



Lunar Surface Innovation

C O N S O R T I U M

LSIC ISRU Focus Group Monthly

<http://lsic.jhuapl.edu/>

<http://lsic-wiki.jhuapl.edu/> (sign-up required)

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Agenda

- Technology Showcase – AirbusUS, ROXY (5-10min)
- Topical Presentation: Lunar QuickMap (Kirby Runyon). (10min)
- Topical ISRU Discussions (15 min each)
 - For water extraction, when does it make more sense to process in the PSR and when does it make sense to process in illuminated terrain? What do we need to know, how well do we need to know it in order to make this assessment?
 - What are the technical advantages and disadvantages of O2R for near and long-term source of propellant?
 - Discussions to be based on discussion on Confluence. <https://lsic-wiki.jhuapl.edu>, specifically: “Winter Discussions” <https://lsic-wiki.jhuapl.edu/display/ISRU/Winter+Discussion+-+Water+and+Oxygen%2C+PSRs+and+non-PSRs>
 - Email Andrea at ams573@alumni.psu.edu, for an account .
- January FG meeting. 20 Jan.
 - Send suggestions for topics.

Technology Showcase
Airbus US on ROXY
(Molten Salt Electrolysis for the extraction of O₂)
Uday Pal

Technology Showcase

Lunar QuickMap

Kirby Runyon

Topical ISRU Discussions

For water extraction, when does it make more sense to process in the PSR and when does it make sense to process in illuminated terrain? What do we need to know, how well do we need to know it in order to make this assessment?

What are the technical advantages and disadvantages of O₂R for near and long-term source of propellant?

“Winter Discussions”

<https://lsic-wiki.jhuapl.edu/display/ISRU/Winter+Discussion+-+Water+and+Oxygen%2C+PSRs+and+non-PSRs>

Eye on the Future

<https://lsic-wiki.jhuapl.edu/x/GYFf>

- ISRU FG Year 1 Goal.

Draft: There is a need for several 10s to a few 100s of metric tons of O₂ per year for propellant use by the 2030 timeframe (S&D workshop, 2020). The first-year goal of the ISRU focus group is to provide specific input to NASA with respect to technology needs, the systems-level end to end processes, and for identifying the ground truth data needed to inform on technology/capability development, for both O₂ extraction from regolith and water extraction from PSRs at the above level.

- Reference and Resources: <https://lsic-wiki.jhuapl.edu/pages/viewpage.action?pageId=6258941>

Your input to NASA...what do you want LSIC to do for you? Ideas you want to get in front of NASA?



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