NEAMS Agenda

NEAMS Annual Review 2027

February 2-3, 2027

Manufacturing Demonstration Facility (MDF), Oak Ridge National Laboratory

2350 Cherahala Blvd

Knoxville, TN 37932

Building 2350, Conference Room 112

Tuesday, February 2nd, 2027

Time	Topic	Presenter
8:15	Badging at the Manufacturing Demonstration Facility (MDF)	
9:00	Welcome to ORNL	Tara Pandya (ORNL), Division Director, Nuclear Science and Engineering
9:15	NEAMS Overview	David Andersson (LANL)
	Technical Area Overviews and Highlights 10 minutes for an overview, 10-15 minutes for a highlight, 5-10 minutes for Q&A	
9:30	Fuel Performance	Stephen Novascone (INL) and Michael Cooper (LANL)
10:00	Structural Materials and Chemistry	Ben Spencer (INL) and Jacy Conrad (INL)
10:30	Reactor Physics	Matt Jessee (ORNL) and Josh Hanophy (INL)
11:00	Break	
11:15	Thermal Fluids	Elia Merzari (ANL/PSU) and Rui Hu (ANL)
11:45	Multiphysics Applications	Emily Shemon (ANL) and Cody Permann (INL)

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12:15	Lunch Break	
	Reactor Specific and Cross-Cutting Panel Discussions	
13:45	**Light Water Reactors:** Demonstration of NEAMS codes for power uprates and extended burnup in the existing reactor fleet	**Moderator:** TBD
14:45	**Fast Reactors:** Deployment of new advanced simulation capabilities for fuels, thermal fluids, reactor physics, and multiphysics, along with advances in validation	**Moderator:** TBD
15:45	Break	
16:00	**High Temperature Gas- Cooled Reactors and Fluoride High Temperature Reactor Research:** Progress in developing new capabilities for air ingress simulations, particle fuel failure predictions, transient multiphysics simulations, supporting reactor physics technologies, and graphite component modeling	**Moderator:** TBD
17:00	**Molten Salt Reactors:** Demonstration of salt spill accident and transient multiphysics simulations, advances in property databases and lower-length-scale simulations, improved species transport and corrosion modeling, and discussion of next steps on salt-structure interactions	**Moderator:** TBD
18:00	Adjourn Day 1	

Wednesday, February 3rd, 2027

Time	Topic	Presenter
9:00	**Microreactors:** Demonstration and validation of NEAMS multiphysics capabilities, moderator simulations, and new opportunities enabled by GPU-accelerated reactor physics simulations	**Moderator:** TBD
10:00	**NEAMS Materials Research for Advanced Reactors:** Status of predictive models for alloy performance and qualification, including joining, and computational improvements supporting multiscale and multiphysics coupling	**Moderator:** TBD
10:45	Break	
11:00	Multiphysics Framework and Workflows	TBD

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Early-Career Highlights, Closing Discussion, and Tours

11:45	Early-career Lightning Presentations
12:15	Discussion, Feedback, and Closing Remarks
12:30	Lunch Break
14:00	Tour of the Manufacturing Demonstration Facility (MDF)
15:30	Adjourn Day 2

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