Poster programme

Poster Session A
Monday 29 July, Halls 1 and 2

P01  Studies of low-energy $K^-$ interactions with light nuclei by AMADEUS
Raffaele Del Grande, INFN-LNF, Italy

P02  Imaging of prompt gamma emissions during proton cancer therapy for geometric and dosimetric verification
Hamed Alshammari, University of Liverpool, UK

P03  Electric Monopole Transitions (E0) in the study of $^{70}$Ge
Abraham Aungwa Avaa, iThemba Labs, South Africa

P04  Development of a spectrometry system for measurement of internal-pair studies
Maluba Vernon Chisapi, iThemba Labs and Stellenbosch University, South Africa

P05  Infrastructure ACI fabric based on EVPN MPBGP data transfer protocols for Tier 1 and Tier 2 data centers
Andrey Baginyan, JINR, Russia

P06  A compact RFQ cooler buncher for CRIS experiments
Ben Cooper, University of Manchester, UK

P07  Novel experiments with ion catcher facilities
Timo Dickel, GSI Helmholtz Center for Heavy Ion Research, Germany

P08  Performance test of 200 µm Scintillation-Fiber Detector with Silicon Photomultiplier Readout
Ashton Falduto, Technische Universität Darmstadt, Germany

P09  Development of a photon polarimeter prototype
Simon Gardner, Glasgow University, UK

P10  Efficiency investigation of wide area gas proportional counter in relationship with pressure and type of filled gas
Seyedmohammad Golgoun, Pars Isotope Co., Iran

P11  The neutrino self-interaction and MSW effects on the neutrino-process for supernovae
Myung-Ki Cheoun, Soongsil University, Republic of South Korea

P12  Towards renormalization invariant equation of state of nuclear matter
Mehdi Drissi, University of Surrey, UK
P13  Investigation of high-lying ($\alpha,\gamma$) resonances in 22Ne through one-neutron transfer in inverse kinematics with SHARC/TIGRESS
Stephen Gillespie, TRIUMF, Canada

P14  Study of the excitation functions and isomer ratios for 184m,gRe and 186m,gRe isomeric pairs
Roza Avetisyan, A.Alikhanyan National Science Laboratory, Armenia

P15  Isospin influence on the reaction mechanisms in the $^{78}$Kr+$^{40}$Ca and $^{86}$Kr+$^{48}$Ca collisions at 10 AMeV
Gnoffo Brunilde, INFN Sez. di Catania and Università degli Studi di Catania, Italy

P16  First advanced studies of isospin dynamics with FAZIA
Alberto Camaiani, Università degli Studi and INFN di Firenze, Italy

P17  On evaluating correction to the surface energy of the nuclei due to the surface curvature and its influence on the orientation effects in fusion reactions
Kostyantyn Cherevko, Taras Shevchenko National University of Kyiv, Ukraine

P18  On nuclear fragmentation at the intermediate energy head-on heavy ion collisions
Kostyantyn Cherevko, Taras Shevchenko National University of Kyiv, Ukraine

P19  Fission rate of excited nuclei at variable friction in the energy diffusion regime
Maria Chushnyakova, Omsk State Technical University, Russia

P20  Isomeric cross section ratios data as a test for codes descriptive of nuclear reactions
Tatjana Chuvilskaya, Moscow State University, Russia

P21  Isospin triplet A=12: search for states with enhanced radii
Andrey Danilov, Kurchatov Institute, Russia

P22  Cosmic ray, meteorites, planetology: which spallation reactions modeling is helpful?
Jean-Christophe David, CEA, France

P23  Estimate of breakup-induced three-body force effects in the incident channel of (d,p) reactions
Michael Dinmore, University of Surrey, UK

P24  Isospin Effect on fragment production and reaction mechanisms for Ni+Ca systems at 25 AMeV
Elena Geraci, University of Catania and INFN Catania, Italy

P25  Influence of angular momentum induced shape transitions on level density and emission spectra
Mamta Aggarwal, University of Mumbai, India

P26  Decay spectroscopy of the proton rich isotopes 176,177Tl
Muneerah Alaqeel, University of Liverpool, UK

P27  Quasi-free scattering off neutron-rich ions at relativistic beam energies at R3B
Tahani Almusidi, University of York, UK

P28  Bogoliubov many-body perturbation theory
Pierre Arthuis, University of Surrey, UK

P29  Investigations of the bound and unbound 2+ states in $^{20}$C
Liam Atkins, Department of Physics, UK
P30 Exploring the triaxial deformation of $^{163}$Ta through plunger lifetime measurements
Liam Barber, University of Manchester, UK

P31 Evolving shapes and shape coexistence in the neutron-deficient selenium isotopes studied by Coulomb excitation
Kevin Belvedere, University of Surrey, UK

P32 Interplay between single particle and collective excitation in $^{49}$V
Abhijit Bisoi, Indian Institute of Engineering Science and Technology, India

P33 Gamma ray and conversion electron decay spectroscopy of neutron-rich francium isotopes
Michael Bowry, University of the West of Scotland, UK

P34 Discovery of the new nuclides 1600s and 156W
Andrew Briscoe, University of Liverpool, UK

P35 Half-life measurements in $^{164}$Dy and $^{166}$Dy using the NuBALL Spectrometer
Rhiann Canavan, University of Surrey, UK

P36 A quest for the two-photon gamma-decay physics-case and a commissioning test for ELIGANT
Luigi Capponi, Extreme Light Infrastructure -Nuclear Physics, Romania

P37 Lifetime of excited states in $^{228}$Th following $\beta$-decay and systematics of its octupole deformation
Muhammad Majid Rauf Chishti, University of the West of Scotland, UK

P38 Structures at the neutron drip-line: probing the halo nature of 19B using Coulomb breakup
Kaitlin Cook, Tokyo Institute of Technology, Japan

P39 Precision fast-timing measurements in neutron-deficient Po isotopes at IFIN-HH
Cristian Costache, IFIN-HH, Romania

P40 Neutron occupancies of neutrinoless double-beta decay candidate nuclei
Benjamin Cropper, University of Manchester, UK

P41 Signals of a new symmetry in atomic nuclei
Jozsef Cseh, Institute for nuclear research of the Hungarian academy of sciences, Hungary

P42 SRC based model for the nuclear structure
Ranjeet Dalal, Guru Jambheswar University, India

P43 Lifetime measurement and decay spectroscopy of $^{117,118}$Sn
Sangeeta Das, Saha Institute of Nuclear Physics, India

P44 Nuclear Structure properties significant to neutrino-less double beta decay of $^{124}$Sn
Vivek Datar, TIFR, India

P45 $^{81}$Ga spectroscopy: probing 78Ni neutron-core excitations
Jérémie Dudouet, CSNSM, France

P46 Nuclear incompressibility from spherical and deformed nuclei
Gianluca Colò, Università degli Studi di Milano, Italy

P47 Teaching university physics to students from different school systems: Australia’s state-based education
Paul Fraser, UNSW Canberra, Australia
P48 Photocouplings of hidden-charm pentaquarks
Roelof Bijker, ICN-UNAM, Mexico

P49 Beam asymmetries from light scalar meson photoproduction on the proton at GlueX
Stuart Fegan, George Washington University, USA

P50 Simulation of a neutron source at the KFSH&RC CS-30 cyclotron
Shaykhah Alsaidan, King Saud University, Saudi Arabia

P51 Position reconstruction of gamma ray interactions in monolithic scintillators
Faten Alsomali, University of York, UK

P52 Developments at AWE in support of the Comprehensive Nuclear-Test-Ban Treaty – Ultra sensitive measurements of airborne nuclear debris
Richard Britton, AWE, UK

P53 Development of a 3D position sensitive monolithic scintillation detector
James Brown, University of York, UK

Poster Session B
Tuesday 30 July, Halls 1 and 2

P54 Towards the X-ray measurement of kaonic deuterium at J-PARC
Tadashi Hashimoto, Japan Atomic Energy Agency, Japan

P55 Collectivity Studies in the Neutron-Deficient A=80 Region
Ryan Llewellyn, University of York, UK

P56 Momentum spectroscopy in neutron beta decay with NoMoS
Daniel Moser, Stefan Meyer Institute and OEAW, Austria

P57 Measurement of isospin mixing in the $\beta$ decay of $^{36}$K
Shloka Chandavar, Michigan State University, USA

P58 Subatomic nuclear activity in the Hydrogen based Rydberg matter state
Sveinn Ólafsson, Science Institute University of Iceland, Iceland

P59 Double beta decay and the quest for Majorana neutrinos
Jenni Kotila, University of Jyväskylä, Finland

P60 New generation $S = -2$ spectroscopy opened with active fiber target
Takeshi Harada, Kyoto University, Japan

P61 High energy gamma source and its applications
Chuangye He, China Institute of Atomic Energy, China

P62 The development of novel pulse shape analysis algorithms for the advanced gamma tracking array (AGATA)
Fraser Holloway, University of Liverpool, UK

P63 Imaging of prompt gamma emissions during proton therapy for geometric and dosimetric verification: NPTool simulation
Sarah Kalantan, University of Liverpool, UK
<table>
<thead>
<tr>
<th>Session No.</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P64</td>
<td>Stable ion beam experiments with the DRAGON recoil separator at TRIUMF</td>
<td>Uwe Greife, Colorado School of Mines, USA</td>
</tr>
<tr>
<td>P65</td>
<td>Low energy stopping power measurements of hydrogen and helium ions in light gases</td>
<td>Uwe Greife, Colorado School of Mines, USA</td>
</tr>
<tr>
<td>P66</td>
<td>Insights on the carbon burning at astrophysical energies by fast-timing gamma-particle coincident measurements</td>
<td>Marcel Heine, IPHC and Universite de Strasbourg, France</td>
</tr>
<tr>
<td>P67</td>
<td>Mass measurement of neutron-rich $^{122}$Rh, $^{123,124}$Pd and $^{125}$Ag nuclides with Rare RI Ring at RIBF in RIKEN</td>
<td>Hongfu Li, RIKEN, Japan</td>
</tr>
<tr>
<td>P68</td>
<td>Properties of rotating compact stars at different evolutionary stages</td>
<td>Sarmistha Banik, BITS pilani, India</td>
</tr>
<tr>
<td>P69</td>
<td>Rapid differentially rotating hot neutron stars within relativistic model</td>
<td>Sarmistha Banik, BITS pilani, India</td>
</tr>
<tr>
<td>P70</td>
<td>Experimental study of $^4n$ with $^8$He(p,2p) reaction</td>
<td>Siwei Huang, RIKEN Nishina Center, China</td>
</tr>
<tr>
<td>P71</td>
<td>Fission fragment mass distributions of Astatine isotopes within collective clusterization approach</td>
<td>Amandeep Kaur, Thapar Institute of Engineering and technology, India</td>
</tr>
<tr>
<td>P72</td>
<td>Investigation of fusion dynamics for reactions induced by Si isobars at similar Ec.m.</td>
<td>Amandeep Kaur, Thapar Institute of Engineering and technology, India</td>
</tr>
<tr>
<td>P73</td>
<td>Statistical and dynamical bimodality in fragmentation of finite nuclei</td>
<td>Swagata Malllik, Variable Energy Cyclotron Centre, India</td>
</tr>
<tr>
<td>P74</td>
<td>Scaling with deformation in the exotic medium mass region</td>
<td>Fnu Manju, IIT Roorkee, India</td>
</tr>
<tr>
<td>P75</td>
<td>Identification of gamma-ray vorticies with compton scattering</td>
<td>Tomoyuki Maruyama, Nihon University, Japan</td>
</tr>
<tr>
<td>P76</td>
<td>Width and shift of longitudinal momentum distribution in fragmentation process at intermediate energies</td>
<td>Sadao Momota, Kochi University of Technology, Japan</td>
</tr>
<tr>
<td>P77</td>
<td>Energy dependence of reaction cross section for $^{17}$Ne on proton target</td>
<td>Tetsuaki Moriguchi, University of Tsukuba, Japan</td>
</tr>
<tr>
<td>P78</td>
<td>New method to evaluate the averaged squared radius of the nuclei in the process of direct and isomer fission</td>
<td>Cristiana Oprea, JINR, Russia</td>
</tr>
<tr>
<td>P79</td>
<td>Cross sections of tagged neutron reactions with emission of charged particles</td>
<td>Cristiana Oprea, JINR, Russia</td>
</tr>
<tr>
<td>P80</td>
<td>Lifetime measurements beyond $^{132}$Sn with the $\nu$-ball array</td>
<td>Guillaume Häfner, CSNSM, France</td>
</tr>
</tbody>
</table>
P81 Developing techniques for lifetime measurements in the heavy elements
Jacob Heery, University of Liverpool, UK

P82 Coulomb excitation of 142Xe
Corinna Henrich, IKP TU Darmstadt, Germany

P83 Weak coupling of 1p1h states to platonic shapes in 208Pb
Andreas Heusler, Heidelberg, Germany

P84 Nuclear spectroscopy of r-process nuclei in the vicinity of N=126 by using KISS
Yoshikazu Hirayama, Wako Nuclear Science Center, Japan

P85 Investigation of 150Sm nuclear structure using the (p,t) reaction
Alina-Nicoleta Ionescu, Horia Hulubei National Institute for Physics and Nuclear Engineering (IFIN-HH), Romania

P86 Investigation of deuteron scattering from ¹³C at low energy
Shaheen Jazrawi, University of Surrey, UK

P87 Lifetime measurements of the non-yrast structure in 102Mo
Alison Bruce, University of Brighton, UK

P88 Investigating the structure properties of the low-lying states of 140Ba
Ahmed Khalil, National and Kapodistrian University of Athens, Greece

P89 Nuclear reactions in the storage ring ESR with EXL
Thorsten Kröll, TU Darmstadt, Germany

P90 g-factor measurement of the 11/2- isomeric state in ¹³³La
Md. Sazedur Rahaman Laskar, Tata Institute of Fundamental Research, India

P91 Quantitative analysis of tensor effects in the relativistic Hartree-Fock theory
Haozhao Liang, RIKEN and University of Tokyo, Japan

P92 Fast-timing studies in 214,216,218Po following the beta-minus decay of 214,216,218Bi isotopes at the ISOLDE Decay Station
Razvan Lica, IFIN-HH, Romania

P93 Nucleon occupancies of the A=124 neutrinoless double beta-decay system
Patrick MacGregor, University of Manchester, UK

P94 Shape coexistence in neutron deficient mercury isotopes
Andrew MacLean, University of Guelph, Canada

P95 Decay spectroscopy of neutron-rich molybdenum and implications for the ground-state properties of isobaric niobium isotopes
Aj Mitchell, Australian National University, Australia

P96 Unbound states of neutron-rich, even-even C isotopes
Silvia Murillo-Morales, University of York, UK

P97 Investigation of the Pygmy Dipole Resonance in photon scattering experiments
Miriam Müscher, University of Cologne, Germany
**Coulomb energy density functionals for nuclear systems**
Tomoya Naito, The University of Tokyo and RIKEN Nishina Center, Japan

**Role of pair-vibrational correlations in forming the odd-even mass difference**
Kai Neergård, Denmark

**Shape coexistence in the Pb region: A systematic study of the even-even 188-200Hg with GRIFFIN**
Bruno Olaizola, TRIUMF, Canada

**Outreach and engagement in Australia and the Indo-Pacific region**
Aj Mitchell, Australian National University, Australia

**Experimental constraint on the quantum number of \( \Lambda c(2765)^+ \)**
Changwoo Joo, University of Tokyo, Japan

**Studying neutron structure at Jefferson Lab through electron scattering off the deuteron, using CLAS12 and the Central Neutron Detector**
Paul Naidoo, University of Glasgow, UK

**Pulse shape discrimination capable plastic scintillator formulations with enhanced mechanical hardness**
Uwe Greife, Colorado School of Mines, USA

**Use of a broad energy germanium (BEGe) detector for tomographic interrogations of radioactive waste drum**
David Igwesi, University of Liverpool, UK

**TRITIUM: A real-time tritium monitor system for water quality assessment**
Marcos Martinez, Universidad de Valencia, Spain

**A versatile plastic neutron spectrometer for nuclear reaction and application: NArCoS**
Emanuele Vincenzo Pagano, INFN, Italy

**Hybrid Array of Gamma Ray Detectors (HAGRiD)**
Xesus Pereira-Lopez, University of York, UK

**Development of a photoionization mass spectrometer for 85Kr detection**
Holly Perrett, University of Manchester, UK

**Considerations on the composition and spectra of the secondary radiation fields inside the E1 experimental area at ELI-NP**
Radu Alin Vasilache, Bucharest Polytechnical University, Romania

**An implantation Diamond detector as a beam monitor for an intense radioactive ion beam**
Jennifer Sanchez Rojo, University of York, UK

**MIRACLS – The Multi Ion Reflection Apparatus for Collinear Laser Spectroscopy**
Simon Sels, CERN, Switzerland
P113 The SIDDHARTA-2 Apparatus for Kaonic Deuterium X-Ray Measurements at DAFNE
Marlene Tüchler, Stefan Meyer Institute for Subatomic Physics, Austria

P114 Optimising sensor geometry of a photodiode based detector for the direct detection of strontium 90 in groundwater
Graeme Turkington, University of Glasgow, UK

P115 Characterisation of the QADRO detector response at proton and electron beams
Radu Vasilache, Canberra Packard SRL, Romania

P116 Monte-Carlo simulation of ion distributions in a gas cell for multinucleon transfer reaction products at LENSFI A F spectrometer
Junying Wang, Chinese Academy of Sciences, China

P117 Fine optimization of SCRIT facility for short-lived nuclei experiment
Masamitsu Watanabe, RIKEN, Japan

P118 Silicon vertex tracker studies for a future electron-ion collider
Håkan Wennlöf, University of Birmingham, UK

P119 Commissioning and initial operation of the electromagnetic mass analyser (EMMA) at the TRIUMF ISAC-II Facility
Matthew Williams, TRIUMF, Canada

P120 Systematic study of pasta nuclei in neutron stars with families of the empirical nuclear equations of state
Kazuhiro Oyamatsu, Aichi Shukutoku University, Japan

P121 Impact of d* degree of freedom on nucleonic equation of state
Alessandro Pastore, University of York, UK

P122 Iterative gaussian process emulation for learning energy surfaces for the inner crusts of neutron stars
Matthew Shelley, University of York, UK

P123 The structure of proto-neutron stars using the variational method with explicit energy functionals taking account of the two-pion-exchange force
Kaoru Shoji, Waseda University, Japan

P124 Isovector effects in neutron stars
Anthony Thomas, University of Adelaide, Australia

P125 Energy dependence of the total cross sections for the reactions 4,6,8He + 28Si and 6,7,9,11Li + 28Si
Mikhail Naumenko, Joint Institute for Nuclear Research, Russia

P126 Study of fission dynamics by K x-ray measurement
Arindam Kumar Sikdar, Variable Energy Cyclotron Center, India

P127 The discovery of the surprising-large 88Zr thermal-neutron capture cross section
Nicholas Scielzo, Lawrence Livermore National Laboratory, USA

P128 Measuring fission prompt gamma multiplicities and energies with STEFF
Adhitya Sekhar, University of Manchester, UK
P129 Implementation of a “Known-Mass” three parameter neutron multiplicity technique to underpin the decommissioning of challenging waste stream material
Ryan Simpson, AWE, UK

P130 Fusion hindrance and pauli blocking in $^{58}$Ni + $^{64}$Ni
Alberto M. Stefanini, INFN, Italy

P131 Lifetime measurement of the $^{26}$O g.s. at SAMURAI
Sonja Storck, TU Darmstadt, Germany

P132 The application of chiral forces with the semi-local regularization in momentum space to the deuteron and 3H photodisintegrations
Vitalii Urbanevych, Jagiellonian University, Poland

P133 Analysis of the three pion production channel using machine learning techniques
Robert Wishart, Department of Physics and Astronomy, UK

P134 Quasi-elastic excitation function for $^{16}$O+$^{169}$Tm system: role of hexadecapole deformation
Abhishek Yadav, Jamia Millia Islamia, India

P135 Laser spectroscopy of neutron-deficient tin approaching 100Sn
Fredrik Parnefjord Gustafsson, KU Leuven, Switzerland

P136 Hartree-Fock and J Projection approach to K-Selection rule violation in $^{174}$Yb and $^{175}$Lu
Z. Naik, Institute of Physics, India

P137 Lifetime determination via the particle-$\gamma$ coincidence Doppler-shift attenuation method
Sarah Prill, University of Cologne, Germany

P138 Using $\alpha$-transfer reactions to populate new radioactive isotopes
Fitzgerald Ramirez, Universidad Nacional de Colombia, Colombia

P139 Fundamental properties of nuclear ground and isomeric states in neutron-deficient indium from laser spectroscopy
Christopher Ricketts, University of Manchester, UK

P140 Collectivity of $^{66}$Zn through Coulomb excitation
Marco Rocchini, INFN Florence, Italy

P141 Sub-nanosecond K-isomers in $^{178}$W
Matthias Rudigier, University of Surrey, UK

P142 Investigation of the Dipole Response of $^{58}$Ni and $^{60}$Ni
Jacqueline Sinclair, University of the West of Scotland, UK

P143 Coulomb Excitation of $^{222,224}$Rn
Pietro Spagnoletti, University of the West of Scotland, UK

P144 Probing single-particle and more complex configurations in $^{55}$Co and $^{55}$Ni
Mark Spieker, National Superconducting Cyclotron Laboratory, USA

P145 Shape coexistence of proton-rich mercury isotopes studied through $\beta$ decay
Marek Stryjczyk, KU Leuven, Belgium
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>P146</td>
<td>Lifetime measurements of excited $^{22}\text{O}$</td>
<td>Luke Tetley, University of York, UK</td>
<td></td>
</tr>
<tr>
<td>P147</td>
<td>Examining isospin symmetry via one- and two- nucleon knockout reactions</td>
<td>Sivahami Uthayakumaar, University of York, UK</td>
<td></td>
</tr>
<tr>
<td>P148</td>
<td>Suppressed and unsuppressed $E2$ branches in $^{78}\text{Ge}$ and neighboring nuclei</td>
<td>Anne Forney, University of Maryland, USA</td>
<td></td>
</tr>
<tr>
<td>P149</td>
<td>Testing isospin symmetry through Coulomb excitation of nuclei along $N=Z$</td>
<td>Kathrin Wimmer, University of Tokyo, Japan</td>
<td></td>
</tr>
<tr>
<td>P150</td>
<td>Investigation of the nuclear structure of $^{33}\text{Al}$ through beta-decay of $^{33}\text{Mg}$ to probe the island of inversion</td>
<td>Tammy Zidar, University of Guelph, Canada</td>
<td></td>
</tr>
<tr>
<td>P151</td>
<td>Mass-dependent cuts in longitudinal phase space</td>
<td>Peter Pauli, University of Glasgow, UK</td>
<td></td>
</tr>
<tr>
<td>P152</td>
<td>Analysis of 2 vector-meson photoproduction with CLAS12 at the Thomas Jefferson Laboratory, Virginia USA</td>
<td>Adam Thornton, University of Glasgow, UK</td>
<td></td>
</tr>
<tr>
<td>P153</td>
<td>Recent results for forward $J/\psi$ production in Pb–Pb Ultra-Peripheral Collisions at $\sqrt{s_{NN}} = 5.02$ TeV with the ALICE detector</td>
<td>Simone Ragoni, University of Birmingham, UK</td>
<td></td>
</tr>
<tr>
<td>P154</td>
<td>Measuring the skewness dependency of generalized parton distributions</td>
<td>Eric Voutier, Institut de Physique Nucléaire, France</td>
<td></td>
</tr>
<tr>
<td>P155</td>
<td>A generalised gamma spectrometry simulator for developing nuclide identification algorithms</td>
<td>Anthony Turner, University of Birmingham, UK</td>
<td></td>
</tr>
</tbody>
</table>