



SKY MAP July

10:00pm: July 5

9:00pm: July 20

9:00pm: August 5

Also can be used in the pre-dawn hours of March thru June.

Latitude 35°N

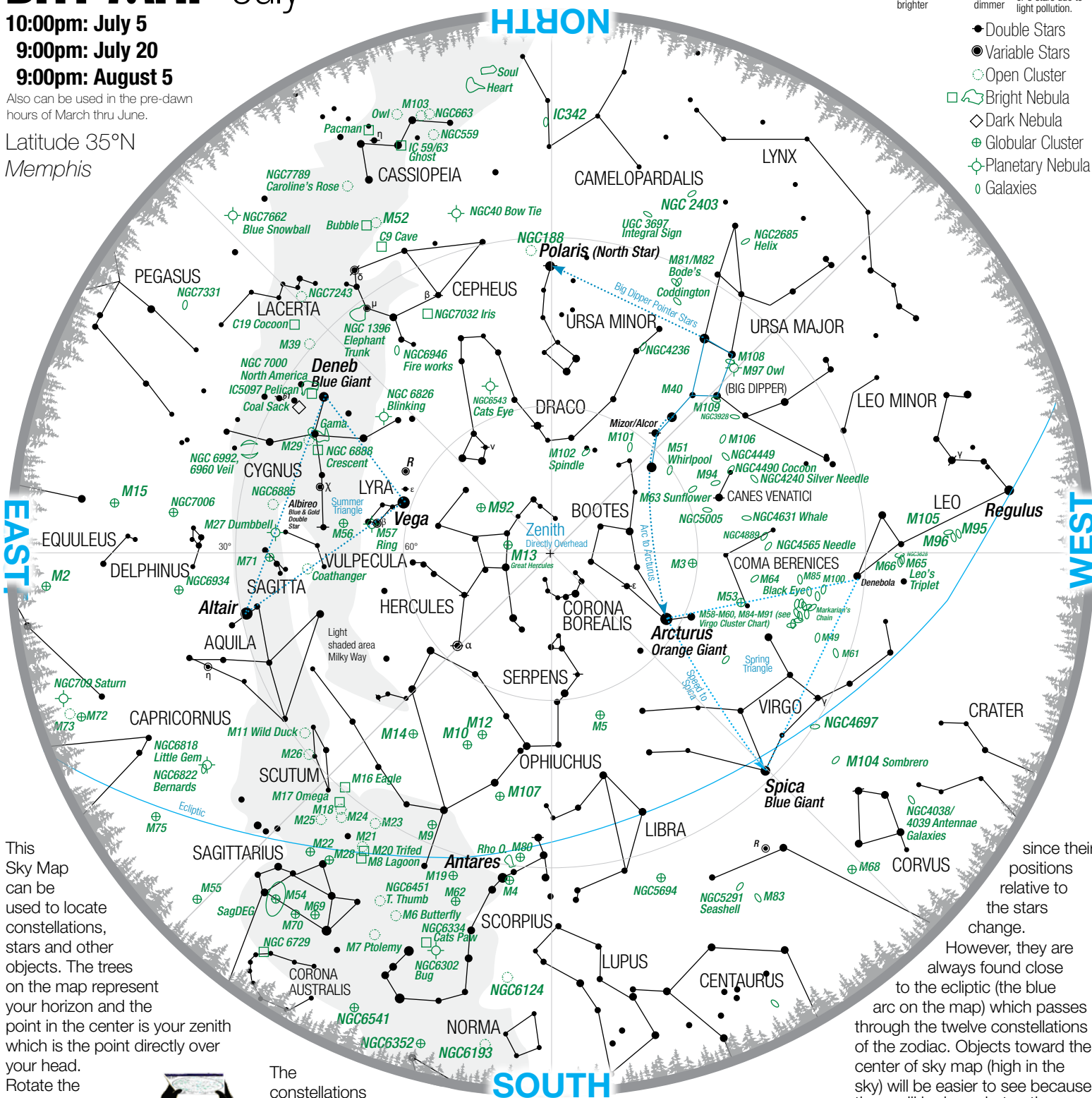
Memphis

Magnitude (Brightness)

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

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 July

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
•	Regulus	Leo	Blue-white star with at least 1 companion in Leo.	77
•	Vega	Lyra	The 5th brightest star in the sky. A blue-white star.	25
•	Antares	Scorpius	Red, supergiant star. Name means "rival of Mars".	136
•	Polaris	Ursa Minor	The North Pole Star. A telescope reveals a mag 8 companion.	433
•	Spica	Virgo	Latin translation: "ear of wheat" Spica held in Virgo's left hand.	250

Binoculars Objects			Light Years*	
•	η Aquilae	Aquila	Bright Cepheid variable. Mag varies between 3.6 & 4.5 over 7.166 days.	1200
•	M3	Canes Venatici	Easy to find in binoculars. Might be glimpsed with the naked eye.	590
•	μ Cephei	Cepheus	Red supergiant. Herschel's Garnet Star. Long period variable (Mag 3.4 to 5.1).	3.1k
•	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
•	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

Binoculars Objects			Light Years*	
•	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
•	M4	Scorpius	A close globular. Can see with eye with good conditions.	7k
•	M6	Scorpius	Butterfly Cluster. 30+ stars in 7x binoculars.	1.9k
•	M7	Scorpius	Superb open cluster. Visible to the naked eye. Age is 260 million years.	780
•	M5	Serpens	Fine globular star cluster. Telescope will reveal individual stars.	25k
•	Mizar & Alcor	Ursa Major	Quadruple star system. Good eyesight or binoculars reveals 2 stars.	82
•	CR 339	Vulpecula	Coat hanger	780

Telescope Objects			Light Years*	
•	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	Orange and blue-green.	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
•	ε Boötis	Bootes	Red giant star with a blue companion. Separation is 2.8".	236
•	η Cassiopeiae	Cassiopeia	Bright yellow and dim red star.	19
•	M94	Canes Venatici	Croc's Eye	16M

Telescope Objects (Continued)				Light Years*
•	M51	Canes Venatici	Whirlpool	16M
•	NGC 7635	Cassiopeia	Bubble, M52 nearby.	1.4k
•	NGC 40	Cepheus	Bow Tie.	2.7k
•	M53	Coma Berenices	Very remote globular.	60k
•	M64	Coma Berenices	Black Eye	17M
•	Leo Galaxies	Leo	Triplet M65/66/NGC3628 and M95/M96/M105	11M
•	M57	Lyra	Ring Nebula.	4.1k
•	B Lyrae	Lyra	Eclipsing binary (13 days)	1k
•	M17	Sagittarius	Omega with cluster NGC6 618	4.9k
•	M20	Sagittarius	Trifid. Colorful.	5.2k
•	M21	Sagittarius	Also called Webb's cross.	3.9k
•	M23	Sagittarius	Also good with binoculars	5.2k
•	M11	Scorpius	Wild Duck Cluster. Resembles a globular through binoculars. V-shaped.	5.6k
•	M16	Serpens	Eagle Nebula. Requires a telescope of large aperture.	8.2k
•	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
•	M87	Virgo	Giant Spherical Galaxy	54M
•	γ Virginis	Virgo	Two bright yellow stars	38
•	M104	Virgo	Sombrero	29M
•	Galaxy Clusters	Virgo	See Virgo Cluster chart	M
•	M27	Vulpecula	Dumbbell Nebula. Large, twin-lobed shape. Most spectacular planetary.	975