

$B_s \rightarrow D_s \pi$ with $D_s \rightarrow \phi\pi$ and $D_s \rightarrow 3\pi$ Trigger studies: short term

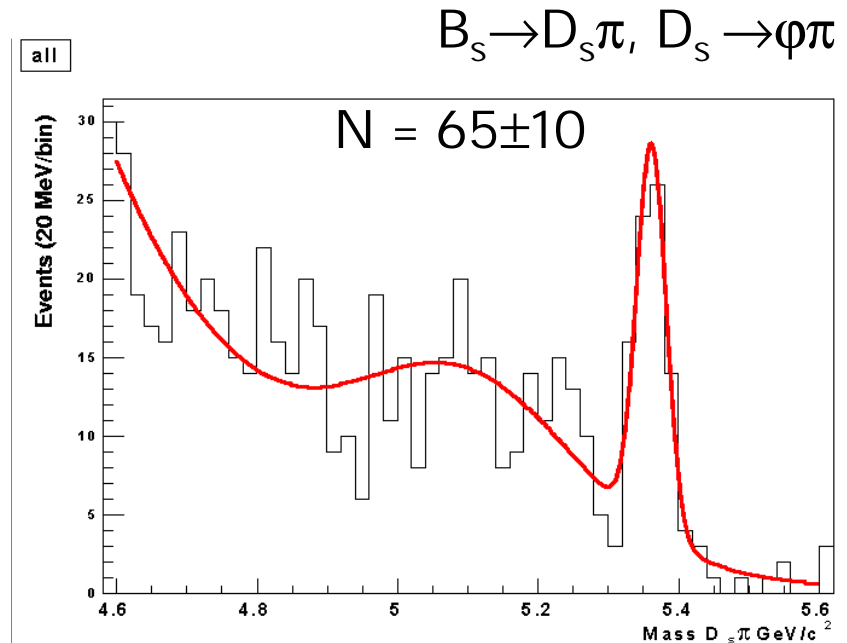
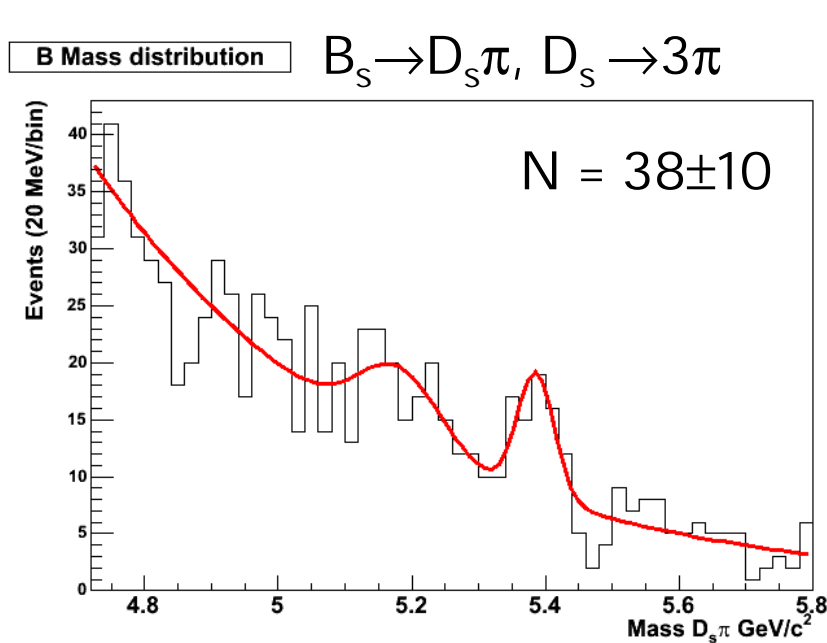
A. Cerri, D. Lucchesi and S. Da Ronco

Are we going to gain something moving to UPS?

- Signal yield
- L1 and L2 rates
- Prescale weighted cross sections (with/without UPS)

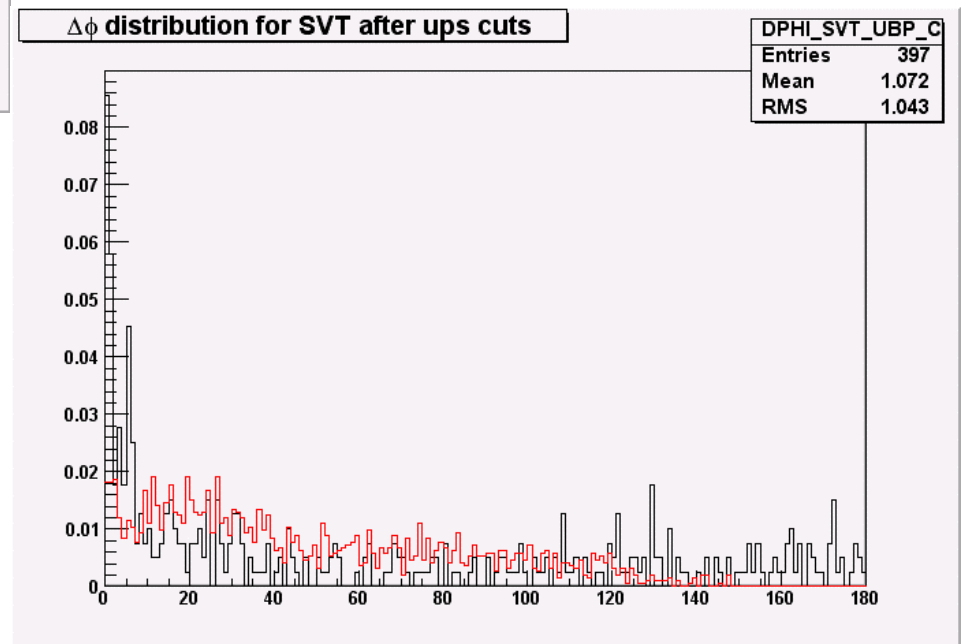
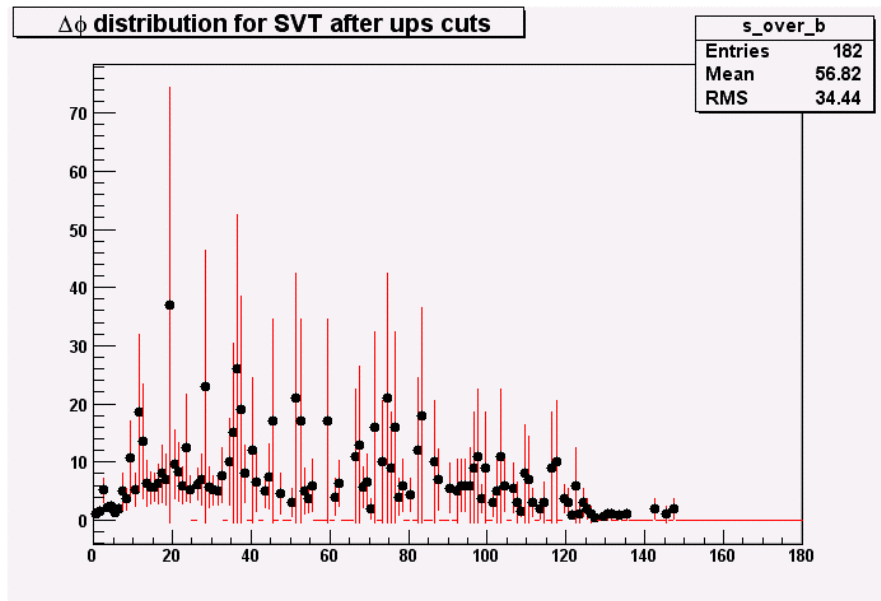
The ingredients

- Simulated data using Alex's "realistic" Monte Carlo
- $P_{\min}^b = 0 \quad |\eta| < 1.5$
- Detector & trigger configuration: run number 165121
- Normalize to the data: Scenario A

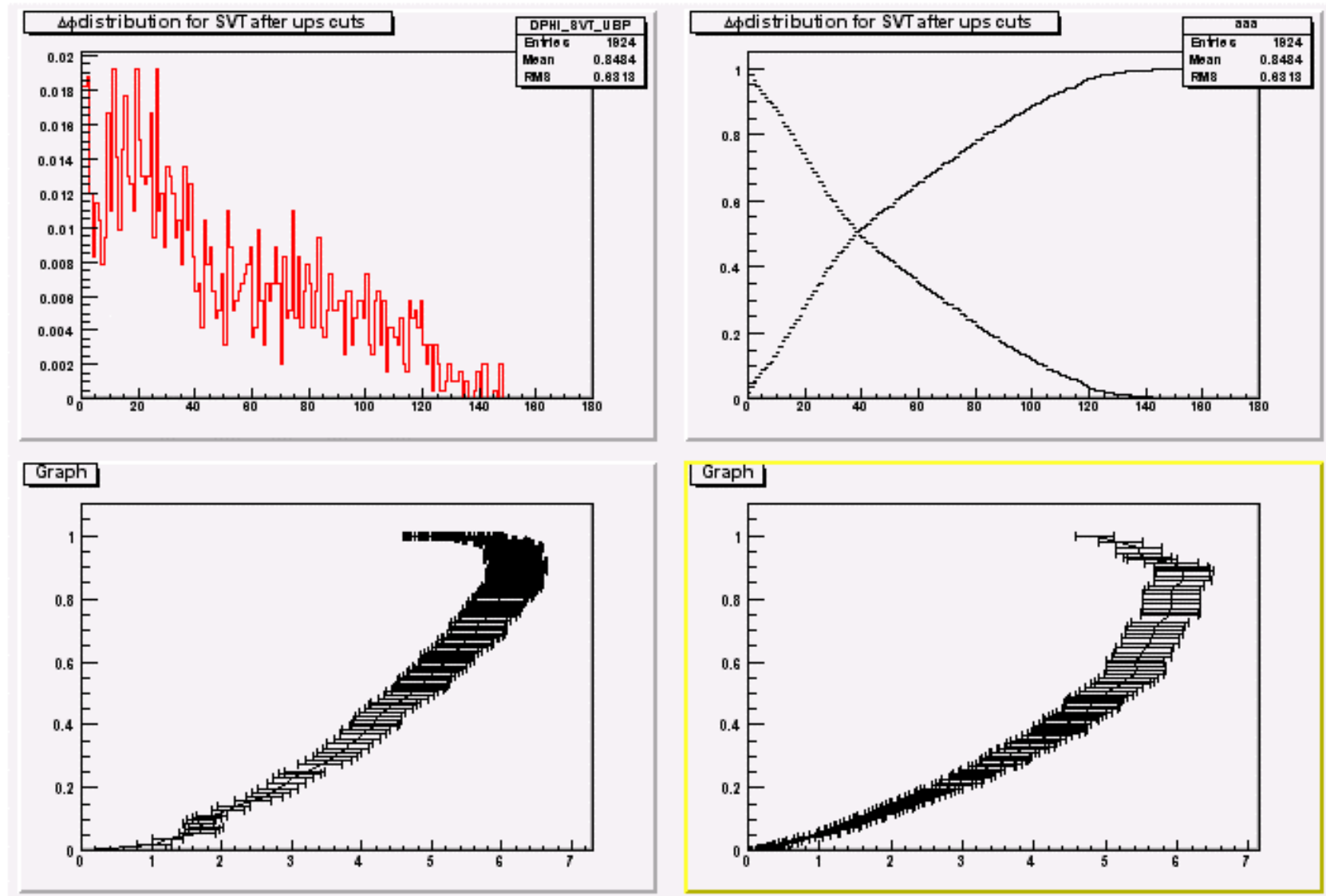


- Test run 167953 (thanks to Kevin for infos and to Massimo for the ntuples)

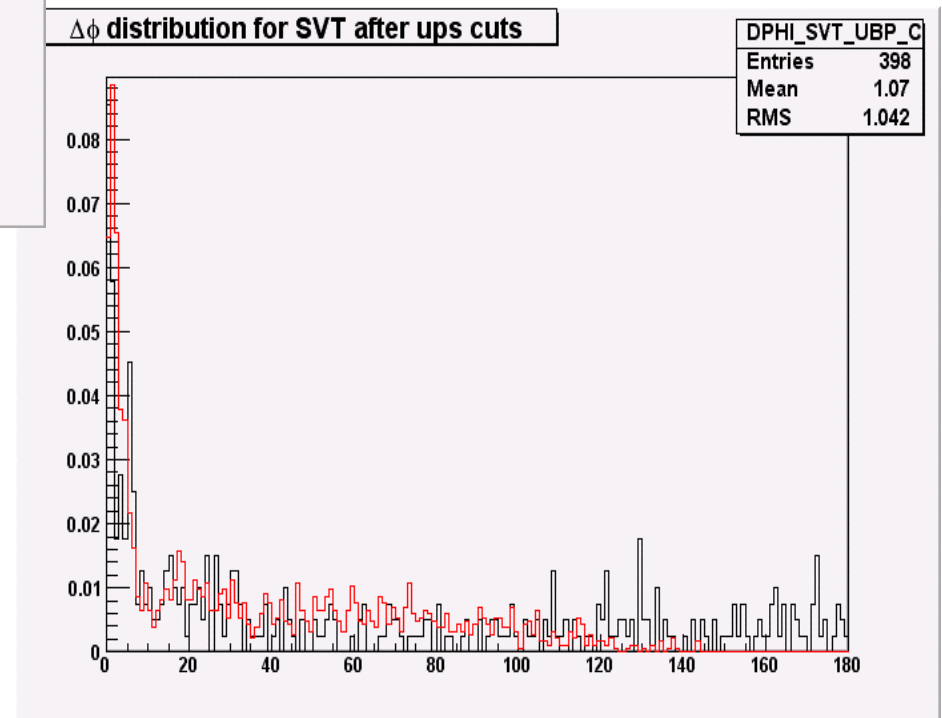
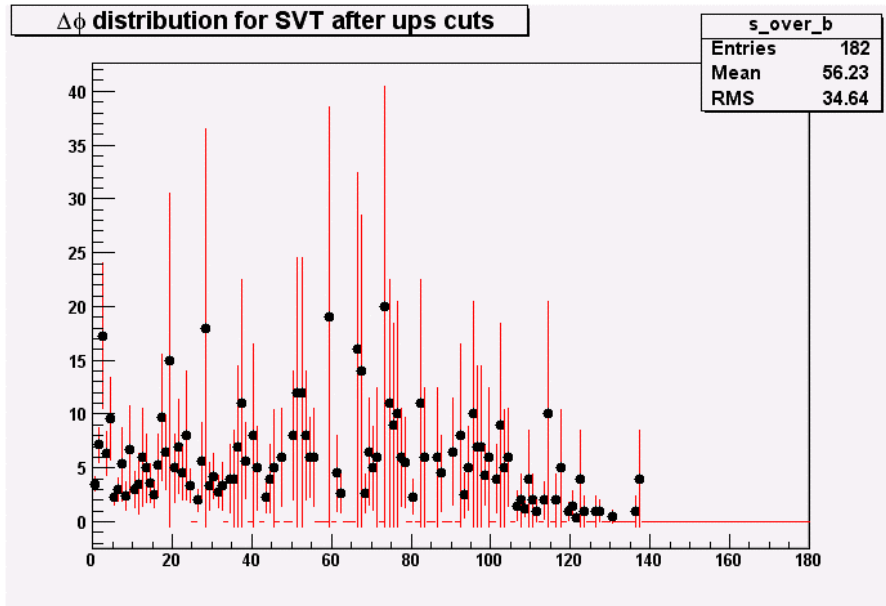
$B_s \rightarrow D_s \pi$ with $D_s \rightarrow 3\pi$ yields



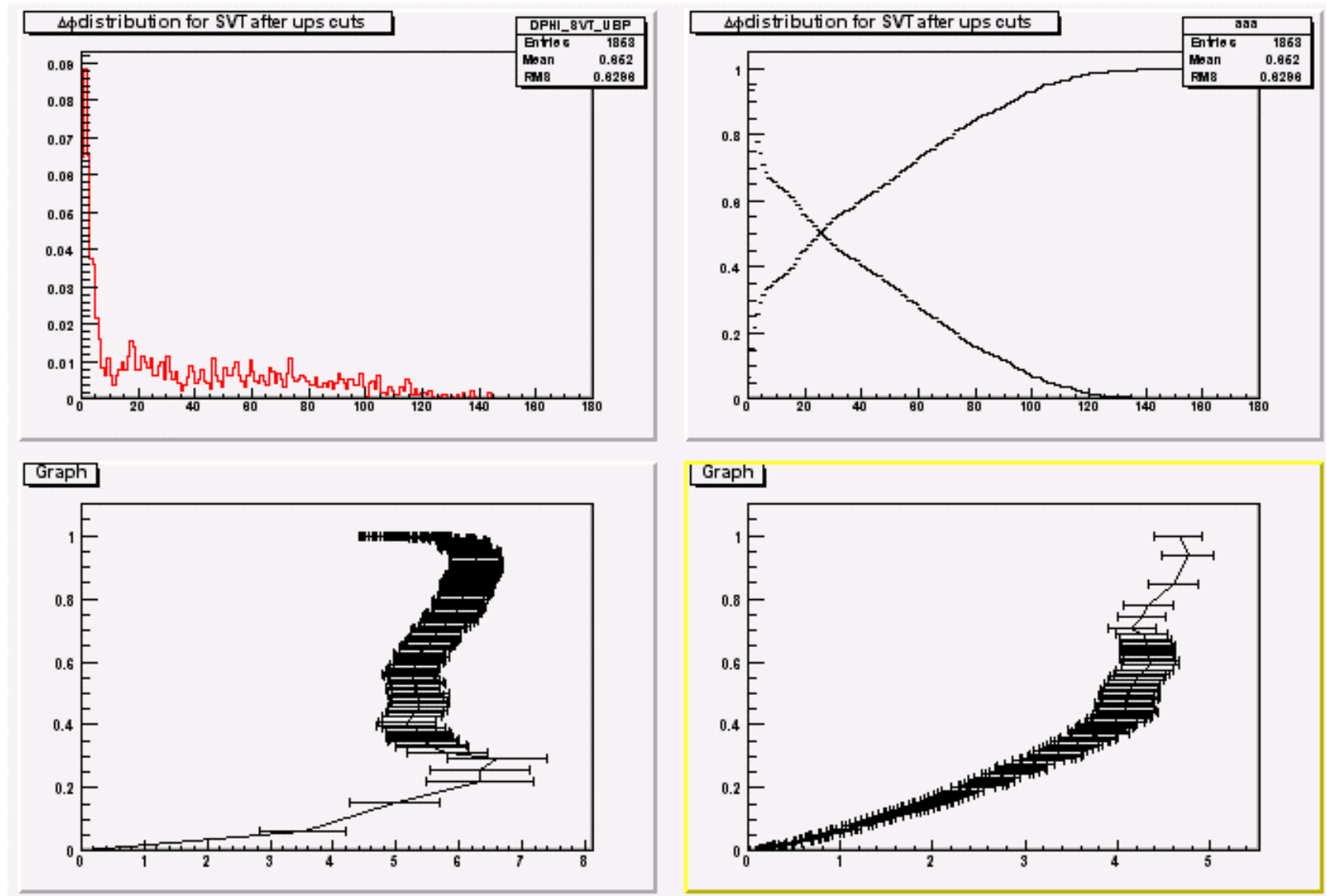
$B_s \rightarrow D_s \pi$ with $D_s \rightarrow 3\pi$ yields



$B_s \rightarrow D_s \pi$ with $D_s \rightarrow \phi \pi$ yields



$B_s \rightarrow D_s \pi$ with $D_s \rightarrow \phi \pi$ yields



$B_s \rightarrow D_s \pi$ with $D_s \rightarrow \phi \pi$ yields (pb)

[illegible]

$B_s \rightarrow D_s \pi$ with $D_s \rightarrow 3\pi$ yields (pb)

[illegible]

$B_S \rightarrow D_S \pi$ with $D_S \rightarrow K^* K$ yields (pb)

[illegible]

167953 (ub) [4.1E31]

[illegible]

Conclusions ToDo's...

- L2 quantities for optimizing the selection on ϕ π , 3π
- We have derived unscaled L1/L2 cross sections for:
 - ϕ π
 - 3π
 - K^*K
 - Test runs
- Still missing:
 - L1/L2 x-sections for **offline reconstructable** events