



What Causes a Red Moon

If you are one of the thousands of people out there who are not able to figure out what causes the Moon to appear red at times, the following information will shed some light on this phenomenon - which is perfectly natural. Continue reading...

Astronomy is full of surprises, and a red Moon is just one of them. While many people claim to have witnessed a red Moon in the sky at night, not many actually know what causes it to appear red. Basically, the Moon never turns red. What all the people refer to as the 'Red Moon' or 'Bloody Moon' is the phenomenon wherein the Moon appears reddish because of some factors which cause the light to scatter while traveling in the atmosphere. When we see the Moon from the Earth, we see it in numerous colors ranging from faint white to yellow, and sometimes even red or blue. All these colors can be attributed to the same factor - scattering of light.



Reddish Appearance of the Moon

The actual color of the Moon's surface is gray, which can be attributed to the presence of oxygen, silicon, magnesium, iron, calcium and aluminum in it. So what is this red Moon all about? You are most likely to see a red Moon at the horizon just after the Moon starts rising in the sky and just before it sets. Even though the chances of this are relatively bleak, a red Moon can appear high in the sky as well. Yet another factor which causes red Moon is the lunar eclipse. Irrespective of which of these three causes are involved, the red appearance of the lunar body can be traced to the scattering of light in the atmosphere.

Red Moon at the Horizon

When the Moon is at the horizon, the sunlight reflected by it has to travel a greater distance to reach us, than what it has to when the Moon is right above our head. While it travels through the Earth's atmosphere it is blocked by minute particles, such as dust, pollutants, etc. The [wavelength of visible light](#) has a crucial role to play in the entire phenomenon. The blue light with shorter wavelengths scatters more easily as compared to the red light with longer wavelengths. In fact, the red light penetrates through the various particles in the atmosphere with amazing ease. While the blue light scatters, what is left in the atmosphere is red light and this very red light makes the Moon appear as if it is red in color.

Red Moon High in the Sky

At times, the Moon may appear reddish in color even when it is right above our head. This occurrence can also be attributed to presence of minute particles, such as dust and pollutants, in the atmosphere. However, the concentration of these particles has to be very high for the moon to appear red when it is high in the sky. This high concentration of particles can be facilitated by volcanic eruption, wildfires, heavy pollution etc. While the blue light fails to penetrate through the atmosphere owing to the high concentration of these particles, the red light makes it to the Earth's surface with immense ease and gives the Moon its red color.

Red Moon During a Lunar Eclipse

Other than the two factors mentioned above, yet another factor which can cause the light to scatter and give the Moon, as well as other celestial objects including the Sun, a red appearance is the lunar eclipse. During a lunar eclipse, the Earth's shadow engulfs the Moon in darkness by blocking the sunlight which illuminates it. At the same time, the Earth develops a red glow as the sunlight which is reflected from it is scattered in the atmosphere. Even though the Moon doesn't receive sunlight at this particular moment, it does receive the red light which is reflected from the Earth and this red light in the atmosphere makes the Moon appear as if it were red when seen from the Earth.

Like the red appearance, even the plain white, yellow or blue appearance of the Moon can be traced to scattering of different wavelengths of light in the atmosphere. The [bluish appearance of the Moon](#), for instance, can be attributed to the Tyndall Effect, wherein scattering of light gives the Moon its bluish appearance. Going through more of such articles on astronomy will give you access to several facts about the Moon and other celestial bodies which are bound to leave you astounded.

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