

Library Loaner Telescope



Blast Off to the Stars

Orion® StarBlast™ 4.5 Astro Reflector

LEVEL 1
Beginner

Here is a fun little telescope that's sure to inspire the whole family's natural inclination to explore. A perfect telescope for beginners, everyone in the family will enjoy using the StarBlast thanks to its uncomplicated design.

Fascinating craters and mountains on the Moon pop out in sharp detail through the pint-sized StarBlast 4.5. The StarBlast can display pleasing views of Jupiter and Saturn with its stunning rings. Thanks to its precisely crafted, wide-field f/4 optics and significant aperture, the StarBlast 4.5 can reveal views of galaxies, cloudy nebulas, and sparkling star clusters.

The telescope comes pre-assembled and ready for action right out of the box! With a weight of just 13 lbs., set up is easy for an educational night full of astronomical adventures. Two included eyepieces provide magnifications of 26x power and 75x power.

Get the StarBlast 4.5 today and have a blast with the whole family.

#9814 **\$199.99**
WEB VIDEO

SPECIFICATIONS

Optical design	Reflector
Aperture	114mm
Focal length, f ratio	450mm, f/4.0
Focuser	1.25" R&P
Eyepiece(s)	Explorer II 17mm, 6mm
Finder scope	EZ Finder II
Weight, assembled	13 lbs.

4.5" aperture
gobbles up light for
high-contrast views

EZ Finder II lets
you aim easily

17mm eyepiece
gives moderate 26x
magnification

6mm eyepiece
provides high power
75x magnification

Pre-assembled
base provides
stable support
and smooth
motion



Orion StarBlast 4.5 inch Reflector:
Not too small, not too large



Mark Stowbridge, originator
New Hampshire Astronomical Society

Features

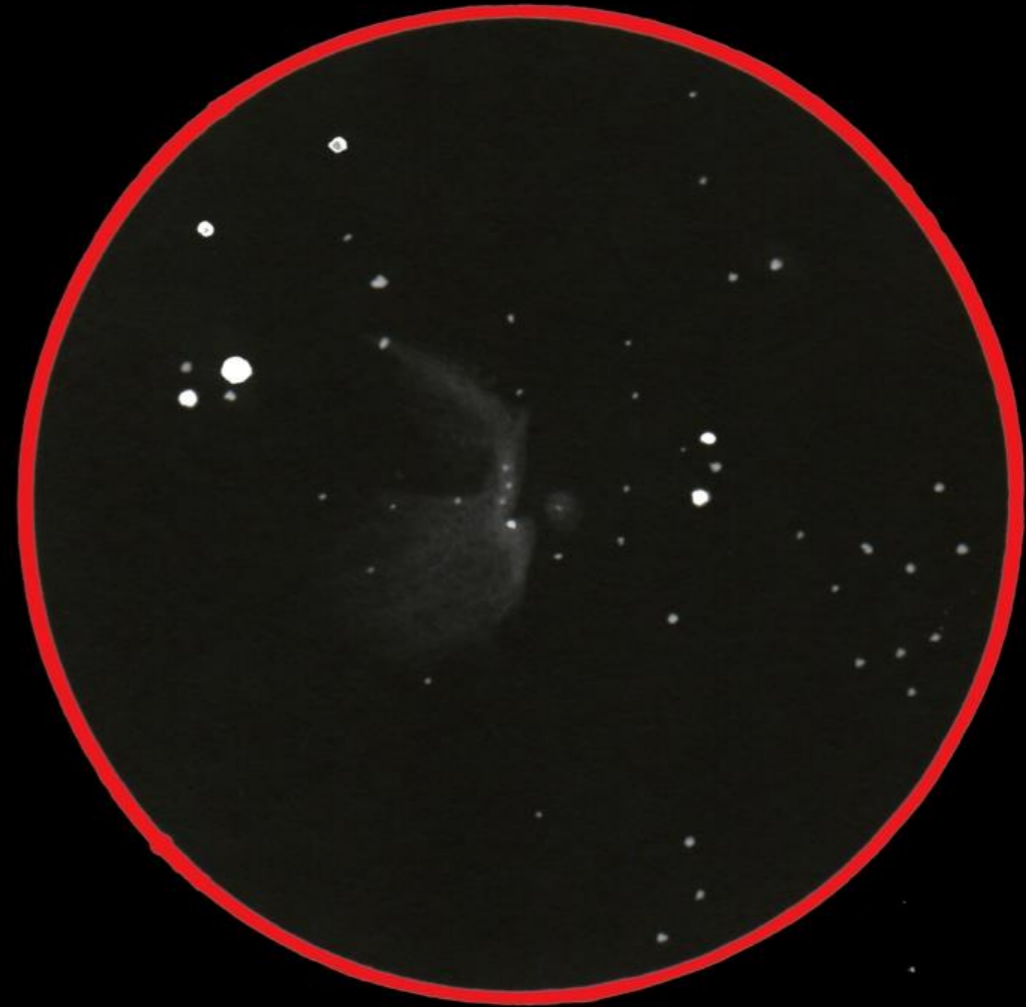
- 4.5 inch aperture
- lightweight
- sturdy mount
 - 8-24 mm Celestron Zoom Eyepiece
- User's Guide



Star Forming Nebula: M42 in Orion



60x – full zoom



20x – lowest power

These images of M42, the Orion Nebula, were drawn while looking through the Library Telescope



Remove from shipping carton



Screwing eyepiece in to Focuser

- tapping into focuser ring



Stiffening the eyepiece travel by adding a 1/2 x 1/2 inch section of velcro, loop side

Securing the
eyepiece
with set screws





Making a protective end cap

The collimation screws are now inaccessible to unauthorized fingers.

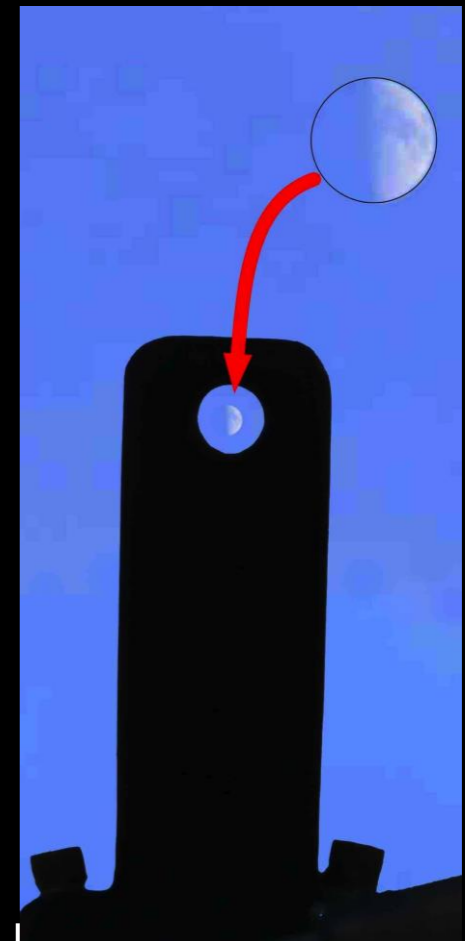




Moon port: 1-3/4 inch mask for bright lunar viewing



Locating a target



1. Use the zoom setting of 24 mm, because it has the widest field of view.
2. Move the scope so that the target is centered in the finder.
3. The target should be in the eyepiece or just outside of it.

The telescope is sturdy,
but keep these two important points in mind:

1. Never drop the telescope!

**2. Do not look at the Sun
with this Telescope!
Severe, permanent eye damage
will result!**





Carry it by:

- grabbing the handle with one hand,
- grabbing the base and platform with the other.

Buckle up!
Seat belt the
scope as you
would a person.

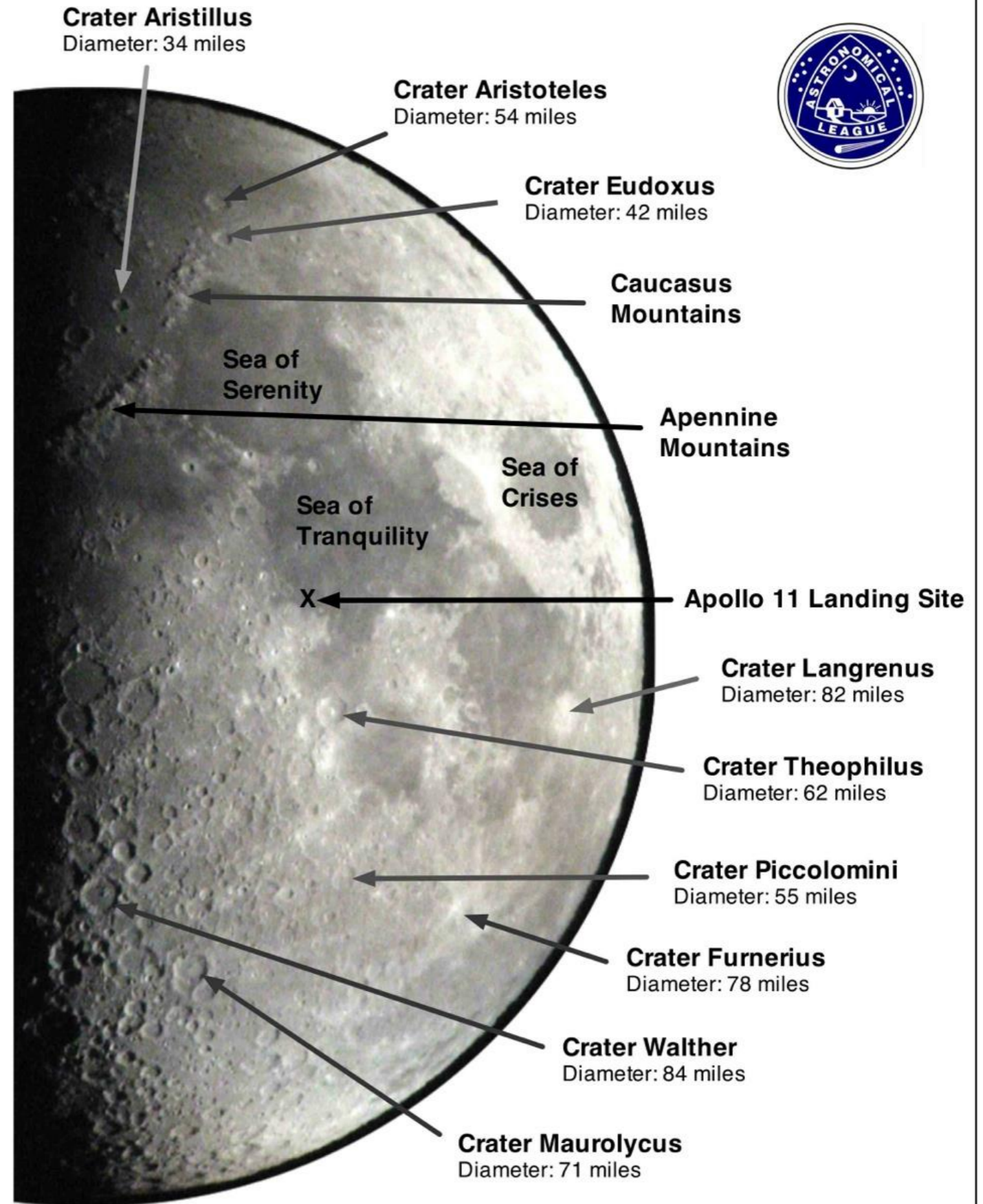




Announcing the program to the media

Selected lunar objects in the User's Guide

Selected objects visible on the First Quarter Moon



Monthly sky positions of the bright planets –

Crescent of Venus Mars at its brightest Jupiter Saturn

Of the bright planets, **Saturn** is the only one which doesn't dominate its area of the sky. It is about as bright as a bright star, so it doesn't immediately stand out. Through this telescope, both the planet and the rings are small. If the telescope is sharply focused, though, the rings can be easily seen, as well as Saturn's large moon Titan.

Saturn, when it is seen 90 minutes after sunset						
Constellation	Scorpius	Ophiuchus	Ophiuchus	Sagittarius	Sagittarius	Capricorn
	2015	2016	2017	2018	2019	2020
January	---	---	---	---	---	---
February	---	---	---	---	---	---
March	---	---	---	---	---	---
April	Very low in the SE.	Very low in the SE.	---	---	---	---
May	Very low in the SE. Best views in the SE.	Very low in the SE.	---	---	---	---

Planetary Positions

When it is not near the sun, **Venus** is always bright, sometimes even brilliant. It exhibits a crescent phase when it is near Earth, passing it as it races around the sun. When Venus is far from Earth, it is still relatively bright but presents a small gibbous phase in the telescope. **The months below are only for its more interesting crescent phase.**

Venus, during its crescent phase, either in the west 45 minutes after sunset or in the east 45 minutes before sunrise						
	2015	2016	2017	2018	2019	2020
January	---	---	In the SW after sunset.	---	---	---
February			In the West			

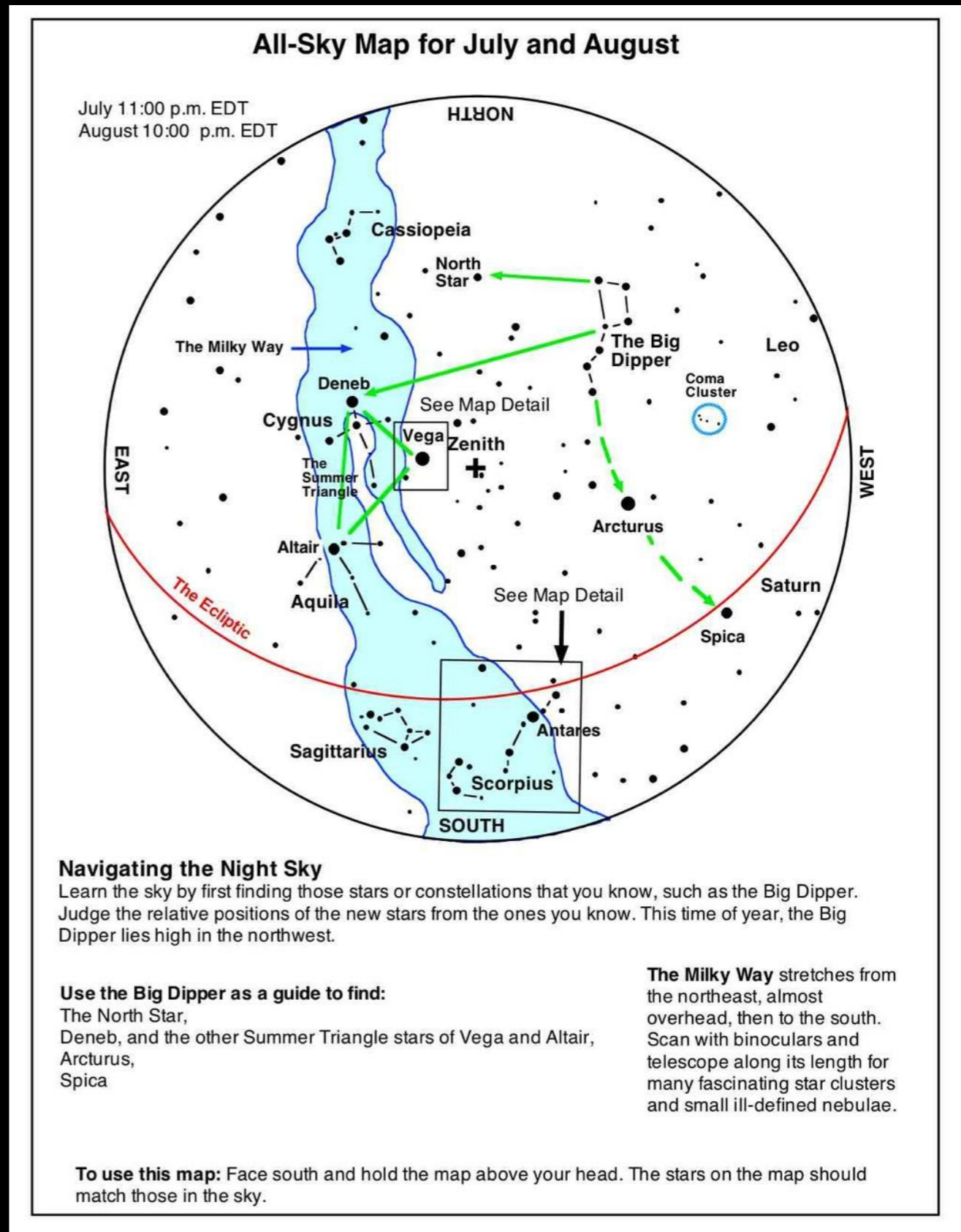
Mars is a suitable object through this telescope when it is relatively near Earth. This occurs for only four or five months out of every twenty-six. When it is far from Earth, i.e., near the opposite side of the sun, the planet presents a very small disk – too small to show any meaningful detail.

Mars, when it is close to Earth. About 90 minutes after sunset.						
Constellation	Scorpius, Libra		Sag., Cap.		Pisces, Aries	
	2015	2016	2017	2018	2019	2020
January	---	---	---	---	---	---
February	---	---	---	---	---	---
March	---	Rises in the SE after midnight	---	---	---	---
April	---	Rises after 11 p.m.	---	---	---	---

Jupiter is always bright and large when it doesn't appear close to the sun. Its atmospheric clouds can be glimpsed, its non-round, flattened shape can be discerned, and its four large moons – Io, Europa, Ganymede, and Callisto – can be found in any combination on either side of the planet. Jupiter is a fascinating object!

Jupiter, when it is seen 90 minutes after sunset						
Constellation	Cancer	Leo	Virgo	Libra	Scorpius	Sagittarius
	2015	2016	2017	2018	2019	2020
January	Low in the East.	---	---	---	---	---
February	In the East. Best views in the week around 2/05.	Very low in the East.	---	---	---	---
March	High in the SE.	Low in the East. Best views in the	Very low in East.	---	---	---

All sky maps in the User's Guide



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



Enjoy the Constellation Scorpius

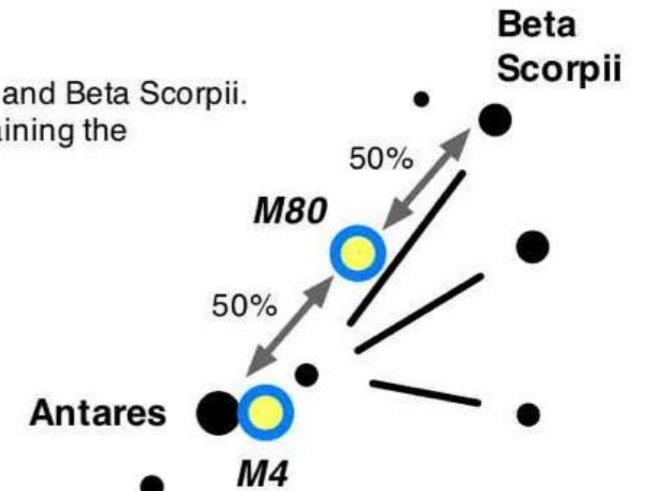
Look for its signature fish hook shape standing above the southern horizon after darkness falls in July and August.

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.

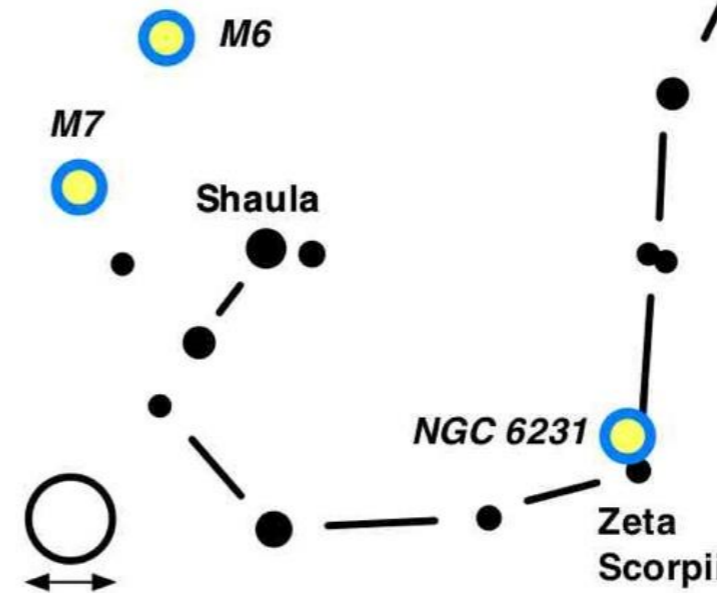
Open Clusters M6 and M7:

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."

Detail maps of selected deep sky objects (Star clusters and Nebulae)

Enjoy!

- Craters on the moon
 - Crescent of Venus
- Large moons of Jupiter
 - Rings of Saturn
 - Star Clusters
 - Nebulae