

Friday, March 23, 2012
ADVANCED CONCEPTS: LENR, ANTI-MATTER, AND NEW PHYSICS
3:30 p.m. Waterway Ballroom 2

Chair: **Harold White Jr.** (NASA Johnson Space Center)

- 3:30 p.m. Kim Y. E. *
[*Cryogenic Ignition of Deuteron Fusion in Micro/Nano-Scale Metal Particles*](#) [#3006]
Possibility of cryogenic ignition of deuteron fusion in micro/nano-scale metal particles is described based on nuclear fusion theory for Bose-Einstein condensation of deuterons in metal. Experimental tests of hypothesis and predictions of the theory are also discussed.
- 3:50 p.m. Yang X. Miley G. *
[*A Game-Changing Power Source Based on Low Energy Nuclear Reactions \(LENRs\)*](#) [#3051]
Excess heat generation from our gas-loading LENR power cell has been verified, confirming nuclear reactions provide output energy. Neglecting unlikely chemical reaction contributions, the energy gain is virtually unlimited due to negligible power input with gas loading.
- 4:10 p.m. White H. * March P.
[*Advanced Propulsion Physics: Harnessing the Quantum Vacuum*](#) [#3082]
NASA/JSC is implementing an advanced propulsion physics laboratory, "Eagleworks," to pursue propulsion technologies necessary to enable human exploration of the solar system over the next 50 years, and interstellar flight by the end of the century.
- 4:30 p.m. Obousy R. K. * Long K. F. Smith T.
[*Project Icarus: Antimatter Catalyzed Fusion Propulsion for Interstellar Missions*](#) [#3104]
This paper will explore the possibility for using antimatter catalyzed fusion propulsion for interstellar missions. This includes direct anti-proton and magnetically insulated ICF schemes.