



Contribution ID: 34

Type: **Submitted oral (In person)**

The ISOL facility of MYRRHA at SCK CEN: current status

Thursday 1 December 2022 09:30 (12 minutes)

An ISOL facility is currently emerging within the MYRRHA project in Belgium. This facility will use 100 MeV protons with intensities up to 500 μA to produce a vast range of radioisotopes, namely isotopes for medical purposes, such as Ac225, but also radioactive ion beams for fundamental research. This facility is part of the MYRRHA-ADS (a Multipurpose hYbrid Research Reactor for High-tech Applications), where its first phase has been fully funded by the Belgian government. The first phase consists of the first part of the accelerator (100 MeV, later to be upgraded to 600 MeV) and also the mentioned ISOL Facility and a fusion material irradiation station.

This ISOL facility uses a modular frontend system which is largely based on the ARIEL design at TRIUMF. This type of frontend presents the main advantages of easing the maintenance and repair processes. Additionally, also following ARIEL, the ISOL facility at MYRRHA uses a Target and Ion Source (TIS) Assembly as a modular and remotely coupled vessel, which allows a high turnover of beams since the target is pre-mounted and conditioned before operation. This facility is currently completing its conceptual design and fixing its building layouts. For development tests an offline prototype of the ISOL system is also being constructed at SCK CEN. In this talk we introduce the project, its current status and the main highlights.

Primary author: RAMOS, Joao Pedro (Belgian Nuclear Research Center (BE))

Co-authors: Mr BRAK, Djef (Belgian Nuclear Research Center (BE)); HOUNGBO, Donald (SCK-CEN); Mr HERMANS, Dylan (Belgian Nuclear Research Center (BE)); AIT ABDERRAHIM, Hamid (SCK.CEN); Dr RIJPSTRA, Kim Elisabeth (Belgian Nuclear Research Center (BE)); POPESCU, Lucia (Belgian Nuclear Research Center (BE)); Dr VERMEEREN, Ludo (Belgian Nuclear Research Center (BE)); Mr DIERCKX, Marc (Belgian Nuclear Research Center (BE)); CREEMERS, Philip (Sck cen)

Presenter: RAMOS, Joao Pedro (Belgian Nuclear Research Center (BE))

Session Classification: News from our Sister Facilities