

# Andromeda on collision course with Milky Way

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A galaxy is a massive collection of gas, dust and billions of stars and their solar systems, all held together by gravity.

Galaxies have four basic components: the nucleus which is in the center where the black hole is, the bulge which surrounds the nucleus and it is filled with millions of stars, the disc with the spiral arms orbiting the nucleus and the halo which is a spherical cloud of stars surrounding the galaxy.

There are three main types of galaxies: spiral, elliptical and irregular.

The Andromeda Galaxy is a spiral galaxy. It is about 10 billion years old and gets its name from the constellation Andromeda, where it is located. It is also known as Messier 31 (M31). Charles Messier (1730-1817) was a French astronomer who catalogued 110 astronomical objects.

The Andromeda Galaxy lies at a distance of 2.5 million light years from Earth, it has a diameter of approximately 200,000 light years and contains more than a trillion stars. There are two small satellite galaxies next to the Andromeda Galaxy, M32 and M110.



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*"Live more Life" 1*

**Sermon Titles:**

SUNDAY 10:30 am	The Spirit Within
SUNDAY Gathering	Questions TBA
SUNDAY 5:00 pm	The Spirit of Community
SUNDAY GATHERING	Questions TBA
MONDAY 10:00 am	The Spirit in Action
MONDAY GATHERING	Questions TBA

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In the image, we can see the galactic bulge in the center of the galaxy. The galactic bulge is extremely bright because it contains millions of stars packed closely together. There is a massive black hole in the center of the galaxy, which we cannot see in this picture. The darker lines contain interstellar dust and gases that block the light from behind. The bluish colored areas contain millions of hot young stars burning bright blue. The stars seen in the image outside the Andromeda Galaxy are the stars of the Milky Way.

Space is expanding constantly and galaxies travel through space at incredible speeds. The Milky Way and the Andromeda Galaxy are on a collision course, approaching each other at a speed of a quarter million miles per hour. It is estimated that the collision will occur in about 4 billion years, just before our sun will cease to exist.

During the collision, massive amounts of rock, dust, stars and planets will be thrown in all directions and, because of the great distance between objects, it will be unlikely that objects will collide with each other, but the night skyline will be transformed forever.

The resulting new galaxy has been nickname Milkdromeda and most likely will be a giant elliptical galaxy. – *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*