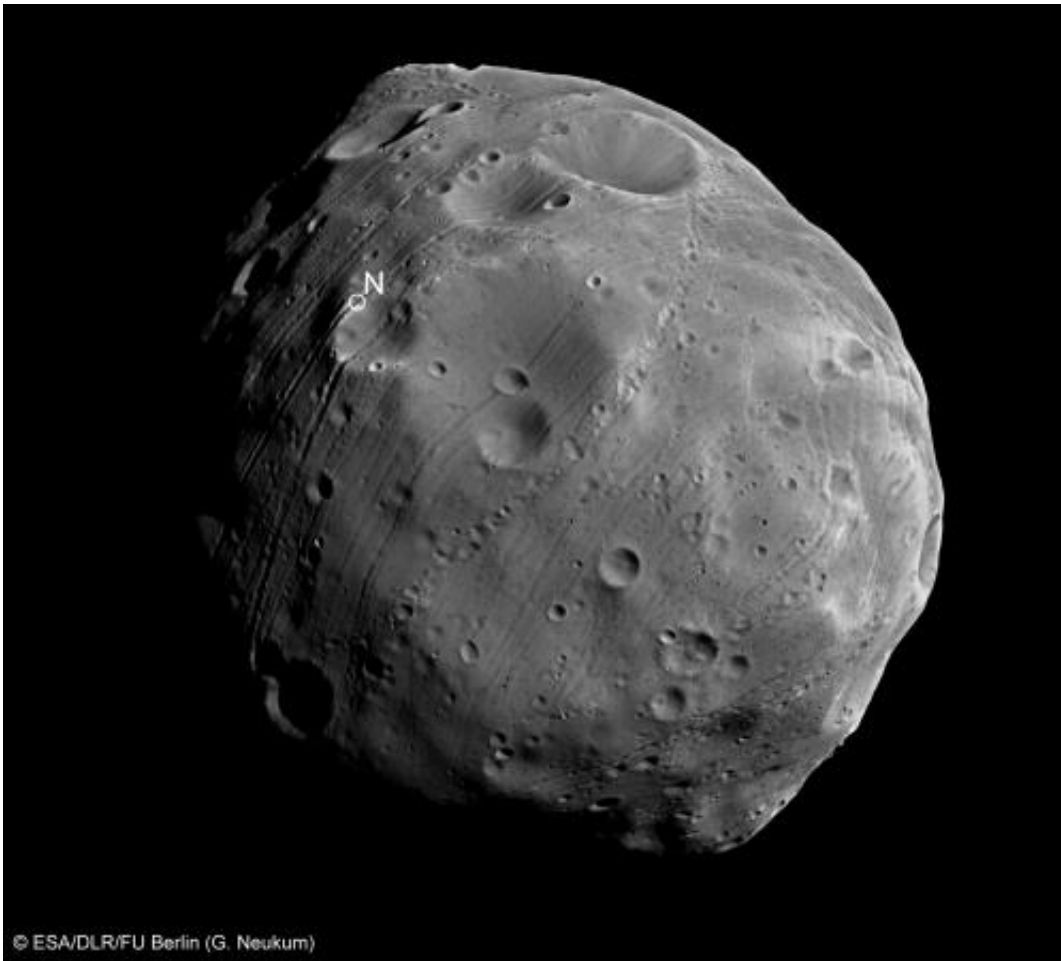


Japan announces plans to send probe to Martian moon

June 12 2015, by Bob Yirka



Credit: ESA/DLR/FU Berlin (G. Neukum)

Japan's space agency JAXA has announced its intention to send a spacecraft to one of Mar's moons, collect a sample from its surface and

then return to Earth to allow for analyzing the sample. If successful, it would be the first human-made craft to land on one of Mar's moons.

As [spacecraft technology](#) has improved, mission objectives have intensified, from simple probes that travel through space sending back data, to sophisticated craft that are able to land on other celestial bodies and then come home—JAXA successfully landed a craft (Hayabusa) on an asteroid, collected samples and returned them to Earth in a mission running from 2003 to 2011. Also the European Space Agency landed the probe Rosetta on a comet just last year.

Plans for the new Japanese mission have not been finalized yet, as it appears they are still in the making. The project also still needs funds approved by the government—approximately \$241 million. The target would be either Phobos or Deimos, the two moons that orbit the red planet. JAXA is looking at a preliminary date of 2022 for launch. Such a mission is not without risk, Russia announced the same goals, built a probe and set it atop a rocket, but the craft never even made it out into space—it crashed shortly after launch back in 2011, marking a setback for the Russian space program.

If JAXA succeeds in its mission, it is believed samples brought back from either moon could help explain its origin (some scientists believe both moons, because they are so tiny, are actually asteroids captured by Mar's gravity) and perhaps help answer questions surrounding the disappearance of water from Mars' surface. It could also help manned mission plans for Mars, some of which have called for first landing humans on one of the moons, and using it as a stepping stone—because it has less gravity it would be a lot easier to land on a moon than another planet—shuttling between Phobos or Deimos seems to be a lot safer option. Just last week, NASA announced plans to build a base on tiny Phobos—at just ten miles across, it is rather like a deserted island in the sea of space.

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