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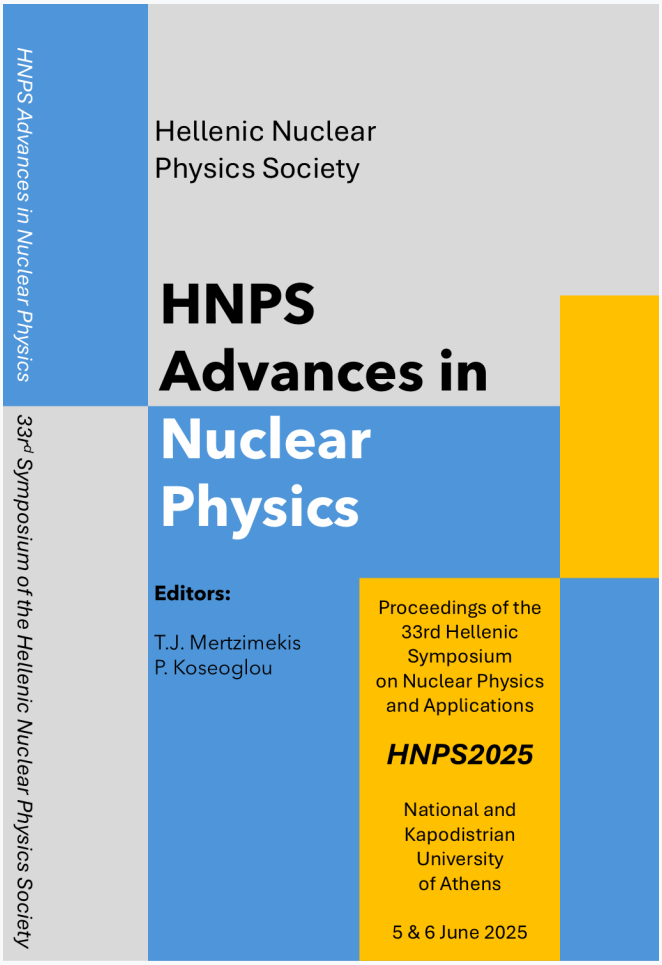

HNPS2025 Editorial

Theo Mertzimekis

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HNPS25

33rd Annual Symposium of the Hellenic Nuclear Physics Society

6 and 7 June 2025

National and Kapodistrian University of Athens

Program

HNPS2025

ANNUAL SYMPOSIUM OF THE HELLENIC NUCLEAR PHYSICS SOCIETY

6 AND 7 JUNE 2025

Department of Physics, Zografou Campus, Athens, Greece

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Local Organizing Committee

Theo J. Mertzimekis • Pavlos Koseoglou • Polytimos Vasileiou • Margarita Efstathiou

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PROGRAM

Program of the 33rd Annual Symposium of the Hellenic Nuclear Physics Society

Friday 06/06/2025	
8:30	**Registration**
9:00	**Welcome Addresses**
Session 1 *Chair: Ch. C. Moustakidis*	
9:30	D. Bonatsos - Triaxial Shapes in Atomic Nuclei
9:50	P. Vasileiou - Exploring Triaxial Deformation in Ground and γ Bands of Even-Even Er Isotopes
10:10	K. E. Karakatsanis - Shape transitions and collective behaviour of Er and Yb isotopes based on relativistic energy density functional theory
10:30	V. Prassa - A Bayesian Network-Based Framework for Predicting Fission Charge Yields
10:50	**Coffee break**
Session 2 *Chair: M. Kokkoris*	
11:10	V. Michalopoulou - Study of the ^{235}U(n,f) reaction in the energy region 1 to 100 eV
11:30	N. Kyritsis - Measurement of the ^{243}Am(n,f) reaction cross-section at the n_TOF facility at CERN
11:50	A. Skouloudaki - Cumulative Yield measurements from ^{235}U(n_{th},f) with the FIPPS detector
12:10	Z. Bari - Cross Section Measurements of Neutron Induced Reactions on Mo Isotopes
12:30	K. Kaperoni - Diamond Detector Development for Neutron Measurements in Harsh Environmental Conditions
Poster session	
12:50	**Light lunch and Poster session**
Session 3 *Chair: D. Bonatsos*	
14:50	Ch. C. Moustakidis - Implications of Kaon Condensation in Dense Nuclear Matter for Recent Light Compact Star Observations
15:10	P. S. Koliogiannis - Nuclear Signatures and Stellar Observables: Bridging Terrestrial Experiments and Neutron Star Structure
15:30	A. Kanakis-Pegios - Investigating isovector properties of finite nuclei through neutron stars
15:50	D. Papoulias - Inelastic neutrino-nucleus scattering using a hybrid nuclear model
16:10	**Coffee break**
Session 4 *Chair: A. Ioannidou*	
16:30	M. Kokkoris - Study of Fundamental Channeling Parameters in a Diamond Crystal Using Deuterons and Combining the EBS and NRA Ion Beam Analysis Techniques
16:50	A. Kanellakopoulos - GAMMA-MRI: A Molecular Imaging modality using anisotropic gamma emission from hyperpolarised nuclei
17:10	G. Kumar - Advances in Radon Based Earthquake Forecasting using Sensor Networking
17:30	Z. Maniati - Studying temporal trends of radionuclides' and chemical concentrations accumulated at the North Cretan Basin, Greece
17:50	C. Tsabaris - The development of a detection system to inspect suspicious nuclear objects in ships's hul in the frame of the EU UnderSEC project
18:10	**Short break**
18:15	**HNPS General Assembly and Elections**
20:30	**Conference Dinner**

Saturday 07/06/2025	
Session 5 *Chair: G. Souliotis*	
10:00	P. Koseoglou - Gamma-spectroscopy on the well-deformed ^{178}Yb
10:20	A. Martinou - Future perspectives of the proxy-SU(3) symmetry
10:40	K. Gkatzogias - Multinucleon transfer mechanisms in peripheral collisions of ^{40}Ar + ^{64}Ni at 15 MeV/nucleon
11:00	E. Kontogianni - Multinucleon Transfer in Peripheral Collisions of ^{64}Ni on ^{64}Ni at 25 MeV/nucleon
11:20	O. Fasoula - Multinucleon Transfer Channels in ^{86}Kr + ^{64}Ni peripheral collisions at 15 and 25 MeV/nucleon
11:50	**Coffee break**
Session 6 *Chair: P. Koseoglou*	
12:20	I. Kaissas - Analysis of SMR behavior during normal operation procedures and malfunction events using IAEA's IPWR simulation
12:40	N. G. Nicolis - Progress in Modeling Proton Reactions on Natural Silicon Targets
13:00	M. Peoviti - Preliminary results of (p,γ) and (α,γ) reaction cross-sections on ^{73}Ge relevant to nuclear astrophysics
13:20	E. Mitsi - *In-situ* observation of radiation damage saturation in ion irradiated Fe thin films
13:40	**Closing Remarks for HNPS25**

Poster contributions

Poster session: Friday 06/06/2025 12:50	
P-1	A. Pakou - Abnormal large reaction cross sections for weakly bound nuclei at deep sub-barrier energies
P-2	M. Lizardou - Calculations of water activation in fission reactors using Monte Carlo simulations
P-3	A. Tasiopoulou - Analysis of historical events using sediment cores and nuclear methods
P-4	E. Kapsokoli - Soil Radioactivity in urban parks of Piraeus
P-5	S. Zonitsas - Development and Evaluation of a new Proton Irradiation Experimental Set-up for Radiobiological Experiments using Human Cells
P-6	K. Palli - Reaction mechanism for $^{8}B+^{nat}Zr$ at the sub-Coulomb energy of 26.5 MeV
P-7	E. Karpouza - Evaluation of Environmental Radioactivity in Thessaly after Storm Daniel: A Pilot Study
P-8	R. Kourgiantakis - Study of Point Defects due to Ion Irradiation in the CrMnFeCoNi High Entropy Alloy
P-9	E. Travlou - Multinucleon transfer in peripheral collisions of ^{86}Kr on ^{208}Pb at 25 MeV/nucleon
P-10	M. Efstathiou - Ground-state lifetime measurements in Tellurium decay chains: Method and Results
P-11	S. Koulouris - Elastic Scattering of Medium-Mass Heavy-Ions and the Compressibility of the Nuclear Equation of State
P-12	N. Giannakou - Neutron Activation Cross Section Measurement of the (n,2n) Reaction on ^{203}Tl at 14.6 MeV
P-13	K. Topalis - Investigating the nuclear structure of $^{116,118}Te$
P-14	Ch. Giannitsa - Investigation of α-cluster Transfer in Peripheral Collisions of ^{40}Ca (12.3 MeV/nucleon) + ^{27}Al using the MARS Spectrometer at Texas A&M
P-15	S. Karachristos - Study of Deuteron-Induced Reactions in ^{18}O in the Framework of NRA
P-16	A. Violanti - Gamma-ray spectroscopic analysis around the N=104 mid-shell for $^{176,177}Yb$ and ^{182}W nuclei
P-17	A. Karakaxi - Time-of-Flight Neutron Transmission Measurements on ^{nat}Cu at the GELINA Facility
P-18	G. Apostolopoulos - OpenTRIM: an open source Monte-Carlo simulation code for ion transport in materials
P-19	M. Karlatira - Measurement of the $^{234}U(n,f)$ cross-section with Micromegas Detectors
P-20	D. A. Papadopoulos - Investigation of the Yb and W isotopic chains using the confined β-soft rotor model
P-21	K. Konstantinidis - Measurement of the differential cross sections of the $^{24}Mg(p,p'\gamma)$ reaction at three detection angles relevant to the PIGE technique
P-22	A. Lymperopoulos - Hauser-Feshbach studies of α-capture reactions in molybdenum isotopes
P-23	N. Pouris - Flux Determination of the 17MeV quasi-monoenergetic Neutron Beam at NCSR “DEMOKRITOS” using the Multiple Foil Activation technique
P-24	E. Bampaloukas - Setup and calibration of in-situ gamma-ray spectrometer for marine applications
P-25	I. Tsormpatzoglou - Characterization of BC501A Liquid Scintillator for Neutron-Gamma Discrimination using the Pulse Shape Analysis Technique

P-26	D. P. Nikou - Estimation of cross section for proton-induced reactions in stable Yb isotopes at astrophysical energies
P-27	S. K. Roumelioti - Calibration of CZT detector systems for laboratory measurement of marine sediment
P-28	G. Andrianopoulos - Design and operation of an Inertial Electrostatic Confinement Fusion Device (FUSOR)
P-29	A. Kalamara - Simulations for Optimization of Proton Dose Delivery Using the Advanced Markus Chamber
P-30	T. Schizas - Development and construction of an Arduino-based Geiger-Müller detector for radiation monitoring applications