Planning for and developing technology is an ongoing process for Planetary Science Missions. The science community and associated technologists are key stakeholders and participants in that process. With the Planetary Decadal Survey underway, this panel will discuss and solicit feedback on the submitted community white papers describing technology needs of the Venus, Mars, Outer Planet and Small Bodies Planetary Assessment Groups.

Please join us to participate, discuss and provide your feedback.

**Thursday, March 11 at 9 am PST/Noon EST**

**Moderator:**

*Patricia M. Beauchamp*

*Chief Technologist, Engineering and Science Directorate*

*Jet Propulsion Laboratory, California Institute of Technology*

*patricia.m.beauchamp@jpl.nasa.gov*
Panelists

• **Prof. G. Scott Hubbard, Stanford University** - gscotthubbard@stanford.edu
  - Scott Hubbard has been engaged in space-related research, project, and executive management for more than 45 years, including 20 years with NASA, culminating as Director of NASA's Ames Research Center. Currently Adjunct Professor of Aeronautics and Astronautics at Stanford University, Hubbard served as NASA’s first Mars Program Director and successfully restructured the entire Mars program, earning him the unofficial-but-notable title of “Mars Czar”. He’s the recipient of NASA's highest award, the Distinguished Service Medal, is a Life Member of the IEEE and was elected an Honorary Fellow of the AIAA in 2019.

• **Dr. Elena Adams, Applied Physics Laboratory, Johns Hopkins University**, elena.adams@jhuapl.edu
  - Elena Adams is a Principal Staff at the Johns Hopkins Applied Physics Laboratory. She is currently serving as the NASA’s Double Asteroid Redirection Test (DART) Mission Systems Engineer, and is the Technology Lead for SBAG. She has been at APL for more than 10 years and in that time got to be an instrument scientist on an ExoMars MOMA instrument, an Instrument System Engineer on NASA’s Van Allen Probes, a Deputy Project System Engineer on NASA’s Europa Clipper Mission, and the Payload Systems Engineer on NASA’s Parker Solar Probe Mission. Elena has been a PI for multiple NASA grants developing new technology for future planetary exploration

• **Dr. Thomas Spilker, Consultant**, planetaryflightarchitect@yahoo.com.
  - Tom Spilker earned his Ph.D. in Electrical Engineering from Stanford University’s Space Telecommunications and Radio Science Laboratory in 1990. From there he worked for more than 20 years as both a scientist and engineer at the Jet Propulsion Laboratory, the second decade of that as a Principal Space Flight Mission Architect. Since his retirement from JPL he has worked as an independent consultant in space flight mission architecture and as a planetary scientist. He participated in NASA’s Voyager, Cassini, and Genesis missions, and was a science Co-Investigator on JPL’s MIRO instrument on the European Space Agency’s Rosetta mission. In 2018 he began his term as Technologist for NASA’s Outer Planets Assessment Group. He is a Founding Member of Orbital Assembly Corporation’s Board of Directors, and is the Chief Technical Officer and Vice President of Engineering and Space Systems Architecture Design.

• **Dr. James A. Cutts, Jet Propulsion Laboratory, California Institute of Technology**, James.A.Cutts@jpl.nasa.gov
  - Jim Cutts is the Program Manager for the Planetary Science Program Support office in the Planetary Science Directorate at JPL-Caltech and is responsible for the development and demonstration of advanced concepts for Venus Exploration Science and Technology. A major focus of this effort is planetary aerobots or robotic balloons. Prior to joining JPL, Jim was Manager of the Planetary Science Institute of Science Applications International Corporation and a scientific investigator with the Mariner 9 and Viking Orbiter Imaging teams. From 1988 to 1991 he was Program Manager for Advanced Concepts and Deputy Director of the Center for Space Microelectronics Technology. He has served as Chair of NASA’s Sensor Working Group from 1988 to 1990 and has served on other NASA and U.S. Air Force advisory committees, including VEXAG.