

Ask an Astronomer

Question: "What is the nearest galaxy to the Milky Way?"

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Michelle Thaller:

It seems it should be easy to answer the question "What the nearest galaxy to the Milky Way?" But in reality, it's a little complicated. One way to answer to the question is that the nearest galaxy to us is the Andromeda Galaxy.

The Andromeda Galaxy is a large spiral galaxy much like the Milky Way. It's located about 2 million light-years away from us. If you look in the constellation Andromeda, you can actually see this little, fuzzy blob. That, in fact, is the galaxy, and it's the farthest object you can see with your naked eye.

The Andromeda Galaxy is the closest, completely separate, large galaxy to the Milky Way. But, you know, there are other ways to answer this question.

The Milky Way actually has two small, blobby galaxies that orbit around it, sort of like moons around a planet. These dwarf galaxies are called the Magellanic Clouds, and they're very easy to see if you happen to be in the Southern Hemisphere.

The Large Magellanic Cloud is about 160,000 light-years away. The similar, but slightly smaller Small Magellanic Cloud is about 210,000 light-years away.

But it actually gets even more complicated than that!

In 1994, astronomers discovered that a dwarf galaxy is actually colliding with the Milky Way right now! This little galaxy is currently about 88,000 light-years away from us in the Constellation Sagittarius.

Then, in 2003, astronomers found another dwarf galaxy in the constellation Canis Major. The Milky Way has almost completely eaten this little galaxy up, but the center of this disrupted, smeared out galaxy is only about 25,000 light-years away from Earth.

There's no danger to Earth from any of these collisions, but it's interesting to note that we're actually slightly closer to the center of the Canis Majoris Dwarf Galaxy than we are to the center of our own Milky Way! For "Ask an Astronomer," I'm Dr. Michelle Thaller at the Spitzer Science Center.