **WGS84: Lon: +4d50m08.4s Lat: +45d45m50.6s Alt: 229m** **All times in CET or CEST (during summer)**
22h30m00s	**99025CVT (32221 1999-025-CVT)** →Ground track →Star chart	**Appears 22h26m33s 3.2mag az:145.0° SE h:29.2°** **Culmination 22h29m19s 2.5mag az: 71.7° ENE h:66.1°** **distance: 915.7km height above Earth: 846.9km** **elevation of Sun: -18° angular velocity: 0.47°/s** **at Meridian 22h31m54s 4.3mag az: 0.0° N h:31.9°** **Disappears 22h37m14s 7.2mag az:349.0° N horizon**
22.5h	♂ **Mars**	**Magnitude= 1.2mag Best seen from 21.1h -22.5h (h_{top}=14° at SW at 21.1h) (in constellation Virgo)** **RA=13h50m52s Dec=-11°51.2' (J2000)** **Distance=1.760AU Elongation= 59° Phase k=90%** **Diameter=5.3" planetographic latitude of the Earth=21.7°**
22.5h	♄ **Saturn**	**Magnitude= 0.8mag Best seen from 21.1h -22.6h (h_{top}=15° at WSW at 21.1h) (in constellation Virgo)** **RA=13h37m20s Dec= -7°37.2' (J2000)** **Distance=10.311AU Elongation= 54° Diameter=16.0"** **planetocentric latitude of the Earth=13.8°**
22.5h	**Deep-Sky Observing**	**Best time interval for observing dim objects: 22.2h- 5.4h** **Prior to midnight**
22h30m11s	USA 129/KH 12-3 (24680 1996-072-A) →Ground track →Star chart	**Appears 22h26m13s** 6.4mag az:182.5° S h:15.1° **Culmination 22h30m11s 5.1mag** az:258.9° **W h:57.2°** distance: 795.0km height above Earth: 681.8km elevation of Sun: -19° angular velocity: 0.55°/s **Disappears 22h36m33s** 9.5mag az:343.2° NNW horizon Time uncertainty of about 1 seconds
22h35.4m	♂ Mars	Set Azimuth=253.4°, WSW (in constellation Virgo)
22h40.0m	♄ Saturn	Set Azimuth=259.5°, W (in constellation Virgo)
22h43m19s	USA 182/Lacrosse 5 (28646 2005-016-A) →Ground track →Star chart	**Appears 22h36m17s** 7.3mag az:273.0° W horizon **Culmination 22h43m19s 4.9mag** az:343.9° **NNW h:27.5°** distance: 1348.9km height above Earth: 724.1km elevation of Sun: -20° angular velocity: 0.33°/s **at Meridian 22h44m07s** 4.7mag az: 0.0° N h:26.3° **Disappears 22h50m21s** 5.7mag az: 55.0° NE

		horizon
22h46m59s	USA 186/KH (28888 2005-042-A) →Ground track →Star chart	**Appears** **22h46m38s** 3.6mag az:135.4° SE h:70.2° **Culmination** **22h46m59s** **3.7mag** az: 74.9° **ENE h:80.0°** distance: 528.1km height above Earth: 521.0km elevation of Sun: -21° angular velocity: 0.85°/s **at Meridian** **22h47m44s** 4.6mag az: 0.0° N h:55.4° **Disappears** **22h53m44s** 9.5mag az:348.3° NNW horizon Time uncertainty of about 2 seconds 
22h55m51s	Cosmos 1666 (15889 1985-058-A) →Ground track →Star chart	**Appears** **22h55m51s** 3.3mag az: 94.2° E h:73.6° **Disappears** **23h01m58s** 8.0mag az: 11.1° N horizon 
22h58m17s	IGS 5 H2A Rocket (36105 2009-066-B) →Ground track →Star chart	**Appears** **22h57m21s** 3.2mag az:201.5° SSW h:47.9° **Culmination** **22h58m17s** **3.1mag** az:259.0° **W h:64.5°** distance: 646.3km height above Earth: 589.2km elevation of Sun: -22° angular velocity: 0.68°/s **Disappears** **23h04m38s** 8.3mag az:345.0° NNW horizon 
23h00m09s	**ISS** →Ground track →Star chart	**Appears** **22h55m56s** **1.7mag** **az:288.2° WNW horizon** **Disappears** **23h00m09s** **-1.6mag** **az:239.1° WSW h:16.8°** 
23h01m16s	Yaogan 1 LM Rocket (29093 2006-015-B) →Ground track →Star chart	**Appears** **23h01m16s** 3.2mag az: 26.1° NNE h:38.2° **Disappears** **23h05m44s** 7.5mag az:352.5° N horizon 
23h04m52s	USA 216/SBSS 1 (37168 2010-048-A) →Ground track →Star chart	**Appears** **22h58m17s** 9.2mag az: 10.8° N horizon **at Meridian** **23h03m19s** 6.3mag az: 0.0° N h:38.9° **Culmination** **23h04m52s** **5.0mag** az:285.7° **WNW h:72.7°** distance: 663.3km height above Earth: 636.2km elevation of Sun: -23° angular velocity: 0.63°/s **Disappears** **23h06m23s** 5.4mag az:211.9° SSW h:39.9° 
23.3h	Uranus	Magnitude= 5.7mag Best seen from 23.3h - 5.4h (h_{top}=47° at S at 4.0h) (in constellation Cetus) RA= 0h29m28s Dec= +2°22.2' (J2000) Distance=19.246AU Elongation=143° Diameter=3.6"
23h22m11s	Cosmos 2428 (31792 2007-029-A) →Ground track →Star chart	**Appears** **23h14m01s** 9.0mag az:332.5° NNW horizon **Culmination** **23h22m11s** **3.3mag** az:245.9° **WSW h:82.2°** distance: 864.4km height above Earth: 857.6km elevation of Sun: -25° angular velocity: 0.49°/s **at Meridian** **23h22m47s** 3.2mag az:180.0° S h:71.3° **Disappears** **23h23m12s** 3.3mag az:170.7° S h:61.3° 

23h24.3m	**Moon**	**Set Azimuth=242.0°, WSW (in constellation Libra)**
23h26m15s	ALOS (28931 2006-002-A) →Ground track →Star chart	**Appears 23h25m52s** 3.0mag az:223.3° SW h:65.7° **Culmination 23h26m15s 3.1mag** az:257.9° **WSW h:69.6°** distance: 740.2km height above Earth: 698.8km elevation of Sun: -25° angular velocity: 0.59°/s **Disappears 23h33m14s** 8.4mag az:345.0° NNW horizon
23h28m21s	E-Star (38079 2012-006-C) →Ground track →Star chart	**Appears 23h23m47s** 5.6mag az:341.7° NNW horizon **Disappears 23h28m21s** 2.4mag az: 27.8° NNE h:14.0° Time uncertainty of about 3 seconds

20 Items/Events: Export to Outlook/iCal Print

Used satellite data set is from 22 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 / h_{max}

This is the best visibility time interval of the object. 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 of the (ecliptic) longitudes of 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.

Phase

Ratio of the illuminated fraction of the apparent planetary or lunar disk to its entire area.

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: 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.

Top

Create new default account/Login

Software Version: 03 September 2012
Database updated 9 min ago
Current Users: 206

11 Sep 2012, 7:11 UTC
38 minutes left for this session