

The LSIC Facilities Directory

A Searchable Facilities Directory to Spur Innovation,
Technological Advancement, and Team Building

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Jacquelyn Black (NASA)

The Need

An aerial, top-down view of a simulated lunar base on a dark, cratered surface. The base consists of several interconnected white and grey modules, some with yellow accents. A central, larger module has a yellow and white pattern on its top. To the left, there are several large, white, cylindrical structures. In the foreground, there are rows of small, white, rectangular objects, possibly solar panels or equipment. A small, white, lunar rover is visible in the lower-left quadrant, moving across the surface. The background shows a dark, cratered landscape with a large, circular crater in the upper right.

- To return to the Moon with the most advanced technologies during Artemis, knowledge of, and access to, appropriate testing facilities is critical.
- NASA and LSIC have heard this need conveyed by the LSIC community and have begun working together to provide some informational support.
- Beginning by gathering searchable knowledge

NASA Facilities

- Dr. Kristen John and Jaquelyn Black managed to:
 - Collect ~150 NASA facilities and POC's focused upon dust mitigation
 - Have been gathering POC permission to list publicly as potentially available to be utilized.
- LSIC has been:
 - Creating and populating a searchable interface on LSIC Confluence Wiki (password protected)
 - And will be placing a call out to the larger LSIC community for additional commercial, academic, government, and non-profit facilities.



LSIC Facilities Directory Interface

- Directory is organized by keywords/labels
- But, is also full listing searchable (not dependent upon selected keywords/labels)
- Currently ~75 facilities; Working on getting approval for an additional 75 facilities
- Most consist of dust mitigation led facilities
- Calling for EE focused facilities here

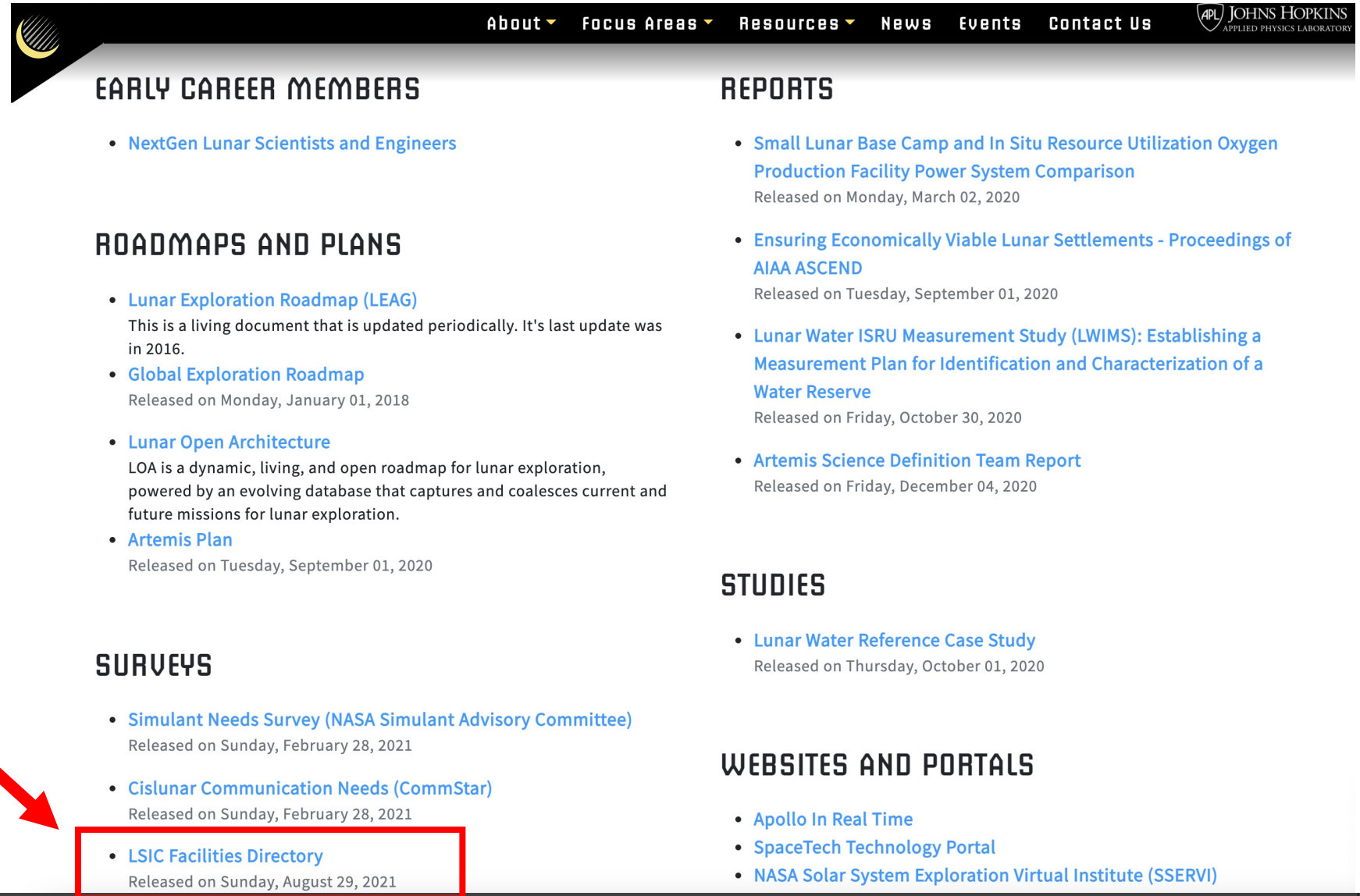
The screenshot shows the 'Facilities Directory Home' page. The sidebar on the left contains a 'Pages' section with a 'Blog' link, 'SPACE SHORTCUTS' for adding links to important content, and a 'PAGE TREE' listing various facility types like '5 x 5 Chamber' and '18" Vac Chamber'. The main content area has a title 'Facilities Directory Home' and a subtitle 'Created by Andrea Harman, last modified by Josh Cahill on Aug 27, 2021'. Below this is the 'LSIC Facilities Directory' heading and a paragraph explaining the directory's purpose. A search bar is provided, and a link to a 'Full List Of Facilities' is shown. At the bottom, there is a 'Facilities Overview' section with a grid of keywords categorized by letter (A, B, C, D, E, F, G-H, I-K, L-M, N-O, P-Q).

A	B	C	D	E	F
abrasion abrasion-testing actuators adhesion aerosols air-permeability ambient anorthosite atmosphere atmospheric	balance bell-jar bending buoyancy	cathode-testing chamber cleaner closed components creasing cryo cryogenic cyclor cylinder	dark-regolith deposition development dirty-chamber dry-cleaner-tumbler drying/heating durability dust dust-box dust-deposition dust-distribution dust-testing dusty-vacuum	electrostatics endurance excavation excavation-construction	fabric fatigue-testing film filter filter-evaluation fire-safety flex flex-fold fold folding force
G-H	I-K	L-M	N-O	P-Q	
gases gas-extraction gasket glovebox	icy-regolith imaging in-situ in-situ-resource-utilization	lh2 light-regolith ln2 lo2	nasa neutral-buoyancy nondust open	paper particles pascehn-breakdown performance	



How Does A Facility Get Listed?

- Fill out the Facilities Survey!
- Find under path: Resources > Community > Surveys



The screenshot shows the top navigation bar of the Applied Physics Laboratory (APL) website. The navigation menu includes: About, Focus Areas, Resources, News, Events, and Contact Us. The main content area is divided into several sections:

- EARLY CAREER MEMBERS**
 - [NextGen Lunar Scientists and Engineers](#)
- ROADMAPS AND PLANS**
 - [Lunar Exploration Roadmap \(LEAG\)](#)
This is a living document that is updated periodically. It's last update was in 2016.
 - [Global Exploration Roadmap](#)
Released on Monday, January 01, 2018
 - [Lunar Open Architecture](#)
LOA is a dynamic, living, and open roadmap for lunar exploration, powered by an evolving database that captures and coalesces current and future missions for lunar exploration.
 - [Artemis Plan](#)
Released on Tuesday, September 01, 2020
- SURVEYS**
 - [Simulant Needs Survey \(NASA Simulant Advisory Committee\)](#)
Released on Sunday, February 28, 2021
 - [Cislunar Communication Needs \(CommStar\)](#)
Released on Sunday, February 28, 2021
 - [LSIC Facilities Directory](#)
Released on Sunday, August 29, 2021
- REPORTS**
 - [Small Lunar Base Camp and In Situ Resource Utilization Oxygen Production Facility Power System Comparison](#)
Released on Monday, March 02, 2020
 - [Ensuring Economically Viable Lunar Settlements - Proceedings of AIAA ASCEND](#)
Released on Tuesday, September 01, 2020
 - [Lunar Water ISRU Measurement Study \(LWIMS\): Establishing a Measurement Plan for Identification and Characterization of a Water Reserve](#)
Released on Friday, October 30, 2020
 - [Artemis Science Definition Team Report](#)
Released on Friday, December 04, 2020
- STUDIES**
 - [Lunar Water Reference Case Study](#)
Released on Thursday, October 01, 2020
- WEBSITES AND PORTALS**
 - [Apollo In Real Time](#)
 - [SpaceTech Technology Portal](#)
 - [NASA Solar System Exploration Virtual Institute \(SSERVI\)](#)

A red arrow points from the 'Surveys' section to the 'LSIC Facilities Directory' link, which is highlighted with a red box.



Directory Questionnaire

- Questionnaire Link:
<https://forms.gle/MronYz72WeWbAqdx6>
- Details on each facility, its location, availability, scheduling, pricing, etc, as well as a Point of Contact and e-mail address
- Listing is Free

LSIC Facilities Directory

Please add information about facilities you have available for the lunar surface development community! This information will be shared using LSIC's Facilities Directory on Confluence.

 [jtmcahill@gmail.com](#) (not shared) [Switch account](#)



Affiliated Organization

Your answer

Your Name

Your answer

Your Email

Your answer

Facility Name

Your answer

Facility Location

Your answer



Getting to the Directory Itself

- Resources > LSIC
- Resources > LSIC and LSII Resources

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

- Password protected

- Contact Andrea Harman if you are a member of LSIC and would like an account

APL JOHN'S HOPKINS APPLIED PHYSICS LABORATORY

LSIC Resources

LSIC and LSII Resources

- Code of Conduct (PDF)
- Welcome Package (PDF)
- Listserv Overview (PDF)
- NASA Lunar Surface Innovation Initiative
- NASA Space Technology Mission Directorate
- Lunar Simulants
- LSIC Facilities Directory (on Confluence wiki)**

Reference Materials

- Ice Mining in Lunar Permanently Shadowed Regions
- Dallas Bienhoff, Cislunar Space Development Company, LLC "CSDC ISRU Propellant Needs and Value"
- Pascal Barbier, Air Liquide "ISRU Development for Sustainable Space Exploration"
- Nicholas Bennett, UNSW ACSEr "An Existing Market for Lunar Propellant — GTO Orbit Raising as a Service"

Newsletters

- September 2021
- August 2021
- July 2021
- June 2021
- May 2021
- April 2021
- March 2021
- February 2021
- January 2021
- December 2020
- November 2020
- October 2020
- September 2020
- August 2020
- July 2020

To suggest resources for this page, please contact us at SES-LSIC-Web@jhuapl.edu

https://www.nasa.gov/directorates/spacetech/Lunar_Surface_Innovation_Initiative...



LSIC Home

Created by Andrea Harman, last modified by Josh Cahill on Sep 01, 2021



Confluence Training Sessions

If you're just getting to know Confluence, please contact @Andrea Harman for support and training.

Focus Areas

Dust Mitigation (DM)	Excavation & Construction (E&C)	Extreme Access (EA)
Extreme Environments (EE)	In Situ Resource Utilization (ISRU)	Surface Power (SP)

Visit LSIC's external website here: lsic.jhuapl.edu
 Visit LSIC's LinkedIn site here: <https://www.linkedin.com/groups/13861869/>
 LSIC's code of conduct for members is available [here](#).

Contents

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- › Focus Group Leads
- Funding Opportunities
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- › Internal Event Planning
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- Newsletters
- Wiki Suggestion Box
- Who's Who - Main
- Resources & Library - Main
- 2021 Fall Meeting Abstracts

Tools & Resources

- Lunar Simulants Working Group
- LSIC Facilities Directory**

LSIC-Wide Events

- 2021 Spring Meeting
- 2020 Fall Meeting

Pages

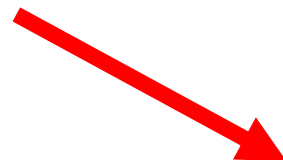
Blog

SPACE SHORTCUTS

Here you can add shortcut links to the most important content for your team or project. [Configure sidebar.](#)

PAGE TREE

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Lunar Surface Innovation

C O N S O R T I U M

