NETS 2011

Nuclear and Emerging Technologies for Space

February 7-10, 2011 • Albuquerque, NM

Call for Papers

Abstracts Due: August 9, 2010

Draft Paper Submission Due: October 11, 2010

http://anstd.ans.org/NETS2011.html

Sponsored by the Aerospace Nuclear Science and Technology Division and the Trinity Section of the American Nuclear Society

About the Meeting

In February 2011 the Aerospace Nuclear Science and Technology Division (ANSTD) of the American Nuclear Society (ANS) will hold its first stand-alone topical meeting in Albuquerque, NM. The momentum and positive collaborative environment established by the former Space Technologies and Applications International Forum (STAIF), last held in 2008, has been upheld by a series of discussion forums and technical meetings sponsored by ANSTD in 2009 and 2010 (see SNSF and NETS 2009 at http://anstd.ans.org/PriorMeetings.html), and NETS 2011 will bring these formats together in a single venue.

Topic Areas

NASA is currently developing capabilities for unmanned and manned missions to the Moon, Mars, and beyond. Strategies implementing advanced power and propulsion technologies, as well as radiation shielding protection, will be an integral part of successful missions of these types. NETS 2011 will provide a communications network and forum for information exchange for the wide cross section of research and management personnel from government, industry, academia, and the national laboratory system that are involved in space nuclear activities. To this end, the meeting will address topics ranging from overviews of current programs and plans to detailed challenges related to space travel, including:

- **Track I: Missions and Architectures**
  - Space Science Missions
  - Exploration Missions
  - Spacecraft Concepts
  - Lunar and Mars Surface Concepts
  - Mission Analysis and Validation Missions
  - Space Policy
- **Track II: Fission Power and Propulsion**
  - Reactor Design
  - Shield Design
  - Reactor Simulation
  - Power Conversion
  - Supporting Technologies (including Heat Rejection and Power Management and Distribution)
  - Nuclear Electric Propulsion Systems
  - Tools and Modeling
  - Testing and Validation
  - Materials and Radiation Testing
- **Track III: Radioisotope Power Systems**
  - Isotope Heat Sources
  - Stirling Power Conversion
  - Thermoelectric Power Conversion
  - Advanced Power Conversion
  - Mechanical, Thermal, and Electrical Integration
  - Tools and Modeling
  - Testing and Validation
- **Track IV: Nuclear Thermal Propulsion**
  - Fuel Development
  - History
  - Design Concepts
  - System Integration
  - Tools and Modeling
  - Testing and Validation
- **Track V: Advanced Concepts**
  - Multi-Megawatt Systems
  - Fusion