

LEAG/SSERVI joint virtual meeting

Decadal Survey community inputs

May 20, 2020

12:00-5:00 pm Eastern time

New (May 22) - Notes from the meeting on presentations, Q&A, and discussion

https://docs.google.com/document/d/1H6huzYTNLal_EAzlq-E5peKkgbrijKI6SbwqhP_-fWw/

Coming soon: Link to the video recording

The Decadal Survey on Planetary Science and Astrobiology will assess key scientific questions in planetary science and astrobiology, identify priority medium- and large-class missions and other initiatives, and present a comprehensive research strategy for the 2023-2032 timeframe. Community participation is critical for the success of the survey.

White Papers are the most important way the community provides input to the Decadal Survey. Topics can include high-priority science questions, useful resources or investigation approaches, technology concepts or needs, instrument or mission concepts, state of the profession, etc.

Each 7-page paper may be generated by a primary author, multiple co-author(s), or a community. White papers are supported by signatories. All white papers are read by the committee and made available to the public on the National Academies web site. White papers should be submitted by July 4 to this link:

<https://www.surveygizmo.com/s3/5489366/Call-to-the-Planetary-Science-Decadal-Community-White-Papers-1>

While all white papers are welcome and anyone can author a white paper, collaboration makes each paper stronger and more effective by decreasing the number of white papers the DS panel will need to read. (In 2019, 573 science and 294 Activities, Projects, and State of the Profession (APC) white papers were submitted to the Decadal Survey on Astronomy and Astrophysics - 867 total!)

We encourage the community to think broadly about the importance of lunar science topics and, if it would strengthen the effort, collaborate with other communities who are advocating similar interests and approaches. The overarching theme of lunar science is that understanding the evolution and character of our home (the Earth-Moon system) helps us understand our solar system and enables us to plan for and protect an extended future.

Effective white papers address these elements:

- **Trace** to SCEM, LER, ASM-SAT, SKGs and **identify emerging areas** of science not captured in these documents
- **Identify and prioritize** areas of scientific progress that could/should be accomplished in the decade 2023-2033, and **suggest specific approaches** that may be taken to accomplish them
- **Identify and prioritize** Research and Analysis (R&A), technology (laboratory, observing, instrument), and/or mission investments needed in the decade 2023-2033

Meeting Goals

1. Facilitate collaboration and discussion on Decadal Survey white paper concepts and strategies for lunar science
2. Solidify commitments on white paper topics and solicit coauthors and signatories
3. Identify gaps and needs

Meeting Agenda

Click here for the agenda: [LEAG/SSERVI Decadal Meeting Agenda](#)

Session structure:

Lightning-talk style presentations on white papers - one slide /3 min from each author.
Group discussion/questions at the end of each session

Discussion prompts:

- What important topics may be missing?

- It's important to motivate the topic within a Planetary Science framework (rather than a Lunar framework) - especially true if panels are not target-based. Are we achieving that?
- What more could LEAG do to help the community develop their white papers?
- How is the pandemic affecting our goal for all voices to be heard? How can we enable our colleagues with reduced time (increased responsibilities, family, illness, etc) to fully participate in white papers?

Potential LEAG or SSERVI-sponsored white papers:

1. "Lunar science is planetary science" - lunar science overview paper with significant progress, priorities, and investment needs (based on ASM-SAT)
2. "Exploration-focused lunar science" - a strong, well-referenced white paper on HEO crossover, that science white papers can point to
3. "Lunar Science missions in the next decade" - reaffirming NF cases for LGN, big basin science, and nuclear rover (updated as discussed at LEAG); reaffirming need for fair Discovery process and distinguishing CLPS from Discovery

Presenter Preparation

Presenters, please check your assignment on the agenda and ensure you are available during your session. Each presenter should submit a one-slide overview of their white paper, identifying the primary author and point of contact, any coauthors, the topics to be considered, their significance, and recommendations being suggested. No template is provided but please ensure you are discussing your white paper - this is not a science or technology talk. Submit your one-slide presentation as a PDF to leag.community@gmail.com by the end of the day, May 19. To facilitate the short time for presentations, all the slides will be collected and displayed by the moderator - participants *will not* have the opportunity to show their own slides. Also, please dial in for a sound check in the break/discussion preceding your session.

White Paper Guidelines

<https://www.surveygizmo.com/s3/5489366/Call-to-the-Planetary-Science-Decadal-Community-White-Papers-1>

- May not be more than 7 pages in length, single spaced, including all figures, tables, references and appendices. Papers can include web links to other documents among the references;
- Should include a cover page (beyond the 7-page limit) containing the title of the white paper, the primary author's name, phone number, institution, and email address, and a list of co-authors with their respective institutions;
- Use a 12-pt font with 1-inch margins on all sides of the document;
- Papers in Microsoft Word (.doc), Adobe Acrobat (.pdf) formats will be accepted. No other formats will be accepted; and
- White paper file sizes should be as small as possible. White papers larger than 50 Mb in size cannot be accepted, and files much smaller than this are encouraged. For file management purposes, please compress your figures as much as possible. You can provide hyperlinks to higher resolution versions of illustrations if you wish.

Reference Materials

The Planetary Science Decadal Survey description and statement of task:

<https://www.nationalacademies.org/our-work/planetary-science-and-astrobiology-decadal-survey-2023-2032>

NASA and the National Academies have given a handful of presentations in recent weeks about their plans for the upcoming Planetary Decadal survey. You can see one of them from LPSC archived here:

<https://www.hou.usra.edu/meetings/lpsc2020/virtual-meetings/>

The National Academies hosted a webinar offering early-career scientists a discussion how to be involved in a decadal, the process itself, advice and recommendations:

<https://www.nationalacademies.org/event/03-27-2020/planetary-science-and-astrobiology-decadal-survey-2023-2032-kick-off-webinar-for-early-career-professionals>

Sessions at the 2019 LEAG meeting focused on the Decadal Survey are archived here:

<https://www.youtube.com/watch?v=dOqSoV3mFrE&list=PLKg3EyXg9SjoUF9kjKb4NcruS76EwTAfh>

Both LEAG and LPI have repositories of White Paper ideas where authors can find each other and collaborate.

LEAG:

https://docs.google.com/spreadsheets/d/1iT4Bo_NhRGGXuEqnaEYRTBHA3SS6XSalTFPpSiQSiK/edit#gid=472923996

LPI:

In June 2017, LEAG presented to the NAS Midterm Report regarding progress made on lunar science and exploration goals since the last Decadal survey; this was prepared in consultation with the community following an inclusive community process. That document may be reviewed here:

https://www.lpi.usra.edu/leag/DecadalMidtermResponse_v4_lowres.pdf

In August 2017, at the request of the Planetary Science Division, LEAG executed the Advancing Science of the Moon Special Action Team. This was the largest and most complicated effort ever undertaken by LEAG, and the goal was to produce an inclusive, community-driven product to articulate the science priorities in anticipation of a vigorous new program of human and robotic lunar exploration. The ASM-SAT report now serves as one of the key science frameworks for the Artemis program.

<https://www.lpi.usra.edu/leag/reports/ASM-SAT-Report-final.pdf>

In late 2017, LEAG, in partnership with USRA and LPI, executed the "Back to the Moon" workshop intended to articulate a programmatic policy framework to ensure a successful human return to the Moon.

https://www.lpi.usra.edu/leag/LEAG_CAPS_20190910.pdf