

## Gaia Mission

March 28, 2025 • vajiramandravi.com



### Gaia Mission Latest News

On March 27, 2025, ESA confirmed that the space observatory mission, Gaia was “passivated” (drained of energy) and placed into a safe “retirement orbit” around the Sun.

### About the Gaia Mission

- **Full Name:** Originally named **Global Astrometric Interferometer for Astrophysics (GAIA)**, later simplified to **Gaia**.
- Launched in **2013** by the **European Space Agency (ESA)**, it aimed to create the **most precise 3D map of the Milky Way** through **astrometry** (measuring positions and movements of celestial bodies).
- **Position:** Placed at **Lagrange Point 2 (L2)**, **1.5 million km from Earth** (behind Earth when viewed from the Sun), ensuring an **unobstructed cosmic view**.
- **Scientific Instruments:**
  - **Twin Telescopes:** Captured light from different directions.
  - **Digital Camera:** Nearly **1 billion pixels**, the **largest ever flown in space**.

- **Three Key Instruments:**
  - **Astrometer:** Measures **precise locations** of celestial bodies.
  - **Photometer:** Determines **brightness and temperature** of stars.
  - **Spectrometer:** Identifies **chemical composition** and **motion** of objects.

## Key Discoveries of Gaia

- **Mapping the Milky Way in 3D: The First precise 3D map** of the **Milky Way galaxy** also helped **understand the shape of the galaxy**, including:
  - The **central bar and spiral arms**.
  - A **warped, wobbly disc**, likely caused by **past collisions with smaller galaxies**.
  - **Ripples in the galaxy** from these collisions may have led to the formation of **new stars, including the Sun**.
- **Discovery of New Black Holes: A new class of black holes** that are **invisible** and **can only be detected by their gravitational effects**.
  - Discovered **one of the closest black holes to Earth**.
- **Tracking asteroids and space threats:** Gaia identified **over 1,50,000 asteroids**, tracking their **orbits and potential threats to Earth**.

## Gaia Mission FAQs

**Q1.** What is the Gaia Space Telescope?

**Ans.** Gaia is a European Space Agency (ESA) mission designed to map the positions, distances, and motions of over a billion stars in the Milky Way.

**Q2.** What is the main objective of the Gaia mission?

**Ans.** The mission aims to create a precise 3D map of our galaxy, helping scientists understand its structure, formation, and evolution.

**Q3** When was the Gaia telescope launched?

**Ans.** Gaia was launched on December 19, 2013, aboard a Soyuz rocket from French Guiana.

**Source:** [IE](#)

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