

Solar and Lunar Eclipses

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Starry Night Education

There will be a partial lunar eclipse, a penumbral lunar eclipse, an annular solar eclipse, and a total solar eclipse in 2012.

May 20 Annular Solar Eclipse

An annular solar eclipse occurs when the Moon is far enough away from the Earth that it is too small to completely cover the Sun, so we observe the Sun as a ring or annulus surrounding the Moon. This eclipse will be visible at sunrise on May 21 in southern China, at midday across the north Pacific Ocean, and at sunset on May 20 over much of the western U.S.A.

Times of maximum eclipse and magnitudes at major cities:

Albuquerque	01:36 UT	0.93
Calgary AB	01:14 UT	0.71
Eureka CA	01:40 UT	0.94
Guangzhou	22:10 UT	0.93
Hong Kong	22:08 UT	0.87
Monterrey	01:21 UT	0.59
Reno NV	01:31 UT	0.94
Shanghai	22:20 UT	0.87
Tokyo	22:35 UT	0.93
Victoria BC	01:16 UT	0.82

June 4 Partial Lunar Eclipse

The Moon will pass through the northern portion of the Earth's shadow. Greatest eclipse will occur at 11:03:13 UT, when 37% of the Moon's surface will be in the umbral shadow of Earth. This partial eclipse is visible all across the Pacific Ocean, and in countries on the Pacific rim.

November 13 Total Solar Eclipse

This eclipse will begin at sunrise in northern Australia and then will sweep across the south Pacific Ocean artfully avoiding any land, ending as the Sun sets off the coast of Chile.

Times of maximum eclipse and magnitude at major cities:

Auckland	21:27 UT	0.87
Cairns	20:40 UT	1.01
Sydney	21:03 UT	0.67

November 28 Penumbral Lunar Eclipse

The Moon will slip through the faint outer penumbral shadow of the Earth, with only a faint shading visible to the unaided eye. Observers in eastern Asia and Australia will get the best views, with maximum eclipse occurring at 14:33 UT.

Source: RASC Observer's Handbook 2012