

Axions beyond Gen 2

Report of Contributions

Contribution ID: 73

Type: **not specified**

Welcome

Monday, January 25, 2021 7:00 AM (25 minutes)

Presenter: Dr CAROSI, Gianpaolo (Lawrence Livermore National Laboratory)

Contribution ID: 74

Type: **not specified**

40 years of axions

Monday, January 25, 2021 7:25 AM (45 minutes)

Summary

Presenter: Dr EKOLB@UCHICAGO.EDU, Rocky (U. Chicago)

Contribution ID: 75

Type: **not specified**

Production mechanisms for cold dark matter axions

Monday, January 25, 2021 8:20 AM (50 minutes)

Summary

Presenter: SAIKAWA, Ken'ichi (Kanazawa University)

Contribution ID: 76

Type: **not specified**

Axion Dark Matter Halos from Parametric Resonance and their Signatures

Monday, January 25, 2021 4:00 PM (45 minutes)

Summary

Presenter: Prof. ARVANITAKI, Asimina (Perimeter Institute)

Contribution ID: 77

Type: **not specified**

Axion Quark Nuggets and Matter-Antimatter asymmetry as two sides of the same coin: theory, observations and future experimental searches

Monday, January 25, 2021 4:45 PM (45 minutes)

Summary

Presenter: Prof. ZHITNITSKY, Ariel (University of British Columbia)

Contribution ID: 78

Type: **not specified**

New Roles of the (QCD) Axion in Dark Matter and Baryogenesis

Monday, January 25, 2021 5:30 PM (45 minutes)

Summary

Presenter: CO, Raymond (University of Minnesota)

Contribution ID: 79

Type: **not specified**

Dark matter in the Milky Way and implications for axion searches

Monday, January 25, 2021 6:15 PM (45 minutes)

Summary

Presenter: Dr O'HARE, Cirian

Contribution ID: **80**

Type: **not specified**

Black holes and axions: from gravitational waves to axionic beacons

Tuesday, January 26, 2021 7:00 AM (45 minutes)

Summary

Presenter: BARYAKHTAR, Masha (NYU)

Contribution ID: **81**

Type: **not specified**

Axion Quasiparticles for Axion Dark Matter Detection

Monday, January 25, 2021 9:10 AM (45 minutes)

Summary

Presenter: MARSH, David (University of Goettingen)

Contribution ID: 82

Type: **not specified**

Making Meaning of Dark Matter Interactions

Tuesday, January 26, 2021 8:30 AM (45 minutes)

Summary

Presenter: Dr PRESCOD-WEINSTEIN, Chanda (UNH)

Contribution ID: **83**

Type: **not specified**

Status of Solar Axion Searches

Tuesday, January 26, 2021 7:45 AM (45 minutes)

Summary

Presenter: Dr VOGEL, Julia (Lawrence Livermore National Laboratory)

Contribution ID: **84**

Type: **not specified**

Illuminating the Hidden Sector with ALPS II

Tuesday, January 26, 2021 9:15 AM (45 minutes)

Summary

Presenter: SPECTOR, Aaron (DESY)

Contribution ID: 85

Type: **not specified**

What's up, CASPEr ?

Wednesday, January 27, 2021 10:00 AM (45 minutes)

Summary

Presenter: BUDKER, DMITRY (Helmholtz Institute Mainz JGU Mainz and UC Berkeley)

Contribution ID: **86**

Type: **not specified**

Searching for the QCD axion with ARIADNE

Wednesday, January 27, 2021 7:45 AM (45 minutes)

Summary

Presenter: Prof. GERACI, Andrew (Northwestern University)

Contribution ID: 87

Type: **not specified**

Searching for Dark Matter with a Superconducting Qubit

Wednesday, January 27, 2021 8:30 AM (45 minutes)

Summary

Presenter: DIXIT, Akash (University of Chicago)

Contribution ID: **88**

Type: **not specified**

Probing The Axion-Electron and Axion-Photon Couplings with the QUAX Haloscopes

Wednesday, January 27, 2021 9:15 AM (45 minutes)

Summary

Presenter: BRAGGIO, Caterina

Contribution ID: 89

Type: **not specified**

MADMAX: Post-inflation axion dark matter search with a dielectric haloscope.

Thursday, January 28, 2021 8:30 AM (45 minutes)

Summary

Presenter: LEE, Chang (Max Planck Institut for Physics)

Contribution ID: **90**

Type: **not specified**

Lumped element searches for low-mass axion dark matter

Wednesday, January 27, 2021 4:45 PM (45 minutes)

Summary

Presenter: Ms SALEMI, Chiara (MIT)

Contribution ID: 91

Type: **not specified**

Wave-like Dark Matter on the Horizon: Searching for the DFSZ axion with the ADMX Haloscope

Wednesday, January 27, 2021 5:30 PM (45 minutes)

Summary

Primary author: Dr BARTRAM, Chelsea (University of Washington)

Presenter: Dr BARTRAM, Chelsea (University of Washington)

Contribution ID: 92

Type: **not specified**

Experiences in High Field Axion Detector Magnet Design

Wednesday, January 27, 2021 4:00 PM (45 minutes)

Summary

Presenter: Dr SEMERTZIDIS, Yannis

Contribution ID: 93

Type: **not specified**

Recent progress in Ultra-High-Field Superconducting Magnet Technology Suitable for Axion Detectors

Thursday, January 28, 2021 7:00 AM (45 minutes)

Summary

Presenter: Dr BIRD, Mark (NHMFL - FSU)

Contribution ID: **94**

Type: **not specified**

Resonant Feedback at ADMX

Thursday, January 28, 2021 7:45 AM (45 minutes)

Summary

Presenter: Dr DAW, Edward (The University of Sheffield)

Contribution ID: 95

Type: **not specified**

Axion Search Activities at IBS/CAPP

Wednesday, January 27, 2021 6:15 PM (45 minutes)

Summary

Presenter: Dr LEE, Soohyung (IBS Korea)

Contribution ID: 96

Type: **not specified**

ORGAN and Other Axion Search Experiments at The University of Western Australia

Thursday, January 28, 2021 9:15 AM (45 minutes)

Summary

Presenter: TOBAR, Michael (The University of Western Australia)

Contribution ID: 97

Type: **not specified**

Broadband Axion Searches with Coaxial Dish Antennas

Wednesday, January 27, 2021 7:00 AM (45 minutes)

Summary

Presenter: SONNENSCHNEIN, Andrew (Fermilab)

Contribution ID: **98**

Type: **not specified**

Community / Snowmass Discussion

Thursday, January 28, 2021 4:45 PM (2 hours)

Contribution ID: 99

Type: **not specified**

A sub-quantum-limited axion search with the HAYSTAC experiment

Thursday, January 28, 2021 4:00 PM (45 minutes)

The Haloscope at Yale Sensitive to Axion Cold dark matter (HAYSTAC) is the first dark matter detector to have employed quantum squeezed states to reduce the noise background to below the standard quantum limit. We have now increased the rate at which we can scan axion parameter space two-fold. The squeezed state receiver is composed of two Josephson parametric amplifiers operating in a phase-sensitive mode. In this mode, the noise is “squeezed,” while the axion-sensitive signal is amplified. The use of this technology brings together the fields of quantum metrology and axion dark matter in an unprecedented way. In this talk, I will give an overview of the operations of Phase 2 of the HAYSTAC experiment, and present the new results covering 4.11 - 4.18 GHz.

Presenter: BACKES, Kelly