

BREAD Collaboration Meeting October 2023

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome

Wednesday, 4 October 2023 09:00 (15 minutes)

Presenter: MILLER, David (University of Chicago)

Session Classification: Introduction and Logistics

Contribution ID: 9

Type: **not specified**

Single Photon Counting from 10-100 GHz - A Review (remote)

Wednesday, 4 October 2023 09:15 (30 minutes)

Presenter: HOFHEINZ, Max

Session Classification: GHz to THz Detectors

Contribution ID: **14**

Type: **not specified**

Quantum Capacitance Detectors at Fermilab

Wednesday, 4 October 2023 10:15 (20 minutes)

current status, LDRD proposal

Presenters: YU, Jialin; KHATIWADA, Rakshya

Session Classification: GHz to THz Detectors

Contribution ID: 15

Type: **not specified**

Kinetic Inductance Parametric Amplifiers at Fermilab

Wednesday, 4 October 2023 11:20 (20 minutes)

Presenter: TEMPLES, Dylan (Fermilab)

Session Classification: GHz to THz Detectors

Contribution ID: **18**

Type: **not specified**

Optical-grade Reflector Manufacturing (remote)

Thursday, 5 October 2023 13:00 (15 minutes)

Presenter: CAROSI, Gianpaolo (Lawrence Livermore National Laboratory)

Session Classification: InfraBREAD & Optical Detection

Contribution ID: **19**

Type: **not specified**

SNSPD Tests in ADR at Fermilab: Results and Plans

Friday, 6 October 2023 09:25 (20 minutes)

Presenter: WANG, Christina (California Institute of Technology)

Session Classification: InfraBREAD & Optical Detection

Contribution ID: 23

Type: **not specified**

Optical Characterization of Reflector Parts at Fermilab

Friday, 6 October 2023 09:50 (20 minutes)

Presenters: IMRAN, Aiman; BROWNING, Robert C.

Session Classification: InfraBREAD & Optical Detection

Contribution ID: **31**

Type: **not specified**

QUALIPHIDE (remote)

Wednesday, 4 October 2023 10:55 (20 minutes)

<https://inspirehep.net/literature/2148929>

Presenter: KLIMOVICH, Nikita

Session Classification: GHz to THz Detectors

Contribution ID: 32

Type: **not specified**

Dielectric Enhancement: Concept

Thursday, 5 October 2023 09:30 (20 minutes)

Presenter: BARYAKHTAR, Masha

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 33

Type: **not specified**

Resonant Enhancement: LDRD Proposal

Thursday, 5 October 2023 10:50 (20 minutes)

Presenter: KNIRCK, Stefan (Fermi National Accelerator Laboratory)

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: **34**

Type: **not specified**

Dish Arrays

Thursday, 5 October 2023 09:15 (10 minutes)

Presenter: KNIRCK, Stefan (Fermi National Accelerator Laboratory)

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 35

Type: **not specified**

Primer: Sensitivity of Dish Antennas - Why we need more

Thursday, 5 October 2023 09:00 (10 minutes)

Presenter: LIU, Jesse (University of Cambridge)

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 37

Type: **not specified**

Single THz Photon Detection for axion searches with Qbits at SLAC

Wednesday, 4 October 2023 09:50 (20 minutes)

Presenters: SALEMI, Chiara (Stanford University and SLAC); KURINSKY, Noah (SLAC National Laboratory)

Session Classification: GHz to THz Detectors

Contribution ID: 38

Type: **not specified**

Large-scale NSF proposal and other opportunities

Thursday, 5 October 2023 15:10 (20 minutes)

Presenter: MILLER, David (University of Chicago)

Session Classification: Scaling Up BREAD

Contribution ID: 39

Type: **not specified**

Brainstorming / Discussion

Thursday, 5 October 2023 15:35 (30 minutes)

Session Classification: Scaling Up BREAD

Contribution ID: 40

Type: **not specified**

Fermilab Dark-Wave Lab: preparations for a large-scale axion facility

Thursday, 5 October 2023 14:20 (20 minutes)

Presenter: SONNENSCHN, Andrew (Fermilab)

Session Classification: Scaling Up BREAD

Contribution ID: 41

Type: **not specified**

The point for a formal collaboration: authorship, funding, organization

Friday, 6 October 2023 11:00 (20 minutes)

Session Classification: Collaboration Forming

Contribution ID: 42

Type: **not specified**

Brainstorming / Discussion

Friday, 6 October 2023 11:20 (40 minutes)

Session Classification: Collaboration Forming

Contribution ID: 44

Type: **not specified**

Collider signatures of axions/axinos

Thursday, 5 October 2023 16:25 (20 minutes)

Presenter: HOSHINO, Gabe (University of Chicago)

Session Classification: Fun Physics

Contribution ID: 46

Type: **not specified**

Group Photo

Thursday, 5 October 2023 11:45 (20 minutes)

Session Classification: Lunch

Contribution ID: 47

Type: **not specified**

On-Chip Fourier Transform Spectrometer

Wednesday, 4 October 2023 11:45 (20 minutes)

<https://arxiv.org/abs/2111.06558>

Presenter: BASU THAKUR, Ritoban (California Institute of Technology)

Session Classification: GHz to THz Detectors

Contribution ID: 48

Type: **not specified**

Long-Wavelength SNSPDs (likely remote)

Friday, 6 October 2023 09:00 (20 minutes)

Presenter: PEÑA, Cristián (Fermilab)

Session Classification: InfraBREAD & Optical Detection

Contribution ID: 50

Type: **not specified**

InfraBREAD sensitivity based on reflector characterization and SNSPD tests

Friday, 6 October 2023 10:10 (10 minutes)

Presenter: BROWNING, Robert C.

Session Classification: InfraBREAD & Optical Detection

Contribution ID: 51

Type: **not specified**

Dielectric Enhancement: MADMAX (remote)

Thursday, 5 October 2023 10:25 (20 minutes)

- How to calibrate a dielectric haloscope
- A first calibrated open booster
- Plans for a first dark photon measurement at UHamburg with GigaBREAD board

Presenter: EGGE, Jacob Mathias

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 52

Type: **not specified**

Dielectric Enhancement: Review of Dielectrics

Thursday, 5 October 2023 10:10 (10 minutes)

Presenter: SONNENSCHNEIN, Andrew (Fermilab)

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 53

Type: **not specified**

Discussion Time

Thursday, 5 October 2023 11:15 (30 minutes)

Session Classification: Enhancing the signal in BREAD: Array, Dielectrics, Resonances

Contribution ID: 54

Type: **not specified**

Discussion Time

Friday, 6 October 2023 10:25 (20 minutes)

Session Classification: InfraBREAD & Optical Detection

Contribution ID: 55

Type: **not specified**

How to detect axion dark matter ... for real: Towards a mutli-M\$ axion facility

Thursday, 5 October 2023 14:45 (20 minutes)

Presenter: CHOU, Aaron (Fermilab)

Session Classification: Scaling Up BREAD

Contribution ID: 57

Type: **not specified**

Optical Single Photon Detection with Skipper-CCDs

Thursday, 5 October 2023 13:20 (20 minutes)

Presenter: CERVANTES VERGARA, Brenda Aurea

Session Classification: InfraBREAD & Optical Detection

Contribution ID: 58

Type: **not specified**

Discussion Time

Thursday, 5 October 2023 13:45 (15 minutes)

Session Classification: InfraBREAD & Optical Detection