

IAF SPACE EXPLORATION SYMPOSIUM (A3)  
Small Bodies Missions and Technologies (Part 1) (4A)

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## MASCOT: LATEST NEWS OF LANDING ON (162173) RYUGU

### **Abstract**

It will be nearly a four year long journey from launch with the Hayabusa2 spacecraft in 2014 Dec 3rd and until beginning of October 2018 when MASCOT ('Mobile Asteroid surface SCOUT') should land on the Near-Earth Asteroid (162173) Ryugu. During cruise phase, MASCOT underwent several inflight and ground based health checks, instrument calibration and subsystem tests to prepare the lander for its biggest challenge: operating autonomously on the asteroid's surface for roughly 16 hours. Within this time, MASCOT should provide scientific data of the surface and physical properties of asteroid Ryugu with its 4 scientific instruments: a wide angle camera with night-time colour illumination (MASCAM), an imaging IR spectrometer microscope (MicrOmega), a multichannel radiometer (MARA), and a magnetometer (MasMAG). MASCOT has an internal mobility unit which enables it to self-right, to place itself into the desired science operation orientation and to relocate on the surface in order to explore more than one site. The lander was jointly developed by the German Aerospace Centre (DLR) and the Centre National d'Etudes Spatiales (CNES). The four payloads are provided by DLR Berlin (MASCAM and MARA), IAS Paris (MicrOmega) and TU Braunschweig (MASMAG). The landing of MASCOT is currently scheduled between 2018, October 1st – 4th during the week of IAC 2018. Thus be possible to present the latest news from the ongoing mission such as landing site selection and very first data right from the asteroid.