

INSIDE Software Status Report

Simulation

- **FLUKA**

Close to the capability of predicting prompt photon fluxes in the irradiation performed with ion therapeutic beams

Secondary proton predictions are satisfactory

PET activity simulation (with proton beam)
successfully being validated

INSIDE Software Status Report

Simulation / Reconstruction / Analysis

- Tracker

Fiber hit simulation, track reconstruction

Carbon treatment simulation

Single track resolution on x,y (4mm), z (8mm)

~ 2000 protons expected

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Simulation / Reconstruction / Analysis

- PET

**2 modules simulation being successfully validated on
beam test data**

-> Extension to simulation of 20 modules

Reconstruction / Analysis software ready

Beam test results very satisfactory

Some (minor) issues to be understood

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Plans

Tracker

- proton TP simulation satisfactory
- Carbon TP simulation to be better understood
 - Study at 60^0
 - Study prompt photons performance

PET

- Full (20 modules) validated proton TP simulation
 - Analysis strategy to be studied
- Carbon TP to be simulated
- Calibration + Monitoring

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Comments

Project well on track

Reliable simulations

Work to be done on

understanding analysis strategy

**What level of Tracker/PET
integration would we like to
achieve?**