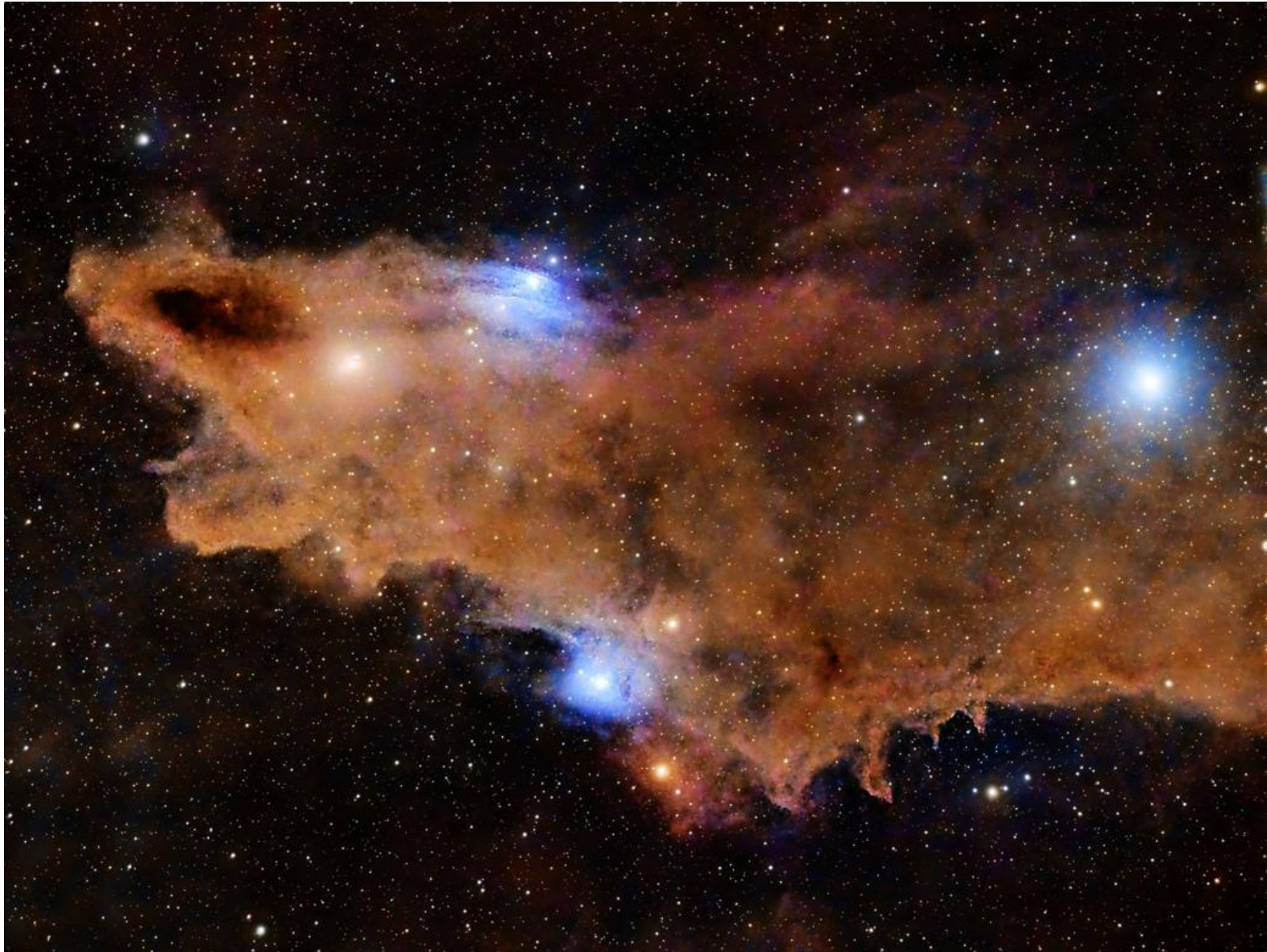


Shark Nebula also know as Howling Wolf

By CARLOS ROTELLAR

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The Shark Nebula.

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Summer is upon us and the sky contains the largest shark which could not fit in any ocean on earth. The Shark Nebula, also known as LDN 1235 and Howling Wolf Nebula, is both a dark and a reflection nebula. It is 15 light years long and located 650 light years away in the constellation Cepheus (King of Eathiofia). It is 1-5 million years old.

The Shark Nebula is comprised of very thick dust and gas that blocks the light behind it and is also faintly illuminated by the surrounding stars when high energy radiation hits the dust particles. Dark nebulae are also active regions where hydrogen molecules form and stars are born. These stars are often hidden from optical light because of the density of the dust and gas.

Radio and infrared telescopes like the James Webb telescope can see through the cosmic dust and see the stars that are formed within. A reflection nebula is a cloud of dust and gas that neither forms stars nor emits its own light. It rather reflects the light from a nearby star. There are two small reflection nebulae that we can see in blue on the image (VdB 150 at top and VdB 149 at bottom).

Dark nebula is not the same as dark matter or dark energy. The Universe contains 68% of dark energy, 27% of dark matter and 5% of normal visible matter. Dark matter does not absorb, reflect or emit light but can be studied by the effect it has on visible matter.

Dark matter is an attractive force that keeps things together, while dark energy is a repelling force that pushes things apart. In the universe there is much more dark energy than dark matter and that is why the universe continues to expand at a rate of about 163,000 miles per hour.

This is a very faint nebula, which is very difficult to photograph. It took me several nights of imaging and a total exposure of 17 hours (204 images with an exposure of 5 minutes each).

– Dr. Carlos Rotellar is a Bowling Green nephrologist who has had an interest in astrophotography and has been taking images of the universe from his driveway for several years. Website: Skyastrophotos.com