IoP Half Day Meeting: Opportunities in nuclear physics with recoil separators at HIE-ISOLDE

29 April 2019
Department of Physics, University of Liverpool

Welcome to participants

Organizers

Ismael Martel, U. Liverpool & U. Huelva
Joakim Cederkall, U. Lund
Maria J. Garcia Borge, CSIC Madrid
Gerda Neyens, CERN ISOLDE
Robert Page, U. Liverpool
James Smallcombe, U. Liverpool
Olof Tengblad, CSIC Madrid
Carsten Welsch, U. Liverpool
Angie Reid, U. Liverpool

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1 - Welcome		11:30 - 12:30
2 - Research plans at ISOLDE for a future recoil separator	*Ismael Martel*	12:35 - 13:05
3 - Recoil separators, present and future design concepts	*Juha Uusitalo*	13:05 - 13:30
4 - Recoil separators in astrophysics	*Alison Laird*	13:30 - 14:00
5 - Recoil separators in nucleon transfer and pairing	*Marlene Assie*	14:00 - 14:30
Coffee break		14:30 - 15:00
6 - Physics at ISOLDE with SEC	*Joakim Cederkall*	15:00 - 15:30
7 - Physics at ISOLDE with ISS and MINIBALL	*Liam Gaffney*	15:30 - 16:00
8 - Discussion		16:00 - 18:00
Dinner		

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Scope of the meeting

- Nuclear reactions induced by exotic nuclei: study nuclear structure, nuclear dynamics and astrophysics.
- ISOL facilities: large range of isotopes (Li – Ra) and beam energy ~ 0.5 - 10 MeV/u (HIE-ISOLDE).
- Recoil separators: provide particle identification (A, Z, E, θ) of reaction products in challenging scenarios, where other particle detectors do not work.
- Objectives of this meeting:
  - Reinforce physics collaborations
  - Start the development of a new instrument
  - Advantage of interdisciplinary research: nuclear physics, particle accelerators and particle detectors

HIE-ISOLDE Recoil Separator White Book