Partial lunar eclipse will take place on 31st December

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(PhysOrg.com) -- In a lunar eclipse, the Earth, Sun and Moon are almost exactly in line and the Moon is on the opposite side of the Earth from the Sun.

The Moon is full but moves partly into the shadow of the Earth and dims dramatically with the shadowed portion of the lunar surface lit by sunlight that passes through the Earth's atmosphere. Stronger atmospheric scattering of blue light means that the light that reaches the lunar surface has a reddish hue, so observers on Earth will see a Moon that has a darkened southern tip, with hints of colour that depend on terrestrial conditions.

The Moon travels to a similar position every month, but the tilt of the lunar orbit means that it normally passes above or below the terrestrial shadow. A Full Moon is seen but no eclipse takes place.

Lunar eclipses are visible wherever the Moon is above the horizon and this one will be visible from virtually all of Europe and Asia, the western half of Australia and the extreme eastern part of North America.

It begins as the Moon enters the lightest part of the Earth's shadow, the penumbra, at 1715 GMT. At 1852 GMT the southern part of the Moon will enter the darker terrestrial shadow, the umbra. Mid-eclipse is at 1923 GMT, when 2.5% of the area of the visible surface of the Moon will be within the umbral shadow of the Earth. The Moon leaves the umbra at 1954 GMT and the eclipse ends when it leaves the penumbra at

2130 GMT.

For further information please visit the Eclipses online website.

Provided by British National Space Centre