



**PISGAH  
ASTRONOMICAL  
RESEARCH INSTITUTE**

## **Astro Advisory**

*Notice of an upcoming  
astronomical event.*

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### **PENUMBRAL ECLIPSE OF THE MOON VISIBLE IN THE CAROLINAS**

**Rosman, NC (January 16, 2017)** – Astronomers at the Pisgah Astronomical Research Institute announce that on Friday, February 10, there will be a penumbral eclipse of the Moon that is visible from western North Carolina.

What causes an eclipse of the Moon, also called a *lunar eclipse*? As the Moon orbits the Earth, it comes to Full Moon once every 29½ days. Most months when this happens the Moon passes above or below the Earth's shadow and we don't have an eclipse. But twice per year, roughly six months apart, the Moon can pass through all or part of the Earth's shadow.

As the moon rises on the evening of February 10 the Full Moon will be passing through the very bottom of the Earth's shadow. It will not enter the *umbra*, the dark part of the shadow, but will pass through the much fainter outer part of the shadow, called the *penumbra*. A penumbral eclipse is very subtle and it is probable that most people will not notice it unless they are aware of the particulars surrounding the event and make an effort to watch it.

Those who do see it will notice a darkening of the Moon from bottom to top as it slides through the lower part of the penumbra of the Earth's shadow. The eclipse technically begins at 5:34 p.m. EST and ends at 9:53 p.m. However, moonrise in Brevard, NC does not occur until 6:03 p.m. The shadowing on the moon as it passes through the penumbra of the earth's shadow is so subtle that the best time to observe it will be about 30 minutes before or after the central time of the eclipse at 7:43 p.m.

For more information from NASA on this eclipse set your browser to...

<https://eclipse.gsfc.nasa.gov/LEplot/LEplot2001/LE2017Feb11N.pdf>

The next total solar eclipse visible from the Americas will occur on August 21, 2017.  
The next total lunar eclipse visible from the Americas will occur on July 27, 2018.

#### **About PARI**

PARI is a public not-for-profit public organization established in 1998. Located in the Pisgah National Forest southwest of Asheville, NC, PARI offers STEM educational programs at all levels, from K-12 through post-graduate research. For more information about PARI and its programs, visit [www.pari.edu](http://www.pari.edu).

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