

The stars are circling

By Vernon Whetstone

Amateur Astronomer

Let me be one of the first to wish you a Happy New Year. With the changing of the year it is almost like we are given a clean slate with all the old stuff erased so we can now begin to write anew.

Also with the scurry, rush, and run of the just-past holiday season behind us, we can pause to take a breath and consider all the circles in which we were running trying to get everything done.

Well, there are earthly circles, and there are celestial circles. We have discussed the Winter Circle—or the more properly called “Winter Hexagon—but I think we can take it out, dust it off, and take a new look at it since it is prominent in the early evening sky.

First off, the Winter Circle is not a constellation, it is an asterism, a group of stars put together to form an object made up of stars from other constellations. In this case, there are six first-magnitude or brighter stars that make up the circle, all taken from six constellations.

The stars are Sirius, in Canis Major, Rigel, in Orion, Aldebaran, in Taurus, Capella, in Auriga, Caster, in Gemini, and Procyon, in Canis Minor.

Let's start with Sirius which is the brightest star in the visible sky and is fun to observe through binoculars or even a small telescope. At present, it is so close to the horizon after rising that it sparkles furiously flashing red and white and occasionally in a blue color.

The reason for all the fireworks is the light from the star has to travel through a lot of dense atmosphere before getting to our eyes, and that dense atmosphere is what causes the sparkle. Go ahead, slap some glass on it and watch it for a while.

Wait, don't know where Sirius is? Locating it is simple. Start with something you can find, the Constellation of Orion. The big guy is above the horizon in the southeast. Start looking at about 8:30 p.m. local time.

Find Orion's belt and follow a line running from the upper right star, down through the belt and extend the line farther to the very bright Sirius. In fact, Orion is key to finding almost all the stars of the circle.

Use the belt stars again only this time run a line from the bottom to the top and extend it to find another circle star, Aldebaran, the Eye of Taurus, the Bull. Okay, that's two stars of the circle.

Next find the left knee (as you are looking at it) of Orion, the very bright blue star, Rigel. Run a line from it up through the middle star of the belt and keep it going until you find Castor, the upper of the two brightest stars in Gemini. Also, the planet Jupiter is located in Gemini presently.

Back to Rigel, run a line up through Orion's left shoulder star—Bellatrix—and keep going to reach Capella, the brightest star in oval-shaped Auriga, the Charioteer.

For the final star in the circle, Procyon in Canis Minor, go back to Bellatrix, run a line from there

down and left to Orion's right shoulder, the reddish star Betelgeuse, and follow it to Procyon, the dimmest star in the circle.

Now, just go back and connect the dots to find one of the biggest asterisms in the sky, the Winter Circle.

SKYWATCH: New moon, Jan. 1. On Saturday, Jan. 4, Earth will be at its closest point to the Sun for the year. If it is so close, why is it so cold, you ask? Remember that pesky 23.5 tilt of Earth's axis? At present—the northern winter—the northern hemisphere is leaning away from the direct rays of the Sun, thus getting less direct, warming, sunlight.

Our friends and neighbors to the south have just started summer, so guess who is getting all the heat? On Sunday, Jan. 5, Jupiter will be at opposition, or opposite the Sun in the sky and the closest it will be to Earth for the year, thus also the brightest for the year. It is a fine target for that new telescope you received for Christmas.