



WP5 - Experiments

- Partners
 - CERN-PH (CMS, ATLAS)
 - Univ. Sheffield (ATLAS)
 - Univ. Prague (ATLAS, (CMS))

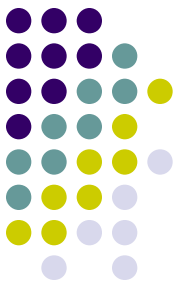
- PSI (CMS, ATLAS)
- CERN-SC (CMS, ATLAS)

WP5 - Activities in Experiments

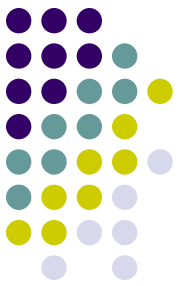


- Validation of predictive tools: Placement of passive detectors in CMS and ATLAS detector caverns (CERN-SC, PSI)
- Measurement of background radiation levels with ATLAS-MPX in ATLAS and CMS (Prague)
- Simulation of radiation levels and activation in and around ATLAS (CERN-PH)
- Simulation of background radiation in ATLAS and sATLAS, prediction of ID RadMon response (Sheffield)

WP5 - Deliverables Year 2



5.1.1	Validation of simulation tools with measurements at LHC	R, March 2010
5.2.1	Estimation of radiation levels for critical areas of the experiments at sLHC	R, March 2010
5.2.2	Estimation of radiation levels for critical areas of sLHC and its injectors	R, March 2010

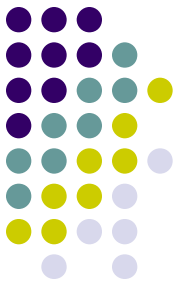


Status 5.1.1 : Validation

- Validation with passive detectors not possible
 - The limited luminosity may even limit the usefulness of many passive detectors at the end of 2010 (signal/background)
- Validation with active detectors:
 - Inner detector RadMon
 - ATLAS MPX (also in CMS)are waiting for beam
- Proposal: write a partial report, containing preliminary results of the two active monitor systems within ATLAS (and CMS, for MPX)

Status 5.2.1:

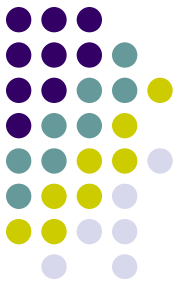
Radiation levels in sLHC experiments



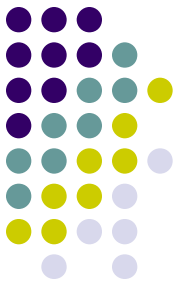
- Various observables (mainly radiation background) have already been simulated
- It would be necessary to extract relevant parameters for radiation protection from these simulations (activation, dose equivalent rates)
- To what extent can a first report be written based on available material ? (contributions from CERN-PH, Sheffield, CERN-SC)

Status 5.2.2:

Radiation levels in sLHC & injectors



- Hiring of a fellow in RP Sept. 2009 (!)
- Partner GSI actively participating, additional resources drafted in
- Working on LINAC-4 and SPL-related questions
- sLHC inner triplets: SC-fellow to be hired in 2010
- New injector chain presently under review
- Presently, only a preliminary report is possible
- To what extent should emphasis be shifted to existing injectors delivering beam to sLHC ?



Summary - Deliverables

	Proposal
5.1.1	Partial report with data and predictions for ID-RadMon and MPX
5.2.1	Compilation of existing work done by CERN-SC, CERN-PH and Sheffield for a preliminary report
5.2.2	Preliminary report. Re-evaluation of critical areas, including presetn injectors ?