

## December 2015 Skies

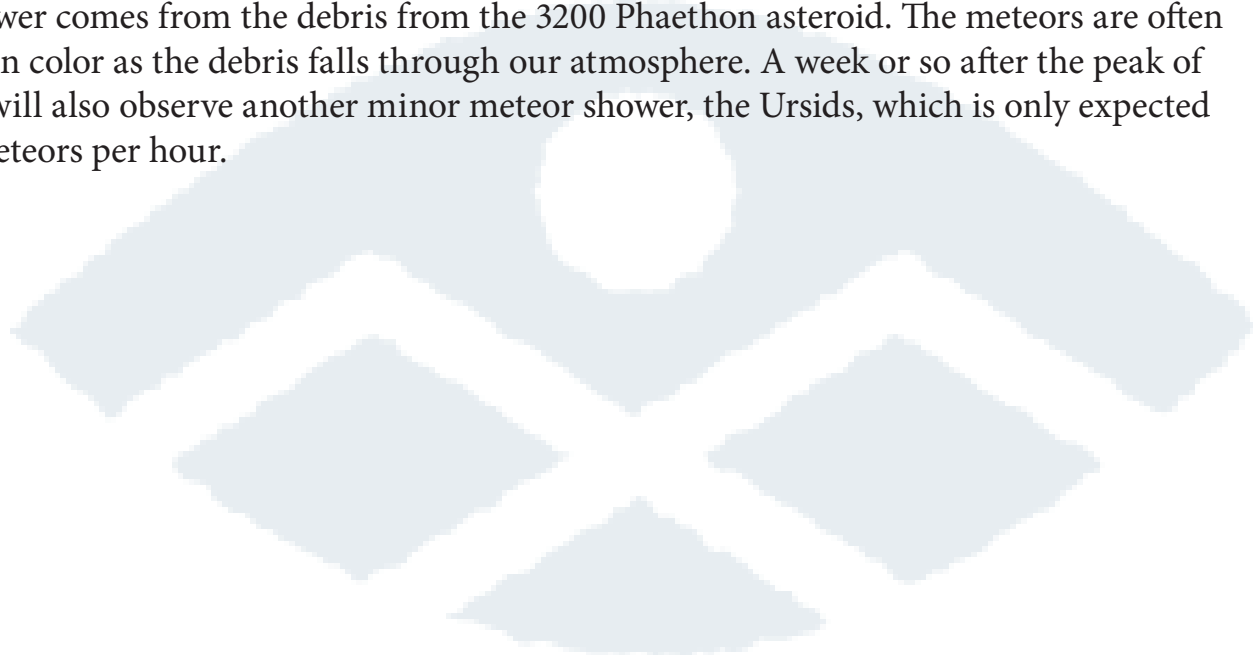
Wednesday, December 2nd	Kaloakukahi (Third Quarter Moon) at 9:41 pm HST
Friday, December 11th	Muku (New Moon) at 12:29 am HST
Sun-Mon, December 13th-14th	Peak of Geminids Meteor Shower
Friday, December 18th	'Olekukahi (First Quarter Moon) at 5:14 am HST
Monday, December 21st	Winter Solstice
Mon-Tues, December 21st-22nd	Peak of the Ursids Meteor Shower
Friday, December 25th	Hoku (Full Moon) at 1:11 am HST

On December 1st, the sun will rise at 6:38 am and set at 5:40 pm, yielding 11 hours, 1 minute, and 46 seconds of daylight. December 21st is the Winter Solstice, the shortest day of the year for those of us living in the Northern Hemisphere. On the solstice the sun will rise at 6:50 am and will set at 5:47 pm, yielding 10 hours, 56 minutes, and 33 seconds of daylight. By December 31st, the sun will rise at 6:54 am and set at 5:52 pm, yielding 10 hours, 57 minutes, and 47 seconds of daylight.

As we approach the Winter Solstice, the sun will continue to rise and set farther and farther south, and the days will get shorter and shorter. On the solstice the sun will rise and set at its southernmost point in the sky and we will experience the least amount of daylight for the whole year. From the beginning of the month until the solstice we'll lose 5 minutes and 13 seconds of daylight. After the solstice, the sun will start setting farther and farther north and the days will start getting longer again. From the solstice to the end of the month we will gain 1 minute and 14 seconds of daylight.

## December 2015 Highlights

Around the middle of December stargazers will be able to view one of the most notable meteor showers, the Geminids. At its peak it is estimated that this shower will produce about 120 meteors per hour. This shower comes from the debris from the 3200 Phaethon asteroid. The meteors are often described to vary in color as the debris falls through our atmosphere. A week or so after the peak of the Geminids we will also observe another minor meteor shower, the Ursids, which is only expected to produce 5-10 meteors per hour.





**'IMILOA**  
Astronomy Center of Hawai'i

# December Sky Chart

