

## 2022 Novice Observer's Challenge:



If you came to the Table Mountain Star Party (TMSP) with your spouse, significant other or parents and have never shown a great interest in astronomy, this program is for you. It will give you just a taste of what they do when they spend all those nights outside looking at the sky. It's easy, will broaden your knowledge of the night sky and you'll get a button for finding just 10 of the naked eye objects on the list. All observations must be done during the TMSP. You must find the objects yourself, without help from anyone else. You may ask someone to help you orient the star chart and point you in the direction of north. Check off each object in the space provided. To receive your button, turn in your observations to **Mark Simonson or Ron Mosher (Observation Challenge Coordinators)** any time during the TMSP. If you finish the list the last night of TMSP, and we are not available to get you your button,

just mail your observations to me at 1519 Ridge Dr., Camano Island, WA. 98282, or email your observations to me at [marknilse@yahoo.com](mailto:marknilse@yahoo.com), and I will see that you get a button. The Novice Observer's Challenge can only be earned once per person.

# ***THE LIST***

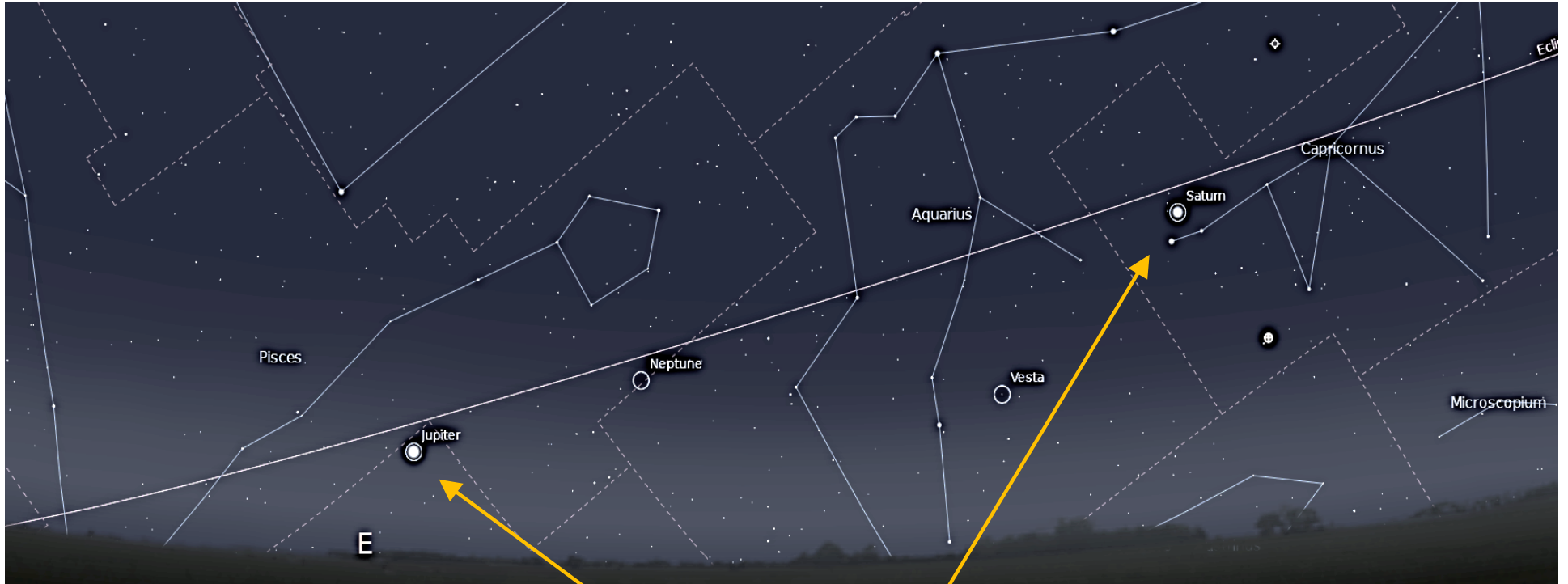
**OBSERVER'S NAME:** \_\_\_\_\_

- \_\_\_\_\_ 1. The Big Dipper – in the constellation Ursa Major. Seven bright stars that make up a dipper pattern. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 2. Mizar and Alcor. The second star from the end of the handle of the Big Dipper is actually a double star. You must see the two stars. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 3. Polaris, the North Star – Use the two stars that form the outer side of the cup of the Big Dipper as pointers. Start with the star at the bottom of the cup, go to the star at the top of the cup and continue the line about 5 times the distance between those two stars to the brightest star in the area. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 4. Arcturus – the brightest star in Bootes. To find it, follow the curve of the stars in the handle of the Big Dipper downward and to the right. This will bring you to a reddish yellow star, Arcturus. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 5. The Milky Way - a faint, whitish glow, stretching in a huge arc from the southern to northeastern horizon. It has a mottled effect, kind of like a fluffy cloud. There are brighter areas, especially down toward the core of the galaxy in the southern part of the sky. There are also darker patches, where nearby clouds of interstellar dust block the light from beyond. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 6. The Dark Rift - You're looking for dark lanes of dust, running the length of the starlit Milky Way band. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 7. The constellation Cassiopeia. A large "W" or "M" shape. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 8. The Little Dipper – In the constellation Ursa Minor. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

- \_\_\_\_\_ 9. The planet Saturn. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 10. The planet Jupiter. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 11. An International Space Station (ISS) flyover. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 12. The Andromeda Galaxy. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 13. The Double Cluster. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 14. The constellation Sagittarius. The Teapot. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 15. The constellation Lyra. The Harp. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 16. The constellation Corona Borealis – a group of 7 stars that resemble a crown.  
**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 17. The constellation Hercules. The Keystone asterism. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 18. M-13 – A bright globular cluster in Hercules. Looks like a small fuzzy patch.  
**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 19. The Summer Triangle – the stars Altair, Deneb and Vega are the brightest stars in the three constellations Aquila, Cygnus and Lyra, respectively and make the Summer Triangle.  
**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_
- \_\_\_\_\_ 20. Locate the Northern Cross – in the constellation Cygnus. **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

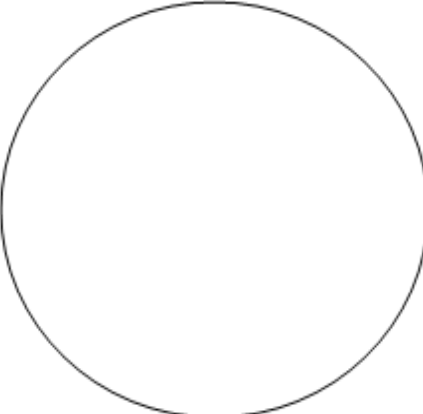
# Locating the Planets

Approximately 11:30 PM July 28<sup>th</sup>, 2022, looking East-Southeast

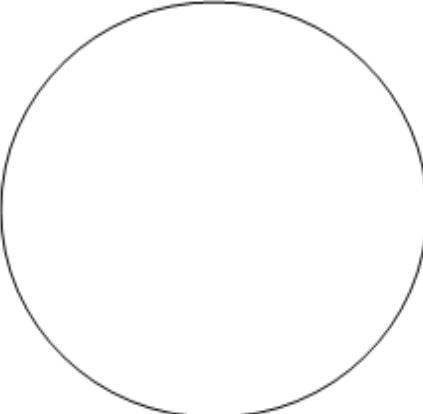


Jupiter Saturn  
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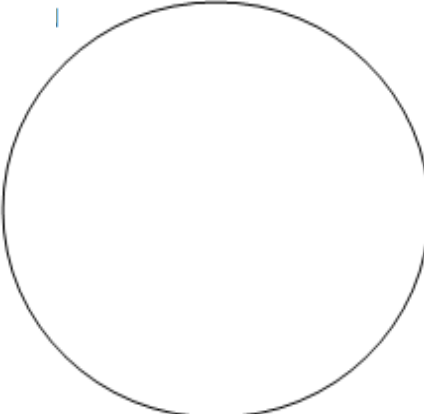
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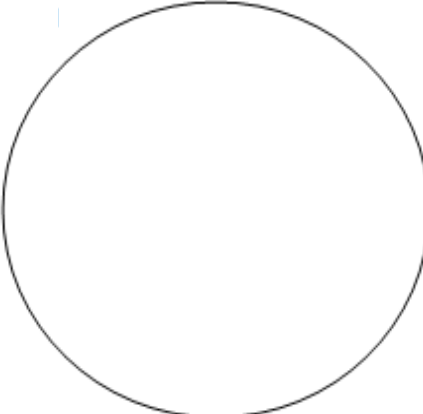
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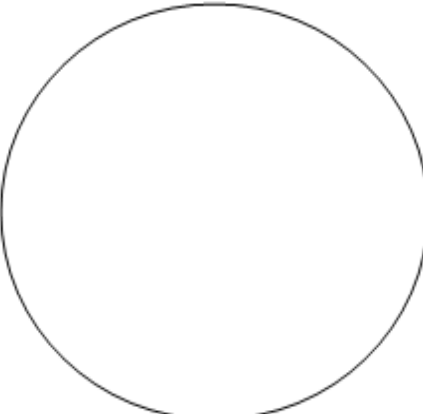
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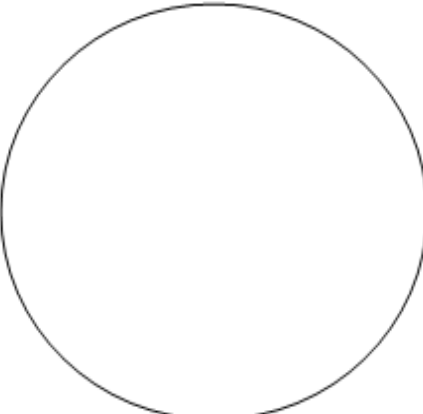
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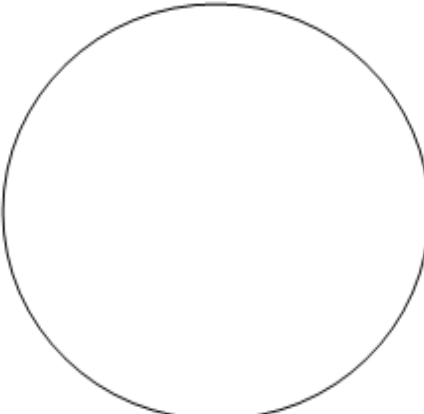
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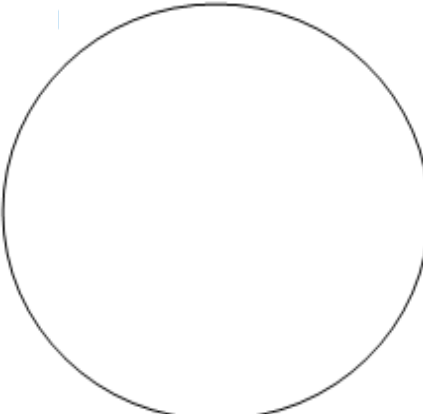
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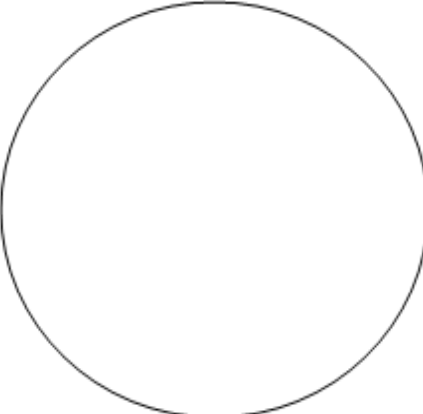
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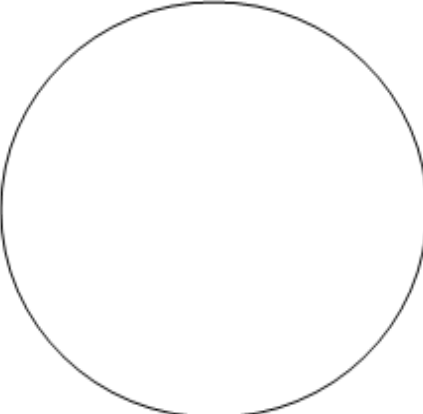
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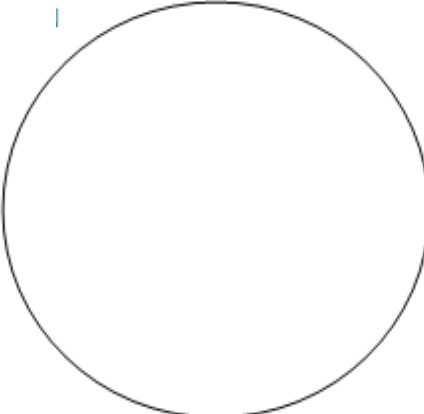
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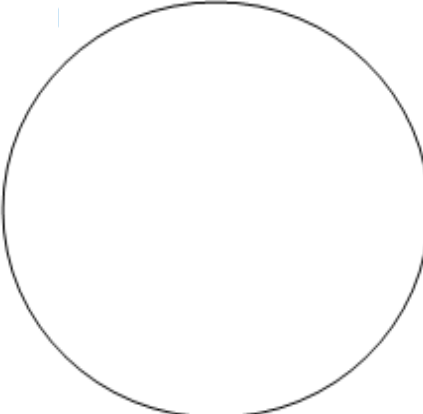
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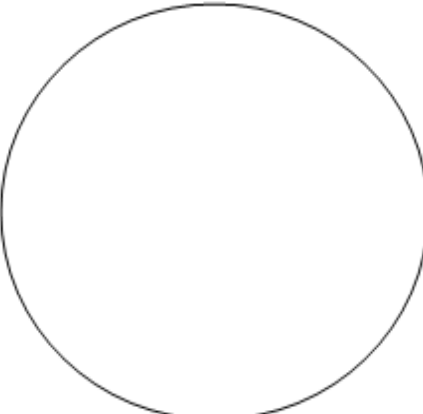
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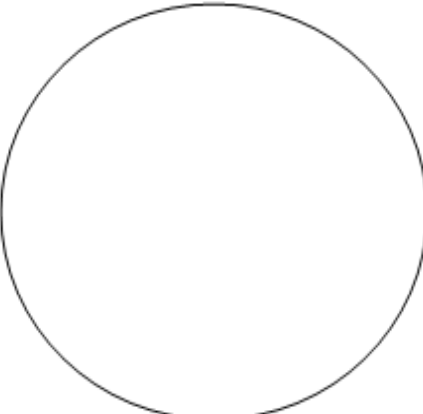
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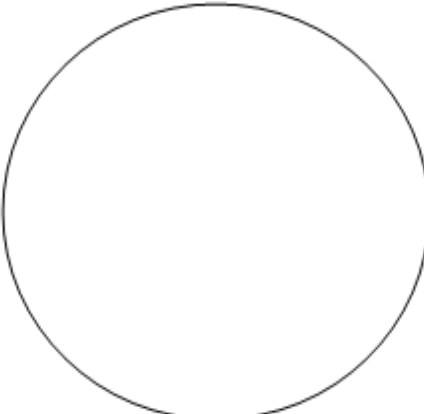
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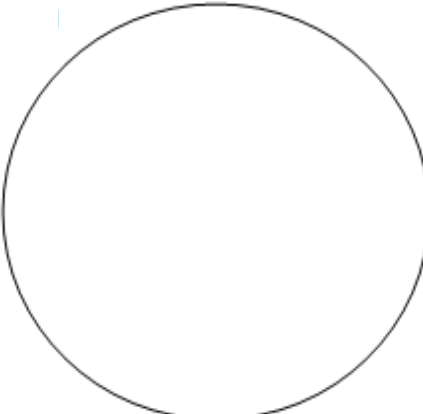
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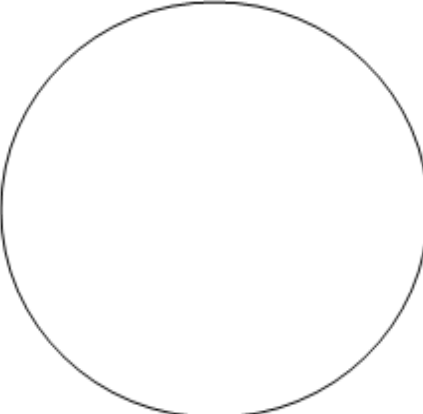
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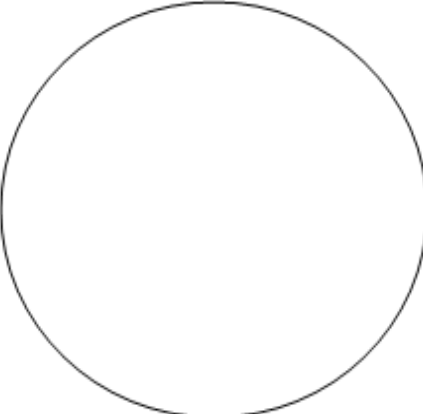
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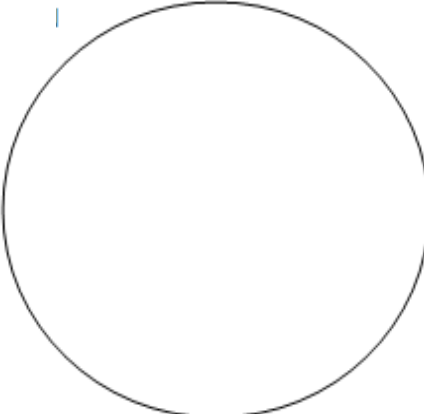
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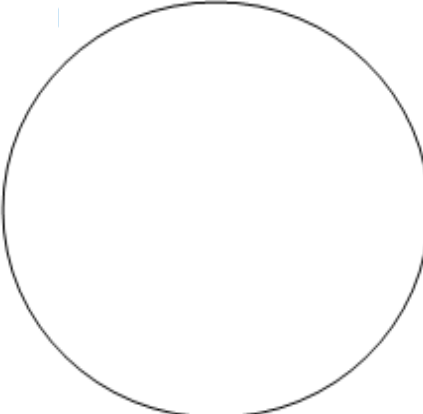
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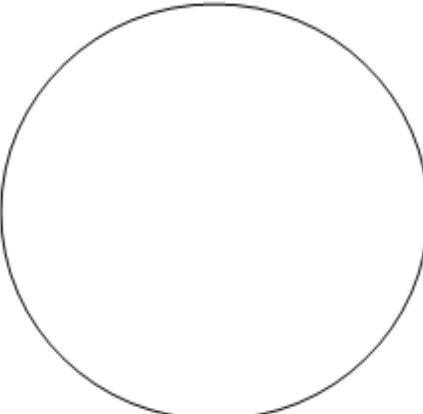
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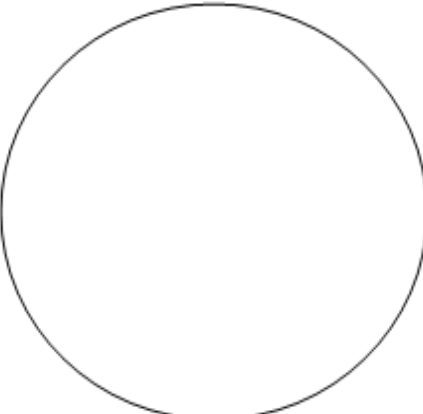
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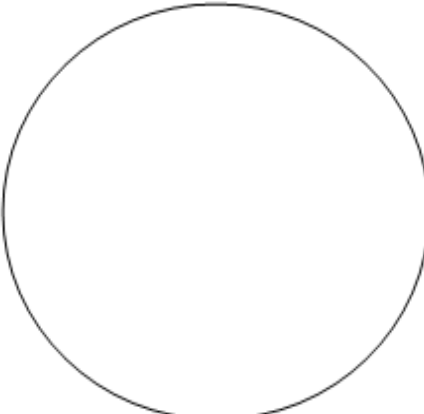
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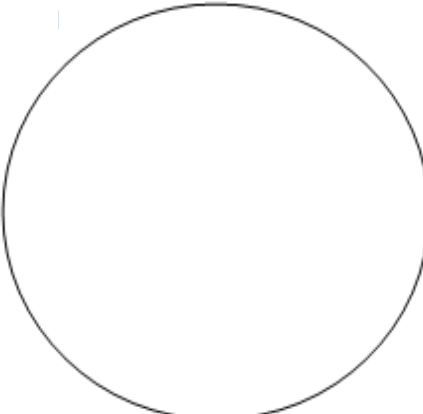
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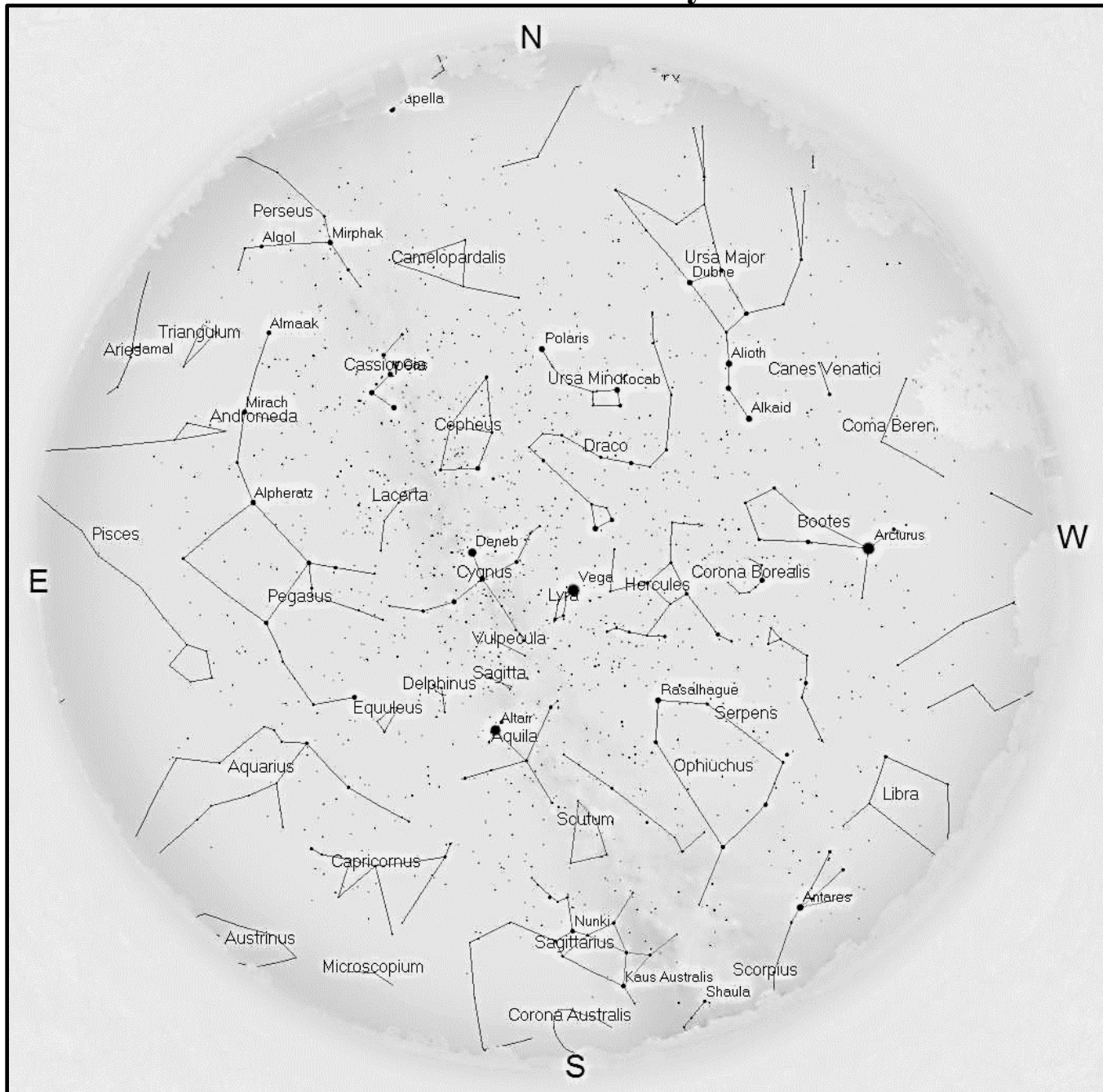
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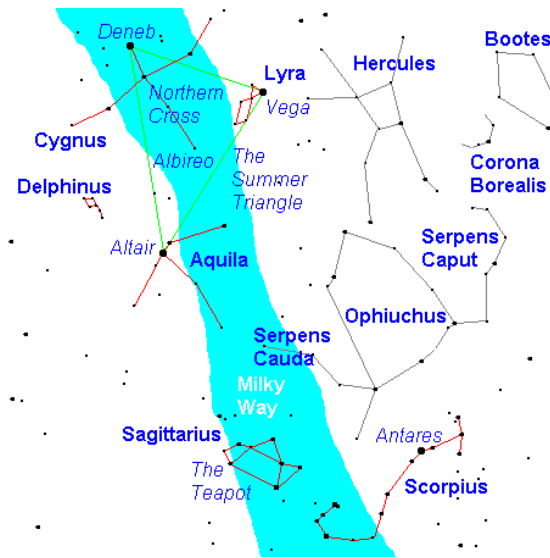


# The Summer Sky





# The Summer Sky



The spectacular summer sky has few really bright stars but picturesque constellations galore and a glorious view of the Milky Way.

The Summer Triangle consists of Deneb and Vega, almost circumpolar for the northern U.S., and Altair. Light from Altair left 16 years ago. Light from Vega left 27 years ago. Light from Deneb left before the Roman Empire fell. Deneb is the brightest star of Cygnus, the Swan, and forms its tail (Deneb means "tail" in Arabic). The Swan is flying with its outstretched neck, and the shape really reflects the constellation name. The head of the Swan, Albireo, is one of the most beautiful double stars in the sky as seen through a small telescope. If you omit the wingtips, the rest of Cygnus forms a cross called the Northern Cross.

Vega is the brightest star in Lyra, a small parallelogram capped by an equilateral triangle. Altair is the brightest star in Aquila, the Eagle, another constellation that's not a bad match for its name, though not terribly bright. Between Aquila and Cygnus is tiny Delphinus, the Dolphin, not very brilliant but very attractive and really fitting its name.

Skimming the southern horizon is Sagittarius, whose stars outline a teapot, and Scorpius the Scorpion, yet another constellation that looks like its namesake. Scorpius is dominated by reddish Antares, whose name means "anti-Mars" because it looks similar to that planet. Between Scorpius and Hercules is faint, sprawling Ophiuchus and the two halves of Serpens. Because of how constellation boundaries are drawn, the Sun actually spends more time in Ophiuchus than it does in Scorpius, and every so often the astrology community gets excited at the "discovery" of a thirteenth constellation in the Zodiac.

Two important points are not marked on the chart. Between Vega and Hercules is the direction the Sun is moving relative to nearby stars. Just off the spout of the teapot of Sagittarius is the center of the Milky Way Galaxy, invisible to the eyes but detectable in radio waves.

## The Mythology of Hercules

Hercules or Heracles, son of Zeus (king of the gods) and the mortal woman Alcmena, was the greatest hero among the gods. As Hercules was born of Alcmena, Hera (queen of the gods) did not like him and did all that was in her power to make Hercules miserable. Hercules went mad because of Hera and hurt several of those close to him. For his redemption Hercules was tasked with the twelve labors by the king of Tiryns, Eurystheus. Among these labors were slaying the invulnerable lion as well as the multi-headed hydra and retrieving Cerberus, guard of the underworld. Upon completion of the twelve super-human labors, Hercules was without doubt the greatest hero Greece had ever known. For this reason, he was placed in the stars.

