

# Night Sky Viewing at Widener University

## December 2024

### Sunrise & Sunset Times (EST)

	Sunrise	Sunset
Begin Month	7:04 am	4:37 pm
End Month	7:23 am	4:47 pm

### Lunar Phases



### Naked-Eye Planets in the Evening & Morning Sky this Month

**Venus** (in *Sagittarius-Capricornus*): Venus, the Evening Star, dazzles the eye with yellowish brilliance in the southwest shortly after sunset. Venus continues to climb steadily above the southwestern horizon at dusk; it starts the month setting nearly 3 hours after sunset, but it gets even higher (and brighter) as the month progresses, setting just under 4 hours after the Sun on New Year's Eve.

**Saturn** (in *Aquarius*): Saturn resides within the dim constellation Aquarius; it stands moderately high in the south during evening twilight in mid-December. Though noticeably fainter than it was at opposition back in September, Saturn's brightness is comparable to first-magnitude Fomalhaut, which lies directly below it. Saturn sets just before midnight EST in early December and by 10 pm at month's end. A telescope reveals that Saturn's rings are now seen nearly edge-on.

**Jupiter** (in *Taurus*): Jupiter reaches opposition with the Sun on December 7<sup>th</sup>, when not only is it at its closest and brightest, but it is also viewable all night, rising as the Sun sets, and setting when the Sun rises. Throughout December, Jupiter glows magnificently, mimicking a brilliant cream-colored star in the constellation Taurus, located between Taurus's two brightest stars, Aldebaran and Elnath. In mid-December, Jupiter is already well up in the east as evening twilight ends; it stands high in the south at around 11:30 pm EST.

**Mars** (in *Cancer*): Ascending in the northeast 3½ hours after Jupiter, Mars's brightness revs up as it approaches its much-anticipated opposition with the Sun and closest approach to Earth in January. Mars parodies a brilliant, reddish-orange star as it emerges above the northeastern horizon during the early evening hours. The Red Planet rises around 8:30 pm EST in early December, but before 6:30 pm at month's end; it stands highest in the south around 3 pm in mid-December, and high in the west at dawn.

**Mercury** (in *Ophiuchus*): After reaching inferior conjunction with the Sun on December 5<sup>th</sup>, Mercury leaps into superb position for viewing at dawn. Greatest elongation with the Sun occurs on the 24<sup>st</sup>, when Mercury rises in the southeast by 5:30 am, before the onset of morning twilight and nearly 2 hours before sunrise.

**Earth**: reaches the *winter solstice* on December 21<sup>st</sup> at 4:21 am EST. Autumn ends and winter begins in the Northern Hemisphere.

**Geminid Meteor Shower**: reaches its peak around the evening of the 13<sup>th</sup> and morning of the 14<sup>th</sup>. Unfortunately, glare from the nearly full Moon will wash out all but the brightest meteors.

### Constellations & Bright Stars Visible Around 8 pm Local Time in December

**Summer Triangle** – low in W, setting  
Consists of three bright stars: *Vega*, *Altair*, and *Deneb*

**Pisces Austrinus** – low in SW, setting  
Bright white star *Fomalhaut*

**Cetus** – halfway up above horizon in S  
Bright orange stars *Diphda*, *Menkar*

**Pegasus (Great Square)** – high in SSW, above *Fomalhaut*  
Bright stars *Scheat*, *Markab*, *Algenib*

**Andromeda** – nearly overhead, connected to Pegasus  
Bright stars *Alpheratz* (NE corner of Great Square), *Mirach*, *Almach*

**Aquarius** – low in SW, below Pegasus  
Planet *Saturn*

**Pisces** – high in S, below the Great Square of Pegasus

**Aries** – high up in S, above Cetus & below Andromeda  
Bright stars *Hamal*, *Sheratan*

**Cassiopeia** – “W” high in N, looking like an “M”  
Bright stars *Shedar*, *Caph*, *Ruchbah*

**Perseus** – just E of overhead, follows Andromeda  
Bright stars *Mirfak* and *Algol*

**Auriga** – getting higher in NE, follows Perseus  
Bright star *Capella*

**Taurus** – well up in ENE, getting higher  
Bright star *Aldebaran*, Star Clusters *Pleiades* & *Hyades*  
Planet *Jupiter*

**Orion** – rising in E  
Bright stars *Betelgeuse*, *Rigel*

**Gemini** – rising in NE, following Taurus  
Bright stars *Pollux*, *Castor*

**Canis Major** – soon to rise in SE, to lower right of *Rigel*  
Bright star *Sirius*

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For more information on the night sky, visit the Widener Observatory Stargazing website at [www.widener.edu/stargazing/](http://www.widener.edu/stargazing/). A set of free sky maps can be obtained at [www.skymaps.com/](http://www.skymaps.com/).