

SPES-Nusprasen Workshop Pisa 1-2 February 2018

Probing Fundamental Symmetries and Interactions by low energy excitations with RIBs

Thursday 1 February 2018

9.00-9.30 Welcome address: M. Grassi (Director of INFN-Pisa), D. Bettoni (LNL Director), M. Taiuti (President of the INFN Experimental Nuclear Physics Commission).

Session 1: Radioactive Ion Beams and Symmetry Violations 1

Chair: G. de Angelis (INFN-LNL)

9.30-10.00 P. Butler (Liverpool) Pear-shaped nuclei and CP-violation

10.00-10.20 G. Prete (INFN-LNL) The SPES project at LNL

10.20-10.40 A. Lombardi (INFN-LNL) Status of the SPES Cyclotron, commissioning and capabilities report

10.40-11.00 Coffee Break

Session 2: Radioactive Ion Beams and Symmetry Violations 2

Chair: A. Bonaccorso (INFN-Pisa)

11.00-11.20 A. Andrichetto (INFN-LNL) Production of Radioactive Ion Beams at Legnaro

11.20-11.40 A. Pisent (INFN-LNL) Selection and acceleration of radioactive ion beams at SPES: possibilities and issues

11.40-12.10 M. Viviani (Pisa) Time reversal violation in light and heavy nuclei

12.10-12.40 F. Recchia (Padova) EDM and pear-shaped nuclei at SPES

12.40 -14.00 Lunch

Session 3: Fundamental Symmetries and Weak Interaction Studies with RIBs 1

Chair: G. Colò (Milano)

14.00-14.30 N. Severijns (Leuven) Prospects for low-energy weak interaction studies with fission products

14.30-15.00 A. Knecht (PSI-Zurich) Probing fundamental symmetries and interactions with radioactive ions

15.00-15.30 D. Santonocito (INFN-LNS) Helical Orbit Spectrometer for SPES and its possible applications

15.30-16.00 A. Goasduff (Padova) The TRACE spectrometer at SPES

16.00-16.30 Coffee Break

16.30-17.00 A. Gottardo (INFN-LNL) On line nuclear orientation for RIBs

17.00-18.00 **Discussion:** A. Di Pietro (INFN-LNS), A. Kievsky (INFN-Pisa), S. Pirrone (INFN-Catania), Ch. Scheidenberger (GSI)

Friday 2 February 2018

Session 4: **Fundamental Symmetries and Weak Interaction Studies with RIBs 2**

Chair: A. Gargano (INFN-Napoli)

9.00-9.30 N. Itaco (Caserta) Realistic shell-model calculations for double beta decay

9.30-10.00 C. Agodi (INFN-Catania) Heavy-Ion Double Charge Exchange reactions towards $0\nu\beta\beta$ NME determination: the NUMEN project

10.00-10.30 Ch. Enss (Heidelberg) Low temperature detectors for precision experiments

10.30-10.50 Coffee Break

Session 5: **Interplay between nuclear and atomic interactions**

Chair: F. Gramegna

10:50-11.20 A. Nannini (Firenze) Low energy Coulomb Excitation of SPES RIB's

11.20-11.50 B. Seiferle (Munich) The elusive ^{229}Th isomer - characterization of its properties

11.50-12.20 E. Mariotti (Siena) Fundamental interactions studies by laser trapping methods

12.20-13.20 **Discussion:** G. Benzoni (INFN-Milano), G. Casini (INFN-Firenze), L. Corradi (INFN-LNL), A. Jokinen (Jyväskylä), S. Lenzi (Padova)