

34th Mazurian Lakes Conference on Physics: Frontiers in Nuclear Physics

PROGRAM

Sunday, September 6

OPENING SESSION

- 20:00 – 20:10 Conference Opening
- 20:10 – 21:00 W. Kutschera
Exploring the world with accelerator mass spectrometry

Reception

Monday, September 7

MORNING SESSION

- 08:45 – 09:15 W. Satuła
Frontiers in nuclear theory
- 09:15 – 09:45 H. Sakurai
Recent progress on Exotic nuclei at RIBF
- 09:45 – 10:15 M.J. Borge
Highlights from ISOLDE and the HIE-ISOLDE project
- 10:15 – 10:30 A. Drouart
The Super Separator Spectrometer: S3

COFFEE BREAK

- 11:00 – 11:25 O. Tesileanu
Nuclear physics with extreme electromagnetic fields at ELI-NP

- 11:25 – 11:50 I. Martel
ECOS-LINCE: a high intensity heavy-ion facility for nuclear structure and reactions
- 11:50 – 12:15 M. Wiescher
Underground laboratories for astrophysics
- 12:15 – 12:40 P. Butler
TSR: a storage

20:40 – 20:45 M. Ramdhane
Study of shape coexistence in the nucleus ^{98}Y

Tuesday, September 8

MORNING SESSION

08:45 – 09:15 R. Hix
The astrophysics of core-collapse supernovae

09:15 – 09:40 G. Martinez-Pinedo
The r process in compact binary mergers

09:40 – 10:05 J. Piekarewicz
The nuclear physics of neutron stars

10:05 – 10:30 R. Surman
R-process abundance pattern variations due to nuclear physics uncertainties

COFFEE BREAK

10:55 – 11:20 S. Nishimura
Properties of exotic nuclei identified at RIBF

11:20 – 11:45 R. Grzywacz
Reinventing the neutrons in beta decay experiments with VANDLE

11:45 – 12:10 A. G. 5799msworthy
Exploring exotic nuclei with the GRIFFIN Spectrometer at TRIUMF-ISAC

12:10 – 12:35 C. Domingo-

14:00 – 18:00 **Free afternoon**

SUPPER

EVENING SESSION

19:00 – 19:15 K. Miernik
Beta-delayed multineutron emission

19:15 – 19:30 L. Olivier
Single-particle states in neutron-rich copper isotopes

19:30 – 19:45 A. Caciolli
Nuclear astrophysics at LNL: the $^{25}\text{Mg}(\alpha,n)^{28}\text{Si}$ and $^{10}\text{B}(p,\alpha)^7\text{Be}$ cases

19:45 – 20:00 D. Trezzi
Nuclear cosmology deep underground

BREAK

20:15 – 20:30 J. Singh
New experiments demand for a more precise analysis of continuum spectrum in ^6He

20:30 – 20:35 H. Dapo
Determination of energy levels and half-lives of some p-rich nuclei (Ga, Sc, Pr) by photonuclear reactions

20:35 – 20:40 A. Rohilla
Shape transition in Pt nuclei; a study via lifetime measurement in ^{188}Pt

20:40 – 20:45 R. Najman
Investigation of the freeze-out configuration in the $^{197}\text{Au}+^{197}\text{Au}$ reaction at 23 A MeV

20:45 – 20:50 B. Wasilewska
Measurement of the phoswich cluster properties based on the test at the γELBE facility

Wednesday, September 9

MORNING SESSION

- 08:45 – 09:10 M. Karny
Modular Total Absorption Spectrometer as a tool for nuclear structure application measurements
- 09:10 – 09:35 P. Dendooven
Gamma ray emission tomography for nuclear safeguards
- 09:35 – 10:00 K. Nishio
Study for multi-nucleon transfer induced fission at JAEA
- 10:00 – 10:25 B. Jurado
Excitation-energy sorting in nuclear fission

COFFEE BREAK

- 10:55 – 11:20 B. Fornal
Exploring yrast structure near neutron-rich doubly-magic nuclei
- 11:20 – 11:45 F. Flavigny
From nucleon transfer cross sections to spectroscopy

SUPPER

EVENING SESSION

- 19:00 – 19:15 J. A. Briz Monago
Total Absorption Spectroscopy of fission fragments relevant for reactor antineutrino spectra determination
- 19:15 – 19:30 W. Luo
Production of medical radioisotopes by photonuclear reaction using ELI-NP gamma-ray beam
- 19:30 – 19:45 M. Diakaki
Measurement of the $^{236}\text{U}(n,f)$ cross section with the MicroMegas detector
- 19:45 – 20:00 S. Kowalski
Recent results from NA61/SHINE strong interaction physics programme

BREAK

- 20:15 – 20:30 C. Portail
Deep inelastic reactions at twice the Coulomb barrier
- 20:30 – 20:35 R. Frost
A novel double-bragg detector with digital signal processing for the event-by-event study of fission in actinide nuclei
- 20:35 – 20:40 M. Warda
Fission barrier of the superheavy isotope ^{266}Hs
- 20:40 – 20:45 A. Mercenne
Generalized Richardson of constant G pairing problem in Berggren basis
- 20:45 – 20:50 T. Furumoto
Approach to high-density nuclear matter via nucleus-nucleus elastic scattering

20:50-20:55 K. Kapoor
Alpha particle multiplicity in $^{16}\text{O}+^{194}\text{Pt}$ fusion-fission reaction

Thursday, September 10

MORNING SESSION

08:30 – 09:00 W. Catford
Spectroscopic studies of the $N=16/N=20/N=28$ shell gaps via (d,p) transfer

09:00 – 09:25 R. Orlandi
Transfer reactions with radioactive beams near $N=50$ and $N=82$

09:25 – 09:50 A. Moro
Recent developments for the calculation of elastic and non-elastic breakup of weakly-bound nuclei

09:50 – 10:15 N. Keeley
Strong coupling effects in near barrier heavy-ion elastic scattering

10:15 – 10:30 S. Marley
Testing Quantum Monte Carlo Overlap Functions in single nucleon transfer reactions of light nuclei

COFFEE BREAK

11:00 – 11:25 Z. Janas
Beta decay of ^8He studied with the Optical Time Projection Chamber

11:25 – 11:50 Y. Fujita
The $T_z=\pm 1 \rightarrow 0$ and $\pm 2 \rightarrow \pm 1$ mirror Gamow-Teller transitions in pf -shell nuclei

- 11:50 – 12:15 J. Perkowski
EAGLE array and conversion-electron spectrometers in study of K-isomers at Heavy Ion Laboratory in Warsaw
- 12:15 – 12:30 E. Strano
Detailed study of the $^{3,4}\text{He}$ production in the system $^7\text{Be}+^{58}\text{Ni}$
- 12:30 – 12:45 K. Sieja
Shell evolution and collectivity in the vicinity of ^{78}Ni
- 12:45 – 13:00 E. Sahin
Nuclear shell evolution toward ^{78}Ni

LUNCH

14:00 – 18:00

- 10:00 – 10:25 J. Gates
Alpha-gamma spectroscopy at the hot-fusion island
- 10:25 – 10:40 M. Kowal
Candidates for long-lived high-K ground-states superheavy nuclei

COFFEE BREAK

- 11:05 – 11:30 P. Greenlees
Shell structure in heavy nuclei
- 11:30 – 11:55 M. Block
Status and perspectives in Superheavy Elements research at GSI
- 11:55 – 12:15 K. Rykaczewski
Recent results and research plans on super heavy nuclei of Russia-US collaboration
- 12:15 – 12:30 S.A. Giuliani
Systematic of the fission properties of superheavy nuclei
- 12:30 – 12:55 P. Navratil
Ab Initio Unified Approach to nuclear structure and reactions

LUNCH

- 14:00 – 18:00 **Free afternoon**

SUPPER

EVENING SESSION

- 19:00 – 19:15 M. Zielińska
Evolution of deformation in neutron-rich Rb isotopes studied by low-energy Coulomb excitation
- 19:15 – 19:30 D. Doherty
Shape evolution in ^{100}Zr and ^{110}Ru studied by low-energy Coulomb excitation

- 19:30 – 19:45 K. Wrzosek-Lipska
Studying shape coexistence above $Z=82$ with Coulomb excitation at the REX-ISOLDE facility in CERN
- 19:45 – 20:00 K. Hadyńska-Klęk
Nuclear shapes in ^{42}Ca studied using Coulomb excitation
- BREAK*
- 20:15 – 20:30 T.E. Cocolios
Studying nuclear ground-state shape and structure evolution in the francium isotopes with high-resolution, high-sensitivity laser spectroscopy at the CRIS experiment in ISOLDE
- 20:30 – 20:45 T. Hagen
Lifetimes of excited states in neutron-rich fission fragments
- 20:45 – 21:00 P. Bączyk
Near-yrast excitations in nucleus ^{83}As : tracing the $vg_{9/2}$ orbital near ^{78}Ni region

Saturday, September 12

MORNING SESSION

- 08:30 – 08:55 M. Kowalska
Beta-NMR: from nuclear physics to biology
- 08:55 – 09:20 M. Cavallaro
Double charge-exchange reaction: a tool towards neutrinoless double beta-decay nuclear matrix elements
- 09:20 – 09:35 D. Carbone
Signatures of Giant Pairing Vibration in ^{14}C and ^{15}C nuclei
- 09:35 – 09:50 J. Bartel
On the possibility to observe new shape isomers in the Po-Th region

09:50 – 10:05

N. Cieplicka-Oryńczak

*The complex low-spin structures in 1-proton 1-neutron
nucleus ^{210}Bi studied in*