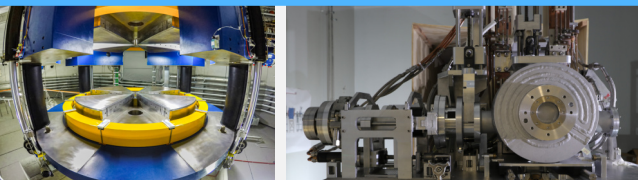


Nuclear Physics Mid Term Plan in Italy

Session LNL
11-12 April 2022



INFN, LNL
Laboratori Nazionali di Legnaro



Organizing Committee

G. Benzoni
 D. Bettoni
 F. Bossi
 M. Colonna
 E. Fioretto
 L. Fortunato
 S. Gammino
 F. Gramegna
 M. La Cognata
 I. Lombardo
 R. Nania
 E. Previtali
 S. Romano
 P. Rusotto
 F. Soramel
 J. J. Valiente-Dobón

The workshop is organized in specific working groups that will report their activities in the final event. These working groups will address the future research opportunities at LNL.

Working Groups	Topic
<ul style="list-style-type: none"> ◆ Nuclear Astrophysics 	<ul style="list-style-type: none"> • Nucleosynthesis up to the iron peak • Nucleosynthesis of trans-iron elements • Nuclear astrophysics theory
<ul style="list-style-type: none"> ◆ Nuclear Structure 	<ul style="list-style-type: none"> • Shell evolution • Light to medium-mass exotic nuclei • $N \sim Z$ nuclei and isospin symmetry • Deformation and collective states
<ul style="list-style-type: none"> ◆ Nuclear Reactions and Dynamics 	<ul style="list-style-type: none"> • Physics overview: alpha clustering, dynamics and structure, thermodynamics, equation of state, collective motions • Mechanisms/Tools: fusion-evaporation and pre-equilibrium emission • Mechanisms/Tools: transfer, particle spectroscopy • Mechanisms/Tools: fission and sub-barrier fusion
<ul style="list-style-type: none"> ◆ Application 	<ul style="list-style-type: none"> • Nuclear cross sections measurements and modelling for direct radionuclide production and neutron beam lines at SPES • ISOL and laser applications at the SPES facility • Development, characterization and modifications of materials for applied nuclear physics

Scientific Program Conveners: R. Depalo, T. Marchi, D. Mengoni, G. Pupillo, M. Ballan, S. Bottoni, A. Cacioli, M. Caamaño-Fresco, M. Camprostrini, M. Cicerchia, F. C. Crespi, S. Cristallo, D. Dell'Aquila, F. Galtarossa, L. Gasques, A. Gottardo, F. Gulminelli, T. Kurtukian Nieto, S. M. Lenzi, K. Mazurek, L. Mou, I. Zanon

Scientific Secretaries: E. Naselli, A. Oliva, J. Pellumaj, M. Polettini

Secretary: M. Andreazzo, S. Martin

Contact: nucphys-plan-italy@lists.infn.it

Website: <https://web.infn.it/nucphys-plan-italy/>

