

ASI / Nuclear Science User Facilities Mid-Year Review

May 5, 2022

Teams Meeting

Program Management and support: Suibel Schuppner, Melissa Bates, & Daniel Nichols (DOE) / Patrick Calderoni, Rory Kennedy, Brenden Heidrich, Simon Pimblott, Kort Bowman, & Kara Cromwell (INL).

Participants: Troy Unruh, Austin Fleming, Craig Primer, Keith Jewell, Travis Howell, Josh Daw, Lance Hone, Kelly McCary, & Zilong Hua (INL) / Dianne Ezell, Chris Petrie (ORNL) / Rick Vilim (ANL) / Andy Casella (PNNL) / Igor Jovanovic (Michigan) / James Wall (EPRI) / Ge Yang, Ayman Hawari (NCSU) / Marat Khafizov, Raymond Cao (OSU) / Kevin Chen (UPitt) / Jorge Carvajal (WEC) / Gordon Kohse (MIT).

- 1:15 pm – Integral Fuel Rod Real-Time Wireless Sensor & Transmitter Irradiation Test and Post Irradiation Examination – WEC Chris Petrie/Jorge Carvajal
- 1:30 pm – Instrumentation for DISECT Irradiation Lance Hone
- 1:45 pm – High Fluence Active Irradiation and Combined Effects Testing of Sapphire Optical Fiber Distributed Temperature Sensors – Idaho National Laboratory Josh Daw
- 2:05 pm – Irradiation of Optical Components of In-Situ Laser Spectroscopic Sensors for Advanced Nuclear Reactor Systems – University of Michigan Igor Jovanovic
- 2:25 pm – Irradiation of Sensors and Adhesive Couplants for Application in LWR Primary Loop Piping and Components - EPRI James Wall
- 2:45 pm – BREAK
- 2:55 pm – Deployment and In-Pile Test of an Instrument for Real-Time Monitoring Thermal Conductivity Evolution of Nuclear Fuels – Idaho National Laboratory Zilong Hua
- 3:15 pm – Understanding Irradiation Behaviors of Ultrawide Bandgap Ga₂O₃ High Temperature Sensor Materials for Advanced Nuclear Reactor Systems – North Carolina State University Ge Yang
- 3:35 pm – Irradiation Behavior of Piezoelectric Materials for Nuclear Reactor Sensors – Ohio State University Marat Khafizov

3:55 pm – Radiation Effects on Optical Fiber Sensor Fused Smart Alloy Parts with Graded Alloy Composition
Manufactured by Additive Manufacturing Processes – University of Pittsburgh Kevin Chen