

Scan path optimization for active beam delivery in charged particle therapy

Marta Dias, Marco Riboldi, Luís Peralta

CNAO: Beam delivery technique

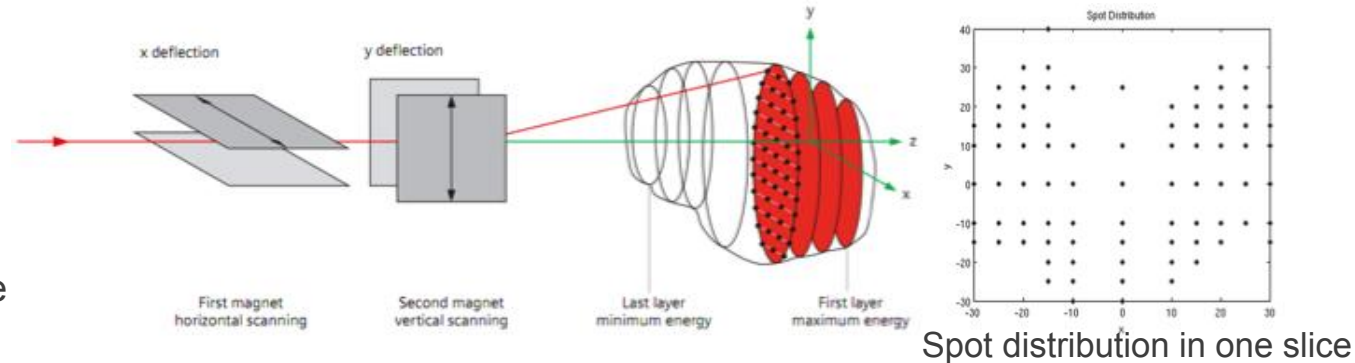
Quasidiscrete Scanning

The beam is only turned off when a new beam energy is set (change from one slice to other)

Extra Dose

- Δt between the time when the prescribed dose is achieved and the time when the beam is turned off in each spot.
- Transition between each irradiation spot.

Marta Dias (FCUL)
Marco Riboldi (Milão)
Luis Peralta (FCUL)



Scan Path Optimization

- Treatment time reduction
- Energy consumption by the scanning magnets
- Reduction in the extra dose

