



PRE - PAC WORKSHOP OF AGATA@LNL

INFN, LABORATORI NAZIONALI DI LEGNARO
8-10 NOVEMBER 2021

SCIENTIFIC PROGRAMME

Monday, 8 November 2021

13:00 - 14:00 **Registration**

14:00 - 14:30 **Welcome Address 30'**

Speakers: Fabiana Gramegna (INFN-LNL Director), Flavio Seno (University of Padova, Dept. of Physics and Astronomy Director), Umberto Dosselli (INFN Padova Director), Pierluigi Campana (INFN Executive Committee), Rosario Nania (INFN-CSN3 President).

14:30 - 15:40 **Session: AGATA at LNL**

CHAIR: P. Reiter

14:30 **Accelerator Status 30'**

Speaker: Enrico Fagotti

15:00 **AGATA 20'**

Speaker: Emmanuel Clément

15:20 **Installation of AGATA@LNL 20'**

Speaker: Jose Javier Valiente Dobón

15:40 - 16:10 **Coffee break**

16:10 - 17:40 **Session: PHYSICS CAMPAIGN@LNL & COMPLEMENTARY DETECTORS**

CHAIR: K. Wimmer

16:10 **Physics addressed in the first AGATA@LNL campaign 20'**

Speaker: Magda Zielińska

16:30 **PRISMA 10'**

Speaker: Franco Galtarossa

16:40 **GAL-TRACE 10'**

Speaker: Stefano Capra

16:50 **EUCLIDES** 10'
Speaker: Daniele Brugnara

17:00 **SPIDER** 10'
Speaker: Marco Rocchini

17:10 **DANTE** 10'
Speaker: Kseniia Rezyunkina

17:20 **Gamma-ray scintillators** 10'
Speaker: Sara Pigliapoco

17:30 **Plunger** 10'
Speaker: Irene Zanon

17:40 – 18:40 **Session: Lol 1**
CHAIR: G. Duchêne

17:40 **Lifetime measurement in the low-lying states of neutron-rich Cd isotopes** 20'
Speaker: Guangxin Zhang

18:00 **Towards the ^{132}Sn nucleus via lifetime measurements** 20'
Speaker: Marco Siciliano

18:20 **Pathway to nuclear structure in heavy neutron rich nuclei in the vicinity of N=126 and nuclei northwest of ^{132}Sn via multi-nucleon transfer reactions** 20'
Speaker: Peter Reiter

Tuesday, 9 November 2021

8:30 - 10:30 **Session: Lol 2**
CHAIR: B. Fornal

8:30 **Lifetime measurements of excited states in neutron-rich ^{16}C and ^{18}C isotopes: a test of the three-body forces** 20'
Speaker: Michał Ciemata

8:50 **Establishing the properties of ^{19}Ne cluster states important for X-ray bursts** 20'
Speaker: Carl Wheldon

9:10 **Coulomb excitation of the super-deformed structure in ^{36}Ar** 20'
Speaker: Katarzyna Hadyńska-Klęk

9:30 **Evolution of deformation along the calcium isotopic chain: Coulomb excitation of ^{44}Ca** 20'
Speaker: Matúš Balogh

9:50 **Coexisting Shapes and Precision Tests of Monte-Carlo Shell-Model Calculations in ^{96}Zr** 20'
Speaker: Naomi Marchini

10:10 **Search for shape isomers in ^{188}Pt by using near-barrier transfer reactions with AGATA at LNL** 20'
Speaker: Nicolae Mărginean

10:30 – 11:00 **Coffee break**

11:00 – 13:20 **Session: Lol 3**

CHAIR: A. Gadea

- 11:00 **Single-particle and collective excitations in ^{56}Ni studied via lifetime measurements** 20'
Speaker: Franco Galtarossa
- 11:20 **Study of shape coexistence in ^{60}Fe via lifetime measurement of excited 0^+ states** 20'
Speaker: Giorgia Pasqualato
- 11:40 **Effects of multiple shape coexistence on low-lying octupole vibrations and couplings** 20'
Speaker: Simone Bottoni
- 12:00 **Spectroscopy and lifetime measurements neutron-rich Co and Fe isotopes** 20'
Speaker: Luis Mario Fraile
- 12:20 **Lifetime measurements in neutron-rich $^{67-75}\text{Cu}$ and $^{70-76}\text{Zn}$ nuclei above $N = 40$** 20'
Speaker: Eda Sahin
- 12:40 **Investigation of the seniority conservation in the neutron $g_{9/2}$ shell towards ^{78}Ni** 20'
Speaker: Rosa Pérez Vidal
- 13:00 **Lifetime measurements in neutron deficient $A \sim 90$ nuclei between the $N=Z$ line and the $N=50$ shell closure: Disentangling collective modes, seniority symmetry breaking and isoscalar correlations** 20'
Speaker: Aysegül Ertoprak

13:20 - 15:00 **Lunch**

15:00 - 16:20 **Session: Lol 4**

CHAIR: J. Ljungvall

- 15:00 **Doorway states and the development of deformation in the Island of inversion around ^{32}Mg** 20'
Speaker: Francesco Recchia
- 15:20 **Investigation of the intruder band in ^{34}Si via lifetime measurement** 20'
Speaker: Irene Zanon
- 15:40 **Investigation of the $N = 20$ to $N = 28$ closed shells transition: Lifetime and g-factor measurements in argon isotopes** 20'
Speaker: Pavlos Koseoglou
- 16:00 **Large matter radii and halo-like neutron p-shells hypothesis in $^{50-52}\text{Ca}$: do we see evidence from spectroscopy?** 20'
Speaker: Andrea Gottardo

16:20 - 17:00 **Coffee break (and Workshop Picture)**

17:00 - 18:40 **Session: Lol 5**

CHAIR: S. Szilner

- 17:00 **Fusion-fission and Neutron-rich γ -spectroscopy with AGATA at PRISMA** 20'
Speaker: Manuel Caamaño

- 17:20 **Transfer-induced fission and fusion-fission studies with the ^{208}Pb beam** 20'
Speaker: Alain Goasduff
- 17:40 **Probing nucleon-nucleon correlations in the $^{48}\text{Ca}+^{208}\text{Pb}$ system below the Coulomb barrier** 20'
Speaker: Tea Mijatović
- 18:00 **Search for a Josephson effect in the $^{116}\text{Sn}+^{60}\text{Ni}$ system** 20'
Speaker: Lorenzo Corradi
- 18:20 **A deeper insight into the fusion dynamics far below the barrier for $^{12}\text{C} + ^{24}\text{Mg}$ by particle- γ coincidences with AGATA+Euclides** 20'
Speaker: Giovanna Montagnoli

18:40 **Bus to Hotels**

20:30 **Workshop Dinner**

Wednesday, 10 November 2021

8:30 -10:30 **Session: Lol 6**
CHAIR: E. Clément

- 8:30 **High Spin Evolution of the doubly midshell nucleus ^{170}Dy** 20'
Speaker: Andrew Boston
- 8:50 **Two-Phonon Gamma Vibrations in ^{162}Dy** 20'
Speaker: Claes Fahlander
- 9:10 **Gamma-ray spectroscopy of the neutron-rich Yb and Er isotopes: a quest for strong deformation around N=110** 20'
Speaker: Jeongsu Ha
- 9:30 **Lifetimes in the ^{196}Os region populated with multi-nucleon transfer reactions** 20'
Speaker: Daniele Brugnara
- 9:50 **Study of the evolution of deformation and collectivity in tungsten isotopes through lifetime measurements in ^{190}W** 20'
Speaker: Julgen Pllumaj
- 10:10 **Lifetime measurements of ^{202}Pt : Shape evolution towards N=126 closed shell** 20'
Speaker: Matúš Sedláč

10:30 - 11:00 **Coffee Break**

11:00 -12:40 **Session: Lol 6**
CHAIR: B. Quintana

- 11:00 **Direct lifetime measurements of the first excited 2^+ states of ^{206}Hg and ^{202}Pt** 20'
Speaker: Volker Werner
- 11:20 **Search for octupole structures in the light U and Th isotopes via Multinucleon Transfer reaction** 20'
Speaker: Giacomo De Angelis

11:40 **Octupole correlations in the neutron-deficient plutonium isotopes** 20'

Speaker: John Smith

12:00 **Conclusions and general discussion** 40'