

Updates on activities.

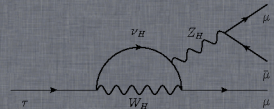
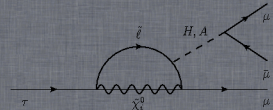
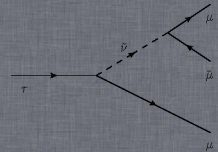
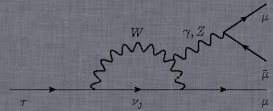
Marcin Chrzęszcz^{1,2}, Nicola Serra¹

¹ University of Zurich, ² Institute of Nuclear Physics, Krakow,

10th July 2013



University of
Zurich ^{UZH}

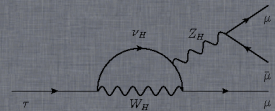
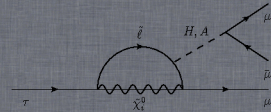
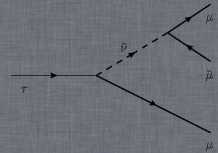
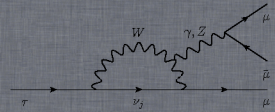


MC Signal

Cutting out trigger decisions

Trash

TMVA



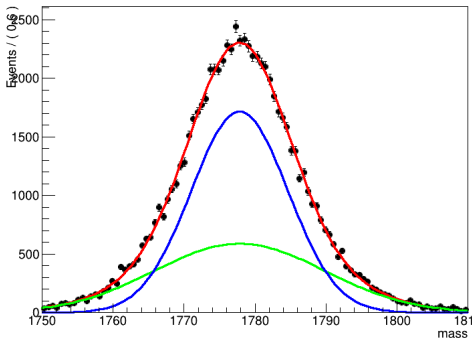
MC Signal

Ntuples are ready. I send link yesterday.

First look at the resolution.

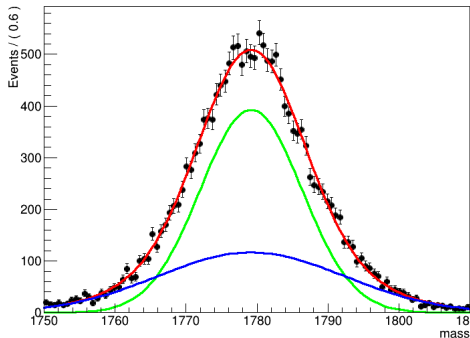
2012

A RooPlot of "mass"



2011

A RooPlot of "mass"

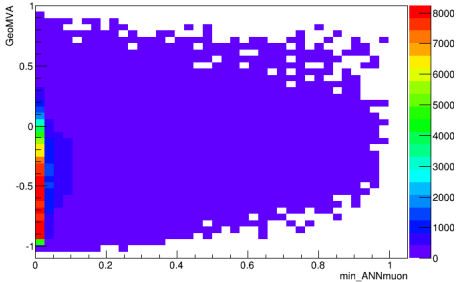


Parameters in errors!. We don't gain with new reco.

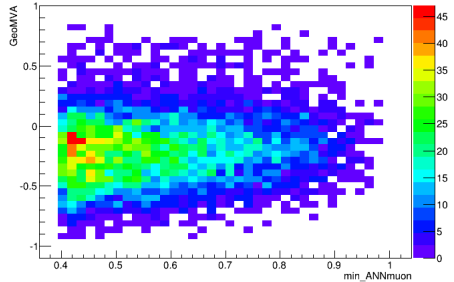
Topo2BodyBBDTDec

Topo2BodyBBDTDec

Before Cut



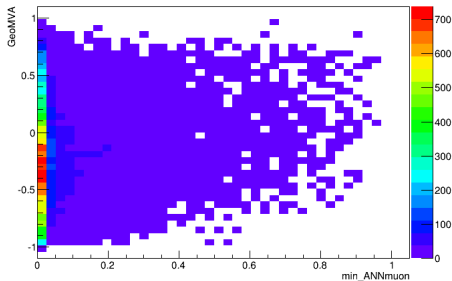
After Cut



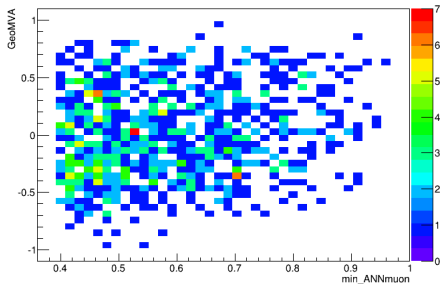
98% efficient. After we get ride of the trash bins.

CharmHadD2HHWide

CharmHadD2HHWide
Before Cut



After cut



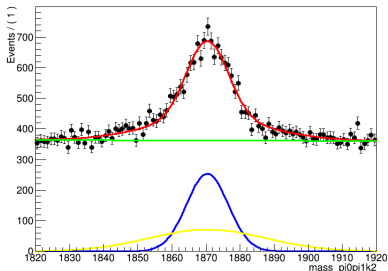
97% efficient. After we get ride of the trash bins.

PIDNN

A question was raised by Marta, if we will need to fine tune the trash bin to get ride of $D \rightarrow K\pi\pi$.

- Let's start from current trash bin.

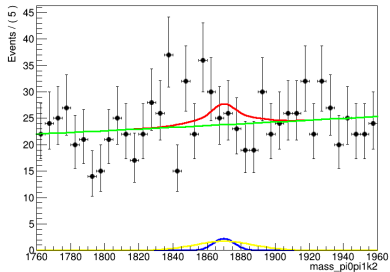
A RooPlot of "mass_pi0pi1k2"



- We clearly see the peak.
- Let's fix now the shape of D (errors are small so no big deal).
- We will cut slices of PIDNN and look for similar peak.

PIDNN

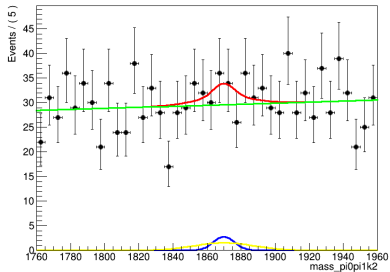
A RooPlot of "mass_pi0pi1k2"



- 0.5σ effect.
- PIDNN (0.45; 0.5)

PIDNN

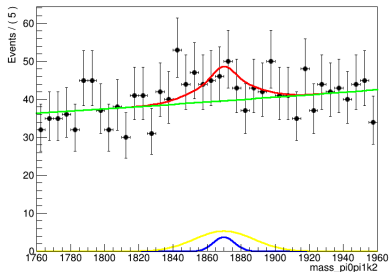
A RooPlot of "mass_pi0pi1k2"



- 0.8σ effect.
- PIDNN (0.4; 0.45)

Maybe we can make trash smaller?

A RooPlot of "mass_pi0pi1k2"



- 1.7σ effect.
- PIDNN (0.35; 0.40)

Conclusions about the trash

- Looks like the trash can't be made smaller.
- Binning turn out already optimum as it should!
- Part of $D^+ \rightarrow K\pi\pi$ was used for optimisation in the first place.

Since MC is still running. Let's train on data.

