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Trajectory reconstruction for proton computed tomography with machine learning

Wednesday 13 March 2024 15:00 (30 minutes)

Hadrontherapy is an alternative way of treating cancer. This method utilizes the Bragg peak of protons to destroy cancerous cells while minimize the harm in the healthy ones. The aim of Hadrontherapy is to beam in protons that deposits most of their energy inside the tumor.

Proton Computed Tomography (pCT) is a method for calculating relative stopping powers on protons in the body of a patient. It can help to optimize the dosage planning for Hadrontherapy.

In my research the goal is to be able to process the signals from the detector layers and then predict the scattering angle from the incoming protons and their kinetic energy before entering the detector system.

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