

**AFOSR + NSF Scientific
Opportunities with Compact,
High Intensity Accelerators**

Report of Contributions

Contribution ID: 1

Type: **not specified**

Introduction and Welcome

Tuesday, February 24, 2026 8:30 AM (10 minutes)

Presenters: MAXSON, Jared; LOCKYER, Nigel (Cornell University)

Session Classification: Introduction

Contribution ID: 2

Type: **not specified**

Welcome and Perspective from AFRL Materials

Tuesday, February 24, 2026 8:40 AM (15 minutes)

Presenter: KOERNER, Hilmar (AFRL)

Session Classification: Introduction

Contribution ID: 3

Type: **not specified**

Welcome and Perspective from NSF Materials

Tuesday, February 24, 2026 8:55 AM (15 minutes)

Presenter: YING, Charles (NSF)

Session Classification: Introduction

Contribution ID: 4

Type: **not specified**

Welcome and Introduction to the AFOSR HERMES program

Tuesday, February 24, 2026 9:10 AM (25 minutes)

Presenter: BIXLER, Joel (AFOSR)

Session Classification: Introduction

Contribution ID: 5

Type: **not specified**

New paradigms in compact linear accelerators

Tuesday, February 24, 2026 9:45 AM (25 minutes)

Presenter: TANTAWI, Sami (Arizona State University)

Session Classification: Linear Accelerators

Contribution ID: 6

Type: **not specified**

From Limits to Breakthroughs: Short-Pulse RF Acceleration at GV/m level gradient

Tuesday, February 24, 2026 10:35 AM (25 minutes)

Presenter: JING, Chunguang (Euclid Techlabs)

Session Classification: Linear Accelerators

Contribution ID: 7

Type: **not specified**

New Applications Enabled by High Gradient RF accelerators

Tuesday, February 24, 2026 10:10 AM (25 minutes)

Presenter: NANNI, Emilio (SLAC)

Session Classification: Linear Accelerators

Contribution ID: 8

Type: **not specified**

State of the Art Performance and Applications of Plasma Accelerators

Tuesday, February 24, 2026 11:00 AM (25 minutes)

Presenter: BARBER, Samuel (LBNL)

Session Classification: Linear Accelerators

Contribution ID: 9

Type: **not specified**

LCLS Research, Quantum Materials, And International Context

Tuesday, February 24, 2026 1:00 PM (25 minutes)

Presenter: LIANG, Mengning (SLAC)

Session Classification: Materials research with accelerators

Contribution ID: **10**

Type: **not specified**

X-ray science at Arizona State University CXLS and CXFEL

Tuesday, February 24, 2026 1:25 PM (25 minutes)

Presenter: SANDHU, Arvinder (Arizona State University)

Session Classification: Materials research with accelerators

Contribution ID: 11

Type: **not specified**

MeV Ultrafast electron diffraction materials research in US and Globally

Tuesday, February 24, 2026 1:50 PM (25 minutes)

Presenter: MUSUMECI, Pietro (UCLA)

Session Classification: Materials research with accelerators

Contribution ID: 12

Type: **not specified**

Introduction to the Materials Solutions Network at CHESS

Tuesday, February 24, 2026 2:30 PM (25 minutes)

Presenter: WOLL, Arthur (Cornell University)

Session Classification: Materials research with accelerators

Contribution ID: 13

Type: **not specified**

Synchrotron radiation for critical studies of composites and thin films in aerospace and space applications

Tuesday, February 24, 2026 2:55 PM (25 minutes)

Presenter: KOERNER, Hilmar (AFRL)

Session Classification: Materials research with accelerators

Contribution ID: 14

Type: **not specified**

Synchrotron X-ray Evaluation of Residual Stress

Tuesday, February 24, 2026 3:20 PM (25 minutes)

Presenter: SHADE, Paul (AFRL)

Session Classification: Materials research with accelerators

Contribution ID: 15

Type: **not specified**

A plasma-accelerator storage ring injector

Wednesday, February 25, 2026 8:30 AM (25 minutes)

Presenter: MAIER, Andreas (DESY)

Session Classification: Upgrading Storage Rings

Contribution ID: 16

Type: **not specified**

The COLD project: upgrading the ESRF storage ring injector with C3 cavities

Wednesday, February 25, 2026 8:55 AM (25 minutes)

Presenter: LUIZZO, Simone (ESRF)

Session Classification: Upgrading Storage Rings

Contribution ID: 17

Type: **not specified**

Upgrades plans for the LEA at Argonne

Wednesday, February 25, 2026 9:20 AM (25 minutes)

Presenter: NASSIRI, Alireza (ANL)

Session Classification: Upgrading Storage Rings

Contribution ID: **18**

Type: **not specified**

Cornell high gradient linac testing and CHESS/CESR upgrade opportunities

Wednesday, February 25, 2026 9:45 AM (25 minutes)

Presenter: MAXSON, Jared

Session Classification: Upgrading Storage Rings

Contribution ID: 19

Type: **not specified**

Accelerator and RF source technology for drilling and sensing applications

Wednesday, February 25, 2026 10:20 AM (25 minutes)

Presenter: SNIVELY, Emma (SLAC)

Session Classification: Directed Energy Applications

Contribution ID: 20

Type: **not specified**

Rapid Density-Modulated Electron Beam Sources for Next-Generation X-ray Communications

Wednesday, February 25, 2026 10:45 AM (25 minutes)

Presenter: CORTEZ, Brandon (U. Wisconsin)

Session Classification: Directed Energy Applications

Contribution ID: 21

Type: **not specified**

Quantum Materials: Structural Insights as the Key to Future Technologies [From X-ray Materials Research With Accelerators Session]

Wednesday, February 25, 2026 1:15 PM (25 minutes)

Presenter: SARKER, Suchismita (Cornell University)

Session Classification: Crossover Topics

Contribution ID: 22

Type: **not specified**

The ultra-compact XFEL: a new paradigm for science and translational applications

Wednesday, February 25, 2026 1:40 PM (25 minutes)

Presenter: ROSENZWEIG, James (UCLA)

Session Classification: Crossover Topics

Contribution ID: 23

Type: **not specified**

From Classical (facility) to Wavefunction-level (ultracompact) High-precision e-beam Control for Advanced Light Sources

Wednesday, February 25, 2026 2:05 PM (25 minutes)

Presenter: CARBAJO, Sergio (UCLA & SLAC)

Session Classification: Crossover Topics

Contribution ID: 24

Type: **not specified**

Ultrafast X-ray Modulation with Quantum Materials

Wednesday, February 25, 2026 2:30 PM (25 minutes)

Presenter: DISA, Ankit (Cornell University)

Session Classification: Crossover Topics

Contribution ID: 25

Type: **not specified**

Exploring extreme matter: accelerators required

Wednesday, February 25, 2026 3:10 PM (25 minutes)

Presenter: COLLINS, Rip

Session Classification: High Energy Density Applications

Contribution ID: 26

Type: **not specified**

LANSCE Enhancements (LANE) Overview

Wednesday, February 25, 2026 3:35 PM (25 minutes)

Presenter: MOSBY, Shea (LANL)

Session Classification: High Energy Density Applications

Contribution ID: 27

Type: **not specified**

Development of C-band high gradient accelerator structures and LANL and potential applications

Wednesday, February 25, 2026 4:00 PM (25 minutes)

Presenter: SIMAKOV, Evgenya (LANL)

Session Classification: High Energy Density Applications

Contribution ID: 28

Type: **not specified**

Medium energy electron accelerator facilities in Europe supporting R&D for VHEE/FLASH radiotherapy

Thursday, February 26, 2026 9:00 AM (20 minutes)

Presenter: ANGAL-KALININ, Deepa (Daresbury Laboratory)

Session Classification: Health Applications

Contribution ID: 29

Type: **not specified**

Accelerator Design for novel cancer therapy efforts

Thursday, February 26, 2026 9:40 AM (25 minutes)

Presenter: MORTON, Phia (SLAC)

Session Classification: Health Applications

Contribution ID: **30**

Type: **not specified**

Accelerator-Based Cancer Therapy Efforts at Duke

Thursday, February 26, 2026 10:05 AM (25 minutes)

Presenter: OLDHAM, Mark (Duke University)

Session Classification: Health Applications

Contribution ID: **31**

Type: **not specified**

DE Discussion

Wednesday, February 25, 2026 11:10 AM (30 minutes)

Presenter: LUGINSLAND, John (AFRL)

Session Classification: Directed Energy Applications

Contribution ID: 32

Type: **not specified**

Medical Studies at the CLEAR Accelerator Facility

Thursday, February 26, 2026 9:20 AM (20 minutes)

Presenter: GILARDI, Antonio (CERN)

Session Classification: Health Applications