

ATF Science Planning Workshop 2024

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome

Thursday, 20 June 2024 09:30 (15 minutes)

Presenter: HEWETT, JoAnne (Brookhaven National Laboratory)

Session Classification: Opening Session

Contribution ID: 2

Type: **not specified**

Workshop Logistics

Thursday, 20 June 2024 09:45 (5 minutes)

Presenter: ILARDI, Mary Jane

Session Classification: Opening Session

Contribution ID: 3

Type: **not specified**

Summary of Previous Workshop and ATF Response

Thursday, 20 June 2024 09:50 (30 minutes)

Presenter: VAF AEI-NAJAFABADI, Navid (Stony Brook University)

Session Classification: Opening Session

Contribution ID: 4

Type: **not specified**

Top Level Workshop Context

Thursday, 20 June 2024 10:20 (25 minutes)

Presenter: PALMER, Mark (Brookhaven National Laboratory)

Session Classification: Opening Session

Contribution ID: 5

Type: **not specified**

Discussion

Thursday, 20 June 2024 10:45 (30 minutes)

Session Classification: Opening Session

Contribution ID: 6

Type: **not specified**

Producing and Measuring “Flying-Doughnut” Pulses

Friday, 21 June 2024 14:50 (15 minutes)

Presenter: CORKUM, Paul (University of Ottawa)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: 7

Type: **not specified**

Enhancing keV high harmonic signals generated by long-wave infrared lasers

Thursday, 20 June 2024 14:00 (15 minutes)

Presenter: CHANG, Zenghu (University of Ottawa)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: 8

Type: **not specified**

Dual-frequency-comb spectroscopy: from 1 THz to 1 PHz

Thursday, 20 June 2024 14:15 (15 minutes)

Presenter: VODOPYANOV, Konstantin (University of Central Florida)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: 9

Type: **not specified**

Future perspectives for near-critical density interactions at the ATF

Thursday, 20 June 2024 14:30 (15 minutes)

Presenter: ETTLINGER, Oliver (Imperial College London)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: **10**

Type: **not specified**

Suitability of LWIR-driven LWFA for External Injection

Thursday, 20 June 2024 15:00 (15 minutes)

Presenter: DOWNER, Michael (University of Texas at Austin)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: 12

Type: **not specified**

Discussion

Thursday, 20 June 2024 15:30 (40 minutes)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: 14

Type: **not specified**

What would it take to demonstrate a coherent X-ray source at ATF?

Thursday, 20 June 2024 17:00 (15 minutes)

Presenter: JOSHI, Chan (UCLA)

Session Classification: LWIR Development at ATF

Contribution ID: 15

Type: **not specified**

e-beam probing & hosing studies in LWIR-driven LWFA

Friday, 21 June 2024 09:55 (15 minutes)

Presenter: VAFAEI-NAJAFABADI, Navid (Stony Brook University)

Session Classification: High- Power M/L-WIR Development II

Contribution ID: 16

Type: **not specified**

Development of Inverse Compton Scattering

Thursday, 20 June 2024 16:45 (15 minutes)

Presenter: SAKAI, Yusuke (UCLA)

Session Classification: LWIR Development at ATF

Contribution ID: 17

Type: **not specified**

High efficiency tapered undulator-based FEL oscillator cavity/Coherent enhancement effects in Inverse Compton Scattering

Thursday, 20 June 2024 16:30 (15 minutes)

Presenter: SCHAAP, Brian (UCLA)

Session Classification: LWIR Development at ATF

Contribution ID: **18**

Type: **not specified**

Compact, tunable laser source of exotic particles

Friday, 21 June 2024 10:10 (15 minutes)

Presenter: SAHAI, Aakash (Univ of Colorado)

Session Classification: High- Power M/L-WIR Development II

Contribution ID: **19**

Type: **not specified**

Discussion

Thursday, 20 June 2024 17:15 (30 minutes)

Session Classification: LWIR Development at ATF

Contribution ID: 20

Type: **not specified**

Summary of Laser BRN Workshop

Friday, 21 June 2024 09:00 (25 minutes)

Presenter: GEDDES, Cameron (LBNL)

Session Classification: Laser Technology BRN PRDs

Contribution ID: 22

Type: **not specified**

Non-linear Optical Materials and Systems for Generating Mid-IR Light

Friday, 21 June 2024 09:25 (15 minutes)

Presenter: ZAWILSKI, Kevin (BAE Systems)

Session Classification: High- Power M/L-WIR Development II

Contribution ID: 23

Type: **not specified**

High-power MWIR/LWIR ultrafast lasers for high-energy physics

Friday, 21 June 2024 09:40 (15 minutes)

Presenter: MIROV, Sergey (University Professor of Physics, University of Alabama at Birmingham)

Session Classification: High- Power M/L-WIR Development II

Contribution ID: 25

Type: **not specified**

Discussion

Friday, 21 June 2024 10:25 (40 minutes)

Session Classification: High- Power M/L-WIR Development II

Contribution ID: 26

Type: **not specified**

Architecture for next generation LWIR laser

Friday, 21 June 2024 11:25 (20 minutes)

Presenter: POLYANSKIY, Mikhail (Brookhaven National Laboratory)

Session Classification: LWIR Development at ATF

Contribution ID: 27

Type: **not specified**

LWIR front end Development

Friday, 21 June 2024 11:45 (15 minutes)

Presenter: LI, William (Brookhaven National Laboratory)

Session Classification: LWIR Development at ATF

Contribution ID: 28

Type: **not specified**

Nonlinear Pulse compression

Friday, 21 June 2024 12:00 (10 minutes)

Presenter: POGORELSKY, Igor (Brookhaven National Laboratory)

Session Classification: LWIR Development at ATF

Contribution ID: 29

Type: **not specified**

Discussion

Friday, 21 June 2024 12:10 (40 minutes)

Session Classification: LWIR Development at ATF

Contribution ID: **30**

Type: **not specified**

Novel high-power mid-IR sources based on optically pumped CO₂ laser technology

Friday, 21 June 2024 13:50 (15 minutes)

Presenter: TOCHITSKY, Sergei (UCLA)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: 31

Type: **not specified**

High Peak Power 2.8 μm GaSb-Based Cascade Diode Laser Arrays for Optical Pumping of CO₂ Gas and Fe:ZnSe

Friday, 21 June 2024 14:05 (15 minutes)

Presenter: SHTERENGAS, Leon (Stony Brook University)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: 32

Type: **not specified**

Plasma optics & Raman amplification

Friday, 21 June 2024 14:20 (15 minutes)

Presenter: GORDON, Daniel (Naval Research Laboratory)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: 33

Type: **not specified**

Plasma Optics for Steering and Shaping High-Power LWIR Laser Pulses

Friday, 21 June 2024 14:35 (15 minutes)

Presenters: MIKHAILOVA, Julia (Princeton University); EDWARDS, Matthew (Stanford University)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: **34**

Type: **not specified**

Discussion

Friday, 21 June 2024 15:05 (40 minutes)

Session Classification: High- Power M/L-WIR Development I

Contribution ID: 35

Type: **not specified**

PAC Comments on ATF Roadmap

Friday, 21 June 2024 16:05 (15 minutes)

Presenter: BIEDRON, Sandra (Element Aero)

Session Classification: Closeout Session

Contribution ID: 36

Type: **not specified**

SWP Report

Friday, 21 June 2024 16:20 (15 minutes)

Presenter: VAF AEI-NAJAFABADI, Navid (Stony Brook University)

Session Classification: Closeout Session

Contribution ID: 37

Type: **not specified**

Mid-IR Facility Proposal

Friday, 21 June 2024 16:35 (15 minutes)

Presenter: POGORELSKY, Igor (BNL/CAD)

Session Classification: Closeout Session

Contribution ID: **38**

Type: **not specified**

Close Out & Discussion

Friday, 21 June 2024 16:50 (30 minutes)

Presenter: PALMER, Mark (Brookhaven National Laboratory)

Session Classification: Closeout Session

Contribution ID: 41

Type: **not specified**

Two-color Ionization injection of high quality electrons

Thursday, 20 June 2024 15:15 (15 minutes)

Presenter: VAF AEI-NAJAFABADI, Navid (Stony Brook University)

Session Classification: LWIR and Multi-Laser Science

Contribution ID: 42

Type: **not specified**

Coherent laser ion acceleration schemes using LWIR lasers

Thursday, 20 June 2024 14:45 (15 minutes)

Presenter: SAHAI, Aakash (Univ of Colorado)

Session Classification: LWIR and Multi-Laser Science