

## Invited Talks



*Karla B. Clark*

### **Jupiter Europa Orbiter – Challenging Engineering for Exceptional Science**

Tuesday, 21 September

**Karla B. Clark** has Bachelor's degrees in Chemistry and Chemical Engineering from Rice University and Master's degrees in Mechanical Engineering and Engineering Management from the University of Southern California. She has held several technical positions in the research and technology development area. She was the manager for the Cassini Power Subsystem and worked on earlier instantiations of the Europa mission concepts since 1997. Karla was the Flight system Manager for the Jupiter Icy Moons Orbiter (Prometheus Nuclear Reactor Program) and led the NASA Study for the last 3 years to get the NASA-ESA Joint Mission - Europa Jupiter System Mission. Jupiter Europa Orbiter is the NASA contribution to the Europa Jupiter System Mission. Recently she left the Jupiter Europa Orbiter to take over the Mission Assurance Directorate at JPL which includes all electronic parts, reliability and quality assurance activities.

I will describe the Jupiter Europa Orbiter mission concept including the science that would result from this mission. Tentatively scheduled to launch in 2020, this mission would spend 3-4 years in the radiation belts of Jupiter and would provide unprecedented science opportunities. The challenge of both the spacecraft and science instruments functioning in the radiation flux and after accumulating significant total dose provides the opportunity for the engineering community to apply ingenuity and creativity to the designs. System engineering, hardware, software, mission design and operational solutions would be combined to enable the mission to be successful and will be described.