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**Select start of calculation:**  
 Date: 25 September 2008  
 Time: 20:30:00:00  in TDT   
**Select duration:** 3 Hours

## 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><b>Calendar and Timekeeping</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Space Calendar: Birthdays, Rocket Launches</li> <li><input type="checkbox"/> Local Events (Talks, Exhibitions)</li> <li><input type="checkbox"/> NASA TV Guide</li> <li><input type="checkbox"/> Local Telescope Dealers</li> <li><input type="checkbox"/> Public Holidays</li> <li><input type="checkbox"/> Saint's Day</li> <li><input type="checkbox"/> Zodiac of today. Change of Zodiac Islamic, Indian, Persian and Hebrew Calendar</li> <li><input type="checkbox"/> Week Number</li> <li><input type="checkbox"/> Sundials / GPS Time / Current Time Definitions</li> <li><input type="checkbox"/> Julian Day Number</li> <li><input type="checkbox"/> Sidereal Time</li> <li><input type="checkbox"/> Local Magnetic Field</li> </ul>	<p><b>General events</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lunar Occultations (2 months)</li> <li><input type="checkbox"/> Planetary Conjunctions</li> <li><input type="checkbox"/> Lunar Eclipses</li> <li><input type="checkbox"/> Solar Eclipses and Transits</li> <li><input type="checkbox"/> Meteor Showers</li> <li><input type="checkbox"/> Planetary Phenomena</li> <li><input type="checkbox"/> Lunar Phenomena</li> <li><input type="checkbox"/> The Sun</li> <li><input type="checkbox"/> Asteroids (6 months)</li> <li><input type="checkbox"/> Comets</li> </ul>	<p><b>Earth orbiting satellites</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Space Station ISS (1 month)</li> <li><input type="checkbox"/> short duration Flares of Iridium satellites (14 days)</li> <li><input type="checkbox"/> Passes of other bright satellites (1 day, slow!)</li> </ul> <p><b>Daily reoccurring events</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Graphical night calendar</li> <li><input type="checkbox"/> Sun and Moon</li> <li><input type="checkbox"/> Planets</li> <li><input type="checkbox"/> Asteroids (7 days)</li> <li><input type="checkbox"/> Comets</li> <li><input type="checkbox"/> Meteor Showers</li> <li><input type="checkbox"/> Polar Star Transits</li> <li><input type="checkbox"/> Weather Balloons</li> </ul>	<p><b>Dimmer and more difficult objects</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Jupiter: Great Red Spot and satellite events</li> <li><input type="checkbox"/> Jupiter's Satellites: position</li> <li><input type="checkbox"/> Saturn: Satellite events and storms</li> <li><input type="checkbox"/> Saturn's Satellites: position</li> <li><input type="checkbox"/> Zodiacal light/Gegenschein</li> <li><input type="checkbox"/> Variable Stars (3 months)</li> <li><input type="checkbox"/> Supernovae</li> <li><input type="checkbox"/> Binary Stars</li> </ul> <p><b>Deep sky objects</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Star chart</li> <li><input type="checkbox"/> Milky Way</li> <li><input type="checkbox"/> Galaxies</li> <li><input type="checkbox"/> Open Star Clusters</li> <li><input type="checkbox"/> Globular Star Clusters</li> <li><input type="checkbox"/> Nebula</li> </ul>
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### Thursday 25 September 2008

Time (24-hour clock)	Object (Link)	Event
	Observer Site	VILLE-ES-NONAIIS LA 35, France WGS84: Lon: -1d57m05.39s Lat: +48d33m02.53s Alt: 97m All times in CET or CEST (during summer)
20h57m37s <small>ET-UT1=65.67s</small>		<b>Appears horizon</b> 20h52m40s      2.0mag      az:253.0° WSW



	 ISS <a href="#">→Ground track</a> <a href="#">→Star chart</a>	<b>Culmination</b> 20h57m37s -4.2mag az:341.3° NNW <b>h:74.0°</b> distance: 370.2km height above Earth: 356.7km elevation of Sun: -11° angular velocity: 1.23°/s <b>at Meridian</b> 20h57m42s -4.3mag az: 0.0° N h:73.2° <b>Disappears</b> 21h00m07s -2.4mag az: 66.6° ENE h:13.6°	
 22h31m42s ET-UT1=65.67s	 ISS <a href="#">→Ground track</a> <a href="#">→Star chart</a>	<b>Appears</b> 22h28m17s 1.8mag az:279.6° W horizon <b>Disappears</b> 22h31m42s -1.2mag az:300.7° WNW <b>h:22.5°</b>	

3 Items/Events: [Export to Outlook/iCal](#) [Print](#) [E-mail](#)  
 Used satellite data set is from 27 September 2008

Hide glossary

### Glossary:

#### Appears

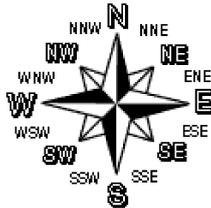
Local time at which the satellite appears visually. The first figure indicates the **visual brightness** of the object. The smaller the number, the brighter and more eye-catching it appears to an observer. The units are astronomical magnitudes [m]. **Azimuth** is given in degrees counting from geographic 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.



#### 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.

#### 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, 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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