

MASCOT IMAGES FROM ASTEROID RYUGU

Japan's Hayabusa2 spacecraft deployed the MASCOT lander to asteroid Ryugu yesterday. Now, MASCOT has returned its 1st image. An international team of engineers and scientists in Germany is standing by.

The German Aerospace Center (DLR) reported today (October 3, 2018) that the near-Earth asteroid Ryugu, located approximately 200 million miles (300 million km) from Earth, has a new inhabitant which has returned its first image.

The Mobile Asteroid Surface Scout (MASCOT) – built by the space agencies of France and Germany – has landed on the asteroid's surface and begun its work.

DLR said the lander successfully separated from the Japanese Hayabusa2 space probe at 03:58 Central European Summer Time. The 16 hours in which the lander will conduct measurements on the asteroid's surface have begun for the international team of engineers and scientists.

The newly released image shows the surface of the tiny asteroid, about 1 km diameter, in great detail, as well as MASCOT's shadow on the top right of the photo. The Japanese Space Agency's Hayabusa2 began its descent towards Ryugu on October 2. MASCOT was ejected at an altitude of 51 metres and descended in free fall – slower than an earthly pedestrian walking – to the asteroid. MASCOT came to rest on the surface approximately 20 minutes after the separation. Although it is basically square and does not have wheels, MASCOT has an internal mechanism allowing it to make a jump in the asteroid's very low gravity to reposition itself if needed.

MASCOT project manager **Tra-Mi Ho** from the DLR Institute of Space Systems said:

It could not have gone better. From the lander's telemetry, we were able to see that it separated from the mothercraft, and made contact with the asteroid surface approximately 20 minutes later. The moment of separation was one of the risks of the mission.

If MASCOT had not successfully separated from Hayabusa2 as planned and often tested, the lander's team would hardly have had the opportunity to solve this problem. But everything went smoothly: Already during the descent on the asteroid, the camera switched MASCAM on and took 20 pictures, which are now stored on board the Japanese space probe.

Ralf Jaumann, DLR planetary scientist and scientific director of the camera instrument, said:

The camera worked perfectly. The team's first images of the camera are therefore safe.

The team is now analysing the data that MASCOT is sending to Earth.

Hayabusa2 successfully dropped the MASCOT lander on the asteroid Ryugu on October 3, 2018. An international team of engineers and scientists is now busy gathering the data.

AK, with EarthSky and Wikipedia Notes



The MASCOT lander captured this image of asteroid Ryugu while descending to the asteroid's surface on October 3, 2018. The lander's shadow is visible in the upper right corner.

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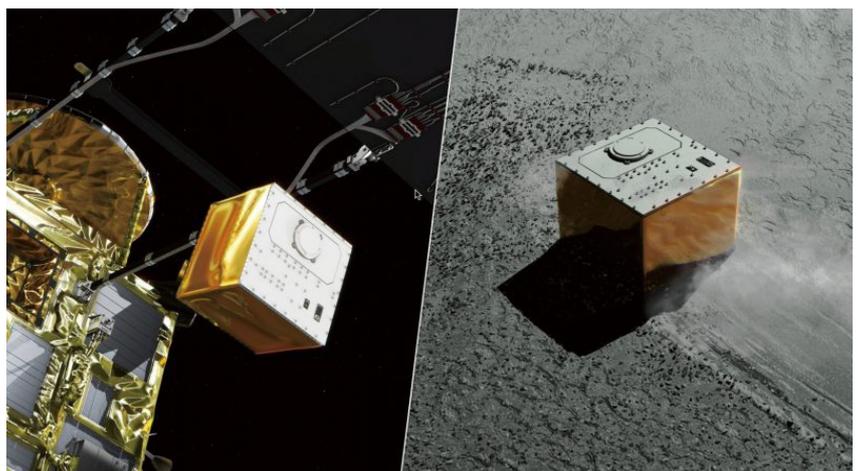
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The MASCOT lander before launch.



Left: Artist's concept of MASCOT lander separating from Japan's Hayabusa2 mother ship. Right: Artist's concept of MASCOT landing on the surface of the asteroid Ryugu.