



## SKY MAP December

9:00pm: December 5

8:00pm: December 20

7:00pm: January 5

Also can be used in the pre-dawn hours of August thru November.

Latitude 35°N

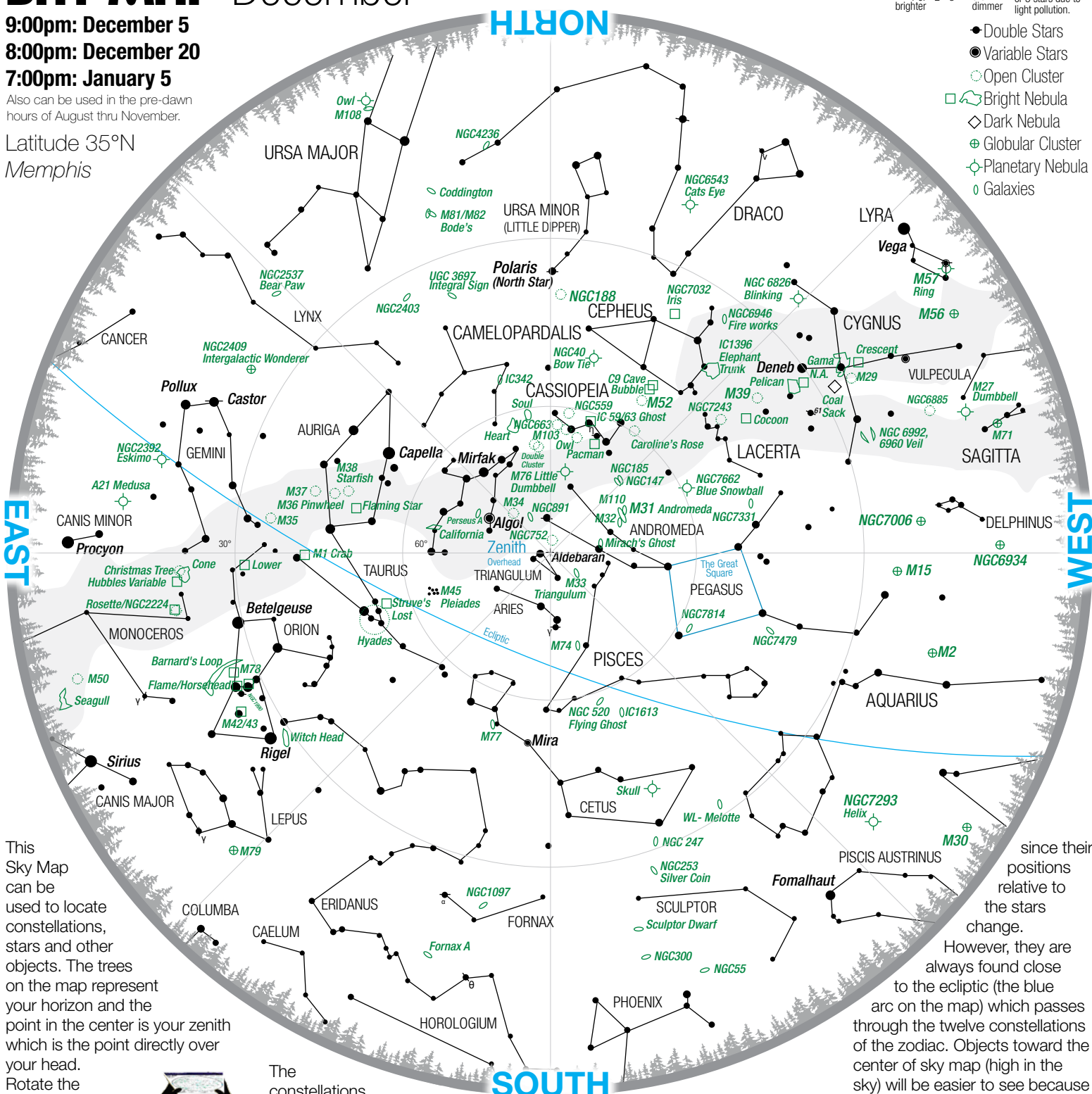
Memphis

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](http://memphisastro.org)).



# Observing List December

Naked Eye Objects			Light Years*	
•	Capella	Auriga	Beautiful yellow star.	42
•	Sirius	Canis Major	The brightest star in night sky.	9
•	Procyon	Canis Minor	Greek translation "before the dog" because it rises before Sirius	11
•	Deneb	Cygnus	Supergiant star in Cygnus.	1.4k
•	Castor	Gemini	Multiple star system. 3 stars visible in telescopes.	52
•	Pollux	Gemini	Bright star (twin of Castor)	34
•	Rigel	Orion	Blue supergiant star. Triple star system; two are visible with telescopes	770
•	Betelgeuse	Orion	Very large red star. Diameter is 300 times that of Sun.	430
•	Algol	Perseus	Eclipsing binary star. Magnitude varies between 2 & 3 over 3 days	90
•	TX Psciscium	Pisces	Red Giant Carbon Star (reddest known star)	900
•	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 (Continued)			Light Years*	
•	M39	Cygnus	9° from Deneb.	1k
•	M35	Gemini	Open cluster near bottom of twin Castor.	2.9k
•	M48	Hydra	Visible to naked eye under dark sky and good atmospheric conditions.	2.5k
•	γ Leporis	Lepus	Visible with binoculars. Yellow & white stars. Mags 3.6 & 6.2.	30
•	M79	Lepus	Unusually globular on opposite of milky way.	42k
•	NGC 2232	Monoceros	Very near open cluster to Sun in comparison.	1.1k
•	NGC 2238/44	Monoceros	Star cluster surrounded by Rosette Nebula. Need telescope to see Rosette.	5.4k
•	M50	Monoceros	Heart shaped open cluster.	3k
•	M42/43	Orion	The Great Orion Nebula. Spectacular bright nebula. Best in telescope. NGC 1977 Running Man nearby.	1.3k
•	Double Cluster	Perseus	Double Cluster in Perseus. NGC 869 & 884. Excellent in binoculars.	7.3k
•	M34	Perseus	Many white dwarfs. Excellent in binoculars.	7.3k
•	NGC 253	Sculptor	Large, cigar-shaped galaxy. Requires dark sky.	11M
•	Mizar & Alcor	Ursa Major	Quadrupal star system. Good eyesight or binoculars reveals 2 stars.	82

Telescope Objects (Continued)			Light Years*	
•	M67	Cancer	Golden eye cluster or King Cobra Cluster. One of the oldest clusters.	2,5k
•	NGC 40	Cepheus	Bow Tie.	2.7k
•	M77	Cetus	Top view barred spiral.	33M
•	Iota (ι) Cancri	Cancer	Blue and yellow double star.	280
•	61 Cygni	Cygnus	K-type red dwarfs.	11.4
•	θ Eridani	Eridanus	Beautiful blue-white double star. Mags 3.2 & 4.3. Visible in a small telescope.	164
•	NGC 2392	Gemini	Eskimo or clown face.	4.2k
•	NGC 2419	Lynx	Intergalactic wonderer. Very remote globular.	300k
•	NGC 2264	Monoceros	Christmas Tree Cluster. Includes Cone Nebula.	2.5k
•	β Monocerotis	Monoceros	Triple star system.	700
•	σ Orionis	Orion	Multiple star system. 2 mag 7 and mag 9 stars. Struve 761 double nearby.	387
•	IC 434	Orion	Flame and Horsehead nearby.	1.6k
•	M78	Orion	Reflection nebula in Orion.	1.6k
•	NGC 7814	Pegasus	Edge-on galaxy.	47M
•	M76	Perseus	Little dumbbell.	5.6k
•	M74	Pisces	Faintest Messier galaxy.	33M
•	M46	Puppis	Open cluster contains NGC 2438 planetary nebula.	4.9k
•	M1	Taurus	Crab Nebula. Remnant from supernova seen as early as 1054.	6.5k
•	M33	Triangulum	Fine face-on spiral galaxy. Requires a large aperture telescope.	3M
•	M81/M82	Ursa Major	M81: Beautiful spiral galaxy visible with binoculars. M82 galaxy nearby but fainter.	12M

Binoculars Objects			Light Years*	
•	M31	Andromeda	The Great Andromeda Galaxy. Most distant object visible to naked eye.	2.5M
•	M38	Auriga	Stars appear arranged greek letter "π"	3.5k
•	M36	Auriga	Open cluster about half the size of M38.	4.1k
•	M37	Auriga	Bright cluster.	4.4k
•	M41	Canis Major	Discovered by Aristotle in 325 BC. Little Bee hive cluster.	2.3k
•	Mira	Cetus	Famous long period variable star. Mag varies between 3.0 & 10.1 over a year.	300
•	μ Cephei	Cepheus	Red supergiant. Herschel's Garnet Star. Long period variable (Mag 3.4 to 5.1.).	3.1k
•	M44	Cancer	Beehive Cluster. Visible to the naked eye.	610

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
•	M2	Aquarius	Interesting butterfly shaped nebula.	2.1k
•	γ Arietis	Aries	Double blue-white stars. Visible in a small telescope.	7.8
•	C31, IC 405	Auriga	Flaming Star; challenging for small telescopes.	1.4k
•	η Cassiopeiae	Cassiopeia	Bright yellow and dim red star.	19
•	NGC 7635	Cassiopeia	Bubble, M52 nearby.	1.4k