



Stars as seen from the observer. Visual limiting magnitude: 5.5 mag

Time:

Thursday, 25 July 2013, 00h 04m 15.75s JD: **2456498.4196267** TDT: 2456498.4204036 deltaT: 67.13 sec leap seconds: 35 sec Apparent sidereal time: Local: 18h 07m 18.941s Greenwich: 18h 15m 25.103s Mean sidereal time: Local: 18h 07m 18.132s Greenwich: 18h 15m 24.294s Local solar time: Mean: 21h 56m 09.582s True: 21h 49m 39.368s Equation of Time: - 6m 30.21s (Times in **CEST, UTC+02:00**, topocentric data for **ST Malo, France**)

Map Center:

	Azimuth direction:	83.55° E (East)			
	Altitude:	89.94°			
	Right Ascension:	18h 07m 42.242s Apparent	coordinates		
	Declination:	+ 48° 39' 23.54" Apparent	coordinates		
	Right Ascension:	18h 07m 18.941s J2000			
	Declination:	+ 48° 38' 57.61" J2000			
	Elongation from Sun center: 105.77°				
	Elongation from Moon center: 76.96°				
	Directory by my (Animuth: 200 70 NDM)				
	Rises:				
	Transit: Un UUM 43s on following day(Altitude: +89.99°)				
	Sets:hm (Azimuth: 338.7° NNW)				
	Opposition in P A	23 June 2013 3h	23m CEST Elongation: 107.99		
	Conjunction in R A	23. December 2013	11h 20m CET Elongation: 72 19		
	conjunction in k.A	23. December 2013	III 52m CEI EIONGACION: 72.1		
~					
Sur	1:				

Altitude: -15.7° Azimuth: 328.2°

Moon:

Altitude: 13.0° Azimuth: 116.8° Phase, illum. fraction: 93.1% (geocentric)

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Positions are shown in topocentric (for objects within the solar system, geocentric otherwise) astrometric (airfree) equatorial coordinates at equinox J2000.0 (Right Ascension/Declination) and epoch of date given. Stereoscopic projection is used for the star chart. If you zoom into a field of view in order of minutes of arc, you will get a fantastic photographic background image from the Digitized Sky Survey (DSS) from the Mount Palomar observatory.

Pointing the mouse to targets reveals their names - the higher the selected user level, the more features are labeled. The highest level "Astronomer" displays all object names. You can switch





Stars as seen from the observer. Visual limiting magnitude: 5.5 mag

Time:

Thursday, 25 July 2013, 00h 04m 21.13s JD: **2456498.4196890** TDT: 2456498.4204660 deltaT: 67.13 sec leap seconds: 35 sec Apparent sidereal time: Local: 18h 07m 24.340s Greenwich: 18h 15m 30.502s Mean sidereal time: Local: 18h 07m 23.531s Greenwich: 18h 15m 29.693s Local solar time: Mean: 21h 56m 14.967s True: 21h 49m 44.753s Equation of Time: - 6m 30.21s (Times in **CEST, UTC+02:00**, topocentric data for **ST Malo, France**)

Map Center:

	Azimuth direction:	83.53° E (East) 89 940				
	Right Ascension: Declination:	<pre>18h 07m 47.642s Apparent coordinates + 48° 39' 23.65" Apparent coordinates</pre>				
	Right Ascension: Declination:	18h 07m 24.340s J2000 + 48° 38' 57.61" J2000				
	Elongation from Sun center: 105.78° Elongation from Moon center: 76.94° Rises:hm (Azimuth: 338.7° NNW) Transit: Oh OOm 48s on following day(Altitude: +89.99°) Sets:hm (Azimuth: 338.7° NNW)					
	Opposition in R.A. Conjunction in R.A	: 23. June 2013 4h 04m CEST Elongation: 107.9° : 23. December 2013 12h 01m CET Elongation: 72.1°				
Su	n:					
	Altitude: Azimuth:	-15.8° 328.2°				

Moon:

Altitude:			13.0°		
Azimuth:			116.8°		
Phas	e,	illum.	fraction:	93.1%	(geocentric

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Time:

Thursday, 25 July 2013, 00h 04m 34.25s JD: **2456498.4198408** TDT: 2456498.4206178 deltaT: 67.13 sec leap seconds: 35 sec Apparent sidereal time: Local: 18h 07m 37.492s Greenwich: 18h 15m 43.653s Mean sidereal time: Local: 18h 07m 36.683s Greenwich: 18h 15m 42.845s Local solar time: Mean: 21h 56m 28.082s True: 21h 49m 57.868s Equation of Time: - 6m 30.21s (Times in **CEST, UTC+02:00**, topocentric data for **ST Malo, France**)

Map Center:

	Azimuth direction: Altitude:	83.47° 89.94°	E (East	.)			
	Right Ascension: Declination:	18h 08m + 48° 3	00.795s 39' 23.90"	Apparent Apparent	coordinat	es es	
	Right Ascension: Declination:	18h 07m + 48° 3	37.492s 88' 57.61"	J2000 J2000			
	Elongation from Sun center: 105.80° Elongation from Moon center: 76.91°						
	Rises:hm (Azimuth: 338.7° NNW) Transit: Oh Olm O2s on following day(Altitude: +89.99°) Sets:hm (Azimuth: 338.7° NNW)						
	Opposition in R.A. Conjunction in R.A.	: .:	23. June 2 23. Decemb	2013 5h Der 2013	20m CEST 13h 13m	Elongation: CET Elongati	: 107.9° ion: 72.1°
Sun	:						
	Altitude: Azimuth:	-15.8° 328.3°					

Moon:

Altitude:			13.0°		
Azimuth:			116.8°		
	Phase,	illum.	fraction:	93.1%	(geocentric)

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