

Preselection for Bose-Einstein Correlations.

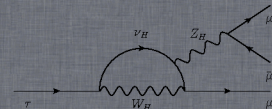
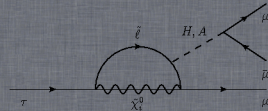
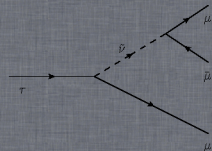
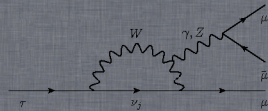
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17th June 2013



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 Zurich ^{UZH}

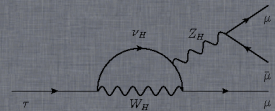
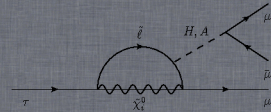
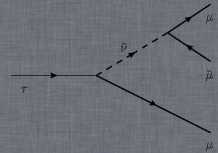
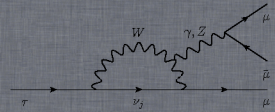


Current preselection

Changes

PID

Proposed changes



Current preselection

So far we are using:

- PIDNN from Chris Jones, and starderd DLL
- Both are highly correlated!
- Values correspond to StdLooseKaon, StdLooseProton.
- $TrkChi2 < 3$, $IP < 0.1\text{ mm}$, $IPChi2 < 0.5$
- $ghostProb < 0.35$
- $PVseparationchi2 = 4$

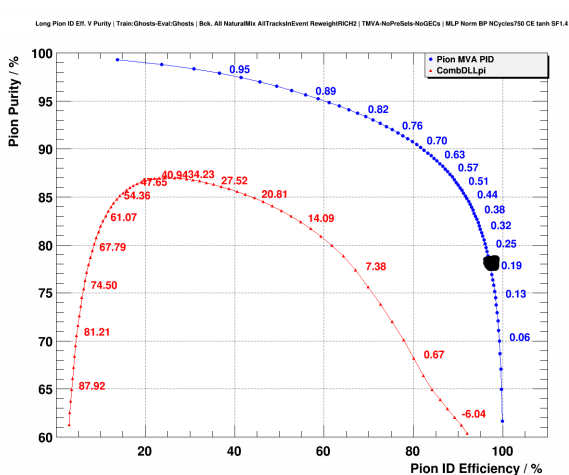
Changes

We should make looser geometric cuts:

- $IP < 0.3mm$
- $ghostNN < 0.3$
- $IPCHi2 < 3$
- $P_t > 100MeV$
- $P > 200MeV$

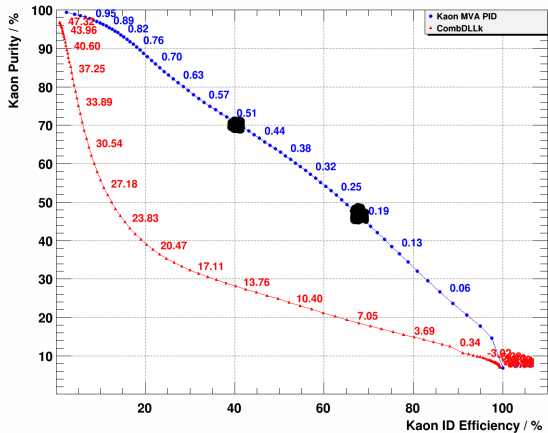
PID π

- No more DLL.
- Only *PIDNN V2*.



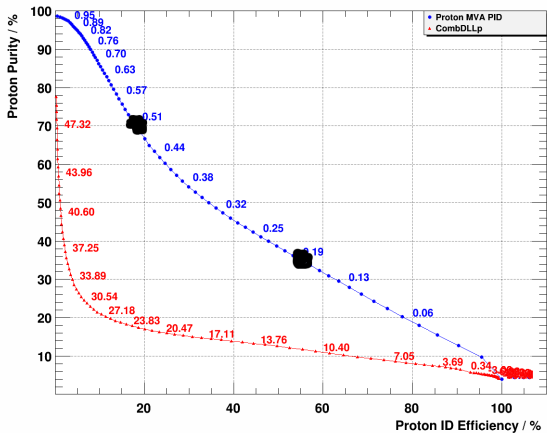
PID K

Long Kaon ID Eff. V Purity | Train:Ghosts-Eval:Ghosts | Bck. All NaturalMix AllTracksInEvent ReweighRICH2 | TMVA-NoPreSels-NoGECs | MLP Norm BP NCycles750 CE tanh SF1.4



PID p

Long Proton ID Eff. V Purity | Train:Ghosts-Eval:Ghosts | Bck. All NaturalMix AllTrackshEvent ReweighRICH2 | TMVA-NoPreSels-NoGECs | MLP Norm BP NCycles750 CE tanh SF1.2



Proposed changes

- Let's Use the looser proposed PIDNN for preselection.
- We might get into troubles with statistics for K/p modes.
- We should really start to think about dedicated stripping!
- Is a paper only with pions a possibility till we get new stripping?
- Code will be fixed today if we reach a consensus.