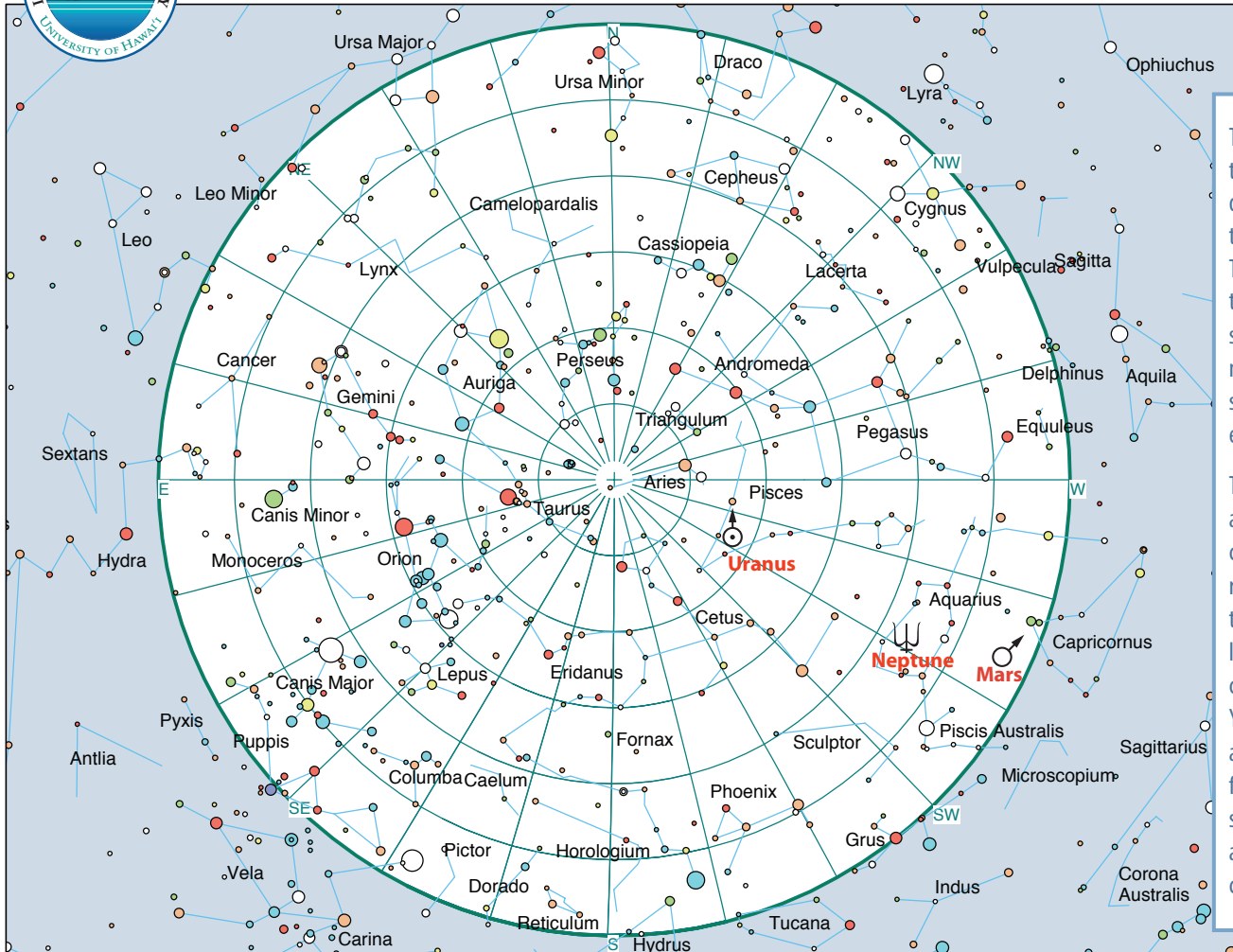




Evening Skies Over Hawai'i December 2016



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.

Honolulu 2016-12-15 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

teramura Dec. 2016



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.

Mercury is visible in the western sky just after sunset until about December 23. Venus, Mars, and Neptune are visible in the evening. Jupiter is visible in the morning. Saturn reappears in the morning sky beginning December 28. Uranus is visible for more than half the night

Join us for these special events




O'ahu Events: call (808) 956-8566. UH Institute for Astronomy Open House April 17.

Maui Events: call (808) 573-9516
 Maikalani Community Lectures occur one Friday per month at the Maikalani building in Pukalani.

Hawaii Island Events: see www.mkaoc.org

Some of the most exciting science in the world is happening at the Institute for Astronomy (IfA), and you can be part of it! IfA scientists conduct research into galaxies, cosmology, stars, planets, and the Sun, as well as teaching undergraduate and graduate students at the University of Hawaii. We invite you to become part of the Friends and explore our amazing universe.

December Moon Phases

-  First Quarter December 6
-  Full Moon December 13
-  Last Quarter December 20
-  New Moon December 28

Monthly activities for the Friends of the Institute for Astronomy can be found at <http://www.ifa.hawaii.edu/friends/>
 Institute for Astronomy Special Events are announced at <http://www.ifa.hawaii.edu/specialevents/>