

Quantum Technologies for Fundamental Physics

Sunday, 3 September 2023

Superconducting cavities, materials, and quantum technology for detection of weakly-coupled particles: Session 1 (09:00 - 10:35)

-Conveners: Yoni Khan

time	[id] title	presenter
09:00	[27] Introduction	KHAN, Yoni
09:10	[33] Opportunities for SRF Cavities in the ADMX-EFR Project	CAROSI, Gianpaolo
09:30	[29] Enabling role of SRF cavities as physics detectors: example of DarkSRF	ROMANENKO, Alexander
09:45	[37] SERAPH: Wavelike Dark Matter Searches with SRF Cavities	CERVANTES, Raphael
10:00	[31] Advances in SRF cavity architectures for quantum computing and sensing	ROY, Tanay
10:15	[32] Search for sub-GeV Dark Matter using superfluid ^3He at ultralow temperatures	CASEY, Andrew

Superconducting cavities, materials, and quantum technology for detection of weakly-coupled particles: Session 2 (11:30 - 13:10)

-Conveners: Caterina Braggio

time	[id] title	presenter
11:35	[30] Novel Materials for High Coherence Superconducting Quantum Devices	BAL, Mustafa
11:50	[34] How to detect axion dark matter ... for real	CHOU, Aaron
12:10	[36] Dark matter detection with trapped ions	RAMANI, Harikrishnan
12:30	[28] Quantum sensing with cavities and more	MAROCCO, Giacomo
12:50	[35] Entering the quantum utility era: how to best mitigate noise on quantum computers?	MANISCALCO, Sabrina

Superconducting cavities, materials, and quantum technology for detection of weakly-coupled particles: Session 3 (15:00 - 16:30)

-Conveners: Claudio Gatti

time	[id] title	presenter
15:00	[38] A search for dark matter axions with a transmon-based single photon counter	BRAGGIO, Caterina
15:15	[39] Axion dark matter search with high-temperature superconducting cavities	CHUNG, Woohyun
15:35	[40] Nb ^3Sn for axion searches	POSEN, Sam
15:50	[41] First Results from BREAD Dark Photon Search	SONNENSCHNEIN, Andrew
16:10	[42] Discussion	