

Eye on the Sky: October 2009

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CONSTELLATION SPOTLIGHT

October's constellation spotlight is Cassiopeia. Cassiopeia includes five bright stars that appear in the formation of an "M" or a "W", depending on its position in the sky. Early in October, look for Cassiopeia rising in the northeast after sunset, reaching its highest altitude in the north around 12:30 a.m., then dropping towards the northwest as dawn approaches. Later in the month, this group of stars will appear in the sky earlier and earlier. On Halloween, the center star of the "M" crosses the northern meridian around 10:45 p.m.

In Greek mythology, Cassiopeia was the Queen of Ethiopia, wife of King Cepheus and mother of Andromeda. Cassiopeia angered the Nereids (sea nymphs) by boasting that Andromeda was more beautiful than them. In retaliation, the Nereids asked the sea god Poseidon to punish Cassiopeia by sending a sea monster to attack the kingdom. To appease the monster, Cepheus chained Andromeda to a rock and offered her as a sacrifice. As luck would have it, the hero Perseus happened to be passing by on his way back from slaying the Medusa. He was more than happy to lend a hand in freeing Andromeda, after which he carried her away to marry her.

If you have trouble seeing a queen in this group of stars, try imagining it as a bird instead. In Hawaii, the same stars that make up Cassiopeia are known as 'Iwa keli'i, the "Great Frigate Bird". The frigate bird is a large, graceful seabird found in tropical areas, including Hawaii. When seen in the air, a frigate bird has long, bent wings, similar in shape to the 'Iwa keli'i constellation. It is easy to imagine this group of stars as a beautiful bird gracefully winging its way across the sky.

Many people know to use the Big Dipper as a tool for finding the North Star (Polaris) in the sky. On mainland U.S., the Big Dipper can always be used to find north because it never sets below the horizon. This is not true in Hawaii. Because of Hawaii's lower latitude, the Big Dipper actually does dip below the horizon, rendering it useless for identifying north in the autumn evening sky. Fortunately, as the Big Dipper disappears, Cassiopeia takes ownership of the northern sky and guides us to the North Star. To find Polaris, bisect the right "wing" of 'Iwa Keli'i with an imaginary line. As you follow that line towards the horizon, you will hit the North Star.

LUNAR IMPACT

On Friday, October 9, at approximately 1:30 a.m., NASA's LCROSS mission will impact our moon with a lunar probe. The impact will create a debris plume that will be analyzed for sources of water. Since it would cost an estimated \$100,000 to bring one gallon of water to the moon, finding existing water would be a huge step towards the possibility of a human settlement on the moon. The impact may be visible through a 10-inch or larger telescope. Windward Community College's Lanihuli Observatory will be show live video of the impact (weather permitting). The Observatory is open from 10:00 p.m. on Thursday, October 8, to 2:00 a.m. on Friday, October 9. For more information about this free event, email ciotti@hawaii.edu.