

Mars Sample Return: The next step in exploring the Red Planet

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Artist's view of the Mars Sample Return (MSR) ascent module lifting off from Mars' surface with the Martian soil samples. Credits: ESA

ESA and the Centre National d'Etudes Spatiales (CNES) will be co-hosting, in cooperation with NASA and the International Mars Exploration Working Group (IMEWG), an International Conference on 9 and 10 July in the Auditorium of the Bibliothèque Nationale de France in Paris to discuss the next step in the exploration of Mars.

We are still collecting data under NASA's Phoenix, Mars Reconnaissance Orbiter, Mars Exploration Rover and Mars Odyssey missions, as well as under ESA's Mars Express mission, as we prepare for even more exciting missions to come, notably NASA's Mars Science

Laboratory and ESA's ExoMars. Mars exploration is continuing at a steady pace and future missions will integrate scientific payloads and technologies that will eventually serve the ultimate goal of carrying out a manned mission to Mars.

The international community has for a long time agreed that the next imperative step, one which will exponentially increase our knowledge and understanding of the Red Planet and its environment, is a Sample Return Mission.

International cooperation is increasingly being regarded as an enabling element of space exploration, especially when it comes to challenging endeavours.

These two factors – the compelling next step in the exploration of Mars and international cooperation – prompted the IMEWG to decide to set up an ad hoc international committee to study an international architecture for a Mars Sample Return (MSR) mission concept.

After several months of collective work by scientists and engineers from several countries worldwide, the "iMARS" group is ready to publish the outcome of its deliberations and the envisioned common architecture for a future international MSR mission.

The International Mars Sample Return Conference will thus bring together members of the scientific and industrial communities as well as representatives of space agencies around the world to discuss the status and prospects for Mars exploration over the coming decades. The Conference will feature keynote addresses from scientist Steve Squyres of Cornell University, principal investigator under the MER mission, and Jean-Pierre Bibring of the Institut d'Astrophysique Spatiale, principal investigator for a key instrument on Mars Express.

The European and international Media are invited to attend this two-day gathering, where they will have the opportunity to hear the current international thinking on Mars Sample Return and to interact with key players in the global endeavour of exploring and understanding Mars – which remains the ultimate goal of human space exploration.

Source: European Space Agency

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