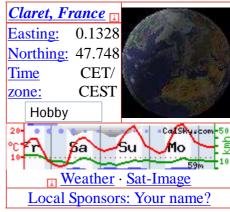


## **Select start of calculation:**





# 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		General events		Earth orbiting		Dimmer and more	
Timekeeping			<b>Lunar Occultations</b>	satellites		difficult objects	
	Space Calendar:		(2 months)	~	Space Station ISS (1		Jupiter: Great Red
	Birthdays, Rocket		Planetary		month)		Spot and satellite
	Launches		Conjunctions		short duration		events
	Local Events		Lunar Eclipses		Flares of Iridium		Jupiter's Satellites:
	(Talks, Exhibitions)		Solar Eclipses and		satellites (14 days)		position
	NASA TV Guide		Transits	Dai	Passes of other		Saturn: Satellite
	Local Telescope		Meteor Streams		bright satellites (7		events and storms
	Dealers		Planetary		days, slow!)		Saturn's Satellites:
	Public Holidays		Phenomena		ly reoccurring		position
	Saint's Day		Lunar Phenomena	events			Zodiacal
	Zodiac of today.		The Sun Asteroids (6 months)		Sun and Moon		light/Gegenschein
	Change of Zodiac			Planets		Variable Stars (3	
	Islamic, Indian,				Asteroids		months)
	Persian and Hebrew		Comets		Comets		Supernovae
	Calendar		Comets		Meteor Streams		Binary Stars
	Week Number				Polar Star Transits	Dee	ep sky objects
					Weather Balloons		

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- Sundials / GPS
- □ Time / Current Time Definitions
- Julian Day Number
- Sidereal Time
- Local Magnetic
  - Field

- Galaxies
- Open Star Clusters
- Globular Star Clusters
- Nebula



## Wednesday 22 August 2012

Time (24-hour clock)	Object (Link)	Event
89	Observer Site	Claret, France WGS84: Lon: +0d07m58.2s Lat: +47d44m52.9s Alt: 106m All times in CET or CEST (during summer)
<sup>SS</sup> 22h16m10s	<u>ISS</u> →Ground track  →Star chart	Appears 22h10m43s 3.5mag az:292.9° WNW horizon Culmination 22h16m10s -3.8mag az:208.8° SSW h:63.4° distance: 473.9km height above Earth: 427.1km elevation of Sun: -13° angular velocity: 0.92°/s at Meridian 22h16m26s -4.0mag az:180.0° S h:60.2° Disappears 22h18m11s -2.8mag az:132.5° SE h:21.9°

2 Items/Events: SExport to Outlook/iCal Export to Outlook/iCal

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°. **W** The three-character direction code is given as well. For example, NNW stands for north-north-west.



#### Culmination

Time at which the satellite reaches his highest point in the sky as seen from the observer. For description of the figures see

Visually "better" passes of satellites are indicated by highlighting the



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information. The selection within the list of all possible transits is coupled with the observer level, the daylight, and several other conditions.

## **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.

### **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.

## **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.

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Happy User Donation

Software Version: 23 August 2012 Database updated 0 min ago Current Users: 144 31 Aug 2012, 17:32 UTC 36 minutes left for this session



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