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Radiation environment in medical and industrial machines

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Superconducting magnets have been used for more than fifteen years in protontherapy systems, starting with NbTi (Varian, IBA) and Nb3Sn (Mevion). These magnets, designed with large temperature, field and current margins, proved to be reliable and show no sign of conductor performance degradation.
The development of HTS presents opportunities and triggers questions about their suitability for medical and industrial applications, such as activation. The purpose of this presentation is to present the radiative environment in medical and industrial applications.
This presentation will provide an overview of the radiation environment around radioisotope production, industrial irradiation and protontherapy or carbon therapy systems. with a focus on the latter. We will depict their main features, which magnet technologies are used and key associated operational characteristics.

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Session Classification: Overview of accelerator and fusion facilities and their radiation environments