

Japan delays spacecraft landing on very rocky asteroid

October 12 2018, by Mari Yamaguchi



This Oct. 3, 2018 image taken at an altitude of about 25 meter by Mobile Asteroid Surface Scout (MASCAT)'s camera and provided by the Japan Aerospace Exploration Agency (JAXA) shows the surface of asteroid Ryugu. The dot at top right is the silhouette of MASCAT. Japan's space agency is

delaying a spacecraft touchdown on an asteroid as scientists need more time to find a safe landing site on the extremely rocky surface. (MASCOT, DLR, JAXA via AP)

Japan's space agency is delaying a spacecraft touchdown on an asteroid because scientists need more time to find a safe landing site on the extremely rocky surface.

The spacecraft Hayabusa2 left Earth in 2014 and traveled 280 million kilometers (170 million miles) to the area of asteroid Ryugu, which it reached in June.

The Japan Aerospace Exploration Agency plans to attempt three brief touch-and-go landings on Ryugu to collect samples in hopes of gaining clues to the origin of the solar system and life on Earth.

JAXA Hayabusa2 project manager Yuichi Tsuda said Friday that the rockier-than-expected asteroid hardly has any flat spaces for landing.

"Those rocks are our biggest headache," Tsuda said. "Ryugu is extremely rocky and it's almost cruel."

He said his team needs at least a month to revise the landing plan, and is still hopeful.

"We will not let Hayabusa2 come back empty-handed," Tsuda said earlier.

A one-month delay at this time of year means two more idle months because the spacecraft will be on the other side of the sun from the Earth in November and December, making it unable to communicate.

Scientists are analyzing data that Hayabusa2 collected when it moved close to the asteroid to release three rovers, as well as images and other data collected by the rovers, to determine the best landing spot.



This Sept. 23, 2018 file image captured by Rover-1B, and provided by the Japan Aerospace Exploration Agency (JAXA) shows the surface of asteroid Ryugu. Japan's space agency is delaying a spacecraft touchdown on an asteroid as scientists need more time to find a safe landing site on the extremely rocky surface. (JAXA via AP, File)

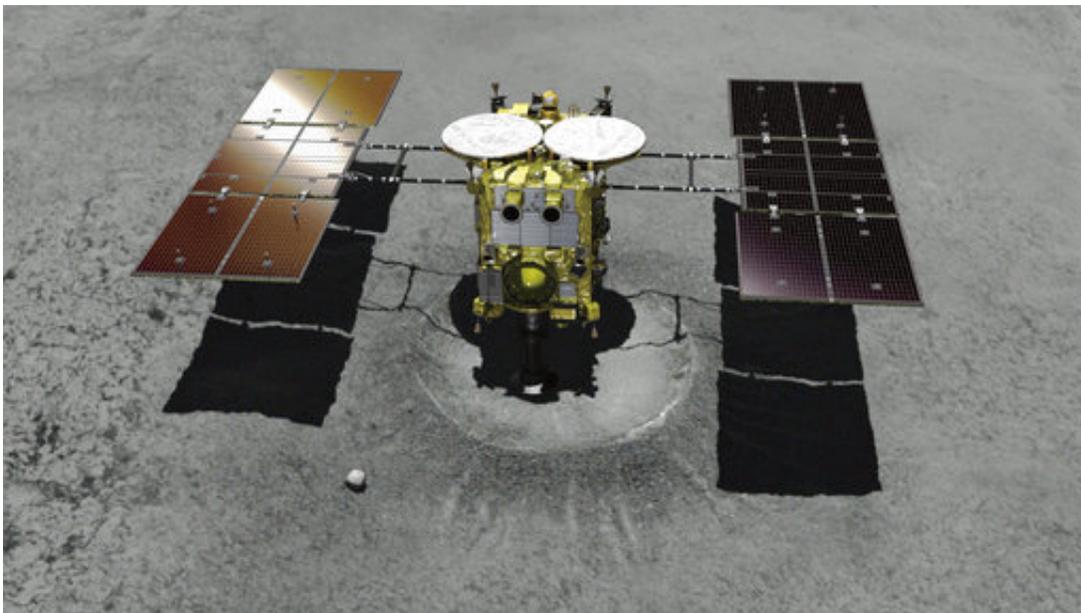
Two Japanese Minerva II-1 rovers landed successfully on the asteroid in September, and a German-French MASCOT rover landed last week. All have sent back surface images and data.

Hayabusa2 will rehearse near-touchdown approaches to the asteroid later this month and obtain more data. Its first actual landing is expected in late January or later.

Before its final touchdown, now expected in May or June, Hayabusa2 is to send out a squat cylinder that will detonate above the asteroid, shooting a projectile into it to form a crater where JAXA hopes Hayabusa2 will land to collect samples before returning home in 2020.

Experts say the asteroid samples may contain organic compounds.

Asteroids, which orbit the sun but are much smaller than planets, are among the oldest objects in the solar system and may help explain how Earth evolved, including the formation of oceans and the start of life.



This computer graphic image provided by the Japan Aerospace Exploration Agency (JAXA) shows the Japanese unmanned spacecraft Hayabusa2 approaching on the asteroid Ryugu. Japan's space agency is delaying a spacecraft touchdown on an asteroid as scientists need more time to find a safe landing site on the extremely rocky surface. (JAXA via AP)



This Oct. 3, 2018, photo provided by the Japan Aerospace Exploration Agency (JAXA) shows JAXA's Hayabusa project manager, Yuichi Tsuda at JAXA Institute of Space and Astronautical Science in Sagami-hara, near Tokyo. Japan's space agency is delaying a spacecraft touchdown on an asteroid as scientists need more time to find a safe landing site on the extremely rocky surface. (JAXA via AP)

© 2018 The Associated Press. All rights reserved.

Citation: Japan delays spacecraft landing on very rocky asteroid (2018, October 12) retrieved 11 May 2024 from <https://phys.org/news/2018-10-japan-spacecraft-rocky-asteroid.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.