SPES 2014
Second International Workshop
26th - 28th May, 2014
Laboratori Nazionali di Legnaro (Padova), Italy

SCIENTIFIC PROGRAMME

Monday 26th May (afternoon)

13:30–14:00   Registration
14:00–14:20   Welcome, E. NAPPI, Executive Board of INFN

Chair: C. Fahlander (Lund University, Sweden)
14:20 – 16:20
14:20 – 14:50 Y. Blumenfeld (IPN, Orsay, France): Introduction to Physics with SPES Beams
14:50 – 15:20 G. Prete (INFN, LNL, Italy): Status of the SPES project
15.20 – 15:40 A. Andrighetto (INFN, LNL, Italy): The SPES Target Ion Source complex
15:40 – 16:00 M. Comunian (INFN, LNL, Italy): Up-grade of the ALPI post-accelerator
16:00 – 16:20 A. Russo (INFN, LNS, Italy): The Medium and High resolution mass separators for the SPES facility

16:20 – 16:40 Coffee Break

Chair: G. de France (GANIL, France)
16:40 – 18:50
16:40 – 17:10 F. Iachello (Yale University, USA): Scientific opportunities at SPES
17:10 – 17:30 A. Nannini (INFN, Firenze, Italy): Set-up for Coulomb-excitation measurements of Radioactive Ions
17:30 – 17:50 G. Benzoni (INFN, Milano, Italy): Beta Decay Spectroscopy at SPES
17:50 – 18:10 A. Gadea (IFIC, Valencia, Spain): Status of AGATA and the AGATA setup at the SPES ISOL Radioactive ion beam facility
18:10 – 18:30 A. Maj (IFJ PAN, Kraków, Poland): PARIS4SPES - A high-resolution scintillator array for medium- and high-energy gamma rays for experiments at SPES radioactive beams facility
18:30 – 18:50 L. Corradi (INFN, LNL, Italy): The Prisma Spectrometer: Status and perspectives

19:00   Bus to Padova
Tuesday 27th May (morning)

Chair: F. Iachello (Yale University, USA)  
9:00 – 10:40
09:00 – 09:25 A. Poves (UAM, Madrid, Spain): Take a walk to the neutron-rich side
09:25 – 09:50 A. Bracco (University of Milano, Italy): Facilities for Nuclear structure and reactions: a NuPECC view
09:50 – 10:15 R. A. Bark (iThemba Labs, Southafrica): The iThemba LABS Radioactive Beam Project
10:15 – 10:40 J. Benlliure (University of Santiago de Compostela, Spain): Nuclear excitations in nucleon removal processes

10:40 – 11:00 Coffee Break

Chair: P. Van Duppen (KU Leuven, Belgium)  
11:00 – 12:40
11:00 – 11:25 F. Azaiez (IPN, Orsay, France): ALTO: status and future prospects
11:25 – 11:50 T. Aumann (GSI, Germany): Status of FAIR and NUSTAR
11:50 – 12:15 M. Borge (CERN, Switzerland): The HIE-ISOLDE project and the day-one physics program
12:15 – 12:40 M. Lewitowicz (GANIL, France): Status and perspectives of the GANIL/SPIRAL2 facility

Tuesday 27th May (afternoon)

Chair: M. Borge (CERN, Switzerland)  
14:00 – 15:50
14:00 – 14:25 M. Colonna (INFN, LNS, Italy): Isospin effects in dissipative reactions
14:25 – 14:50 B. Rubio (IFIC, Valencia, Spain): Beta decay studies using the gamma Total Absorption Technique at present and future facilities: A personal point of view
14:50 – 15:10 J. J. Valiente Dobon (INFN, LNL, Italy): The Galileo project: Status and perspectives
15:10 – 15:30 D. Mengoni (University of Padova, Italy): The TRACE GASPARD project: Status and perspectives
15:30 – 15:50 E. V. Pagano (INFN, LNS, Italy): The FARCOS project: Status and perspectives

15:50 – 16:20 Coffee Break

Chair: M. Lewitowicz (GANIL, France)  
16:20 – 18:05
16:20 – 16:45 D. Vretenar (University of Zagreb, Croatia): Energy Density Functional Studies of Exotic Nuclear Structure
16:45 – 17:05 R. Raabe (KU Leuven Belgium): The ACTAR project at SPES: Status and perspectives
17:05 – 17:25 E. Bonnet (GANIL, France): The FAZIA project: Status and perspectives
17:25 – 17:45 F. Camera (University of Milano, Italy): LaBr3:Ce and new scintillators, status and perspectives
17:45 – 18:05 J. Nyberg (Uppsala University, Sweden): The NEDA project: Status and perspectives

18:10 – 19:10 Visit to the SPES project

19.30 Bus to restaurant Baretta (Social Dinner)

23.00 Bus to Padova
**Wednesday 28th May (morning)**

*SAC open session and Presentation of LOIs*

**Chair: T. Aumann (GSI, Germany)**

9:00 – 10:20

09:00 – 09:10 C. Gross (ORNL, USA): *Nuclear Structure of neutron-rich nuclei determined through beta decay spectroscopy of fission fragments*

09:10 – 09:20 T. Kurtukian-Nieto (CENBG and University of Bordeaux, France): *Measurement of the decay characteristics of nuclei around A=90 relevant to r-process nucleosynthesis*

09:20 – 09:30 A. Gottardo (IPN, Orsay, France): *Neutron Decay Spectroscopy at SPES*

09:30 – 09:40 R. Lozeva (IPHC, Strasbourg, France): *Nuclear Moment Studies with Galileo*

09:40 – 09:50 M. Zielinska (CEA, Saclay, France), D. Vernay (IPN, Orsay, France): *Exploring the Z=32 triaxiality corridor towards N=50 via safe coulomb excitation at SPES*

09:50 – 10:00 R. Raabe (KU Leuven, Belgium): *Shell structure in the vicinity of \(^{132}\)Sn with an active target*

10:00 – 10:10 W. Krolas (IFJ PAN, Kraków, Poland): *Entry distributions for fragments produced in deep-inelastic collisions with stable and radioactive beams*

10:10 – 10:20 E. Sahin (University of Oslo, Norway), D. Curien (IPHC, Strasbourg, France), J. Dudek (IPHC, Strasbourg, France): *Search for tetrahedral symmetry in neutron rich Xe-Ba nuclei*

10:20 – 11:00 *Coffee break*

**Chair: A. Vitturi (University of Padova, Italy)**

11:00 – 12:30

11:00 – 11:10 J. J. Valiente Dobón (INFN, LNL, Italy): *Spectroscopy studies around \(^{78}\)Ni and beyond N=50 via transfer and Coulomb excitation reactions*

11:10 – 11:20 M. Kmiecik (IFJ PAN, Kraków, Poland), G. Benzoni (INFN, Milano, Italy), D. Suzuki (IPN, Orsay, France): *Coulomb excitation tagged by beta decay: The onset of deformation in the n-rich Y isotopes*

11:20 – 11:30 D. Mengoni (University of Padova, Italy), G. de Angelis (INFN, LNL, Italy), M. N. Erduran (Istanbul Sabahattin Zaim University, Turkey): *Direct reactions at SPES to probe: Nuclear magicity at Z \approx 50 and N \approx 82, NN pairing and neutron capture cross section via the surrogate method*

11:30 – 11:40 G. Rainovski (University of Sofia, Bulgaria): *Study of proton-neutron balance of quadrupole-collective states of even-even neutron rich Te, Xe and Ba isotopes*

11:40 – 11:50 S. D. Pain (ORNL, USA): *Transfer reaction measurements at SPES for r-process nucleosynthesis*

11:50 – 12:00 G. Politi (INFN and University of Catania, Italy), E De Filippo (INFN, Catania, Italy), J.D. Frankland (Ganil, France), S. Pirrone (INFN,Catania, Italy), P. Russotto (INFN and University of Catania, Italy): *Isospin dependence of compound nucleus formation and decay*

12:00 – 12:10 B. Szpak (INP, Kraków, Poland), B. Fornal (INP, Kraków, Poland), S. Leoni (University of Milano, Italy): *Structure of Sb nuclei around \(^{132}\)Sn as a testing ground for realistic shell model interactions*

12:10 – 12:20 S. Leoni (University of Milano, Italy), A. Maj (IFJ PAN, Kraków, Poland): *Heavy-ion binary reactions as a tool for detailed gamma spectroscopy in exotic regions*

12:20 – 12:30 S. Leoni (University of Milano, Italy), B. Fornal (INP, Kraków, Poland): *Search for deformed oblate structures in \(^{96}\)Y by gamma spectroscopy and cluster transfer reactions with a \(^{95}\)Sr SPES beam*

12:30 – 13:10 Signature of the Italy-Poland LEA agreement (Prof. Giovanni Fiorentini, LNL Director – Prof. Marek Jezabek, Director General of the Institute of Nuclear Physics PAN – Prof. Adam Maj, Chair of the COPIN Council)
Wednesday 28th May (afternoon)

SAC open session and Presentation of LOIs

Chair: B. Fornal (IFJ PAN, Kraków, Poland)

14:20 – 16:00
14:20 – 14:30 E. G. Lanza (INFN, Catania, Italy), D. Mengoni (University of Padova, Italy): *Low-lying dipole excitation via nuclear probes in exotic nuclei*
14:30 – 14:40 D. Pierroutsakou (INFN, Napoli, Italy): *Study of the Dynamical Dipole mode with the SPES radioactive beams*
14:40 – 14:50 S. Barlini (INFN, Firenze, Italy): *Prompt collective oscillations with exotic beams*
14:50 – 15:00 E. Kozulin (JINR, Dubna, Russia): *Measurement of cross sections for the production of neutron rich heavy-nuclei using the beams of accelerated fission fragments*
15:00 – 15:10 E. Kozulin (JINR, Dubna, Russia): The search of double magic superheavy nucleus in the region of neutron shell at N=184
15:10 – 15:20 S. Szilner (University of Zagreb, Croatia), J. J. Valiente Dobón (LNL, Italy): *Neutron-rich heavy nuclei explored via multinucleon transfers*
15:20 – 15:30 L. Corradi (INFN, LNL, Italy): *Studies of pair transfer processes with the SPES beams*
15:30 – 15:40 P. Bednarczyk (IFJ PAN, Kraków, Poland): *High-spin gamma ray spectroscopy of heavy, octupole deformed Ac and Fr nuclei produced in fusion evaporation reactions with the intense A~90 Rb radioactive beams at SPES*
15:40 – 15:50 A. Di Pietro (INFN, LNS, Italy): *Study of cluster states using the Resonance Scattering Method with the SPES Beams*
15:50 – 16:00 L. Morelli (INFN and University of Bologna, Italy): *Projectile and Compound Nucleus Decay with light beams provided by SPES*

16:00 – 16:30 Coffee break

Chair: A. Olmi (INFN, Firenze, Italy)

16.30 – 18.10
16:30 – 16:40 T. Marchi (INFN, LNL, Italy): *Preequilibrium emission: a tool to study dynamic effects and clustering structure in exotic nuclei*
16:40 – 16:50 B. Melon (INFN Firenze, Italy): *Coulomb-excitation measurements in nuclei around 132Sn*
16:50 – 17:00 G. Casini (INFN, Firenze, Italy): *Isospin dynamics and thermodynamics in n-rich heavy-ion induced reactions*
17:00 – 17:10 G. Benzoni (INFN, Milano, Italy): *Study of the shell structure and order to chaos transition in warm rotating nuclei with the radioactive beams of SPES*
17:10 – 17:20 V. Modamio (INFN, LNL, Italy): *Shape coexistence in Kr isotopes towards N=60*
17:20 – 17:30 E. Vardaci (University of Napoli, Italy): *Probing the Island of Stability with SPES beams*
17:30 – 17:40 M. Milin (University of Zagreb, Croatia): *Spectroscopy of proton rich light nuclei with the radioactive 17F beam*
17:40—17:50 B. Fernandez Dominguez (University of Santiago de Compostela, Spain): *Direct Reactions with exotic nuclei in the r-process using an active target*

17:50 – 18:10 M. Taiuti (Head of INFN nuclear physics committee) *Closing Remarks*

18:20 Bus to Padova

Thursday 29th May (morning)

SAC closed session (Chair: T. Aumann (GSI, Germany))