

## Annular Solar Eclipse



This is *the* event for US observers in 2023, this month's annular solar eclipse cuts a path from the Pacific Northwest to the Gulf of Mexico. As an added bonus, a partial eclipse will be visible from every location in the contiguous US, with observers in the far southwest seeing a Sun that's at least 70% eclipsed, and those in the far northeast seeing the Sun at least 10% eclipsed.

This particular annular eclipse has a magnitude of 0.952, meaning that 95% of the Sun will be obscured by the Moon, with the longest possible period of totality being 5 minutes and 17 seconds. Totality will be visible from numerous towns and cities, but the city with the longest period of totality is Corpus Christi TX, with a duration of 5 minutes and 2.1 seconds. Texas locations will generally see a longer eclipse, while the best chances of good weather will be in Arizona and New Mexico.

## OUR NEAREST NEIGHBORS

**Mars** is lost to the Sun's glare this month, while **Saturn** remains visible throughout the evening in Aquarius, with a waxing gibbous Moon nearby on the 23<sup>rd</sup> and 24<sup>th</sup>. **Neptune** is moving through neighboring Pisces and is observable from a few hours after sunset until the early hours of the morning. Next over the horizon is **Jupiter**, best seen in the hours shortly before or after midnight. The planet is nearing opposition in Aries and is visited by a waning gibbous Moon in the morning hours of the 2<sup>nd</sup>, and the full Moon on the evening of the 28<sup>th</sup>. **Uranus** is also in Aries and can be found two degrees southeast of **Botein** throughout the month. **Venus** is an unmistakable sight in the predawn twilight and rises nearly four hours before the Sun. It spends the month in Leo and will be closest to Regulus on the 9<sup>th</sup> when 2.3 degrees will separate them. A waning crescent Moon appears to their left the following morning. Early risers can also catch a quick glimpse of **Mercury** for the first week, shining at a reasonably bright magnitude -1.1 low over the eastern horizon at about twenty minutes before sunrise. The **Moon** turns new on the 14<sup>th</sup>, bringing an annular solar eclipse with it, and then turns full on the 28<sup>th</sup>.

**NGC 7662 - The Blue Snowball Nebula:** A magnification of just under 100x shows a small, circular slightly blue disc - much like a planet. Increasing the magnification to over 200x will reveal its oval form in larger scopes, as well as rings of blue and green surrounding the darker center.

**NGC 7789:** NGC 7789 is bright enough to be seen with binoculars within the same binocular field of view as Beta Cassiopeiae. Small telescopes show it as a rich and concentrated patch of faint stars with no discernable core, while mid-sized scopes show a band of stars encircling the center.

**Messier 52:** The best views of M52 are with a telescope. At a magnification of 35x, you'll see the orange star 4 Cassiopeiae within the same field of view. The cluster appears compact and conical, with a bright star at the tip and a base that's brighter than the rest of the cluster.

**Messier 30:** A magnification of around 100x will show the slightly elongated core, and there may be some resolution along the cluster's edges with averted vision. Chains of stars can be seen with larger scopes.

Messier 30



Source: NASA/ESA