Super full moon

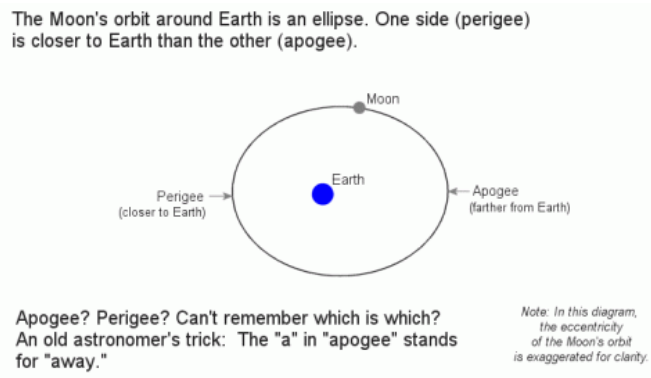
17 March 2011, By Dr. Tony Phillips

The Moon looks extra-big when it is beaming through foreground objects--a.k.a. "the Moon illusion." Credit: NASA

Mark your calendar. On March 19th, a full Moon of rare size and beauty will rise in the east at sunset. It's a super "perigee moon"--the biggest in almost 20 years.

"The last full Moon so big and close to Earth occurred in March of 1993," says Geoff Chester of the US Naval Observatory in Washington DC. "I'd say it's worth a look."

Full Moons vary in size because of the oval shape of the Moon's orbit. It is an ellipse with one side (perigee) about 50,000 km closer to Earth than the other (apogee): diagram.



Nearby perigee moons are about 14% bigger and 30% brighter than lesser moons that occur on the apogee side of the Moon's orbit.

"The full Moon of March 19th occurs less than one hour away from perigee--a near-perfect coincidence1 that happens only 18 years or so," adds Chester.

A perigee full Moon brings with it extra-high "perigean tides," but this is nothing to worry about, according to NOAA. In most places, lunar gravity at perigee pulls tide waters only a few centimeters (an inch or so) higher than usual. Local geography can amplify the effect to about 15 centimeters (six inches)--not exactly a great flood.

Indeed, contrary to some reports circulating the Internet, perigee Moons do not trigger natural disasters. The "super moon" of March 1983, for instance, passed without incident. And an almost-super Moon in Dec. 2008 also proved harmless.

Okay, the Moon is 14% bigger than usual, but can you really tell the difference? It's tricky. There are no rulers floating in the sky to measure lunar diameters. Hanging high overhead with no reference points to provide a sense of scale, one full Moon can seem much like any other.

The best time to look is when the Moon is near the horizon. That is when illusion mixes with reality to produce a truly stunning view. For reasons not fully understood by astronomers or psychologists, low-hanging Moons look unnaturally large when they beam through trees, buildings and other foreground objects. On March 19th, why not let the "Moon illusion" amplify a full Moon that's extra-big to begin with? The swollen orb rising in the east at sunset may seem so nearby, you can almost reach out

and touch it.

Don't bother. Even a super perigee Moon is still 356,577 km away. That is, it turns out, a distance of rare beauty.

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