**SPACE TECHNOLOGY INDUSTRY-GOVERNMENT-UNIVERSITY ROUNDTABLE**

**Keck Center of the National Academies**

**Room 208**

**500 Fifth St. N.W.  
Washington, D.C.**

**(parking garage entrance on 6th St. NW between E St. and F St. NW)**

**AGENDA**

**Thursday, October 18, 2018**

7:30am **Room opens** (breakfast available in meeting room)

8:30am **Meeting convenes**

**Welcome**

* Wanda Sigur, STIGUR Chair
* Jim Reuter, NASA Space Technology Mission Directorate (STMD) Associate Administrator (Acting)

8:40am **NASA and STMD Update: Programs, Organization, and Budget**

* Jim Reuter, STMD Associate Administrator (Acting)
* Steve Jurczyk, NASA Associate Administrator

**Key Questions**

Regarding the FY 2019 budget request; the Agency’s new exploration direction; and STMD’s strategic framework:

* How will the proposed changes impact Human Exploration, Science, and Aeronautics missions?
* Who are the major stakeholders in the most likely reorganization options? Where and why have they established their positions?
* How will the potential changes affect the technology mission of NASA? Are there expected changes to how technology objectives and missions will be established?

9:40am **STIGUR Feedback and Discussion**

10:00am **Break**

**Panel on Space Nuclear Power:**

**Small Fission Reactors and Advanced Radioisotope Power Systems (RPS)**

This session will review and discuss research and development related to small fission reactors and advanced RPS: current status, next steps, and potential applications. The session will consist of a series of short presentations to be followed a general discussion with roundtable members. (Background information on the STMD’s Kilopower small fission reactor project is available at [www.nasa.gov/directorates/spacetech/kilopower](http://www.nasa.gov/directorates/spacetech/kilopower).)

**Key Questions**

* What results to date have been achieved in developing (1) fission power systems, (2) advanced RPS, and (3) associated power conversion systems? What are the next steps?
* What results to date have been achieved in addressing issues related to flight certification of new operational systems? What are the next steps?
* What potential applications of a small fission reactor system, advanced RPS, and advanced power conversion systems will provide the most value added to space science and exploration missions?
* What additional high-priority steps are needed to develop operational systems?
* What is the timeframe in which new operational systems could be fielded for key applications of interest?
* What are the prospects for evolving systems currently under development to provide greater power and thereby have the ability to support a broader range of applications?

10:10am **Introduction**

* Moderator: Doug Cooke, STIGUR member

**Opening Remarks**

10:15am **Overview of Results to Date and Next Steps**

* Jim Reuter, STMD Associate Administrator (Acting)

10:30am **Systems, Missions, and Opportunities for Space Nuclear Power**

* *10 minutes each*
* Lee Mason, Glenn Research Center
* Bhavya Lal, IDA Science and Technology Policy Institute
* David Schurr, NASA, Planetary Science Division
* Tony Antonelli, Lockheed Martin, Deep Space Exploration
* Alan Stern, Consultant
* Jonathon Cirtain, BWX Technologies

**Discussion**

11:30pm **STIGUR Feedback and Discussion**

12:30pm **Lunch**

**Panel on Lunar Exploration Visions and Technologies**

This session will focus on current plans and future visions for human and robotic exploration of the lunar surface and cislunar space. The session will consist of a series of short presentations to be followed a general discussion with roundtable members.

**Key Questions**

* What is NASA’s Gateway Vision?
* What are the recent updates to the STMD lunar exploration programs? How have they evolved in the last 2 years?
* Have the STMD technology program accomplishments been linked to mission objectives?
* Has an assessment of prior lunar development efforts been performed? Have they been linked to current programs?
* What objectives can NASA’s lunar exploration program be reasonably expected to accomplish over the near and far term and what key technologies are needed to achieve these objectives?
* In addition to the Gateway Vision, what other lunar exploration visions should be considered?
* How do key exploration technologies support the lunar exploration visions? How do they support the schedule?
* What are the near-term expectations and assumptions regarding NASA’s support of the Lunar Exploration technology development?
* To what extent can systems relevant to Mars exploration be validated on the moon?

1:30pm **Introduction**

* Jim Free, STIGUR member

**Opening Remarks**

1:35pm **Status of STMD Lunar Exploration Program**

* Jim Reuter, STMD Associate Administrator (Acting)

1:50pm **Lunar Exploration Roadmap**

* Clive Neal, Lunar Exploration and Analysis Group (LEAG)

2:05pm **Lunar Exploration Vision of the International Space Exploration**

**Coordination Group**

* John Guidi, NASA Human Exploration and Operations Mission Directorate

2:20pm **Industry Perspectives**

*15 minutes each*

* John Thornton, Astrobiotic
* Peter McGrath II, Boeing
* Robert Chambers, Lockheed Martin
* Josh Brost, SpaceX

3:20pm **Break**

**Discussion**

3:30pm **STIGUR Feedback and Discussion**

4:30pm **Summary, Feedback, Actions, and Plans for the Next Meeting (March 14, 2019**

5:00pm **Adjourn**

**Space Technology Industry-Government-University Roundtable**

**STATEMENT OF TASK**

The Space Technology-Industry-Government-University Roundtable of the National Academies of Sciences, Engineering, and Medicine convenes senior-most representatives from industry, universities, NASA, and other government agencies to define and explore critical issues related to NASA's space technology research agenda that are of shared interest; to frame systems-level research issues; and to explore options for public-private partnerships. This forum is designed to facilitate candid dialogue among attendees to foster greater partnership among the NASA-related space technology community, and, where appropriate, carry awareness of consequences to the wider public.