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# The MEDICIS facility –first operation year, current and future plans

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The MEDICIS facility mission is to become a European leading facility and CERN's main producer of non-conventional medical isotopes for research in cancer treatment and diagnosis. Current isotopes produced at MEDICIS include:  $^{149}\text{Tb}$ ,  $^{152}\text{Tb}$ ,  $^{155}\text{Tb}$ ,  $^{169}\text{Er}$  and  $^{165}\text{Tm}$  and developments are being made to extend this list to  $^{47}\text{Sc}$ ,  $^{44}\text{Sc}$ ,  $^{67}\text{Cu}$  and  $^{225}\text{Ac}$ . The isotopes are either produced with CERN's 1.4 GeV proton beam (Tb, Tm, Sc, Ac, Cu) or they are provided as non-separated external sources from MEDICIS partners cyclotrons (Er, Tb, Sc).

MEDICIS first operation with radioactive beam started in May 2018 (after a short radioactive commissioning in December 2017). During 2018, more than 20 irradiations have been performed in more than 10 targets for machine development and experiments previously approved by the MEDICIS Collaboration board. Progress was achieved at a steady pace reaching the proposed milestones and isotope release efficiency goals successfully.

This year, a technical stop has been issued to maintain and upgrade the facility with radiochemistry capability and laser ionization (MELISSA), which is expected more than 10-fold in collected activities for Tb and Er. In April 2019 the facility will resume operation with external sources since CERN's protons are only available in 2021 (long shutdown).

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