Geophysical Research Abstracts
Vol. 18, EGU2016-7462, 2016
EGU General Assembly 2016

NASA's Planetary Science Missions and Participations

James Green
NASA,United States (James.Green@nasa.gov)

NASA's Planetary Science Division (PSD) and space agencies around the world are collaborating on an extensive array of missions exploring our solar system. Planetary science missions are conducted by some of the most sophisticated robots ever built. International collaboration is an essential part of what we do. NASA has always encouraged international participation on our missions both strategic (ie: Mars 2020) and competitive (ie: Discovery and New Frontiers) and other Space Agencies have reciprocated and invited NASA investigators to participate in their missions. NASA PSD has partnerships with virtually every major space agency.

For example, NASA has had a long and very fruitful collaboration with ESA. ESA has been involved in the Cassini mission and, currently, NASA funded scientists are involved in the Rosetta mission (3 full instruments, part of another), BepiColombo mission (1 instrument in the Italian Space Agency's instrument suite), and the Jupiter Icy Moon Explorer mission (1 instrument and parts of two others). In concert with ESA's Mars missions NASA has an instrument on the Mars Express mission, the orbit-ground communications package on the Trace Gas Orbiter (launched in March 2016) and part of the DLR/Mars Organic Molecule Analyzer instruments going onboard the ExoMars Rover (to be launched in 2018).

NASA's Planetary Science Division has continuously provided its U.S. planetary science community with opportunities to include international participation on NASA missions too. For example, NASA's Discovery and New Frontiers Programs provide U.S. scientists the opportunity to assemble international teams and design exciting, focused planetary science investigations that would deepen the knowledge of our Solar System.

Last year, PSD put out an international call for instruments on the Mars 2020 mission. This procurement led to the selection of Spain and Norway scientist leading two instruments and French scientists providing a significant portion of another instrument. This was a tremendously successful activity leading to another similar call for instrument proposals for the Europa mission that is currently under definition by NASA. Europa mission instruments will be used to conduct high priority scientific investigations addressing the science goals for the moon's exploration outlined in the National Resource Council's Planetary Decadal Survey, Vision and Voyages (2011). The selection of these instruments will be announced in the late spring or early summer.

International partnerships are an excellent, proven way of amplifying the scope and sharing the science results of a mission otherwise implemented by an individual space agency. The exploration of the Solar System is uniquely poised to bring planetary scientists, worldwide, together under the common theme of understanding the origin, evolution, and bodies of our solar neighborhood. In the past decade we have witnessed great examples of international partnerships that made various missions the success they are known for today. As Director of Planetary Science at NASA I will continue to seek cooperation with our strong international partners in support of planetary missions.