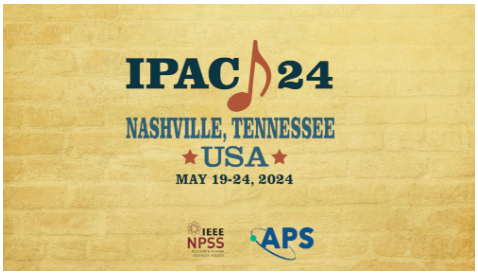

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Status of helium ion beams commissioning at MedAustron ion therapy center

Tuesday, 21 May 2024 16:00 (2 hours)

MedAustron is a synchrotron-based cancer therapy center located in Lower Austria. Patients are treated with proton and carbon ion beams in an energy range of 62-252 MeV/u and of 120-400 MeV/u respectively. The facility features three clinical irradiation rooms, among which horizontal and vertical beam lines as well as a proton gantry are available for treatment. A fourth irradiation room (IR1) is dedicated to non-clinical research activities among which helium ion beams are currently under commissioning. Helium ions are also promising future candidates for clinical treatment due their favorable physical and biological properties. At MedAustron the beam commissioning up to IR1 is near completion. A large energy range (i.e. 39-402 MeV/u) has been commissioned with the support of Monte Carlo simulations performed by the future users. The beam properties in terms of spot size and beam roundness obtained at the isocenter fulfill the user requirements. In this work we present the helium commissioning status with the main focus on the recent results obtained from the commissioning of the synchrotron and transfer line up to the isocenter in IR1.

Footnotes

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