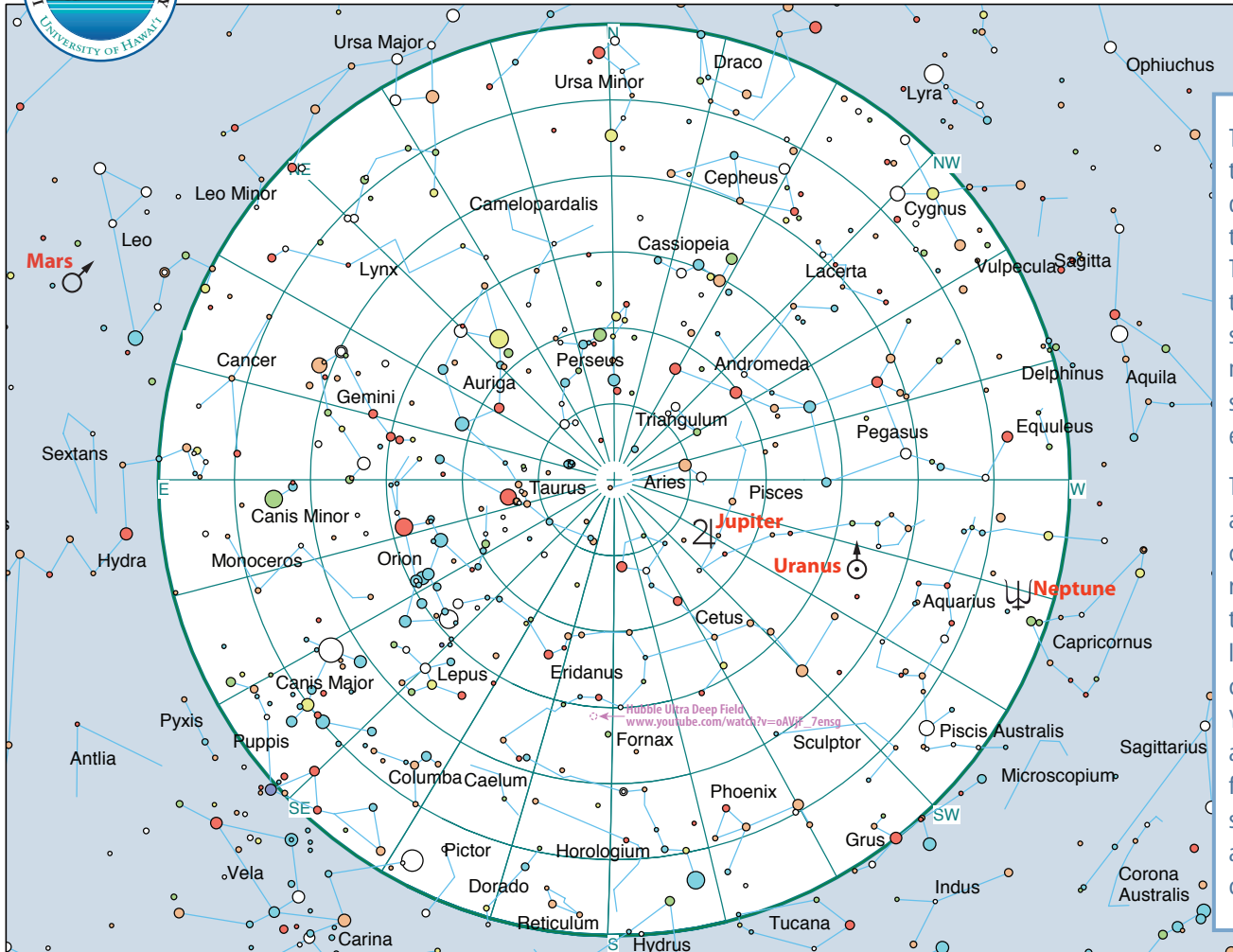




# Evening Skies Over Hawai'i December 2011



This star chart shows the zenith, the point directly overhead, at the center of the chart. The circle represents the horizon, so the stars outside it are not visible, although some may rise in the east later in the night.

To find constellations and stars, hold the chart overhead and rotate the page until the correct direction labeled on the horizon circle is ahead of you. You should now be able to look back and forth between the star chart and the sky, and match the constellations.

teramura December 2011

Honolulu 2011-12-15 10:00 p.m. C: 219h13m +21°20' L: +270°00' 0:90° ARC HZ Cat: BSC  
 On Dec. 1, the sky will appear as shown on the chart at about 11 p.m. On Dec. 31, it will appear as shown at about 9 p.m.

Produced using *Cartes du Ciel* Sky Charts program by Patrick Chevalley  
 This free program is available at <http://www.stargazing.net/astropcl/>

Magnitude: 0 1 2 3 4      B-V: < -0.3 -0.1 0.2 0.5 0.8 1.3 >      Planets: Mercury Venus Mars Jupiter Saturn Uranus Neptune

The star chart includes only the brightest stars to avoid cluttering the chart. The constellations are labeled, and the lines connecting their stars will help you find these celestial groupings.

The Planets table gives positions on the sky (in astronomical right ascension and declination), their apparent magnitude, the time they rise, reach culmination (their highest point in the sky), and when they set. Mercury begins the month too close to the Sun to be visible, but beginning about December 10, you should be able to see it in the morning. Venus and Jupiter are visible in the evening. Mars and Saturn are visible in the morning sky. If you have a telescope, you can see Uranus and Neptune in the evening.

## December Moon Phases

- First Quarter December 1
- Full Moon December 10
- Last Quarter December 17
- New Moon December 24

Object	R.A.	Dec.	Mag.	Rise	Culmination	Set
Mercury	16h 09m	-18° 09'	0.2	5h 35m	11h 08m	16h 41m
Venus	19h 41m	-23° 11'	-3.9	9h 16m	14h 40m	20h 04m
Mars	11h 08m	+08° 16'	0.5	23h 52m	6h 07m	12h 22m
Jupiter	1h 55m	+10° 22'	-2.7	14h 35m	20h 54m	3h 13m
Saturn	13h 43m	-08° 09'	1.2	2h 52m	8h 42m	14h 31m
Uranus	0h 03m	-00° 29'	5.8	13h 00m	19h 02m	1h 03m
Neptune	22h 03m	-12° 34'	7.9	11h 19m	17h 01m	22h 44m