

Fragmentation Measurements In Particle Therapy: Status and plans of the FOOT Experiment

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Due to the advantageous characteristics of charged particles' energy deposition in matter, proton or ^{12}C beams are used to treat deep-seated solid tumors. Using these beams, the maximum of the dose is released to the tumor tissues at the end of the beam range, in the Bragg peak region. In this process nevertheless, fragmentation of both projectile and target nuclei can occur in the nuclear interactions of the beam with the patient tissues and needs to be carefully taken into account.

The goal of the FOOT (FragmentatiOn Of Target) experiment is to estimate both target and beam fragmentation cross sections in the energy range of interest for hadrotherapy, in order to provide new data for medical physicists and radio-biologists and to improve the new generation of Treatment Planning Systems (TPS). In this talk the project, the status of the different sub-systems construction and the plans for the final assembling will be presented.

Funding information

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