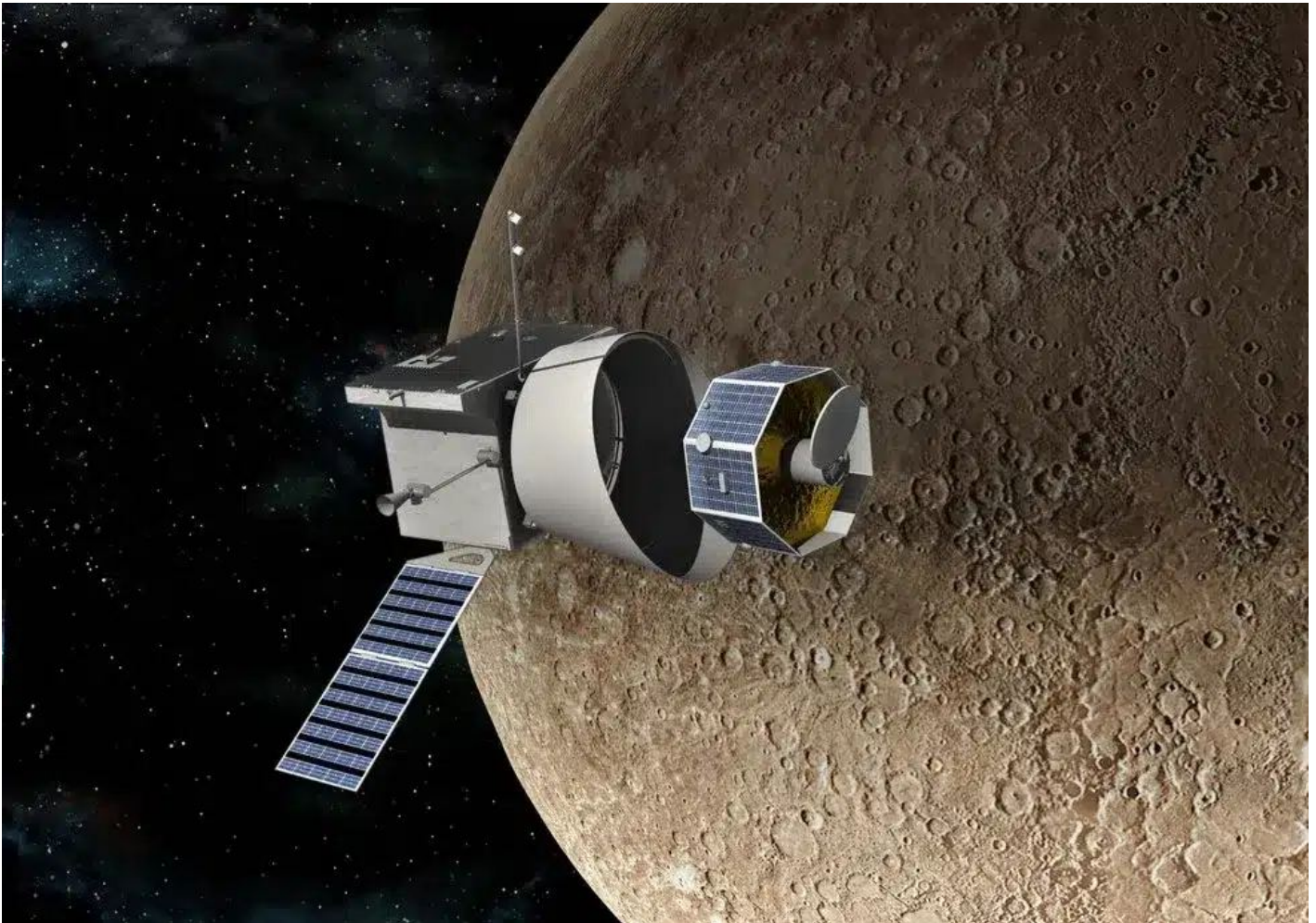


What is BepiColombo?

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About BepiColombo spacecraft:

- It is a joint **European Space Agency (ESA)** and **Japan Aerospace Exploration Agency (JAXA)** mission to Mercury.
- The mission was named after Giuseppe “Bepi” Colombo, an Italian mathematician and engineer who made significant contributions to the understanding of Mercury’s orbit.
- It was launched on October 20, 2018 and it is an ambitious and complex mission designed to **study Mercury’s surface**, composition, magnetic field, and its interaction with the solar environment.
- The BepiColombo spacecraft consists of two main components:
 - **Mercury Planetary Orbiter (MPO)**: The MPO is primarily provided by ESA and is responsible for mapping and studying Mercury’s surface, as well as its composition and topography.
 - **Mercury Magnetospheric Orbiter (MMO)**: The MMO is provided by JAXA and focuses on studying Mercury’s magnetic field and magnetosphere.

- **Objectives:**

- **Investigating** Mercury's **surface and composition** to better understand its geological history and formation processes.
 - Studying **Mercury's magnetic field** and magnetosphere to gain insights into its internal structure and how it interacts with the solar wind.
 - Measuring **Mercury's exosphere** (a thin atmosphere) and understanding its composition and dynamics.
 - Conducting experiments to test certain principles of general relativity and improve our understanding of gravity.
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Q1: What is the exosphere?

It is an atmosphere so thin that its few atoms or molecules are unlikely to collide with one another. In Earth's atmosphere, the exosphere is the highest part of the atmosphere where the density of gas molecules is very low.

Source: [Explained: The significance of the first clear images of Mercury's South Pole](#)

Source: <https://vajiramandravi.com/current-affairs/what-is-bepicolombo/>

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