Monday, 25 March 2019

8:00 - 9:00  Registration
9:00 - 9:30  Welcome Address 30’
   Speakers: Diego Bettoni (INFN LNL Director), Francesca Soramel (University of Padova, Dept. of Physics and Astronomy Director), Mauro Mezzetto (INFN Padova Director).
9:30 – 10:00 Accelerator Status 30’
   Speaker: Giovanni Bisoffi (INFN LNL)

10:00 - 11:30 Session: NUCLEAR REACTIONS
   Conveners: M. Caamaño (Santiago), S. Szilner (Zagreb), A. Goasduff (Padova)

10:00  Introduction 5’
10:05  Neutron-rich heavy nuclei explored via multinucleon transfer reactions 15’
   Speaker: Franco Galtarossa (INFN LNL)
10:20  Studies of pair transfer processes 15’
   Speaker: Tea Mijatovic (Ruder Boskovic Institute)
10:35  Nuclear structure studies of n-rich actinides produced in $^{238}$U+$^{238}$U collisions with PRISMA+AGATA+LEPS 15’
   Speaker: Dieter Ackermann (GANIL)
10:50  Large- and positive-Q-value proton-transfer reactions with radioactive targets for nuclear structure studies 15’
   Speaker: Simone Bottoni (University and INFN Milano)
11:05  Low-energy heavy-ion fusion: the hindrance effect and consequences for stellar evolution (coupling an array of silicon detectors to the AGATA spectrometer) 15’
   Speaker: Giovanna Montagnoli (University and INFN Padova)
11:20  Discussion 10’

11:30 - 11:55 Coffee break

11:55 - 13:30 Session: LIGHT EXOTIC NUCLEI and ASTROPHYSICS
   Conveners: B. Fernandez (Santiago), C. Wheldon (Birmingham), D. Mengoni (Padova)

11:55  Introduction 5’
12:00  Lifetime measurements of excited states in neutron-rich C isotopes: a test of the three-body forces 15’
   Speaker: Michal Ciemala (IFJ PAN Krakow)
12:15  Onset of collectivization/clusterization in Oxygen neutron-rich nuclei 15’
   Speaker: Sara Ziliani (University and INFN Milano)
12:30  Establishing the properties of $^{19}$Ne cluster states important for X-ray bursts 15’
   Speaker: Carl Wheldon (Birmingham University)
12:45  Experimental study of the key system in advanced stage of stellar evolution $^{16}$O+$^{16}$O at $E_{lab}$ around 5 MeV, and its reaction channels; The Supersonic jet Gas Target SUGAR, an alternative to measure reactions with pure thin targets 20’
   Speaker: Daniel Jose Marín Lámbarri (IFUNAM)
13:05 Surrogate measurement of $^{83}$Se via $^{82}$Se (d,p) $^{83}$Se inverse kinematics 15'
Speaker: Eda Sahin (Oslo University)

13:20 Discussion 10'

13:30 - 14:30 Lunch

14:30 - 16:50 Session: NUCLEAR SHELL STRUCTURE
Conveners: D. Verney (Orsay), P. Reiter (Koln), A. Gottardo (LNL)

14:30 Introduction 5'
14:35 Neutron-rich nuclei in the vicinity of $^{208}$Pb:
Multi-nucleon transfer reactions for production and study of heavy neutron rich nuclei relevant to the r-process nucleosynthesis 20'
Speaker: Zsolt Podolyak (Surrey University)

14:55 Shell- and Shape Evolution with AGATA@LNL: a Short Potpourri of Small Ideas;
Shell evolution in the neutron-rich Cu and Zn isotopes in the vicinity of $^{68}$Ni;
Deformed intruder band around Z=28 from N=40 to N=50: Lifetime measurements in $^{67-75}$Cu;
Investigating the role of the proton $g_{9/2}$ orbital in the structure of $^{66}$Cu 30'
Speaker: Joa Ljungvall (CSNSM-IN2P3/CNRS)

15:25 In-beam gamma-ray spectroscopy of neutron-rich nuclei around N=50 with fusion-fission reactions;
Shape coexistence in N=49 isotones: large radius or large deformation?;
Structure investigation of $^{96}$Mo through lifetime measurements of excited states above 2 MeV 25'
Speaker: Andrea Gottardo (INFN LNL)

15:50 Direct lifetime measurements of the first excited $2^+$ states of $^{204}$Hg, $^{202}$Pt and $^{210}$Pb 15'
Speaker: Philipp Rudolf John (TU Darmstadt)

16:05 Spectroscopy of n-rich Gd isotopes after multinucleon transfer reactions 15'
Speaker: Caterina Michelagnoli (Institut Laue-Langevin)

16:20 Lifetime measurements of excited states in odd-mass pseudo-mirror nuclei 15'
Speaker: Bahadir Saygi (Ege University Turkey)

16:35 Discussion 10'

16:45 - 17:10 Coffee break

17:10 - 18:50 Session: N=Z NUCLEI
Conveners: A. Gadea (Valencia), J. Nyberg (Uppsala), F. Recchia (Padova)

17:10 Introduction 5'
17:15 Collectivity in N≈Z heavy nuclei 15'
Speaker: Gilles de France (GANIL)

17:30 Direct measurement of proton-neutron matrix elements with respect to the $^{100}$Sn core by studying excited states in $^{100}$In 15'
Speaker: Marcin Palacz (HIL Warsaw University)

17:45 Exploring the robustness of N=Z=28 via transfer reactions and lifetime measurements;
The role of the $g_{9/2}$ orbital in the development of deformation in the N=Z nucleus $^{68}$Se 20'
Speaker: Andres Gadea (IFIC CSIC - Valencia University)

18:05 Isospin mixing in the mirror-pair nuclei with A=35 and A=45;
Isospin mixing in the A=63 mirror nuclei 20'
Speaker: Ana Montaner Pizá (INFN Padova)

18:25 Model-independent measurement of isospin symmetry breaking 15'
Speaker: Daniele Mengoni (University and INFN Padova)

18:40 Discussion 10'

20:30 - 22:30 Workshop Dinner
Tuesday, 25 March 2019

9:00 - 10:55  Session: HIGH-SPIN PHYSICS
Conveners: A. Korichi (Orsay), V. Werner (Darmstadt), G. Benzoni (Milano)

9:00  Introduction 5'
9:05  New chiral geometry in triaxial nuclei;
      Study of the phase transition phenomenon, band termination and chirality 20'
      Speaker: Elena Lawrie (iThemba LABS)
9:25  Decay and deformation of the oblate and chiral bands in $^{135,136,137}$Nd;
      Search for chiral structures based on 1-particle-2-hole configurations in the A~100 region 20'
      Speaker: Costel Petrache (Paris Sud University)
9:45  Investigation of a high spin structure in the vicinity of $^{44}$Ti via discrete and continuum gamma spectroscopy with AGATA+EUCLIDES+RFD and PARIS detectors 15'
      Speaker: Piotr Bednarczyk (IFJ PAN Krakow)
10:00 Attacking the quasi-continuum with AGATA;
      Study of super-deformed and hyper-deformed nuclei 20'
      Speaker: Amel Korichi (CSNSM-IN2P3/CNRS)
10:20 Lifetime measurements of low-lying states in light actinides;
      High-spin states and novel nuclear shapes in light-actinide nuclei;
      Exotic Nuclei for EDM search: lifetime measurements in octupole deformed Ra and Th nuclei by multinucleon transfer 25'
      Speaker: Alain Goasduff (University and INFN Padova)
10:45 Discussion 10'

10:55 - 11:25  Coffee break

11:25 - 13:05  Session: NUCLEAR RESONANCES
Conveners: A. Maj (Krakow), A. Zilges (Koln), F. Crespi (Milano)

11:25  Introduction 5'
11:30  Gamma strength functions and decay pattern of dipole excitations 15'
      Speaker: J. Isaak (TU Darmstadt)
11:45  Gamma and Particle Decay of Giant Resonances Excited by Inelastic Scattering of $^{17}$O ions at 20 MeV/A;
      Study of single-particle structure of pygmy dipole resonance 20'
      Speaker: Mateusz Krzysiek (IFJ PAN Krakow)
12:05  The search for Jacobi shape transitions in hot rotating nuclei from the Mo-Ba region;
      GDR feeding of SD states: a LOI for AGATA@LNL 20'
      Speaker: Maria Kmiecik (IFJ PAN Krakow)
12:25  Measurement of Isospin Mixing 15'
      Speaker: Giulia Gosta (University and INFN Milano)
12:40  Study of the isovector giant dipole resonance in hot superheavy nuclei 15'
      Speaker: Marine Vandebrouck (CEA Saclay)
12:55 Discussion 10'

13:05 - 14:30  Lunch

14:30 - 16:30  Session: NUCLEAR SHAPES 1
Conveners: M. Zielinska (Saclay), B. Fornal (Krakow), A. Nannini (Firenze)

14:30  Introduction 5'
14:35  Search for shape isomers by using near-barrier transfer reactions with AGATA at LNL;
      Low spin spectroscopy around $^{190}$Pt with the deep inelastic reaction $^{58}$Ni+$^{190}$Pt;
      Lifetimes in the $^{196}$Os region populated in multi-nucleon transfer reactions 25'
      Speaker: Nicolae Marginean (IFIN-HH Bucharest)
15:00 Multiple shape coexistence in stable Cd isotopes studied through Coulomb excitation with AGATA at LNL;
      An Electron Conversion Spectrometer for AGATA: Study of the vibrational modes in stable Cd isotopes 20'
      Speaker: Katarzyna Wrzosek-Lipska (HIL - Warsaw University)
15:20  **Shape coexistence of $^{96}$Zr - Determination of the quadrupole moments $Q(2^+)$ and $Q(2^+_2)$**  
Speaker: Volker Werner (TU Darmstadt)  
15:35  **Coulomb excitation of the super-deformed structures in A~40 mass region (AGATA+SPIDER+PARIS at INFN LNL)**  
Speaker: Katarzyna Hadynska-Klek (HIL - Warsaw University)  
15:50  **Quadrupole, Octupole and Hexadecapole Collectivity in $^{152}$Sm Through Low-Energy Coulomb-Excitation; Onset of octupole deformation in very light Te isotopes**  
Speaker: Marco Rocchini (INFN Firenze)  
15:10 - 16:40  **Coffee break**  
16:40 - 17:35  **Session: NUCLEAR SHAPES 2**  
Conveners: M. Zielinska (Saclay), B. Fornal (Krakow), A. Nannini (Firenze)  
16:40  **Probing the Z=50 shell closure - Lifetime measurements in $^{110}$Sn and $^{111,113}$Sb with AGATA+PRISMA; Collectivity evolution in Z=50 region: multi-step Coulomb excitation in stable Sn and Te nuclei**  
Speaker: Marco Siciliano (CEA Saclay)  
17:00  **Search for deformed structures in neutron-rich Nb isotopes by gamma spectroscopy and cluster transfer reaction**  
Speaker: Lukasz Iskra (INFN Milano)  
17:15  **Studies of shape coexistence in the neutron-deficient Po and Rn isotopes via plunger lifetime measurements with fusion-evaporation reactions**  
Speaker: Francois Didierjean (IPHC - Strasbourg University)  
17:40 – 18:30  **General Discussion and Closure**