Contribution ID: **39** Type: **not specified**

MYRRHA and its driver accelerator

Friday, 7 November 2025 19:00 (45 minutes)

MYRRHA is the first Accelerator Driven System (ADS) to be built, consisting of a subcritical nuclear reactor driven by a high power linear accelerator, for the demonstration of transmutation of nuclear waste at pre-industrial scale. With the subcritical concentration of fission material, the nuclear reaction is sustained by the particle accelerator only.
The MYRRHA design for an ADS is based on a 4mA, 600 MeV CW superconducting proton linac. The first stage towards its realization is called MINERVA and was approved in 2018 to be constructed by SCK CEN in Belgium. This consist of a 4mA 100MeV superconducting linac as well as two independent target stations, one for radio-isotope research and production of radio-isotopes for medical purposes, the other one for fusion materials research. The extension of the superconducting linac to 600 MeV is in the conceptual design stage, with a planned implementation until the early 2030s.
This contribution presents the main design choices and current status of the overall project parts (civil engineering, particle accelerator and target facilities).

Primary authors: FABICH, Adrian; ABDERRAHIM, Hamid Aït; DORDA, Ulrich

Presenter: FABICH, Adrian

Session Classification: Plenary session