Preliminary course programme

Stockholm 8.-12.9.2008.

–lectures 5x6h in Detection techniques, Detectors and Accelerators:

Day 1. Modern particle physics experiments and accelerators – Barbro Åsman, Volker Ziemann

Day 2. Tracking detectors – Richard Brenner

Day 3. Calorimetry – Bengt Lund-Jensen, Kerstin Jon-And

Day 4. Electronics, read-out systems and trigger – Sten Hellman, Sam Silverstein

Day 5. Reconstruction (tracks, vertices, energy clusters) – Peter Hansen

Introduction to self-study material and exercises – Barbro Åsman

Self-studies and exercises September-November 2008.

Helsinki 24.11.-5.12.2008

–lectures and hands-on supervised laboratory work

Day 1. Introduction: Si detector fundamentals, Si detector R&D state-of-the-art – Jaakko Härkönen/Michael Moll

Day 2-5. Laboratory work:

Group 1: build a semiconductor detector from the components. Measure its characteristics with the help of a source and an oscilloscope.
– Richard Brenner

Group 2: gas detectors. Characterization of GEM-detectors.
– Francisco Garcia, Kari Kurvinen

Day 6. Visit to and demonstrations at the Micronova Research Centre for Micro- and Nanotechnology.
– Esa Tuovinen

Day 7-9. Laboratory work:

Group 1: Probe station measurement of irradiated Si detector
– Esa Tuovinen/Heikki Viljanen

Group 2: Design and construction of a large Tracker system
– Lenny Spiegel

'Mini-Tracker' FinnCrack
– Teppo Mäenpää/Henri Moilanen

Day 10. Group summaries, conclusions.