

Reminder: no food or
drinks in the planetarium!

Astronomy 4 - *Solar System Astronomy*

Reminders

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-Feel free to email me about course questions or astronomy in general.

Class website:

-<https://amcody.github.io/astro4>

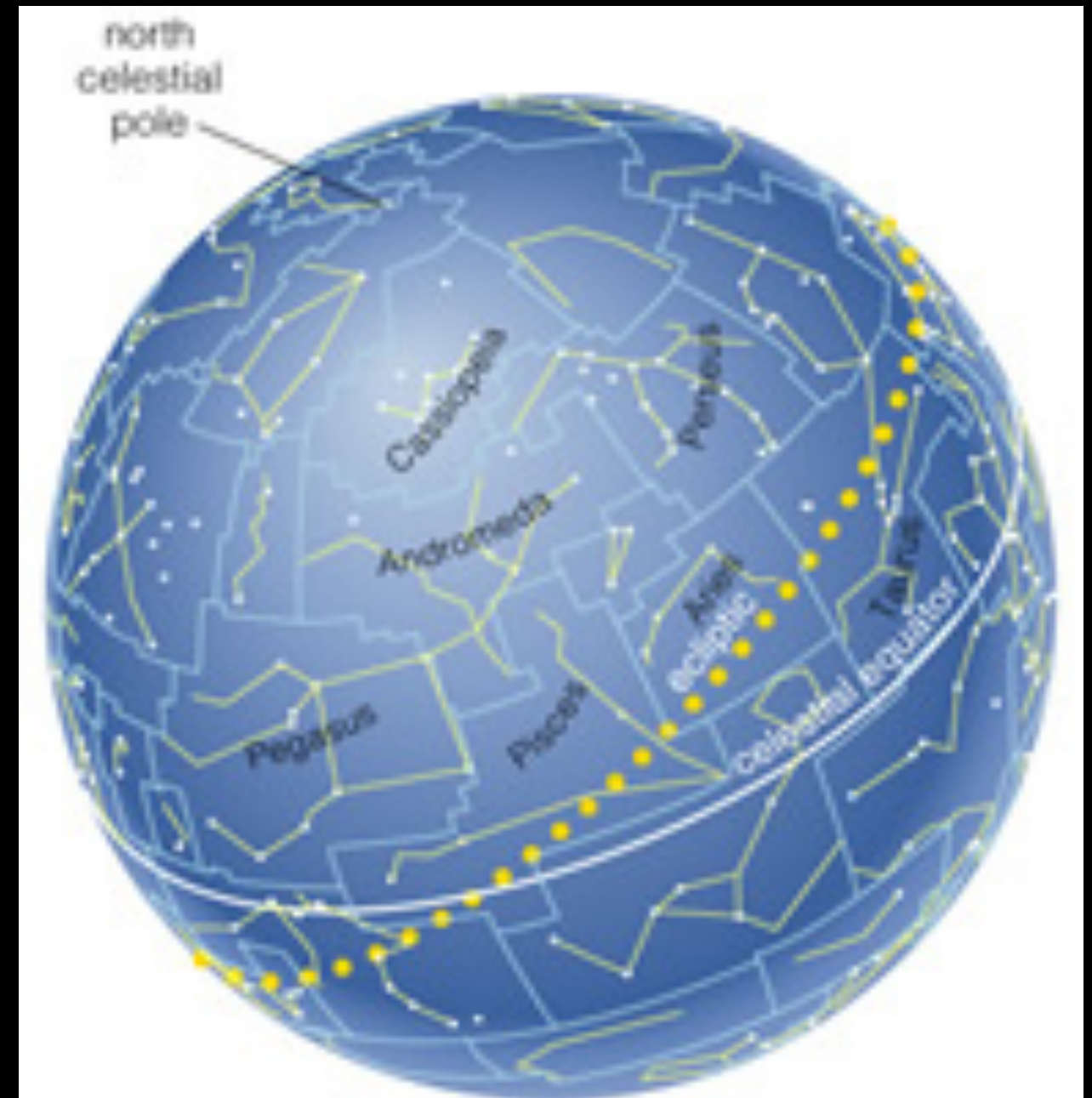
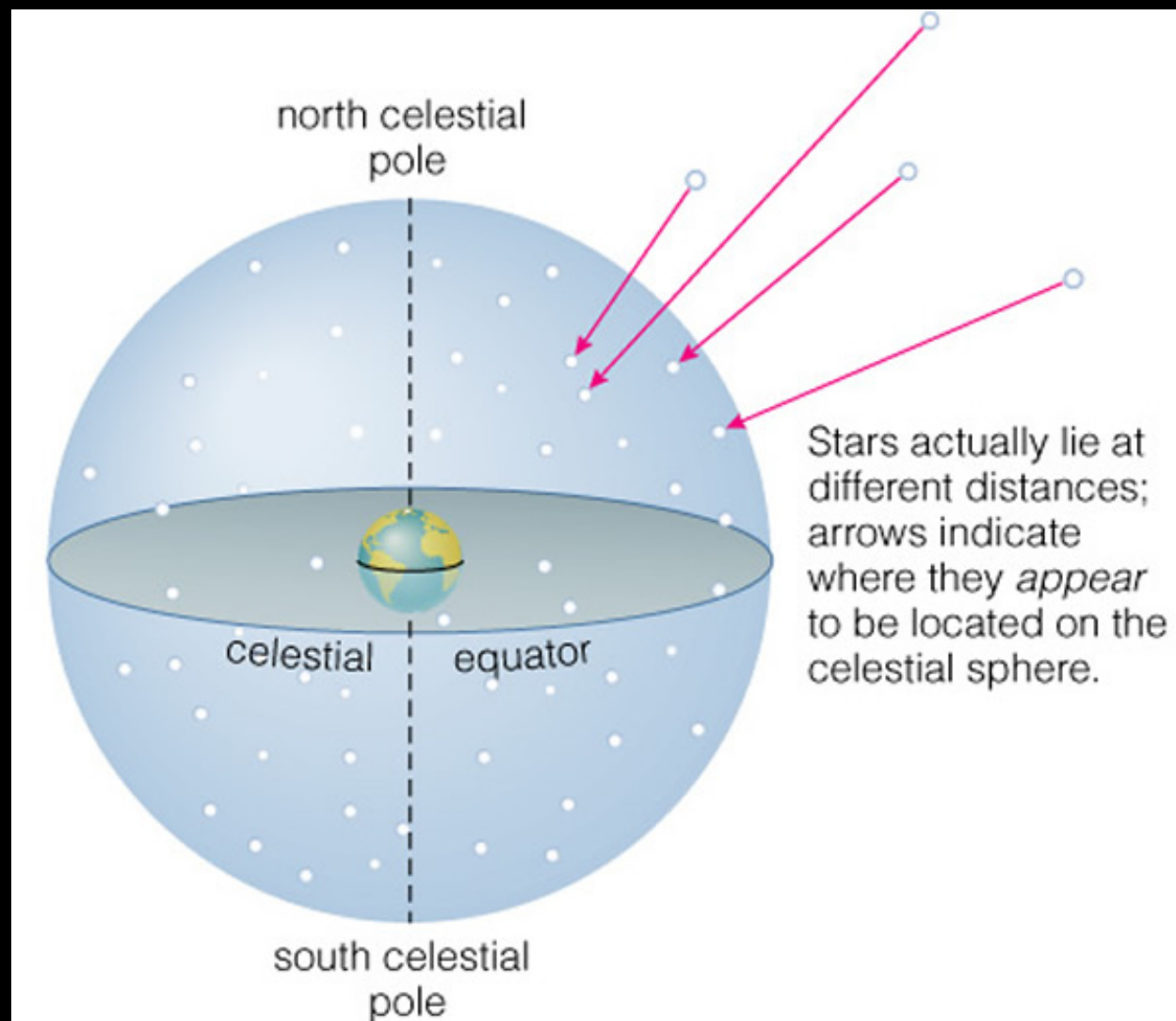
Your one-stop shop for anything course related, including homework readings and exam practice material.

Lost and found:

-At the end of class, check to make sure you aren't leaving anything behind. Any items will be added to the Lost and Found box in back.

Let's Review a bit about the
night sky...

Imagining a spinning *Celestial Sphere* surrounding Earth aids in thinking about the position and motion of the sky.



Consider the dome of the sky over our heads....



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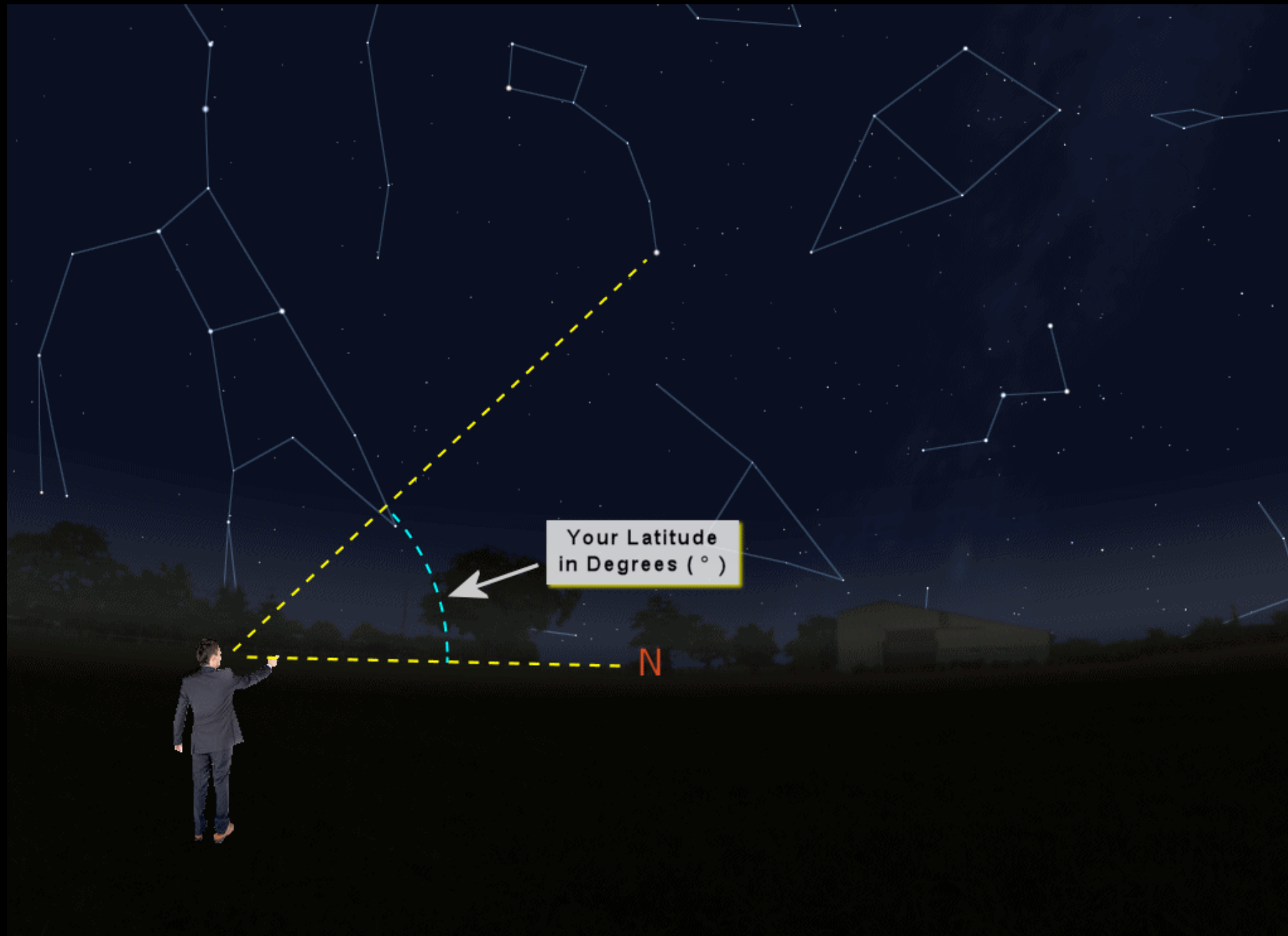


inverted mixing bowl

The International Astronomical Union (IAU) has established 88 official constellations with clearly defined permanent boundaries that together cover the entire sky.



How Astronomy Can Save Your Life

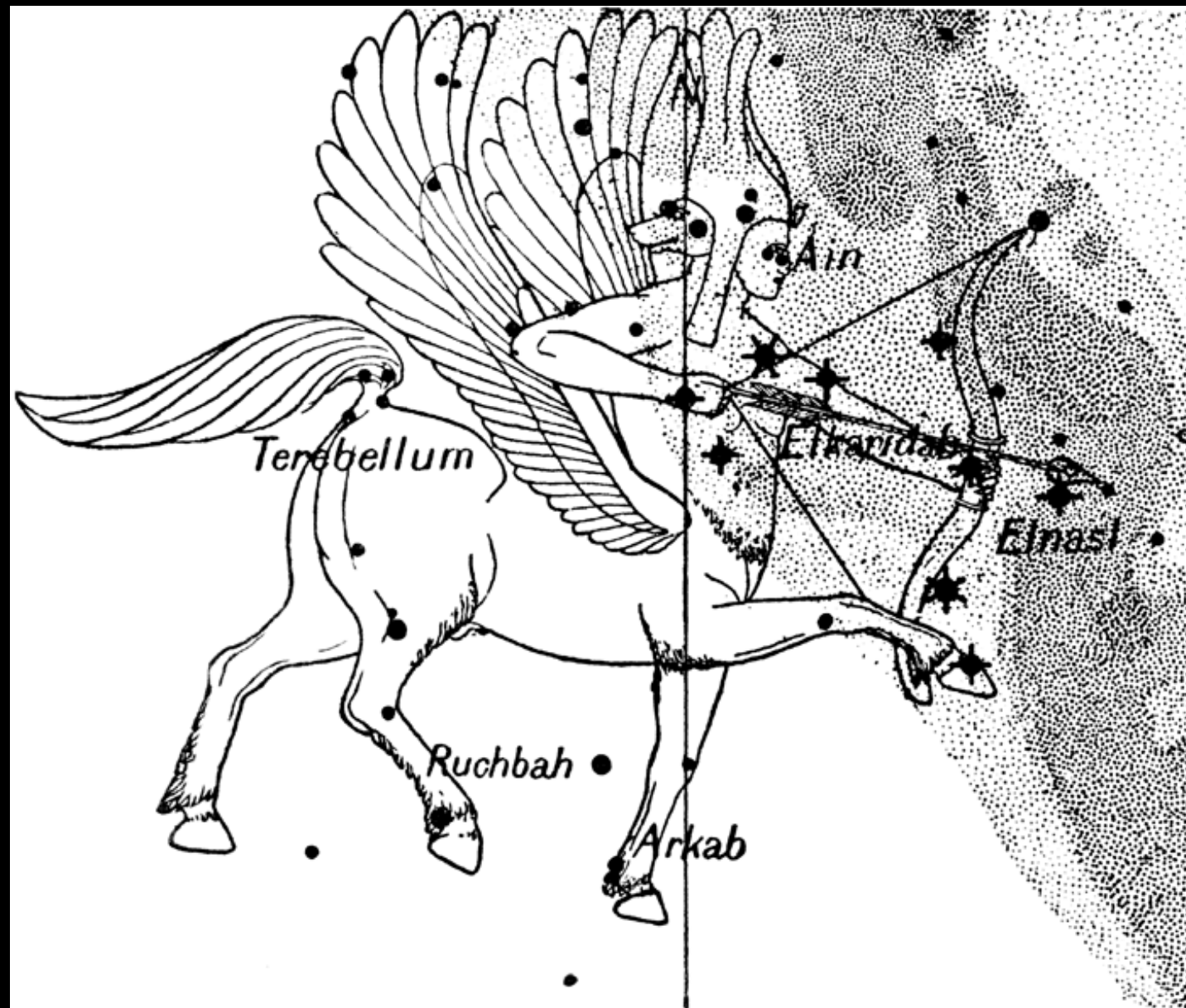


The angle (altitude) of the North Star (Polaris) above the horizon is your Latitude!

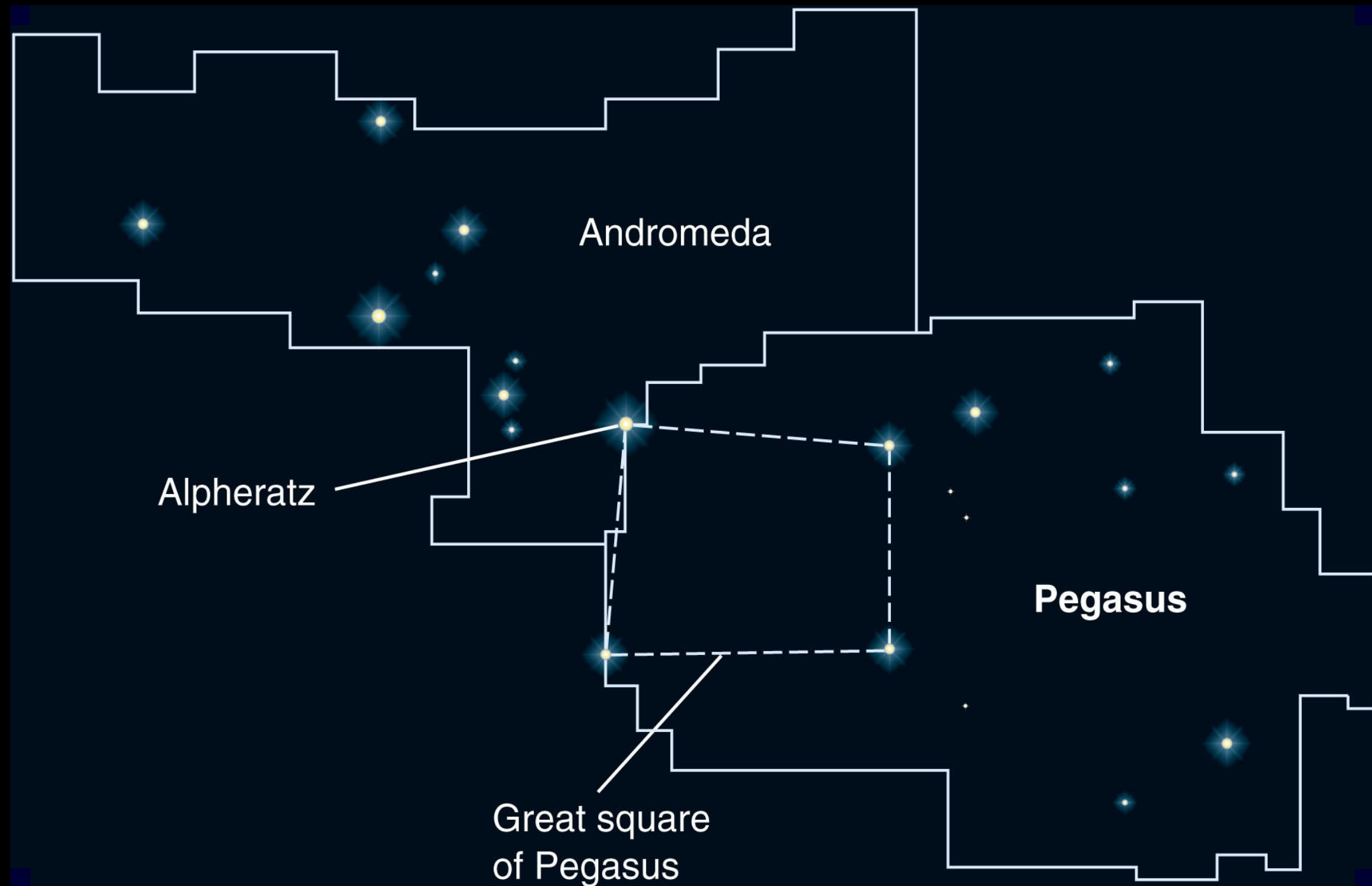
A Tour of the Winter Night Sky

Constellations

All around the world, ancient cultures celebrated heroes, gods, and mythical beasts by naming groups of stars called **constellations**.

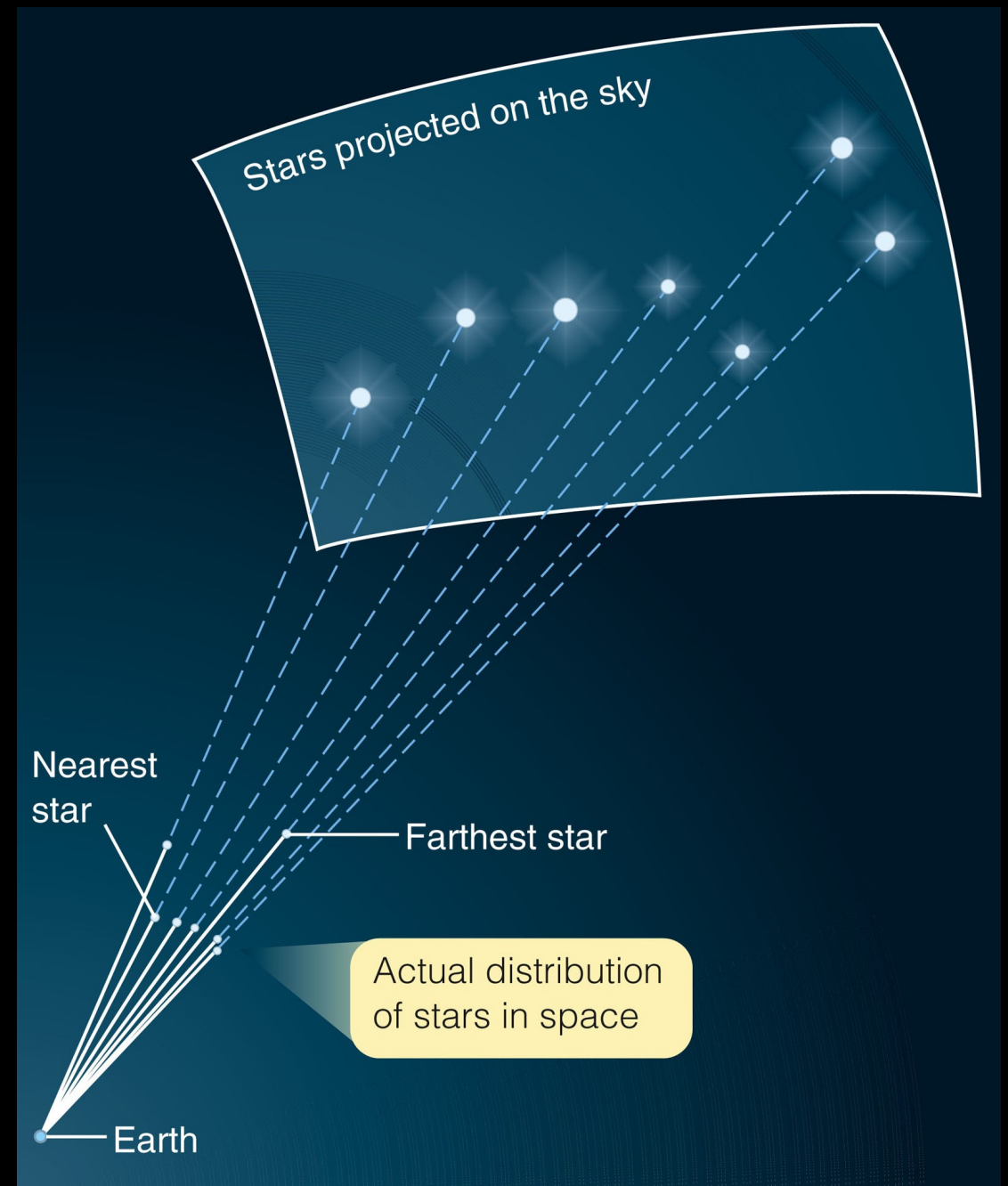


Today, astronomers use constellations like states to map out regions of the sky.



Constellations are a pattern in the sky and NOT necessarily all at the same distance

The only thing they have in common is that they lie in approximately the same direction from Earth.

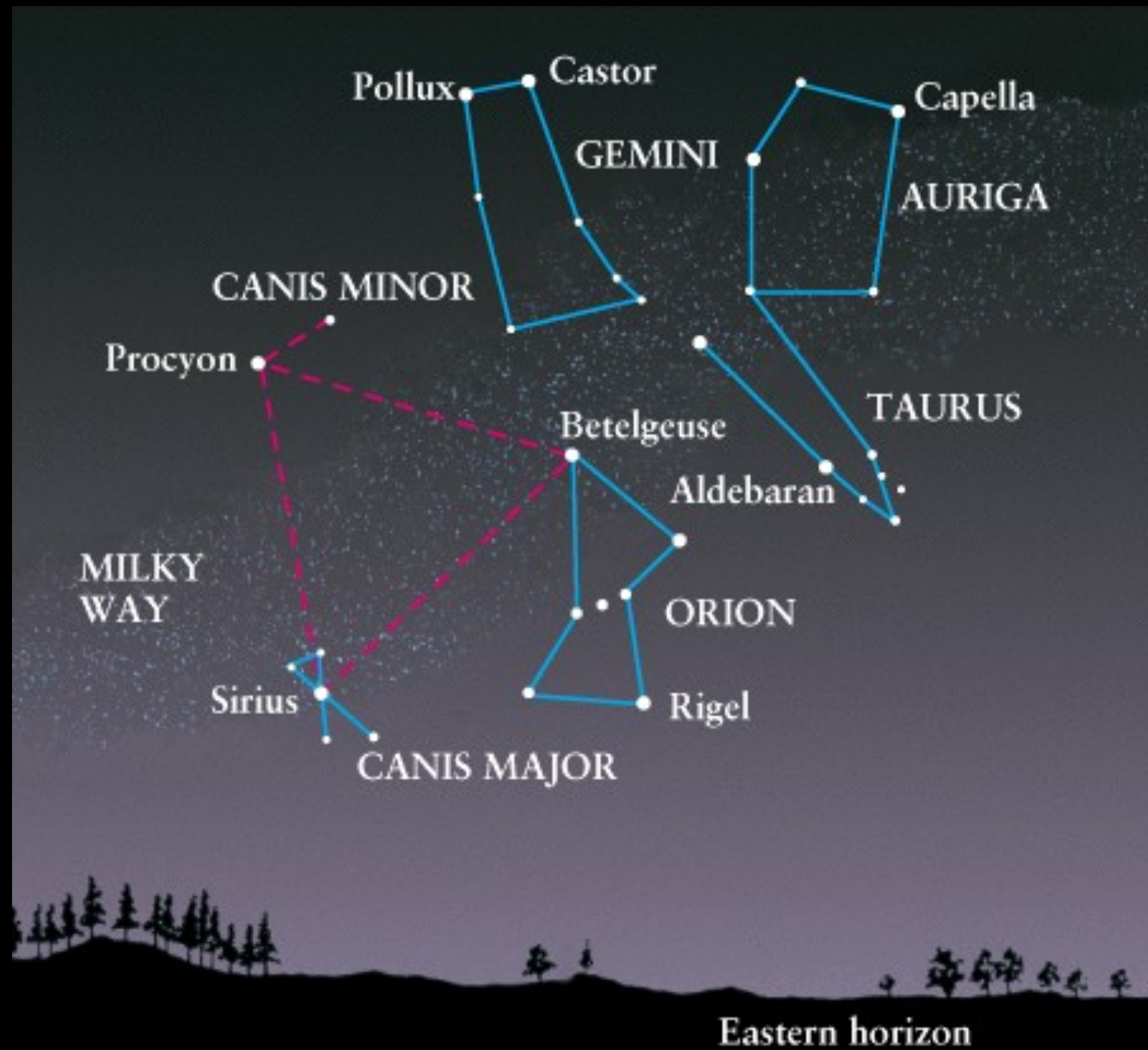


True or False: All the stars in this constellation are at the same distance.

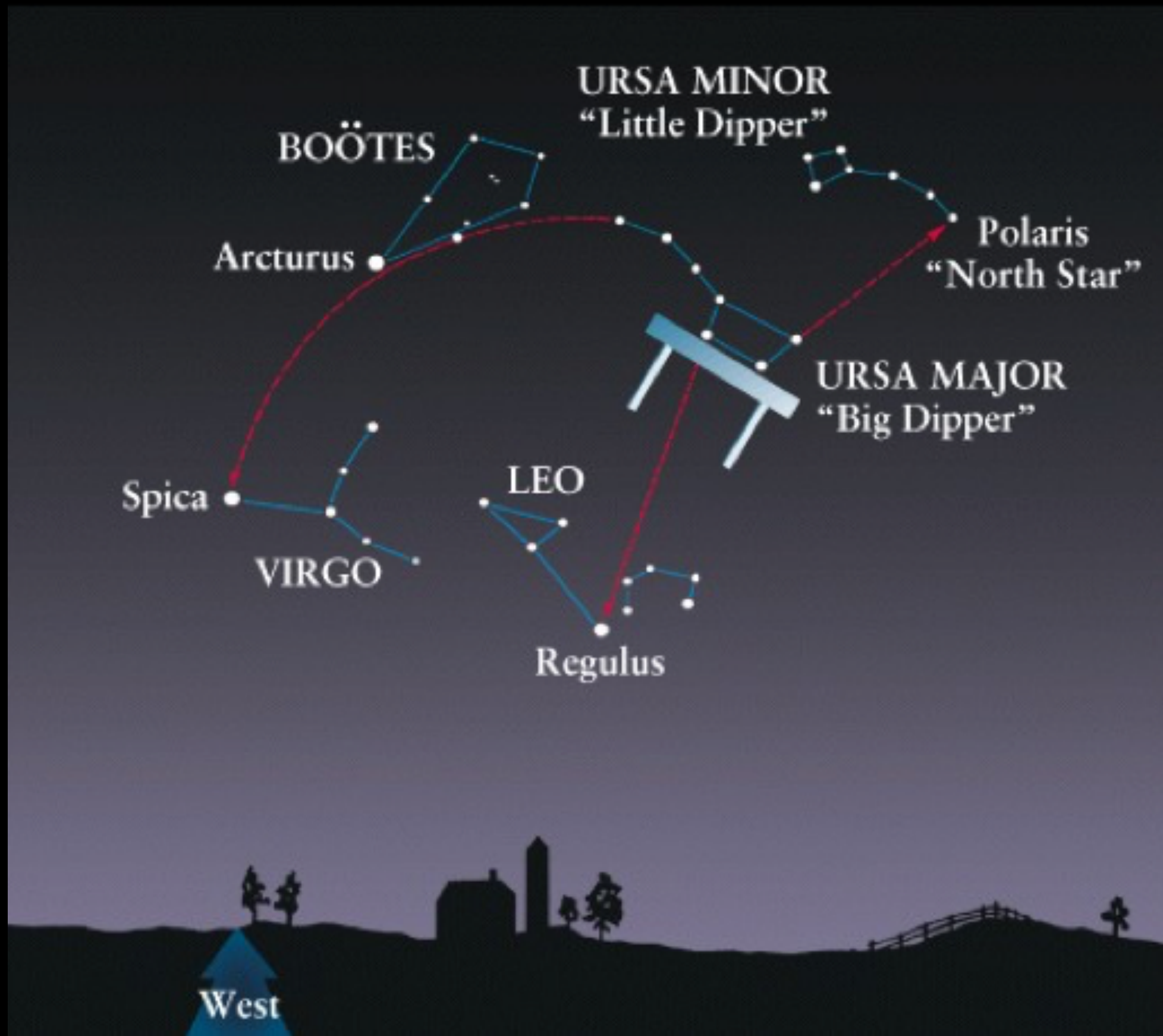


- A) True**
- B) False**

Use the *winter triangle* to find constellations during winter evenings



Big Dipper - Ursa Major



Ursa Major, Ursa Minor and Cassiopeia

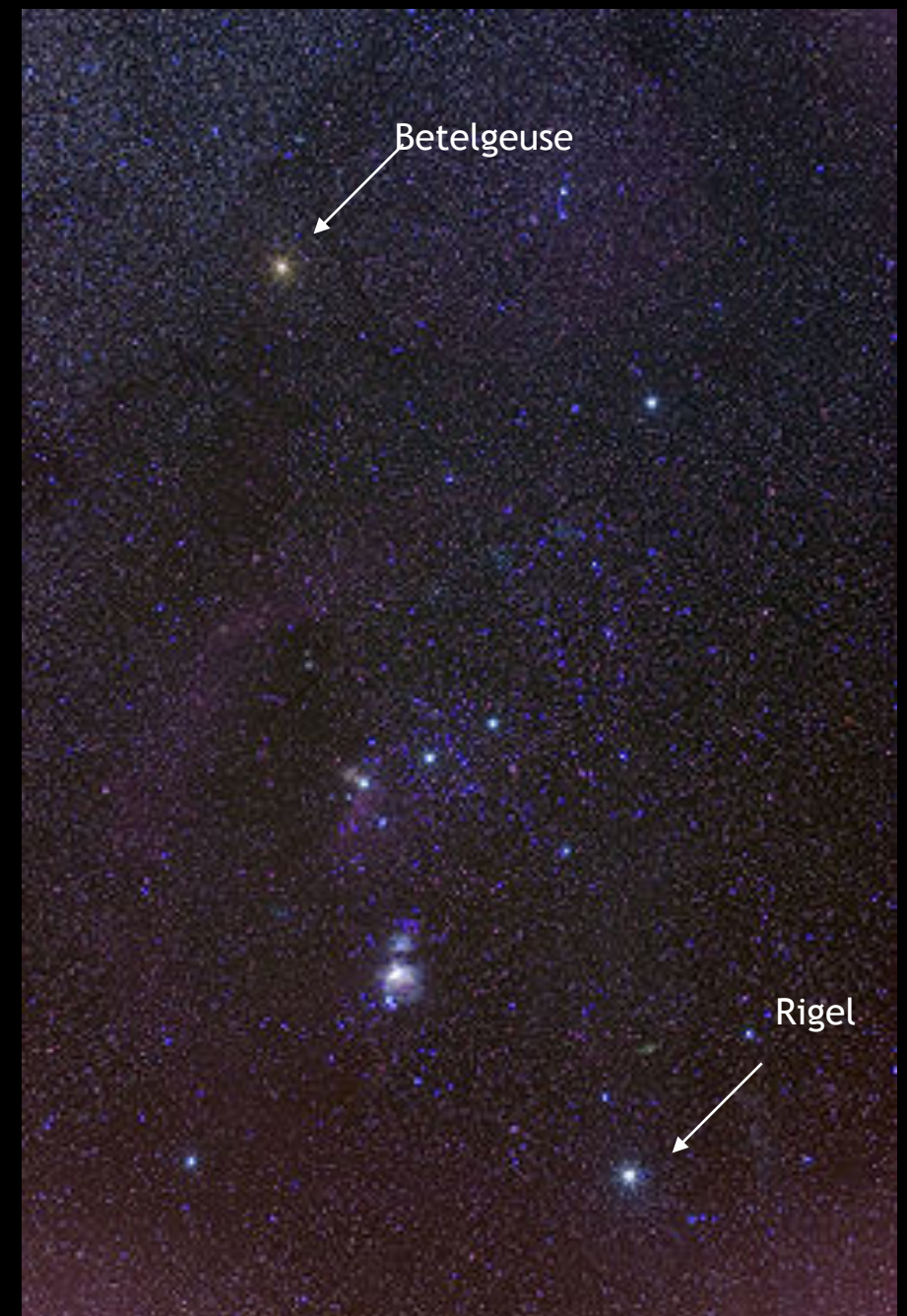


The Names of the Stars

In addition to naming groups of stars, ancient astronomers named the brighter stars.

Modern astronomers still use many of those names.

Many of the early stellar cartographers where Arabic hence the “odd” names



The Names of the Stars

Another way to identify stars is to assign Greek letters to the bright stars in a constellation in the approximate order of brightness.

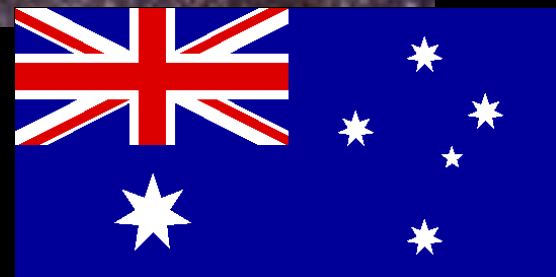
Thus, the brightest star is usually designated alpha (α), the second brightest beta (β), and so on.



The sky **CHANGES** depending on where you are on Earth.



The Southern Cross and the Centauri system cannot be seen from the United States



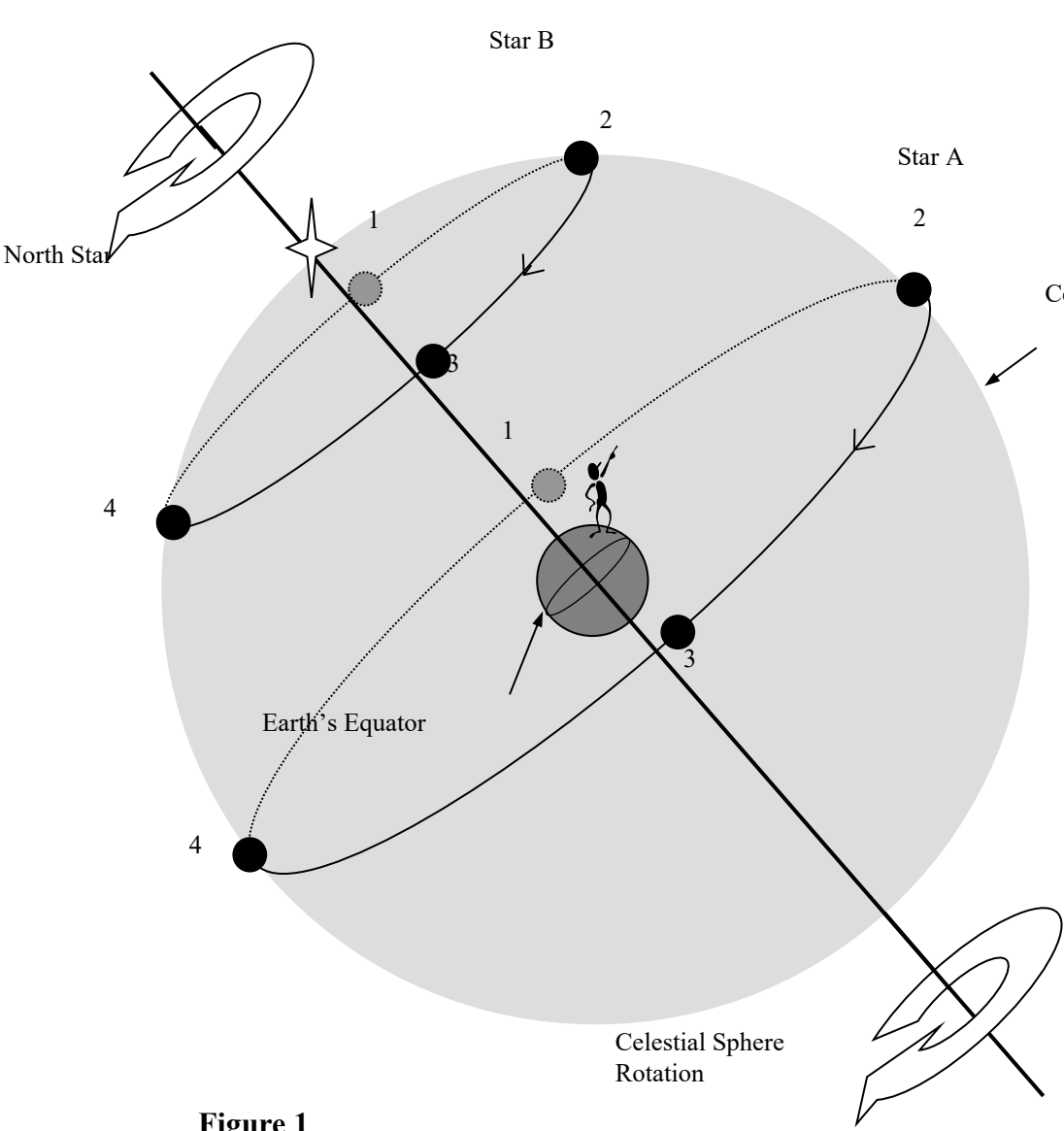
The sky appears to MOVE from day to day AND over the year.

- Sky objects appear to rotate **westward** around Earth each day, but that is a consequence of Earth's **eastward** rotation.
- This produces day and night.

The Sun rises in the **EAST** and sets in the **WEST**



Celestial Sphere Rotation



Celestial Sphere Rotation

