

Computing & SUSY analyses

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“ZE” table

Labo	CCIN2P3, CPPM, LAL (MSSM), LPSC
Format	D3PD
Taille	~500GB
Input Prod	AOD or ESD future: use SUSY or jet/met dESD or may slim/thin SUSYD3PD Private
Outil	D3PDMaker + custom JO
Saveur de grille	Panda
Type data	Data + MC
Stockage	Grid + local (NFS server)
Analyse	Dedicated mini-framework (see next slide)

Analysis mini framework

- ◆ We did not like the concept / usage of a flat ntuple but decided to go with the “party line”, i.e. D3PD, but use OO for analysis
- ◆ Investigated a simple framework in python, but that turned out to be too slow.
- ◆ Developed a mini-framework for analysis in C++
 - ◆ Generate code to
 - ◆ Use only selected branches
 - ◆ Create physics objects
 - ◆ Analysis code in C++
 - ◆ Based on TSelector, allow to investigate proof at some point

Remarks

- ◆ Did a few benchmarks on performance with the D3PDs as produced:
 - ◆ Local disk: OK, limited by CPU on a reasonably fast machine
 - ◆ NFS server at Orsay: slow, ~ 25% CPU utilisation
 - ◆ RFIO to the local SE: excruciatingly slow, unusable
 - ◆ New RFIO version installed last week, to be tested
- ◆ Main problem is that the way root files are organised by default cause lots of random access in files and so invalidate cache and read-ahead
 - ◆ Illya Vukotic working on optimising the layout like he did for AOD/ESD, first results are promising
- ◆ Need to test proof
- ◆ I can see the size grow rapidly to few TBs
- ◆ NB: Analysis strategy for LAL-sgluon analysis and LAPP not fully defined now.