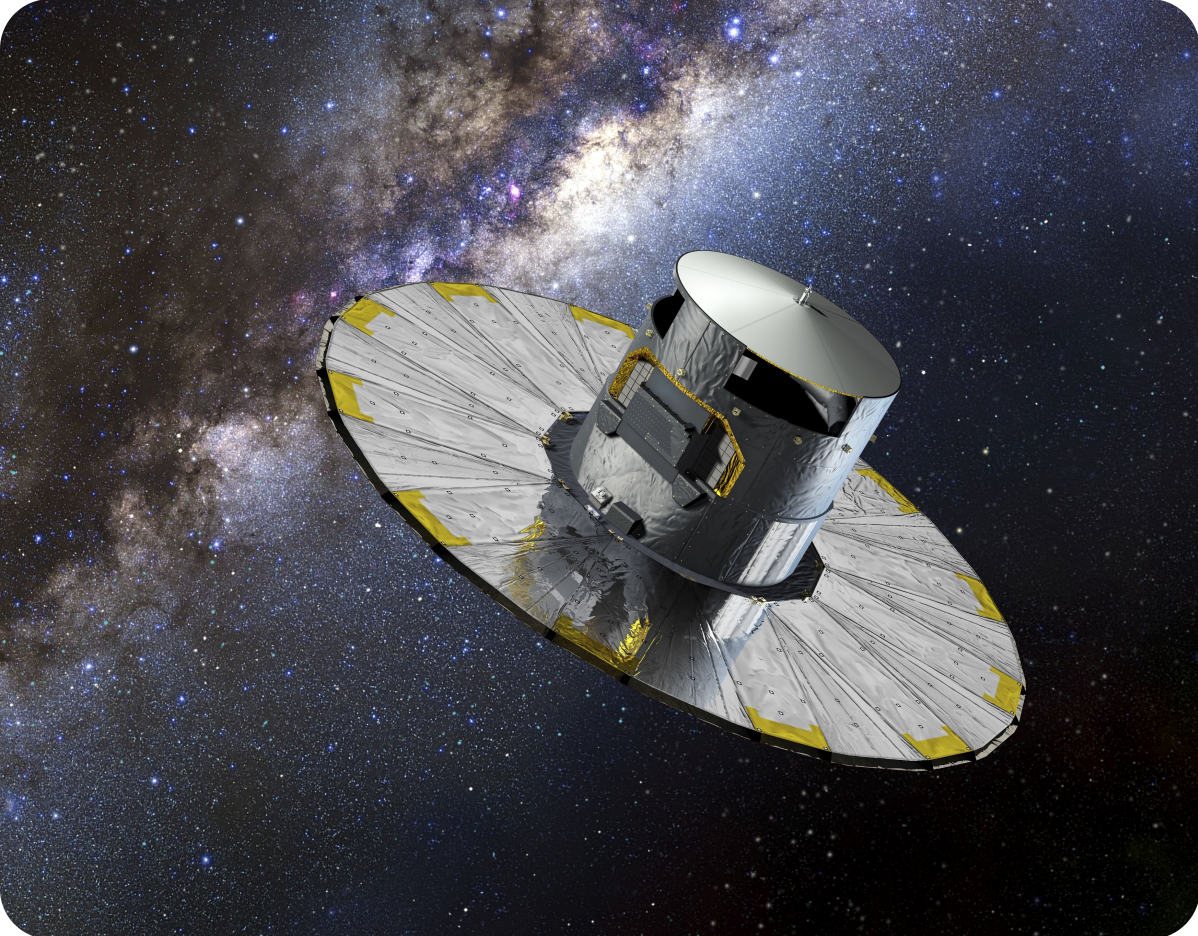


Gaia satellite maps over a billion stars!

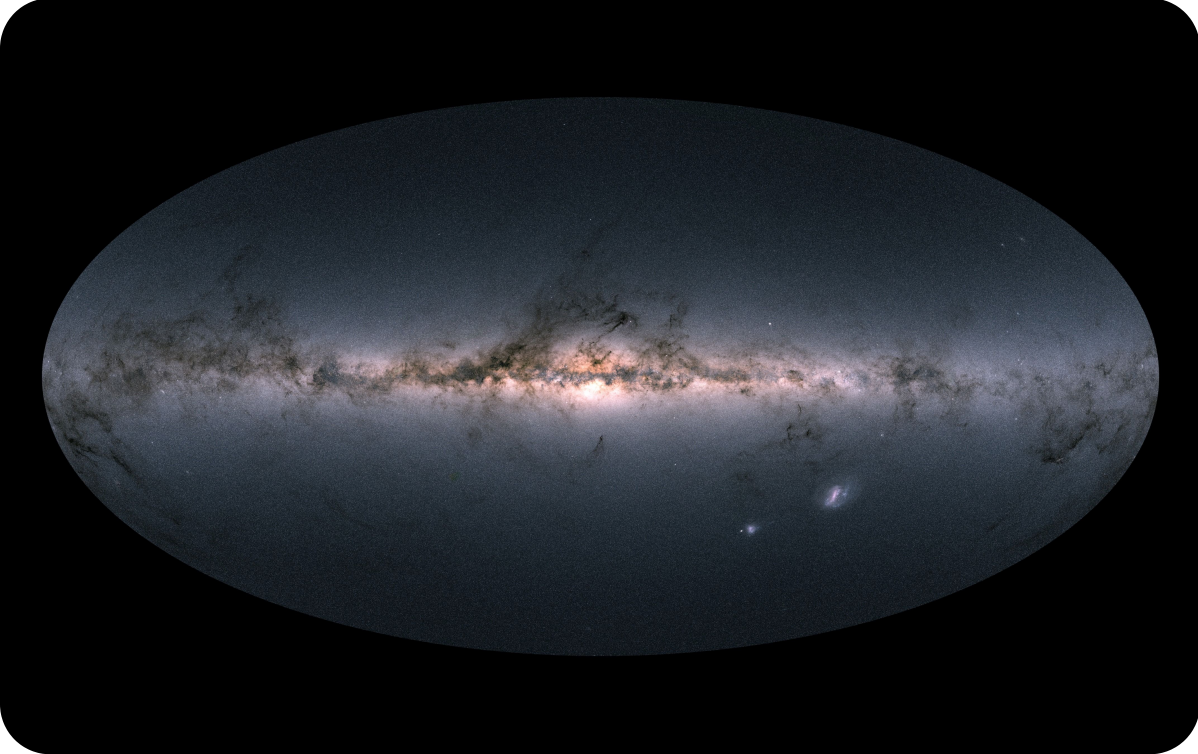


SA's Gaia satellite has created an amazing map of space!
[Access the image](#)

03 May 2018

A European Space Agency satellite called Gaia has spent 22 months charting the sky in more detail than ever before. Now astronomers have used this data to make a new map of space that reveals our Milky Way Galaxy in fantastic detail!

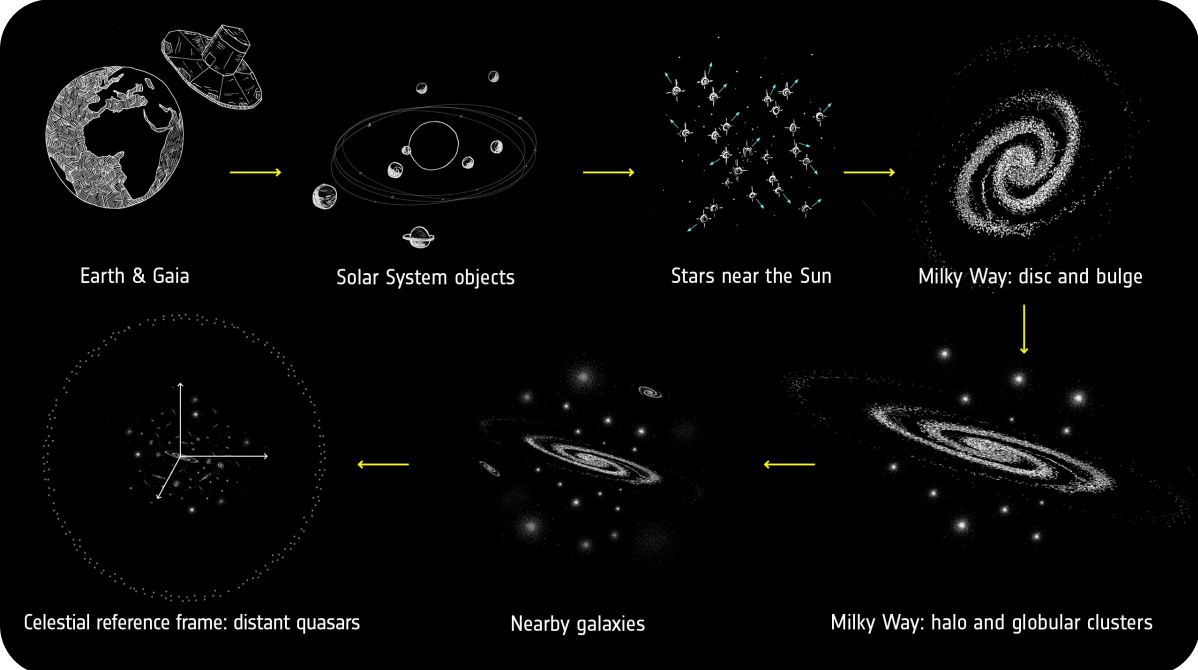
This new map includes very precise measurements of more than a billion stars, including their positions and movements in space. Gaia also measured some stars' colours, brightness, and surface temperatures. It even gathered data on some stars beyond our Galaxy. 14,000 asteroids within our Solar System were also recorded, giving more information about these strange rocks in space. Incredibly, Gaia noted the positions of half a million distant quasars, which are bright galaxies powered by the activity of the supermassive black holes at their cores!



Gaia's map took 22 months to make
[Access the image](#)

The Gaia mission is clearly very important, so about 450 scientists and software engineers have been working on turning the satellite's data into the star map. Astronomers around the world now have access to all of this information, and they are very excited! Even a short time studying the map has been enough to improve our understanding of the ages of stars in our Galaxy, and how stars are moving in space, which is essential for investigating how stars form and change over time.

The new data has also been used to work out the orbits of 75 globular clusters of stars, and 12 dwarf galaxies, which revolve around our Milky Way Galaxy. This will help us to study the Galaxy and its surroundings as it is now, as it was in the past, and to predict what it will be like in the future. How does gravity affect the movement of objects in space, and how much of an impact does mysterious dark matter have? Astronomers have lots of new clues thanks to Gaia.



Gaia gathered information on lots of space objects, from asteroids in our Solar System to globular clusters orbiting our Galaxy!
[Access the image](#)

ESA's Director of Science, Günther Hasinger, said “the observations collected by Gaia are redefining the foundations of astronomy.” This is a very exciting time to be interested in space! What will the Gaia map help us to discover next?

Cool fact: Some of the stars were measured with the same precision as if an observer on Earth could spot a Euro coin on the surface of the Moon!