

**Welcome to Episode 133 of the Actual Astronomy Podcast.
I'm Chris and joining me is Shane. We are amateur
astronomers who love looking up at the night sky and this
podcast is for anyone who likes going out under the stars.**

Queue the Crickets!

https://www.youtube.com/watch?v=Tgy4cAQVzLU&ab_channel=JasonLewis-MindAmend

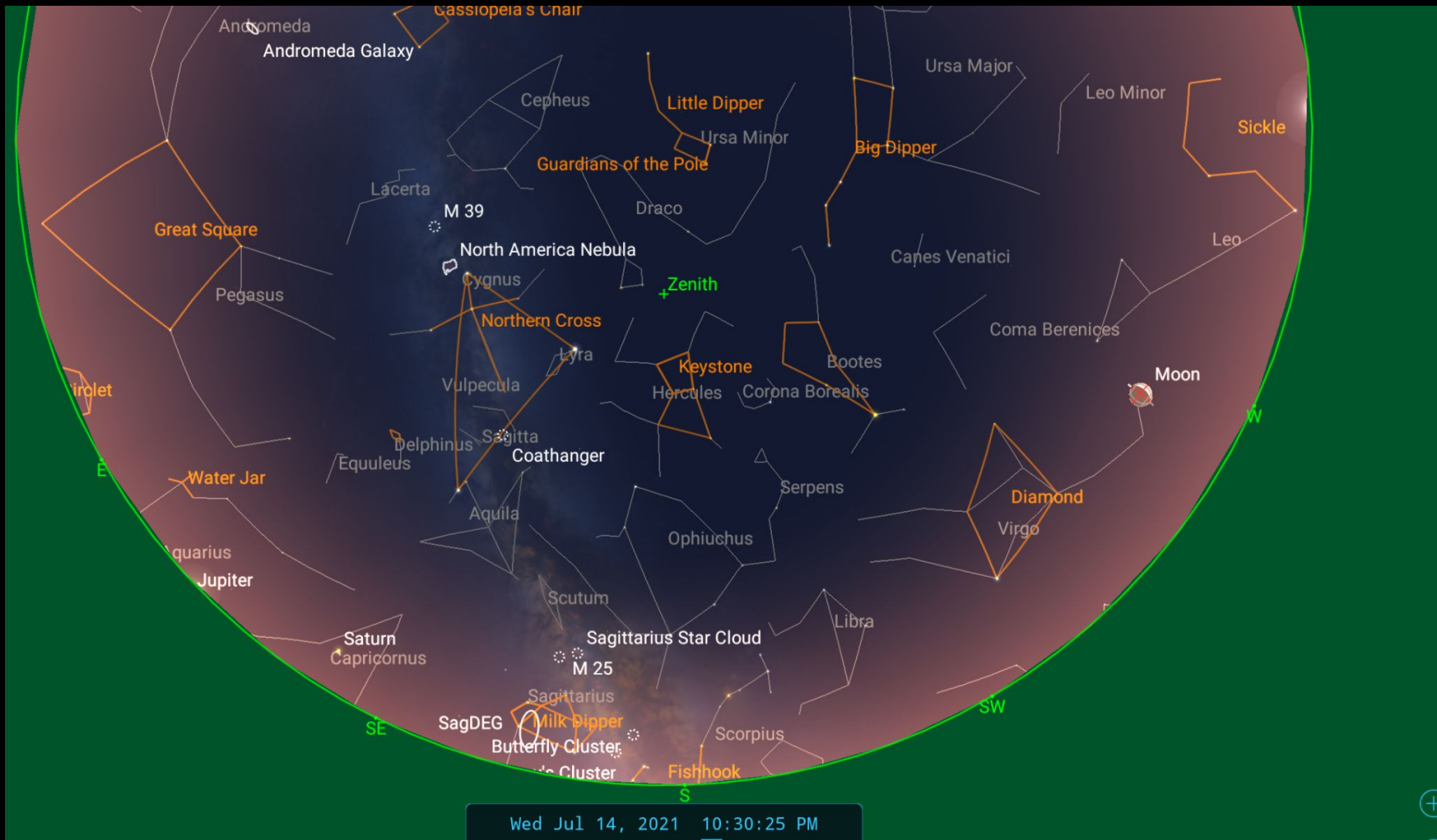


June 30th is Asteroid Day!

**A global day of awareness
sanctioned by the United
Nations, Asteroid Day is
observed each year on June
30 and is designed to
educate the public about
asteroids and the
importance of defending our
planet against a potential
impact.**

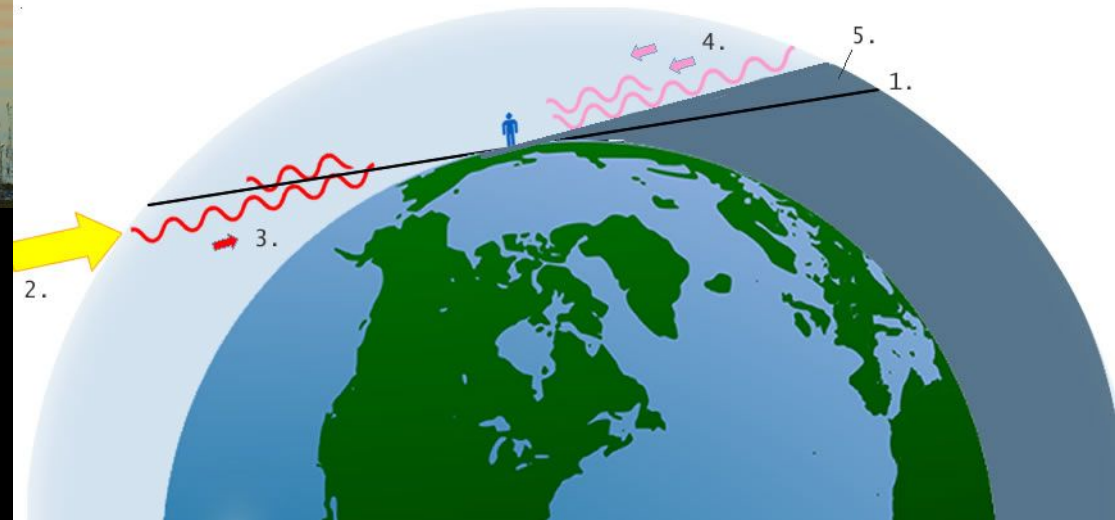
Summer 2021 Binocular Sky Tour

By Chris Beckett

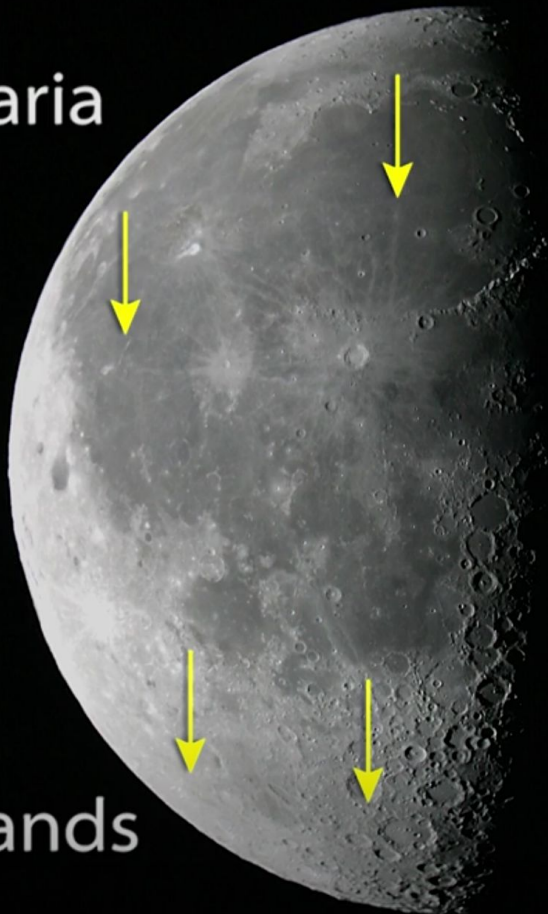




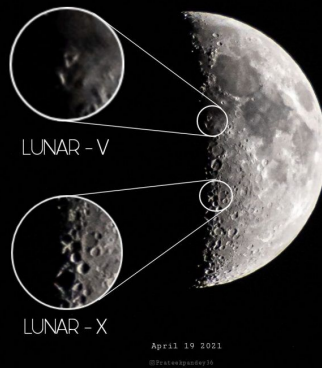
1. Observer's Line of Sight
2. Sun Below Observer's Line of Sight / Horizon
3. Incoming Light waves move through more atmosphere near horizon
4. Observer sees pink waves that are **backscattered** off of atmosphere
5. Observer sees Earth's shadow where sun's direct light no longer reaches



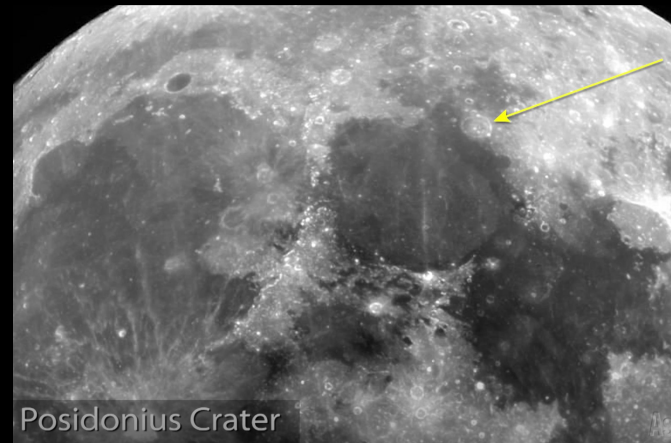
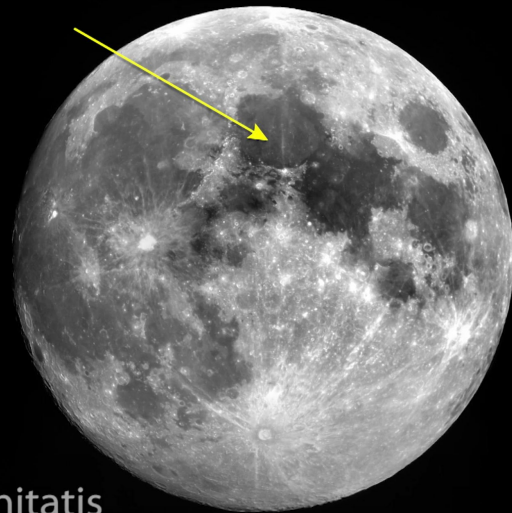
Maria



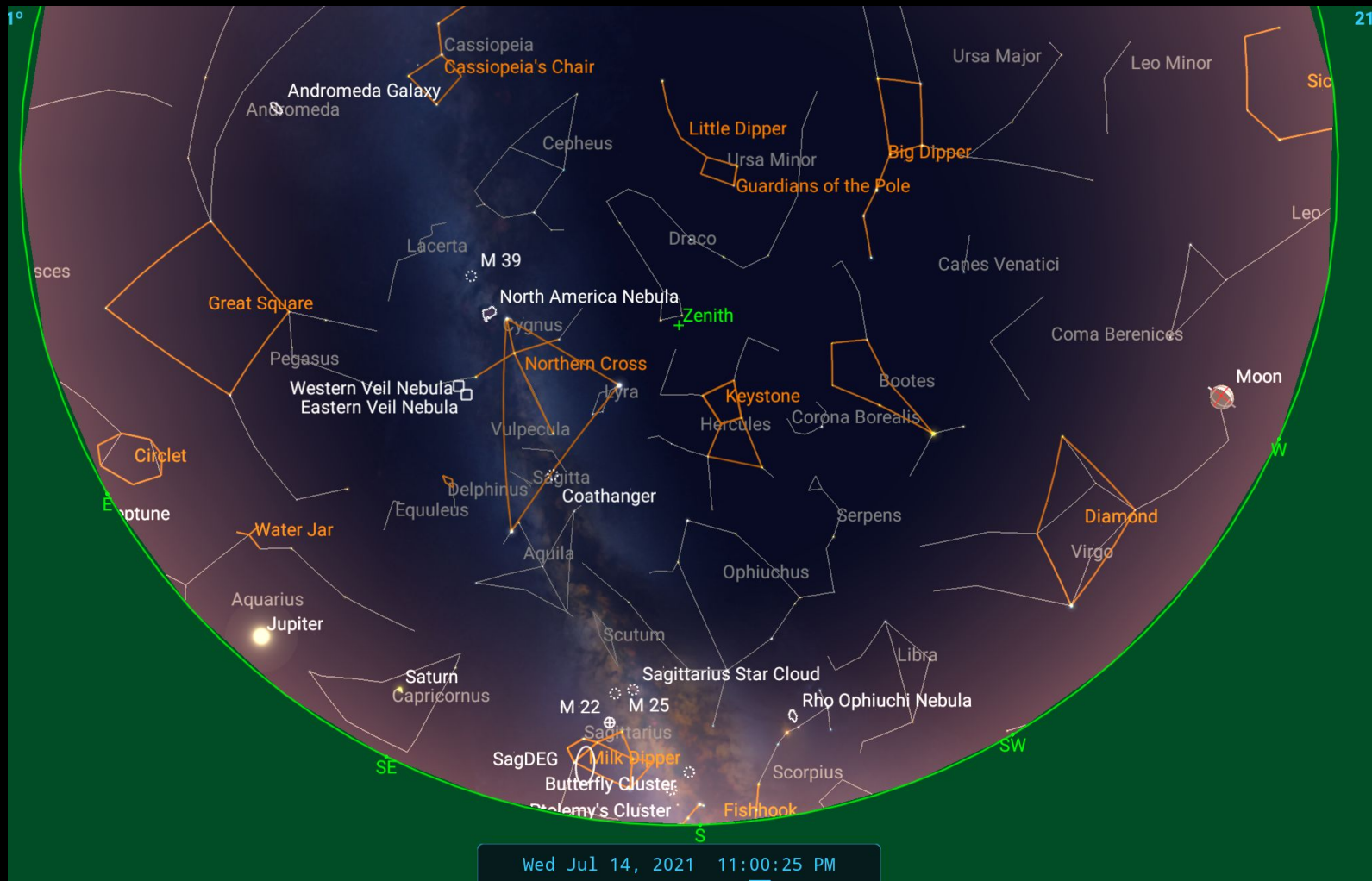
Highlands

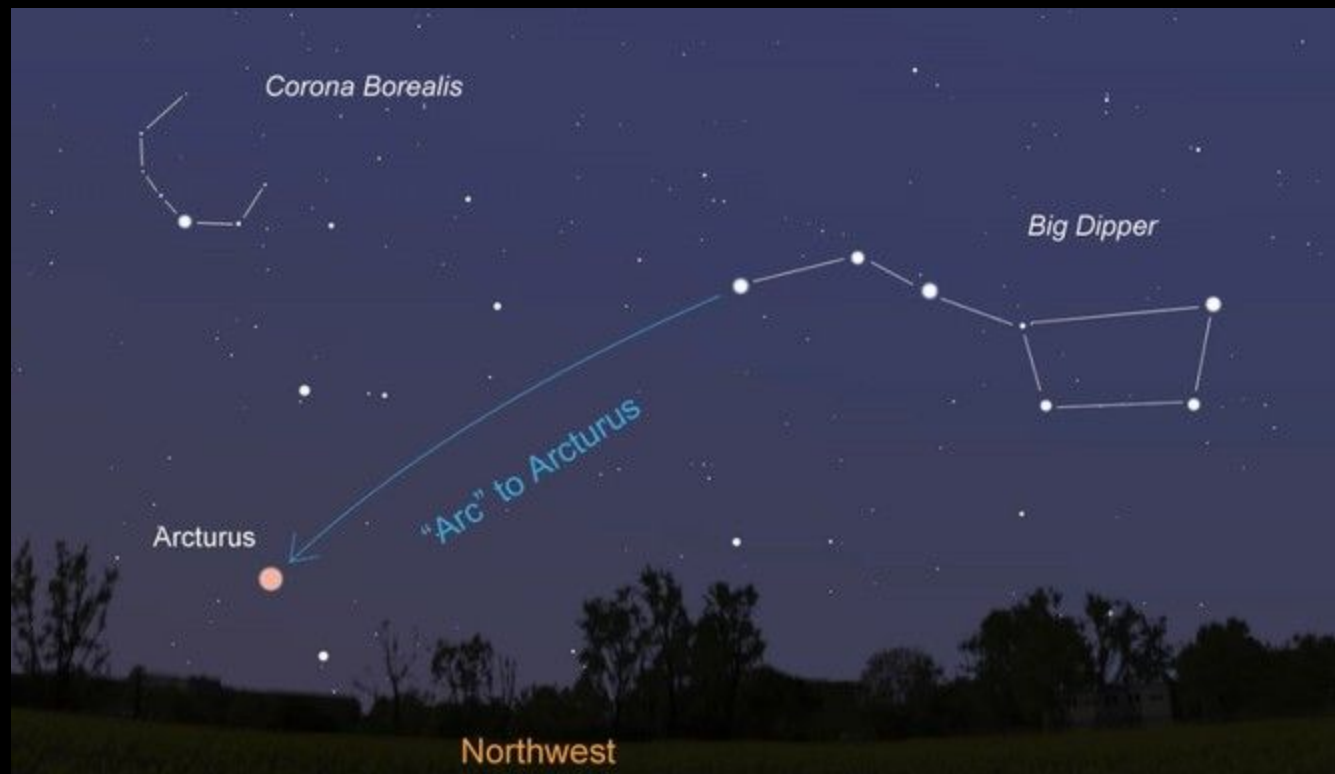


Mare Serenitatis

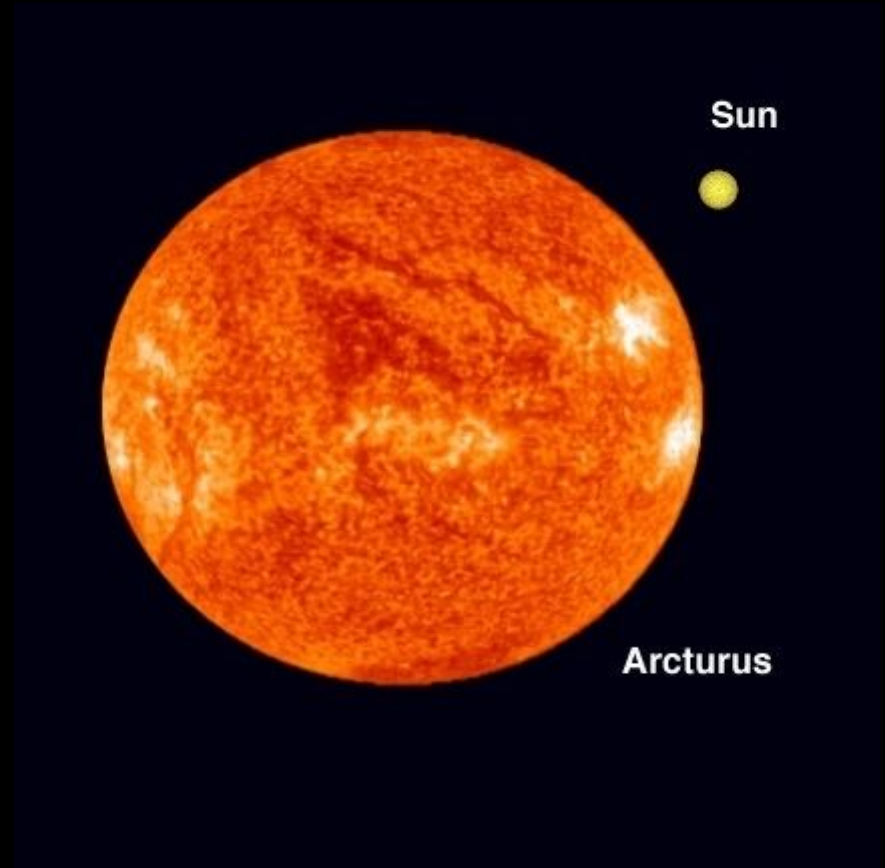


Posidonius Crater





Arcturus is a red giant star in the constellation Boötes (the herdsman). Arcturus is also among the brightest stars that can be seen from Earth. Astronomers say Arcturus will end up as a white dwarf at the end of its life.



Lyra

Vega

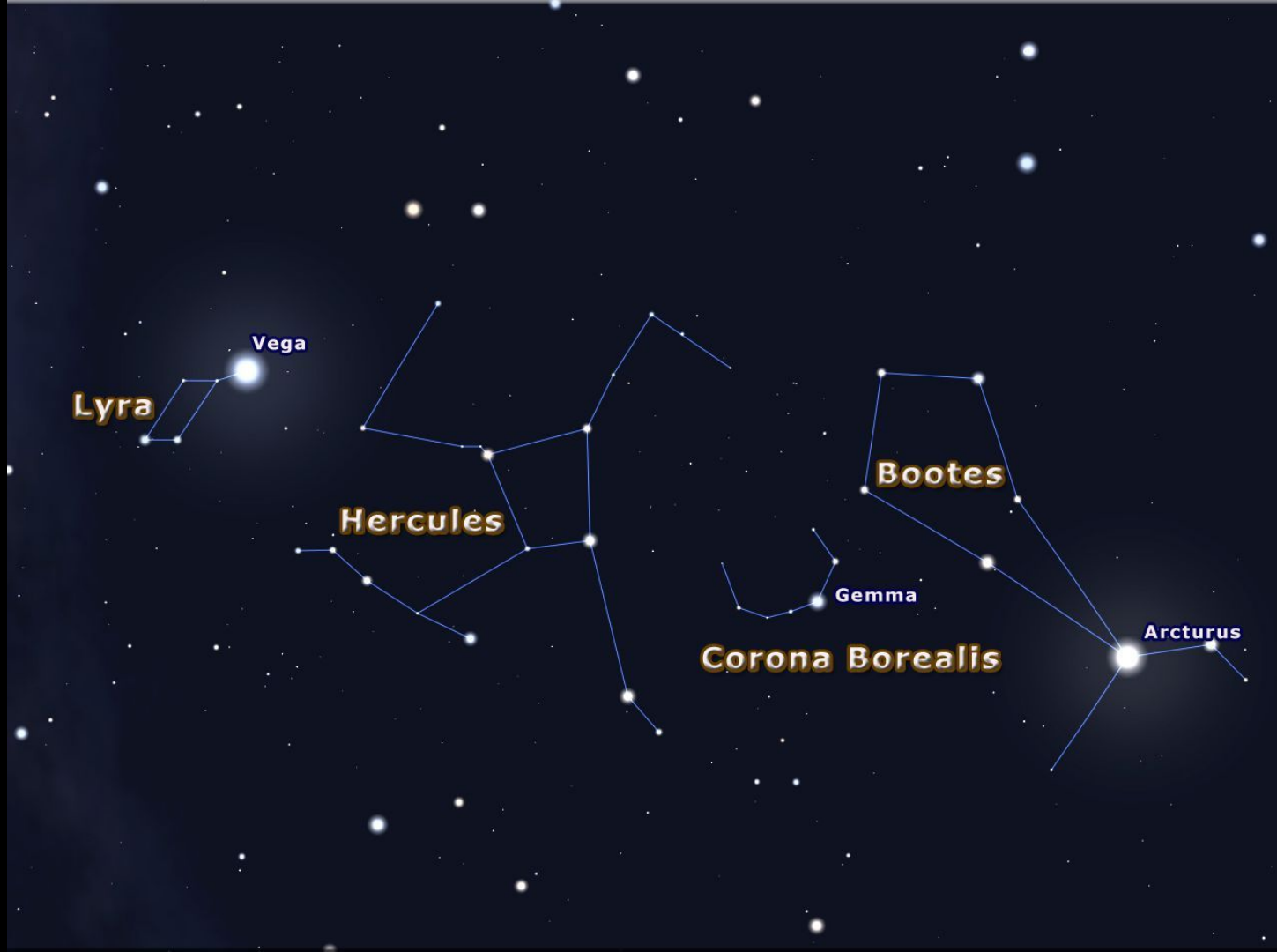
Hercules

Bootes

Gemma

Corona Borealis

Arcturus



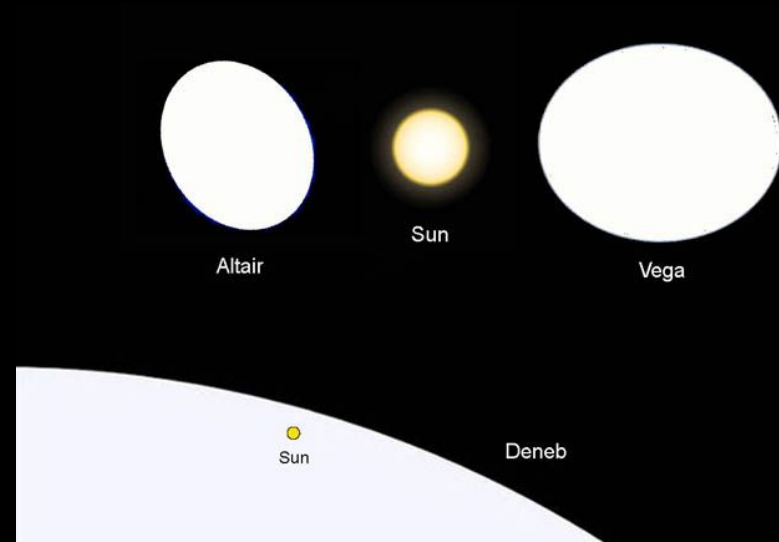
Looking high towards the south
1am (15 June) / midnight (30 June)



Deneb (*/ˈdɛnɛb/*) is a first-magnitude star in the constellation of Cygnus, the swan. ... It is the brightest star in Cygnus and the 19th brightest star in the night sky, with an average apparent magnitude of +1.25. A blue-white supergiant, Deneb rivals Rigel as the most luminous first-magnitude star.

Vega is the brightest star in the northern constellation of Lyra. It has the Bayer designation α Lyrae, which is Latinised to Alpha Lyrae and abbreviated Alpha Lyr or α Lyr. ... It is the fifth-brightest star in the night sky, and the second-brightest star in the northern celestial hemisphere, after Arcturus.

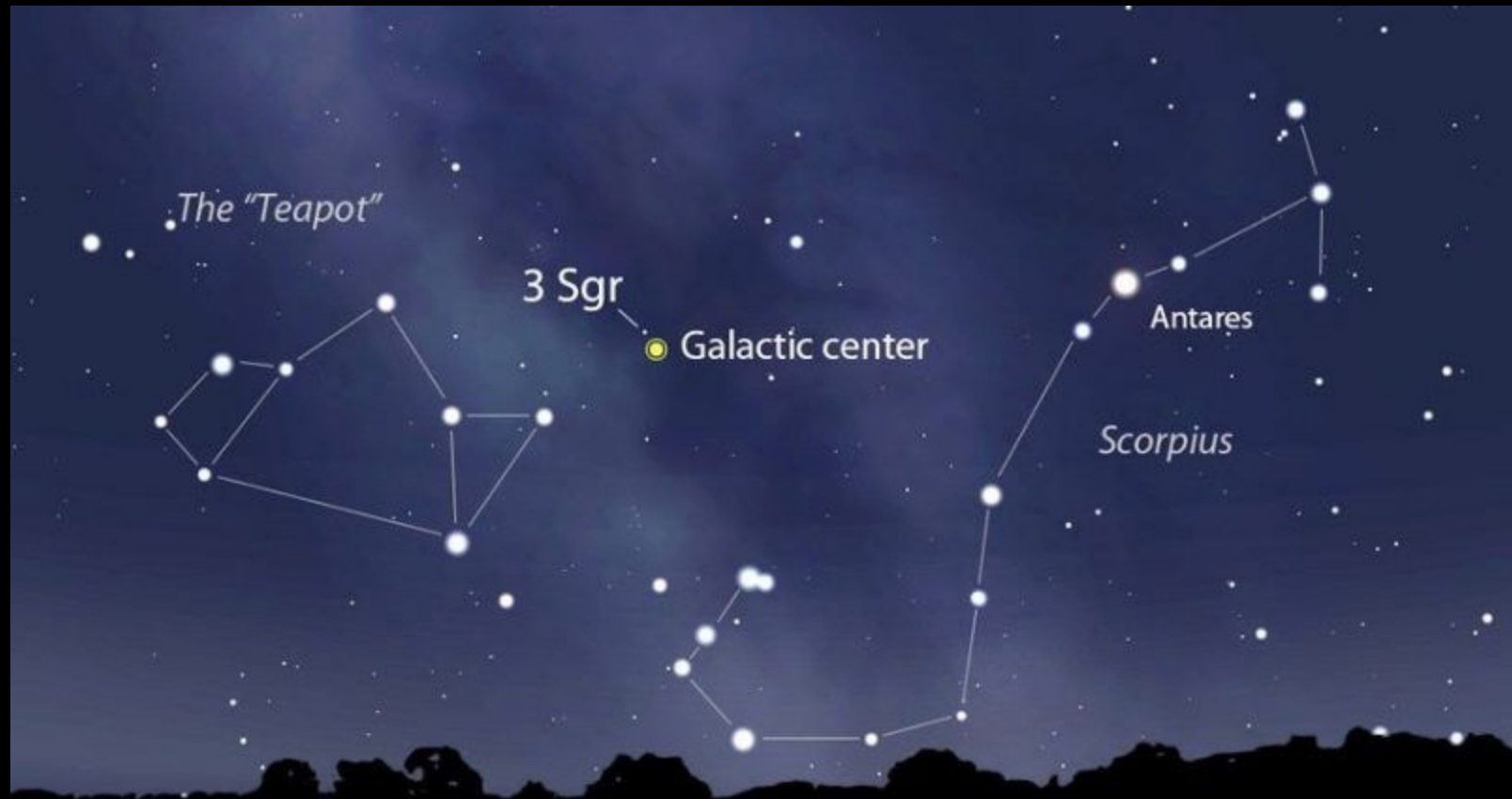
Altair is the twelfth-brightest star in the night sky and one of the closest stars to Earth, at a distance of only 16.7 light-years.



Well revisit these later....let's take a look at some planets







The "Teapot"

3 Sgr

● Galactic center

Antares

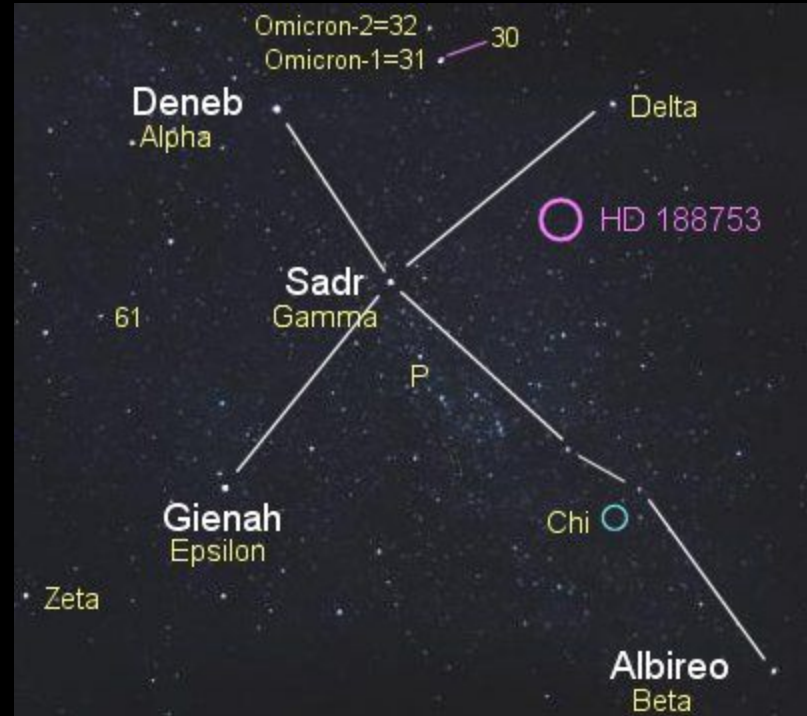
Scorpius

How about some double - stars Shane?

Maybe you can tell us what double stars are 1st?

Omicron Cygni

O 1 (30 & 31) 20 13 6 + 46 44 3.9, 7.0,
4.8 109, 337



Beta (β) Cygni aka 'Albireo'

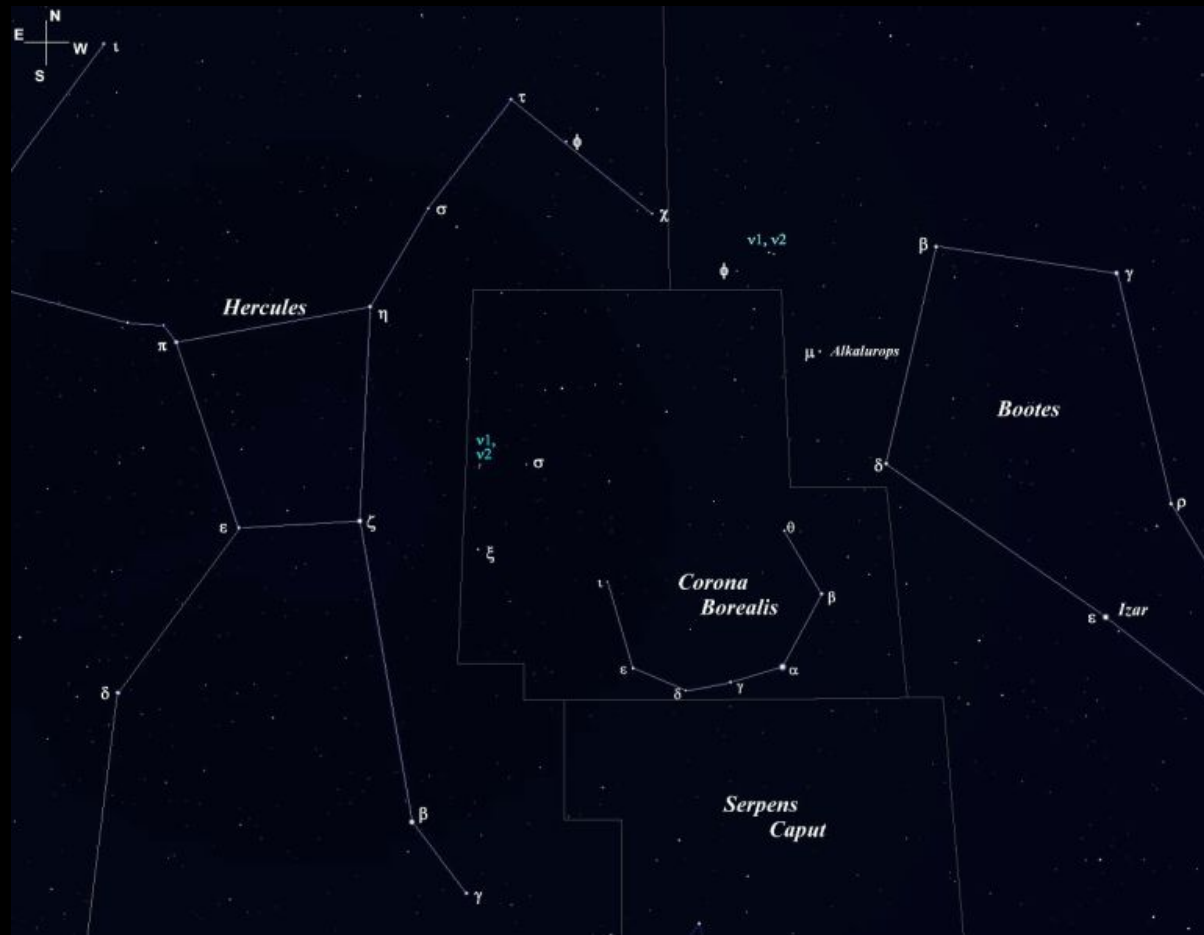
$\alpha=19^{\text{h}} 30.7^{\text{m}}$, $\delta=+27^{\circ} 58'$ (J2000.0) Magnitudes: **3.1 & 5.1**
Separation: **34.3 arcseconds**

Few observers would disagree that this object should be on everyone's must-see list. Albireo lies at the heart of the Summer Triangle, a third-magnitude star to the naked eye that sits just to the left of the mid-point of a line drawn between Vega and Altair. You can resolve Albireo with 10x + binocular, but even the smallest telescope at 25 \times magnification or more reveals its glorious amber and sapphire blue components set against the sugar on velvet' richness of the Milky Way in Cygnus. Albireo lies about 430 light-years from Earth.



V1 & V2 Corona Borealis

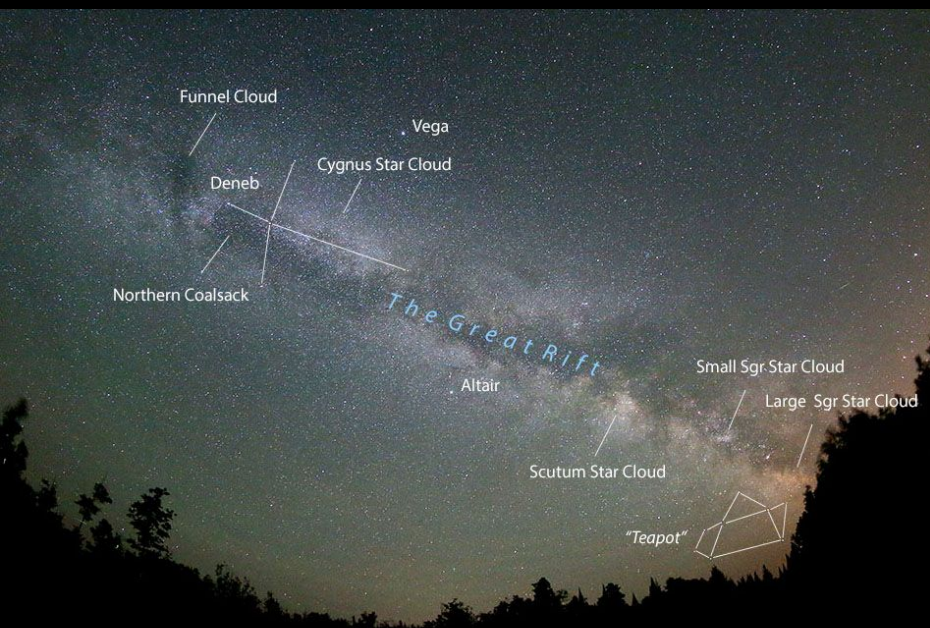
5.4, 5.6 355'



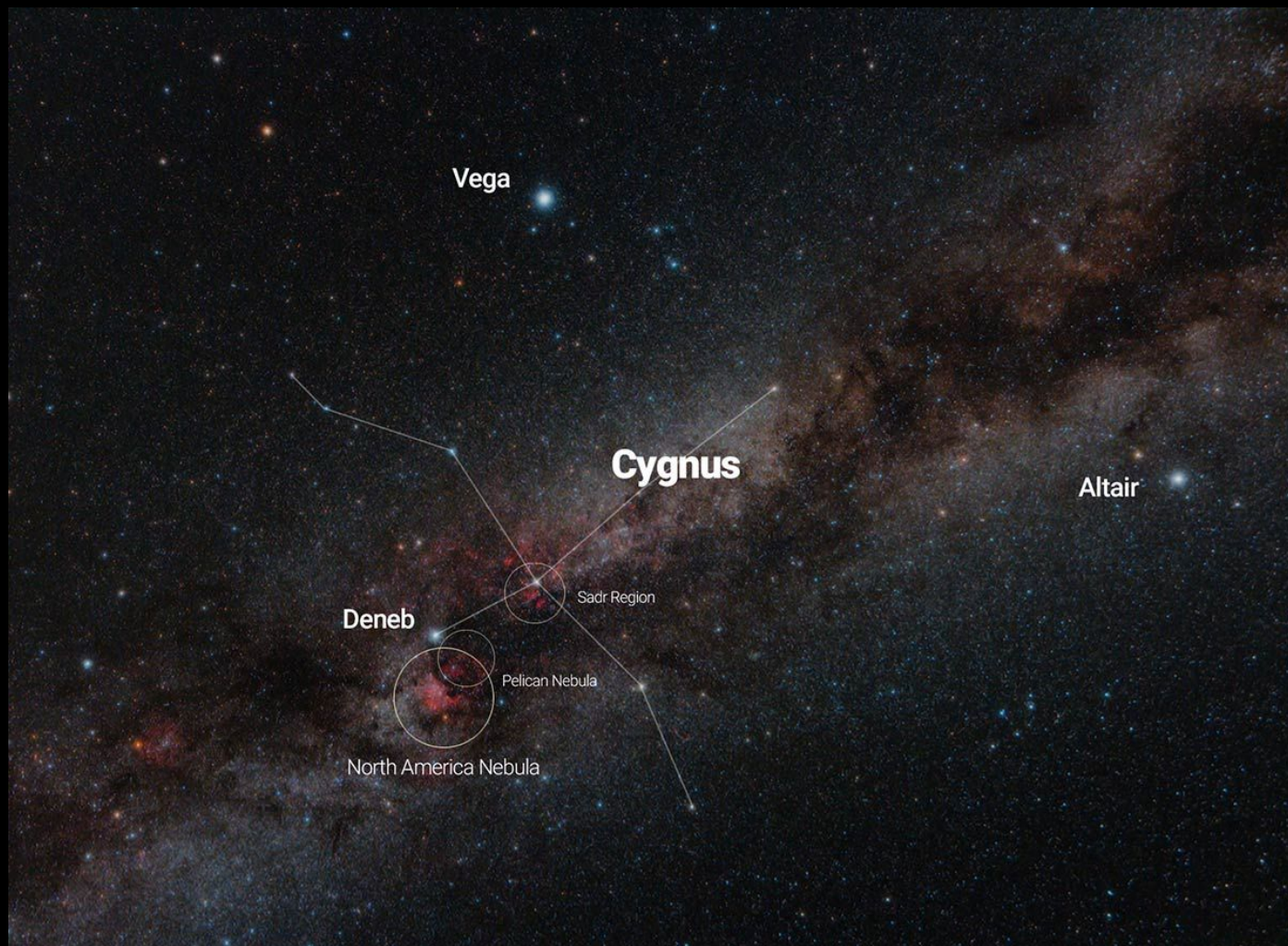
Now for some deep sky objects

Well what are they first?

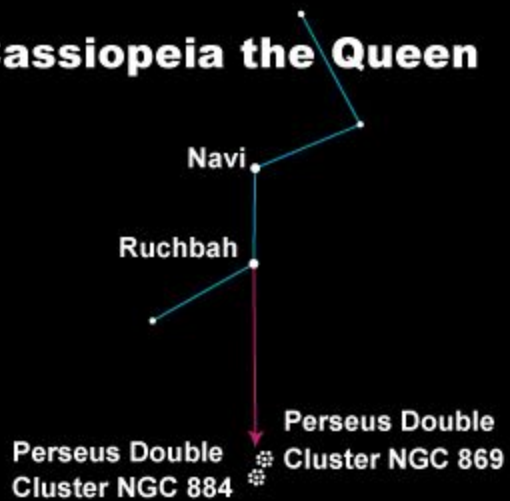




Facing south around 12:30 a.m. mid July



Cassiopeia the Queen



And We're Done!