

24th ATF Users' Meeting

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome

Tuesday, 18 January 2022 11:00 (10 minutes)

Presenter: ASNER, David (Brookhaven National Laboratory)

Session Classification: Opening Session

Contribution ID: 2

Type: **not specified**

Meeting Logistics

Tuesday, 18 January 2022 11:10 (5 minutes)

Presenter: PALMER, Mark (Brookhaven National Laboratory)

Session Classification: Opening Session

Contribution ID: 3

Type: **not specified**

Comments from DOE ARDAP

Tuesday, 18 January 2022 11:15 (30 minutes)

Presenter: COLBY, Eric (U. S. DOE)

Session Classification: Opening Session

Contribution ID: 4

Type: **not specified**

ATF Status and Plans

Tuesday, 18 January 2022 11:45 (45 minutes)

Presenter: PALMER, Mark (Brookhaven National Laboratory)

Session Classification: Opening Session

Contribution ID: 5

Type: **not specified**

ATF Capability Upgrades

Tuesday, 18 January 2022 12:30 (30 minutes)

Presenter: SIMMONDS, Andrew (Brookhaven National Lab)

Session Classification: Opening Session

Contribution ID: 6

Type: **not specified**

AE101 - Optical Materials for Ultrahigh-Power Long-Wave Infrared Lasers

Tuesday, 18 January 2022 13:30 (20 minutes)

Status Report

Presenter: POLYANSKIY, Mikhail (Brookhaven National Laboratoty)

Session Classification: Status Reports

Contribution ID: 7

Type: **not specified**

Facility Report: AE101 Implications for non linear pulse compression

Tuesday, 18 January 2022 13:50 (20 minutes)

Presenter: POGORELSKY, Igor (BNL/CAD)

Session Classification: Status Reports

Contribution ID: 8

Type: **not specified**

AE108 - Development of Wave length Conversion Techniques for Generation of Coherent Radiation at the Mid- to Long-wave Infrared / AE88 - Electron Beam Formation via Ionization Injection for Next Generation Accelerator R&D

Tuesday, 18 January 2022 14:10 (30 minutes)

Status Reports

Presenter: KUPFER, Rotem (Brookhaven National Laboratory)

Session Classification: Status Reports

Contribution ID: 9

Type: **not specified**

AE87 - Hard X-ray ICS

Tuesday, 18 January 2022 14:50 (20 minutes)

Status Report

Presenter: SAKAI, Yusuke (UCLA)

Session Classification: Status Reports

Contribution ID: 11

Type: **not specified**

UE110 - Baseline materials for characterizing the MUED configuration, their role verifying daily alignment and in operation and implementation of a non-destructive real-time machine learning diagnostic for ensuring beam stability

Tuesday, 18 January 2022 15:10 (20 minutes)

Status Report

Presenter: FAZIO, Mariana (University of New Mexico)

Session Classification: Status Reports

Contribution ID: 12

Type: **not specified**

AE102 - Collinear wakefield accelerator based on corrugated waveguide

Thursday, 20 January 2022 11:10 (20 minutes)

Closeout

Presenter: Dr ZHOLENTS, Alexander (ANL)

Session Classification: Status Reports

Contribution ID: 13

Type: **not specified**

AE85 - Multi atmospheric CO2 Amplifier Optically Pumped by a 4.3 micron FeZnSe Laser

Thursday, 20 January 2022 11:30 (20 minutes)

Status Report

Presenter: TOCHITSKY, Sergei (UCLA)

Session Classification: Status Reports

Contribution ID: 14

Type: **not specified**

AE98 - Probing electron Weibel instability in optical field-ionized plasmas using ultrashort electron bunches

Thursday, 20 January 2022 11:50 (20 minutes)

Status Report

Presenter: ZHANG, Chaojie (UCLA)

Session Classification: Status Reports

Contribution ID: 15

Type: **not specified**

AE99 - Directional X-ray radiation produced by an ultra-short period plasma magneto-static undulator

Thursday, 20 January 2022 12:10 (20 minutes)

Status Report

Presenter: JOSHI, Chan (UCLA)

Session Classification: Status Reports

Contribution ID: **16**

Type: **not specified**

Introduction

Thursday, 20 January 2022 11:00 (10 minutes)

Session Classification: Status Reports

Contribution ID: 17

Type: **not specified**

UE117 – Advanced Control of the ATF MUED Electron Beam Using Automation, Artificial Intelligence, and High-Performance Computing

Friday, 21 January 2022 12:20 (20 minutes)

Status Report

Presenter: Dr SOSA GUITRON, Salvador (University of New Mexico)

Session Classification: Status Reports

Contribution ID: **18**

Type: **not specified**

309994: Characterization of the collinear wakefield accelerator module

Thursday, 20 January 2022 13:25 (30 minutes)

E-Beam

Presenter: ZHOLENTS, Alexander (ANL)

Session Classification: New Proposals

Contribution ID: **19**

Type: **not specified**

Session Introduction

Thursday, 20 January 2022 13:15 (10 minutes)

Session Classification: New Proposals

Contribution ID: 20

Type: **not specified**

309989: MeV energy gain in a CO2 laser driven dielectric accelerator

Thursday, 20 January 2022 13:55 (30 minutes)

CO2 Laser + E-Beam

Presenter: YADAV, Gyanendra (University of Liverpool)

Session Classification: New Proposals

Contribution ID: 21

Type: **not specified**

309977: Radiofrequency emission from 10 μm short pulse laser ionized gases and solids

Friday, 21 January 2022 14:10 (30 minutes)

CO2 Laser

Presenter: ELLE, Jennifer (AFRL)

Session Classification: New Proposals

Contribution ID: 22

Type: **not specified**

310010: High-efficiency laser-driven electron accelerator

Thursday, 20 January 2022 15:15 (30 minutes)

CO2 Laser

Presenter: Prof. FUCHS, Matthias (University of Nebraska - Lincoln)

Session Classification: New Proposals

Contribution ID: 23

Type: **not specified**

Introduction

Friday, 21 January 2022 11:00 (5 minutes)

Session Classification: Status Reports

Contribution ID: 24

Type: **not specified**

AE93 - Direct Measurement of Fields and Radiation in the Self-Modulated Plasma Wakefield Regime

Friday, 21 January 2022 11:05 (20 minutes)

Status Report

Presenter: PETRUSHINA, Irina (Stony Brook University)

Session Classification: Status Reports

Contribution ID: 25

Type: **not specified**

AE95 - Optical Diagnosis of Self-Modulated CO₂-laser Driven Plasma Wakes

Friday, 21 January 2022 11:25 (20 minutes)

Status Report

Presenter: ZGADZAJ, Rafal (The University of Texas at Austin)

Session Classification: Status Reports

Contribution ID: 26

Type: **not specified**

UE104 - Structure phase transition on Weyl semimetal MoTe₂

Friday, 21 January 2022 12:00 (20 minutes)

Status Report

Presenter: LI, Junjie (Brookhaven national Lab)

Session Classification: Status Reports

Contribution ID: **28**

Type: **not specified**

Introduction

Friday, 21 January 2022 13:00 (10 minutes)

Session Classification: New Proposals

Contribution ID: 29

Type: **not specified**

310036: Remote detection of radioactive materials using long wave infrared laser-driven avalanche breakdown

Friday, 21 January 2022 13:10 (30 minutes)

CO2

Presenter: SCHWARTZ, Robert Max (University of Maryland College Park)

Session Classification: New Proposals

Contribution ID: **30**

Type: **not specified**

310044: Development of actinide studies using MeV ultrafast electron diffraction

Friday, 21 January 2022 13:40 (30 minutes)

UED

Presenter: FAZIO, Mariana (University of New Mexico)

Session Classification: New Proposals

Contribution ID: 31

Type: **not specified**

310047: Tunable positron source: CO2 laser driven post-processing of ATF electron beam driven particle shower

Friday, 21 January 2022 15:00 (30 minutes)

E-Beam + CO2

Presenter: Dr SAHAL, Aakash (Univ of Colorado)

Session Classification: New Proposals

Contribution ID: 33

Type: **not specified**

310077: Simulation-aided Instrument Optimization using Artificial Intelligence and Machine Learning Methods

Thursday, 20 January 2022 14:25 (30 minutes)

E-Beam

Presenters: RAKITIN, Maksim; FEDURIN, Mikhail (BNL)

Session Classification: New Proposals

Contribution ID: 34

Type: **not specified**

AE89 - Plasma Compression for Terawatt Long Wavelength Lasers

Friday, 21 January 2022 11:45 (15 minutes)

Session Classification: Status Reports