



## EURO-CARES WP3 Meeting

### Designing a European Extraterrestrial Sample Curation Facility



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## Mars Sample Return: End to End Curation from Return to Earth to Sample Distribution - Report from iMARS Phase II.

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The return of samples from Mars is of paramount scientific interest and will be an international undertaking. iMARS, (the international Mars Architecture for the Return of Samples) was chartered in 2006 by the International Mars Exploration Working Group (IMEWG), to develop a plan for an international Mars Sample Return (MSR) mission potentially occurring in the timeframe 2018-2023. iMARS Phase I work took place in 2007-2008 and resulted in a consensus on the architecture for an international mission and suggestions for the next steps of campaign definition [1]. MSR mission(s) remain a high-priority in the exploration of Mars and a number of important developments have occurred since the iMARS Phase I work. In early 2014, IMEWG reconstituted iMARS with the objectives of incorporating developments since 2008 and to expand on the scientific management aspects of returned Martian samples. iMARS Phase II has developed a credible structure and process for ensuring that the best possible science is accomplished with returned samples, the world is protected from contamination, and pristine samples are preserved for the future.

Curation of the Mars samples is a critical interface between scientific and planetary protection activities within and outside and Sample Receiving/Curation Facility(ies). Curators will ensure that samples are handled, sub-sampled, stored and transported in compliance with yet-to-be-determined cleanliness and planetary protection requirements. Curators will be responsible for creating and maintaining a detailed documentary history for each sample, from initial reception through long-term use in scientific studies. This curatorial record must capture every action carried out on samples in addition to relevant information from scientific and Planetary Protection investigations.

**References:** [1] iMARS Working Group, 2008. Preliminary Planning for an International Mars Sample Return Mission. ([http://mepag.nasa.gov/reports/iMARS\\_FinalReport.pdf](http://mepag.nasa.gov/reports/iMARS_FinalReport.pdf)).

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