

Status of Simulation Validation

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- **LaThuile release (4.8.3) is out → re-integrating simulation**
- **Currently testing 4.8.4pre1**
- **Changes that went into 4.8.4pre1:**
 - **Silicon: Fix bug in physical CDM (Hall effect) plus other fixes, add option to tune gain, fix bug to whiten out dead layers in simulation, treat pedestals correctly, added logic and hooks for realistic MC**
 - **COT: Correct for spacers in digitizer**
 - **generators: add Grappa, fix problem in setting random numbers in some generators, fix missed tag in Tauola,**
 - **add HEPEV4 bank with hard scattering info**
 - **fix bug in ParticleDB**
- **Test of 4.8.4pre1 in progress:**
 - **Generated 5000 events each $Z \rightarrow ee$, $Z \rightarrow \mu\mu$ with no core dump, ran successfully through production, MC data available on fcdfsgi2**
 - **also generated some other samples such as $W \rightarrow e \nu$, $J/\Psi \rightarrow \mu\mu$**

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- **Known features in 4.8.4pre1:**
 - Core dump in Physical CDM (now default)
 - Potential memory leak in SiCluster (under investigation)
 - Potential problem with brem-rate
 - Change sample tcl files to FileInput – FileOutput
 - Change default simulation tcl files for better sourcing from RunMC
- **Plans for further validation:**
 - Asked some people to look/generate initial samples (Evelyn T., Ken B., Victoria M., Shabnaz P., Savario D.)
 - Check of passive material (Laurent V.)
 - Requested special queue on CAF for real 10k & 100k tests
 - Talked with Tony Liss to tag onto successful new model for production validation: Generate 10k samples of specific decays (W, Z, jets, J/Psi, ...) Use manpower validating production output to run these MC data through production including validation modules and compare for changes to previous releases



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- **Further issues:**
 - Need feedback from physics groups on whether this release will serve needs for LaThuile physics analyses
 - Future requests for setting priorities in simulation improvements should be joint effort of simulation group together with offline and physics coordinators as well as physics groups

