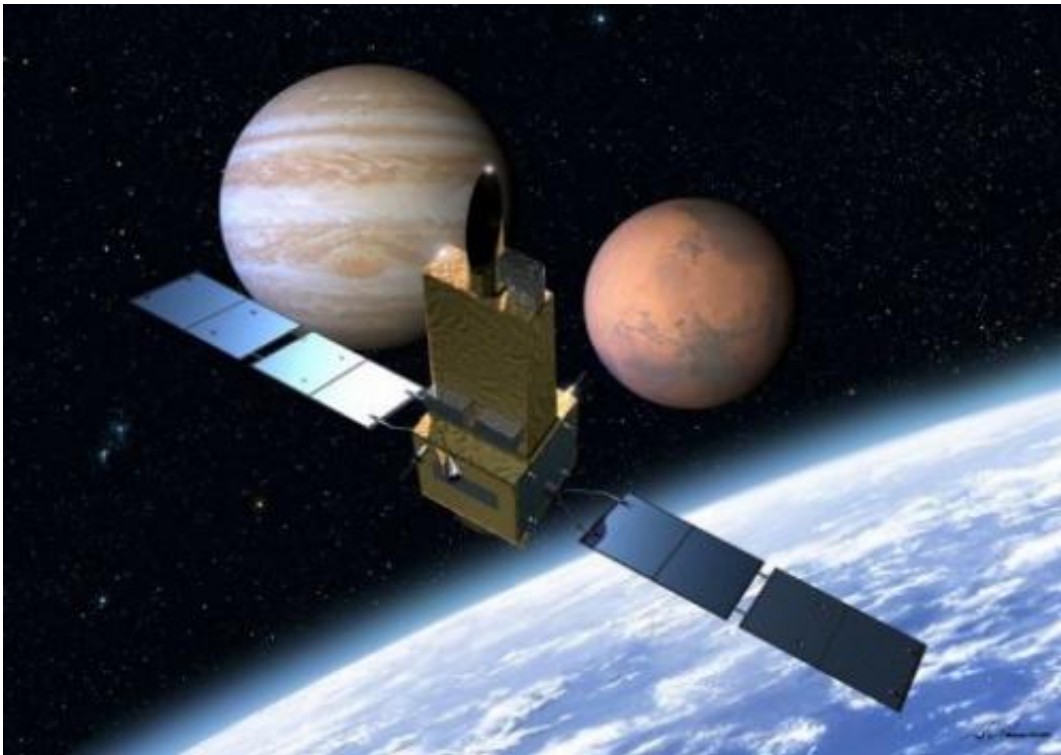


# Japan readies space telescope to study atmosphere

February 15 2013

---



This image, illustrated by Akihiro Ikeshita and released from Japan Aerospace Exploration Agency (JAXA), shows Japan's astronomical observation satellite 'Sprint-A' in the space. The satellite, which will observe atmosphere of Venus, Mars, and Jupiter from the orbit, will be launched in this summer.

Japan is to send a space telescope into orbit around the Earth to observe Venus, Mars, and Jupiter, officials said on Friday, as they look to unlock the secrets of our own planet's atmosphere.

Japan Aerospace Exploration Agency ([JAXA](#)) plans to launch a satellite later this year equipped with an [ultraviolet telescope](#) that will probe the gases surrounding three of our nearest neighbours in the solar system.

Scientists hope this will help them understand the conditions that created the dense, life-supporting atmosphere of Earth, JAXA said in a statement.

They also want to understand if solar winds have any effect on Jupiter's magnetosphere, the area of space around the planet where the particles fall under the sway of its [magnetic field](#).

The satellite, weighing 320 kilogrammes (700 pounds), will go around the Earth in an elliptical orbit between 950 and 1,150 kilometres (between 600 and 700 miles) high, officials said.

Next year, scientists operating the so-far unnamed telescope will team up with their [Hubble Space Telescope](#) counterparts in their observations of Jupiter, with the data available for scientists around the world, JAXA said.

The space agency said Venus, Earth and Mars may have had quite similar atmospheres when they first formed.

"However, within one billion years after the birth of the solar system... growth and change resulted in the different and specific current states," it said in a statement.

"Currently, we can't explain the atmospheric diversity of Mars, Earth and Venus. We hope the mission will explain why most of the [atmosphere of Mars](#) and Venus escaped into [outer space](#) and what kept Earth's atmosphere dense enough to sustain life."

The study of how strong solar winds affect Jupiter's atmosphere is aimed at learning about the early stages of the solar system, when the sun was much more active than it is presently.

Scientists say it is possible that the winds it generated at the time could have driven off large parts of the atmosphere.

The satellite will also carry out experiments on next-generation solar batteries in the form of a thin sheet, and on lithium-ion batteries designed to tolerate greater ranges of temperatures, JAXA said.

(c) 2013 AFP

Citation: Japan readies space telescope to study atmosphere (2013, February 15) retrieved 6 August 2024 from <https://phys.org/news/2013-02-japan-readies-space-telescope-atmosphere.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.