Mercury mission made a ‘flyby’ today

Today the mission to Mercury made a ‘flyby’ of Earth before heading off to the inner solar system.

The BepiColombo spacecraft will slow down as it approaches earth at 12,700km which will allow scientists to test some of the onboard instruments.

At 5.25am this morning you had the last chance to see the spacecraft from Earth before it sets off on its seven year voyage.

Rosemary Young, Science Programme Manager at the UK Space Agency, said: “The UK built X-ray spectrometer instrument onboard BepiColombo will eventually tell us so much more about the planet’s chemical composition but before then the spacecraft must undertake a complex orbit manoeuvre to get there. It will be passing the Earth on Friday before gravity slings it towards Venus and onwards to Mercury.

“This distance to Earth is so close that it will be possible to see it through telescopes and even binoculars from southern Europe. It’s a final chance to wave BepiColombo goodbye!”

And if you still need a science fix then remember that the Edinburgh Science Festival is all online for you with live sessions from 12 noon today and on Earth Live Sessions tomorrow.

Launched on 20 October 2018, BepiColombo is the first ESA mission to Mercury, the least explored planet in the inner

Solar System, and will provide new insight into how the planet closest to the Sun formed and evolved. The spacecraft will travel 9 billion km and is designed to survive extreme temperatures, from +450 to -180 degrees.

In October, the spacecraft will perform the first of two flybys at Venus. The final six orbit-tightening manoeuvres will use the gravity of BepiColombo's destination, Mercury, to arrive in late 2025.

Much of the spacecraft was built right here in the UK by our growing space sector, which employs more than 40,000 people across the country. The mission is an outstanding example of international collaboration between the European and Japanese space agencies. The UK's involvement is managed and funded by the UK Space Agency.

- The UK Space Agency funded, and University of Leicester designed and built the Mercury Imaging X-ray Spectrometer (MIXS). This instrument will use novel X-ray optics to determine small-scale features on Mercury and find out what the planet's surface is made of.
- Airbus Defence and Space provided spacecraft structures, electrical and chemical propulsion systems and the systems which will separate the spacecraft modules on arrival at Mercury.
- QinetiQ supplied the innovative electric propulsion system. A beam of charged particles are expelled from the spacecraft to propel it forward. Ion propulsion produces low levels of thrust very efficiently compared with conventional chemical rockets.
- Thales Alenia Space UK supplied the Remote Interface Units that acquire sensor data and telemetry as well as driving the thrusters that control the spacecraft.
- UK teams also provided a hardware contribution to the Finnish led Solar Intensity X-ray & particle spectrometer (SIXS).