

Astronomical Highlights 2023

Comets

A new comet **C/2022 E3 ZTF** is expected to reach +5 magnitude in late Jan. to early Feb. It is expected to be a morning object in Jan., becoming circumpolar and visible all night by late Jan., and then become an evening object in Feb. as it make a close pass by Earth and fades rapidly.

Eclipses

Of the 4 eclipses that occur in 2023 (2 solar, 2 lunar), only the partial phase of the **Oct. 14** annular solar eclipse, and ending penumbral part at moonrise of the **Oct. 28** Partial Lunar Eclipses will be visible from Hampton Roads.

Planets

Mercury reaches its greatest western elongations in the morning sky **Jan. 30**, **May 29**, and **Sept. 22**, and greatest eastern elongations in the evening sky **Apr. 11**, **Aug 10**, and **Dec. 4**. Around these dates will be the best times to try to spot this elusive planet in twilight. Venus reaches greatest eastern elongation in the evening sky on **June 4**, evening greatest brilliancy of -4.7 on **July 8**, inferior conjunction of **Aug. 13**, morning greatest brilliancy of -4.7 on **Sept. 18**, and greatest western elongation on **Oct. 23**.

The remaining superior planets are best observed near opposition, which occurs for Saturn on **Aug 27**, for Neptune on **Sep 19**, for Jupiter on **Nov. 3**, and Uranus on **Nov 19**. Mars does not come to opposition in 2023.

Meteor Showers

The best meteor showers are expected to be the **Aug. 13 Perseids** (zhr=100) and **Dec. 14 Geminids** (zhr=150) which both peak near New Moon. Other showers with minimal moon interference include the **Apr. 22 Lyrids** (zhr=18), the **Oct. 21 Orionids** (zhr=20), and the **Nov. 18 Leonids** (zhr=10). The remainder of the meteor showers have serious interference with the Moon.

Lunar Occultations/Grazes

Two planets Jupiter and Mars are occulted by the Moon this year. On the morning of **May 17**, Jupiter disappears behind the waning crescent moon after sunrise from 7:31 to 8:39 AM EDT. Mars disappears behind the waxing crescent moon at 3:14 PM EDT **Sept. 16**

The brightest star occulted by the Moon this year is +1.1-magnitude Antares (alpha SCO) on **Aug. 24** and again on **Nov. 14**. Both events are low in the sky and will require a clear horizon.