
Fw: ESA: Exploring the Moon with a large European lander

2 messages

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Mon, Oct 5, 2020 at 11:48 PM

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Latest message from ESA. I don't think that our proposal has been selected - but I'll continue to hold my breath. It's received 564 views on OSIP!
Ananda

On Tuesday, October 6, 2020 12:40 PM, James David Carpenter via Open Space Innovation Platform - OSIP <James.Carpenter@esa.int> wrote:



Dear idea authors

In our the last message we indicated that as we transition into step two of the Call for Ideas process (see flow chart on overview page), we will be holding dedicated virtual workshops around major mission themes that have emerged from "science" related ideas submitted to the Call.

These themed workshops provide an opportunity to share ideas, identify key objectives, and to seek consensus where possible. Participation in these workshops will fior invited participants. Workshop outputs will be made publicly available afterwards.

ESA is also encouraging the establishment of community Topical Teams, and engagement of existing Topical Teams to advance concepts in the various themes, which could be taken forwards for study. Workshop outputs will help to inform the work of these Topical Teams. Invitations to participate in a first workshop relating to a Polar Explorer mission concept have been sent out. Invitations for subsequent workshops focusing on different science themes will be sent out over the coming weeks.

Ideas linked to technologies and infrastructure have also yielded a set of typologies of interest. We will continue to explore and refine this set of typologies, identifying priorities for further work, which address the needs of research driven missions or of exploration infrastructure and capabilities.

Below is a list of the science themes, and technology/infrastructure typologies that have emerged from the Call for Ideas. Please note that these themes and typologies are in no particular order.

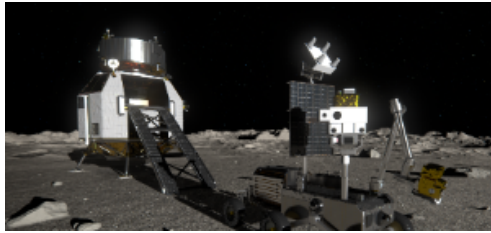
Please remember, this is not a selection process. There will not be a single winning idea. It is an attempt to gather the ideas of the community to inform decisions about the way forwards that we hope will create future opportunities for the community as a whole.

Thank you again for your contributions. We are working hard to advance ideas and develop a limited and manageable number of concepts to take forwards, whilst continuing to engage to the greatest extent possible with the community that has contributed so substantially to this effort. For those who receive invitations to workshops, thank you in advance for supporting them. We will keep you informed on workshop outputs and next stage progress, and will continue to engage with as many of you as possible as we build interactive communities around concept themes.

Many thanks

James Carpenter (Campaign Manager)

| Science themes for developing potential mission concepts or science payload packages, based on Call for Ideas contributions: | |
|---|--|
| | Polar exploration mission to characterise volatile distribution at a lunar pole |
| | Astrophysical observatory for the lunar far side |
| | Geosciences mission to an unexplored location or lithology |
| | A biosciences mission to investigate the effects of the lunar environment on diverse biological models |
| | Space resources characterisation and investigation of materials and processes needed to enable sustained operations at the Moon |
| | Lava tube exploration mission to access and explore a lunar cave |
| | Geophysics payload package to probe the deep interior of the Moon and which can be deployed by different EL3 missions |
| | Environment and space weather payload package to investigate plasma, fields and dust and which could be deployed on different lander missions |
| | Exobiology payload to expose biological and chemical samples to the lunar environment and which could be deployed on different lander missions |
| | Radio receiver payload to characterise the environment in advance of an astrophysical observatory. |
| | A payload to characterise the local geology at any mission landing site |
| Technology & Infrastructure Typologies based on Call for Ideas contributions: | |
| 1a | Small rovers (range of sizes <100 kg) |
| 1b | Multi-rover systems (swarms) |
| 1c | Large rovers (> 100 kg) |
| 2a | Mobility drones |
| 2b | Mobility hoppers |
| 2c | Mobility GNC for landers/hoppers/drones |
| 3a | ISRU oxygen/water production and purification |
| 3b | ISRU construction |
| 3c | ISRU energy storage |
| 3d | ISRU food production |
| 3e | ISRU oxygen; refuelling |
| 4a | Deployable structure for ISRU thermal shield |
| 4b | Deployable habitat |
| 5a | Subsurface geophysics exploration |
| 5b | Subsurface; penetrators |
| 6a | Cave exploration |
| 7 | Robotic arm for science/ISRU/logistics |
| 8a | Power plant (solar, fuel cells, radioisotope, nuclear) |
| 8b | Power transfer for night survival |
| 9 | Small payload accommodation |
| 10a | Life-support; closed-loop food production |
| 10b | Life-support; greenhouse |
| 11 | Sample return |
| 12 | Environmental monitoring stations |
| 13 | Payload suite for outreach |
| 14 | Vehicle for deployment of probes |



Ideas for exploring the Moon with a large European lander

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To: The-Lunascan-Project@googlegroups.com

Tue, Oct 6, 2020 at 8:54 AM

Keep our fingers crossed.

fran

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