**BEPICOLOMBO’S JOURNEY TO LAUNCH**

**Suggested web copy intro:** The component parts of BepiColombo, the European Space Agency’s first mission to Mercury, have been delivered to the launch pad in French Guiana by air, sea and road.

The joint mission between ESA and the Japan Aerospace Exploration Agency (JAXA) consists of two orbiters and one transfer module. These took four weeks to disassemble and pack and required 70 shipping containers and four cargo planes to ensure it was safely delivered to the European Spaceport at Kourou.

Everything will now be unpacked and re-assembled, together with the addition of solar panels, before launching to Mercury later this year.

The film contains soundbites from Johannes Benkoff, BepiColombo Project Scientist, ESA.

**[TITLE] BEPICOLOMBO’S JOURNEY TO LAUNCH (A-ROLL)**

**TAPE STARTS: 10:00:00**

**VT STARTS: 10:00:10**

**10:00:10**

**[LOADING BEPICOLOMBO PARTS INTO AN ANTONOV CARGO PLANET AT SCHIPOL AIRPORT, THE NETHERLANDS]**

Inside these containers are parts of the European Mercury Planetary Orbiter. It’s about to make a journey from ESTEC, ESA’s technical facility in The Netherlands, to another continent.

**10:00:24**

**[CARGO PLANE TAKE OFF]**

From Schipol airport the spacecraft travelled by cargo plane to the European spaceport in South America.

**10:00:35**

**[REMOVAL OF PHEBUS INSTRUMENT FROM MERCURY PLANETARY ORBITER AT ESTEC, ESA]**

Earlier, the orbiter was separated from a pump connecting its PHEBUS instrument - an ultraviolet spectrometer that will examine Mercury’s outer atmosphere.

But the orbiter isn’t the only part of BepiColombo’s mission to Mercury.

**10:00:50**

**[GRAPHIC SHOWING BEPICOLOMBO MISSION CONSTITUENTS]**

This joint mission also contains a scientific orbiter from the Japanese space agency JAXA, a European protective sunshield… and a Transfer Module to ensure both spacecraft go into orbit.

**10:01:05**

**[BEPICOLOMBO SPACECRAFT STILL. CREDIT: ESA]**

But first, the spacecraft’s solar electric propulsion needs to make the challenging journey to Mercury.

**10:01:10**

**[INSET CLIP: Johannes Benkoff, BepiColombo Project Scientist, ESA]**

*“Because this planet is so close to the Sun, you need to have a lot of energy to go there. It’s even easier to send a spacecraft to Pluto than to Mercury. You have to brake until the gravity of the Sun and you need a lot of energy. And for that reason our mission takes quite a long time because we also need the help of planetary flybys in order to bring our spacecraft there.”*

**10:01:36**

**[MERCURY STILLS - CREDIT: NASA]**

Investigating Mercury will also be a challenge. It has surface temperatures as hot as a pizza oven – up to 450 degrees Celsius. But during the night it can reach as cold as minus 170 degrees. There’s even ice in craters on the poles.

**10:01:55**

**[ANIMATION SHOWING TWO BEPICOLOMBO ORBITERS AROUND MERCURY WITH ITS MAGNETIC FIELD. CREDIT: ESA]**

Like Earth, Mercury has a magnetic field. Understanding how this interacts with the solar wind can help scientists better understand the effects of space weather on our planet.

**10:02:05**

**[GVS PACKING BEPICOLOMBO’S MERCURY PLANETARY ORBITER INTO CRATES AT ESTEC, ESA]**

Four cargo planes and 70 sea containers have delivered the mission to the spaceport in French Guiana.

**10:02:44**

**[GVS UNFURLING SOLAR PANELS ON SPACECRAFT WHILE IN EUROPE]**

BepiColombo will then be unpacked, reassembled with solar panels, tested and fuelled.

**10:02:20**

**[INSET CLIP: Johannes Benkoff, BepiColombo Project Scientist, ESA]**

*“I’m working now 14 years on this mission so it’s really like a baby growing up and then leaving the house finally. So for me it’s a special moment.”*

**10:02:32**

**[ANIMATION BEPICOLOMBO JOURNEY TO MERCURY TRAJECTORY]**

Preparations for the launch campaign later this year will soon be underway.

The next journey for BepiColombo will take seven and a half years - to one of the hottest planet in our Solar System.

**10:02:46**

**END OF A-ROLL**

**ESA STING**

**[TITLE] BEPICOLOMBO’S JOURNEY TO LAUNCH (B-ROLL) [10:02:46:07]**

**[TITLE] Johannes Benkoff, BepiColombo Project Scientist, ESA**

**English**

*“Because this planet is so close to the Sun you need to have a lot of energy to go there. It’s even easier to send a spacecraft to Pluto than to Mercury. You have to brake until the gravity of the Sun and you need a lot of energy. And for that reason our mission takes quite a long time because we also need the help of planetary flybys in order to bring our spacecraft there. Then we want to send two spacecraft in an orbit around Mercury and that in itself is also a problem because on the other hand you need to brake against the Sun but on the other hand you need to accelerate your spacecraft to bring it to the same speed as Mercury goes around the Sun and then to finally drop it into an orbit of the planet. And with two spacecraft, of course they need to withstand the heat and the environment and then we had to do this special development for insulation, for the antenna. Eighty percent of our material needs to re-qualify for this mission because we hadn’t tested before in that harsh environment so it’s a real challenge to go there and to bring two spacecraft in an orbit around Mercury.”*

**[TITLE] Johannes Benkoff, BepiColombo Project Scientist, ESA [10:04:11:24]**

**German**

An explanation of the BepiColombo mission to Mercury in German.

**[TITLE] Loading BepiColombo MPO at ESTEC [10:06:41:17]**

Loading parts of BepiColombo’s Mercury Planetary Orbiter at ESTEC, ESA’s technical facility in The Netherlands, into containers for its journey to Schipol Airport and then French Guiana.

**[TITLE] Loading BepiColombo MPO at Schiphol airport [10:07:57:02]**

GVs of containers of BepiColombo’s Mercury Planetary Orbiter being loaded onto an Antonov cargo plane.

**[TITLE] Antonov cargo plane take off from Schiphol airport [10:10:22:09]**

Departure of the Antonov cargo plane carrying the Mercury Planetary Orbiter, part of the BepiColombo mission to Mercury.

**[TITLE****] Removal of PHEBUS instrument from MPO** **[10:10:57:21]**

The PHEBUS instrument is removed from the Mercury Planetary Orbiter at ESTEC, ESA’s technical facility in The Netherlands, before being transported to the European spaceport in French Guiana, where the BepiColombo mission will be launched to Mercury.

**[10:12:26:06]**

**[ENDS]**