



Contribution ID: 318

Type: **Poster presentation**

First Simulations of RIB extraction in the ISOL@MYRRHA Target Module.

In the first phase of the ISOL@MYRRHA project at SCK•CEN a 100 MeV proton beam will be used to produce radioactive ion beams (RIB) through the isotope separation on-line (ISOL) technique. A first conceptual design of the facility together with its target module was realized with special attention towards a quick and reliable target exchange. This target module integrates the target and ion source, the RIB-extraction electrodes and the RIB-deflection plates.

A first simulation and optimization of the RIB extraction and transport system in the target module has been carried out with SIMION. Different optimization algorithms were applied to improve the design with respect to beam size and emittance. These results form the basis for the further design of the target module which will be prototyped and tested at the SCK•CEN laboratories.

Author: Mr CREEMERS, Philip (Belgian Nuclear Research Centre SCK•CEN, Institute for Advanced Nuclear Systems)

Co-author: Dr RIJPSTRA, Kim (Belgian Nuclear Research Centre SCK•CEN, Institute for Advanced Nuclear Systems)

Presenter: Mr CREEMERS, Philip (Belgian Nuclear Research Centre SCK•CEN, Institute for Advanced Nuclear Systems)

Track Classification: Beam extraction, transport, and diagnostics