

**“More than Just a Faint Fuzzy”**  
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**CPRC Community Observatory**

The other evening at the Observatory, someone asked if we could see other galaxies through the telescopes. “Well, as a matter of fact,” I said, “did you know there is a galaxy just next door to our own Milky Way galaxy visible even without the aid of a telescope”? As it was a moonless evening, we stepped outside and with the aid of a sky map and laser pointer, we found our neighboring galaxy, Andromeda.

The Andromeda Galaxy, named after the princess Andromeda in Greek mythology, is a spiral galaxy approximately 2,500,000 light-years away in the constellation Andromeda. Catalogued as Messier Object 31 or M-31 by 18<sup>th</sup> century astronomer and comet hunter, Charles Messier, it is notable for being one of the brightest Messier objects, making it easily visible to the naked eye even when viewed from areas with moderate light pollution. Although it appears more than six times as wide as the full moon when photographed through a larger telescope, only the brighter central region is visible with the naked eye.

Like our own galaxy, M31 is a spiral galaxy, named for the (usually two-armed) spiral structures that extend from the center into the disk. The spiral arms are sites of ongoing star formation and are brighter than the surrounding disk because of the young, hot stars that inhabit them.

As that Observatory visitor discovered, it is visible as a faint smudge on a moonless night. It is one of the farthest objects visible to the naked eye and can be seen even from urban areas with binoculars. It is really fun to first locate this faint fuzzy in the northeastern sky with the naked eye. Then pull out your binoculars and locate it again...now the faint fuzzy really stands out. The icing on the cake is when you look through one of the Observatory telescopes. Observations by the Spitzer Space Telescope in 2006 revealed that M31 contains one trillion stars, greatly exceeding the number of stars in our own galaxy. Is it any wonder we are able to see the “great nebula in Andromeda” (as it was referred to in old texts) without the aid of a telescope?

Did you know M31 is on a collision course with the Milky Way Galaxy? That’s right; the Andromeda Galaxy and the Milky Way are approaching one another at a speed of 100 to 140 kilometers per second (62 to 87 mi/s). But not to worry, the collision is predicted to occur in about 2.5 billion years and the two galaxies will likely merge to form one giant galaxy. The fate of the Earth and the Solar System in the event of a collision are presently unknown, and there is a small chance someday the Solar System could be ejected from the Milky Way or join Andromeda. But that is an uncertain future we won’t have to worry about...right?

The Observatory is in its fall transition and will be operating each Friday, Saturday and Sunday evenings from 8:00 PM – 10:00 PM until October 30<sup>th</sup> when we move to our

winter hours of 7:30 PM – 9:30 PM...weather permitting of course! For more information about the Observatory go to [www.communityObservatory.com](http://www.communityObservatory.com)