

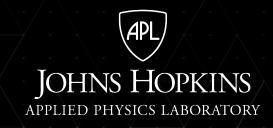
LSIC ISRU Focus Group Monthly

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

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Agenda

- General updates
 - Including additions to the "ISRU Library and Resources" page on Confluence.
 - Setting Year 1 goals. Penultimate version and topic for discussion at next meeting. How this goal can enable you.
 - Take-away from this meeting to be provided to other FGs leads.
- Technology Showcase
 - Lunar Trailblazer mission from an ISRU perspective Dr. Bethany Ehlmann
- Topical ISRU Discussions
 - ISRU Technology Considerations for Preserving the Lunar Environment Dr. Parvathy Prem
 - Lunar QuickMap Dr. Kirby Runyon
- February ISRU FG meeting. 17 Feb. In addition to discussing Year 1 goals, what topics do we
 want to do a 20 min 'deep dive' into? The discussion needs to have a reachable goal clarification,
 new information, decision-making/recommendation.



General Updates

ISRU FG Year 1 Goal. - will discuss this at next month FG. How does achieving this goal enable you?

Penultimate Version: There is a need for several 10s to a few100s of metric tons of O₂ per year for propellent 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 for *systems-level end to end ISRU 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 levels.

References and Resources Page: https://lsic-wiki.jhuapl.edu/pages/viewpage.action?pageId=6258941

- Vol. 1: "Advances in Terrestrial Drilling: Ground, Ice, and Underwater" https://www.amazon.com/Advances-Terrestrial-Drilling-Ground-Underwater/dp/036765346X
- Vol. 2: "Advances in Extraterrestrial Drilling: Ground, Ice, and Underwater" https://www.amazon.com/Advances-Extraterrestrial-Drilling-Ground-Underwater/dp/0367653478





Technology Showcase Lunar Trailblazer – a NASA SIMPLEX mission Dr. Bethany Elhmann, CalTech

A presentation followed by discussion

Question posed to the Focus Group members: To what extent will the data from Trailblazer be enabling to understanding where to mine for water ice, or enable development of more rigorous models of near surface ice so one can more accurately/reliably decide where to mine.

https://lsic-wiki.jhuapl.edu

Folder: "ISRU Discussions/Trailblazer"



Topical ISRU Discussions ISRU Technology Considerations for Preserving the Lunar Environment Dr. Parvathy Prem

Confluence:

https://lsic-wiki.jhuapl.edu

Folder: "ISRU Discussions/ ISRU Technology

Perspective on Impacting the Lunar Environment"



Topical ISRU Discussions Lunar QuickMap Dr. Kirby Runyon

Confluence:

https://lsic-wiki.jhuapl.edu

Folder: "ISRU Discussions/QuickMap"

