Virtual Visit to the Milky Way



What is the Milky Way? Our solar system, including the Earth, is part of a larger galaxy called the Milky Way. NASA has created a virtual journey through the Milky Way, to help everyone understand how huge it really is. Take a look by viewing this video clip.

The *Chandra* orbiting space telescope guides us as we initially zoom past various planets (Earth, Venus, Mercury) and then our Sun. Leaving our solar system, and then the Milky Way, we travel deeper into space.

As NASA describes this video, we next "zoom back in from the Local Group to the Galactic Center & view the Chandra mosaic of the central region of our Galaxy."

As you watch this clip, which combines stunning images from the orbiting space telescope, consider these facts about the Milky Way and its enormous size. The European Space Agency <u>describes our galaxy</u>:

We live in one of the arms of a large spiral galaxy called the Milky Way. The Sun and its planets (including Earth) lie in this quiet part of the galaxy, about half way out from the center.

The Milky Way is shaped like a huge whirlpool that rotates once every 200 million years. It is made up of at least 100 billion stars, as well as dust and gas. It is so big that light takes 100 000 years to cross from one side to the other.

The center of the Galaxy is very hard to see because clouds of gas and dust block our view. Scientists think that it contains a supermassive black hole that swallows anything passing too close.

Outside the main spiral are about 200 ball-shaped clusters of stars. Each "globular cluster" is very old and contains up to one million stars. The Milky Way belongs to a cluster of at least 40 galaxies. The so-called Local Group has two large spiral galaxies – the Milky Way and Andromeda.

The others are much smaller. They include two galaxies that can be seen with the naked eye from countries south of the equator. The galaxies are called the Magellanic Clouds, after the Portuguese explorer Ferdinand Magellan.

This clip also takes us outside our own galaxy. Isn't it astounding to realize that we can see all of these amazing images transmitted to Earth from an orbiting space telescope?

Credits:

Video and animation, NASA/CXC/A.Hobart.

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