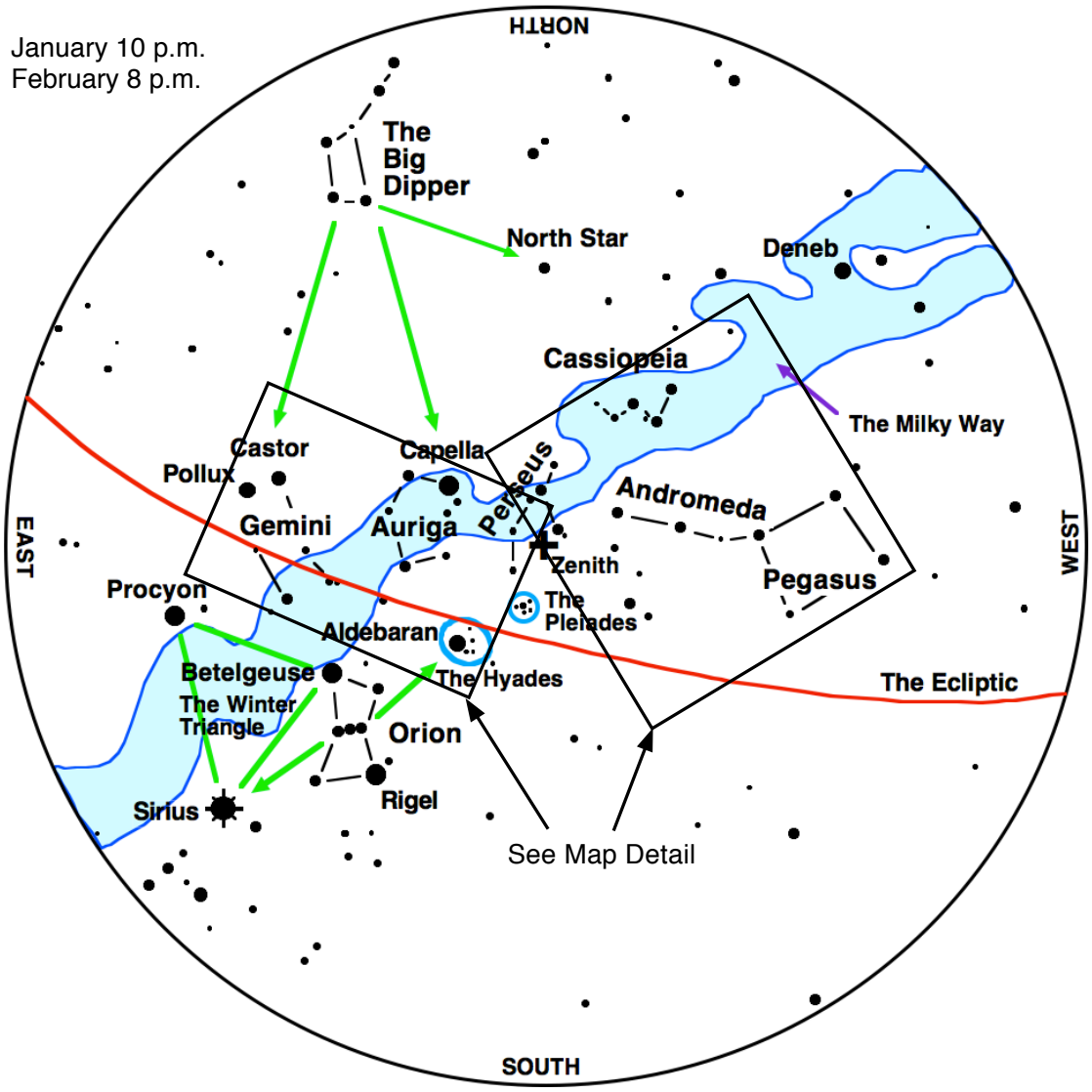
All-Sky Map for January and February



Navigating the Night Sky

Learn the sky by first finding those stars or constellations that you already know, such as the Big Dipper or Orion. This time of year, the Big Dipper lies low in the northeast and Orion is high in the southeast. Judge the relative positions of new stars from the ones you know.

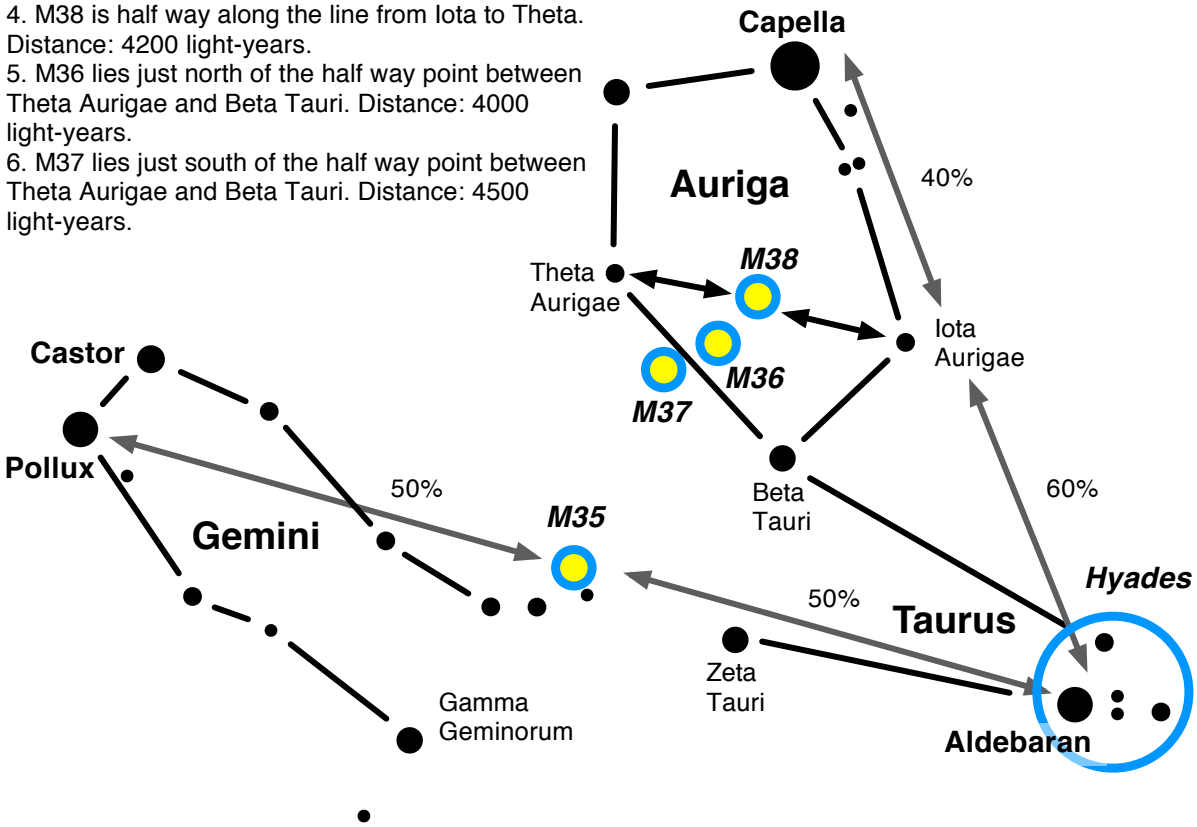
Use the Big Dipper as a guide to find:
The North Star
Capella
Castor

Use Orion as a guide to find:
Sirius, the brightest star in the night sky,
The Winter Triangle,
Aldebaran and the Hyades

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.

Selected Deep Sky Objects in the January through April early evening sky

To find star clusters M36, M37, and M38:
1. Locate the bright star Capella. It is nearly directly overhead. Locate reddish Aldebaran.
2. Locate the other four major stars of the pentagon of Auriga. The bottom one is really Beta Tauri.
3. Find Iota. It is 40% of the distance between Capella and Aldebaran.
4. M38 is half way along the line from Iota to Theta. Distance: 4200 light-years.
5. M36 lies just north of the half way point between Theta Aurigae and Beta Tauri. Distance: 4000 light-years.
6. M37 lies just south of the half way point between Theta Aurigae and Beta Tauri. Distance: 4500 light-years.



To find star cluster M35:
1. Find the bright stars Pollux and Aldebaran.
2. Draw a line between them.
3. M35 is located 1/2 way between them. Distance: 2800 light-years.
4. The telescope will also show another open cluster, NGC 2158, as a small blur in the same field. Distance: 11,000 light-years.

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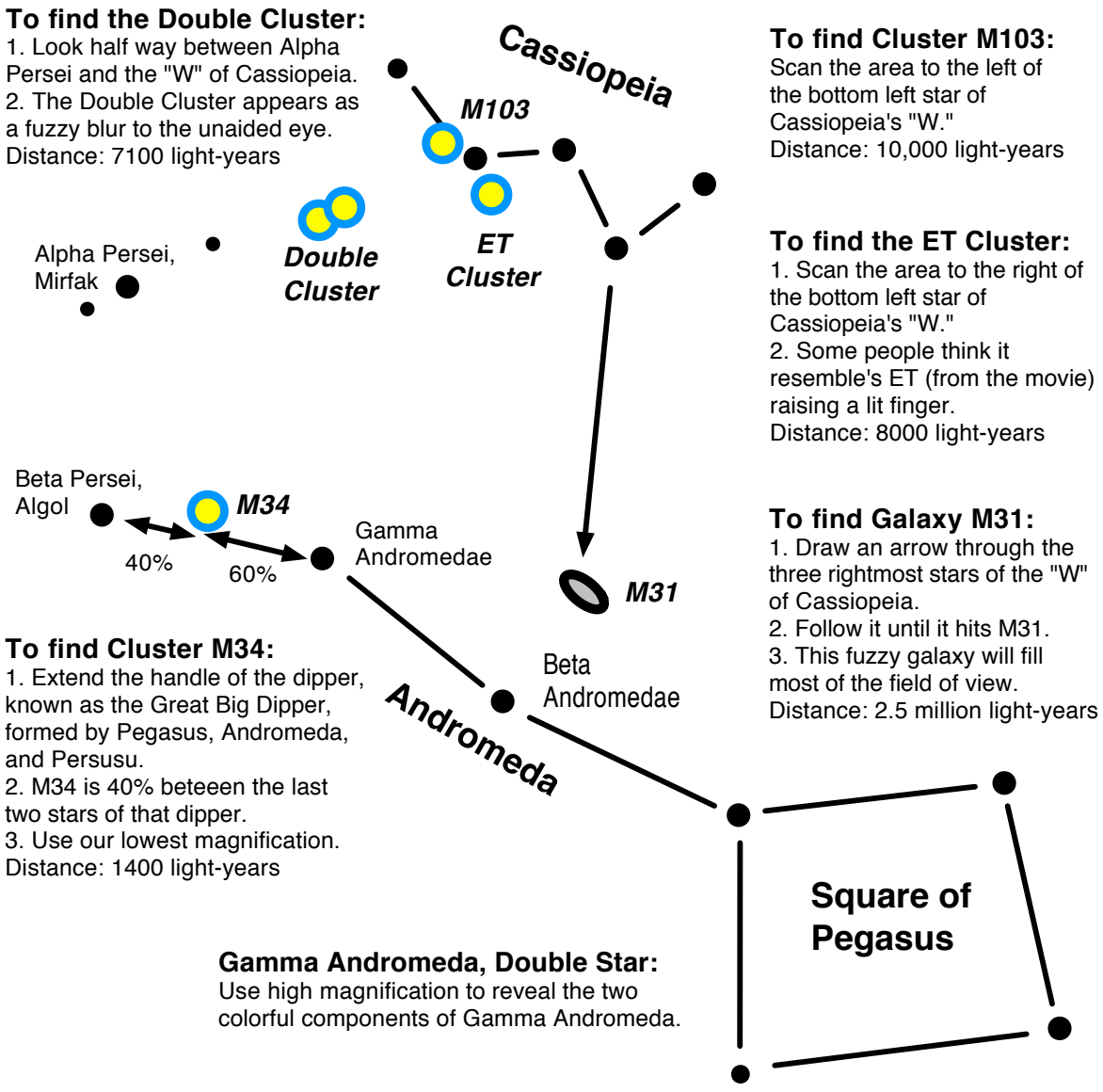
Selected Deep Sky Objects in the January and February (and November and December) early evening sky

Look nearly overhead for Pegasus, Andromeda, Perseus, and Cassiopeia



To find the Double Cluster:
1. Look half way between Alpha Persei and the "W" of Cassiopeia.
2. The Double Cluster appears as a fuzzy blur to the unaided eye.
Distance: 7100 light-years

To find Cluster M103:
Scan the area to the left of the bottom left star of Cassiopeia's "W."
Distance: 10,000 light-years

To find the ET Cluster:
1. Scan the area to the right of the bottom left star of Cassiopeia's "W."
2. Some people think it resemble's ET (from the movie) raising a lit finger.
Distance: 8000 light-years

To find Galaxy M31:
1. Draw an arrow through the three rightmost stars of the "W" of Cassiopeia.
2. Follow it until it hits M31.
3. This fuzzy galaxy will fill most of the field of view.
Distance: 2.5 million light-years

To find Cluster M34:
1. Extend the handle of the dipper, known as the Great Big Dipper, formed by Pegasus, Andromeda, and Persusu.
2. M34 is 40% beteeen the last two stars of that dipper.
3. Use our lowest magnification.
Distance: 1400 light-years

Gamma Andromeda, Double Star:
Use high magnification to reveal the two colorful components of Gamma Andromeda.

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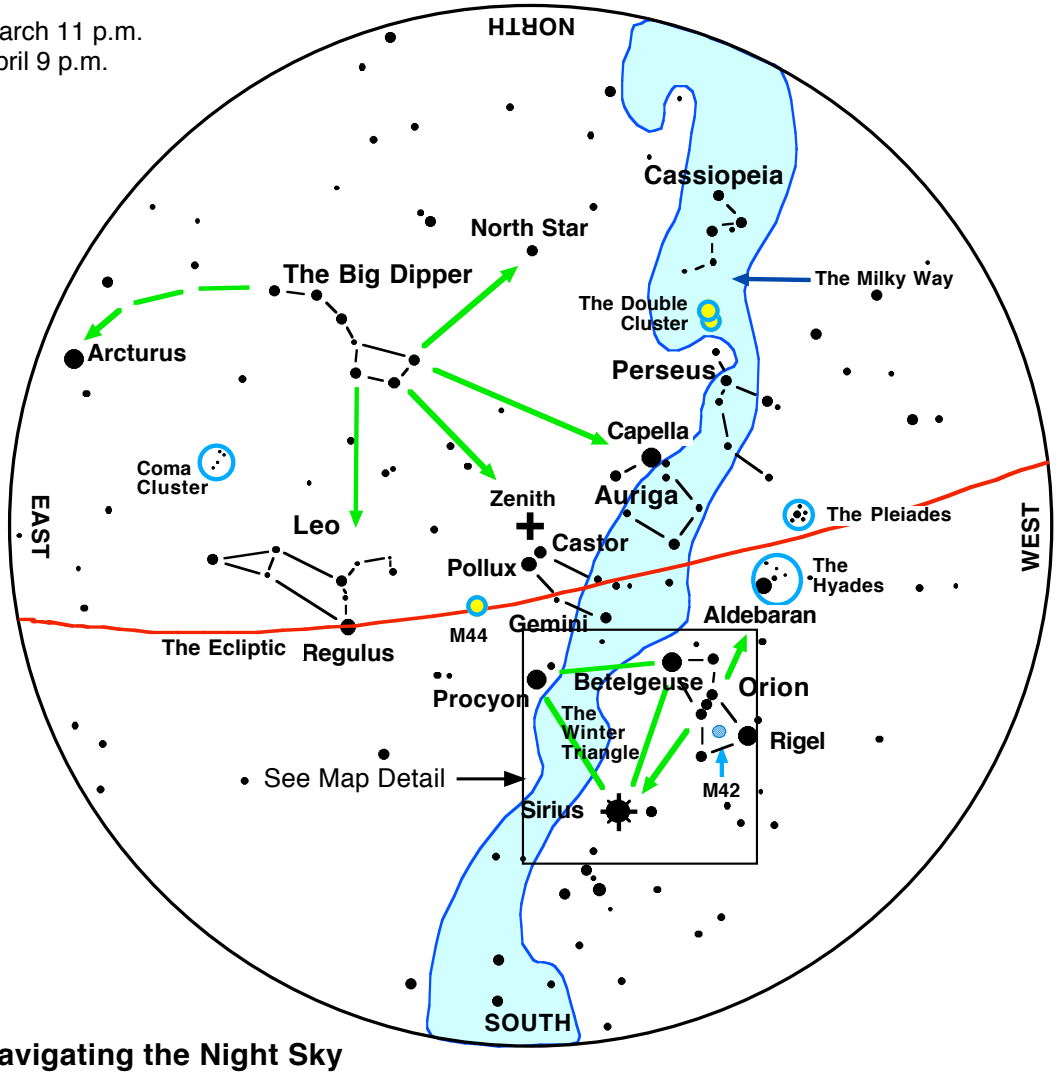
All-Sky Map for March and April

March 11 p.m.
April 9 p.m.



Navigating the Night Sky

Learn the sky by first finding those stars or constellations that you know, such as the Big Dipper or Orion. Judge the relative positions of the new stars from the ones you know. This time of year, the Big Dipper lies high in the northeast and Orion is high in the south or southwest.

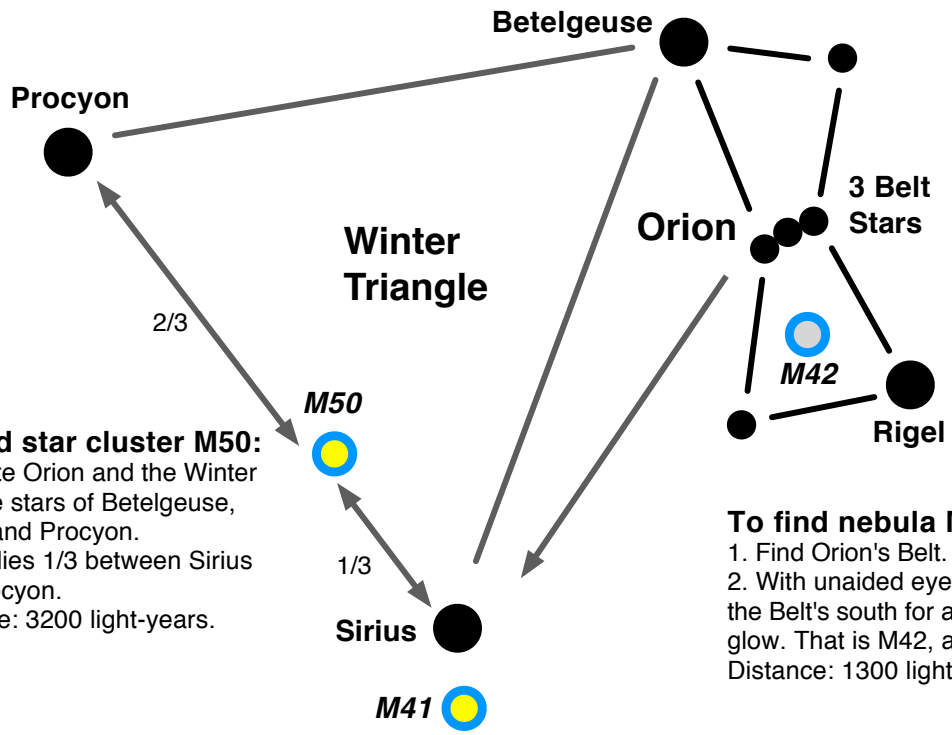
Use the Big Dipper as a guide to find:
The North Star
Capella
Castor
Leo
Arcturus

Use Orion as a guide to find:
Sirius,
The Winter Triangle,
Aldebaran and the Hyades

View the large star cluster M44:
It lies near the center of a triangle formed by Pollux, Regulus, and Procyon. The cluster appears to the unaided eye as a smudge, but through a low-powered telescope, its many twinkling stellar lights can be easily seen. Distance: 580 light-years.

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.

Selected Deep Sky Objects in the March and April early evening sky



To find star cluster M50:
1. Locate Orion and the Winter Triangle stars of Betelgeuse, Sirius, and Procyon.
2. M50 lies 1/3 between Sirius and Procyon.
Distance: 3200 light-years.

To find nebula M42:
1. Find Orion's Belt.
2. With unaided eye, look to the Belt's south for a fuzzy glow. That is M42, a nebula.
Distance: 1300 light-years.

To find star cluster M41:
1. Find Orion and its Belt Stars.
2. Find Sirius by extending a line formed by the Belt Stars to the southeast
3. M41 lies three field of views directly south.
Distance: 2300 light-years.

Relative field of view at 20 magnification (24 mm focal length on the zoom eyepiece).

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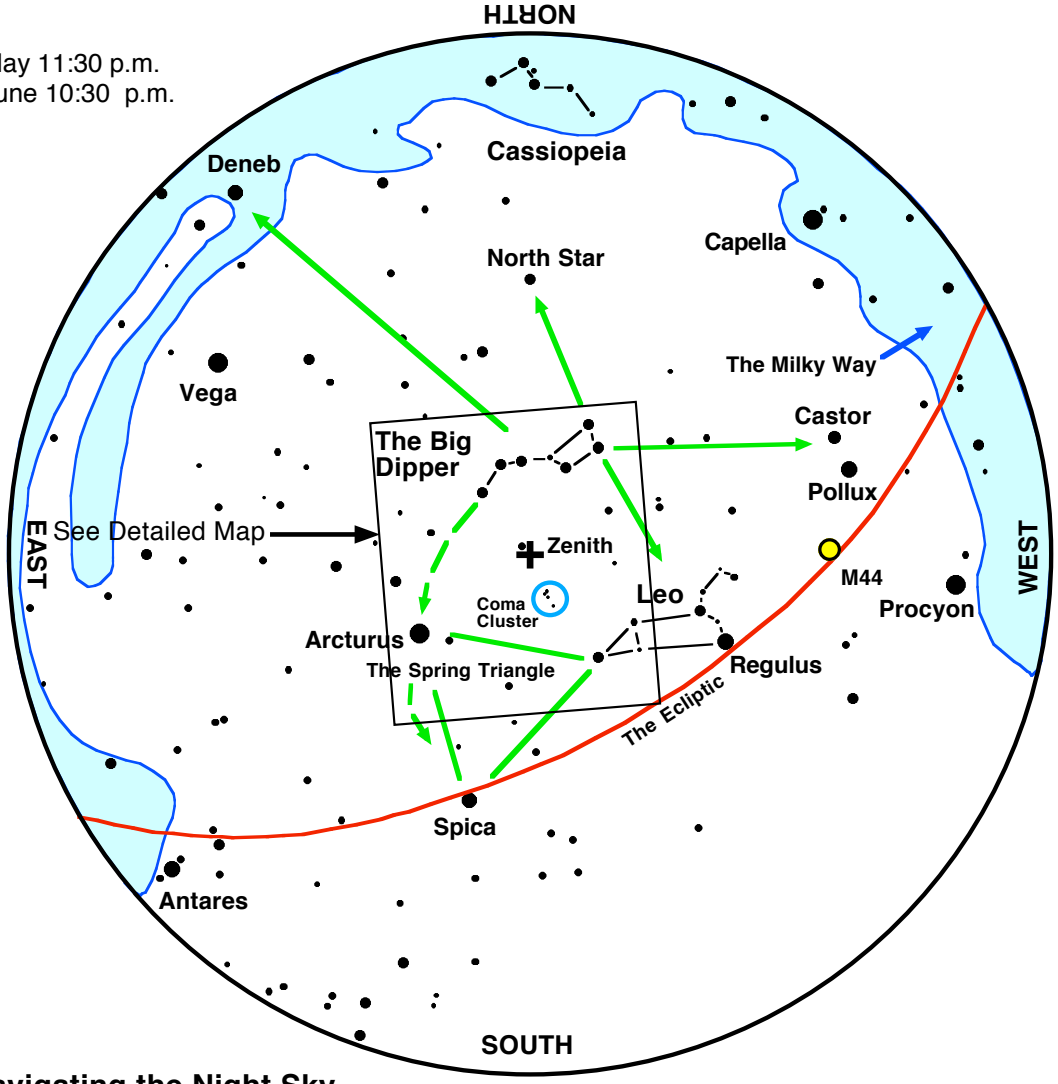
All-Sky Map for May and June



Navigating the Night Sky

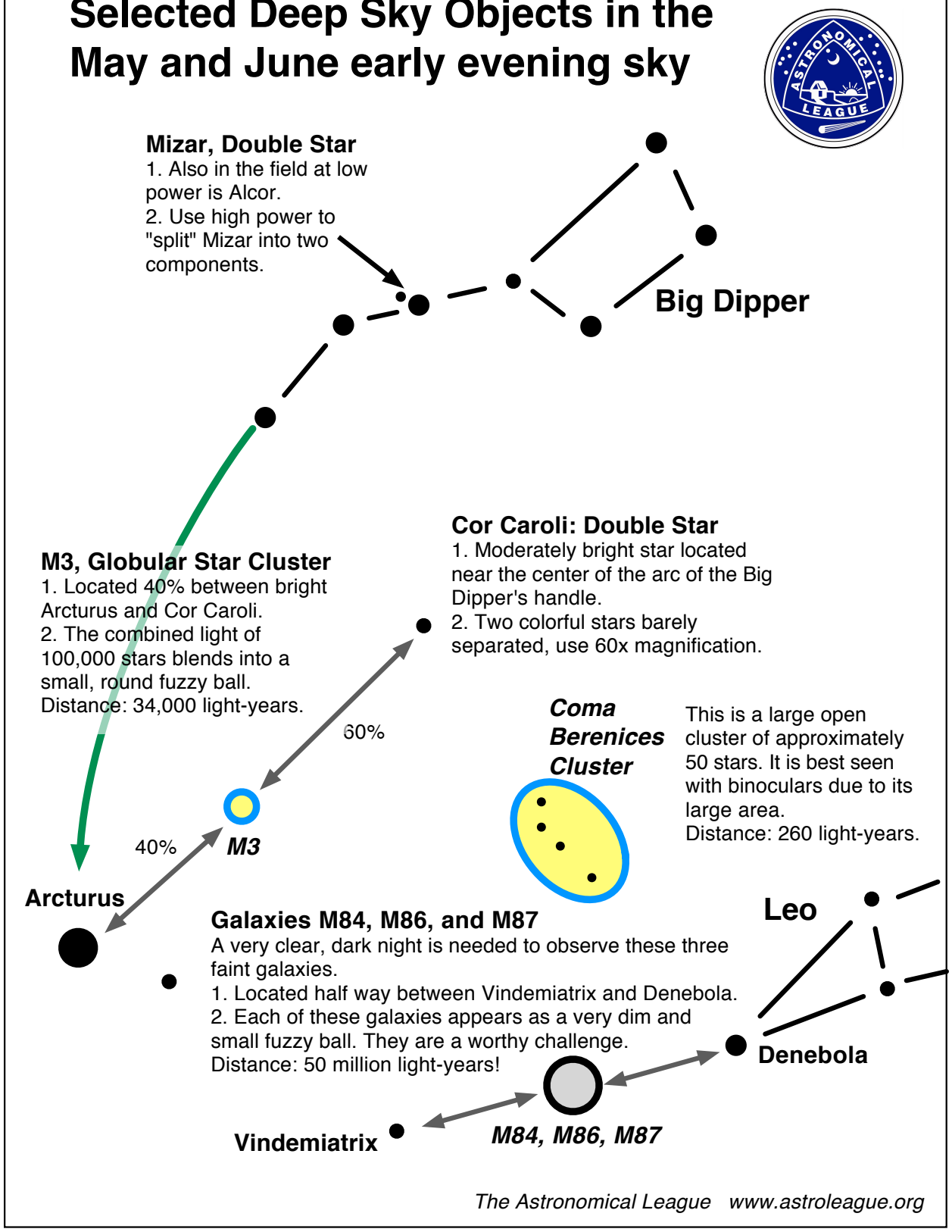
Learn the sky by first finding those stars or constellations that you know, such as the Big Dipper. Judge the relative positions of the new stars from the ones you know. This time of year, the Big Dipper lies almost overhead.

Use the Big Dipper as a guide to find:
The North Star,
Deneb,
Arcturus then Spica,
Leo,
Castor

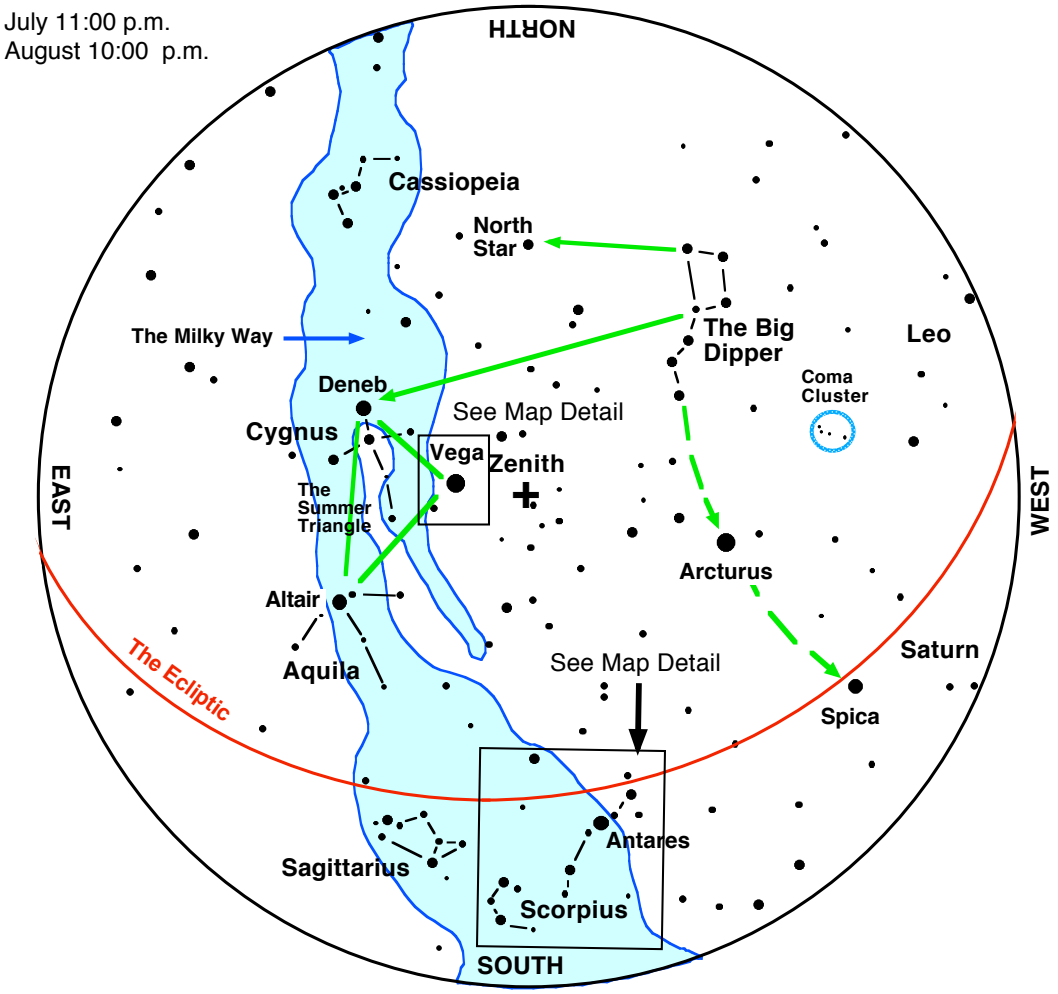
View the large star cluster M44:
Also called the Beehive, M44 lies near the center of a triangle formed by Pollux, Regulus, and Procyon. The cluster appears to the unaided eye as a smudge, but through a low-powered telescope, its many twinkling stellar lights can be easily seen.

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.

Selected Deep Sky Objects in the May and June early evening sky



All-Sky Map for July and August



Navigating the Night Sky

Learn the sky by first finding those stars or constellations that you know, such as the Big Dipper. Judge the relative positions of the new stars from the ones you know. This time of year, the Big Dipper lies high in the northwest.

Use the Big Dipper as a guide to find:
The North Star,
Deneb, and the other Summer Triangle stars of Vega and Altair,
Arcturus,
Spica

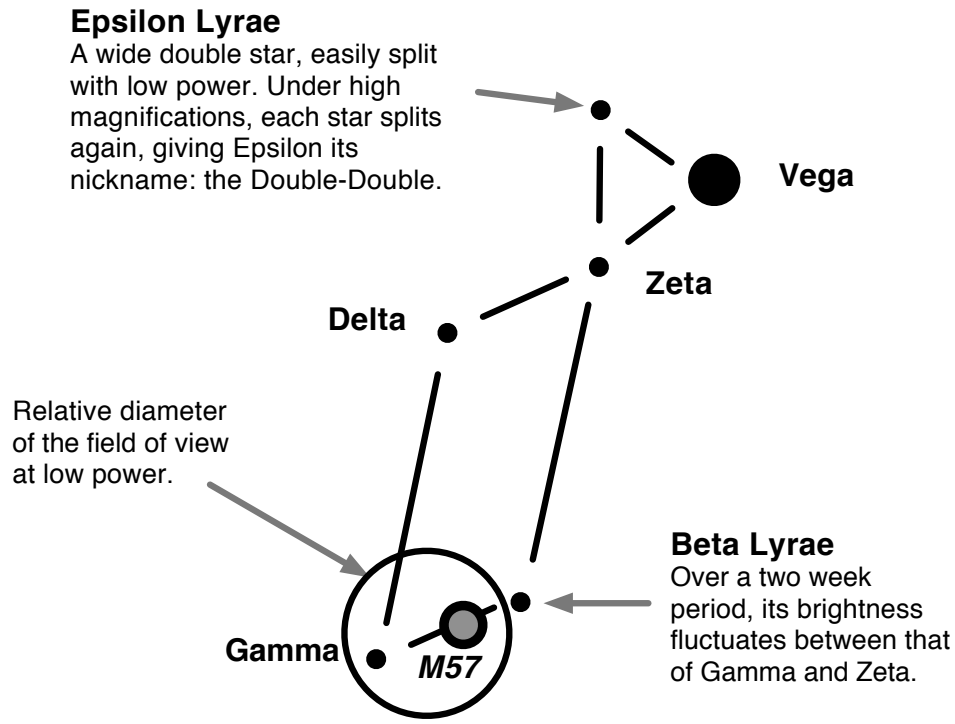
The Milky Way stretches from the northeast, almost overhead, then to the south. Scan with binoculars and telescope along its length for many fascinating star clusters and small ill-defined nebulae.

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.

Selected Deep Sky Objects in the July and August early evening sky

Lyra

Lyra is a small constellation situated almost overhead in summer evenings. It is dominated by its bright star, Vega, third brightest star visible from the mid latitudes of the United States. Vega is also the brightest member of the "Summer Triangle."



To find Planetary Nebula M57:

Although it is called a "planetary nebula," it has nothing to do with the planets.
1. Find the parallelogram of Lyra.
2. M57 lies between the two lower stars of the parallelogram, Beta and Gamma Lyrae.
3. It appears very small and dim, and slightly oblong.

Distance: 2000 light-years.

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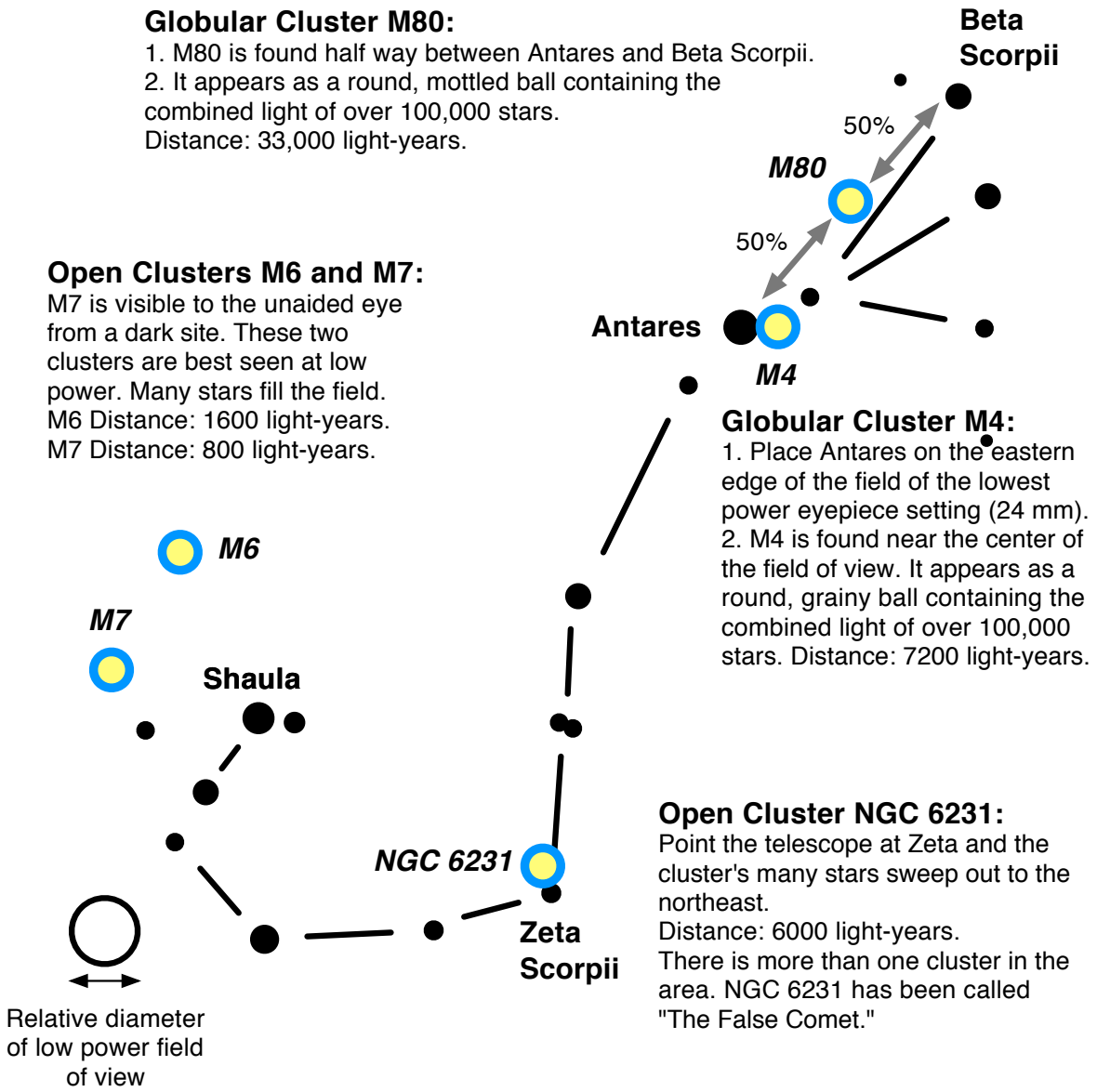
Selected Deep Sky Objects in the July and August early evening sky

Enjoy the Constellation Scorpius

Look for its signature fish hook shape standing above the southern horizon after darkness falls in July and August.

Globular Cluster M80:
1. M80 is found half way between Antares and Beta Scorpii.
2. It appears as a round, mottled ball containing the combined light of over 100,000 stars.
Distance: 33,000 light-years.

Open Clusters M6 and M7:
M7 is visible to the unaided eye from a dark site. These two clusters are best seen at low power. Many stars fill the field.
M6 Distance: 1600 light-years.
M7 Distance: 800 light-years.



Globular Cluster M4:
1. Place Antares on the eastern edge of the field of the lowest power eyepiece setting (24 mm).
2. M4 is found near the center of the field of view. It appears as a round, grainy ball containing the combined light of over 100,000 stars. Distance: 7200 light-years.

Open Cluster NGC 6231:
Point the telescope at Zeta and the cluster's many stars sweep out to the northeast.
Distance: 6000 light-years.
There is more than one cluster in the area. NGC 6231 has been called "The False Comet."

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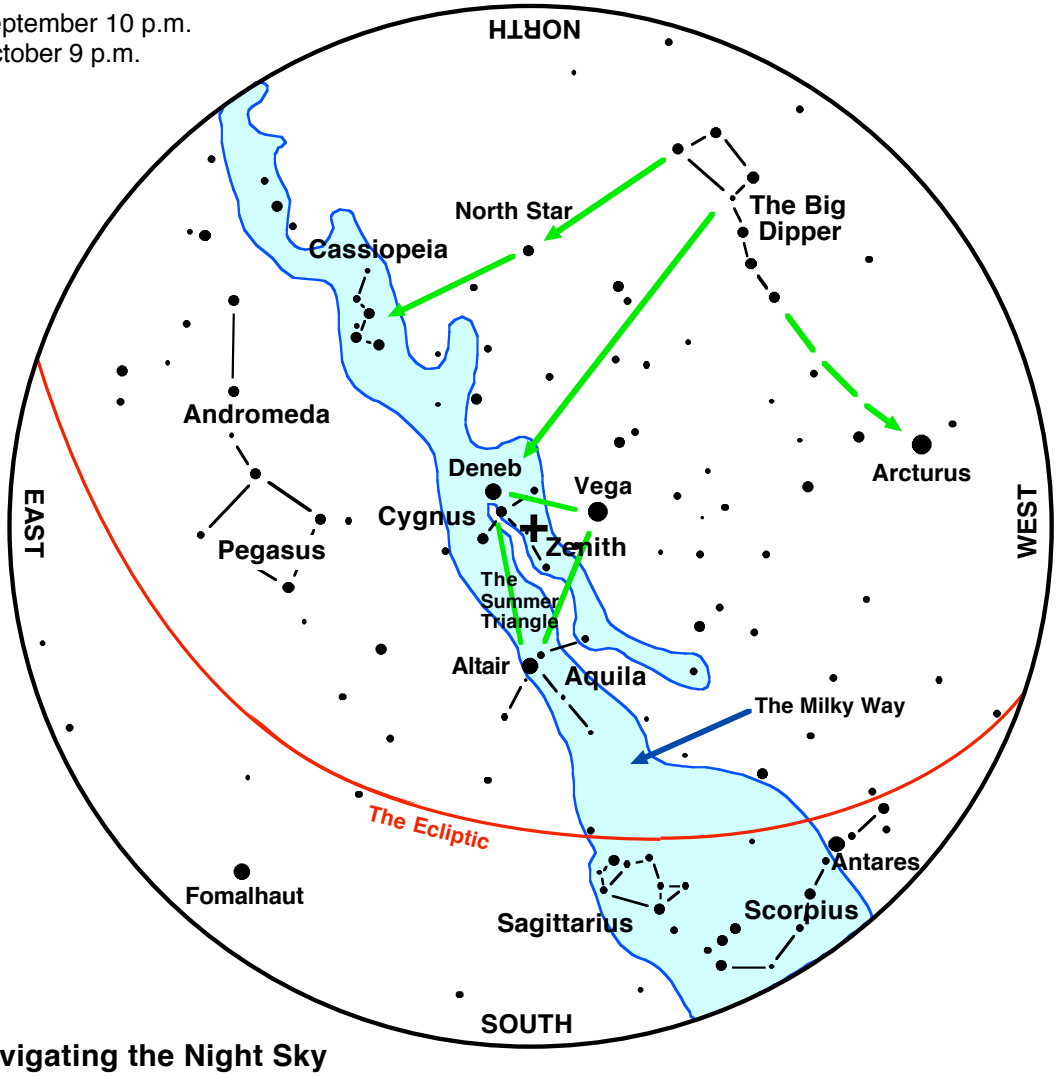
All-Sky Map for September and October

September 10 p.m.
October 9 p.m.



Navigating the Night Sky

Learn the sky by first finding those stars or constellations that you know, such as the Big Dipper. Judge the relative positions of the new stars from the ones you know. This time of year, the Big Dipper lies high in the northwest.

Use the Big Dipper as a guide to find:
The North Star,
Deneb, and the other Summer Triangle stars of Vega and Altair,
Arcturus,
Cassiopeia

The Milky Way stretches from the northeast, overhead, then to the south. Scan, with binoculars and telescope along its length for many fascinating star clusters and small ill-defined nebulae.

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.

Selected Deep Sky Objects in the September and October early evening sky

Enjoy the Constellation Sagittarius

Look for its signature teapot shape pouring above the southern horizon after darkness falls in September and October. Scan the area for many distant star clusters and nebuale.

Relative diameter of the field of view using low power.

M16

Both M16 and M17 are star forming nebulae. M16 is nicknamed "The Eagle Nebula," and M17 "The Omega Nebula." Both nebuale are 6000 light-years distant.

M17

Globular Clusters M22 and M28:
Both of these round glows are composed of the combined light of over 100,000 stars.
M22 Distance: 11,000 light-years.
M28 Distance: 18,000 light-years.

Mu Sagittarii: Possibly the farthest star the unaided eye can see. Distance: 10,000 ligth-years.

The Iced Teaspoon

M22

M28

M20

M8

Both M8 and M20 are star forming nebulae with imbedded star clusters. M8 is nicknamed "The Lagoon," M20 "The Trifid."
M8 Distance: 4000 light-years.
M20 Distance: 6000 light-years.

The Teapot

Both the star clusters M6 and M7 are large and bright. They nearly fill the field with many stars.
M6 Distance: 1600 light-years.
M7 Distance: 800 light-years.

M6

M7

Shaula

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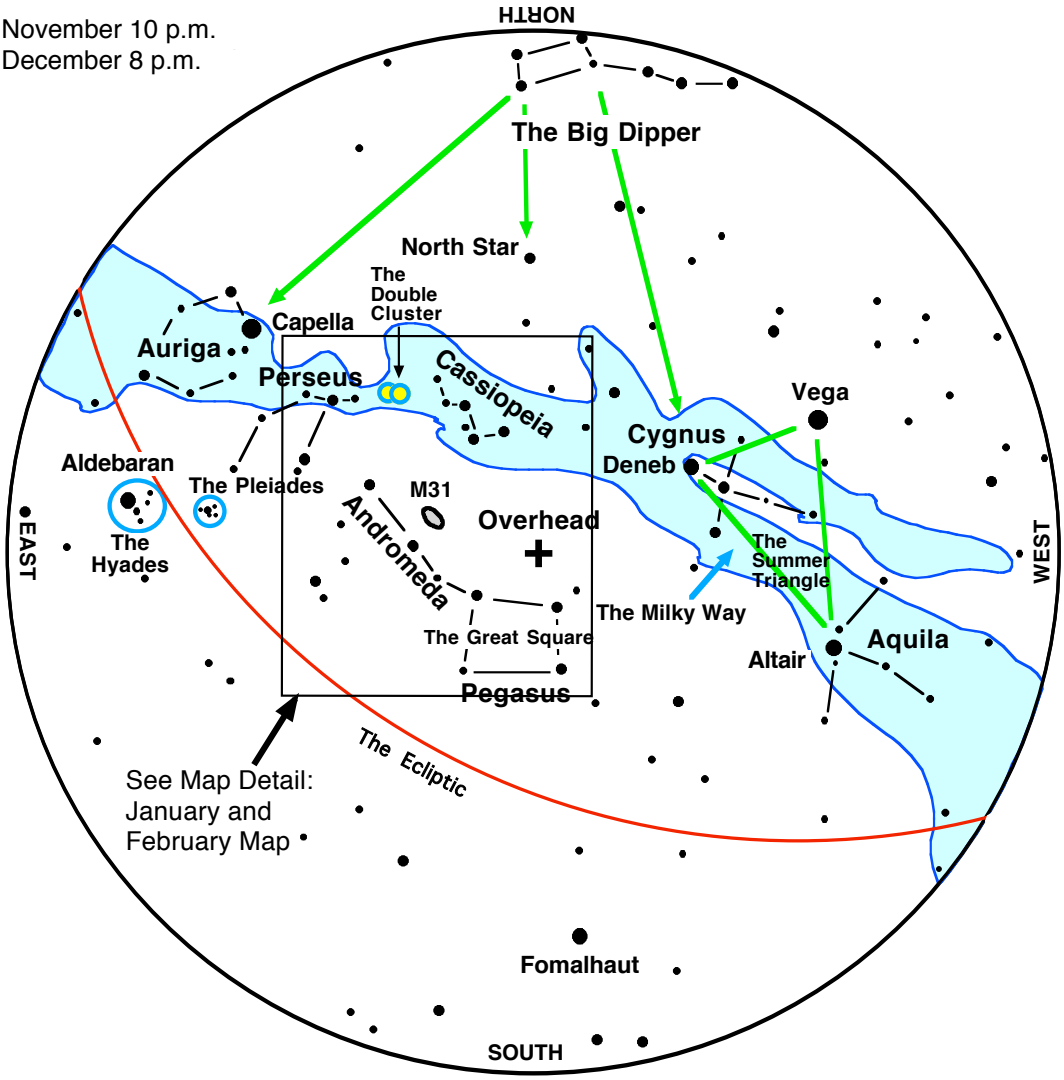
All-Sky Map for November and December



Navigating the Night Sky

Learn the sky by first finding those stars or constellations that you know, such as the Big Dipper. Judge the relative positions of the new stars from the ones you know. This time of year, the Big Dipper hugs the northern horizon. The "W" of Cassiopeia lies high overhead.

Use the Big Dipper as a guide to find:
The North Star,
Deneb, and the other Summer Triangle stars of Vega and Altair,
Capella

To use this map: Face south and hold the map above your head. The stars on the map should match those in the sky.