

SPACE EXPLORATION SYMPOSIUM (A3)
Mars Exploration – missions current and future (3A)

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PHOOTPRINT: PHOBOS SAMPLE RETURN MISSION

Abstract

The Phobos Sample Return mission is a candidate mission of the Mars Robotic Exploration Preparation (MREP-2) programme, targeted for a launch in 2024.

Its main objective is to acquire and return a sample from the Mars moon Phobos, after a scientific characterisation phase of the moon and of the landing site. It also includes as secondary objective the characterisation of Mars moon Deimos at global level.

In 2013 a cooperation agreement was signed between ESA and Roscosmos concerning possible cooperation for the robotic exploration of Mars and other bodies of the solar system, and it was agreed that a sample return from Phobos was a mission of common interest and a relevant to the Mars Sample Return mission (MSR).

Thales Alenia Space is carrying on the Phobos Sample Return Phase A study, that shall consolidate the designs performed during the previous industrial and CDF studies, taking into account preliminary agreements on the mission elements distribution between ESA and Roscosmos, without discarding the possibility of a full ESA implementation scenario.

This paper will present the preliminary results of the study.