Contribution ID: **10** Type: **Invited talk**

Reactions with stored nuclei with CARME@CRYRING

Tuesday 17 September 2024 12:10 (25 minutes)

Heavy ion storage rings have been used for nuclear astrophysics measurements for decades, and have proven themselves powerful tools for exotic mass measurements.

Recent advances in ring operation and beam intensities made measurement of nuclear reactions at rings possible. In particular, pioneering measurements were carried out at the ESR at GSI (Germany) investigating the astrophysical p-process.

The recent commissioning of a new low-energy heavy ion storage ring at GSI/FAIR - the CRYRING - opened the door to the possibility to carry out measurements at rings directly at the energies of interest for quiescent burning scenarios, as well as nova and supernova explosions. CRYRING is the only low-energy ring in the world to be linked to a radioactive beam facility (FAIR), and offers unique new possibilities.

In this talk I will describe the CRYRING Array for Reaction MEasurements (CARME) which was designed to carry out nuclear reaction measurements in the extreme high vacuum environment of the CRYRING. I will show commissioning results and future science plans. The programme at CARME is supported by the ELDAR ERC grant.

Primary author: BRUNO, Carlo (The University of Edinburgh)

Presenter: BRUNO, Carlo (The University of Edinburgh)

Session Classification: Plenary Session