Ratio Mu +/Mu-

Contribution to discussion on analysis setup
for CRAFT data
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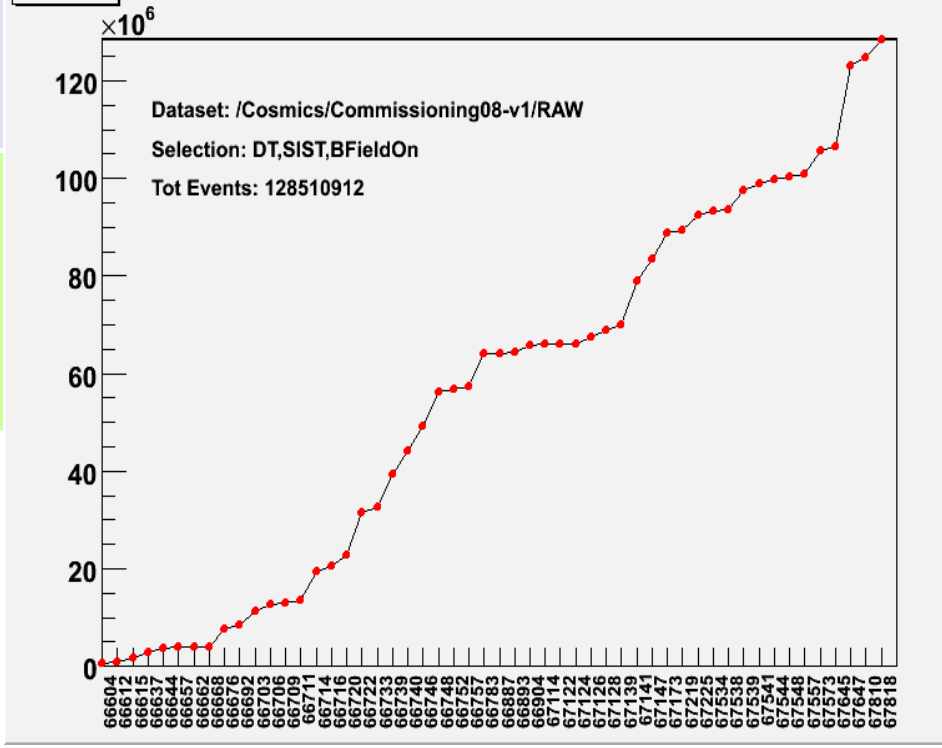
Intro

**In CRAFT, statistics is not an issue…
we must carefully understand systematics…
(against trigger, selection, track quality, angles, different detector regions….)**

In this stage, analyses performed using different track selection, loose/tight quality cuts ect.. will allow us:



- Understand the detector behavour at different levels of reco (it's the first time we can carry out a physics analysis on real data using this level of complexity !)
- Strengthening our confidence on systematics
- Train ourselves preparing for more complex pp collision data analyses

We propose to carry out a "tight selection" based analysis (complementary to the more inclusive one by US collegues) allowing good control/measurement of momentum resolution on data (of course, to be x-checked on MonteCarlo))

Examples in next 2 slides

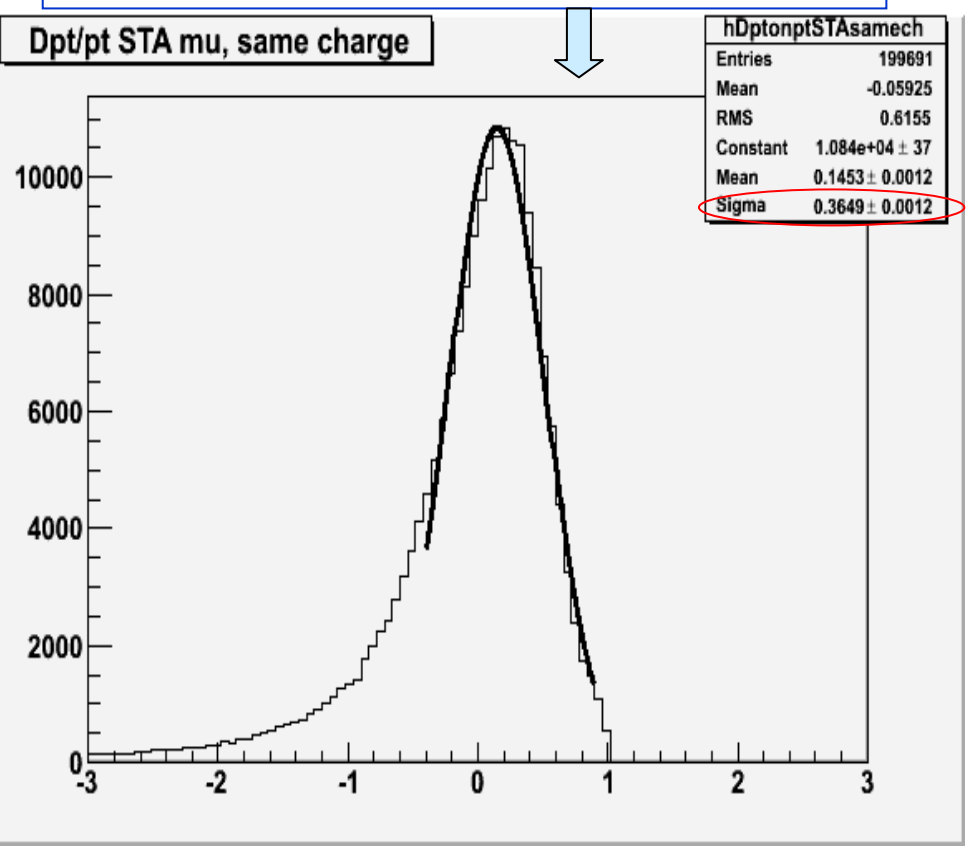
Mu charge, 1st look…

Run 66783, ~3.0 M events
(30% of the run)

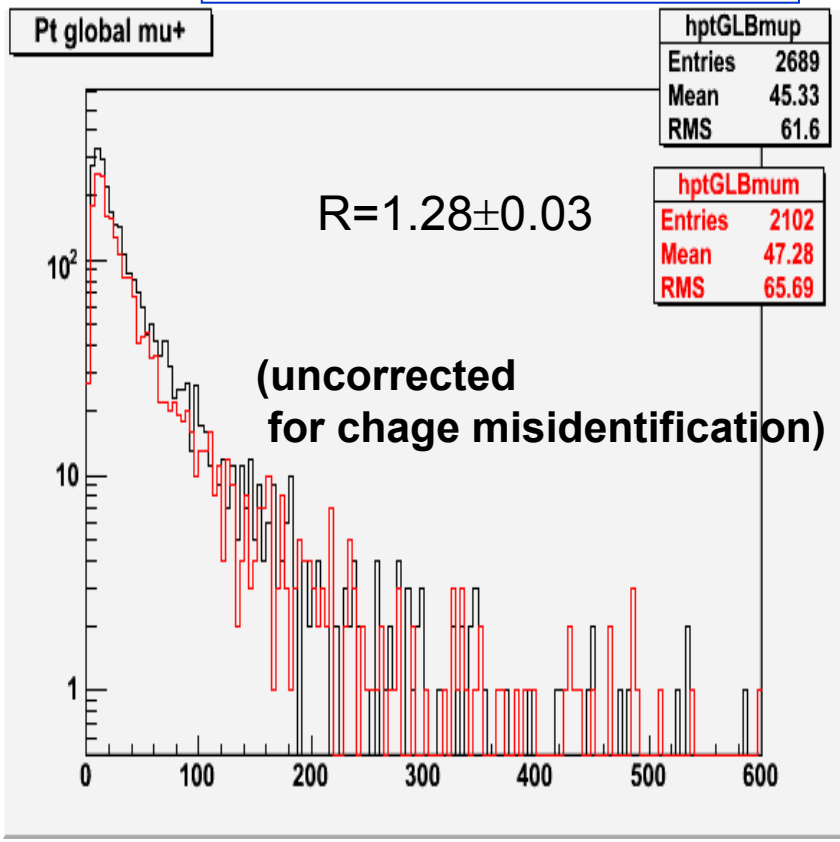
[memo: we have
~120 M events with DT+SIS on tape so far…]

Use 2 legs reco to study resolution, charge misidentification, ect…

Events with 2 high quality STA tracks



Restricting to 2 good
Tracker matched tracks



Mu charge (cont.)

A further different (very tight) selection… (from the same run):

1 leg STA muons made of hits from stations on both side of the Tracker (> 60 hits),compared with Tracker track (>8 Hits)

(plan to include L1 trigger selection + DT Local Reco quality criteria; see e.g. Francesca's talk @ Yesterdays DPG-PH meeting…)