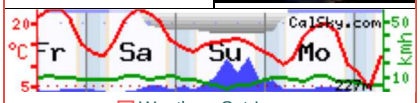
Select start of calculation:
Date: 6 June 2013
Time: 22 : 00 : 00 Now
Select duration: 3 Hours go!

geipan
St Max 54 , France
Easting: 6.2064
Northing: 48.7055
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
- ☐ Sundials / GPS Time / Current Time Definitions
- ☐ Julian Day Number
- ☐ Sidereal Time
- ☐ Local Magnetic Field

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
- ☐ Milky Way
- ☐ Galaxies
- ☐ Open Star Clusters
- ☐ Globular Star Clusters
- ☐ Nebula

go!

Thursday 6 June 2013

Time (24-hour clock)	Object (Link)	Event
	Observer Site	**St Max 54 , France** **WGS84: Lon: +6d12m23.11s Lat: +48d42m19.84s Alt: 275m** **All times in CET or CEST (during summer)**
22h59m53.88s	ISS	**Close to Arcturus, Alp Boo (SAO 100944, HIP 69673 HD124897), Magnitude=-0.1mag.** Separation=0.546° Position Angle=335.1°, Position angle vertex=331.7° Angular diameter=59.0" size=109.0m x 73.0m x 27.5m Satellite at Azimuth=185.4° S Altitude= 60.8° Distance=468.5 km **Magnitude=-4.1mag** In a clock-face concept, the satellite will seem to move toward 9:57 Angular Velocity=52.6'/s

		Centerline, closest point →Map: Longitude= 6°10'35"E Latitude=+48°44'44" (WGS84) **Distance=4.97 km** Azimuth=333.7° NNW Path direction= 63.0° ENE ground speed=7.441 km/s Sun elevation=-11° Elongation from Sun=122°
23h00m10s	**ISS** →Ground track →Star chart	**Appears 22h54m50s -0.1mag az:238.3° WSW horizon** **at Meridian 22h59m57s -4.1mag az:180.0° S h:62.1°** **Culmination 23h00m10s -4.2mag az:153.7° SSE h:64.7°** **distance: 454.0km height above Earth: 413.4km elevation of Sun: -11° angular velocity: 0.93°/s** **Disappears 23h05m33s -0.4mag az: 69.3° ENE horizon**

Friday 7 June 2013

Time (24-hour clock)	Object (Link)	Event
0h36m58s	**ISS** →Ground track →Star chart	**Appears 0h31m37s 0.1mag az:269.9° W horizon** **Culmination 0h36m58s -2.9mag az:353.3° N h:50.9°** **distance: 524.6km height above Earth: 415.5km elevation of Sun: -17° angular velocity: 0.81°/s** **at Meridian 0h37m03s -2.9mag az: 0.0° N h:50.7°** **Disappears 0h42m21s -0.1mag az: 76.7° ENE horizon**

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

Hide glossary

Glossary:

Altitude/alt/h
Angular separation of the object from the local mathematical horizon. This accounts for refraction as well.

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 t he 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.

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!*

Close to...
The Moon or main object appears close to the listed star or planet. These events may be useful for reasons of 'near miss' or to make it easier to find the fainter object in the sky. Usually, such constellations give a nice view.

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.

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.

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.

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.

Position Angle rel. Vertex

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.

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.

Separation

Angular distance between the centers of disks of two objects. For eclipses: the Sun and the Moon. For occultations: Moon/satellite and Star/Planet. For binary stars: Star/Star

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.

Top

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