

US Magnet Development Program Collaboration Meeting 2023

Report of Contributions

Contribution ID: 1

Type: **not specified**

Nb3Sn CCT Program Overview

Tuesday, 21 March 2023 08:50 (20 minutes)

Presenter: ARBELAEZ, Diego (Lawrence Berkeley National Laboratory)

Session Classification: Nb3Sn Magnet Block - CCT

Contribution ID: 2

Type: **not specified**

CCT Fabrication Method Development

Tuesday, 21 March 2023 09:10 (20 minutes)

Presenter: RUDEIROS FERNANDEZ, Jose (Lawrence Berkeley National Laboratory)

Session Classification: Nb₃Sn Magnet Block - CCT

Contribution ID: 3

Type: **not specified**

CCT6 Design and Prototyping

Tuesday, 21 March 2023 09:30 (20 minutes)

Presenter: BROUWER, Lucas (Lawrence Berkeley National Laboratory)

Session Classification: Nb₃Sn Magnet Block - CCT

Contribution ID: 4

Type: **not specified**

Nb3Sn SMCT Program Overview and Next Steps

Tuesday, 21 March 2023 09:50 (20 minutes)

Presenter: ZLOBIN, Alexander (FNAL)

Session Classification: Nb3Sn Magnet Block - CCT

Contribution ID: 5

Type: **not specified**

Acoustic and Quench Antenna Data Analysis for CCT Sub-scales

Tuesday, 21 March 2023 11:10 (20 minutes)

Presenters: MARCHEVSKY, Maxim (Lawrence Berkeley National Laboratory); TEYBER, Reed (Staff@lbl.gov;Member@lbl.gov;Other@lbl.gov)

Session Classification: Nb3Sn Magnet Block - SMCT

Contribution ID: 6

Type: **not specified**

SMCS Mirror Design, Fabrication and Instrumentation

Tuesday, 21 March 2023 10:30 (25 minutes)

Presenter: NOVITSKI, Igor (Fermilab)

Session Classification: Nb₃Sn Magnet Block - SMCT

Contribution ID: 7

Type: **not specified**

MDPCT1 Coil 5 CT Scan

Tuesday, 21 March 2023 10:55 (15 minutes)

Presenter: NOVITSKI, Igor (Fermilab)

Session Classification: Nb3Sn Magnet Block - SMCT

Contribution ID: 8

Type: **not specified**

Utility Structure Design

Tuesday, 21 March 2023 11:30 (15 minutes)

Presenter: JUCHNO, Mariusz (Lawrence Berkeley National Laboratory)

Session Classification: Nb₃Sn Magnet Block - SMCT

Contribution ID: **10**

Type: **not specified**

Summary of R&D Milestones

Tuesday, 21 March 2023 13:30 (20 minutes)

Presenter: BROUWER, Lucas (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Advanced Modeling

Contribution ID: 11

Type: **not specified**

Computing Training and Strength of Nb₃Sn Coils

Tuesday, 21 March 2023 13:50 (30 minutes)

Presenter: VALLONE, Giorgio (LBNL)

Session Classification: Technology - Advanced Modeling

Contribution ID: 12

Type: **not specified**

Efforts on HTS Modeling and Code Development: Progress, Challenges, Opportunities

Tuesday, 21 March 2023 14:20 (30 minutes)

Presenter: MESSE, Christian (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Advanced Modeling

Contribution ID: 13

Type: **not specified**

20 T Hybrid Magnet and Comparative Analysis: Status and Plans

Tuesday, 21 March 2023 14:50 (35 minutes)

Presenter: FERRACIN, Paolo (Lawrence Berkeley National Laboratory)

Session Classification: Technology - 20 T Hybrid Magnet Design and Comparative Analysis

Contribution ID: 14

Type: **not specified**

Quench Protection of a 20T Hybrid Dipole Magnet

Tuesday, 21 March 2023 15:45 (20 minutes)

Presenter: MARINOZZI, Vittorio (Fermilab)

Session Classification: Technology - 20 T Hybrid Magnet Design and Comparative Analysis
(Continued)

Contribution ID: 15

Type: **not specified**

Design of a 20T Hybrid Common-Coil Dipole Magnet

Tuesday, 21 March 2023 16:05 (25 minutes)

Presenter: GUPTA, Ramesh (Brookhaven National Laboratory)

Session Classification: Technology - 20 T Hybrid Magnet Design and Comparative Analysis
(Continued)

Contribution ID: 16

Type: **not specified**

Uni-Layer Design for HTS Inserts

Tuesday, 21 March 2023 16:30 (25 minutes)

Presenter: RUDEIROS FERNANDEZ, Jose (Lawrence Berkeley National Laboratory)

Session Classification: Technology - 20 T Hybrid Magnet Design and Comparative Analysis
(Continued)

Contribution ID: **18**

Type: **not specified**

Session Overview

Wednesday, 22 March 2023 08:30 (10 minutes)

Presenter: SHEN, Tengming (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212

Contribution ID: **19**

Type: **not specified**

US MDP 2212 Program - Milestones and Goals

Wednesday, 22 March 2023 08:40 (35 minutes)

Presenters: ZLOBIN, Alexander (FNAL); DAVIS, Daniel (Florida State University); SHEN, Tengming (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212

Contribution ID: 20

Type: **not specified**

Bi-2212 Development Under DOE-HEP, Its Potential Impacts on Accelerator & Magnet Landscape, and NHMFL Program

Wednesday, 22 March 2023 09:15 (20 minutes)

Presenter: LARBALESTIER, David (ASC-NHMFL-FSU)

Session Classification: HTS Magnets - Bi2212

Contribution ID: **21**

Type: **not specified**

Bi-2212 Challenges as a Magnet-Ready Conductor

Wednesday, 22 March 2023 09:35 (20 minutes)

Presenter: BARZI, Emanuela (Fermilab)

Session Classification: HTS Magnets - Bi2212

Contribution ID: 22

Type: **not specified**

Bi-SMCT Coil Development (1) Design, (2) Practice Coil Fabrication

Wednesday, 22 March 2023 09:55 (20 minutes)

Presenter: NOVITSKI, Igor (Fermilab)

Session Classification: HTS Magnets - Bi2212

Contribution ID: 23

Type: **not specified**

Bi-2212 Canted Cosine Theta Coil Design and Fabrication

Wednesday, 22 March 2023 10:35 (25 minutes)

Presenter: GARCIA FAJARDO, Laura (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212 (Continued)

Contribution ID: 24

Type: **not specified**

Overpressure Processing Furnaces

Wednesday, 22 March 2023 11:00 (20 minutes)

Presenter: DAVIS, Daniel (Florida State University)

Session Classification: HTS Magnets - Bi2212 (Continued)

Contribution ID: 25

Type: **not specified**

Insulation, Leakage, and Potential Solutions

Wednesday, 22 March 2023 11:20 (20 minutes)

Presenters: DAVIS, Daniel (Florida State University); SHEN, Tengming (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212 (Continued)

Contribution ID: 26

Type: **not specified**

Bi2212 CCT Inserts for Hybrid Magnets-Design and Integration

Wednesday, 22 March 2023 11:40 (20 minutes)

Presenter: GARCIA FAJARDO, Laura (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212 (Continued)

Contribution ID: 27

Type: **not specified**

Quench Protection: Stability, Margin of Safety, and a New Paradigm

Wednesday, 22 March 2023 12:00 (30 minutes)

Presenters: DAVIS, Daniel (Florida State University); SHEN, Tengming (Lawrence Berkeley National Laboratory)

Session Classification: HTS Magnets - Bi2212 (Continued)

Contribution ID: 28

Type: **not specified**

BNL Report, Subscale Common Coil Test and Next Steps, and Conductor Needs

Wednesday, 22 March 2023 14:00 (25 minutes)

Presenter: KUMAR, Mithlesh (Brookhaven National Laboratory)

Session Classification: HTS Magnets - REBCO

Contribution ID: 29

Type: **not specified**

FNAL Report and Conductor Needs

Wednesday, 22 March 2023 14:25 (25 minutes)

Presenter: KASHIKHIN, Vadim (Fermilab)

Session Classification: HTS Magnets - REBCO

Contribution ID: **30**

Type: **not specified**

LBNL Report and Conductor Needs

Wednesday, 22 March 2023 14:50 (25 minutes)

Presenter: WANG, Xiaorong (LBNL)

Session Classification: HTS Magnets - REBCO

Contribution ID: **31**

Type: **not specified**

Introduction and Milestones, Work at FNAL

Wednesday, 22 March 2023 16:15 (25 minutes)

Presenter: KRAVE, Steve (Fermilab)

Session Classification: Technology - Magnet Materials

Contribution ID: **32**

Type: **not specified**

Characterization of Irradiated Epoxies at LBL

Wednesday, 22 March 2023 16:40 (25 minutes)

Presenter: REIS, Chris (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Magnet Materials

Contribution ID: 33

Type: **not specified**

Impregnation of CCT with Alternative Resins

Wednesday, 22 March 2023 17:05 (25 minutes)

Presenter: RUDEIROS FERNANDEZ, Jose (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Magnet Materials

Contribution ID: 34

Type: **not specified**

Areas of Development and Milestones

Thursday, 23 March 2023 08:30 (15 minutes)

Presenter: STOYNEV, Stoyan (Fermilab)

Session Classification: Technology - Training Reduction

Contribution ID: 35

Type: **not specified**

High-Cp Conductor Development

Thursday, 23 March 2023 08:45 (25 minutes)

Presenter: XU, Xingchen (Fermilab)

Session Classification: Technology - Training Reduction

Contribution ID: 36

Type: **not specified**

Magnet Training Studies - QCD, Mechanical Vibrations, Sub-Scales

Thursday, 23 March 2023 09:10 (30 minutes)

Presenter: STOYNEV, Stoyan (Fermilab)

Session Classification: Technology - Training Reduction

Contribution ID: 37

Type: **not specified**

Introduction to Milestones and Progress

Thursday, 23 March 2023 09:40 (20 minutes)

Presenter: MARTCHEVSKII, Maxim (LBNL)

Session Classification: Technology - Novel Diagnostics

Contribution ID: **38**

Type: **not specified**

ML QA Data Analysis/Clustering

Thursday, 23 March 2023 10:00 (20 minutes)

Presenters: BARZI, Emanuela (Fermilab); TEYBER, Reed (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Novel Diagnostics

Contribution ID: 39

Type: **not specified**

Fiber-Optics Developments

Thursday, 23 March 2023 10:40 (30 minutes)

Presenters: BALDINI, Maria (Fermilab); KRAVE, Steve (Fermilab)

Session Classification: Technology - Novel Diagnostics (Continued)

Contribution ID: 40

Type: **not specified**

Quench Antenna Development

Thursday, 23 March 2023 11:10 (25 minutes)

Presenter: DIMARCO, Joe (Fermilab)

Session Classification: Technology - Novel Diagnostics (Continued)

Contribution ID: 41

Type: **not specified**

Quench Detection Progress

Thursday, 23 March 2023 11:35 (35 minutes)

Presenters: LEE, Geon Seok (Lawrence Berkeley National Laboratory); MARTCHEVSKII, Maxim (LBNL); TEYBER, Reed (Lawrence Berkeley National Laboratory)

Session Classification: Technology - Novel Diagnostics (Continued)

Contribution ID: 42

Type: **not specified**

Conductor Roadmap and Present Activities

Thursday, 23 March 2023 13:55 (35 minutes)

Presenters: PONG, Ian (LBNL); COOLEY, Lance (Florida State University)

Session Classification: CPRD

Contribution ID: 43

Type: **not specified**

APC Conductor Development

Thursday, 23 March 2023 14:30 (20 minutes)

Presenter: XU, Xingchen (Fermilab)

Session Classification: CPRD

Contribution ID: 44

Type: **not specified**

Make 2212 a Routine Long Length Predictable Conductor and Path to a Better Future Conductor

Thursday, 23 March 2023 15:10 (30 minutes)

Presenter: HELLSTROM, Eric (Florida State University)

Session Classification: CPRD (Continued)

Contribution ID: 45

Type: **not specified**

Photoacoustic Detection of Interfacial Failures in High Field Magnets

Thursday, 23 March 2023 15:40 (10 minutes)

Presenter: DAVIS, Daniel (Florida State University)

Session Classification: CPRD (Continued)

Contribution ID: 46

Type: **not specified**

Experience with Rebco Conductor

Thursday, 23 March 2023 15:50 (15 minutes)

Presenter: WANG, Xiaorong (LBNL)

Session Classification: CPRD (Continued)

Contribution ID: 47

Type: **not specified**

Conductor AI/ML

Thursday, 23 March 2023 16:05 (20 minutes)

Presenter: PONG, Ian (LBNL)

Session Classification: CPRD (Continued)

Contribution ID: 48

Type: **not specified**

ARDAP Report

Thursday, 23 March 2023 16:25 (20 minutes)

Presenter: COOLEY, Lance (Florida State University)

Session Classification: CPRD (Continued)

Contribution ID: 49

Type: **not specified**

SC Magnet R&D Status from Japan

Friday, 24 March 2023 08:30 (35 minutes)

Presenter: OGITSU, Toru (KEK)

Session Classification: Status from Japan

Contribution ID: 51

Type: **not specified**

LH2 Facility Development for Energy and Magnets

Friday, 24 March 2023 09:10 (20 minutes)

Presenter: COOLEY, Lance (Florida State University)

Session Classification: Strategic Planning

Contribution ID: 52

Type: **not specified**

Magnet R&D: Strategic Planning

Friday, 24 March 2023 09:30 (45 minutes)

Presenter: GOURLAY, Stephen (Fermilab)

Session Classification: Strategic Planning

Contribution ID: 53

Type: **not specified**

TAC Closing Remarks

Friday, 24 March 2023 11:50 (20 minutes)

Session Classification: TAC Meeting

Contribution ID: 54

Type: **not specified**

MDP Collaboration Meeting Agenda, Charge, and Goals

Tuesday, 21 March 2023 08:35 (15 minutes)

Presenter: PRESTEMON, Soren (Lawrence Berkeley National Laboratory)

Session Classification: Introduction and Welcome