

Pixel-only b-tagging with CMSSW_363_SLHC1

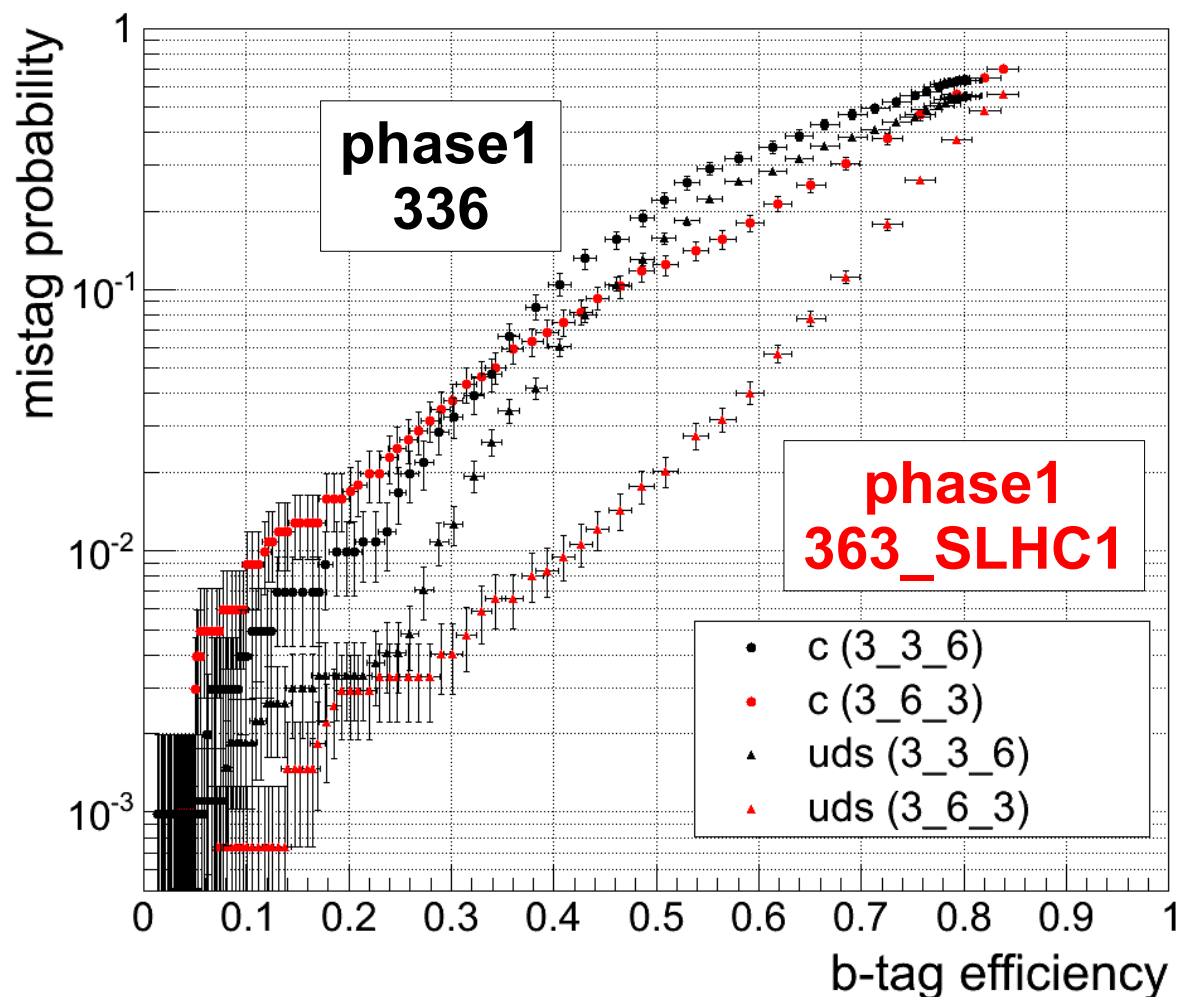
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DESY

Pixel upgrade simulation technical meeting 15.11.10

HLT pixel-only b-tag efficiency vs. fakerate

Several new Pixel reco features in CMSSW_3_6_3 (wrt. CMSSW_3_3_6)

comparison of “old” 336 with “new” 363_SLHC1



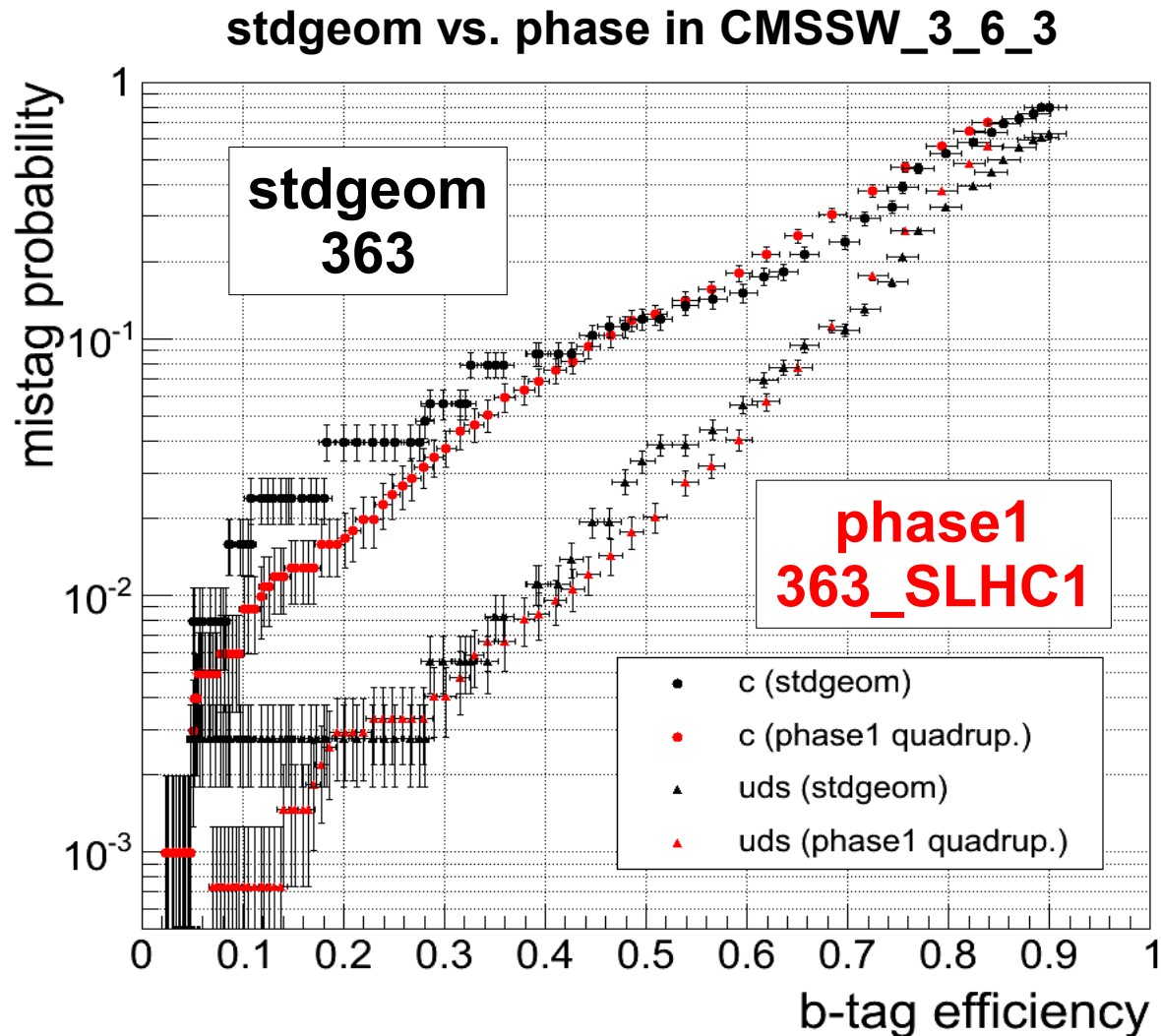
- some fixes in the track fitting routines (mostly error calculation)
- ...
- vertexing now uses offline **beamspot constraints**



Huge improvement in HLT btag **fakrate** & efficiency wrt. “old” 336, particularly for light quark jets (~ factor 5)

Currently investigating effect on iterative tracking & all-silicon b-tagging

HLT pixel-only b-tag efficiency vs. fakerate



Still no improvement of
Phase1 b-tag wrt. stdgeom.
Investigating further...

HLT BTagIP trigger step 2.5
4k events ttbar (private)