

Winslow Homolovi Observatory

Guest Presenters: *Little Colorado
River Valley Astronomy Club*

June 22, 2024 7:00 PM (AZ-MST)

Winslow Homolovi Observatory "Our Galaxy, Our Universe" 7:00 PM (AZ-MST) Homolovi State Park Visitor Center– Museum Patio. Telescope viewing after sunset.

 *Little Colorado River Valley Astronomy Club* 

ARIZONA

STATE PARKS & TRAILS



NATIONAL ENDOWMENT FOR THE ARTS
and BLUE STAR FAMILIES present
arts.gov/bluestarmuseums

BLUE STAR MUSEUMS

Telescope Viewing 8:00 PM AZ-MST

Astronomical Information

Homolovi State Park Time UTC-7 Saturday April 27, 2024

<u>Luminous</u>	<u>Begin</u>	<u>End</u>	<u>Planet</u>	<u>Rise</u>	<u>Set</u>	<u>Meridian</u>	<u>Comment</u>
Morning Astronomical Twilight	3:22 AM	4:02 AM	Mercury	Sat 5:57 am	Sat 8:28 pm	Sat 1:13 pm	Slightly difficult to see
Morning Nautical Twilight	4:02 AM	4:39 AM	Venus	Sat 5:40 am	Sat 8:03 pm	Sat 12:52 pm	Slightly difficult to see
Morning Civil Twilight	4:39 AM	5:09 AM	Mars	Sun 2:12 am	Sun 3:34 pm	Sun 8:53 am	Average visibility
Sunrise & Sunset	5:09 AM	7:40 PM	Jupiter	Sun 3:38 am	Sun 5:38 pm	Sun 10:38 am	Average visibility
Solar Noon/Transit	12:24 PM	94.472 MIL Miles	Saturn	Sat 11:57 pm	Sun 11:29 am	Sun 5:43 am	Great visibility
Evening Civil Twilight	7:40 PM	8:10 PM	Uranus	Sun 2:57 am	Sun 4:45 pm	Sun 9:51 am	Difficult to see
Evening Nautical Twilight	8:10 PM	8:46 PM	Neptune	Sun 12:22 am	Sun 12:19 pm	Sun 6:21 am	Difficult to see
Evening Astronomical Twilight	8:46 PM	9:27 PM	Winslow Homolovi Observatory and Visitor Center: The grounds surrounding the observatory and visitor center is home to many desert creatures. Venomous reptiles and insects inhabit the area. Be aware of your surroundings. Watch children and pets to prevent injury. Report all snake sightings to Ranger on Duty. Help us to keep the park clean and safe for our visitors and wildlife.				
Moon Set & Moon Rise	8:55 PM	5:22 AM					
Moon Phase	Waning Gibbous	Illum: 99.7					
Star Party Begin & End	7:00 PM	10:00 PM					
Temperature Forecast °F.°C H/L	93°F/34°C	56°F/13°C					

Partners and Information: The Winslow Homolovi Observatory is a community partnership with the Arizona State Parks and Trails: Homolovi State Park, City of Winslow, Little Colorado River Valley Astronomy Club, NASA Jet Propulsion Laboratory (www.nightsky.jpl.nasa.gov/clubs-and-events.cfm), Winslow Chamber of Commerce, Hopi Tribe, local Navajo County Businesses and private individuals who have a love and passion for science and astronomy. Donations are accepted, see a park ranger for more information.

Observatory Viewing Engineers: Randall Sahmie & Bill Wood

Park Manager: Chad Meunier Contact: (928) 289-4106

Program Coordinator: Kenn Evans, Park Ranger, Contact: (928) 289-4106

email: homolovi@azstateparks.gov Web: www.azstateparks.com/stars

Little Colorado River Valley Astronomy Club: Bill Wood email: billdwood@hotmail.com

Next Event: July 27, 2024 8:00 PM (AZ-MST) Guest Speaker (TBA)

Winslow Homolovi Observatory

Tonight's Viewing Targets: June 22, 2024

1. M13 - Glob, The Great Hercules Cluster
2. M57 - PN The Ring Nebula
3. NGC 4565 - Gal, The Needle Galaxy
4. M51 - Gal, The Whirlpool Galaxy
5. (TBD) Others as time permits

Images from: **NASA**

<https://images.nasa.gov/>



1

Messier 13: **Globular Cluster**

Distance **25,000 light-years**

Apparent Magnitude **5.8**

Constellation: **Hercules**

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubble-messier-catalog/messier-13/>



2

Messier 57: **Ring Nebula**

Distance **2,000 light-years**

Apparent Magnitude **8.8**

Constellation: **Lyra**

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubble-messier-catalog/messier-57/>



3

NGC 4565, Caldwell 38 "**The Needle**" **Spiral Galaxy**

Distance: **40million light-years**

Apparent Magnitude **9.6**

Constellation: **Coma Berenices**

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubble-caldwell-catalog/caldwell-38/>



4

Messier 51: **Whirlpool Galaxy**

Distance **31 million light-years**, Apparent Magnitude **8.4**

Constellation: **Canes Venatici**

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubble-messier-catalog/messier-51/>

Little Colorado River Valley

Astronomy Club

What is Light Pollution?

Most of us are familiar with air, water, and land pollution, but did you know that light can also be a pollutant? The inappropriate or excessive use of artificial light known as light pollution can have serious environmental consequences for humans, wildlife, and our climate. By joining IDA you can make a difference in protecting our Planet, saving billions of dollars in wasted energy, and connecting future generations with our legacy of starry skies. www.darksky.org



Star Party Etiquette: Don't use white lights. Use red lights (put red tape over your flashlight) if you must use a light. ✨ If you come to a star party without a telescope please park away from the observing site to save room for those with heavy equipment to carry. ✨ Please ask permission to touch equipment. ✨ Never touch any glass optical surface. ✨ Don't litter. ✨ Drive very slowly so as to avoid people (especially children) ✨ Watch your step; be especially careful of wires on the ground. Some scopes require power and the use of a battery. ✨ Children — please keep an eye on them and instruct them not to run around or to touch the equipment. ✨ Smoking — no smoking allowed in observation area, please if you smoke, go down wind of telescopes. Homolovi does not offer ashtrays, please do not litter, dispose of extinguished smoking materials properly. ✨ No-aerosol sprays to be used near the telescopes. (Aerosol repellents may drift and leave a film damaging optics). Roll-on repellents recommended. ✨ Green lasers are great tools for pointing out stars, asterisms, and constellations to beginning amateur astronomers. Lasers can ruin long-exposure astrophotos. We ask that green lasers (and any other color of bright laser) be used only for informal sky tours **in the early evening**. Use it sparingly and be prepared to put it away if someone asks. Please stop all laser use after astronomical twilight. ✨ Pets are welcome, but must be supervised and under control. Clean up after your pet. ✨ Homolovi State Park is home to venomous reptiles and insects. Please use caution and be aware of your surroundings. Rattlesnakes and scorpions are found in and around the observatory.

Nocturnal Critters: CAUTION

Homolovi State Park is home to many nocturnal creatures. These include venomous snakes and insects. Please use caution while walking on paths and accessing buildings. If bit call 9-1-1

RATTLESNAKES



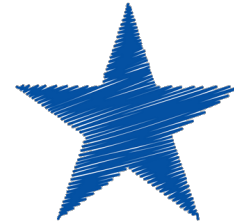
BARK SCORPIONS (*Centruroides exilicauda*)



https://telemedicine.arizona.edu/sites/default/files/webinar_files/Scorp.pdf

Photo by Jillian Cowles

June Night Sky

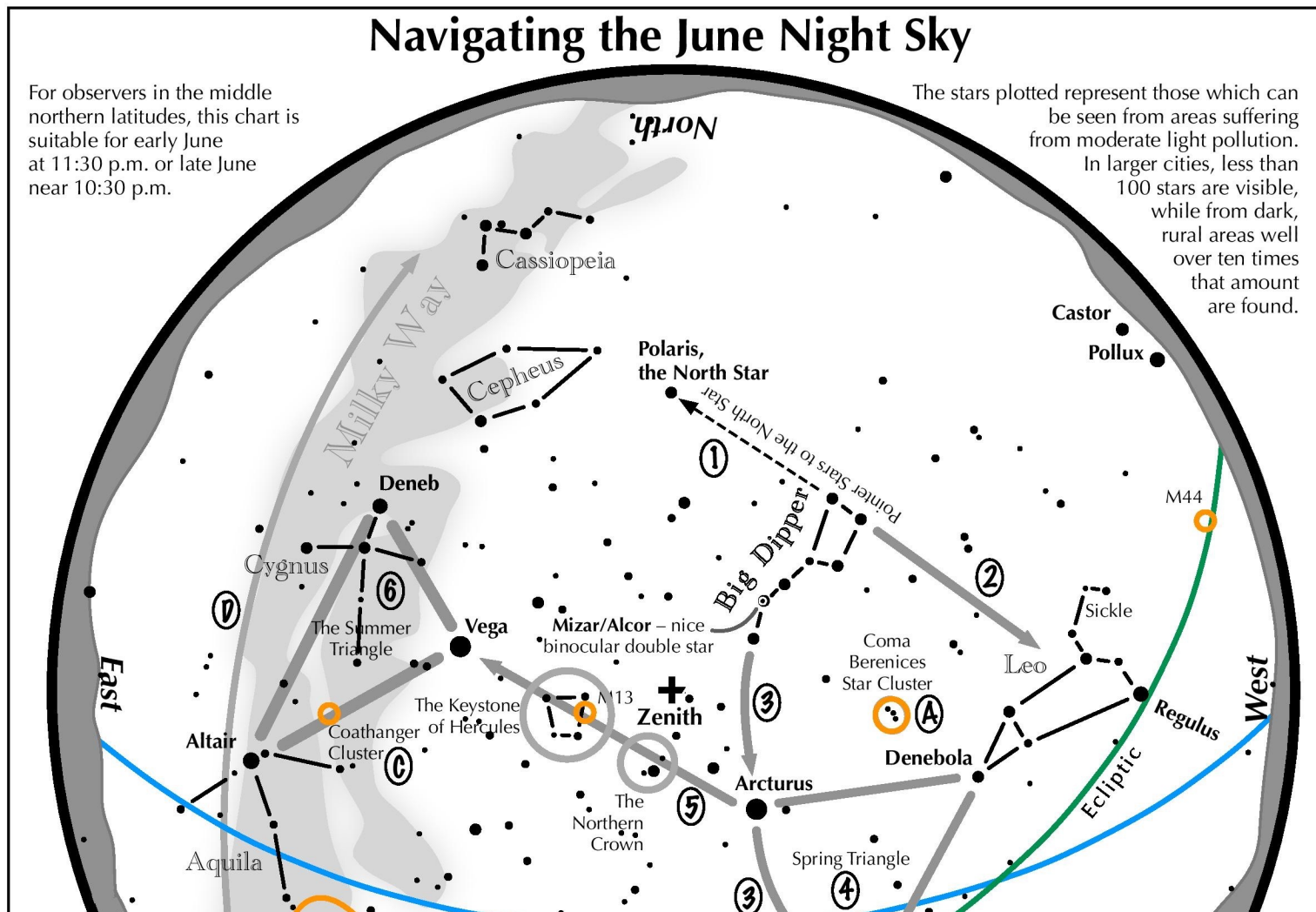


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Navigating the June Night Sky

For observers in the middle northern latitudes, this chart is suitable for early June at 11:30 p.m. or late June near 10:30 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

Navigating the June night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Draw another line in the opposite direction. It strikes the constellation Leo high in the west.
- 3 Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the June evening sky, then Spica.
- 4 Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
- 5 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 6 High in the east are the three bright stars of the Summer Triangle: Vega, Altair, and Deneb.

Binocular Highlights

- A:** Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
- B:** Between the bright stars of Antares and Altair, hides an area containing many star clusters and nebulae.
- C:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- D.** Sweep along the Milky Way for an astounding number of faint glows and dark bays.

Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.

This week in History: Animals in Space



www.nasa.gov

Before humans actually went into space, one of the prevailing theories of the perils of space flight was that humans might not be able to survive long periods of weightlessness. For several years, there had been a serious debate among scientists about the effects of prolonged weightlessness. American and Russian scientists utilized animals—mainly monkeys, chimps and dogs—in order to test each country's ability to launch a living organism into space and bring it back alive and unharmed.

Read more here: <https://www.nasa.gov/history/a-brief-history-of-animals-in-space/>

Notes: