



# 17th Patras Workshop on Axions, WIMPs and WISPs

## Monday, 8 August 2022

### Poster Lightning Talks: I (14:30 - 15:10)

-Conveners: Gulden Othman

time	[id] title	presenter
14:30	[99] Axion-like Dark Matter and the Cosmic Birefringence Signal	Dr TRIVEDI, Pranjal
14:33	[43] Supermassive black holes as detectors for ultralight bosons	CHEN, Yifan
14:36	[122] Towards sub-Hz ultralight dark matter searches with atom multi-gradiometry	Mr BADURINA, Leonardo
14:39	[14] Axion Production in Pulsar Magnetosphere Gaps	PRABHU, Anirudh
14:42	[4] Earth as a transducer for ultralight dark-matter detection	Mr KALIA, Saarik
14:45	[78] Constraints on Dark Matter from the Eccentric Supermassive Black Hole Binary OJ 287	ALACHKAR, Ahmad
14:48	[116] Wave dark matter structures	CEMBRANOS, J. A. R.
14:51	[76] ALP Dark Matter from Kinetic Fragmentation: Opening up the parameter window and Observational Consequences	ERÖNCEL, Cem
14:54	[81] UPLOAD: UPconversion Low-Noise Oscillator Axion Detection Experiment	THOMSON, Catriona

### Poster Lightning Talks: II (16:10 - 17:10)

-Conveners: Hendrik Bekker

time	[id] title	presenter
16:10	[22] Millimeter-wave WISP search with lock-in Light-Shining-Through-a-Wall	MIYAZAKI, Akira
16:13	[69] Dark Matter Radio - 50 Liter	IRWIN, Kent
16:16	[63] Introducing the longitudinal ferromagnetic haloscope	CRESCINI, Nicolò
16:19	[50] Towards optimal extraction of dark matter signal from the Ly-alpha forest	MÜLLER, Hendrik
16:22	[3] A first application of machine and deep learning for background rejection in the ALPS II TES detector	MEYER, Manuel
16:25	[89] Comsol Simulation for Axions → FEM Simulation Study for Various Experiment Configurations.	ULRICHS, Johannes
16:28	[107] Impedance Matching to the Axion	CAMERON, peter
16:31	[94] Relaxion dark matter from large fluctuations	Dr CHATRCHYAN, Aleksandr
16:34	[66] High-z Cosmic Web Statistics in Fuzzy Dark Matter Cosmologies	DOMÉ, Tibor
16:37	[54] ALP-EFTs for additionally gauged U(1) symmetries	LAUX, Julien
16:40	[87] Commissioning of Detection System for the Cosmic Axion Spin Precession Experiment (CASPER)	ZHANG, Yuzhe
16:43	[121] Interface Between the Xenon-129 Polarizer and NMR Spectrometer in the CASPER Dark Matter Experiment	RUIMI, Ophir

16:46	[67] Production of hyperpolarized xenon-129 for the Cosmic Axion Spin Precession Experiment (CASPEr)	Mr DOGAN, Arian
16:49	[68] Searching for Scalar Dark Matter and High Frequency Gravitational Waves with Mechanical Resonators	CAMPBELL, William
16:52	[9] Constraining heavy axion-like particles by energy deposition in Globular Cluster stars	CARENZA, Pierluca
16:55	[88] Shimming and SQUID detection for CASPEr-Gradient	WALTER, Julian Pascal Maximilian
16:58	[32] Connection of GeV Dark Matter and Neutrino Floor with $(g-2)_{\mu}$ Anomaly in $U(1)_{L_{\mu}-L_{\tau}}$	DEKA, KULDEEP

# Tuesday, 9 August 2022

## Poster Lightning Talks: III (14:30 - 15:10)

-Conveners: Derek Jackson Kimball

time	[id] title	presenter
14:30	[10] Testing the mean field description of scalar field dark matter	EBERHARDT, Andrew
14:33	[115] Collision Rates of Axion Stars with astrophysical Objects	MASEIZIK, Dennis
14:36	[34] Black hole superradiance of self-interacting scalar fields	SIMON, Olivier
14:39	[55] Challenging the Stability of Light Millicharged Dark Matter	SCHENK, Sebastian
14:42	[91] The VMB@CERN experiment	MESSINEO, Giuseppe
14:45	[114] Searching for ultralight dark matter with spectroscopy of radio-frequency atomic transitions	ZHANG, Xue
14:48	[127] Axion Vacua	MEHTA, Viraf
14:51	[70] Improving the solar axion-electron limit with a GridPix detector at CAST	SCHMIDT, Sebastian
14:54	[97] Novel Method for the Detection of Axions by Daily Modulations	ADAIR, Connor
14:57	[119] New prospects for the axion dark-matter search brought by the advanced GNOME sensor	PADNIUK, Mikhail
15:00	[134] Novel calibration of XENON1T at lowest energies with $^{37}\text{Ar}$	HILS, Christopher
15:03	[30] Axion searches based on $Q_0 \approx 10^{10}$ multimode superconducting cavities	Dr POSEN, Sam

## Poster Lightning Talks: IV (16:10 - 17:10)

-Conveners: Kristof Schmieden

time	[id] title	presenter
16:10	[102] The importance of quantum loops for astrophysical ALPs	MÜLLER, Eike
16:13	[92] A self-consistent wave description of axion minicluster and their survival in the galaxy	DANDOY, virgile
16:16	[56] Updated bounds on ALP Dark Matter with the optical MUSE-Faint survey	TODARELLO, Elisa
16:19	[40] Simulations of axionlike particles in the post-inflationary scenario	PIEROBON, Giovanni
16:22	[49] Obtaining Small Kinetic Mixing in String Theory	KUESPERT, Ruben
16:25	[61] A TES for ALPS II	SHAH, Rikhav
16:28	[120] Luminous black holes	GARNICA, Yadir
16:31	[71] Implications of the cosmic birefringence measurement for the axion dark matter search	OBATA, Ippei
16:34	[75] Detection of very small structures of dark matter with direct detection experiments	MONTOYA, Valentina
16:37	[8] Searching for dilaton fields in the Ly $\alpha$ forest	Mr HAMAIDE, Louis
16:40	[59] Axion Gegenschein: Dark Counterimages of Bright Radio Sources	GHOSH, Oindrila
16:43	[15] Axion signatures from supernova explosions through the nucleon electric-dipole portal	LUCENTE, Giuseppe
16:46	[117] Intensity interferometry for ultralight bosonic dark matter detection	MASIA ROIG, Hector

16:49	[51] Search for Exotic Spin-Dependent Force with Atomic Comagnetometers	Jl, Wei
16:52	[7] Quantum Sensors for the Hidden Sector	BAILEY, Ian
16:55	[60] Axion Haloscope Calibration from Reciprocity	EGGE, Jacob
16:58	[135] Atomic spectroscopy setup to search for fundamental constant oscillations in a frequency range up to 125 MHz with a Hz resolution	TRETIK, Oleg
17:01	[144] Search for Axion Stars Using the Global Network of Optical Magnetometers for Exotic Physics (GNOME)	TANDON, Dhruv