



SPES 2010 International Workshop

INFN Laboratori Nazionali di Legnaro

15-17 November 2010

Villi meeting room

Scientific Program

MONDAY 15 November 2010

09:00 – 09:45 Registration

Chair: A. Covello (Napoli)

09:45 – 09:55 G. Fiorentini, *LNL Director* - Welcome

09:55 – 10:05 M. Lattuada, *LNS Director* - Welcome

10:05 – 10:15 G. Fortuna, *INFN Vice President* - Welcome

10:15 – 10:40 Perspectives in Nuclear Physics within INFN and the Long Range Plan of NuPECC
A. Bracco, *Chair of INFN Nuclear Physics Committee*

10:40 – 11:10 *Coffee break*

Chair: U. Dosselli (INFN)

11:10 – 11:50 The SPES Project
G. Prete, *INFN LNL*

11:50 – 12:15 Target & Ion Source
A. Andrichetto, *INFN LNL*

12:15 – 12:40 Beam Selection and Beam Transportation
L. Calabretta, *INFN LNS*

12:40 – 13:05 Post Acceleration and ALPI Upgrade
G. Bisoffi, *INFN LNL*

13:05 – 13:25 Radioprotection Activities
D. Zafiropoulos, *INFN LNL*

13:30 – 15:00 *L u n c h*

Chair: A. Vitturi (Padova)

15:00 – 15:30 Energy Density Functional Description of Exotic Nuclear Structure
D. Vretenar, *U. of Zagreb*

15:30 – 15:45 Self-Consistent Continuum Random Phase Approximation Calculations with Finite-Range Interactions
V. De Donno, *INFN Lecce*

15:45 – 16:00 Heavy-Ion Binary Reactions as a Tool for Detailed Gamma Spectroscopy in Exotic Regions (LOI)
S. Leoni, *INFN & U. of Milano*

16:00 – 16:15 Study of the Shell Structure in Warm Rotating Nuclei with Fusion Reactions Induced by Radioactive SPES Beams (LOI)
G. Benzoni, *INFN Milano*

16:15 – 16:30 Nuclear and Coulomb Excitations of Pygmy Dipole Resonance
E. Lanza, *INFN Catania*

16:30 – 17:00 *C o f f e e b r e a k*

Chair: S. M. Lenzi (Padova)

17:00 – 17:30 Shell Structure in ^{132}Sn Region with New Generation RIBs
A. Gargano, *INFN Napoli*

17:30 – 17:45 Coulomb-Excitation Measurements of Radioactive Ions (LOI)
B. Melon, *INFN Firenze*

17:45 – 18:00 Nuclear Moment Studies with Galileo (LOI)
R. Lozeva, *IPHC Strasbourg*

18:00 – 18:15 Structure of Sb Nuclei Around ^{132}Sn as a Testing Ground for Realistic Shell Model Interactions (LOI)
B. Szpak, *IFJ PAN Krakow*

18:15 – 18:30 Spectroscopy Studies around ^{78}Ni and beyond $N = 50$ Via Transfer and Coulomb Excitation Reactions (LOI)
J. J. Valiente Dobón, *INFN LNL*

18:30 *E n d*

TUESDAY 16 November 2010

Chair: K. H. Schmidt (GSI)

- 09:15 - 09:45 Yrast Spectroscopy near Doubly Magic ^{132}Sn and ^{208}Pb – Possibilities with Radioactive Beams
B. Fornal, *IFJ PAN Krakow*
- 09:45 – 10:00 Direct Reactions with the SPES Beams: Nuclear Magicity at $Z\sim 50$ $N\sim 82$. Neutron Capture Cross Section via the Surrogate Method (LOI)
D. Mengoni, *U. of West Scotland*
- 10:00 – 10:15 Study of Quadrupole-Collective Isovector Valence-Shell Excitations of Exotic Nuclei at SPES (LOI)
G. Rainovsky, *U. of Sofia*
- 10:15 – 10:45 Physics with Post-Accelerated ISOL Beams: the HIE-ISOLDE Program
Y. Blumenfeld, *CERN*
- 10:45 – 11:00 Search for Exotic-Octupole Deformation Effects in Neutron Rich Ce-Xe-Ba Nuclei (LOI)
E. Sahin, *INFN LNL*
- 11:00 – 11:30 *Coffee break*

Chair: J. A. Scarpaci (IPNO)

- 11:30 – 12:00 New Perspectives North to ^{78}Ni
D. Verney, *IPN Orsay*
- 12:00 – 12:15 Investigation of Critical Point Symmetries in Neutron Rich Nuclei (LOI)
D. Tonev, *INRNE Sofia*
- 12:15 – 12:30 Pair Transfer Processes in n-Rich Nuclei (LOI)
L. Corradi, *INFN LNL*
- 12:30 – 12:45 The Onset of Deformation in Neutron-Rich Yttrium Isotopes Studied by the Coulomb Excitation Tagged by the β -decay (LOI)
M. Kmiecik, *IFJ PAN Krakow*
- 12:45 – 13:00 Gamma Spectroscopy of Exotic Nuclei for $A\sim 80$ Region (LOI)
S. Ertürk, *U. of Nigde*
- 13:00 – 13:15 High Spin Gamma-Ray Spectroscopy of Heavy Octupole Deformed Ac and Fr Nuclei Produced in Fusion-Evaporation Reactions with the Intense $A\sim 90$ Rb Radioactive Beams at SPES (LOI)
P. Bednarczyk, *IFJ PAN Krakow*
- 13:30 – 15:00 *Lunch*

Chair: M. di Toro (LNS)

- 15:00 – 15:30 Symmetry Energy Effects in Heavy Ion Collisions at Low Energies
M. Colonna, *INFN LNS*
- 15:30 – 15:45 Isospin Dependence of Compound Nuclear Formation and Decay (LOI)
S. Pirrone, *INFN Catania*
- 15:45 – 16:00 Proton and Neutron Exchanges in Dissipative Collisions (LOI)
G. Casini, *INFN Firenze*
- 16:00 – 16:15 Projectile Break-Up and Compound Nucleus Decay with Light Neutron-Deficient
Provided by SPES (LOI)
G. Baiocco, *INFN & U. of Bologna*
- 16:15 – 16:30 Search for Isospin Effects on Nuclear Level Density (LOI)
A. Di Nitto, *INFN Napoli*
- 16:30 – 17:00 *Coffee break*

Chair: G. de France (GANIL)

- 17:00 – 17:15 Pre-Equilibrium Emission: a Tool to Study Dynamic Effects and Clustering
Structure in Exotic Nuclei (LOI)
V. Kravchuk, *INFN LNL*
- 17:15 – 17:30 Prompt Collective Oscillations with Exotic Beams (LOI)
G. Casini, *INFN Firenze*
- 17:30 – 17:45 Study of the Dynamical Dipole Resonance Mode with the SPES Radioactive Beams
(LOI)
D. Pierroutsakou, *INFN Napoli*
- 17:45 – 18:00 Fission Process: Isospin and Nucleosynthesis (LOI)
E. Vardaci, *INFN & U. of Napoli*
- 18:00 – 18:15 Measuring Near- and Sub-Barrier Fusion Excitation Functions with Exotic Neutron-
Rich Beams (LOI)
A. M. Stefanini, *INFN LNL*
- 18:15 – 18:30 Nuclear Structure and Reaction Mechanism Studies with Radioactive Ion Beams
Produced in Batch-Mode (LOI)
F. Recchia, *INFN & U. of Padova*
- 18:30 *End*

WEDNESDAY 17 November 2010

Chair: F. Azaiez (IPNO)

- 09:15 - 09:45 Near-Yrast Medium-Spin States of $^{91,93,95}\text{Rb}$
G. Simpson, *LPSC Grenoble*
- 09:45 – 10:15 Radioactive Beams at the HRIBF
D. Stracener, *ORNL*
- 10:15 – 10:40 The AGATA Array at LNL
E. Farnea, *INFN Padova*
- 10:40 – 11:05 The PARIS Array - Status of the Project and Perspectives
A. Maj, *IFJ PAN Krakow*
- 11:05 – 11:35 *Coffee break*

Chair: F. Gramegna (LNL)

- 11:35 – 12:00 Results on the R&D of the FAZIA Detectors for Nuclear (Thermo)Dynamics
N. Le Neindre, *LPC Caen*
- 12:00 – 12:15 The RIPEN Setup for Neutron Spectroscopy
M. Cinausero, *INFN LNL*
- 12:15 – 12:30 New Perspectives for the Gamma-Ray Spectroscopy at LNL: the GALILEO Project
C. Ur, *INFN Padova*
- 12:30 – 12:45 The NEDA Array
J. J. Valiente Dobón, *INFN LNL*
- 12:45 – 13:00 Status of the TRACE Array
D. Mengoni, *U. of West of Scotland*
- 13:00 – 13:20 Diagnostic Devices for Radioactive Ion Beams at INFN LNS
L. Cosentino, *INFN LNS*
- 13:20 – 13:30 Concluding Remarks
A. Covello, *INFN & U. of Napoli*
- 13:30 – 15:00 *Lunch*
- 15:15 *Bus to Padova*

FREE TIME

- 17:30 *Padova Visit – Palazzo della Ragione*
- 18:45 *Reception – Caffè Pedrocchi, Padova*
- 20:15 *Dinner – Zairo Restaurant, Padova*