

Session Program

17-31 Jul 2025



XIV International Conference
on New Frontiers in Physics
17-31 July 2025, OAC, Kolymbari, Crete, Greece

XIV International Conference on New Frontiers in Physics 2025

***Cosmology, Astrophysics, Gravity, Mathematical
Physics***

Orthodox Academy of Crete, Kolymbari, Crete, Greece

Monday 21 July

17:25

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 3 | **Convener:** Prof. Shalini Thakur

17:25-17:50

FIT: a high-resolution scintillating-fiber tracker with SiPM readout for future space applications

Speaker

Kimberly Sarah Keyser

17:50-18:15

EPSI R&D: A Novel Charge Sign Discrimination Technique for Electrons and Positrons in Space

Speaker

Giacomo De Giorgi

18:15

Wednesday 23 July

17:50

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Francesco Loparco

17:50-18:10

The Zirè detector on board the NUSES space mission

Speaker

Giuliana Panzarini

18:10-18:30

A Two-Dimensional fit approach to sea-level muon flux modelling and its integration into Geant4 models

Speaker

Catalin Frosin

18:30-18:50

The ACROMASS project for the study of the charged components of the atmospheric cosmic radiation

Speakers

Dr Catalin Frosin, Lorenzo Bonechi

18:50

17:50

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 2 | **Convener:** Prof. Tommaso Dorigo

17:50-18:15

The scintillating fiber tracker of the Zirè detector onboard the NUSES satellite

Speaker

Dr Leonarda Lorusso

18:15

Thursday 24 July

09:30

10:00

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Dr Catalin Frosin

09:30-10:00

Search for dark matter-related features in the Galactic gamma-ray energy spectra

Speaker

Francesco Loparco

Monday 28 July

11:00

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Prof. Yanxi Zhang

11:00-11:25

The SABRE South Experiment at the Stawell Underground Physics Laboratory

Speaker

Dr Irene Bolognino

11:25

Tuesday 29 July

17:00

17:25

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Prof. Larissa Bravina

17:00-17:25

Mass Composition Studies at the Pierre Auger Observatory

Speaker

Nikolas Denner

Wednesday 30 July

09:00

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Prof. Vladimir Dzhunushaliev

09:00–09:30

Vacuum energy reduction by massless scalar field

Speaker

Elena Arbuzova

10:00

09:30–10:00

AEgIS experiment: recent developments and upgrades

Speaker

Kamila Marta Kempny

17:00

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | **Location:** Room 1 | **Convener:** Prof. Elena Arbuzova

17:00–17:30

Dilaton in a Deformed Gross-Neveu Model

Speaker

Prof. Gordon Semenoff

17:55

17:30–17:55

Born–Infeld type tachyonic dark energy model revisited with Pantheon+

Speaker

Balazs Kacskovics

Thursday 31 July

09:05

Cosmology, Astrophysics, Gravity, Mathematical Physics

Session | Location: Room 1

09:05–09:30

Review of requirements and possible solutions for the Input Mode Cleaner of the Einstein Telescope Interferometers

Speaker

Antonino Chiummo

09:30