Comparison of old vs. new data (Bst-ntuples):

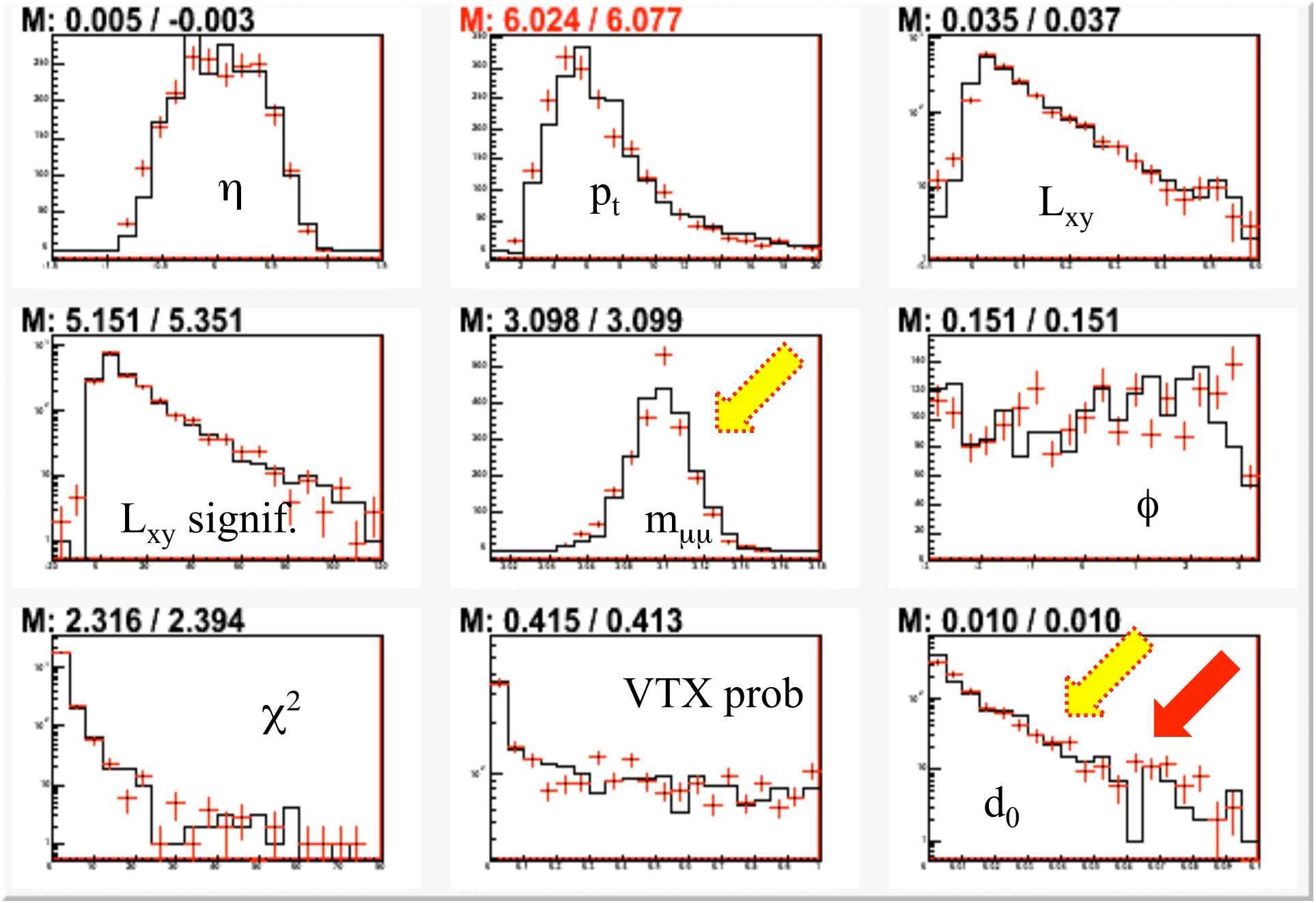
old data: 1st 1.35 fb^{-1} (***red*** crosses)
new data: from 1.35 to 2.8 fb^{-1} (***black*** histograms)

B^0_s -> J/ψϕ distributions (except for obvious cases) are sideband subtracted.

Using a NN-with**out**-PID and a cut of 0.5

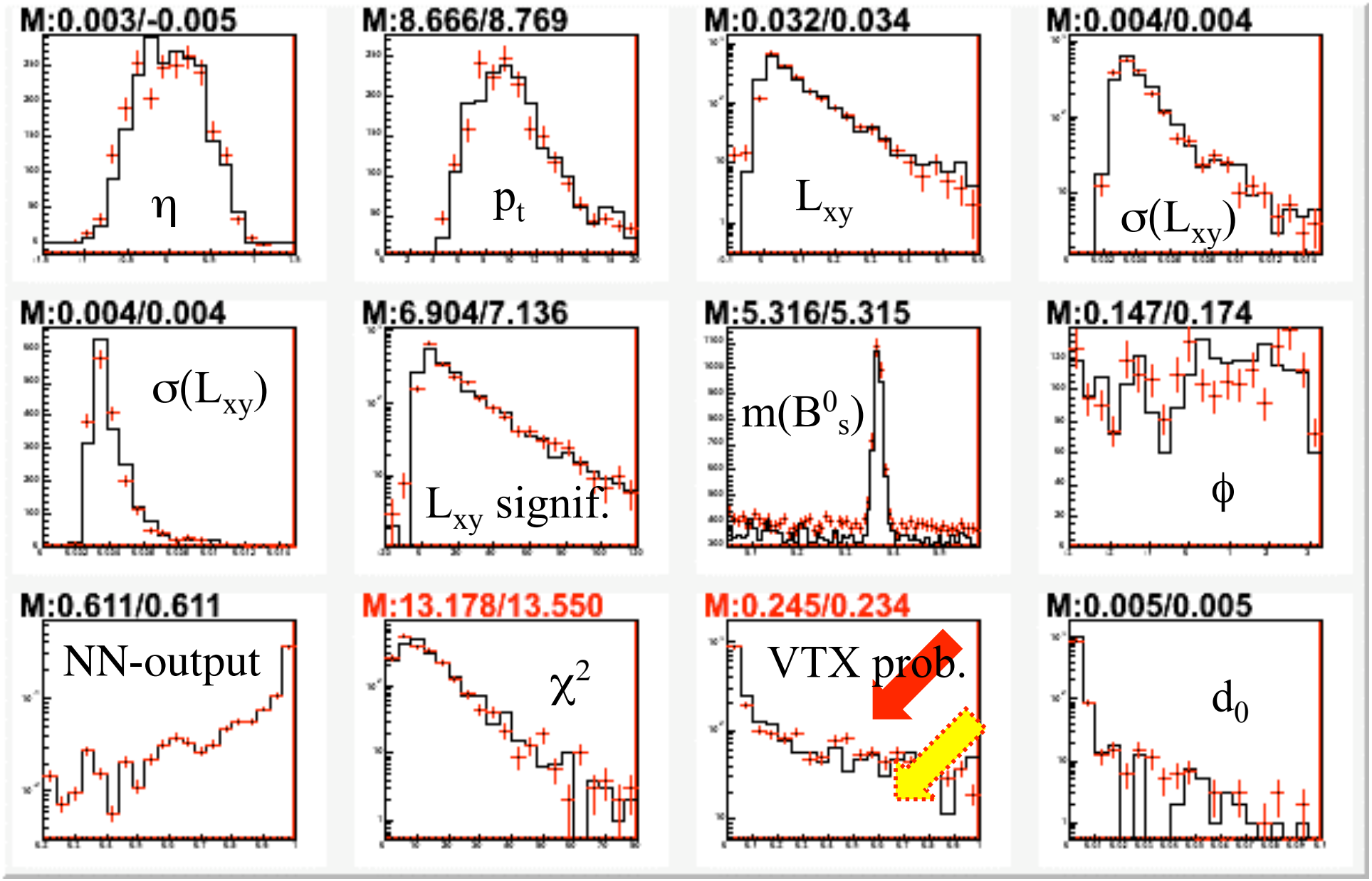
J/ψ

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



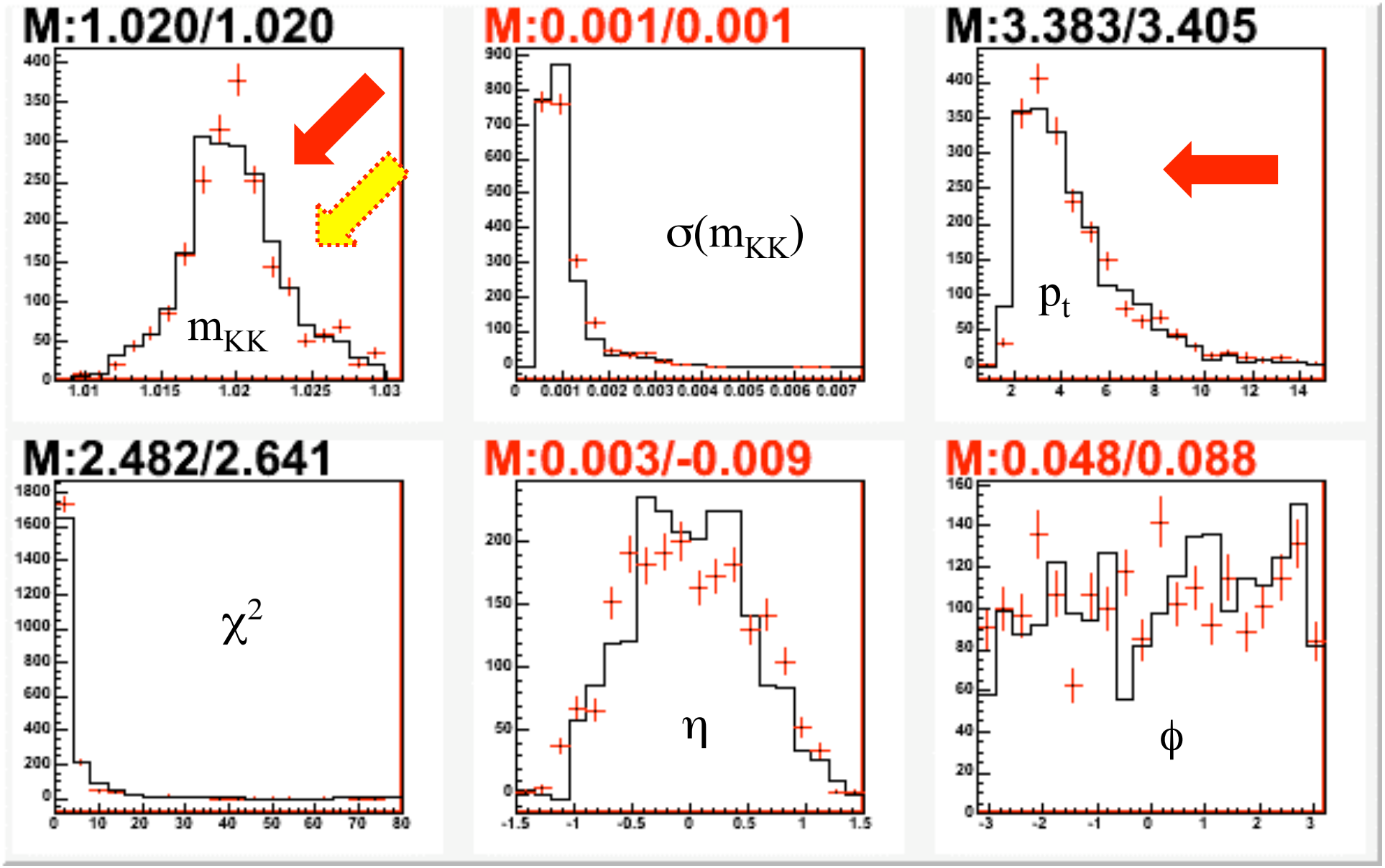
B^0_s

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



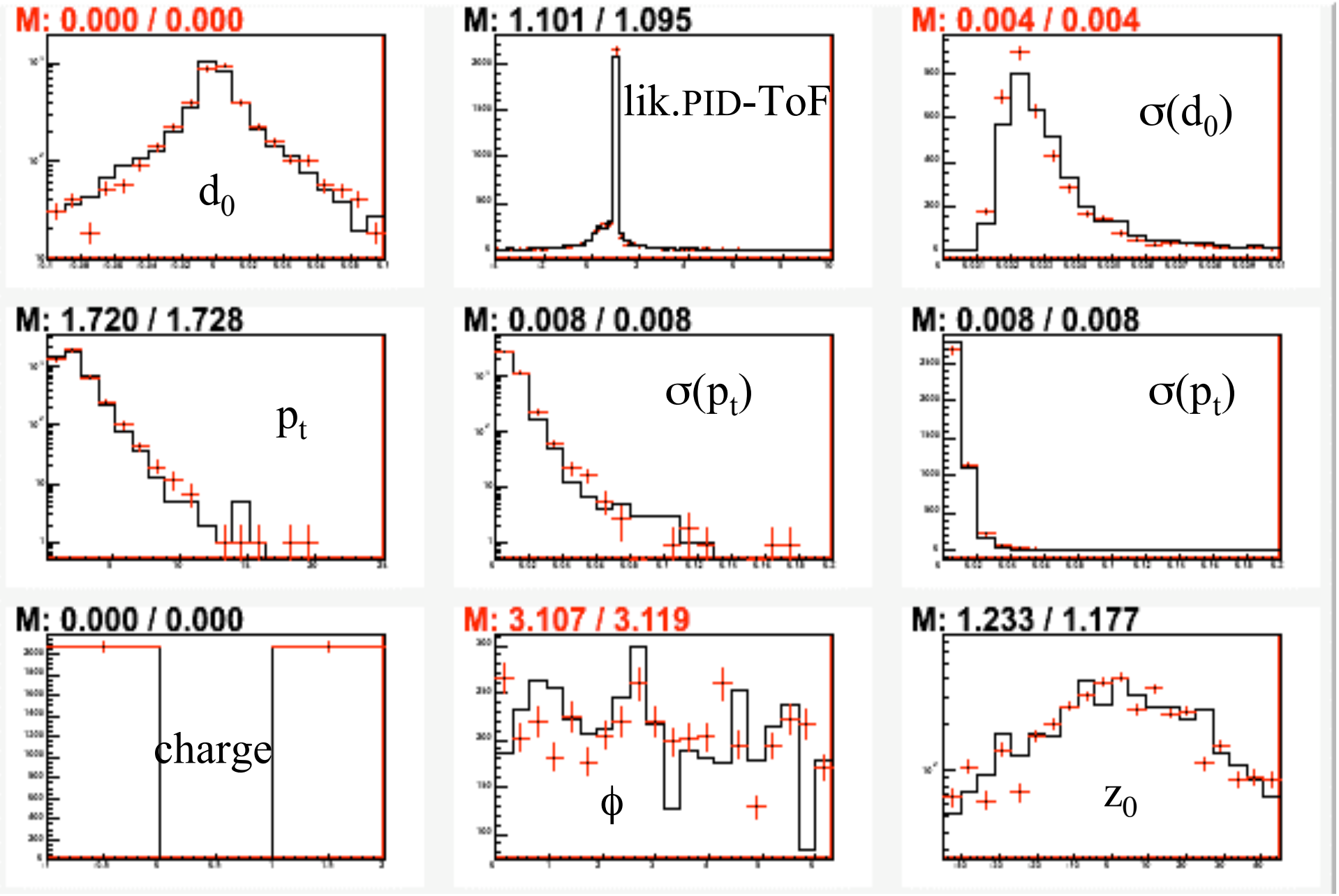
ϕ

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



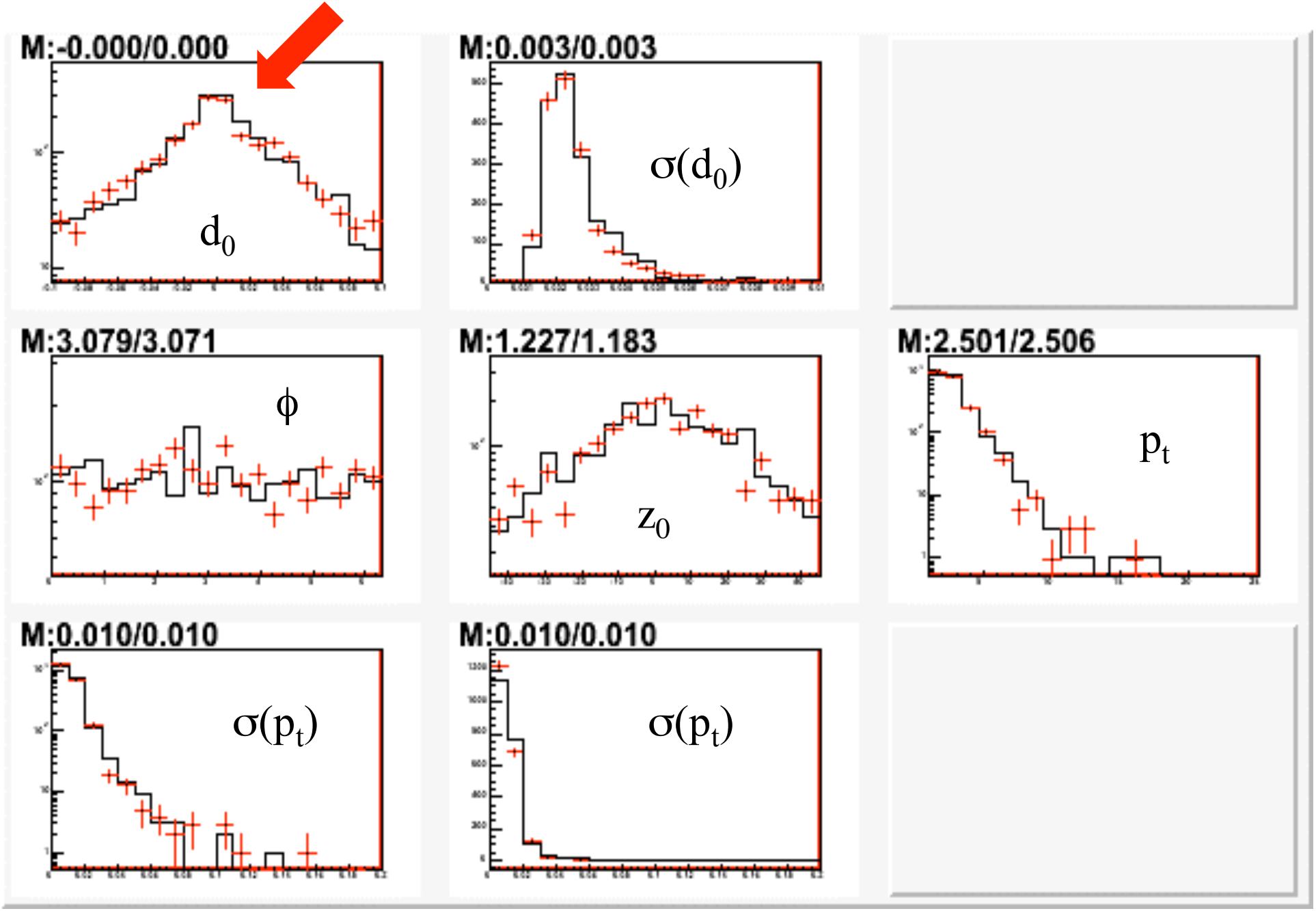
Kaons from ϕ:

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



+ive muons from J/ψ:

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

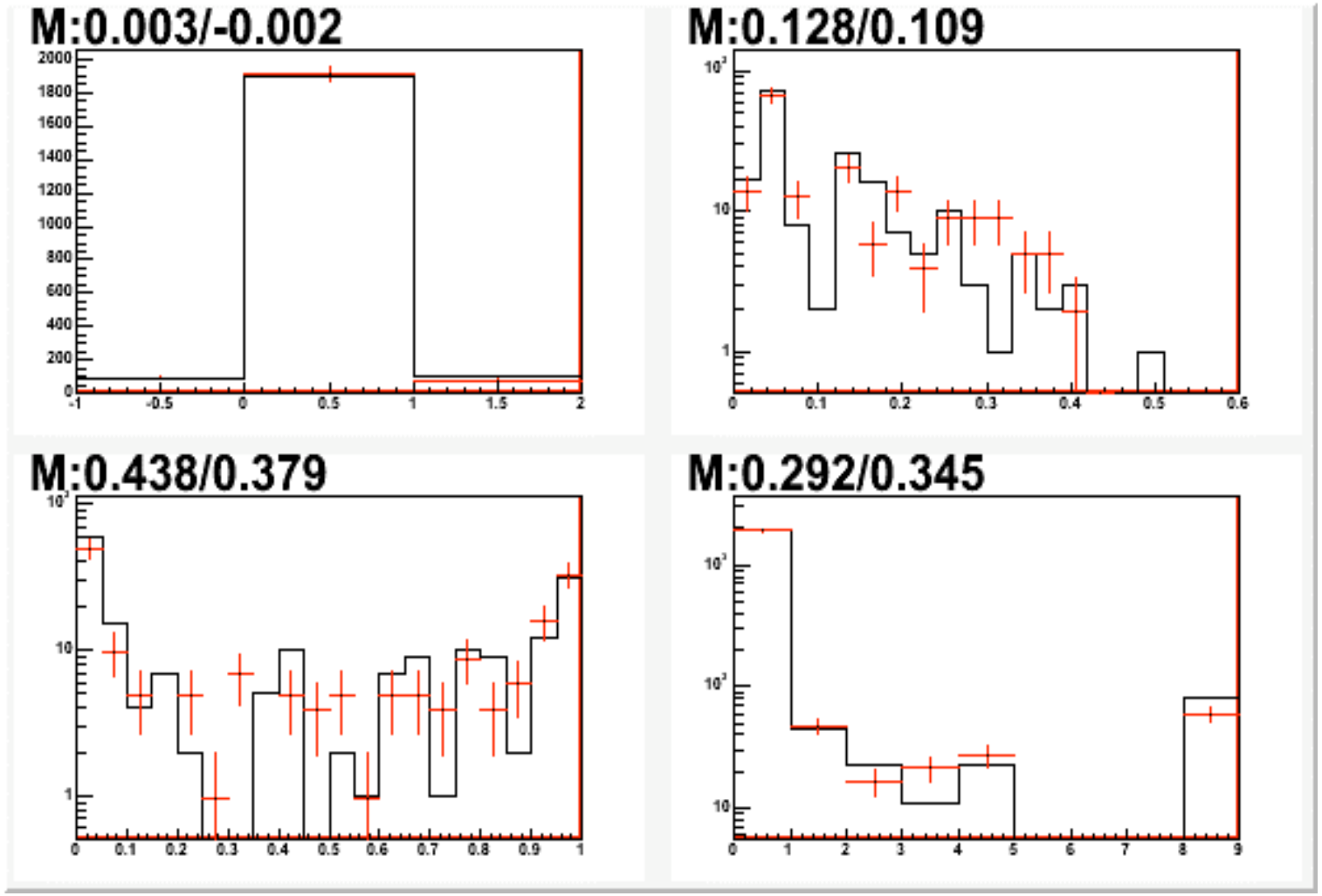


Taggers :

Soft Muon Tagger

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

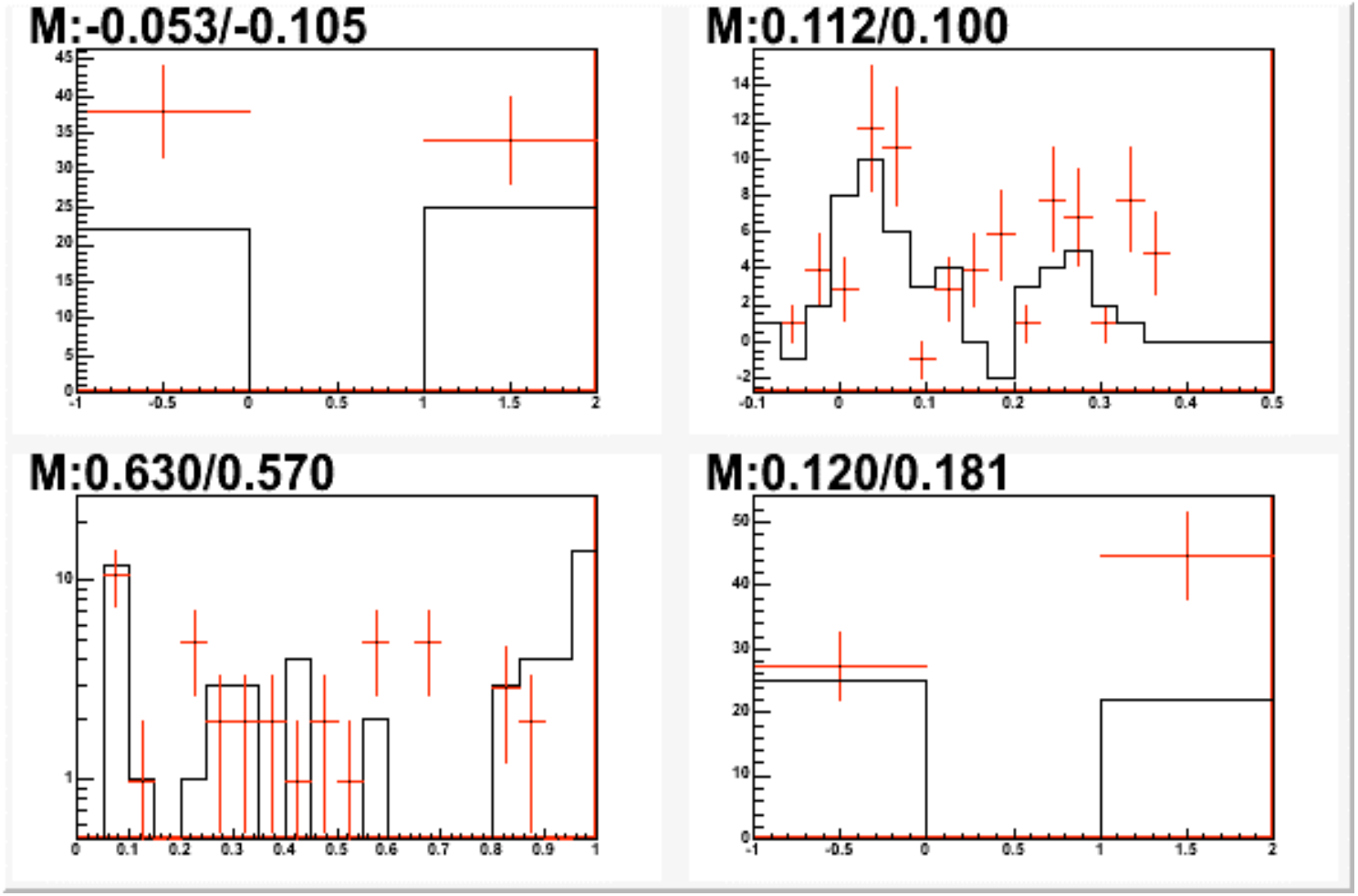
Order of variables: decision , dilution, likelihood, tag type



Soft Electron Tagger

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

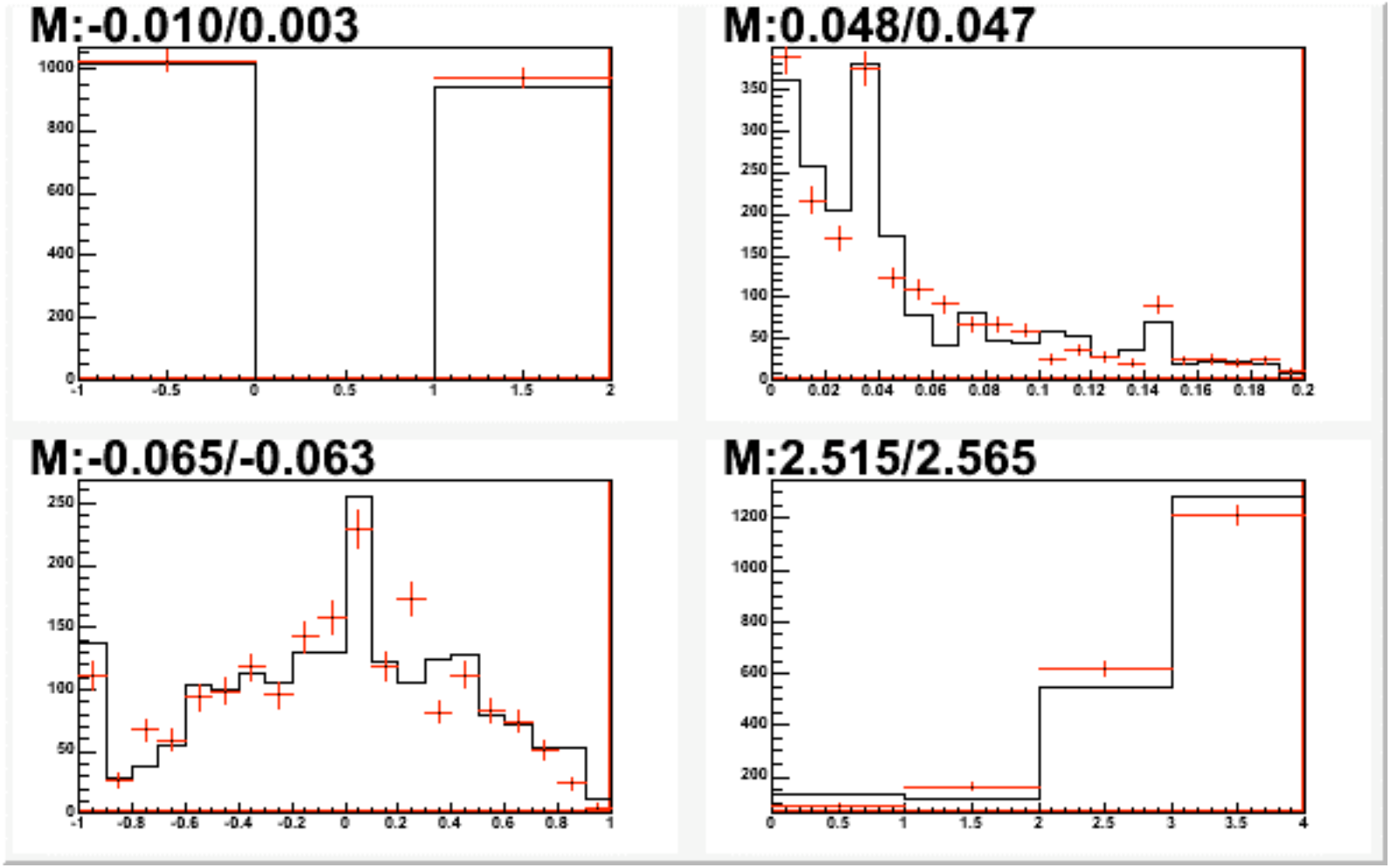
Order of variables: decision , dilution, likelihood, tag type



Jet Charge Tagger

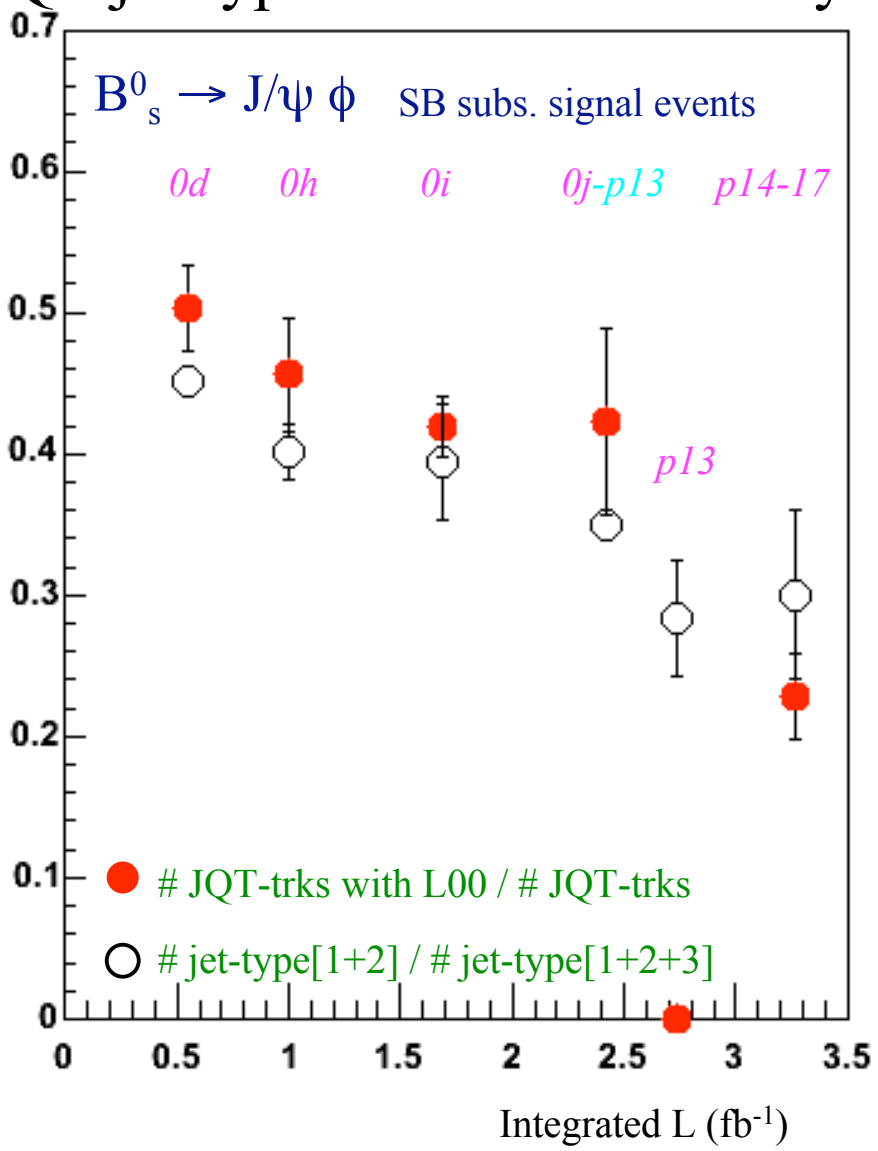
Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

Order of variables: decision, dilution, jet-charge, tag type



JP, LL 20080617

JQT jet-type vs. "L00 efficiency"



Errors reflect the difference between the results obtained at two sets of Signal/SB windows

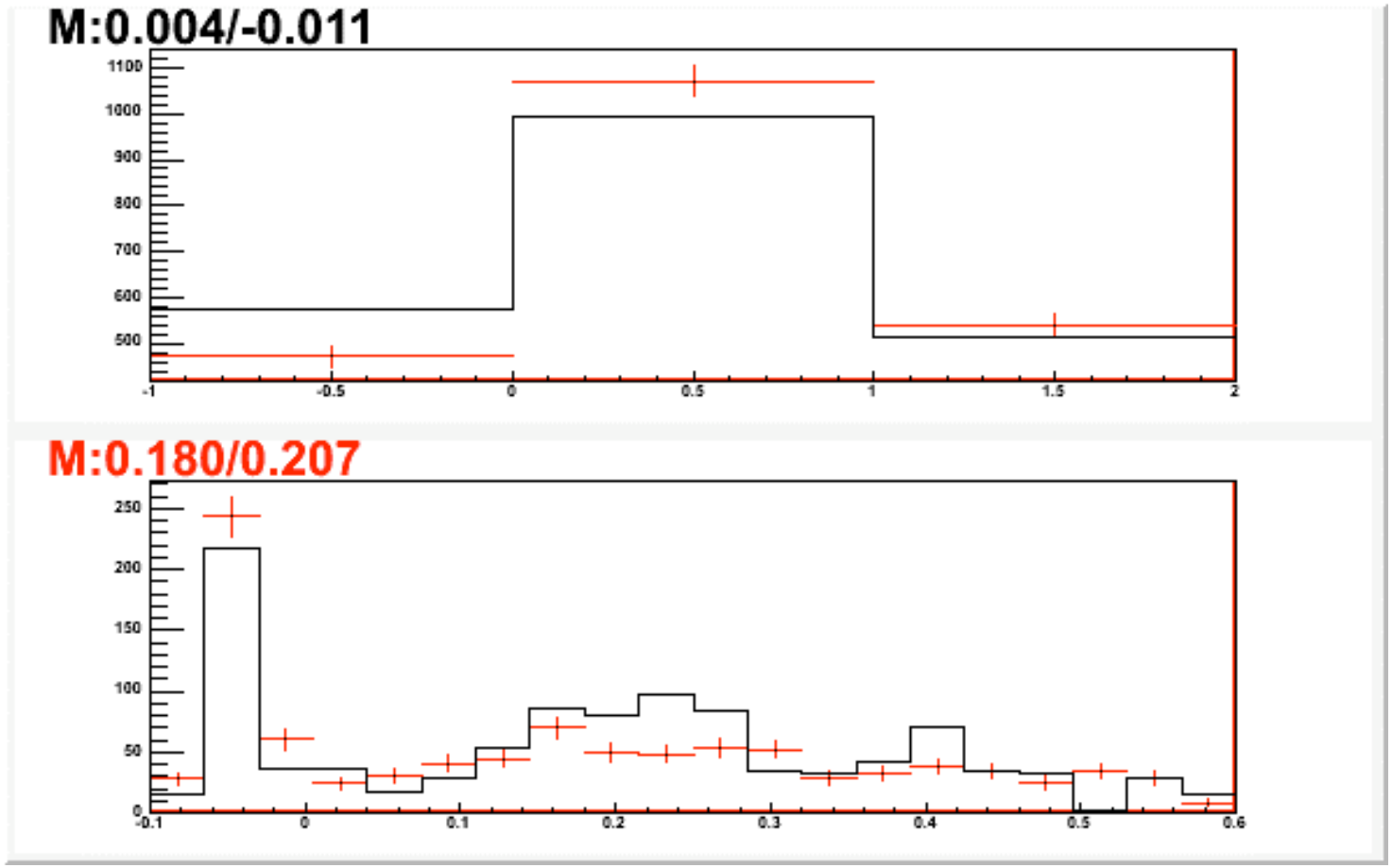
SB1: 5.2861-5.3131
Signal: 5.3400-5.3940
SB2: 5.4211-5.4481

SB1: 5.175 - 5.202
Signal: 5.3400-5.3940
SB2: 5.547 - 5.575

Same Side Tagger (NN – SSKT)

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

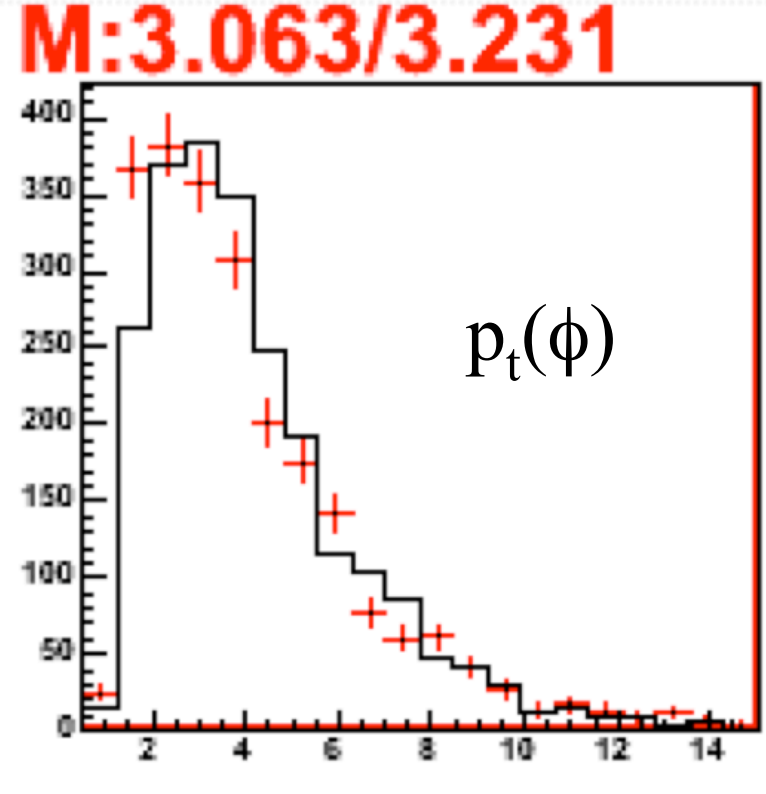
Order of variables: decision, dilution



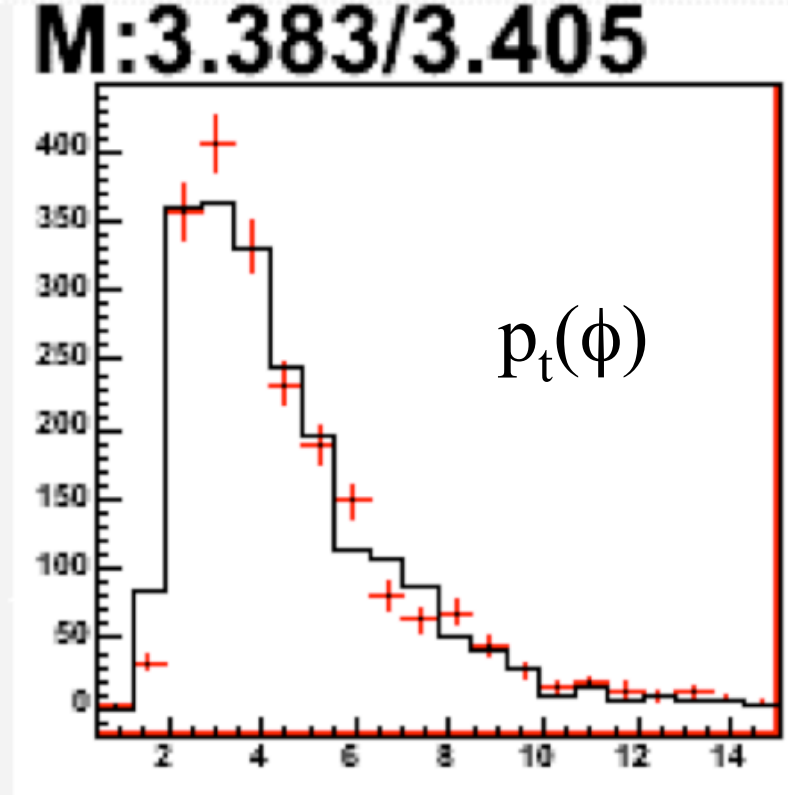
Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

⇨ The use of the bad-calibrated PID in the L>1.35 sample does produce a significant effect on $p_t(\phi)$

Bst, NN-**with**-PID, 0.5



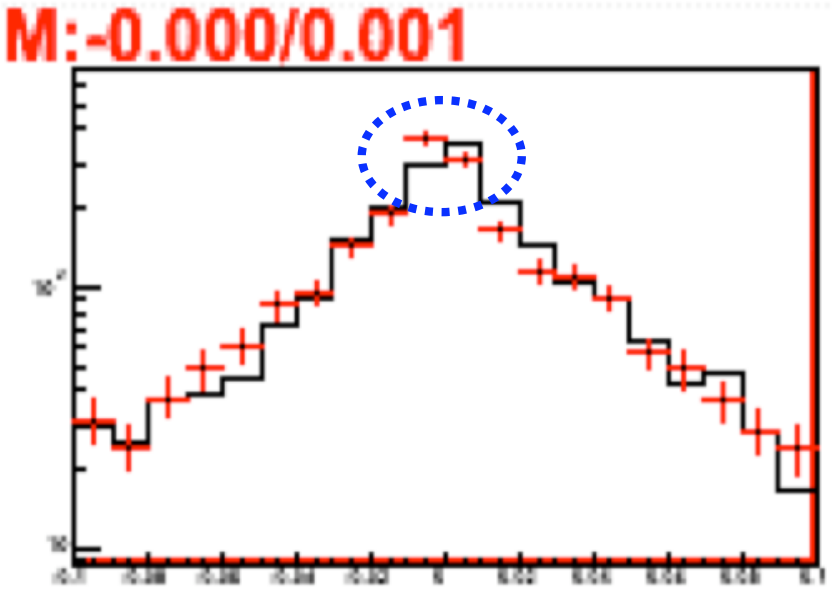
Bst, NN-with**out**-PID, 0.5



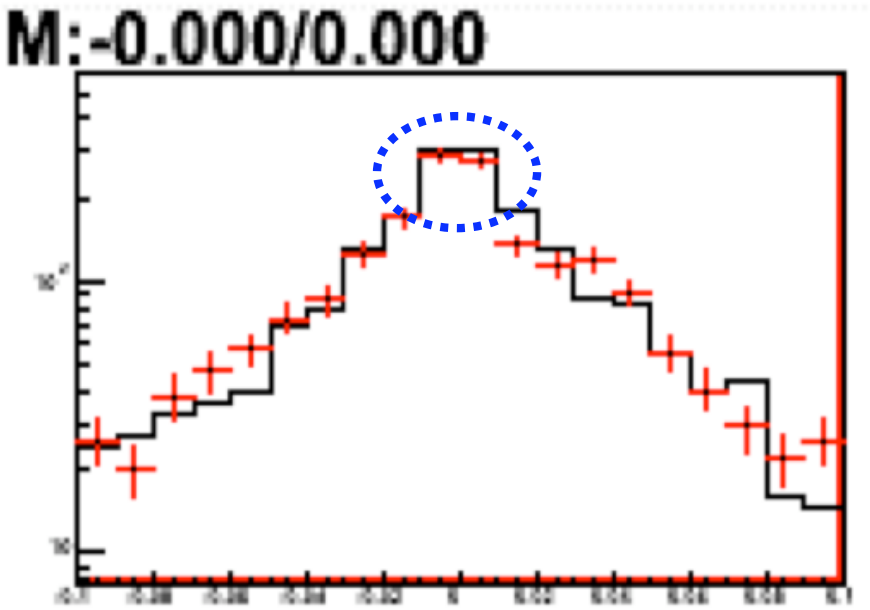
Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

⇨ The use of the bad-calibrated PID in the L>1.35 sample does "apparently" produce an effect at low values of $d_0(\mu)$ (μ,s from J/ψ)

Bst, NN-**with**-PID, 0.5



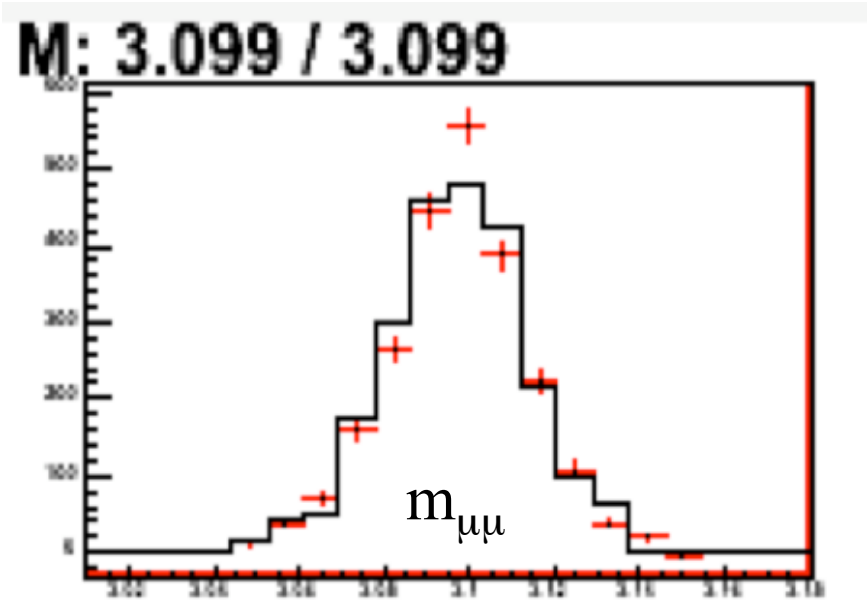
Bst, NN-with**out**-PID, 0.5



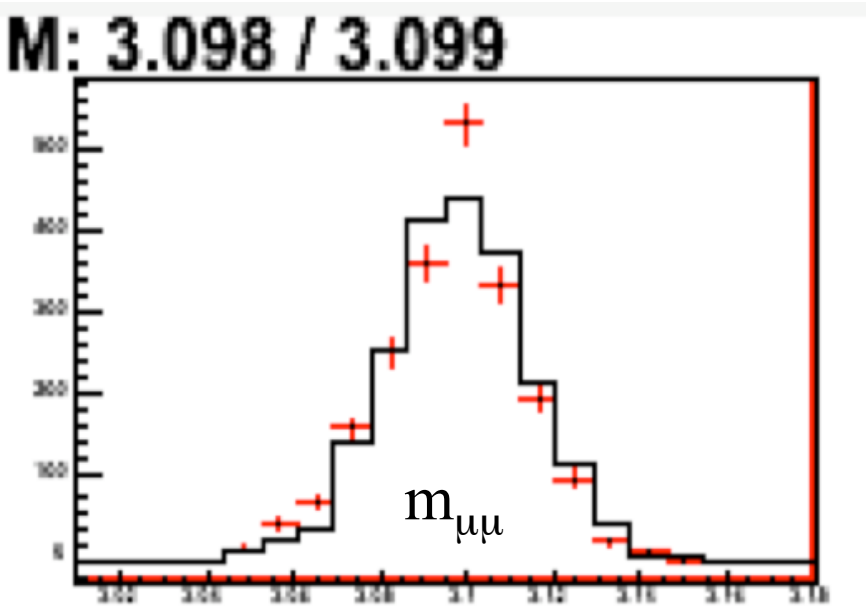
⇨ The use of the bad-calibrated PID in the L>1.35 sample does not produce a significant effect to the J/ψ mass distribution

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

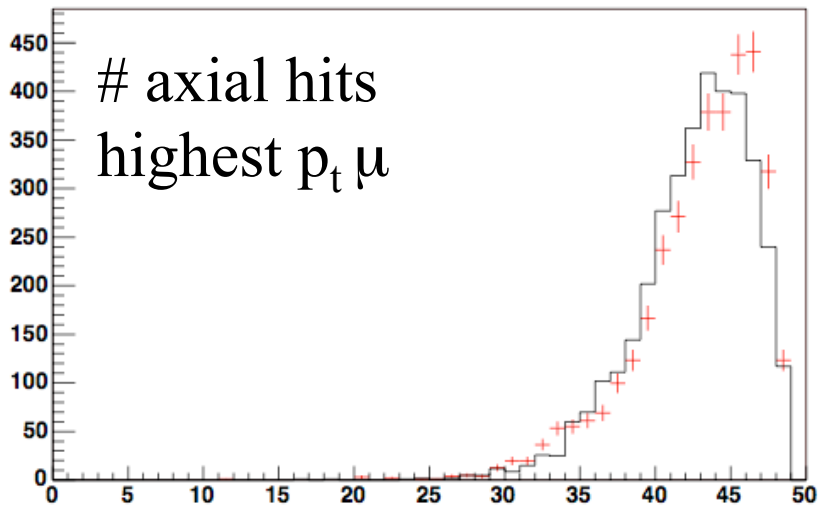
Bst, NN-**with**-PID, 0.5

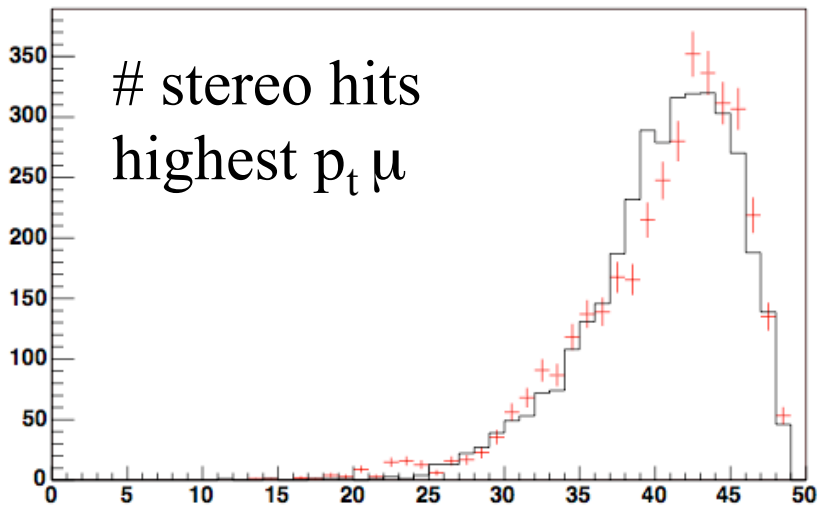


Bst, NN-with**out**-PID, 0.5



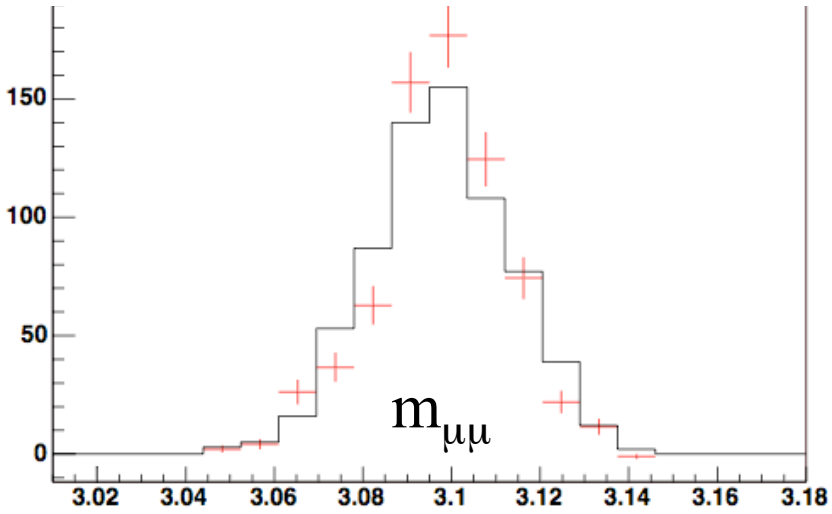
Blt-ntuples, L<1.35 ***red***, L>1.35 ***black***



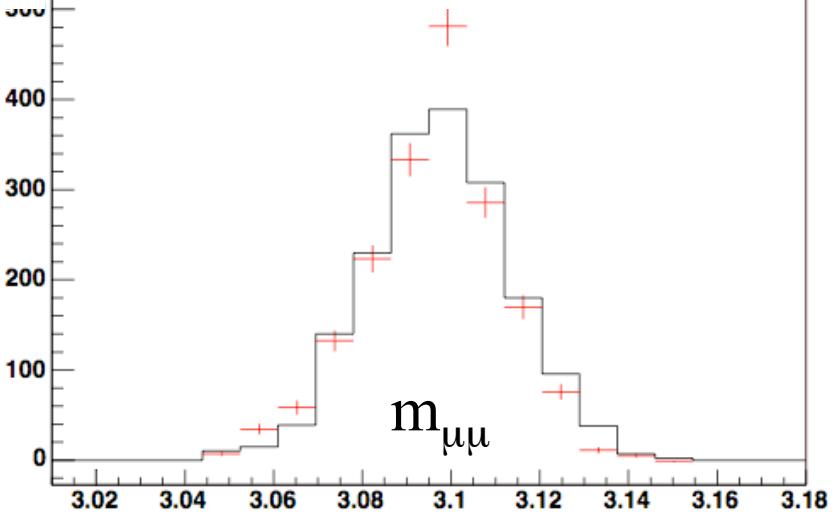


Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

(Axial+Stereo) 82(80)<hits< 92(90)



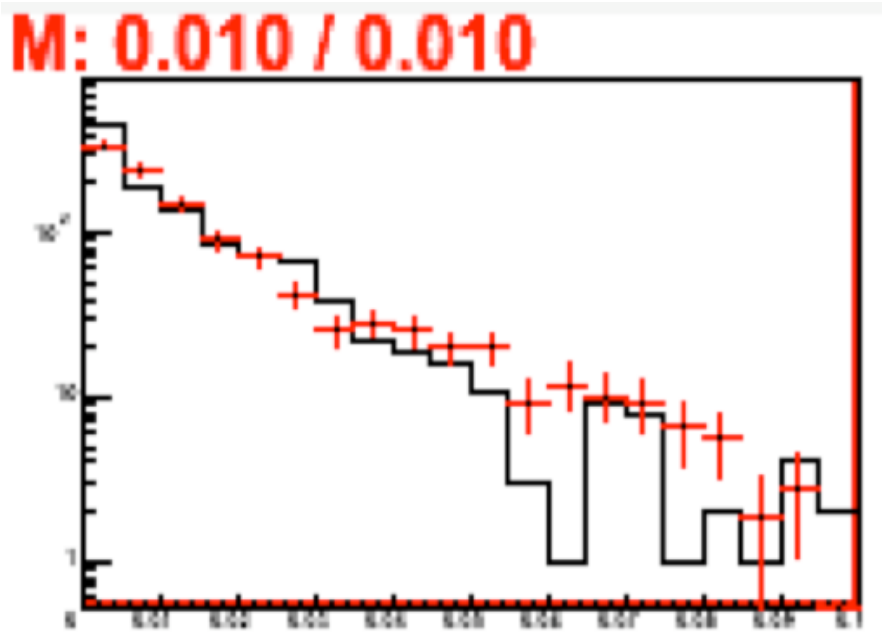
ster. $|\eta| < 0.5$



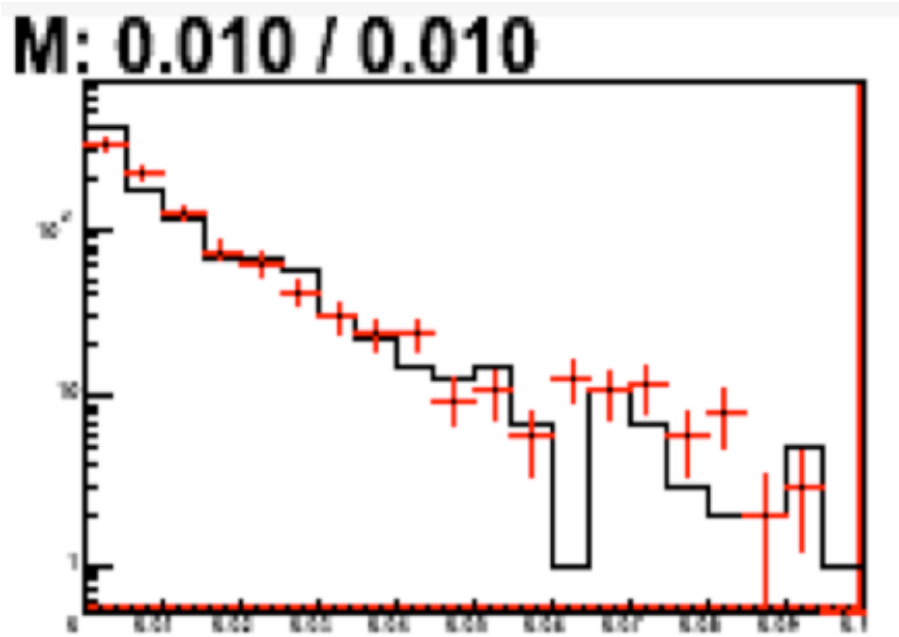
⇨ The use of the bad-calibrated PID in the L>1.35 sample does not produce a significant effect to the d_0 J/ψ distribution

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

Bst, NN-**with**-PID, 0.5

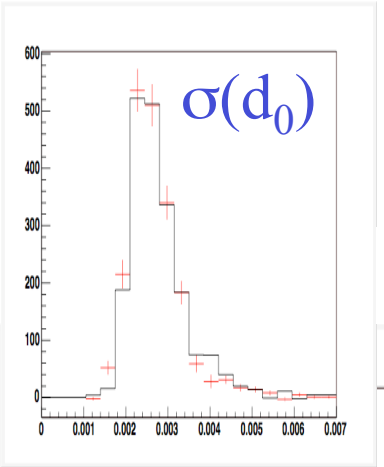


Bst, NN-with**out**-PID, 0.5

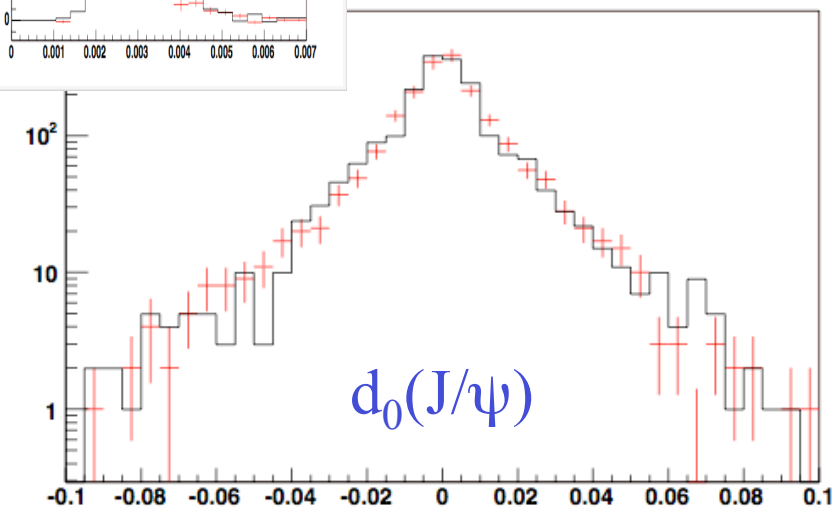


⇨ In addition, it seems that the lower L00 hit content of the μ tracks in L>1.35 is playing also no role in the $d_0(J/\psi)$ distribution

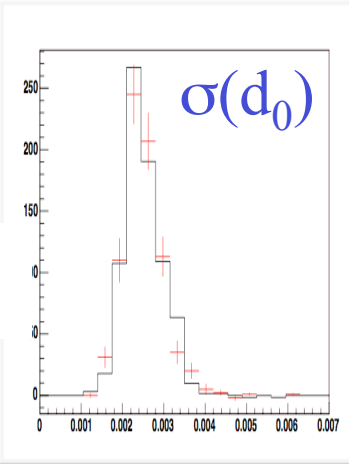
BIt-ntuples, L<1.35 ***red***, L>1.35 ***black***

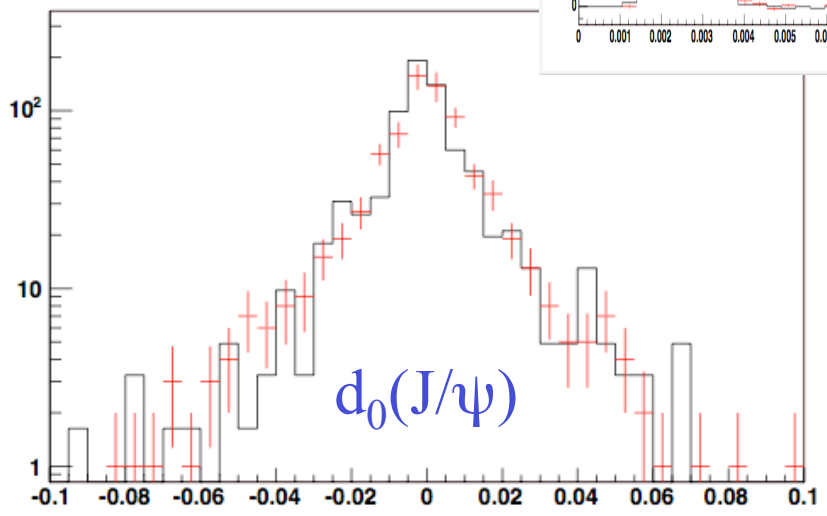


No L00-hit require.



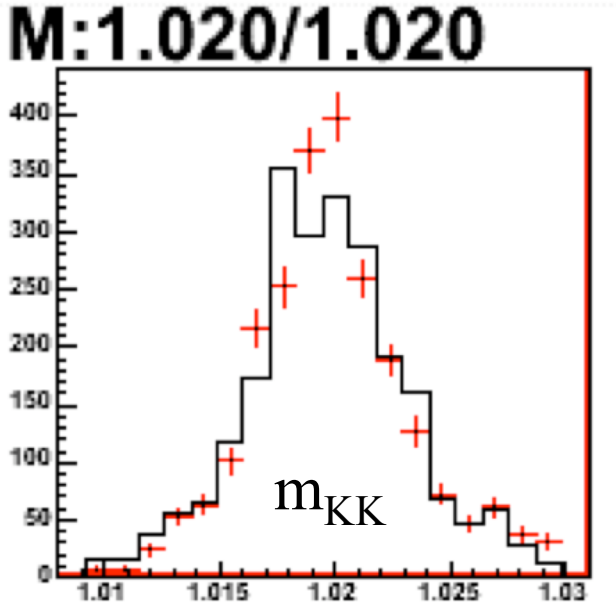
The 2 μ,s w/ L00-hit





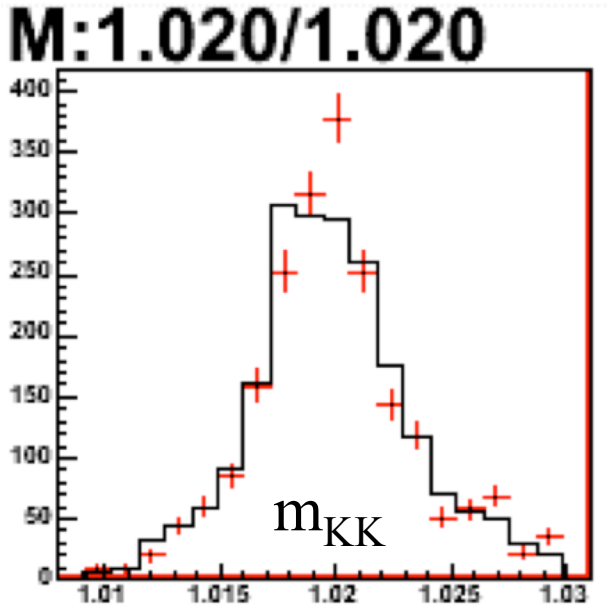
⇨ The use of the bad-calibrated PID in the L>1.35 sample does not produce a significant effect to the ϕ mass distribution

Bst, NN-**with**-PID, 0.5



Bst-ntuples,
L<1.35 ***red***,
L>1.35 ***black***

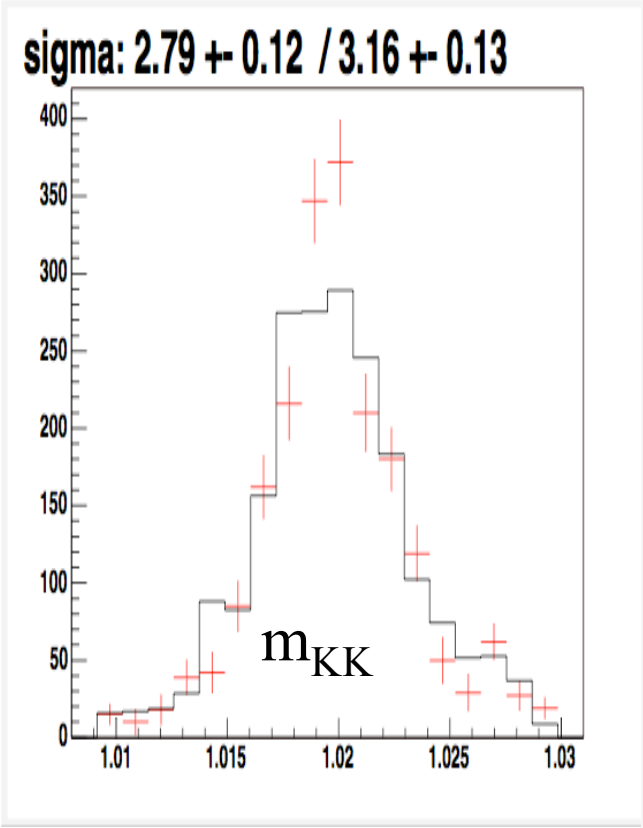
Bst, NN-with**out**-PID, 0.5



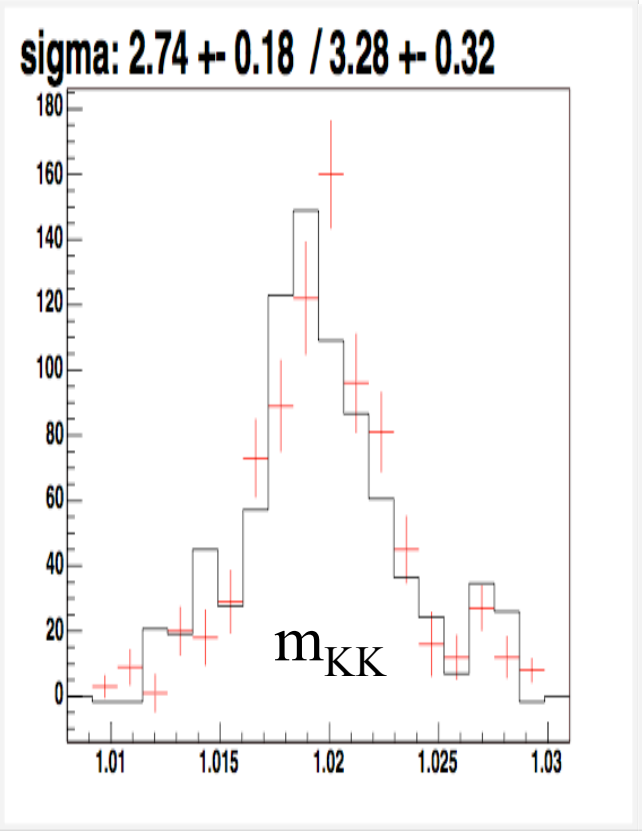
⇨ In addition, it seems that the lower L00 hit content of f the tracks in L>1.35 is playing also no role in the ϕ mass distribution

BIt-ntuples 0.26, L<1.35 ***red***, L>1.35 ***black***

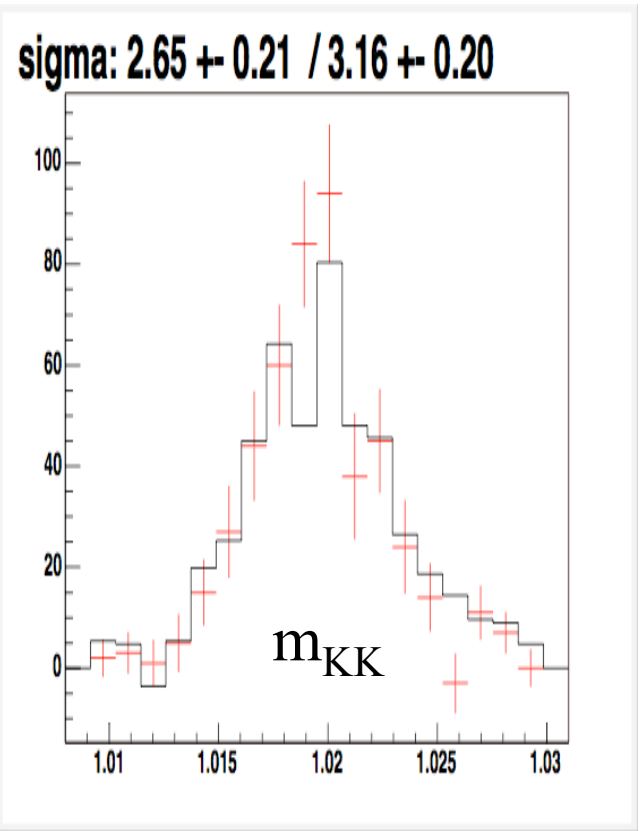
No L00-hit require.



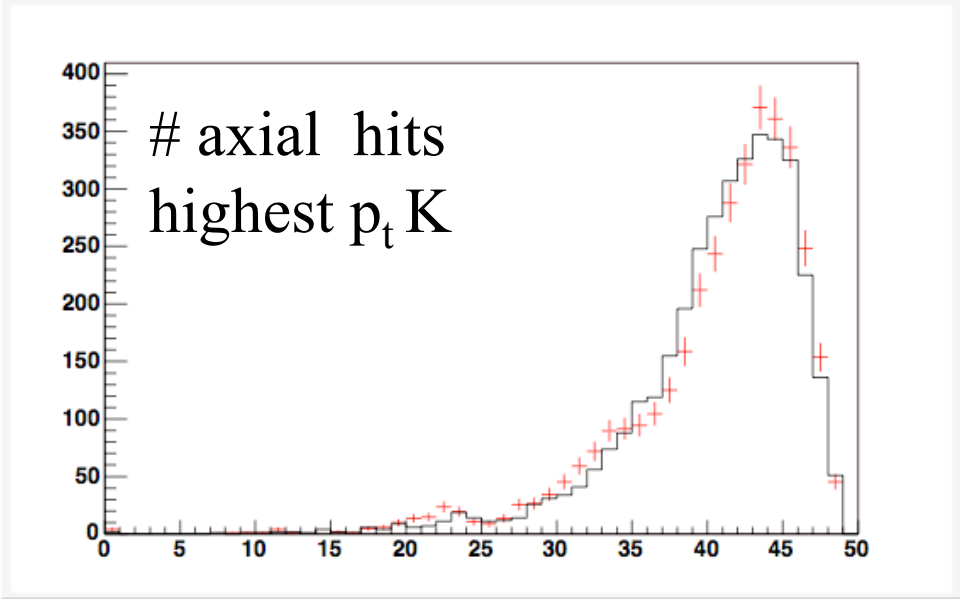
The 2 K,s w/ L00-hit

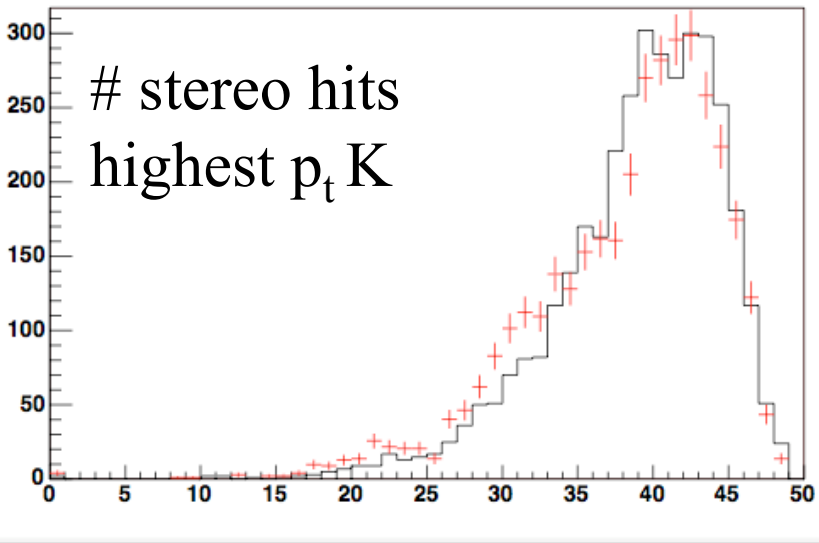


The 2 K,s no L00-hit



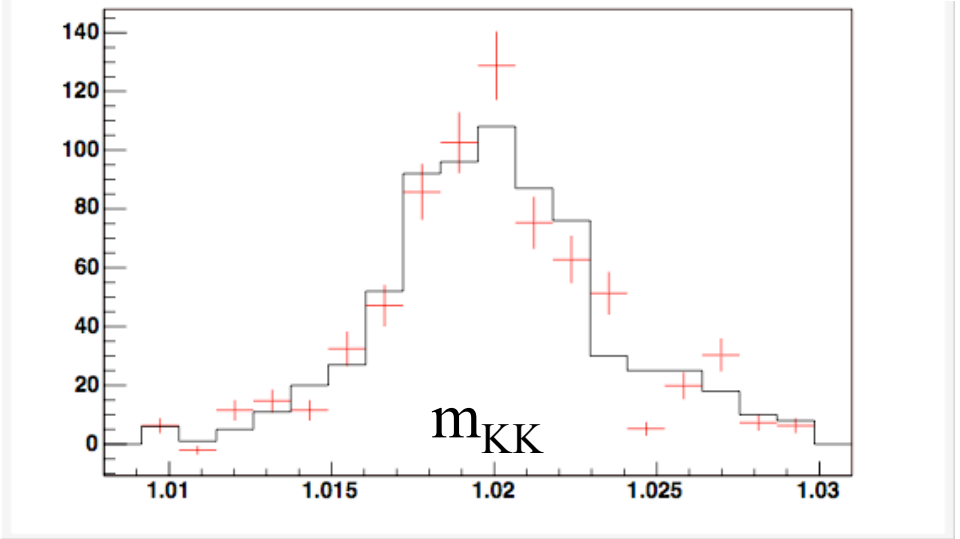
Blt-ntuples, L<1.35 ***red***, L>1.35 ***black***



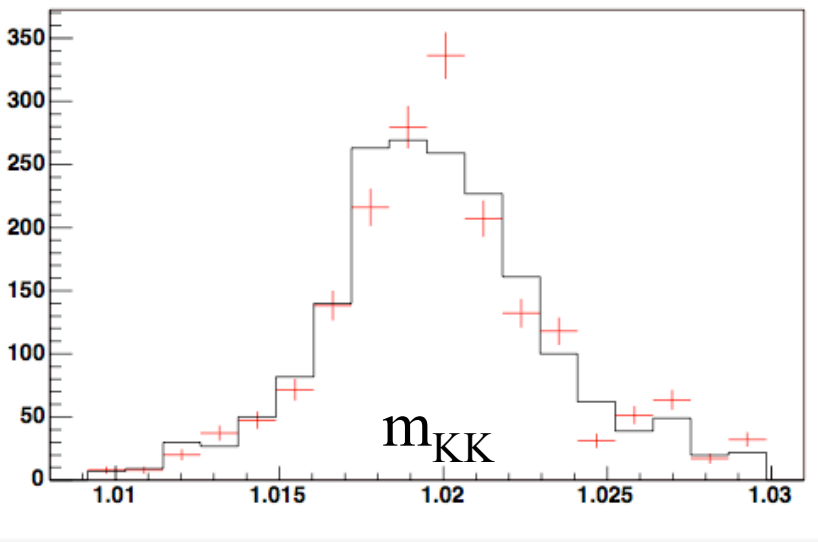


Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

(Axial+Stereo) 82(80)<hits< 92(90)



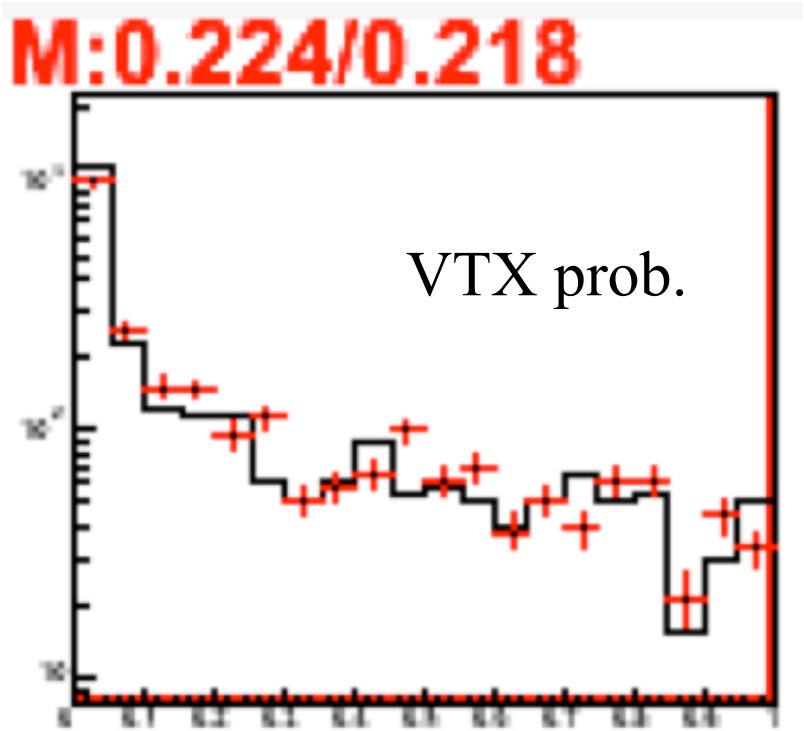
ster. $|\eta| < 0.5$



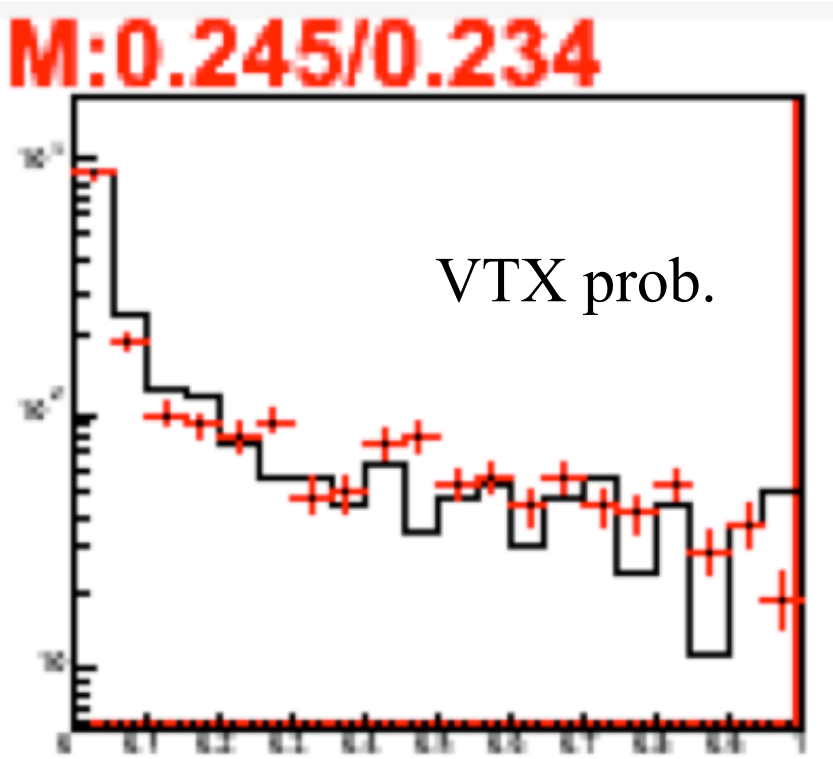
⇨ The use of the bad-calibrated PID in the L>1.35 sample does produce some, unclear, effect to the B_s^0 VTX probability distribution

Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***

Bst, NN-**with**-PID, 0.5



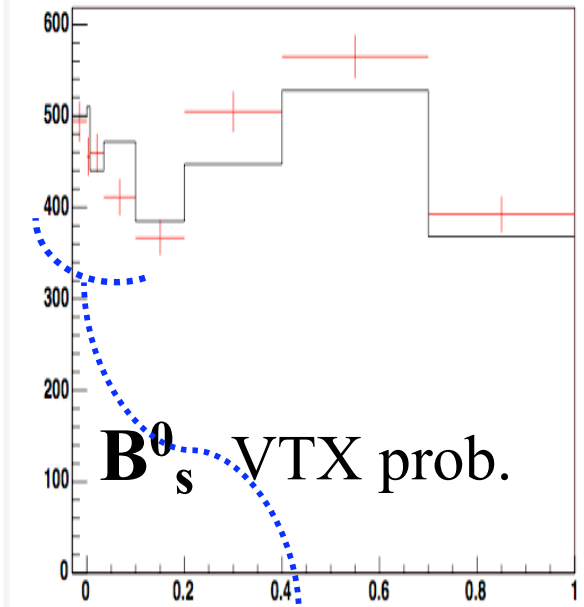
Bst, NN-with**out**-PID, 0.5



⇨ However, in the Blt-ntuple analysis it seems that the lower L00 hit content of the tracks in L>1.35 is playing some role in the B_s^0 VTX probability distribution

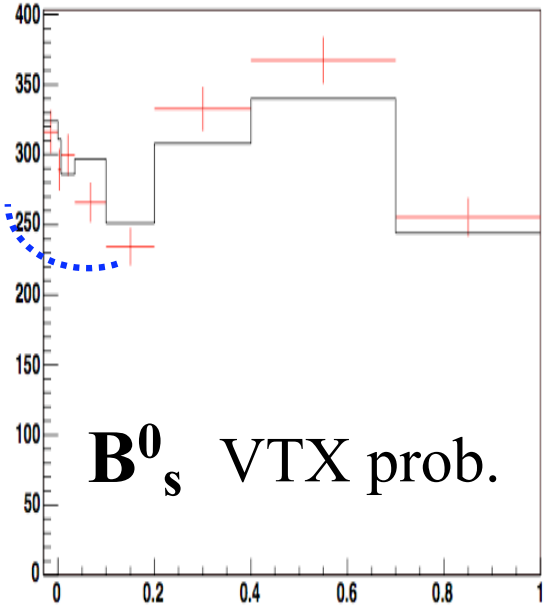
Blt-ntuples, L<1.35 ***red***, L>1.35 ***black***

No L00-hit require.

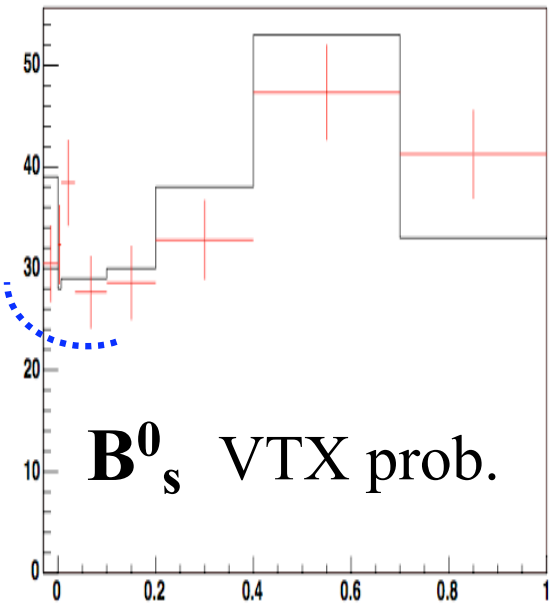


1st bin: 0.0 - 0.00016
2nd bin: 0.00016 - 0.0065
3th bin: 0.0065 - 0.035

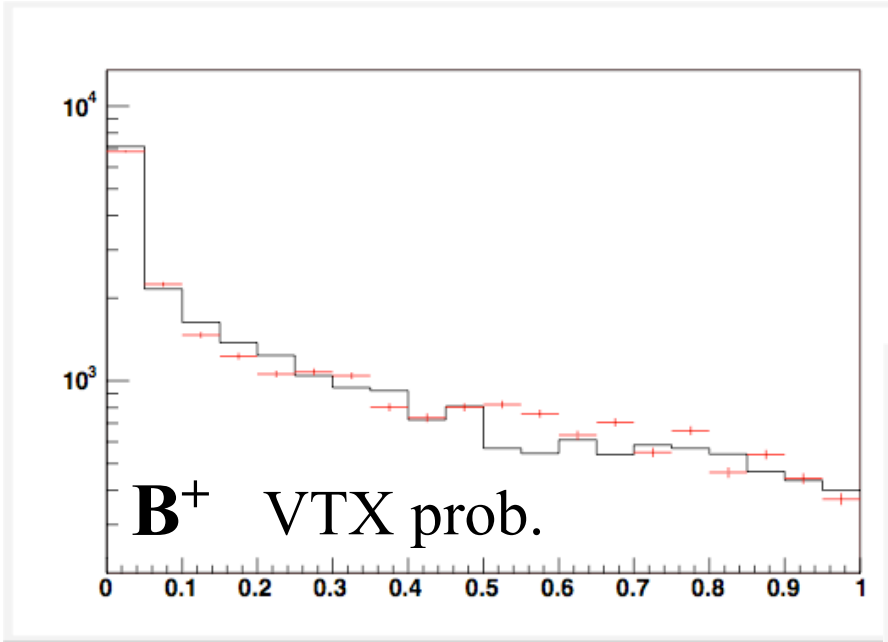
at least 1 K .AND.
at least 1μ w/L00



the 2 K and the
2 μ w/L00



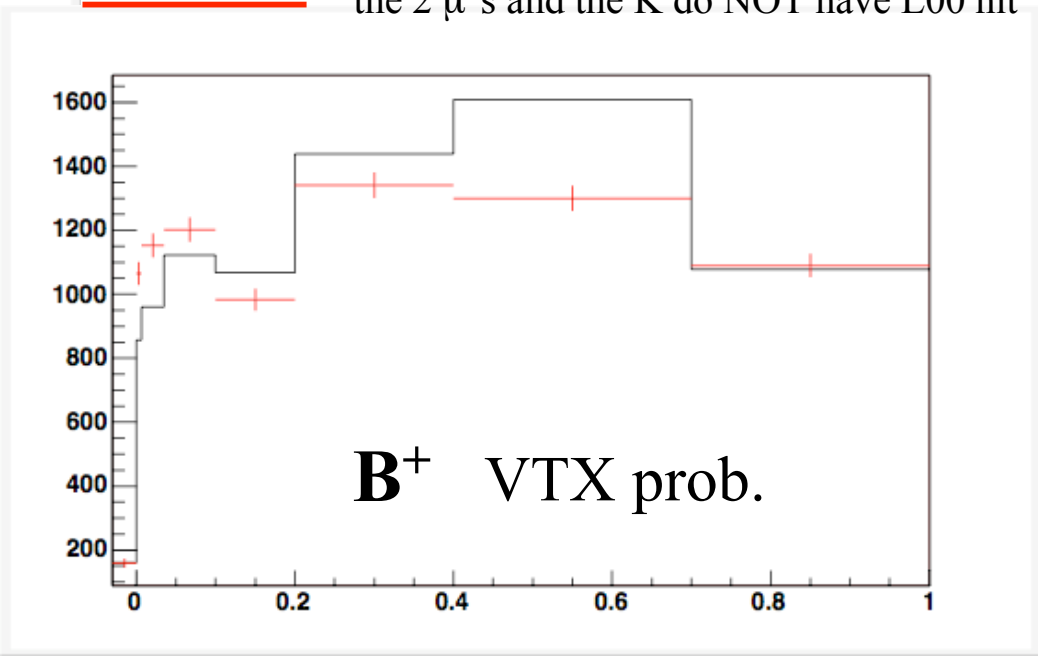
Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



Bst-ntuples

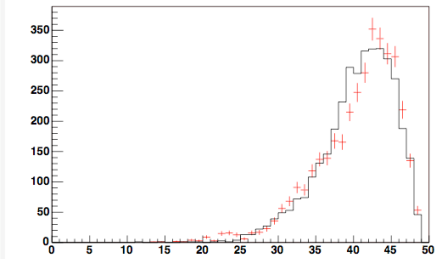
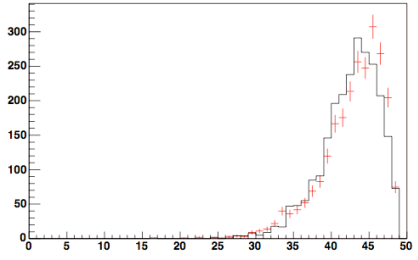
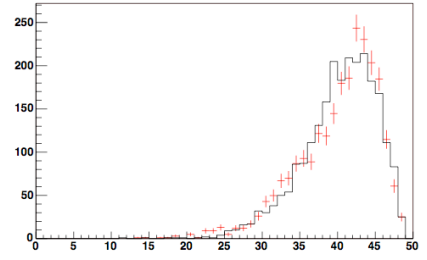
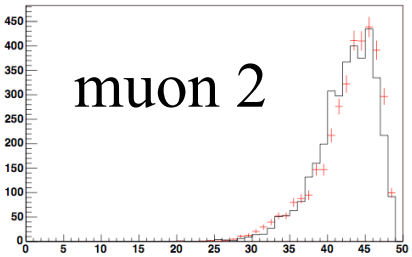
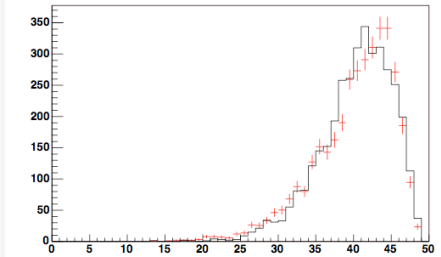
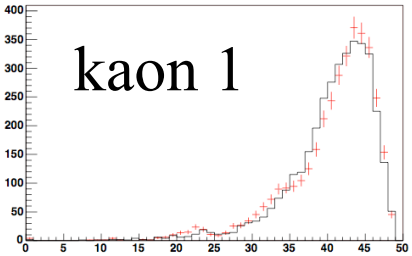
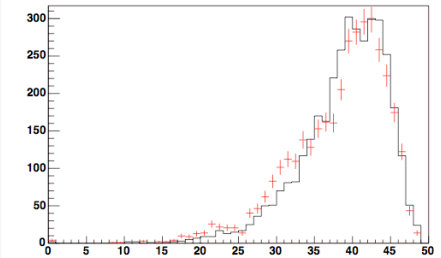
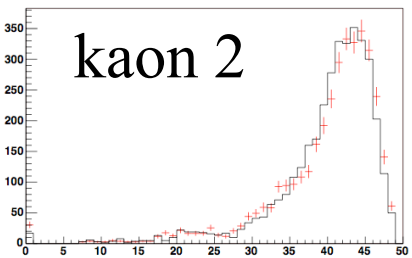
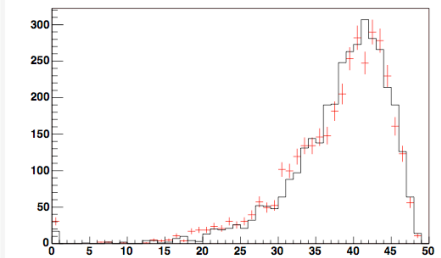
the 2 μ's and the K DO have L00 hit

the 2 μ's and the K do NOT have L00 hit

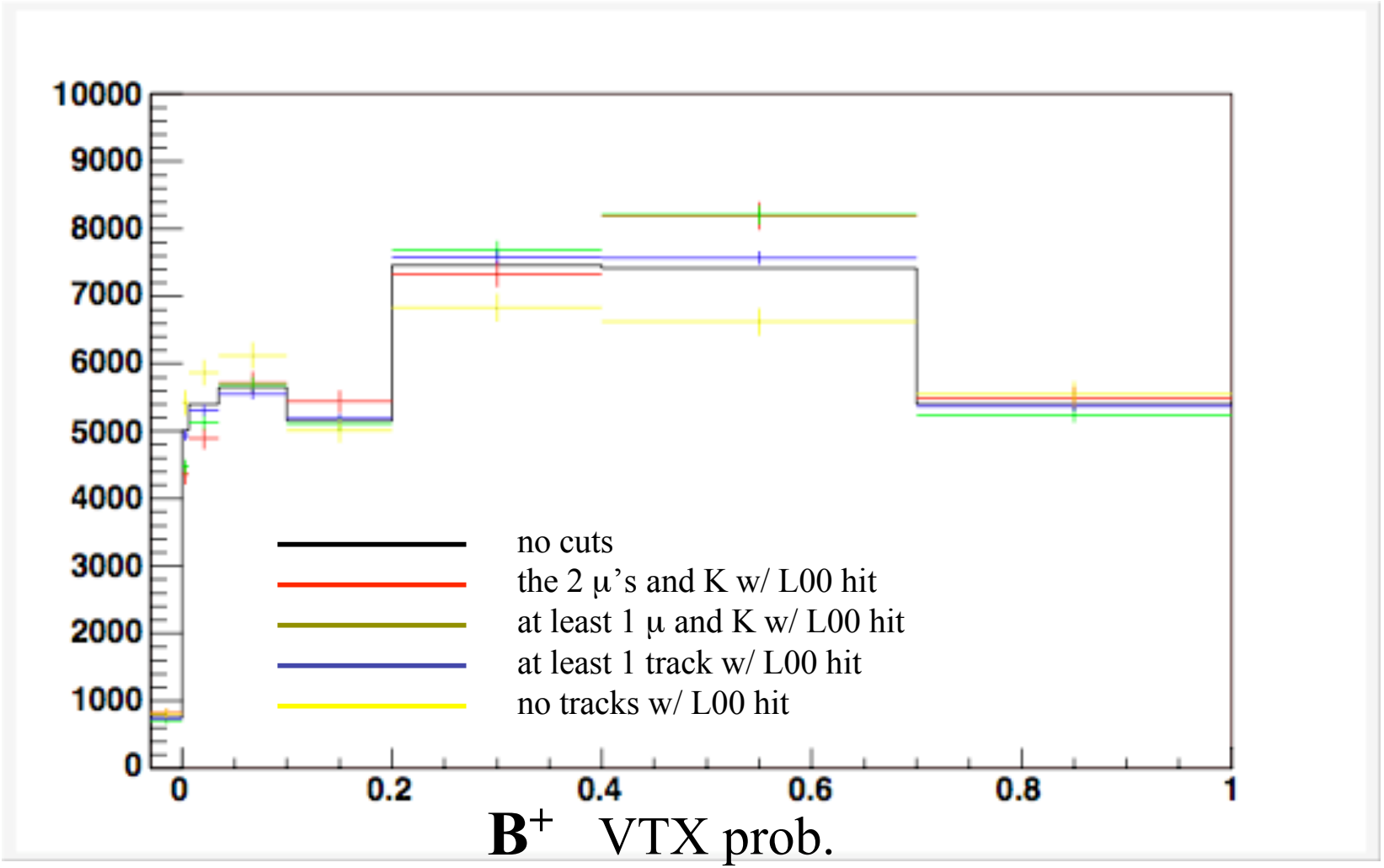


END (for the time being)

Blt-ntuples, L<1.35 ***red***, L>1.35 ***black***

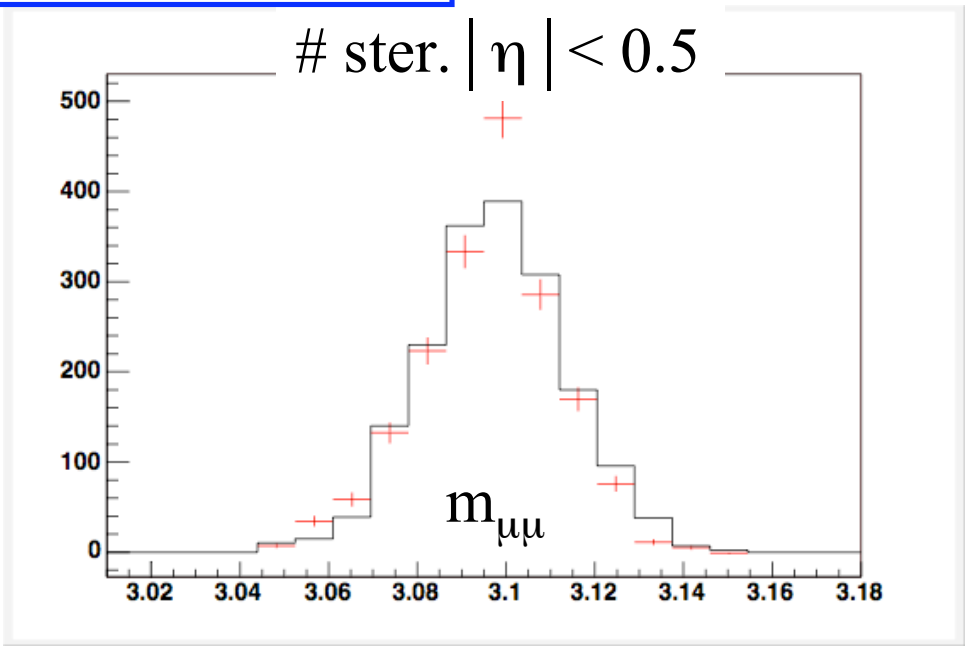
# axial hits	# stereo hits	# axi. $\lvert\eta\rvert < 0.5$	# ster. $\lvert\eta\rvert < 0.5$
muon 1			
muon 2			
kaon 1			
kaon 2			

Bst-ntuples



B^+ VTX prob.

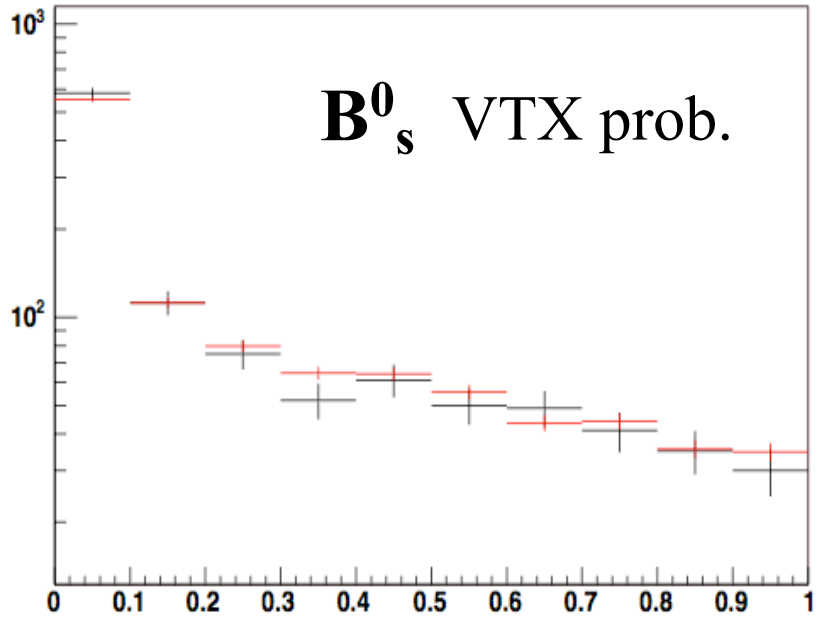
Bst-ntuples, L<1.35 ***red***, L>1.35 ***black***



⇨ However, in the Blt-ntuple analysis it seems that the lower L00 hit content of the tracks in L>1.35 is playing some role in the B_s^0 VTX probability distribution

Blt-ntuples, no L00 requirement ***black***, L00 requirement ***red***

at least 1 K .OR. at least 1μ with L00 hit



at least 1 K .AND. at least 1μ with L00 hit