Press Release

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# France-Japan space cooperation
## Hayabusa2 collects first samples from Ryugu

On the night of 21 to 22 February, the Japanese space agency JAXA's Hayabusa2 probe collected its first samples from the surface of asteroid Ryugu. Hayabusa2 began its descent on Thursday 21 February at 13:05 CET, where it subsequently touched down on the asteroid for a few seconds, long enough to fire a small impactor and kick up surface material for collection. The probe was thus able to recover samples that will be brought back for analysis on Earth late next year. This is a landmark achievement for the world scientific community, marking the first time that fragments will be returned from a primitive carbonaceous asteroid. Preliminary analyses in Japan will be followed by more in-depth investigation by international science teams.

CNES and the French national scientific research centre CNRS will be contributing to the sample analysis phase in three ways:

- During the preliminary analysis phase, 20 French research scientists from CNRS laboratories will be working on the integrated Japanese science team. No fewer than seven laboratories—CRPG, CSNSM, IAS, IMPMC, IPAG, IPGP and UMET[1]—will be involved.
- MicrOmega, the hyperspectral microscope developed by IAS to enable non-destructive, contactless analysis of sample materials and thus determine their texture and composition, will be set up inside the sample storage room that JAXA has built for the Hayabusa2 mission. It will be a key asset for the initial sample classification and preliminary analysis phase once Hayabusa2's sample container is opened.
- The J. L. Lagrange, LAM and LESIA laboratories will also be contributing to remote-sensing analyses.[2]

Like OSIRIS-REx, MMX and MSR, Hayabusa2 is a mission designed to collect and return extraterrestrial samples to Earth for analysis with highly sophisticated instruments that can't be carried on deep-space missions. Such missions yield invaluable information that would be impossible to obtain in situ. France is a prime partner on a number of international partnership missions to analyse samples of celestial bodies, to which it is contributing its world-renowned know-how and expertise.

[1] CRPG Earth and planetary sciences laboratory (CNRS/University of Lorraine), CSNSM nuclear and material sciences centre (CNRS/Paris-Sud University), IAS space astrophysics institute (CNRS/Paris-Sud University), IMPMC mineralogy, materials physics and cosmochemistry institute (CNRS/MNHN/Sorbonne University), IPAG planetology and astrophysics institute in Grenoble (CNRS/Grenoble Alpes University), IPGP global physics institute in Paris (CNRS/Paris Diderot University), UMET materials and transformations research unit (CNRS/University of Lille/ENSC Lille/INRA),.

[2] J-L Lagrange laboratory (CNRS/Nice Sophia Antipolis University/OCA), LAM astrophysics laboratory in Marseille (CNRS/CNES/Aix-Marseille University), LESIA space and astrophysics instrumentation research laboratory (CNRS/Observatoire de Paris/Sorbonne University/Paris Diderot University).

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 (CNRS/Paris-Sud University) and Braunschweig University of Technology (TUB). MASCOT and its experiments were operated and controlled by DLR with support from CNES and in constant communication with JAXA.

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