



# The 27th European Cosmic Ray Symposium

## Monday, 25 July 2022

### Parallel 1: DM - Dark Matter (14:00 - 15:30)

time	[id] title	presenter
14:00	[16] Multi-messenger constraints on the dark matter interpretation of the Fermi-LAT Galactic center excess	DI MAURO, MATTIA
14:30	[88] Updated constraints on dark matter (WIMP) annihilation by radio observations of M31	EGOROV, Andrei
14:45	[163] Limits to gauge coupling in the dark sector set by the non-observation of instanton-induced decay of Super-Heavy Dark Matter in the Pierre Auger Observatory data	DELIGNY, Olivier
15:00	[138] Assessing the Impact of Hydrogen Absorption on the Characteristics of the Galactic Center Excess}	MACIAS, Oscar
15:15	[123] COSINUS: Direct dark matter searches using sodium iodide as a cryogenic calorimeter	Ms MAJI, Rituparna

### Parallel 1: CRD - Direct measurements of Cosmic Rays (16:00 - 18:00)

time	[id] title	presenter
16:00	[50] The rigidity dependence of galactic cosmic-ray fluxes and its connection with the diffusion coefficient	VECCHI, Manuela
16:15	[67] Anisotropy of Positron and Electron Fluxes Measured with the Alpha Magnetic Spectrometer on the ISS	MOLERO GONZALEZ, Miguel
16:30	[69] Towards Understanding the Origin of Cosmic-Ray Positrons	KRASNOPEVTSEV, Dimitrii
16:45	[83] Antiproton Flux and Properties of Elementary Particle Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the ISS	TANG, Zhicheng
17:00	[84] Measurements of galactic CR energy spectra with the DAMPE space mission	DE MITRI, Ivan
17:15	[103] Properties of Cosmic Deuteron and $^3\text{He}$	GIOVACCHINI, Francesca
17:30	[121] Properties of Cosmic Beryllium Isotopes	DIMICCOLI, Francesco
17:45	[114] Properties of Heavy Nuclei in South Atlantic Anomaly region	VALENCIA OTERO, Martha Liliana

## Tuesday, 26 July 2022

### Parallel 1: CRI - Indirect measurements of Cosmic Rays (14:00 - 15:30)

time	[id] title	presenter
14:00	[56] Results on mass composition of cosmic rays as measured with LOFAR	CORSTANJE, Arthur
14:15	[156] Mass Composition and More: Results from the Auger Engineering Radio Array	PONT, Bjarni
14:30	[57] Cosmic Ray Spectrum and Composition Analysis at IceCube, using Graph Neural Networks	KOUNDAL, Paras
14:45	[42] Observational constraints on cosmic-ray escape from ultra-high energy accelerators	CONDORELLI, Antonio
15:00	[53] The Mini-EUSO telescope on board the International Space Station: first results in view of UHECR measurements from space	BERTAINA, Mario Edoardo
15:15	[155] Towards mass composition study with KASCADE using deep neural networks	SOTNIKOV, Vladimir

### Parallel 1: CRI - Indirect measurements of Cosmic Rays (16:00 - 18:00)

time	[id] title	presenter
16:00	[72] The energy spectrum of the H+He mass group of cosmic rays in the TeV region measured with HAWC	ARTEAGA-VELAZQUEZ, Juan Carlos
16:15	[100] The all-particle cosmic ray energy spectrum measured with HAWC in the TeV region	MORALES SOTO, Jorge Antonio
16:30	[148] Testing effects of Lorentz Invariance Violation in the propagation of astroparticles with the Pierre Auger Observatory	DE SOUZA, Vitor
16:45	[141] Searches for ultra-high energy photons and neutrinos with the Pierre Auger Observatory	GONZALEZ PINTOS, Nicolas Martin
17:00	[162] Status and prospects of the Auger Radio Detector	HOERANDEL, Joerg
17:15	[118] Prospects for Air Shower Measurements with RNO-G	PYRAS, Lilly
17:30	[153] Search for optimal deep neural network architecture for gamma ray search at KASCADE	PETROV, Nikita
17:45	[161] Asymmetries in the lateral distributions of signals measured by surface-detector arrays	SCHMIDT, David

# Wednesday, 27 July 2022

## **Parallel 1: THEO - Theory (14:00 - 15:30)**

time	[id] title	presenter
14:00	[19] Particle acceleration in core-collapse supernova remnant expanding inside the wind bubble	DAS, Samata
14:15	[91] Spectral evolution of CR electrons and their synchrotron emission in live MHD models of spiral galaxies	Prof. HANASZ, Michał
14:30	[152] LOCAL PARTICLE-IN-CELL SIMULATIONS OF THE MAGNETOROTATIONAL INSTABILITY IN STRATIFIED, SUB-RELATIVISTIC ACCRETION DISKS	SANDOVAL, Astor
14:45	[145] Pulsars do not produce sharp spectral features in the cosmic-ray positron flux	JOHN, Isabelle
15:00	[139] Cosmic rays as a feedback agent in primordial galactic ecosystems	OWEN, Ellis
15:15	[127] Diffusive shock acceleration at wind shocks in AGN-driven outflows	PERETTI, Enrico

## **Parallel 1: THEO - Theory (16:00 - 18:02)**

time	[id] title	presenter
16:00	[125] Modeling the Black Hole Spin	BOTTACINI, Eugenio
16:15	[27] New determination of the production cross section for secondary positrons and electrons in the Galaxy	ORUSA, Luca
16:30	[68] The FLUKA cross sections for galactic cosmic-ray propagation studies	MAZZIOTTA, Mario Nicola
16:45	[74] Comparing Propagation Models with Local Cosmic Ray Spectra	SILVER, Ethan
17:00	[93] CR diffusion in a dwarf galaxy and the $\gamma$ -ray-FIR relation	Dr NUNEZ-CASTINEYRA, Arturo
17:15	[128] Galactic halo magnetic fields and UHECRs deflections	SHAW, Vasundhara
17:30	[107] Constraints on the extragalactic magnetic field from UHECR arrival directions	VAN VLIET, Arjen
17:45	[126] A study of super-luminous stars with the Fermi Large Area Telescope	DE MENEZES, Raniere

# Thursday, 28 July 2022

## Parallel 1 (14:00 - 15:30)

time	[id] title	presenter
14:00	[151] Theoretical derivation of diffusion-tensor coefficients for the transport of charged particles in magnetic fields	DELIGNY, Olivier
14:15	[66] Towards Understanding the Origin of Cosmic-Ray Electrons¶	GRAZIANI, Maura
14:30	[77] Anti-nuclei predictions from antiproton-motivated models	DE LA TORRE LUQUE, Pedro
14:45	[106] Anisotropy of Protons and Light Primary Nuclei in Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the ISS¶	MOLERO GONZALEZ, Miguel
15:00	[115] Precision Measurement of the Monthly Proton, Helium, Carbon, and Oxygen Fluxes in Cosmic Rays with the Alpha Magnetic Spectrometer on the International Space Station	KHIALI, Behrouz
15:15	[159] RDSim, a fast and comprehensive simulation of radio detection of air showers	CARVALHO JR, Washington

## Parallel 1: EAS - Air shower physics and hadronic interactions (16:00 - 18:00)

time	[id] title	presenter
16:00	[146] The Use of an Optimal Distance from the Shower Core as Surrogate for Shower Size	WATSON, Alan
16:30	[36] The muon deficit problem: a new method to calculate the muon rescaling factors and the Heitler-Matthew's $\beta$ -exponent	PEKALA, Jan
16:45	[89] Multiplicity of TeV muons in air showers measured with IceTop and IceCube	VERPOEST, Stef
17:00	[144] Investigating hadronic interaction model predictions for air showers in the 100 GeV-100 TeV range	PARSONS, Daniel
17:15	[160] Practical and Accurate Calculations of Radio Emission from Extensive Air Showers	CARVALHO JR, Washington
17:30	[130] Status and prospects of the CORSIKA 8 air shower simulation framework	SANDROCK, Alexander
17:45	[63] Cosmic-ray measurements by reconstructing longitudinal shower profiles for the Cherenkov Telescope Array	DELGADO, Andres