



Contribution ID: 809 Contribution code: TUPB047

Type: **Poster Presentation**

CERN-MEDICIS: a unique facility for the production of radionuclides for medical research

Tuesday 3 June 2025 16:00 (2 hours)

The MEDICIS facility is a unique facility located at CERN, dedicated to the production of non-conventional radionuclides for research and development in imaging, diagnostics and radiation therapy, and based on offline mass separation. It exploits a classified area for handling of highly radioactive open sources, a dedicated isotope separator beam line, a target irradiation station at the 1.4 GeV Proton Synchrotron Booster (PSB) and receives activated targets from external institutes during CERN Long Shut-Downs. After collection, the batch is prepared to be dispatched to a research center. Since its commissioning in December 2017, the facility has provided novel radionuclides such as Ba-128, Tb-155, Sm-153, Tm-165 Ra-224/Pb-212 and Ra-225/Ac-225 with high specific activity, some for the first time, to research institutes part of the collaboration. CERN-MEDICIS has advanced significantly to reach mature processes to translate into clinical application for the most promising radionuclides.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

Funding Agency

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Session Classification: Tuesday Poster Session

Track Classification: MC8: Applications of Accelerators, and Engagement for Industry and Society:
MC8.U04 Isotope Production