

**International Research and Training Group
School on Radiation Tolerant Detectors in High Energy Physics
Heidelberg, 01-05.11.2010**

Physikalisches Institut (PI) Uni-Hd, Albert-~~?~~berle-Str. 3-5, Fakultätssaal, 323
Kirchhof Institut für Physik (KIP) Uni-Hd, Im Neuenheimer Feld 227, Hardware Praktikum, 3.201

Monday, 01.11.2010 (PI)

14:00 Welcome (**N.Herrmann**)

14:15 [Introduction to silicon detectors and radiation damages](#) (**U.Husemann**)

15:30 [Radiation effects in FPGAs used in high energy physics experiments and accelerators](#) (**K.Roed**)

16:30 Reception

Tuesday, 02.11.2010 (KIP)

9:00 Tutorial 1 - Introduction to FPGA programming (**A.Schöning/V.Angelov**)

10:30 Coffee

11:00 Tutorial 1 - continued

12:30 Lunch

(continuation in KIP)

14:00 Tutorial 2 - Synthesizing CPU on FPGA (**U.Kebschull/H.Engel**)

15:30 Coffee

16:00 Tutorial 2 - continued

Wednesday, 03.11.2010 (PI)

9:00 [Operating silicon detectors at hadron colliders](#) (**U.Husemann**)

10:00 Coffee

10:30 [Surface effects of ionizing radiation - radiation tolerant CMOS ICs](#) (**I.Peric**)
(additional notes to the lecture)

11:30 [Deep Level Transient Spectroscopy: Characterization of Radiation Damage](#)
(**E.Monakhov**)

12:30 Lunch

(changing place to KIP)

14:00 Tutorial 3 - Making radiation-tolerant FPGA (**U.Kebschull/J.Gebelein**)

15:30 Coffee

16:00 Tutorial 3 - continued

Thursday, 04.11.2010

10:00 Social activity - guided tour through Heidelberg and castle

16:00 Social activity - wine degustation and dinner

Friday, 05.11.2010 (PI) - PhD reports

- 9:00** [CP violation in the decay Bs->JPsi Phi at LHCb](#)
(Ch.Langenbruch)
- 9:15** [Underlying event analysis with the ALICE detector: data correction procedure](#)
(S.Vallero)
- 9:30** SiPM characterisation and quality assurance for imaging calorimeters
(P.Eckert)
- 9:45** [Search for multi-body final states at high invariant masses with ATLAS](#)
(M.Henke)
- 10:00** Measurement of the inclusive jet cross section at ATLAS
(F.Müller)
- 10:15** Coffee
- 10:45** [Low power radiation tolerant CMOS design using commercial fabrication processes](#)
(A.Hasanbegovic)
- 11:00** [Application of Birks' law of scintillator nonlinearity in Geant4](#)
(A.Tadday)
- 11:15** [Miniaturized Langmuir probe systems for in-situ space plasma measurements](#)
(T.A.Bekkeng)
- 11:30** [VM scheduling challenges in the ALICE HLT-cluster](#)
(S.Böttger)
- 12:25** [FPGA based TDC for future application in LHCb](#)
(Ch.Färber)