Spring Equinox

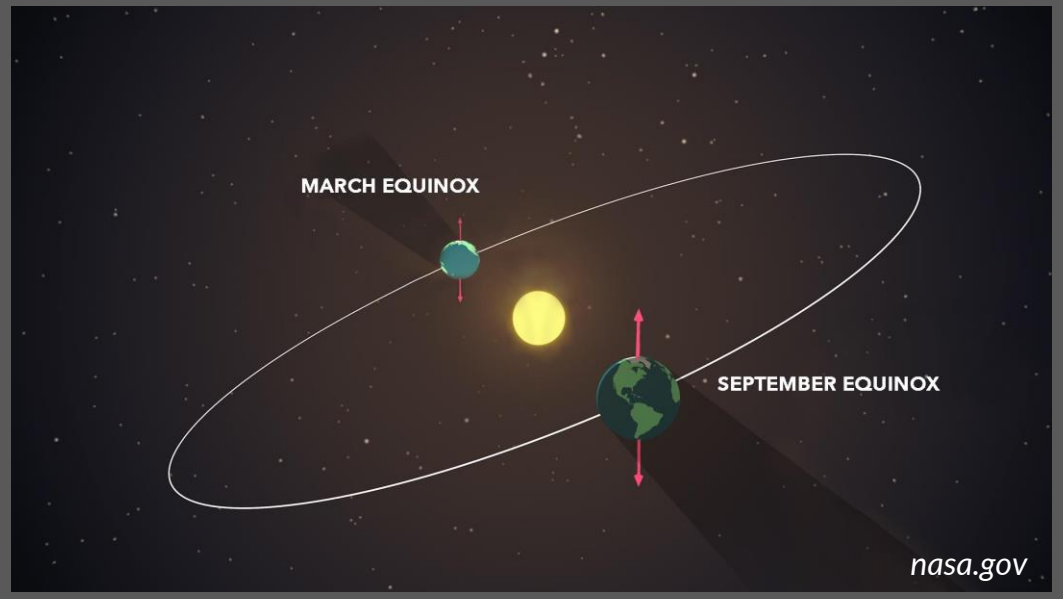
2025

Weather Forecast Office
Albuquerque, NM
Updated: March 20, 2025 1:03 AM MDT

March 20, 2025
3:01 AM MDT

There are only two times of the year when the Earth's axis is tilted neither toward nor away from the sun, resulting in a "nearly" equal amount of daylight and darkness at all latitudes. These events are referred to as Equinoxes. The Vernal equinox (the first day of spring) occurred on **March 20th at 3:01 am MDT** and the Autumnal Equinox (the first day of fall) will occur on **September 22nd at 12:19 pm MDT**.

The word equinox is derived from two Latin words - *aequus* (equal) and *nox* (night). At the equator, the sun is directly overhead at noon on these two equinoxes. The "nearly" equal hours of day and night is due to refraction of sunlight, or a bending of the light's rays that causes the sun to appear above the horizon when the actual position of the sun is below the horizon. Additionally, the days become a little longer at the higher latitudes (those at a distance from the equator) because it takes the sun longer to rise and set. Therefore, on the equinox and for several days before and after the equinox, the length of day will range from about 12 hours and six and one-half minutes at the equator, to 12 hours and 8 minutes at 30° latitude, to 12 hours and 16 minutes at 60° latitude.



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The Seasons

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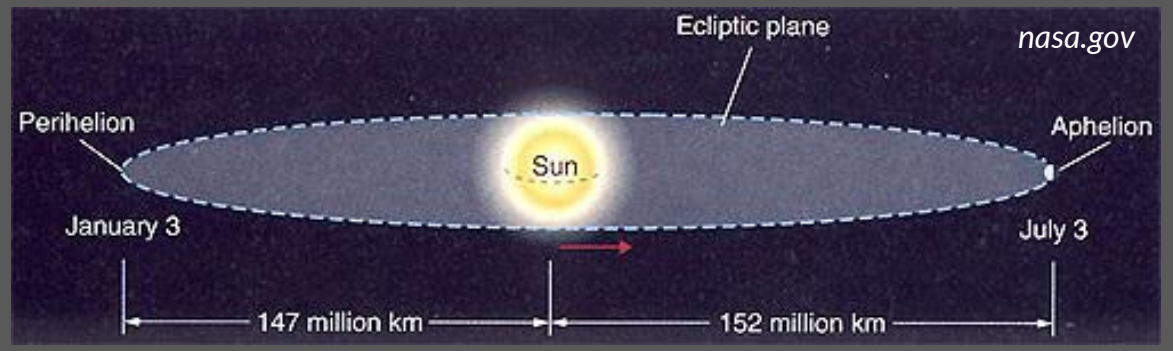
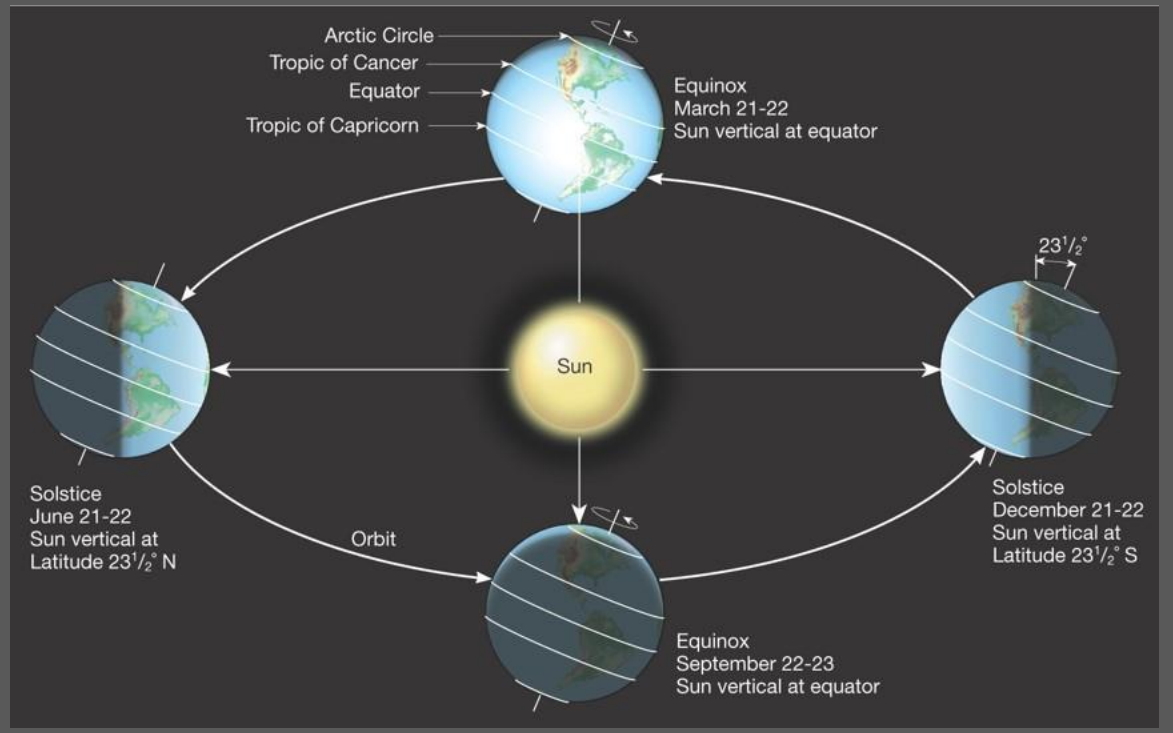
We all know that the Earth makes a complete revolution around the sun once every 365 days, following an orbit that is elliptical in shape. This means that the distance between the Earth and Sun, which is 93 million miles on average, varies throughout the year. The top of figure on the right illustrates that during the first week in January, the Earth is about 1.6 million miles closer to the sun. This is referred to as the perihelion. The aphelion, or the point at which the Earth is about 1.6 million miles farther away from the sun, occurs during the first week in July. This fact may sound counter to what we know about seasons in the Northern Hemisphere, but actually the difference is not significant in terms of climate and is NOT the reason why we have seasons. **Seasons are caused by the fact that the Earth is tilted on its axis by 23.5°.** The tilt's orientation with respect to space does not change during the year; thus, the Northern Hemisphere is tilted toward the sun in June and away from the sun in December, as illustrated in the bottom graphic on the right. The combination of the earth's elliptical orbit and it's axial tilt contribute to the uneven changes in the times of sunrise and sunset throughout the year.





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Satellite View

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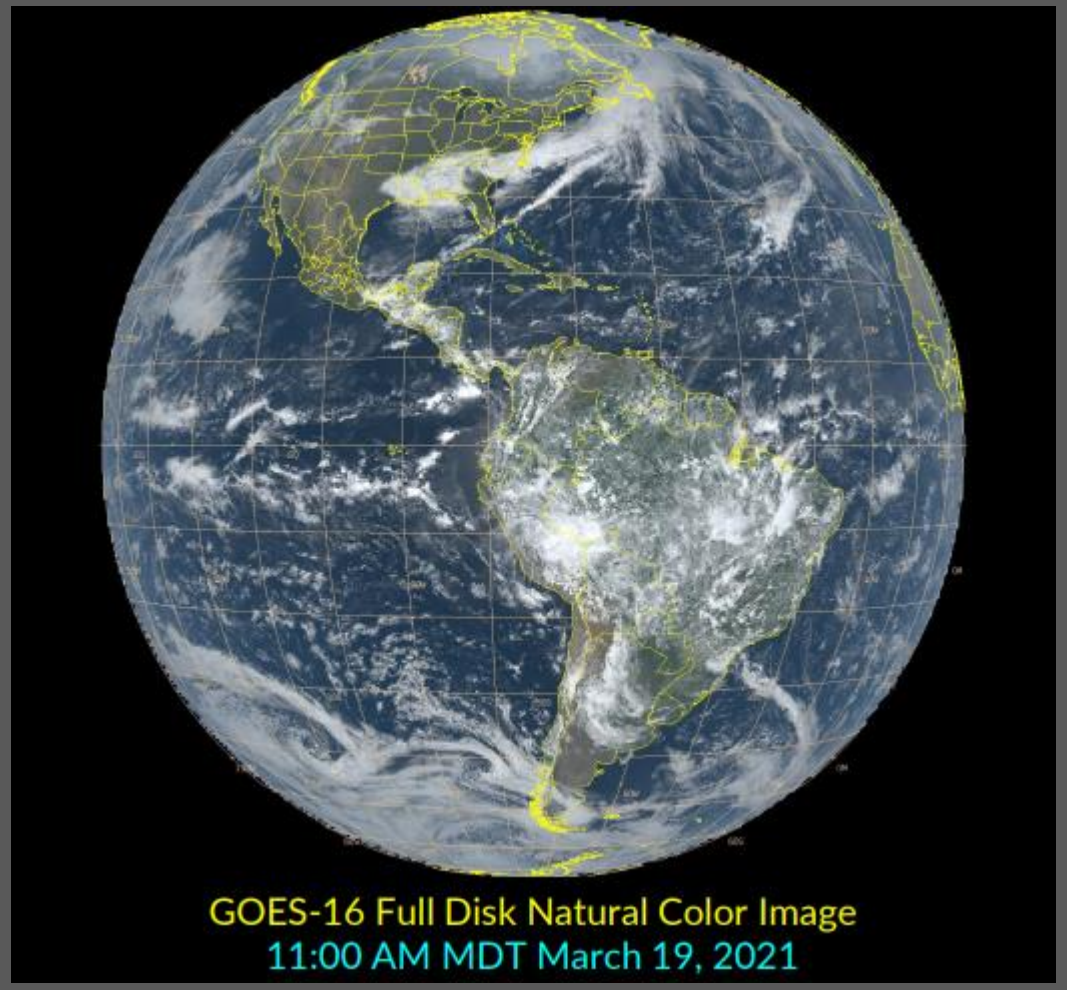
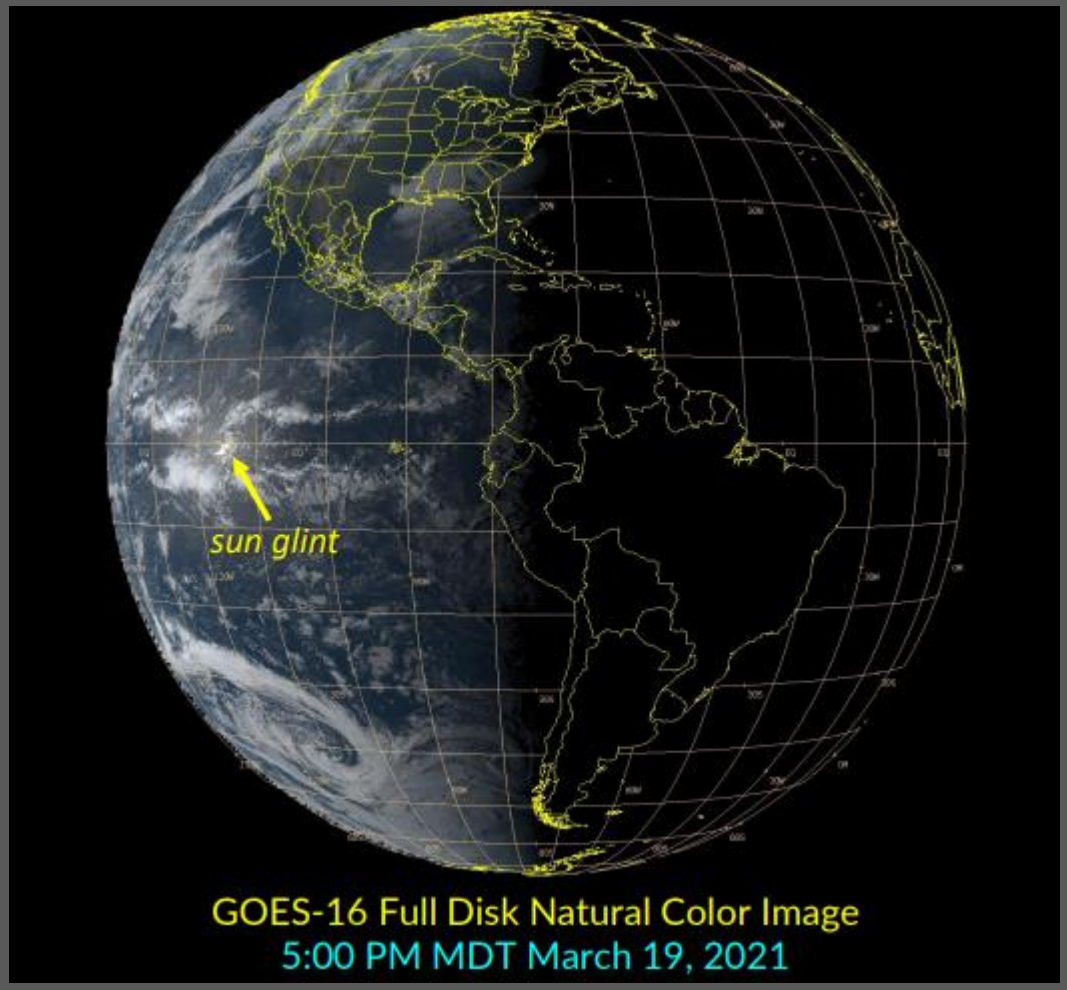
The GOES-16 full disk examples from March 19, 2021 showed the near equal distribution of day and night along a common longitude. There is a near equal amount of daylight and darkness at all latitudes. The location of maximum sun glint can be seen over the equator where sunlight is reflected back to the satellite on the spring equinox. Earth will orbit the sun for the fall equinox on September 22, 2022 at 7:03 PM MDT.



GOES-16 Full Disk Natural Color Image
11:00 AM MDT March 19, 2021



GOES-16 Full Disk Natural Color Image
5:00 PM MDT March 19, 2021

Spring Equinox

Weather

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New Mexico is no stranger to active spring weather. The transition from winter to summer is associated with some of the most dramatic weather observed in the state as the jet stream slowly meanders northward away from the region. Every type of weather ranging from snow and ice to severe thunderstorms, flooding, damaging winds, blowing dust, and wildfires occur across New Mexico during the spring months, sometimes all in the same day!

Maxwell, NM | Bill and Barbie Goebel
June 6, 2014

Taos Mountain | John Hamilton Farr
April 27, 2015

Whitewater Baldy Complex | Pleasanton, NM
May 22, 2012 David Thornburg

WSMR | Dennis Page
May 2, 2007