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Meet a Nuclear Physics

PGR Coordinator: Moritz Pascal Reiter,
mreiter@ed.ac.uk

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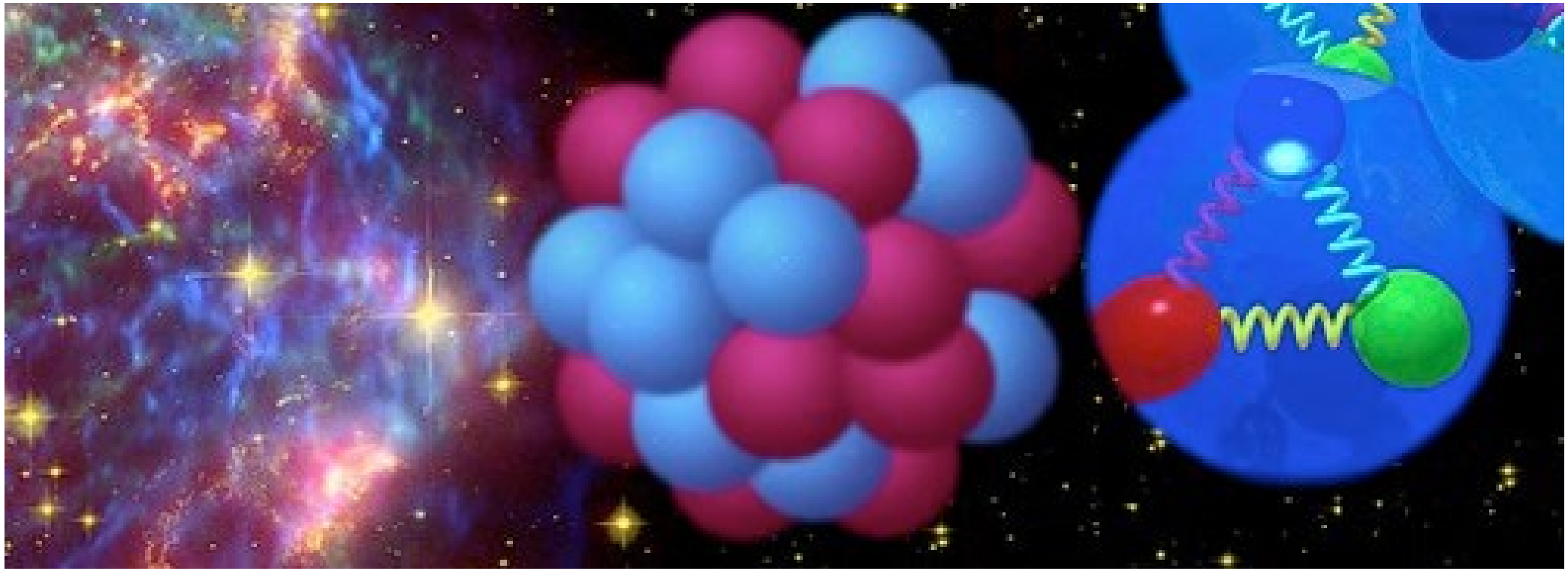

http://www.ph.ed.ac.uk/nuclear-physics

Projects list
http://www.ph.ed.ac.uk/studying/postgraduate-research/research-opportunities/nuclear-physics

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Staff Members

Academic Staff


Marialuisa Aliotta
(Head of Group)


Carlo Bruno


James Cubis


Tom Davinson


Claudia Lederer-Woods


Alex Murphy


Moritz Pascal Reiter
(PGR Coordinator)


Phil Woods

Research Staff

Sid El Moctar Ahmed Maouloud
(externally placed)

Jordan Marsh

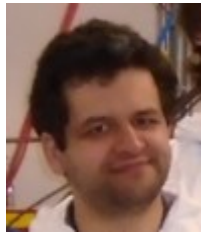
Francisco Garcia Infantes

Ragandeep Singh Sidhu

Alexandra Zadvornaya

With 3 + starting in January

Technician


Peter Black

emeritus Prof.


Alan Shotter

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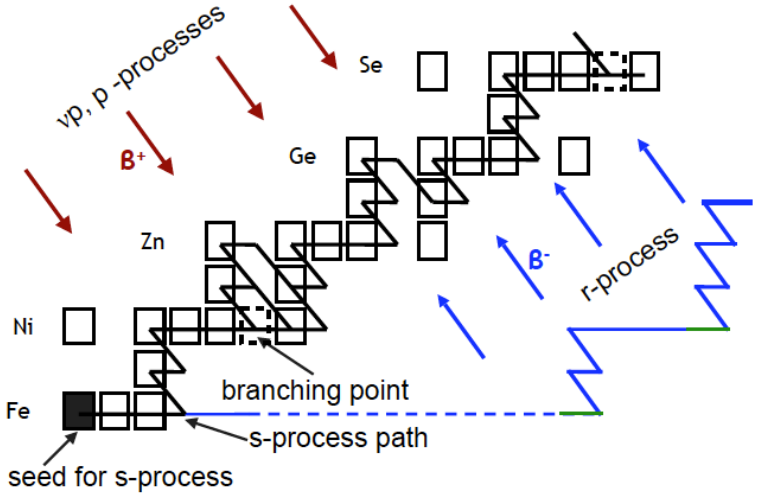
Projects

Origin of the Heavy Elements

Understand the formation of heavy elements



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Projects

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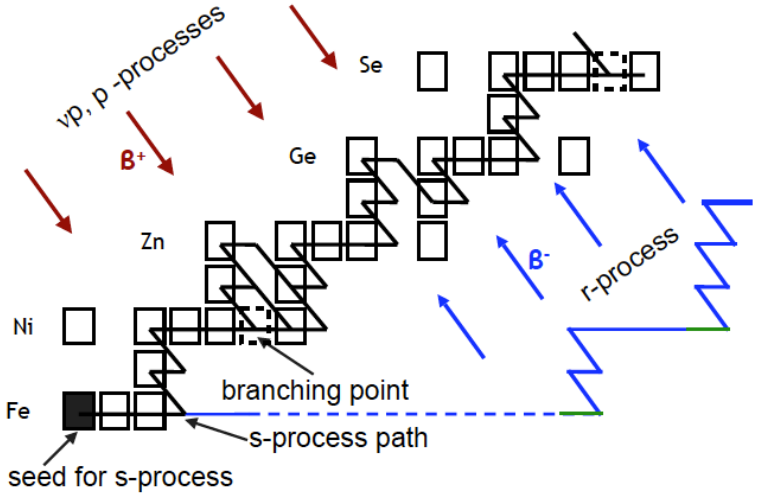

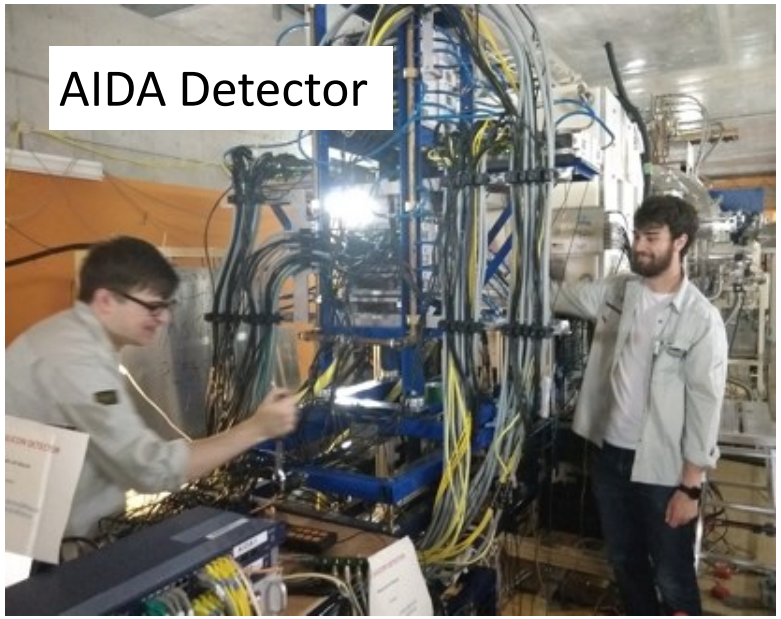

Studying key properties of exotic nuclei responsible for heavy element formation in explosive astrophysical environments

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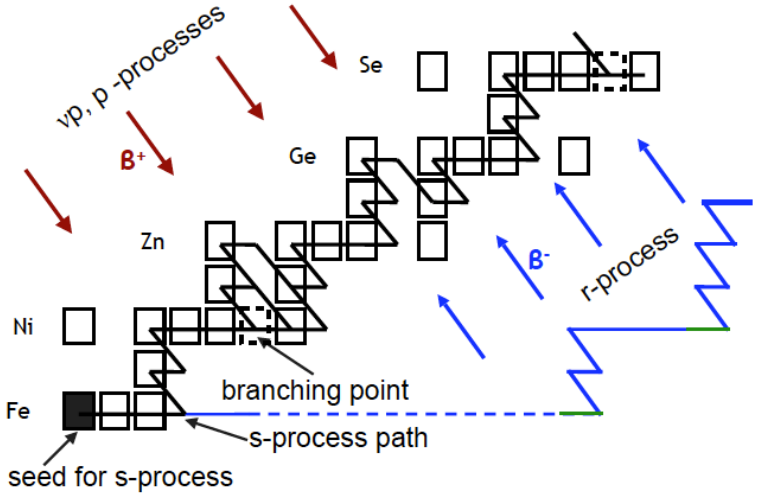
Projects

Origin of the Heavy Elements

Understand the formation of heavy elements



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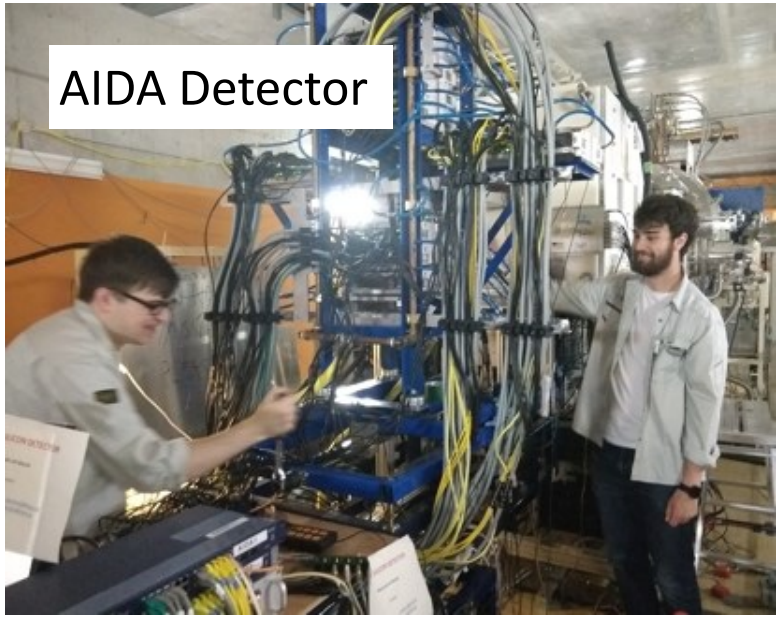
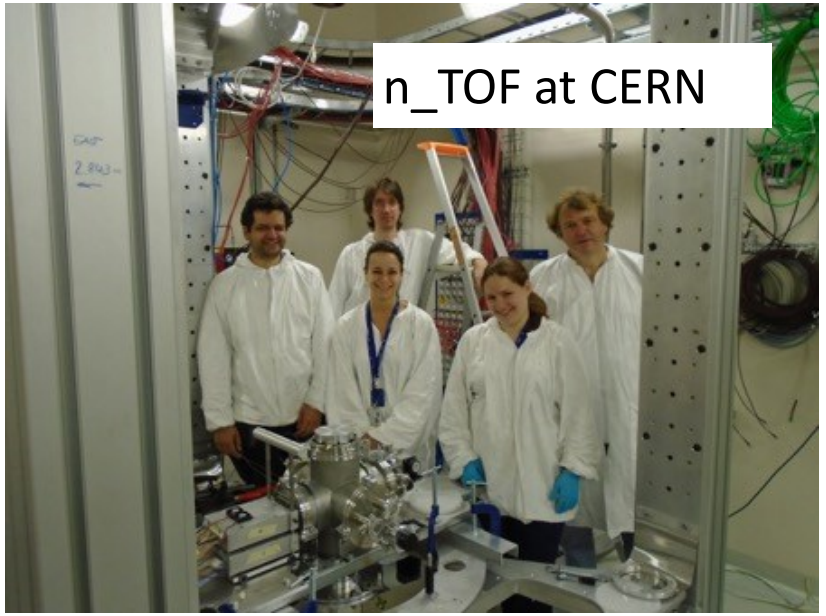


High precision measurements of neutron reactions for heavy element formation in Red Giants and Massive Stars



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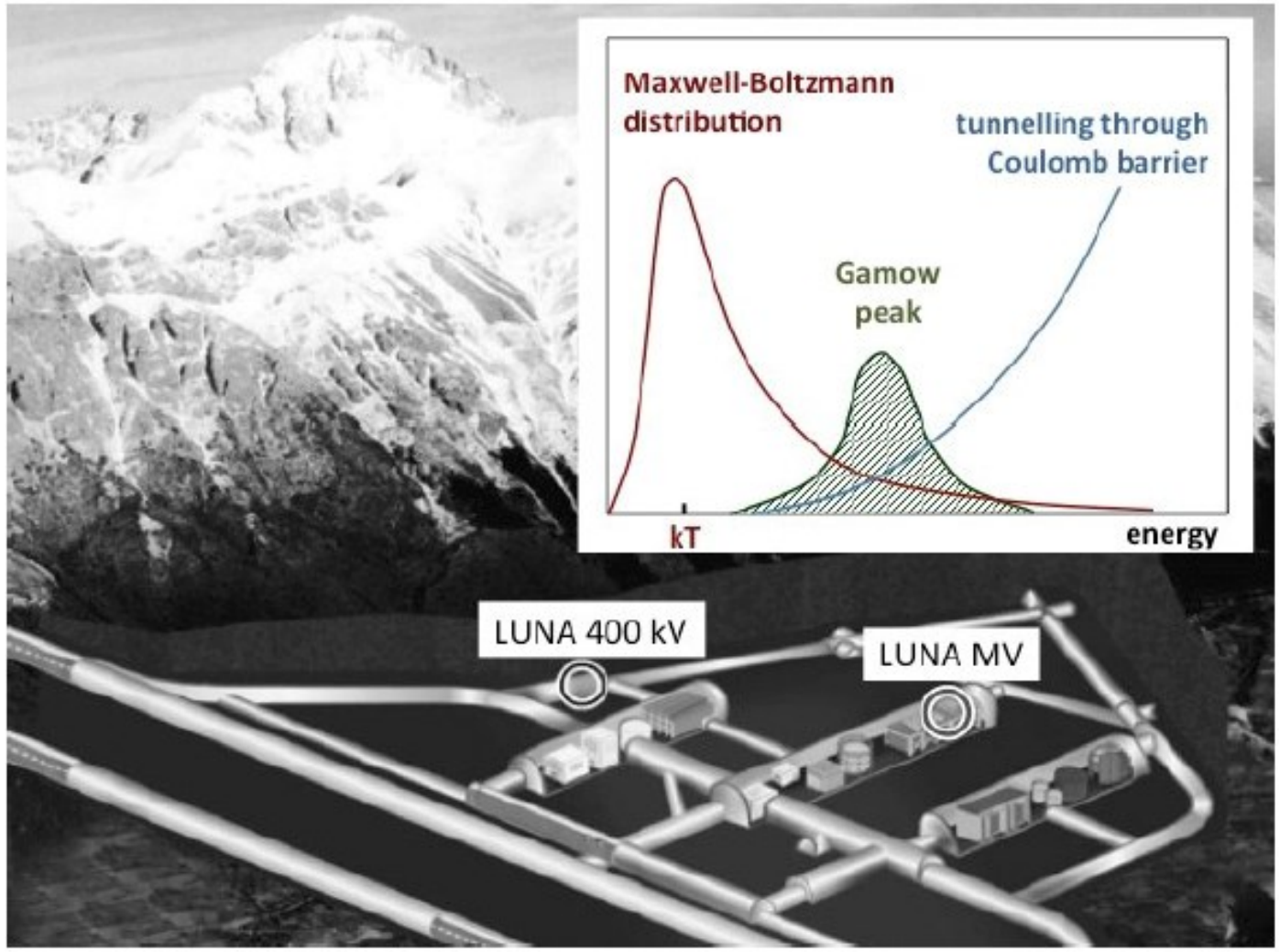
Projects

Underground Measurements for Stellar Evolution Studies

Understand reactions in stars

High sensitivity measurements of key nuclear reactions in quiescent burning phases in stars



LUNA Underground Laboratory, Italy

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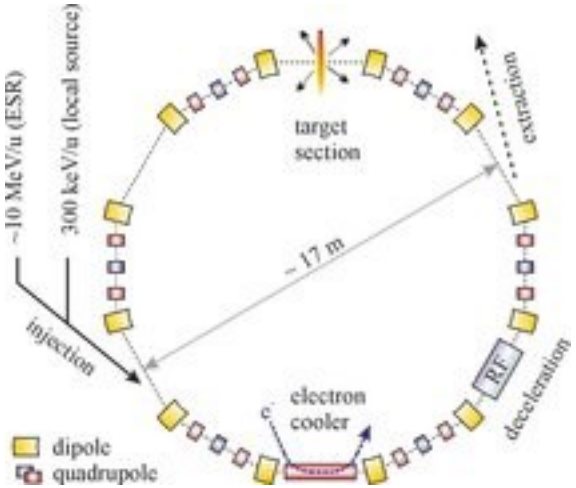
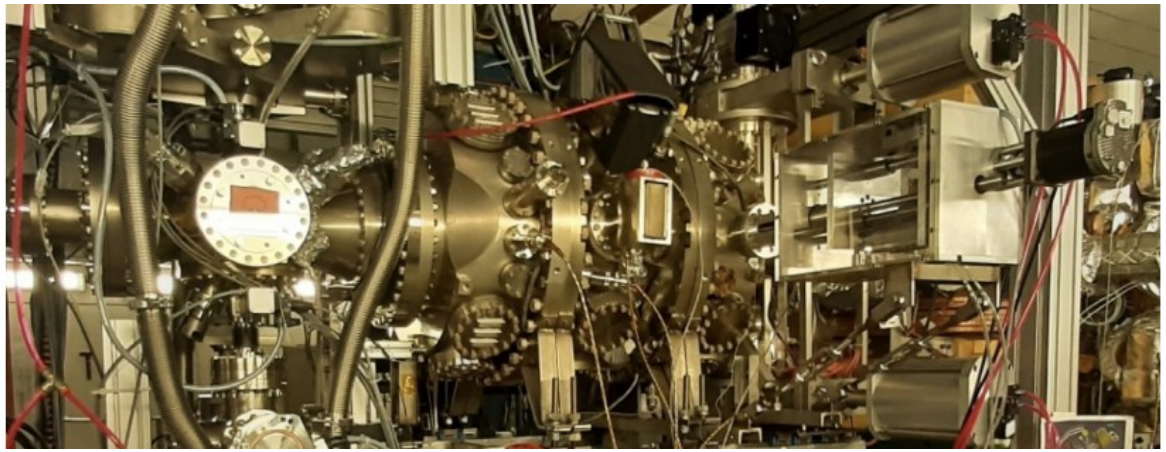
Projects

Measurements for Stellar Evolution Studies using storage rings

Understand reactions in stars



CARME detector array at CRYRING, GSI, Germany



High sensitivity measurements of key nuclear reactions in quiescent burning phases in stars due to circulating particle beam

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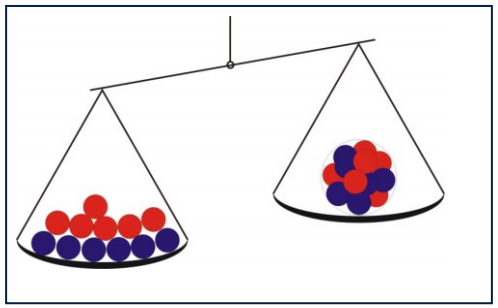
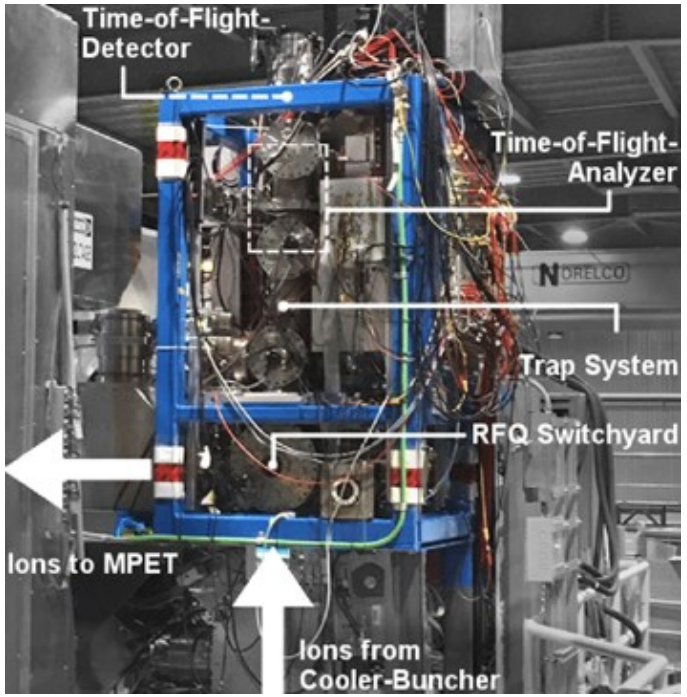
Projects

High Precision Mass Measurements for Nuclear Structure

Understanding nuclear ground state properties





Mass measurements at TRIUMF, Canada and GSI, Germany laboratories

High precision mass measurements (using ion trapping) of exotic isotopes for nuclear structure and astrophysics research

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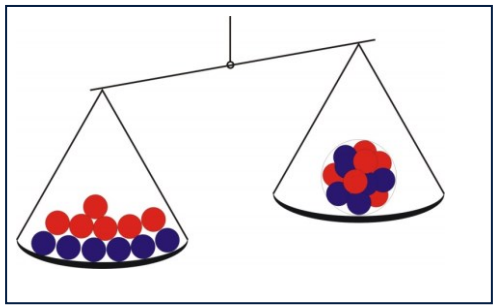
High Precision Mass Measurements for Nuclear Structure

Understanding nuclear ground state properties



High precision mass measurements (using ion trapping) of exotic isotopes for nuclear structure and astrophysics research

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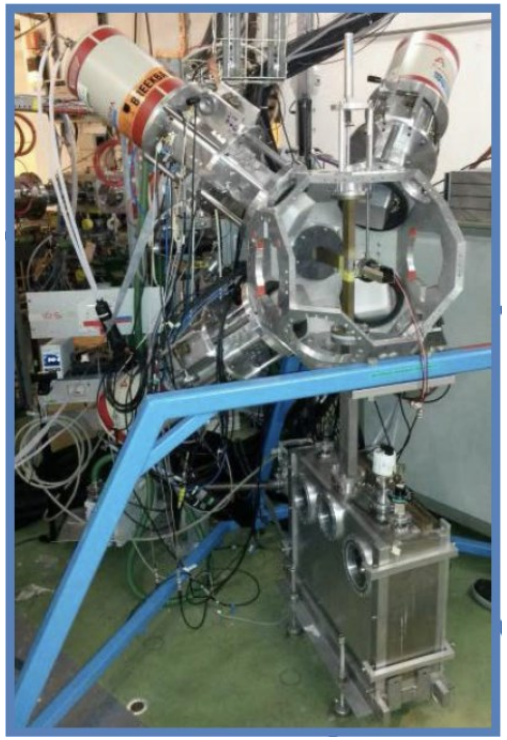
Laser and Decay Spectroscopy for Nuclear Structure



ISOLDE Decay Station 2018

Precision spectroscopy (using laser ionization and decay spectroscopy) of exotic isotopes for nuclear structure and astrophysics research

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Overview

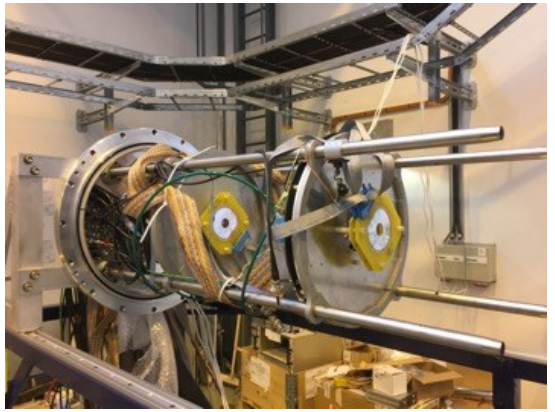
- A PhD in nuclear physics offers a **broad physics experience**
  - Lost of transferable skills!

- Direct experience **in each aspect of the project**: detector development, experimental setup, data taking, data analysis, simulations… paper writing

- Opportunity to play **a leading role** in your experiment
  (work in collaboration with 10 to 30 researches, students etc)

- Work at a wide range of facilities **world-wide**

- PhD projects usually allow for **experience at different facilities**



Edinburgh detection system @ CERN

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How to join us

- **What to Do?**
  - put in an application through EUCLID + apply for additional funding options (e.g. PCDS) (see how to apply, funding options)
  - Deadline: late **January 2025**
  - clearly state your interest for a PhD project in Nuclear Physics,
    (no need to upload a full research proposal, but state/explain interest in specific areas)

- **What Happens Then?**
  - we will invite you for a **interview** to our group (typically February-March)
  - you will get an opportunity to talk to members of staff
  - **find out about projects on offer**

- **If Your Application is Successful…**
  - you will have a couple of months after starting to decide about specific project and supervisor

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Thanks for listening!

Moritz Pascal Reiter, mreiter@ed.ac.uk

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