NEAMS

Agenda

NEAMS Annual Review

Molten Salt Reactors

May 28, 2025

11:00 AM-4:15 PM (Eastern Time)

11:00 **Opening remarks and meeting objectives**   *David Henderson, DOE/David Andersson, LANL*

11:05 **NEAMS overview and Molten Salt Reactors research plan**   *David Andersson, LANL*

Research presentations on Molten Salt Reactors by NEAMS Technical Areas

11:15 **Multiphysics Applications**
Introduction to Multiphysics Technical Area   *Emily Shemon, ANL/Cody Permann, INL*
(5 min)

Multiphysics analysis of MSR transient and validation using MSRE   *Mauricio Tano, INL*
(17 min)

MSR species transport multiphysics simulation and applications   *Tingzhou Fei, ANL/Shayan Shahbazi, ANL*
(16 min)

MSR depletion and future MSR work   *Eva Davidson, ORNL*
(10 min)

Q & A
(12 min)

12:15 **Reactor Physics**
 Introduction to Reactor Physics Technical Area   *Matthew Jessee, ORNL*
 (5 min)

Overview of Griffin R&D activities for MSR systems   *Changho Lee, ANL*
(15 min)

Application of Griffin for CNRS benchmark   *Namjae Choi, INL*
 (15 min)

 Q & A
 (10 min)

Agenda

13:00 **Thermal Fluids**
Introduction to Thermal Fluids Technical Area   *Elia Merzari, ANL/Rui Hu, ANL*
(5 min)

Enhancement on species transport modeling in SAM and coupling to Saline and Mole   *Bob Salko, ORNL*
(15 min)

Improvements in Pronghorn for MSR modeling, including overlapping domain   *Mauricio Tano, INL*
coupling with SAM for multiscale modeling
(15 min)

Q & A
(10 min)

13:45 **Break**

14:30 **Structural Materials and Chemistry**
Introduction to Structural Materials and Chemistry Technical Area   *Benjamin Spencer, INL/Ted Besmann, USC*
(5 min)

Summary of high-temperature alloy and graphite efforts   *Benjamin Spencer, INL*
(10 min)

MSTDB-TP and MSTDB-TC development   *Tony Birri, ORNL*
(10 min)

Ab-initio molten machine-learning molten salt property modeling   *Gaoxue Wang, LANL*
(10 min)

Thermochimica Transport Coupling for Offgas Composition Estimation   *Will Gurecky, ORNL*
(10 min)

Pronghorn/Thermochimica integration for full-core MSR simulations   *Mauricio Tano, INL*
(10 min)

MOSCATO development and integration   *Nathan Hoyt, ANL*
(10 min)

Q & A
(25 min)

16:00 **Feedback and conclusion**

16:15 **Adjourn**