

Sesto Incontro Nazionale di Fisica Nucleare

Monday, 26 February 2024 - Wednesday, 28 February 2024

Trento
Programme

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Monday, 26 February 2024

Welcome from. TIFPA Director, Presidents of the 3 commissions: Welcome (08:30 - 09:00)

TIFPA Director, Presidents of the 3 commissions

Hadronic Physics II (09:00 - 10:30)

-Conveners: Alessia Fantini

time	title	presenter
09:00	Exploring the multidimensional structure of the nucleon (Invited)	PAPPALARDO, Luciano Libero
09:30	Mass spectra and electromagnetic decays of single bottom baryons	RIVERO ACOSTA, Ailier
09:50	Open heavy-flavour production from the high-mass dilepton spectrum in pp collisions with ALICE	PENNISI, Michele
10:10	AI application to hadron spectroscopy	SPREAFICO, Marco

Coffee (10:30 - 10:50)

Nuclear Astrophysics II (10:50 - 12:40)

-Conveners: Alessandro Roggero

time	title	presenter
10:50	Cosmological and stellar nuclear processes (Invited)	VILLANTE, Francesco Lorenzo
11:20	A new underground measurement of the $^{14}\text{N}(p,\gamma)^{15}\text{O}$ reaction at Bellotti Ion Beam Facility	COMPAGNUCCI, Alessandro
11:40	Neutron capture and total cross-section measurements on 94,95,96Mo at n_TOF and GELINA	MUCCIOLA, Riccardo
12:00	Effects of nuclear matter properties in neutron star mergers	GUERCILENA, Federico Maria
12:20	Results of $^{20}\text{Ne}(p,\gamma)^{21}\text{Na}$ and status of $^{21}\text{Ne}(p,\gamma)^{22}\text{Na}$ reaction at Laboratory for Underground Nuclear Astrophysics (LUNA) experiment	CASABURO, Fausto
12:25	Modification of ^7Be β -Decay Rates in Laboratory Magnetoplasma and Perspectives for the PANDORA Facility	MISHRA, Bharat
12:30	Nucleosynthesis of light and iron group elements in the ejecta of binary neutron star mergers	CHIESA, Leonardo
12:35	Flash Q&A	

Lunch on site & Poster Session (12:40 - 14:20)

Quark Gluon Plasma I (14:20 - 15:30)

-Conveners: Giuseppe Eugenio Bruno

time	title	presenter
14:20	From soft to hard observables: recent experimental results from ALICE (Invited)	FIONDA, Fiorella Maria Celeste
14:50	NA60+: an overview of the experiment at the CERN SPS	MULLIRI, Alice
15:10	New insights on strange quark hadronization measuring multiple strange hadron production in small collision systems with ALICE	PUCILLO, Sara

Nuclear Structure and Reactions I (15:30 - 16:45)**-Conveners: Winfried Leidemann**

time	title	presenter
15:30	Nuclear response and decay processes within beyond mean-field methods (Invited)	GAMBACURTA, Danilo
16:00	Nuclear fusion reaction cycles: new prospects	FORTUNATO, Lorenzo
16:20	Cluster Effective Field Theory calculation of electromagnetic breakup reactions with Lorentz Integral Transform method	CAPITANI, Ylenia
16:25	Evolution of the mixing between single-particle and intruder configurations approaching the island of inversion at N=20: lifetimes in ^{37}S	ZAGO, Luca
16:30	LYSO calorimeters for searching ^{176}Lu electron capture decay	NICOLAIDIS, Riccardo
16:35	Flash Q&A	

Coffee (16:45 - 17:05)**Applications of Nuclear Physics III (17:05 - 18:25)****-Conveners: Cristina Vaccarezza**

time	title	presenter
17:05	Fundamental research and applications with the EuPRAXIA facility at LNF (Invited)	PISANO, Silvia
17:35	Primary particles tracking integrated with secondary radiation detectors for next generation of ion beam delivery system	MAS MILIAN, Felix
17:55	The ARCADIA Depleted Monolithic Active Pixel: characterization and prospects for high precision tracking systems at future colliders	PANTOUVAKIS, Caterina
18:00	Studies on MAPS devices for medical applications.	TORRES RAMOS, Arianna Grisel
18:05	Bulk MgB ₂ superconductor for Nuclear Physics experiments	BARION, Luca
18:10	Flash (3+Q&A)	

Visit at Protontherapy Center (18:30 - 19:45)

Tuesday, 27 February 2024

Quark Gluon Plasma I (08:30 - 10:20)

-Conveners: Enrico Scomparin

time	title	presenter
08:30	Recent theory developments on the physics of Quark-Gluon Plasma (Invited)	PAROTTO, Paolo
09:00	Constraining the formation mechanisms of light (anti)nuclei with ALICE at the LHC and applications for cosmic ray physics	MALFATTORE, Giovanni
09:20	Development of the ALICE Inner Tracking System 3	RICCI, Riccardo
09:40	A novel SiPM-based aerogel RICH detector for the future ALICE 3 apparatus at LHC	NICASSIO, Nicola
10:00	SiPMs in direct detection of charged particles: response and timing performance for the future ALICE 3 at LHC	SABIU, Bianca
10:05	Measurement of azimuthal anisotropy in coherent p_0 photoproduction in ultra-peripheral Pb–Pb collisions with ALICE	RIFFERO, Andrea Giovanni
10:10	First results on Timing Performance of Monolithic sensors with additional gain for the future ALICE 3 experiment	GIOACHIN, Giulia
10:15	Flash Q&A	

Coffee (10:20 - 10:40)

Nuclear Structure and Reactions I (10:40 - 12:25)

-Conveners: Carlotta Giusti

time	title	presenter
10:40	Nuclear physics at LNS: recent results and future perspectives (Invited)	TUMINO, Aurora
11:10	The AGATA campaign at LNL	BOTTONI, Simone
11:30	The three-nucleon correlation function	KIEVSKY, Alejandro
11:50	Multi-channel analysis of the $^{18}\text{O} + ^{48}\text{Ti}$ reaction at 275 MeV within the NUMEN project	BRISCHETTO, Giuseppe Antonio
12:10	Recent results on clustering investigation from the CHIRONE collaboration	RISITANO, Fabio
12:15	Emergence of triaxiality in ^{74}Se from electric monopole transition strengths	MARCHINI, Naomi
12:20	Flash Q&A	

Lunch (12:25 - 13:40)

Nuclear Astrophysics II (13:40 - 14:50)

-Conveners: Massimo Mannarelli

time	title	presenter
13:40	Study of reactions of astrophysical interest with indirect methods (Invited)	GUARDO, Giovanni Luca
14:10	Dark matter effects on the thermal properties of the neutron star	DAS, Harish Chandra
14:30	Direct and Indirect measurement of $^{22}\text{Ne}(\alpha,\gamma)^{26}\text{Mg}$	MERCOGLIANO, Daniela
14:35	Glitches in rotating supersolids	TRABUCCO, Silvia
14:40	Effect of thermal composition fluctuations in quark nucleation	GUERRINI, Mirco

14:45	Flash Q&A	
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Hadronic Physics II (14:50 - 16:05)

-Conveners: Elena Santopinto

time	title	presenter
14:50	Hadron spectroscopy in the light sector: the on-going experimental programs. (Invited)	LANZA, Lucilla
15:20	Overview and performance of the ePIC Silicon Vertex Tracker	KUMAR, Shyam
15:40	Jefferson Labs secondary beams for nuclear physics	GRAZZI, Stefano
15:45	Silica aerogel characterization for the ePIC dRICH detector	ALTAMURA, Anna Rita
15:50	A large-area prototype SiPM readout plane for the ePIC-dRICH detector at the EIC: realisation and beam test results	RUBINI, Nicola
15:55	Characterization of the photosensor and performance studies for the dRICH detector of the ePIC experiment at the future Electron-Ion Collider	OCCHIUTO, Luisa Rosa Maria
16:00	FLASH (Q&A)	

Coffee (16:05 - 16:25)

Applications of Nuclear Physics III (16:25 - 17:50)

-Conveners: Francesco Tommasino

time	title	presenter
16:25	Quantum Computing for Nuclear Physics (Invited)	ROGGERO, Alessandro
16:55	Imaging methods for in-vivo Boron Neutron Capture Therapy	FERRARA, Nicola
17:15	A model for particle beams response at Ultra-High Dose Rate including LET and oxygenation interplay effects	BATTESTINI, Marco
17:20	A unique model to accurately describe low and high LET particle beam biological response	BORDIERI, Giulio
17:25	Measurements of the Birks-Onsager quenching parameters for the LYSO scintillator.	LEGA, Alessandro
17:30	FLASH (Q&A)	

Muse Guided Tour (18:00 - 19:30)

meeting with INFN President (19:30 - 20:00)

Social Dinner at MUSE (20:00 - 22:30)

Wednesday, 28 February 2024

EPS: EPS Overview (08:30 - 09:00)

-Conveners: Marzia Nardi

time	title	presenter
08:30	The European Physical Society and its Nuclear Physics Division (Invited)	FANTONI, Alessandra

Symmetries and Fundamental Interactions (09:00 - 10:50)

-Conveners: Luca Girlanda

time	title	presenter
09:00	The X17 boson anomaly: overview and forthcoming experiments (Invited)	GUSTAVINO, Carlo
09:25	The CERN Antimatter Factory: testing the Equivalence Principle, the CPT symmetry, and beyond (Invited)	CARAVITA, Ruggero
09:50	The status of the FAMU experiment	MOCCHIUTTI, Emiliano
10:10	Kaonic atoms at the DAFNE Collider in Italy: a strangeness Odyssey	DE PAOLIS, Luca
10:30	Momentum dependent nucleon-nucleon contact interactions and their effect on p-d scattering observables	FILANDRI, Elena

Coffee (10:50 - 11:10)

Applications of Nuclear Physics III (11:10 - 13:05)

-Conveners: Maria Giuseppina Bisogni

time	title	presenter
11:10	Radionuclides: state of the art, INFN research and perspectives in production and medical applications (Invited)	PUPILLO, Gaia
11:40	Nuclear fragmentation cross sections measurements: the FOOT experiment	DONG, Yunsheng
12:00	A method to predict space radiation biological effectiveness for Galactic Cosmic Rays and intense Solar Particle Events	RAMOS, Ricardo Luis
12:20	XpCalib: a proton computed tomography system for proton treatment planning	FOGAZZI, Elena
12:40	Theoretical simulations for innovative nuclear medicine applications: cyclotron production of the theranostic radionuclides ^{47}Sc and ^{155}Tb	BARBARO, Francesca
12:45	Development of a β imaging detector tailored to Ag-111 for the ISOLPHARM project	SERAFINI, Davide
12:50	Cross-section measurements of different reactions leading to the production of ^{155}Tb for medical applications	COLUCCI, Michele
12:55	Flash Q&A	

Closing Remarks (13:05 - 13:25)