Program Corrections

Monday February 23, 2015

1:30-4:00pm

Track I: Radioisotope Power Systems

Nuclear Power Assessment Studies Salon A

The Nuclear Power Assessment Study, R.L. McNutt (John Hopkins University), S.M. Aleman (NASA HQ), M.J., Amato (NASA GFC), W. Carroll (DOE), L. Dudzinski (NASA HWQ, J. McKamy (DOE), C. Moore (NASA HQ), C. Reed (John Hopkins University), K.R. Reh (Jet Propulsion Lab), J.A. Sholtis (Sholtis Engineering and Safety Consulting), R.A. Stephan (NASA HQ)

The 2014 NASA Nuclear Power Assessment Study: Mission Study Results Investigating Advanced Radioisotope Systems and Fission Power Systems, Y.H. Lee, B.K. Bairstow (Jet Propulsion Lab), R. Cataldo (NASA GRC), R. Anderson (Applied Physics Lab), S, Oleson (NASA GRC), S.G. Johnson (Idaho National Lab)

The 2014 NASA Nuclear Power Assessment Study: Assembly, Test and Launch Operations Comparisons between Notional 1kWe Fission Power System and Conventional Radioisotope Power System, S. G. Johnson (Idaho National Lab), R. Cataldo (NASA GRC), S. Vernon (Applied Physics Lav), C. Tatro (NASA JSC), G. English, R. Cook (Idaho National Lab), R. Langevin (NASA JSC), Y.H. Lee (Jet Propulsion Lab)

The 2014 NASA Nuclear Power Assessment Study: Safety, Environmental Impact, and Launch Approval Considerations and Findings, J.A. Sholtis Jr (Sholtis Engineering and Safety Consulting), R.D. Bechtel (DOE NE-75), P.K. Van Damme, J. M. Phillips (Jet Propulsion Lab), R.J. Lipinski (Sandia National Lab)

Reference Power System Options for the Nuclear Power Assessment Study, L.S. Mason, J.G. Schreiber, P.C. Schmitz (NASA GRC), J.P. Fleurial, D.F Woerner (Jet Propulsion Lab), D. Cairns-Gallimore, A. Belvin (DOE), P.R. McClure, D.I. Poston (Los Alamos National Lab), S.G. Johnson, J.S. Herring (Idaho National Lab), C.R. Robinson, J.T. Creasy (Y-12 Security Complex), M.E. Fraeman (John Hopkins University)

Monday February 23, 2015

2:30-5:30pm

Track III: Nuclear Thermal Propulsion

NTP Project and Mission Architecture — Salon C

NASA Nuclear Thermal Propulsion Project, M. Houts, S. Mitchell, T. Kim (NASA MSFC), S. Borowski (NASA GRC), K. Power (NASA SSC), J. Scott (NASA JSC), A. Belvin (DOE-NE75), S. Clement (Los Alamos National Lab)

Nuclear Thermal Propulsion: Considerations for Affordable Development Strategies, G.E. Goughty (NASA MSFC)

Determining an Affordable Mars Mission Capable NTP Thrust Size, C.R Joyner II, J.H Levack, J. Crowley (Aerojet Rocketdyne)

Affordable Development and Demonstration of a Small NTR Engine and Stage: A Preliminary NASA, DOE and Industry Assessment, S.K. Borowski, R.J. Sefcik (NASA GRC), J.E. Fittje (Vantage Partners), A.L. Qualls, B.G. Schnitzler (Oak Ridge National Lab), A. Weitzberg (DOE Consultant), C.R. Joyner (Aerojet Rocketdyne)

Revised Point-of-Departure Design Options for the Nuclear Thermal Propulsion, J.E. Fittje (Vantage Partners), B.G. Schnitzler (Oak Ridge National Lab), S.K. Borowski (NASA GRC)

Monday February 23, 2015

2:30-6:00pm

Track IV: Advanced Concepts

Advanced Nuclear Safety and Radiation Detection — Salon B

An Analysis of Projected Risks from Abnormal Occurrences During Ground Based Testing and Development of Space Nuclear Systems, L.A. Hardin Jr. (Nuclear Regulatory Commission)

Space Nuclear System Development Process Risk Mitigation, L.A. Hardin Jr. (Nuclear Regulatory Commission)

Potential Regulatory Processes and Frameworks to Support Space Nuclear Development, L.A. Hardin Jr. (Nuclear Regulatory Commission)

GEANT4 Based Assessment of the Cosmic Radiation Transport in Space: Examples of International Space Station and Apollo, M. Lund, T. Jevremovic (University of Utah)

Microstructured Semiconductor Neutron Detectors (MSNDs), D.S. McGregor (Kansas State University), S.L.Bellinger (Radiation Detection Technologies), R.G. Fronk, L.C. Henson, T.R. Ochs, J.K. Shultis, T.J. Sobering (Kansas State University)

Microstructured Semiconductor Neutron Detector (MSND)-based Systems for Lower-Power, Compact Neutron Detection R.G. Fronk (Kansas State University), S.L. Bellinger (Radiation Detection Technolgies), L.C. Henson, T.R. Ochs, M.A. Reichenberger, J.K. Shultis, T.J. Sobering, D.S. McGregor (Kansas State University)

Tuesday February 24, 2015

1:30pm-4:30pm

Track II: Fission Power and Electric Propulsion

NEP Reactor Physics and Fuel Salon D

Benchmark Evaluation of Fuel Effect and Material Worth Measurements for a Beryllium-Reflected Space Reactor Mockup, M.A. Marshall (Center for Space Nuclear Research/Idaho National Lab), J.D. Bess (Idaho National Lab)

Benchmark Experiment for Fast Neutron Spectrum Potassium Worth Validation in Space Power Reactor Design,J. Bess (Idaho National Lab)

The Performance of an Acciedent-Tolerant Control Drum System for HEU-Fueled Space Reactors, H.C. Lee, T.Y Han, H.S. Lim, J.M. Noh (Korea Atomic Energy Research Institute)

Solid Matrix Fuels for Space Power Reactors, C.G. Morrison, W. Ji (Rensselaer Polytechnic Institute)

Thermal Power Scaling of the Kilopower Reactor Concept, D.I. Poston, P.R. McClure (Los Alamos National Lab)

Wednesday February 25, 2015
8:00am-12:30pm

Track I: Radioisotope Power Systems

Power System Technology: Part A — Salon B

Chassis Short Mitigation and Characterization Technique for the Multi-Mission Radioisotope Thermoelectric Generator, G. Bolotin, N. Keyawa (Jet Propulsion Lab)

The eMMRTG – To Europa, Titan or Mars, T. Hammel (Teledyne Energy Solutions), B. Otting (Aerojet Rocketdyne), R. Bennett, B. Sievers (Teledyne Energy Solutions)

Radioisotope Thermoelectric Generators Based on Americieum-241, R.M. Ambrosi, H.R. Williams (University of Leicester), M. Robbins (European Thermodynamcis Ltd), H. Ning, M. Reece (Queen Mary University of London), K. Simpson (European Thermodynamics Ltd), P. Samara-Ratna (University of Leicester), M-C. Perkinson, K. Tomkins (Airbus Defense and Space), K. Stephenson (European Space Agency), N.P. Bannister, T. Crawford, D. Vernon, E.J. Watkinson (University of Leicester)

RTG Degradation Primer and Application of the MMRTG, T. Hammel (Teledyne Energy Solutions), B. Otting (Aerojet Rocketdyne), R. Bennett, B. Sievers (Teledyne Energy Solutions)

Beta Voltaic Power Source Design Using an Electron Emitting Radioisotope Source for a Pinger Device to be Dropped on a Hydrated C-Class Asteroid, A. Rajguru, J. Nieminen (University of Southern California/CSNR), N. Nadupalli (University of Michigan/CSNR), J. Weatherford (George Fox University/CSNR), J. Santora (University of Utah/CSNR)

Chassis Short Characterization and Potential Technique for the Multi-Mission Radioisotope Thermoelectric Generator, G. Bolotin, N. Keyawa (Jet Propulsion Lab)

Advanced Stirling Radioisotope Generator Engineering Unit 2 Final Assembly, S.M. Oriti (NASA GRC)

A History, the Development and Potential Mission Uses for a 40mW Radioisotope Power System, F.A. Leavitt (Hi-Z Technology), B.J. Nesmith (Jet Propulsion Lab), J.C. Bass, C. Brown (Hi-Z Technolgoy)

Wednesday February 25, 2015

1:30am-3:30pm

Track II: Fission Power and Electric Propulsion

NEP Reactor Analytical Studies — Salon D

Low-Cost Radiator for Fission Power Thermal Control, T. Maxwell, C. Tarau, W.G. Anderson (Advanced Cooling Technologies, M. Wrosch (Vanguard Space Technologies), M.H. Briggs (NASA GRC)

Radiation Guiding in Active Nano-Structures for Shielding and Nuclear Reaction Control Systems, L. Popa-Simil (Los Alamos Academy of Sciences)

Liquid Metal Thermo-magnetic Systems for Space, Nuclear, and Industrial Applications, C. Maidana (Maidana Research)

Computational Predications of the Reactor Simulator Subsystem at NASA GRC, T.V. Reid (NASA GRC)

Track III: Nuclear Thermal Propulsion

NTP Test Facility & Regulatory Considerations — Salon C

Assessment of Space Nuclear Thermal Propulsion Facility and Capability Needs, J. Werner (Idaho National Lab)

Review of Nuclear Thermal Propulsion Engine Ground Test Options, D. Coote (NASA JSC)

Nuclear Thermal Propulsion Development Risks, T. Kim (NASA MSFC)

Initial Operation of the Nuclear Thermal Rocket Element Environmental Simulator, W.J. Emrich Jr, J.B. Pearson, M.P. Schoenfeld (NASA MSFC)