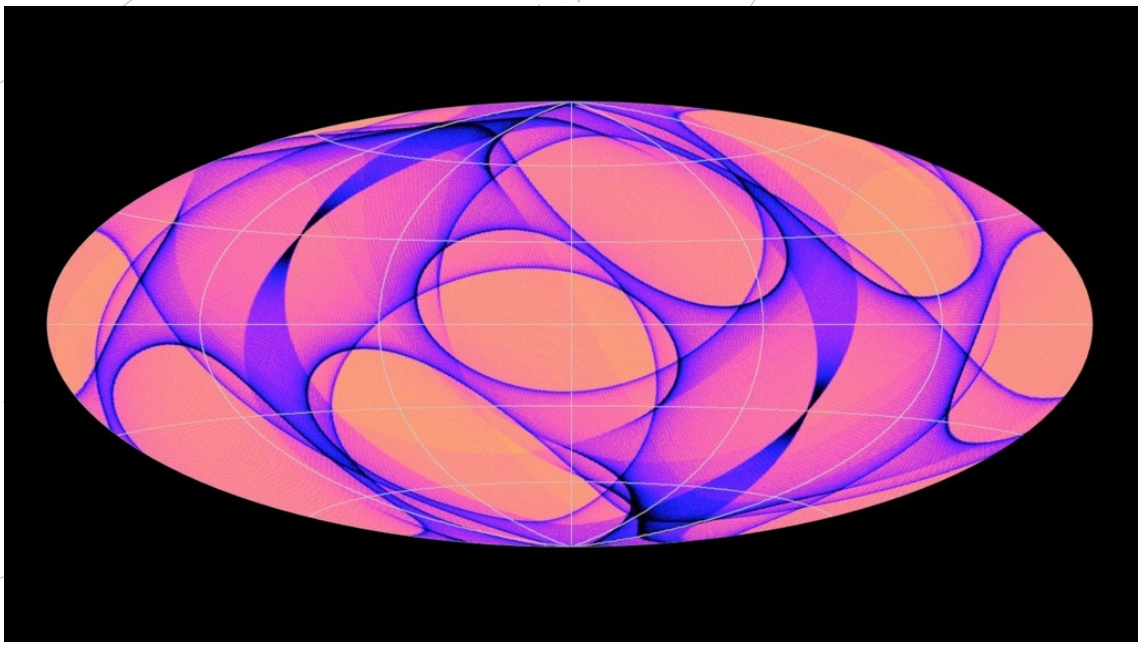
SPACE awareness

SPACE SCOOP

ΝΈΑ ΑΠΌ ΟΛΌΚΛΗΡΟ ΤΟ ΣΎΜΠΑΝ



Cosmic Easter Egg

16/04/2017

Many ancient tribes believed that the Earth was enclosed inside a giant dome, across which the stars travel each night.

Over time, we came to realise that the stars are actually very far away, scattered throughout the Milky Way Galaxy or beyond. They don't move across the inside of a vast ball, as it might appear.

However, this ancient idea is still useful. Today we call the dome the "celestial sphere" (sell-EST-ial), and it gives us a simple way of making maps of the Universe.

Making this type of map we ignore how far away the stars are. Instead, we imagine that everything we see in the sky is set on the inside of a huge ball that surrounds the Earth, like ancient people did.

This oval picture might look like a beautifully decorated Easter egg, but it represents the entire sky. This picture is actually a map, showing how the Gaia satellite scanned the sky during its first 14 months at work.

To achieve its mission and map the entire Milky Way Galaxy, Gaia spins slowly in space, sweeping its two eyes across the entire sky in giant circles. The spacecraft rotates four times per day, plus it's moving around the Sun, meaning it scans different parts of the sky every day!

The colours tell us how often Gaia looked at different areas of the sky. The regions it scanned most often are shown in blue; the areas Gaia paid the least attention to are coloured in peach.

COOL FACT!

During its five-year mission, Gaia will observe 1000 million stars about 70 times each. That means it will study about 40 million stars a day!