

# Night Sky Viewing at Widener University

## July 2018

### Sunrise & Sunset Times (EDT)

	Sunrise	Sunset
Begin Month	5:37 am	8:34 pm
End Month	5:59 am	8:16 pm

### Lunar Phases



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

**Mercury** (*in Cancer-Leo*): As July begins, Mercury resembles a bright yellow star low in the west-northwest at dusk, to the lower right of much brighter Venus. In early July, Mercury is setting 1½ hours after the Sun, or around 10 pm EDT. On July 12<sup>th</sup>, Mercury reaches its greatest eastern (evening) elongation with the Sun, and thereafter the separation decreases rapidly. By the end of July, Mercury will have vanished into the evening twilight.

**Venus** (*in Leo*): Venus dominates the early evening sky, radiating like a yellow gem in the west at dusk. Venus will be gradually brightening over the next few weeks, but it will also be slowly sinking toward the western horizon – it sets 2½ hours after sunset (about 11 pm EDT) in early July, but only two hours after the Sun by month's end, at which time a telescope will reveal a nearly "quarter phase." During the second week in July, Venus passes just above Regulus; the apparent proximity is merely a consequence of perspective, since Regulus is about 15 million times farther away than Venus!

**Jupiter** (*in Libra*): Jupiter, resembling a brilliant golden star in the constellation Libra, lies in the south at nightfall, and sets shortly after midnight in mid-July. Jupiter is outshone only by Venus.

**Saturn** (*in Sagittarius*): Saturn reached opposition with the Sun on June 27<sup>th</sup>, and is in excellent position for viewing throughout July. At mid-month, Saturn appears low in the southeastern sky as darkness falls, stands due south before midnight, and sets at the first light of dawn. Saturn's cream color is similar to that of Jupiter, but contrasts with reddish Mars, which rises 2½ hours later.

**Mars** (*in Capricornus*): Mars reaches its much-anticipated grand opposition late this month on the evening of the July 26-27; it comes closest to Earth a few days later on the 31<sup>st</sup>. As July begins, Mars is already rivaling Jupiter's brilliance, but with a distinctly reddish hue, compared with Jupiter's yellowish color. Mars rises above the southeastern horizon around 10:30 pm EDT, or about 2½ hours after Saturn. By month's end, Mars will be second only to Venus in brilliance, and will rise at sunset and remain visible all night.

**Earth**: Earth reaches aphelion, its greatest distance from the Sun, on July 6<sup>th</sup>, when it will be 3.5% farther from the Sun than it was in January

**Sun**: (*in Gemini-Cancer*): The Sun begins July in the constellation Gemini, then crosses into Cancer on the 21<sup>st</sup>.

### Constellations & Bright Stars Visible Around 10 pm EDT

- Leo** – very low in W, setting  
Bright star *Regulus*, about to set
  - Virgo** – low in WSW  
Bright star *Spica*
  - Ursa Major** – halfway up in NW, getting lower  
Asterism *Big Dipper*, w/ pointer stars *Merak*, *Dubhe*; handle stars *Alioth*, *Mizar* (& *Alcor*), *Alkaid*
  - Ursa Minor** – halfway up in N, directly above North Star  
Asterism *Little Dipper*, contains *Polaris* (North Star)
  - Boötes** – high in WSW  
Bright star *Arcturus*, well above *Spica*
  - Corona Borealis** – high in SW, to upper left of *Arcturus*  
Bright star *Alphecca* (also called *Gemma*)
  - Libra** – one-third of way up in SSW  
Bright stars *Zubenelgenubi*, *Zubeneschamali*  
Planet *Jupiter* near *Zubenelgenubi*
  - Scorpius** – low in S  
Bright star *Antares*
  - Ophiuchus** – halfway up in S, above *Scorpius*  
Bright star *Ras Alhague*  
Planet *Saturn*, to far left of *Antares* in *Scorpius*
  - Sagittarius** – low in SSE  
Asterism the "Tea Pot"
  - Lyra** – high in E, approaching overhead  
Bright star *Vega*
  - Aquila** – halfway up in SE  
Bright star *Altair*
  - Cygnus** – high in E, below *Lyra*  
Bright star *Deneb*
- Altair*, *Deneb*, & *Vega* form the Summer Triangle

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/).