

$B^0 \rightarrow K^* \mu^- \mu^+$ Update



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$B^0 \rightarrow K^* \mu^- \mu^+$ meeting, CERN
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Topics on discussion

1. Trigger
2. Data/MC corrections
3. BDT training
4. PID re sampling
5. Exotic pollutions to $B \rightarrow K^* J/\psi$.
6. VARIA

Bookkeeping

⇒ The ntuples returned from GRID:

/eos/lhcb/wg/RD/Bd2Kstmumu/Strip

⇒ The old ones (with trigger BUG) are also there but with directory name `_TISTOSbug`

Let me know if you see anything strange in them!

PID resampling - what we had

Variable	pi	K	p	e	mu
CombDLLK_Brunel	G	G	G		
CombDLLp_Brunel	G	G	G		
MC15TuneV1_ProbNNK_Brunel	G	G	G		
MC15TuneV1_ProbNNmu_Brunel					G
MC15TuneV1_ProbNNe_Brunel				G	
MC15TuneV1_ProbNNp_Brunel	G	G	G		
MC15TuneV1_ProbNNpi_Brunel	G	G	G		

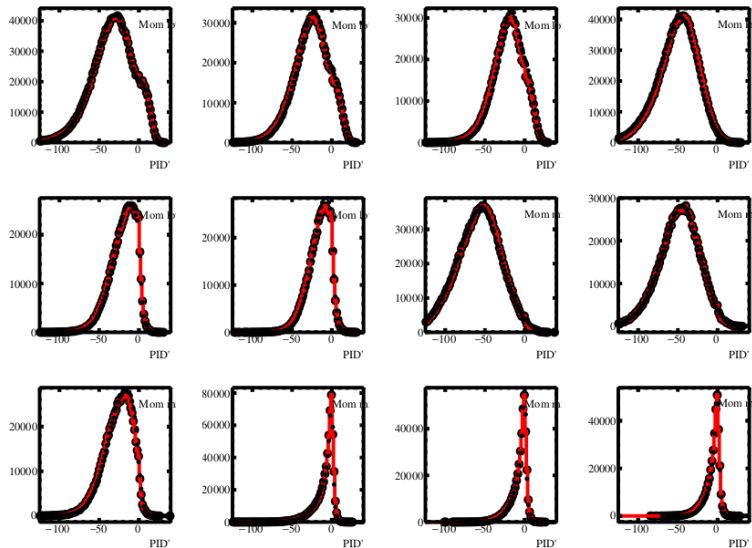
PID resampling - what we had

Variable	pi	K	p	e	mu
CombDLLK_Brunel	G	G	G		
CombDLLp_Brunel	G	G	G		
MC15TuneV1_ProbNNK_Brunel	G	G	G		
MC15TuneV1_ProbNNmu_Brunel					G
MC15TuneV1_ProbNNe_Brunel				G	
MC15TuneV1_ProbNNp_Brunel	G	G	G		
MC15TuneV1_ProbNNpi_Brunel	G	G	G		

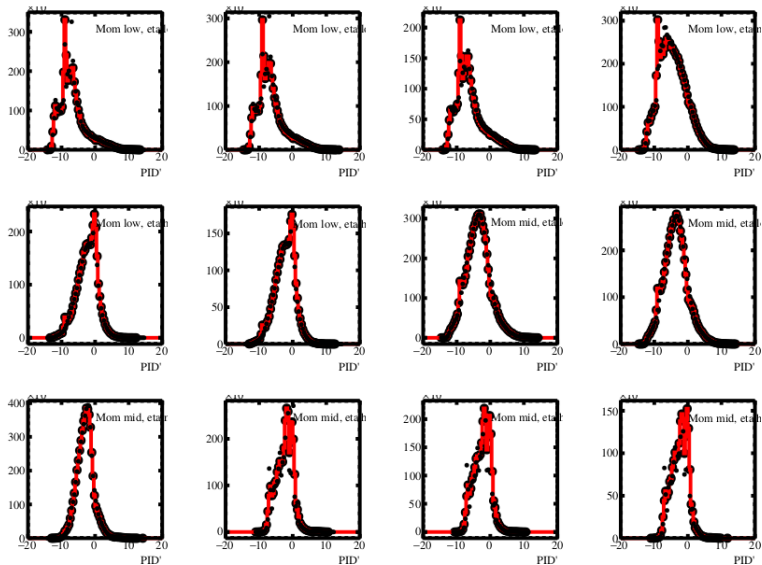
PID resampling - what we have

Variable	pi	K	p	e	mu
CombDLLK_Brunel	G	G	G		•
CombDLLp_Brunel	G	G	G		
MC15TuneV1_ProbNNK_Brunel	G	G	G		•
MC15TuneV1_ProbNNmu_Brunel	•	•			G
MC15TuneV1_ProbNNe_Brunel				G	
MC15TuneV1_ProbNNp_Brunel	G	G	G		
MC15TuneV1_ProbNNpi_Brunel	G	G	G		•
CombDLLmu_Brunel	•	•			•

PID resampling - example muDLLK



PID resampling - example piDLLmu



Conclusions

- PID works reasonably well, but still needs a bit of work.
- To fully test the BDT we need the re sampled MC.
- I think we can fix the preselection today.
- Trigger study performed.
- Discrepancy on the Pi_PT fixed and others are under control.

Backup