

21st International Symposium on Very High Energy Cosmic Ray Interactions - ISVHECRI 2022 (Virtual)

Monday, 23 May 2022 - Saturday, 28 May 2022

**GRAPES-3 Collaboration (Tata Institute of Fundamental Research), India
Programme**

Monday 23 May 2022**Inauguration (14:30-15:30)****Invited talks (15:30-16:30)**

time	[id] title	presenter
15:30	[183] Constraints from the latest CMS data (30 minutes)	D'ENTERRIA, David
16:00	[175] ALICE at the LHC and astrophysics: from providing input for the search for anti-nuclei in space to constraining the equation-of-state of neutron stars (30 minutes)	KALWEIT, Alexander

Break (16:30-16:50)**Invited talks (16:50-18:50)**

time	[id] title	presenter
16:50	[172] Recent results from LHCb for astroparticle physics (30 minutes)	DEMBINSKI, Hans
17:20	[96] Very forward particle measurements with LHCf and RHICf (30 minutes)	MENJO, Hiroaki
17:50	[173] Recent results from the TOTEM collaboration at CERN (30 minutes)	ROYON, Christophe
18:20	[103] The MoEDAL Experiment - The LHC's First Dedicated Search Experiment – Results and Future Plans (30 minutes)	PINFOLD, James

Break (18:50-19:10)**Invited talks (19:10-20:10)**

time	[id] title	presenter
19:10	[94] Recent results from Belle II (30 minutes)	ZHOU, Qi-Dong
19:40	[174] Atmospheric neutrino fluxes for the next generation of neutrino telescopes (30 minutes)	FEDYNITCH, Anatoli

Contributed talks (20:10-21:10)

time	[id] title	presenter
20:10	[105] Uncertainty in mean Xmax from diffractive dissociation estimated using measurements of accelerator experiments (15 minutes)	OHASHI, Ken
20:25	[107] 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 (15 minutes)	DELIGNY, Olivier
20:40	[142] On the way to solving the mystery of the long-flying cosmic ray hadrons (15 minutes)	BORISOV, Alexander
20:55	[166] Dual-polarized directional antenna for inclined air-shower detection (15 minutes)	SHINBULATOV, Saken

Tuesday 24 May 2022**Special session: Muon puzzle: Experiment (14:30-16:30)**

time	[id] title	presenter
14:30	[100] Muon measurements with the Pierre Auger Observatory (25 minutes)	CONCEIÇÃO, Ruben
14:55	[91] Results from recent analysis of KASCADE-Grande data (25 minutes)	KANG, Donghwa
15:20	[118] Muon puzzle in inclined muon bundles detected by NEVOD-DECOR (25 minutes)	BOGDANOV, Aleksei
15:45	[164] Muons in showers with energy $E_0 \geq 5$ EeV and QGSjetII-04 and EPOS LHC models of hadronic interactions. Is there a muon deficit in the models? (15 minutes)	KNURENKO, Stanislav
16:00	[162] Cosmic Ray Measurements with IceCube and IceTop (30 minutes)	SOLDIN, Dennis

Break (16:30-16:50)**Special session: Muon puzzle: Theory (16:50-17:50)**

time	[id] title	presenter
16:50	[88] Core-corona effect and air showers (30 minutes)	PIEROG, Tanguy
17:20	[169] UHE hadronic interactions in air showers, Sibyll and the muon puzzle (30 minutes)	RIEHN, felix

Public lecture (18:00-19:00)

time	[id] title	presenter
18:00	[182] Atmospheric Neutrino Oscillations (1 hour)	KAJITA, Takaaki

Break (19:00-19:10)**Special session: Muon puzzle: Theory (19:10-19:40)**

time	[id] title	presenter
19:10	[152] Peering into the hadronic component of extensive air showers (30 minutes)	CAZON, Lorenzo

Special session: Muon puzzle: Panel discussion (19:40-20:10)

time	[id] title	presenter
19:40	[177] Muon puzzle: Panel discussion (30 minutes)	

Contributed talks (20:05-21:10)

time	[id] title	presenter
20:10	[156] EUSO-SPB2: A sub-orbital cosmic ray and neutrino multi-messenger pathfinder observatory (15 minutes)	ESER, Johannes
20:25	[133] The Tunka-Grande scintillation array: current results. (15 minutes)	IVANOVA, Anna
20:40	[117] The Telescope Array Low-energy Extension Hybrid Detector (15 minutes)	FUJITA, Keitaro

20:55 [128] The global cosmic ray observatory - GCOS (15 minutes)

HORANDEL, Jorg

Wednesday 25 May 2022**Invited talks (14:30-16:30)**

time	[id] title	presenter
14:30	[171] New Experiments at the LHC (30 minutes)	DE ROECK, Albert
15:00	[82] Looking forward to forward physics at the LHC (30 minutes)	ANCHORDOQUI, Luis
15:30	[140] CORSIKA 8 - the next-generation air shower simulation framework (30 minutes)	HUEGE, Tim
16:00	[110] Cosmic ray interactions in the atmosphere: QGSJET-III and other models (30 minutes)	OSTAPCHENKO, Sergey

Break (16:30-16:50)**Invited talks (16:50-17:50)**

time	[id] title	presenter
16:50	[178] INO (30 minutes)	INDUMATHI, D
17:20	[129] The TAIGA - an advanced hybrid detector complex for astroparticle physics, cosmic ray physics and gamma-ray astronomy (30 minutes)	BUDNEV, Nikolay

Contributed talks (17:50-18:50)

time	[id] title	presenter
17:50	[137] Measuring the attenuation length of muon number in the air shower with LHAASO muon detector (15 minutes)	FENG, Xiaoting
18:05	[148] Overview of quarkonium production with ALICE at the LHC (15 minutes)	HUSHNUD, Hushnud
18:20	[79] Proton Penetration Efficiency over High Altitude Observatories (15 minutes)	MURAKI, Yasushi
18:35	[76] New determination of the production cross section for secondary positrons and electrons in the Galaxy (15 minutes)	ORUSA, Luca

Break (18:50-19:10)**Contributed talks (19:10-21:10)**

time	[id] title	presenter
19:10	[147] The all-particle energy spectrum of cosmic rays from 10 TeV to 1 PeV measured with HAWC (15 minutes)	MORALES-SOTO, Jorge Antonio
19:25	[130] On irregularities in the cosmic ray spectrum of 10^{16} - 10^{18} eV range (15 minutes)	PETROV, Igor
19:40	[116] Hadronic Interaction Model Dependence in Cosmic Gamma-ray Flux Estimation Using Ground-based Air Shower Array with Underground Water Cherenkov muon detector array (15 minutes)	OKUKAWA, sosuke
19:55	[78] Point sources of ultra-high-energy neutrinos: minimalist predictions for near-future discovery (15 minutes)	FIORILLO, Damiano
20:10	[134] Probing hadronic interaction models with the hybrid data of the Pierre Auger Observatory (15 minutes)	VICHA, Jakub

20:25	[121] The use of PYTHIA for nucleus-nucleus interactions in CORSIKA simulations (15 minutes)	NIKOLAENKO, Roman
20:40	[87] On connection between the collider long-range near-side "ridge" effect at $ \eta < 2.4$ and cosmic-ray coplanarity of most energetic particles (15 minutes)	MUKHAMEDSHIN, Rauf
20:55	[139] Dark matter searches through correlations of the gamma-ray sky with neutral hydrogen, cosmic voids and galaxies surveys (15 minutes)	PINETTI, Elena

Thursday 26 May 2022**Invited talks (14:30-16:30)**

time	[id] title	presenter
14:30	[184] Selected MAGIC Results at TeraelectronVolt Energies (30 minutes)	MIRZOYAN, Razmik
15:00	[143] VERITAS highlights of observations and results (30 minutes)	PATEL, Sonal Ramesh
15:30	[77] The HAWC observatory in view of the second decade of the 21st century: An Overview and Current Results (30 minutes)	DE LA FUENTE ACOSTA, Eduardo
16:00	[99] An update on the MACE gamma-ray telescope (30 minutes)	MANKUZHIYIL, Nijil

Break (16:30-16:50)**Invited talks (16:50-18:50)**

time	[id] title	presenter
16:50	[102] Direct Measurements of Cosmic Rays with the CALorimetric Electron Telescope on the International Space Station (30 minutes)	AKAIKE, Yosui
17:20	[181] Latest results from the AMS experiment (30 minutes)	TING, Samuel
17:50	[89] Status and Prospect of Cosmic Ray Energy Spectrum Measured by LHAASO (30 minutes)	ZHANG, Shoushan
18:20	[81] Cherenkov Telescope Array : Current Status (30 minutes)	BOSE, Debanjan

Break (18:50-19:10)**Contributed talks (19:10-21:10)**

time	[id] title	presenter
19:10	[112] A measurement of the proton plus helium spectrum of cosmic rays in the TeV region with HAWC (15 minutes)	ARTEAGA-VELAZQUEZ, Juan Carlos
19:25	[138] On the primary spectrum of the hadronic PeVatron candidate HAWC J1825-134 (15 minutes)	DZHATDOEV, Timur PODLESNYI, Egor
19:40	[136] The composition of cosmic rays according to the data on EAS cores. (15 minutes)	SHAULOV, Sergey
19:55	[127] Results on high energy galactic cosmic rays from the DAMPE space mission (15 minutes)	SILVERI, Leandro
20:10	[122] GRAINE project: balloon-borne sub-GeV/GeV gamma ray telescope with nuclear emulsion (15 minutes)	NAKAMURA, Yuya
20:25	[120] Primary Cosmic Rays Energy Spectrum and Mean Mass Composition by the Data of the TAIGA Astrophysical Complex (15 minutes)	PROSIN, Vasily
20:40	[109] The ALPACA experiment: The project of the first sub-PeV gamma-ray observation in the southern sky (15 minutes)	KAWASHIMA, Teruyoshi
20:55	[80] Constraining ultra-high-energy cosmic ray composition through cross-correlations (15 minutes)	TANIDIS, Konstantinos

Friday 27 May 2022**Invited talks (14:30-16:30)**

time	[id] title	presenter
14:30	[158] Results from the ARIANNA high-energy neutrino detector (30 minutes)	GLASER, Christian
15:00	[95] The KM3NeT infrastructure: status and first results (30 minutes)	MARGIOTTA, Annarita
15:30	[92] Neutrinos from near and far: Results from the IceCube Neutrino Observatory (30 minutes)	YUAN, Tianlu
16:00	[85] Neutrino-Matter interactions at TeV energies and above (30 minutes)	GAULD, Rhorry

Break (16:30-16:50)**Invited talks (16:50-18:50)**

time	[id] title	presenter
16:50	[170] Astroparticle and Particle physics with Air Showers: results from the Pierre Auger Observatory (30 minutes)	CASTELLINA, Antonella
17:20	[114] Highlights from the Telescope Array Experiment (30 minutes)	SAGAWA, Hiroyuki
17:50	[90] The full coverage approach to the detection of Extensive Air Showers (30 minutes)	DI SCIASCIO, Giuseppe
18:20	[84] Latest results from the Tibet ASgamma experiment (30 minutes)	TAKITA, Masato

Break (18:50-19:10)**Invited talks (19:10-19:40)**

time	[id] title	presenter
19:10	[176] Highlights of the results from the GRAPES-3 experiment (30 minutes)	B, Hari Haran

Contributed talks (19:40-20:40)

time	[id] title	presenter
19:40	[159] Updated results on the cosmic ray energy spectrum and composition from the GRAPES-3 experiment (15 minutes)	VARSİ, Fahim
19:55	[160] Update on the angular resolution of GRAPES-3 experiment based on Moon shadow analysis (15 minutes)	PATTANAİK, DIPTIRANJAN
20:10	[73] DEASA STUDIES AND APPLICATIONS TO SPACE PHYSICS AND MUON TOMOGRAPHY (15 minutes)	BHATNAGAR, Sonali
20:25	[153] Mass testing of SiPMs for the CMVD at IICHP (15 minutes)	JANGRA, Mamta

Closing ceremony (20:40-21:10)