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Hayabusa2/MASCOT mission MASCOT lands successfully on Ryugu

After its release from Hayabusa2 today just before 04:00 and a short free-fall descent at an estimated speed of 15 cm/s, MASCOT (Mobile Asteroid surface SCOut) successfully landed at the MA-9 site in the southern hemisphere of asteroid Ryugu, after bouncing several times on the particularly inhospitable surface that is strewn with rocks (according to pictures taken by Hayabusa2's camera from an altitude of 6 kilometres) and where temperatures are not yet known.

The Japanese Hayabusa2 mission's French-German surface scout can now begin its science mission, a first in the history of space since it will be able to move about on the surface in short hops due to the asteroid's low gravity. With its four instruments, including the MicrOmega spectrometer developed by the IAS space astrophysics institute in Orsay with CNES oversight, MASCOT is set to analyse the mineral composition of grains in the asteroid's soil in an attempt to unlock its secrets at two sites just a few metres apart.

Scientists are keen to learn more about the properties and structure of near-Earth asteroids in order to gain new insights into how our solar system formed and how water and life emerged on Earth, and perhaps to determine solutions in the event of a risk of such an asteroid colliding with our planet.

For MASCOT, everything will play out during the 12 to 15 hours that its battery is designed to last immediately after the lander separates from Hayabusa2. This amazing space odyssey will then unfold as the science teams sift through the results of the lander's in-situ analyses.

Learn more at <https://mascot.cnes.fr/fr/atterrissage>

About the Hayabusa2 mission

Hayabusa2 is a sample return mission to asteroid Ryugu led by the Japan Aerospace Exploration Agency (JAXA). The French-German MASCOT lander on Hayabusa2 was developed and built by the German space agency DLR, in close collaboration with CNES. The lander's scientific instruments were developed by DLR, the IAS space astrophysics institute and Braunschweig University of Technology (TUB). MASCOT and its experiments are being operated and controlled by DLR with support from CNES and in constant communication with JAXA.

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