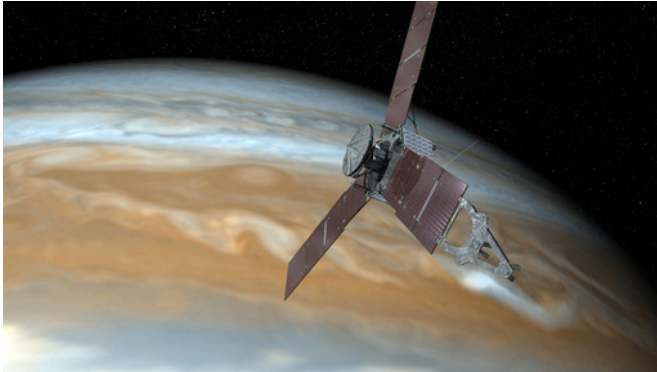


NASA's Jupiter-circling spacecraft stuck making long laps

23 February 2017, by Marcia Dunn



This undated image shows shows an artist's rendering of NASA's Juno spacecraft making a close pass over Jupiter. On Thursday, Feb. 23, 2017, NASA said its the spacecraft is stuck making long laps around the gas giant because of sticky valves. (NASA via AP)

NASA's Jupiter-circling spacecraft is stuck making long laps around the gas giant because of sticky valves.

It currently takes Juno 53 days to fly around the solar system's biggest planet. That's almost four times longer than the intended 14-day [orbit](#).

After repeated delays, NASA decided late last week to scrap an engine firing that would have shortened the orbit. Officials said the maneuver is too risky because of the valve problem.

Only the second spacecraft to orbit Jupiter, Juno has been circling the planet since July.

NASA said the quality of science won't be affected and stressed that stunning pictures of Jupiter will keep coming this way. But it will take more time to gather the data, given Juno's longer loops. The [mission](#) will have to be extended at tens of millions of extra dollars if scientists are to collect everything under the original plan. It's already a billion-dollar

mission.

On the plus side, according to scientists, Juno now will spend less time in Jupiter's abrasive radiation belts.

"The decision to forego the burn is the right thing to do—preserving a valuable asset so that Juno can continue its exciting journey of discovery," NASA's Thomas Zurbuchen, the science mission associate administrator, said in a statement. He added that the pictures from Juno "are nothing short of amazing."



next close flyby will come at the end of March.

Whenever Juno's mission does end, the spacecraft will end up diving into Jupiter's atmosphere and burning up, meteor-style. It was launched in 2011 from Cape Canaveral.

More information: NASA:

www.nasa.gov/mission_pages/juno/main/index.html

© 2017 The Associated Press. All rights reserved.

This Dec. 11, 2016 image made available by NASA shows Jupiter's northern latitudes made by the spacecraft Juno as it performed a close flyby of the gas giant planet. On Thursday, Feb. 23, 2017, NASA said its the spacecraft is stuck making long laps around the gas giant because of sticky valves. (NASA/JPL-Caltech/SwRI/MSSS/Gerald Eichstaedt/John Rogers via AP)

Juno is able to peer through Jupiter's clouds to see what's going on in the atmosphere. Scientists want to better understand how the planet—the fifth from our sun, with at least 67 moons— originated and evolved.

Every orbit, Juno swoops within 2,600 miles (4,200 kilometers) of Jupiter's cloud tops. The most recently completed orbit was three weeks ago; the

APA citation: NASA's Jupiter-circling spacecraft stuck making long laps (2017, February 23) retrieved 19 April 2021 from <https://phys.org/news/2017-02-nasa-jupiter-circling-spacecraft-stuck-laps.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.