Sandia National Laboratories

Agenda

2026 National Diagnostic Working Group (NDWG)

March 31st and April 1st (2026)

Tuesday, ***March 31st***

Sandia Badge Office (New Location: SVRE 10700 Research Rd SE, Albuquerque, NM 87123)

7:15 Visitor Badge Pickup — Non-HSPD12 Holders

Center for Global Security and Cooperation (CGSC) (10600 Research Rd SE, Albuquerque, NM 87123)

8:00 Continental Breakfast

9:00 Introduction and Welcome — Dave Bradley/Eric Harding, *Lawrence Livermore National Laboratory/Sandia National Laboratories*

9:10 NNSA Perspective and Priorities — Anagha Iyengar, *National Nuclear Security Administration*

9:20 Historical Perspective on the NDWG — Joe Kilkenny, *Lawrence Livermore National Laboratory*

9:50 How Did Diagnostics Get Us to Ignition? — Dave Bradley, *Lawrence Livermore National Laboratory*

10:20 Break for 15 minutes

10:35 AI for NGHED stagnation diagnostics — Graeme Sutcliffe, *Lawrence Livermore National Laboratory*

11:05 How Do We Get to Predictive Hohlraums? — Steven Ross, *Lawrence Livermore National Laboratory*

11:40 Group Picture

11:50 – 1:00 pm Lunch

SECURITY NOTICE: Sandia has restrictions on where electronic devices, such as phones, laptops and their associated media are allowed. More information on these devices and where they are allowed will be provided by your host. Tobacco products are prohibited at all Sandia locations, including e-cigarettes, cigarettes, cigars, and chewing tobacco/snuff.

Purpose:	*2026 National Diagnostic Working Group*
Technical Host:	*Eric Harding, (505-284-7779, ehardi@sandia.gov)*
SNL Point of Contact:	*Adriana Canavan, Ellie Landers, Stephanie Spivey (acanav@sandia.gov, emlande@sandia.gov, sjspive@sandia.gov)*
Accessible Meeting:	*If you need an accommodation for a meeting, please let the meeting organizer know.*
SNL Update:	*Provide information; provides information about changes in the Laboratory schedule (i.e., closings or delays).*

Agenda

Tuesday, ***March 31st***

1:00-1:30 pm Diagnostic Challenges for NGHED Facilities

Alastair Moore/Eric Harding
Lawrence Livermore National Laboratories/Sandia National Laboratories

3 Breakout Sessions (1:30-3:30pm)

#1: **Location SRVE NEO classroom (Room #131)**
1:30-3:30 **Breakout Session #1:**
Data science and AI for diagnostic design and analysis. Output: Outline current and future uses and needs for data science and AI methodologies to design diagnostic suites and analyze outcomes.

Facilitator: Will Lewis
Sandia National Laboratories

#2: Location CGSC (Room #1149)
1:30-3:30 **Breakout Session #2:** How do we get to predictive Hohlraums? Output: Identify key issues and suggest actions with timeline.

Facilitator: Steven Ross
Lawrence Livermore National Laboratory

#3: Location CGSC (Room #1154)
1:30-3:30 **Breakout Session #3:** *Diagnostic Road Map for NGHED.* Output: Identify key diagnostics and development approach. Are there transformative elements and where is the urgency?

Facilitators: Dave Schlossberg, Steve Ivancic
Lawrence Livermore National Laboratory, Laboratory for Laser Energetics

3:30 Breakout Sessions Adjourn

Poster session (CGSC Museum Area)

3:30 – 5:30 Poster Session

5:30 Poster Session Adjourn

Sandia National Laboratories

Agenda

Wednesday, April 1st (2026)

8:00 Coffee and Continental Breakfast

9:00 Announcements

Eric Harding
Sandia National Laboratories

9:10 Simulated Diagnostic Signatures of Burning Plasmas on ZX

Matt Weis
Sandia National Laboratories

9:40 Radiography of ICF heated samples on NIF-EYC

Andrew MacPhee
Lawrence Livermore National Laboratory

10:10 Break for 15 minutes

10:25 Concepts for creating laser-electron based X-ray sources that meet HED brightness requirements

Gerrit Bruhaug
Los Alamos National Laboratory

10:55 Nanosecond Raman Spectroscopy for HED Chemistry and Temperature Measurements

Alexa LaPierre
Laboratory for Laser Energetics

11:25 -1:00 pm Lunch

3 Breakout Sessions (1:00-3:00pm)

#1: Location CGSC (Room #1154)
1:00-3:00 **Breakout Session #1:** *Generating High Energy Photons for Diagnostic Applications*. Output: Summary of current options and path forward.

Facilitators: Matt Hill
Lawrence Livermore National Laboratory

#2: Location CGSC (Room #1149)
1:00-3:00 **Breakout Session #1:** Pulsed Power Diagnostic Roadmap for Z to ZX. Output: Prioritized list of diagnostics for alpha heating.

Facilitators: Mike Mangan, Owen Mannion
Sandia National Laboratories

#3: Location SRVE NEO classroom (Room #131)
1:00-3:00 **Breakout Session #3:** Road map for advanced detectors. Output: Define general energy range, size, and time-response needed. Recommend path forward.

Facilitators: Peter Nyholm, Matthias Geissel
Lawrence Livermore National Laboratory, Sandia National Laboratories

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Wednesday, April 1st (2026)

Break for 30 min

3:30 - 5:00 Out briefs from Breakout Sessions (15 min for each), Main Room

6:00-9:00

Please join us for Joe's Retirement Celebration!

Location: National Museum of Nuclear Science & History (601 Eubank Blvd SE, Albuquerque, NM 87123)