



Scientific Workshop on nu-Ball2 2024 - Reports from the last campaign and prospects for future experiments

Jul 3–5, 2024
University of Milan
Europe/Paris timezone



Previous nuBall workshops



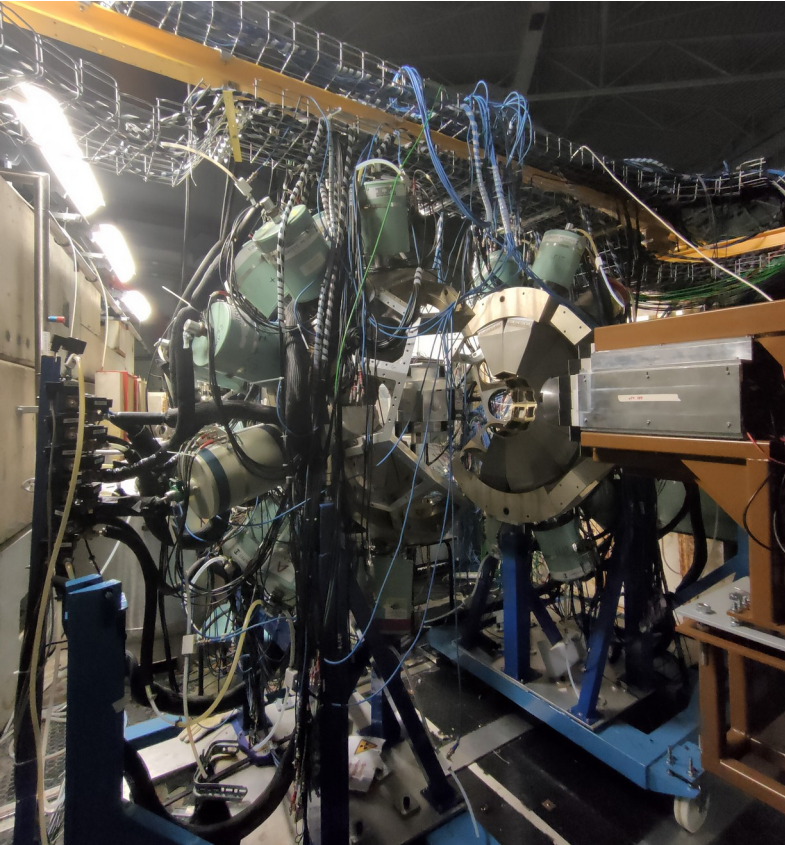
nuBall2 workshops



The nu-Ball2: Hybrid γ -ray spectrometer at ALTO

Study of: nuclear fission process, lifetimes/nuclear moments

15 approved experiments. 2900 hours beam time
march 2022 – june 2023



- ✓ Hybrid Spectrometer (Ge/BGO/LaBr3/PARIS) high resolution, high efficiency

28 Clover Ge's (GammapoolEU consortium)

15 Coaxial Ge's (UK/France loan pool)

36 FATIMA LaBr3 (FATIMA collaboration)

72 PARIS phoswich (PARIS collaboration)

- ✓ Different geometries and couplings

DSSD silicon detectors (HIL Warsaw)

LICORNE neutron source (ALTO)

- ✓ Use as calorimetry for reaction studies/selection
- ✓ Fully digital, 200 channels, including BGO
- ✓ Modes Triggered or Triggerless



Program of the workshop - Wednesday 03/07

- 14:40 **The nuBall2 project (remote)**
Gabriel Charles
- 15:05 **FASTER New features and prospects**
David Etasse
- 15:30 **The LICORNE inverse kinematic neutron source: Development and perspectives**
Jonathan Wilson

15:55 – 16:25 *Coffee Break*

- 16:25 **FATIMA: a versatile tool for nuclear physics studies**
Sorin Pascu
- 16:50 **PARIS array - status of the project and performance in the nuBall3 campaign**
Adam Maj
- 17:15 **The Warsaw SiLCA array - status and perspectives**
Kasia Hadynska-Klek

Welcome cocktail 18:00

Program of the workshop - Thursday 04/07, morning

- 9:20 **Spectroscopy of neutron-rich fission fragments produced in the $^{238}\text{U}(n,f)$ reaction**
PASCU, Sorin
- 9:30 **nuBall2 fission campaign: fast-timing calibration and first results**
FISCHER, Julia
- 9:50 **Lifetime measurement of neutron rich Xe isotopes using the fast timing technique (remote)**
MESSINGSCHLAGER, Andi
- 10:10 **Improvement of the ^{238}U level scheme thanks to γ -spectroscopy**
CHATEL, Carole
- ~~10:10 **Angular momentum removal by neutrons in fission fragments**~~
~~GJESTVANG, Dortehea~~
- 10:30 – 11:00 *Coffee Break*
- 11:00 **Current status of the $^{12}\text{C}+^{182}\text{W}$ fusion-fission studies analysis**
MIERNIK, Krzysztof
- 11:30 **High precision spectroscopy of fission shape isomers with Nu-Ball2 : Exploring the gamma back-decay**
HIVER, Corentin
- 12:00 **Characterization of the de-excitation path of fission fragments during the spontaneous fission of ^{252}Cf**
PERTILLE-RITTER, Brigitte

Program of the workshop - Thursday 04/07, afternoon

14:30 Evidence for enhanced collectivity in ^{58}Fe examined through Coulomb excitation
PASQUALATO, Giorgia

15:00 Coulomb excitation of ^{60}Ni at the IJC Lab with the Nuball2+SiLCA DSSD setup
HADYNSKA-KLEK, Kasia

15:30 – 16:00 *Coffee Break*

16:00 Links between ^{80}Sr compound nucleus' shape and its residue's deformation studied with GDR
CIEMAŁA, Michał

16:30 Investigation of high spin structures in ^{44}Ti and ^{42}Ca via discrete and continuum gamma spectroscopy
MATEJSKA-MINDA, Magdalena

17:00 – 18:00 Discussion

Social dinner 19:45

Program of the workshop - Friday 05/07

- 09:00 **AGATA physics campaign at LNL**
ZIELINSKA, Magda
- 09:25 **Nuclear structure after slow neutron reactions at ILL**
MICHELAGNOLI, Caterina
- 09:50 **First EXOGAM campaign at NFS**
CLEMENT, Emmanuel
- 10:15 **The GRIFFIN Spectrometer at TRIUMF: Its Capabilities and Science Highlights**
GARRETT, Paul

10:40 – 11:10 *Coffee Break*

- 11:05 **Spectroscopy of shape isomers: status and perspectives**
LEONI, Silvia
- 11:30 **Perspective about spontaneous fission studies**
LEBOIS, Matthieu
- 11:55 **Nuclear Fission – interesting questions after 85 years**
OBERSTEDT, Stephan
- 12:20 **Future possibilities for gamma-ray spectroscopy of fission in direct kinematics**
WILSON, Jonathan



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LA STATALE

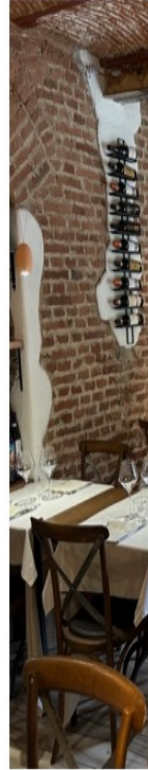


Welcome cocktail - Wednesday, July 3rd 18:00 at COLIBRÌ



Via Laghetto 9
...just behind the University building

Social dinner - Thursday, July 4th 19:30 at Osteria della Darsena



Porta
Genova

Via Vigevano 1



Tram 15