

Session Program

14-24 Jul 2025



ICRC 2025 - The Astroparticle Physics Conference

CRD

CICG - International Conference Centre - Geneva, Switzerland
17 rue de Varembé CH - 1211 Geneva Switzerland

Tuesday 15 July

13:20

CRD: experimental results: proton & He

Session | **Location:** Room B

13:20–13:35

Direct measurement of the all-particle spectrum up to the PeV region with CALET on the International Space Station

Speaker

Dr Yosui Akaike

13:35–13:50

Measurement of the all-particle energy spectrum up to 0.5 PeV with DAMPE

Speaker

Irene Cagnoli

13:50–14:05

Revisiting the Cosmic Ray knee: new insights from LHAASO

Speaker

Igor Vaiman

14:05–14:20

Extended measurement of the proton spectrum with CALET on the International Space Station

Speaker

Kazuyoshi Kobayashi

14:20–14:35

Cosmic ray proton spectrum towards PeV with 9 years of DAMPE data

Speaker

Andrii Kotenko

14:35–14:50

Measurements of cosmic-ray proton and helium spectra from the ISS-CREAM experiment

Speaker

Gwangho Choi

14:50

15:20

CRD: experimental results: primary CR

Session | **Location:** Room B

15:20–15:35

Update of the Helium flux measurement with CALET on the International Space Station

Speaker

Paolo Brogi

15:35–15:50

Properties of Primary Cosmic Ray Nuclei: Thirteen-year Results from the Alpha Magnetic Spectrometer

Speaker

Jose Ocampo Peleteiro

15:50–16:05

Latest Advancements on Cosmic Ray Carbon and Oxygen with the DAMPE Space Mission**Speaker**

Dimitrios Kyratzis

16:05–16:20

Energy spectra and flux ratios of BCNO cosmic-ray nuclei measured by CALET up to multi-TeV energies**Speaker**

Prof. Paolo Maestro

16:20–16:35

Direct measurement of cosmic neon, magnesium, and silicon fluxes with DAMPE**Speaker**

Elisabetta Casilli

16:35–16:50

Properties of Cl and K Cosmic Nuclei: Results from the Alpha Magnetic Spectrometer**Speaker**

Yao Chen

16:50

Wednesday 16 July

13:20

CRD: experimental results: secondary CR and transport

Session | Location: Room B

13:20–13:35

Properties of Secondary Cosmic Ray Nuclei: Thirteen-year Results from the Alpha Magnetic Spectrometer

Speaker

Dr Erwan Robyn

13:35–13:50

Measurement of the boron spectrum and the boron-to-carbon and boron-to-oxygen flux ratios with 9 years of on-orbit data of the DAMPE space mission.

Speaker

Andrea Serpolla

13:50–14:05

Analysis of secondary cosmic ray lithium and beryllium with the DAMPE mission

Speaker

En-heng Xu

14:05–14:20

Measurement of Cr and Ti fluxes and sub-iron/iron flux ratios with CALET on the International Space Station

Speaker

Francesco Stolzi

14:20–14:35

Galactic cosmic rays and cross-sections from accelerators

Speaker

Prof. Fiorenza Donato

14:35–14:50

Fragmentation Cross Sections for the Understanding of Cosmic-Ray Transport in the Galaxy: Results and Prospects from NA61/SHINE

Speaker

Michael Unger

14:50

15:20

CRD: experimental results: isotopes

Session | Location: Room B

15:20–15:35

Precision Measurement of Cosmic Ray Deuterons with Alpha Magnetic Spectrometer

Speaker

Francisco Hernandez Nicolas

15:35–15:50

Voyager 1 Observations of Galactic Cosmic Ray Isotopes in the Very Local Interstellar Medium: Evidence for Primary 2H and B

Speaker

Igor Moskalenko

15:50–16:05

Cosmic-Ray Beryllium Isotopes with the Alpha Magnetic Spectrometer**Speaker**

Weiwei Xu

16:05–16:20

Isotopic composition of cosmic rays with the HELIX balloon project**Speaker**

Dr Keith McBride

16:20–16:35

Cosmic ray ionisation rate and Beryllium-10 modelling with inhomogeneous interstellar medium and time-dependent cosmic ray sources**Speaker**

Troy Porter

16:35–16:50

The BESS-Polar II lower-energy antiproton flux using the upper-middle TOF trigger mode**Speaker**

Kenichi Sakai

16:50

17:05

CRD: experimental results: heavy and ultra-heavy nuclei**Session** | **Location:** Room B

17:05–17:20

Properties of Ar and Ca Cosmic Nuclei: Results from the Alpha Magnetic Spectrometer**Speaker**

Qi Yan

17:20–17:35

Measurement of the iron energy spectrum with DAMPE**Speaker**

Dr Pengxiong Ma

17:35–17:50

Measurement of Nickel Flux in Cosmic Rays with the Alpha Magnetic Spectrometer on the International Space Station**Speaker**

Yuhang You

17:50–18:05

Nickel Measurements in DAMPE Cosmic Ray Data**Speaker**

Haoran Sun

18:05–18:20

Status of Ultra-Heavy Galactic Cosmic Ray Analysis for the Two SuperTIGER Antarctic Flights**Speaker**

Nicole Osborn

18:20-18:35

Updates to the results of the Ultra-Heavy Cosmic Ray Analysis with CALET on the International Space Station

Speaker

Wolfgang Zober

18:35

Thursday 17 July

13:20

CRD: induced ionisation & miscellaneous

Session | Location: Room B

13:20–13:35

Cosmic-ray induced ionisation and spatio-temporal correlations between supernova remnants and molecular clouds

Speaker

Philipp Mertsch

13:35–13:50

Reevaluation of the Cosmic-Ray Ionization Rate in Diffuse Clouds

Speaker

Marta Obolentseva

13:50–14:05

Estimating cosmic-ray induced ionization rates in molecular clumps close stellar clusters

Speaker

STEFANO MENCHIARI

14:05–14:20

Can cosmic rays explain the high ionisation rates in the Galactic centre?

Speaker

Sruthiranjani Ravikularaman

14:20–14:35

Acceleration and Transport of the Unstable Cosmic-ray Isotope ^{60}Fe in Supernova-Enriched Environments

Speaker

Martin Pohl

14:35–14:50

Investigating the CREDIT history of supernova remnants as cosmic-ray sources

Speaker

Anton Stall

14:50

15:20

CRD: instruments

Session | Location: Room B

15:20–15:35

The TIGERISS Galactic Cosmic Ray Detector

Speaker

Brian Rauch

15:35–15:50

Much-needed high-Z (p,X) cross sections for TIGERISS and other cosmic-ray missions

Speaker

Priyarshini Ghosh

15:50–16:05

MINI HYBRID NOVEL COSMIC RAY DETECTOR**Speaker**

Misael Perez Sierra

16:05–16:20

Sensitivity studies and technological advancements for balloon-borne demonstrators of direct antimatter detection**Speaker**

Roberto Iuppa

16:20–16:35

The MoonRay concept of a high energy cosmic radiation telescope at the Moon**Speaker**

Pier Simone Marocchesi

16:35–16:50

Cosmic Radiation Detector Based on Polymethyl Methacrylate**Speaker**

Salvador Aguilar

16:50

Friday 18 July

13:20

CRD: acceleration

Session | Location: Room B

13:20–13:35

Kinetic simulations of particle acceleration at shock waves in plasma with pre-existing turbulence

Speaker

Karol Fulat

13:35–13:50

Turbulence driven by shock-clump interactions and particle acceleration in the turbulence

Speaker

Kanji Morikawa

13:50–14:05

Modifications to diffusive shock acceleration in the presence of density gradients

Speaker

Robert Brose

14:05–14:20

Impact of anisotropic diffusion and drifts on CR acceleration

Speaker

Lukas Merten

14:20–14:35

Cosmic Ray Acceleration via Turbulence-Induced Magnetic Reconnection: From Micro to Macro Scales

Speaker

Elisabete de Gouveia Dal Pino

14:35–14:50

Supernova-like Collisionless Shock in the Laboratory

Speaker

Luca Orusa

14:50

15:20

CRD: acceleration

Session | Location: Room B

15:20–15:35

Non-thermal particle spectra from Fermi acceleration at oblique magnetised shocks

Speaker

Florian Schulze

15:35–15:50

Uncovering Electron Acceleration Mechanisms in Quasi-Parallel Shocks using First-Principles Simulations

Speaker

Siddhartha Gupta

15:50–16:05

Diffusive shock acceleration of dust grains at supernova remnants**Speaker**

Pierre Cristofari

16:05–16:20

Collisionless shock in a relativistically hot and unmagnetized plasma**Speaker**

Kazuki Kamiido

16:20–16:35

Efficient electron and ion acceleration and heating at oblique magnetised mildly relativistic shocks**Speaker**

Gabriel Torralba Paz

16:35–16:50

PIC Simulation of a Relativistic Shock Propagating to Electron, Proton, and Heavy Ion Plasmas**Speaker**

Sara TOMITA

16:50

17:05

CRD: acceleration**Session** | **Location:** Room B

17:05–17:20

How Cosmic Rays Reshape Their Accelerators**Speaker**

Rebecca Diesing

17:20–17:35

On the Non-universality of Diffusive Shock Acceleration**Speaker**

Damiano Caprioli

17:35–17:50

Breaking the universal power law: Advanced models of diffusive shock acceleration in Galactic sources**Speaker**

Sophie Aerdker

17:50–18:05

Particle acceleration in neutron star ultra-strong magnetic fields**Speaker**

Jérôme Pétri

18:05–18:20

Lightning in Cosmic Ray Sources Shapes Their Spectra**Speaker**

Sasa Maricic

18:20–18:35

Time-dependent Acceleration and Escape of Charged Particles at Traveling Shocks in the near-Sun environment: the case of the Sept 5th 2022 Parker Solar Probe event

18:35

Speaker

Federico Fraschetti

Saturday 19 July

13:20

CRD: acceleration

Session | **Location:** Room B

13:20–13:35

Supernova remnants in super bubbles as cosmic ray accelerators

Speaker

Iurii Sushch

13:35–13:50

Accelerating Ultra-High-Energy Cosmic Rays in the Bowshocks of Massive Stars within Centaurus A's Jets

Speaker

Anabella Araudo

13:50–14:05

The effect of spatially dependent diffusion coefficient on particle acceleration at the wind termination shock of a star cluster

Speaker

Ben Li

14:05–14:20

Implications of late-time XRT detected GRBs for particle acceleration

Speaker

Zhiqiu Huang

14:20–14:35

Acceleration and Origins of Very- and Ultra-High-Energy Cosmic Rays

Speaker

Jieshuang Wang

14:35–14:50

Evidence for the Sombrero Galaxy as an Accelerator of the Highest-Energy Cosmic Rays

Speaker

Haoning He

14:50

Monday 21 July

13:20

CRD: transport

Session | Location: Room B

13:20–13:35

Field line separation in 3D magnetic turbulence

Speaker

Matthieu BOUCHET

13:35–13:50

Micromirror-Induced Anomalous Cosmic-Ray Transport in Galaxy Clusters

Speaker

Patrick Reichherzer

13:50–14:05

Critical Aspects of the Nested Leaky-Box Model

Speaker

Benedikt Schroer

14:05–14:20

The Correspondence Between Leaky-Box and Diffusion Models of Cosmic-Ray Propagation

Speaker

Ramanath Cowsik

14:20–14:35

Spatial dependence of the break in the energy spectrum of cosmic rays in the new anisotropic diffusion approach

Speaker

Vladislav Borisov

14:35–14:50

Understanding the origin of the break in the cosmic-ray all-electron spectrum at around 1 TeV

Speaker

Satyendra Thoudam

14:50

15:20

CRD: transport

Session | Location: Room B

15:20–15:35

The Role of Acoustic Instability in Cosmic-Ray Self-Confinement

Speaker

Dr Antonio Capanema

15:35–15:50

Non-linear transport of cosmic rays around supernova remnants: insights from particle-in-cell simulations

Speaker

Vo Hong Minh Phan

15:50-16:05

Every Nearby Pulsar is Surrounded by Inhibited Diffusion**Speaker**

Isabelle John

16:05-16:20

Kinetic simulations of electron-positron induced streaming instability in the context of gamma-ray halos around pulsars**Speaker**

Alexandre MARCOWITH

16:20-16:35

Cosmic Ray Heating in the Early Universe: Joule Heating by Return Currents and its Impact on the Thermal Evolution of the Intergalactic Medium at Redshift around 10**Speaker**

Shota Yokoyama

16:35-16:50

Numerical Investigation of Cosmic Ray Spectral Features**Speaker**

Yuca Chen

16:50

17:05

CRD: transport**Session** | **Location:** Room B

17:05-17:20

Cosmic Ray Transport and Gamma-Ray Signatures in the Interstellar Medium**Speaker**

Lucas Barreto Mota dos Santos

17:20-17:35

Updated Limits on Anisotropy in Electron+Positron Cosmic Rays from CALET Data**Speaker**

Holger Motz

17:35-17:50

Measurements of separate electron and positron spectra from 10 GeV to 20 GeV with DAMPE mission**Speaker**

Yu Nie

17:50-18:05

Estimation of temporal and spatial distributions of high-energy cosmic-ray electron sources using genetic algorithms**Speaker**

Prof. Kenji Yoshida

18:05

Tuesday 22 July

13:20

CRD: experimental results: techniques & ML applications

Session | Location: Room B

13:20–13:35

The Response of 3D Imaging BGO Calorimeter of DAMPE to TeV e^+/e^- in space

Speaker

Ms Cong Zhao

13:35–13:50

Machine Learning methods for antideuteron identification with the AMS-02 detector

Speaker

Marta Borchellini

13:50–14:05

Monte Carlo Helium Data Analysis for the ISS-CREAM Instrument

Speaker

Arul Bagga (on behalf of the ISS-CREAM Collaboration)

14:05–14:20

A deep learning method for event recognition in CALET data

Speaker

Adrien Picquenot

14:20–14:35

Unsupervised selection of cosmic-ray electrons and positrons in Fermi-LAT data

Speaker

Raffaella Bonino

14:35–14:50

GeoMagFilter: Modeling the Angular-Rigidity Joint Distribution of Galactic Cosmic Rays on Low Earth Orbit

Speaker

Dr Ran Huo

14:50

15:20

CRD: experimental results: antimatter/transport in the heliosphere, solar modulation

Session | Location: Room B

15:20–15:35

Antiproton Flux and Properties of Elementary Particle Fluxes in Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the ISS

Speaker

Hannah Taylor Anderson

15:35–15:50

Antiprotons and Elementary Particles over a Solar Cycle: Results from the Alpha Magnetic Spectrometer

Speaker

Dr Zhi-Cheng Tang

15:50–16:05

Precision Measurement of the Monthly Light Ion Fluxes in Cosmic Rays with the Alpha Magnetic Spectrometer on the International Space Station**Speaker**

Jian Tian

16:05–16:20

Time-Dependent Measurements of Absolute Spectra for Elements up to Fe by SuperTIGER as a Probe of Solar Modulation, Atmospheric and Geomagnetic Rigidity Effects**Speaker**

Allan Labrador

16:20–16:35

Temporal Structures in Electron and Positron Spectra and Charge Sign Effects in Galactic Cosmic Rays**Speaker**

Tong Su

16:35–16:50

Observations of Low-energy Cosmic-Ray Electron and Positron Spectra with the 2024 AESOP-Lite Mission**Speaker**

Scott Martin

16:50

17:05

CRD: experimental results: miscellaneous**Session** | **Location:** Room B

17:05–17:20

Measuring sub-GeV galactic cosmic ray with HEPD-01 on the CSES-01 satellite**Speaker**

Alessandro Sotgiu

17:20–17:35

Measurement of the Proton and Helium-4 Cross Sections in Space with DAMPE**Speaker**

Paul Coppin

17:35–17:50

First Results from the RadMap Telescope**Speaker**

Martin Jan Losekamm

17:50–18:05

Dual cosmic ray detector based on acrylic rods**Speaker**

Juan Emmanuel Rosas Trujillo

18:05