

Special Lecture

Physics of Ionisation Detectors

Norbert Wermes (Bonn U)

Feb. 6.+7.+8. (Mo-We) and Feb. 15.+16.+17. (We-Fr)

9:30 – 13:00 h (30 min break)

FTD Presentation Room

Provisional content:

- Fundamentals of ionisation detectors
- Tracking of particles
- Charge transport and signal generation in a detector (incl. Shockley-Ramo Theorem and weighting field)
- Fundamentals of semiconductor and gaseous detectors
- Detector technology, especially of semiconductor and gaseous micro-pattern detectors
- Signal processing & noise in ionisation detector readout
- Radiation damage: physics and mitigation measures
- Recent novel R&D: e.g. monolithic pixel detectors, precision timing with ionisation detectors (Si and RPCs)

Level: **MSc + PhD student/postdoc level**

Prerequisites: Basic knowledge in detector physics (lecture)

Participants are asked to **register by email** (wermes@uni-bonn.de)