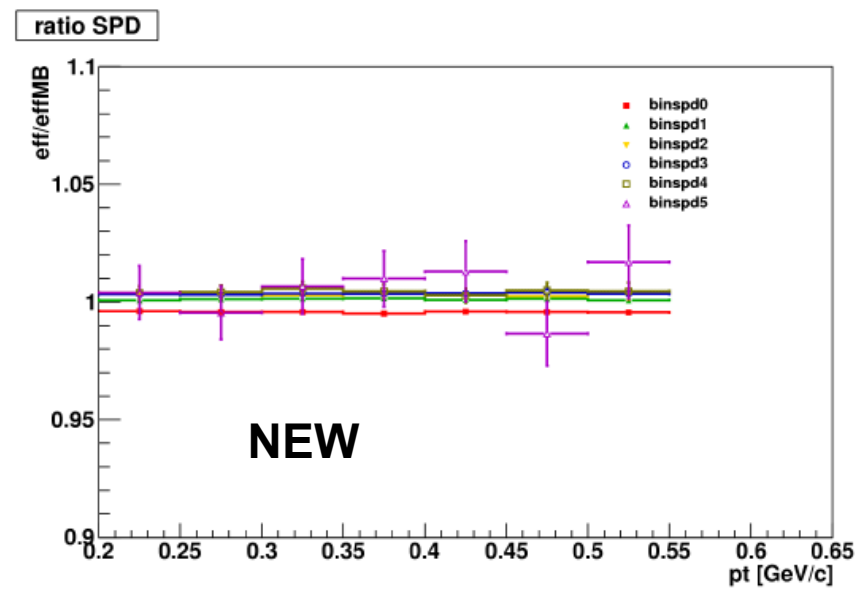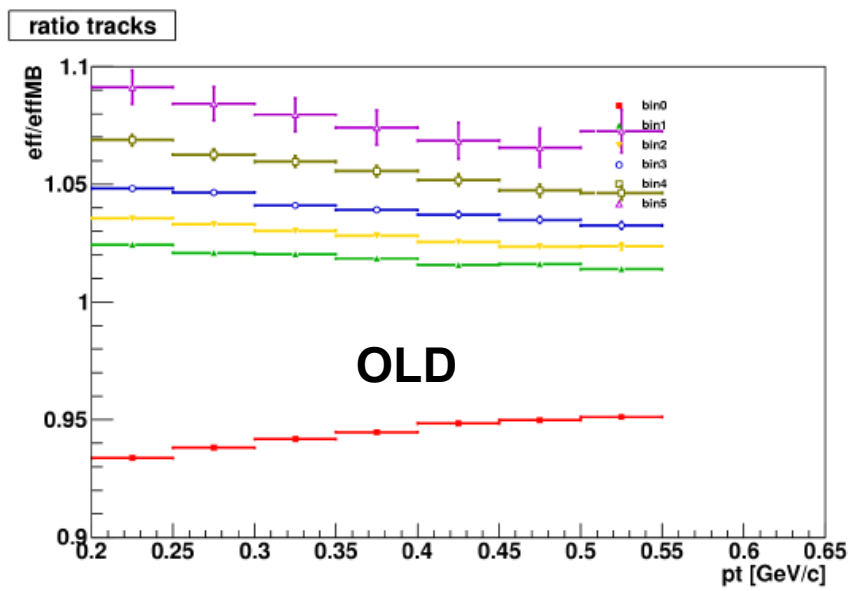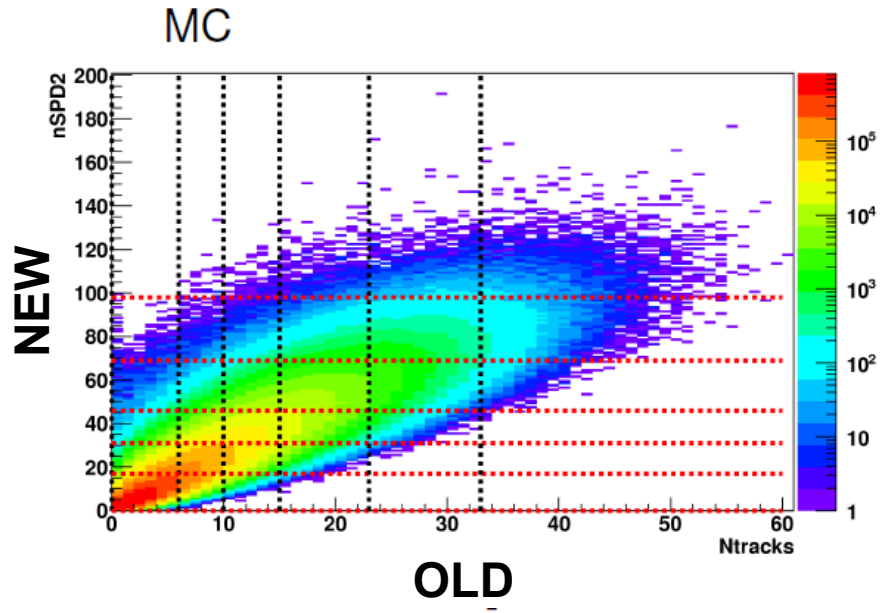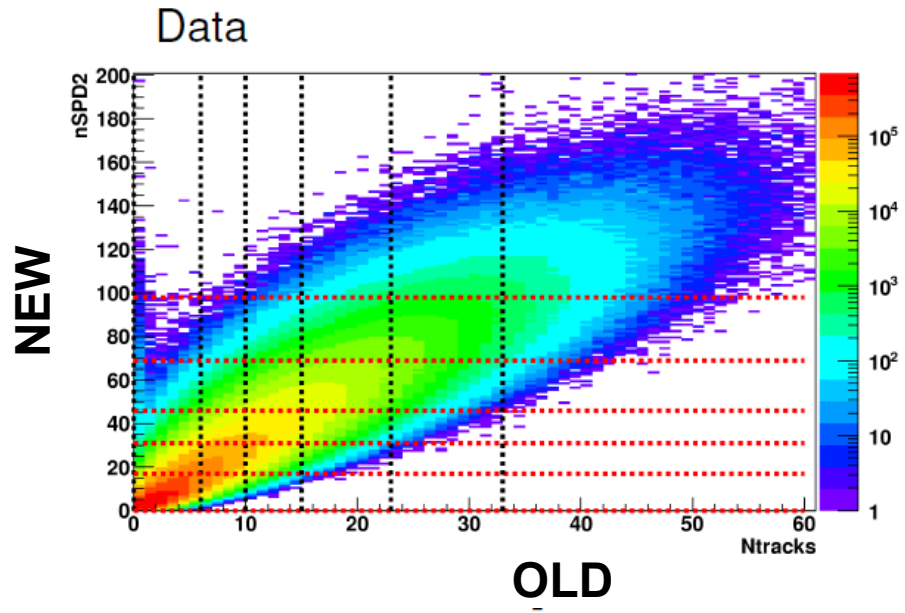# New multiplicity vs. old multiplicity estimators

from Marek Chojnacki talk of yesterday

New TPC track quality cuts

from Michele Floris talk of yesterday
Marian was not there, but I understood what I needed, from talking with Michele.

In particular, what Marian mentions as "number of clusters in crossed rows" and other stuff are relevant only for high-momentum tracks, and then for the moment nothing is foreseen to be implemented for that.

➤ Meeting with Marian & Jan Fiete yesterday morning

➤ Cuts finalized:

◇ "Number of crossed rows" we cut at 70 (similar to previous cut on clusters)

◇ "Number of crossed rows"/"Number of findable clusters" we cut at 80% (see Fig. 3c on Marian's note)

❖ This guarantees that we loose less than 5% of the events if no readout card is missing, and it's still safe if 1 ro card is missing.

➤ Being implemented as a new standard method

Test run on PbPb

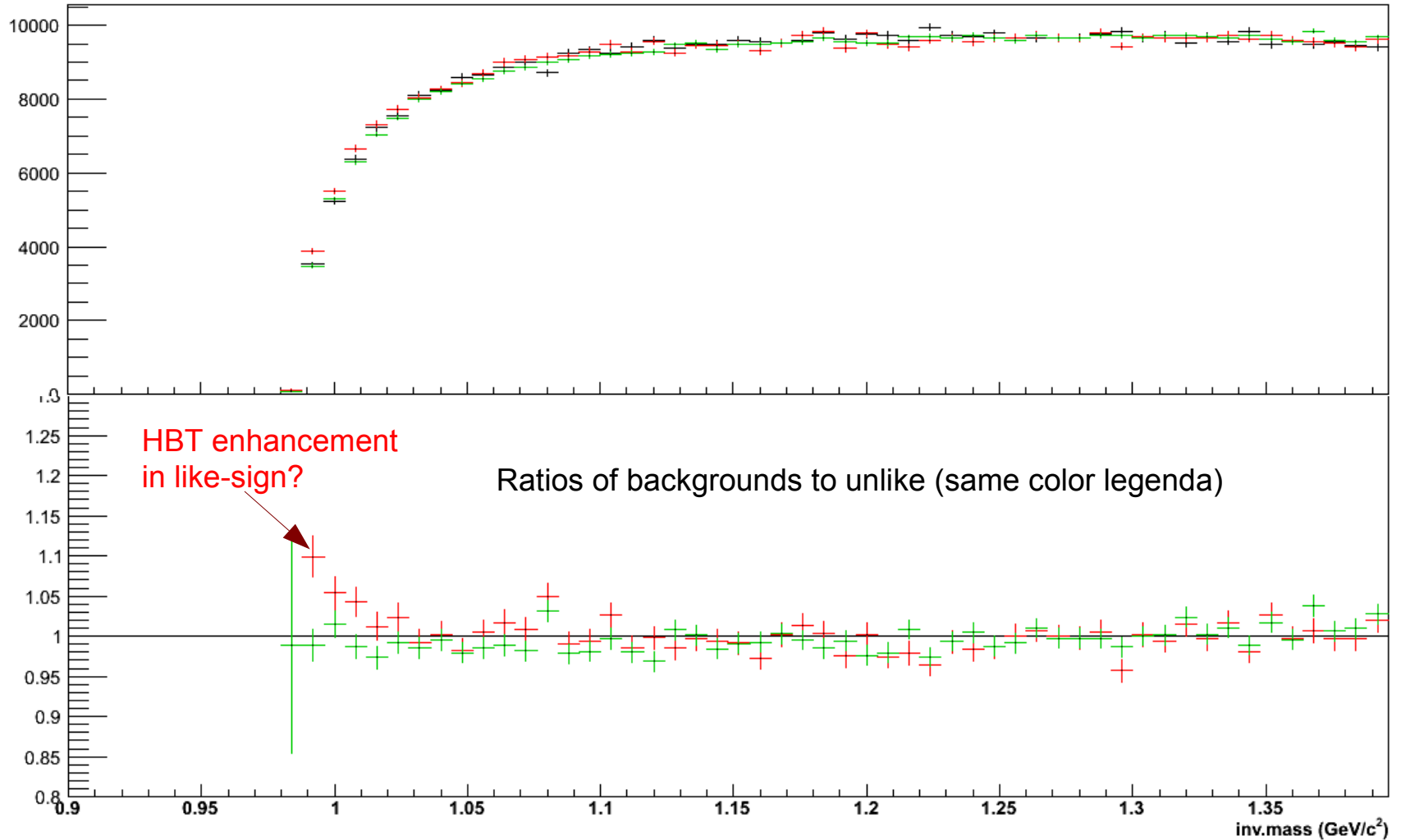❑ **For both samples I had my first attempt to run a job with Event Mixing** (now PhysicsSelection is IN)

❑ Data: LHC10h pass2 run 13800
- centrality: 0-10% (V0M)
- chosen just because it contained most events (~600k)
- its pass1 had some problems with ZDC but
  - I got this info later, and I preferred to go on with it for tests
  - the expert himself told that proably the pass2 redured the problem a lot
  - I didn't see strange things in the small sample I succeeded in analyzing
- up to now, jobs finished successfully for just 600 events (both for normal analysis and for mixing)

❑ MC: same run from LHC11a7
- not mixed → almost all completed successfully
- mixed → all finished but empty output (investigating)
- probably statistics is not large?

Data

BLACK : unlike K⁺K⁻

RED : like K⁺K⁺ + K⁻K⁻

GREEN : mixing (K⁺K⁻)

too small statistics to see the peak,
but we can compare mixed background with like-sign

HBT enhancement in like-sign?

Ratios of backgrounds to unlike (same color legenda)

inv.mass (GeV/c²)

MC

BLACK   : unlike K⁺K⁻
RED   : like K⁺K⁺ + K⁻K⁻
mixing job failed with MC

too small statistics to see the peak,
but we can compare real background with like-sign