



Andromeda

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About Andromeda

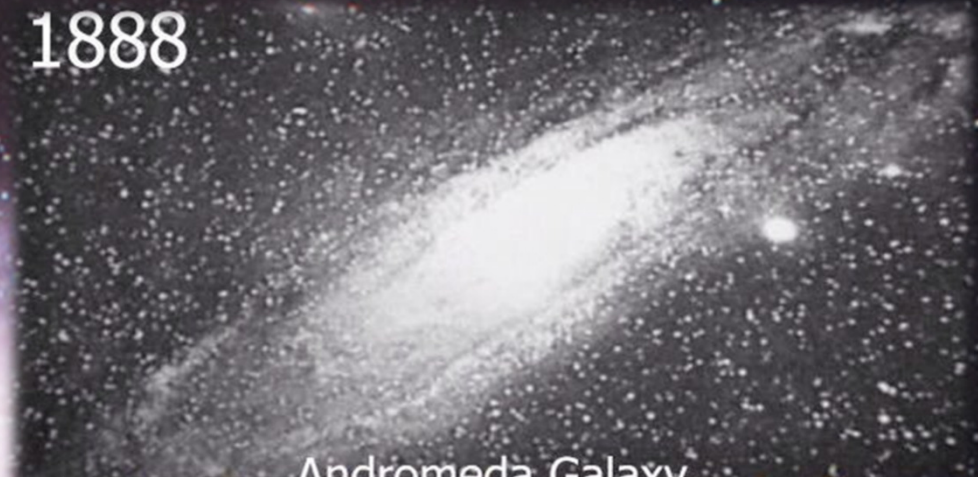
- Andromeda galaxy is also known as M31, Messier 31 or NGC 224
- The closest spiral galaxy to our Milky Way at 2.5 million light years away
- Similar with Milky Way, both are spiral galaxies
- Contains approximately a trillion stars



History

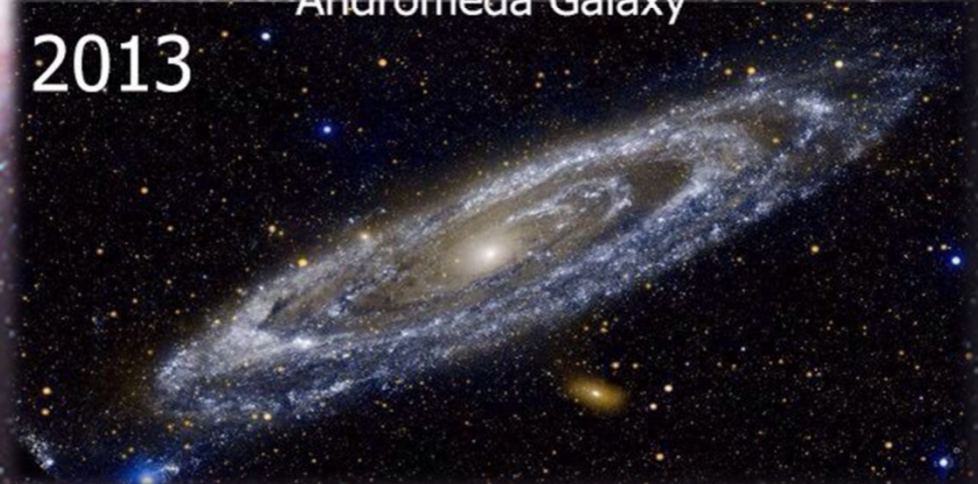
- Andromeda was found in 905. It was first labeled as the Little Cloud.
- It was already found but Persian astronomer was first who marked it in his book in 964.
- Isaac Roberts took the first picture of it in 1887

1888



Andromeda Galaxy

2013



How to find Andromeda

- It is easy to spot because of its brightness
- The most easy to spot from August to February
- It is the farthest target, that a human can see with bare eyes (when the sky is dark)
- Constellation of Andromeda can be seen through the year



The man who found Andromeda
(Simon Marius)



FINDING ANDROMEDA

Finding Andromeda

- In 1612 a German astronomer gave an early description on Andromeda based on telescopic observations
- Immanuel Kant conjectured in 1755 that the blurry spot was an island universe
- Andromeda was first thought to be a nebula (a cloud that consists of gas or dust) in the Milky Way
- In 1850 Andromeda's spiral structure was discovered and drawn

Finding Andromeda

- In 1864 it was realized that Andromeda differs from a nebula and it was deduced that Andromeda has a stellar nature
- In 1885 a supernova was seen in Andromeda, but as it was still considered a nearby object, it was named Nova 1885
- In 1917 it was first realized that Andromeda might be a totally different galaxy
- In 1922 it was by measurements confirmed that Andromeda is in fact, a galaxy

Andromeda and the Milky Way

- Andromeda and the Milky Way's similarities have helped to find out a lot about other galaxies
- Scientists have been able to do detailed studies of black holes, stars and other objects in the galaxy
- A few of the Milky Way and Andromeda's similarities: they share a spiral form, they both have satellite galaxies and their stars in the halo are generally metal-poor
- Andromeda and the Milky Way have followed similar evolutionary paths

The collision of Andromeda and Milky Way

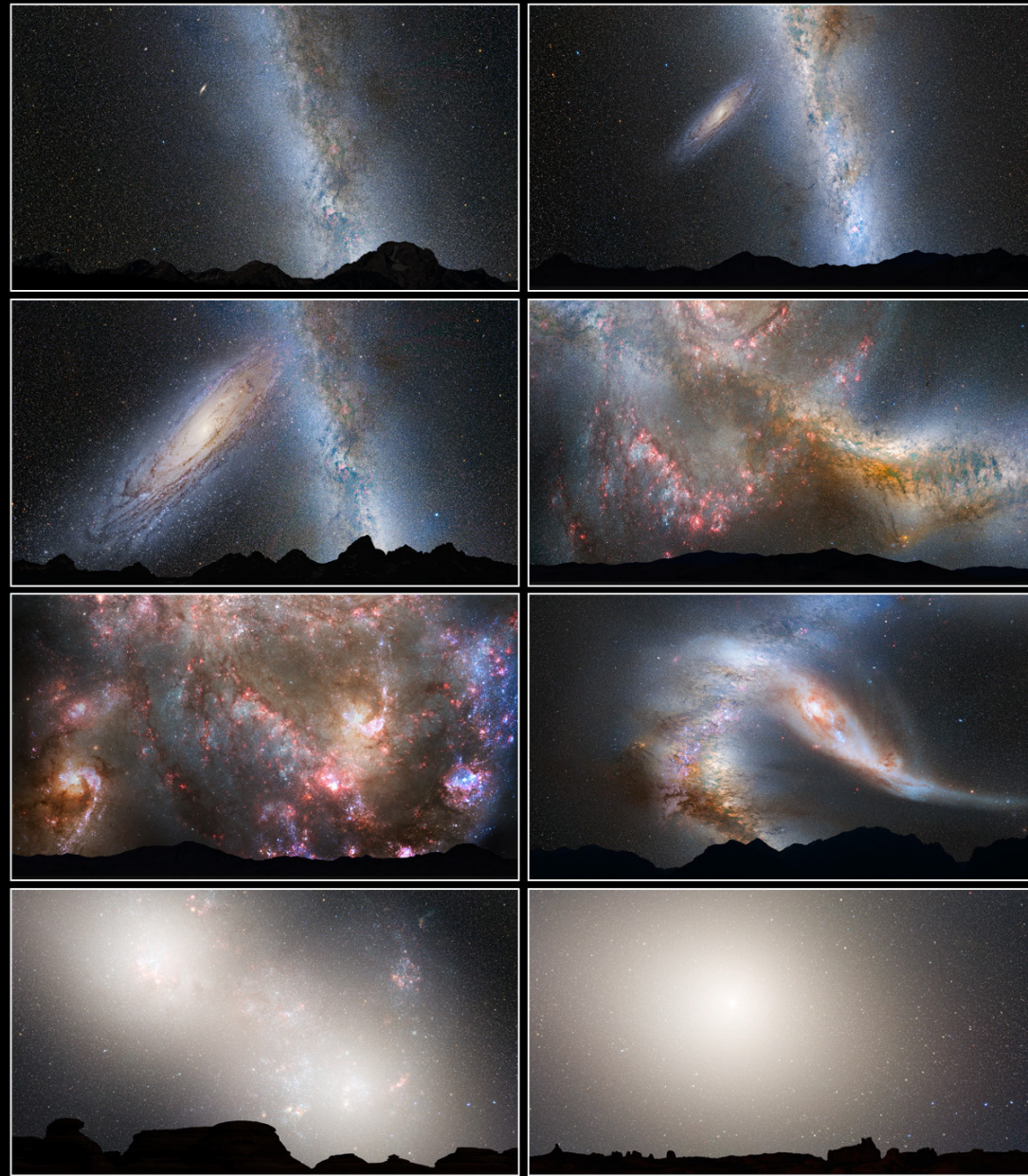
- In 2012 researchers concluded that Milky Way and Andromeda are going to collide in around four billion years
- Andromeda is approaching Milky way at about 110 km/s
- This kind of collisions are actually considered relatively common, because galaxies have such long lifespans
- Andromeda is believed to have collided with at least one galaxy before



This is what the night sky is thought to look like in 3.75 billion years

The collision

1. Andromeda is a small dot in the sky
2. Andromeda is much closer to the Milky Way
3. Andromeda appears the size of the Milky Way
- 4-6. The collision happens
- 7-8. Andromeda and the Milky Way form a new galaxy, already nicknamed Milkomeda





Sources

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