



SKY MAP November

9:00pm: November 5

8:00pm: November 20

7:00pm: December 5

Also can be used in the pre-dawn hours of July thru October.

Latitude 35°N

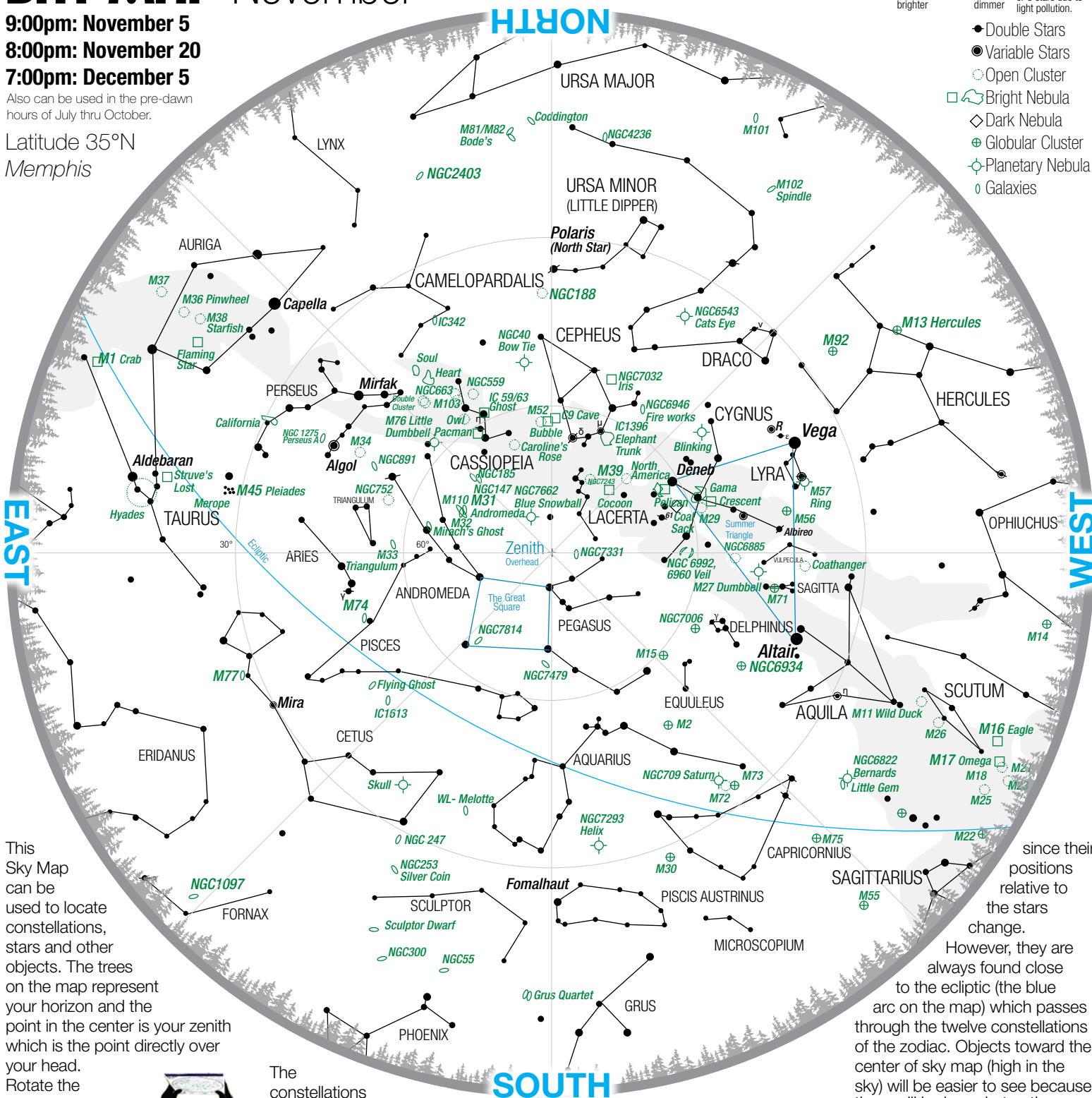
Memphis

Magnitude (Brightness)

Stars ● ● ● ● ●
1 or brighter 2 3 4 5 & dimmer

In cities you may not be able to see magnitude 3, 4 or 5 stars due to light pollution.

- Double Stars
- Variable Stars
- Open Cluster
- Bright Nebula
- ◇ Dark Nebula
- ⊕ Globular Cluster
- Planetary Nebula
- Galaxies



This Sky Map can be used to locate constellations, stars and other objects. The trees on the map represent your horizon and the point in the center is your zenith which is the point directly over your head. Rotate the map so that the direction you are facing is at the bottom of the page.



The constellations above the horizon at the bottom of the page will correspond to what you see above the horizon in front of you. Rotate the map as you face different directions to identify objects in that direction. Stars near the center of the map are

high overhead; those near the edge are low in the sky. Constellation names are in all capital letters. Star are in bold italic and lower case. Deep sky objects are smaller in type and green on color printing. The Moon and planets are not shown,

since their positions relative to the stars change. However, they are always found close to the ecliptic (the blue arc on the map) which passes through the twelve constellations of the zodiac. Objects toward the center of sky map (high in the sky) will be easier to see because there will be less obstructions from trees, buildings and light pollution.

Contact the Memphis Astronomical Society (M.A.S.) for more info on our sky maps and other outreach services (memphisastro.org).



Observing List November

Naked Eye Objects

			Light Years*	
•	Altair	Aquila	Brightest star in Aquila. Name means "the flying eagle".	16.8
•	Arcturus	Bootes	Giant K star. "Bear watcher"	37
•	δ Cephei	Cepheus	Cepheid prototype. Mag varies between 3.5 & 4.4 over 5k days. Mag 6 companion.	887
•	α Herculis	Hercules	Semi-regular variable. Magnitude varies between 3.1 & 3.9 over 90 days. Mag 5.4 companion.	360
•	Vega	Lyra	The 5th brightest star in the sky. A blue-white star.	25
•	Algol	Perseus	Eclipsing binary star. Magnitude varies between 2.1 & 3.4 over 3 days	90
•	Fomalhaut	Piscis Austrinus	Arabic translation: "fish's mouth".	25
•	Aldebaran	Taurus	Arabic translation: "The Follower". Has massive planets	67
•	Pleiades	Taurus	M45: The Seven Sisters. Spectacular cluster. Many more stars visible in binoculars.	399
•	Hyades	Taurus	Large V-shaped star cluster. Binoculars reveal many more stars.	152
•	Polaris	Ursa Minor	The North Pole Star. A telescope reveals a mag 8 companion.	433

Binoculars Objects

			Light Years*	
○	M31	Andromeda	The Great Andromeda Galaxy. Most distant object visible to naked eye.	2.5M
•	η Aquilae	Aquila	Bright Cepheid variable. Mag varies between 3.6 & 4.5 over 7.166 days.	1200
•	μ Cephei	Cepheus	Red supergiant. Herschel's Garnet Star. Long period variable (Mag 3.4 to 5.1.).	3.1k
•	Mira	Cetus	Famous long period variable star. Mag varies between 3.0 & 10.1 over a year.	300
○	M39	Cygnus	9° from Deneb.	1k
•	χ Cygni	Cygnus	Mira type. Long period pulsating red giant. Magnitude varies between 3.3 & 14.2 over 407 days.	553

Binoculars Objects (Continued)

			Light Years*	
•	ν Draconis	Draco	White double stars. Excellent in binoculars.	98
•	M13	Hercules	Excellent globular. Discovered by Halley in 1714.	2.3k
•	M92	Hercules	Fainter and smaller than M13. Use a telescope to resolve its stars.	27k
•	R Lyrae	Lyra	Semi-regular variable. Magnitude varies between 3.9 & 5.0 over 46.0 days.	298
•	ε Lyrae	Lyra	Famous Double Double. Binoculars show a double star. High power reveals each a double.	162
•	M12	Ophiuchus	Fainter and smaller than M13. Use a telescope to resolve its stars.	27k
•	M10	Ophiuchus	3 degrees from the fainter M12. Both may be glimpsed in binoculars.	14k
•	M15	Pegasus	Globular with a planetary nebula	30k
•	M8	Sagittarius	Lagoon Nebula.	5.2k
•	M22	Sagittarius	Excellent globular, better in telescope	10k
•	M25	Sagittarius	Near teapots lid	1.9k
•	Mizar & Alcor	Ursa Major	Quadrupal star system. Good eyesight or binoculars reveals 2 stars.	82
•	CR 339	Vulpecula	Coat hanger	780

Telescope Objects

			Light Years*	
•	γ Andromedae	Andromeda	Beautiful yellow, blue double star.	390
○	NGC 891	Andromeda	Edge-on galaxy.	33M
○	NGC 7662	Andromeda	Blue Snow ball.	3.6k
○	NGC 7009	Aquarius	Saturn Nebula. Requires 8-inch telescope to see Saturn-like appendages.	3k
○	NGC 7293	Aquarius	Helix Nebula. Spans nearly 1/4 deg. Requires dark sky.	300
•	γ Arietis	Aries	Double blue-white stars. Visible in a small telescope.	7.8

Telescope Objects (Continued)

			Light Years*	
□	C31, IC 405	Auriga	Flaming Star; challenging for small telescopes.	1.4k
•	η Cassiopeiae	Cassiopeia	Yellow star mag 3.4 & orange star mag 7.5.	19
○	NGC 40	Cepheus	Bow tie	2.7k
•	61 Cygni	Cygnus	Attractive double star. Mags 5.2 & 6.1 orange dwarfs. S	11.4
•	Albireo	Cygnus	Beautiful telescope double star. Contrasting colors of orange and blue. Sep=34.4".	415
•	61 Cygni	Cygnus	Attractive double star. Mags 5.2 & 6.1 orange dwarfs. Sep=28.4".	11.4
□	NGC 6888	Cygnus	Crescent	8.2k
•	Albireo	Cygnus	Orange and blue-green.	415
•	η Cassiopeiae	Cassiopeia	Bright yellow and dim red star.	19
○	NGC 7635	Cassiopeia	Bubble, M52 nearby.	1.4k
○	NGC 40	Cepheus	Bow Tie.	2.7k
○	M77	Cetus	Top view barred spiral.	33M
○	M57	Lyra	Ring Nebula.	4.1k
•	B Lyrae	Lyra	Eclipsing binary (13 days)	1k
○	M74	Pisces	Faintest Messier galaxy.	33M
○	M81/M82	Ursa Major	M81: Beautiful spiral galaxy visible with binoculars. M82 galaxy nearby but fainter.	12M
○	M101	Ursa Major	Large faint face-on spiral galaxy	12M
○	M97	Ursa Major	Owl	2.8k
○	M27	Vulpecula	Dumbbell Nebula. Large, twin-lobed shape. Most spectacular planetary.	975