FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 10.12.2015, 16^{15} Uhr

Seminarraum 127, TUM, Physik II, Erdgeschoss/Nord
Treffen zum gemeinsamen Kaffee 16 Uhr

Prof. Marco Schippers

(Paul Scherrer Institut, Villigen/Switzerland)

Accelerators for Medical Application: What is so special ?

Accelerators for particle therapy have originated from a typical well-known instrument for research in (nuclear) physics laboratories, having as many operating parameters as possible. The specific requirements that apply for particle therapy with protons or ions will be discussed. The focus will be on accelerator design and operational aspects. The special requirements to reach a high reliability for patient treatments will be discussed as well as how one can achieve an accurate delivery of the dose at the correct position in the patient using modern techniques like pencil beam scanning. The accelerators currently used and some of the accelerator types being development will be discussed in relation to the requirements for therapy. It will be shown at which points the requirements and control of the accelerators for this application differ from those in a nuclear physics laboratory.

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