

Radiation effects at the LHC experiments and impact on operation and performance



Sensor Simulation Session

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Welcome to the Sensor Simulation Session!

What to expect from this session

1. **What we want to simulate, both macro- and micro-scopically**
 - Currents, voltages, CCE, cluster sizes, L.A.; electric field, mobility
2. **How we do that**
 - TCAD, Geant4, standalone, combination of all of these; a posteriori corrections of Monte Carlo
3. **How good we are at that and how predictive we can be**
 - Comparison with Run1&2 data, testbeam data, lab measurements
4. **Which is the insight we can get**
 - Can we have a look at observables otherwise un-accessible? e.g. electric field, carriers distribution, more?
5. **What we are still missing**
 - Temperature dependence? Annealing? Breakdown? Multiplication? Extrapolations/predictions for Run3 / HL-LHC

Session agenda

14:00	Introduction 6-2-024 - BE Auditorium Meyrin, CERN	Marco Bomben 	14:00 - 14:10
	Silicon Sensor Simulation in the ATLAS Monte Carlo Framework (20'+10') 6-2-024 - BE Auditorium Meyrin, CERN	Ben Nachman 	14:10 - 14:40
	Silicon Sensor Simulation in the LHCb Monte Carlo Framework (15'+5') 6-2-024 - BE Auditorium Meyrin, CERN	Tomasz Szumlak 	14:40 - 15:00
15:00	Silicon Sensor Simulation in the CMS Monte Carlo Framework (15'+5') 6-2-024 - BE Auditorium Meyrin, CERN	Morris Swartz et al. 	15:00 - 15:20
	Coffee break 6-2-024 - BE Auditorium Meyrin, CERN		15:20 - 15:50
16:00	Cluster and Track Property Data/MC in ATLAS (20'+5') 6-2-024 - BE Auditorium Meyrin, CERN	Lorenzo Rossini 	15:50 - 16:15
17:00	Discussion and Closeout 6-2-024 - BE Auditorium Meyrin, CERN		16:15 - 17:15

Discussions are vital so
please respect the
allocated time.

14:00

Introd

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Discussion

6-2-024 - BE Auditorium Me

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15:20 - 15:50

Lorenzo Rossini



15:50 - 16:15

16:00

17:00

16:15 - 17:15

Time to start

