Study of central exclusive dijets production using the PPS spectrometer

Update

https://twiki.cern.ch/twiki/bin/view/Main/PPSBrazil

Remarks

Samples

- ExHuMe (pp → gg → dijets) + Pythia 8 (minBias, PU - Run II scenario)
  - σ= ~1700.0 fb
  - 10000 events NoOOT with PU
  - 10000 events NoOOT without PU
  - Generator cuts:
    - $0 < |t| < 4$
    - $0.01 < \Upsilon < 0.2$
    - $300 < M < 2000$ GeV

Code

Working in CMSSW_6_2_X release.

Kinematic Selection for CEP

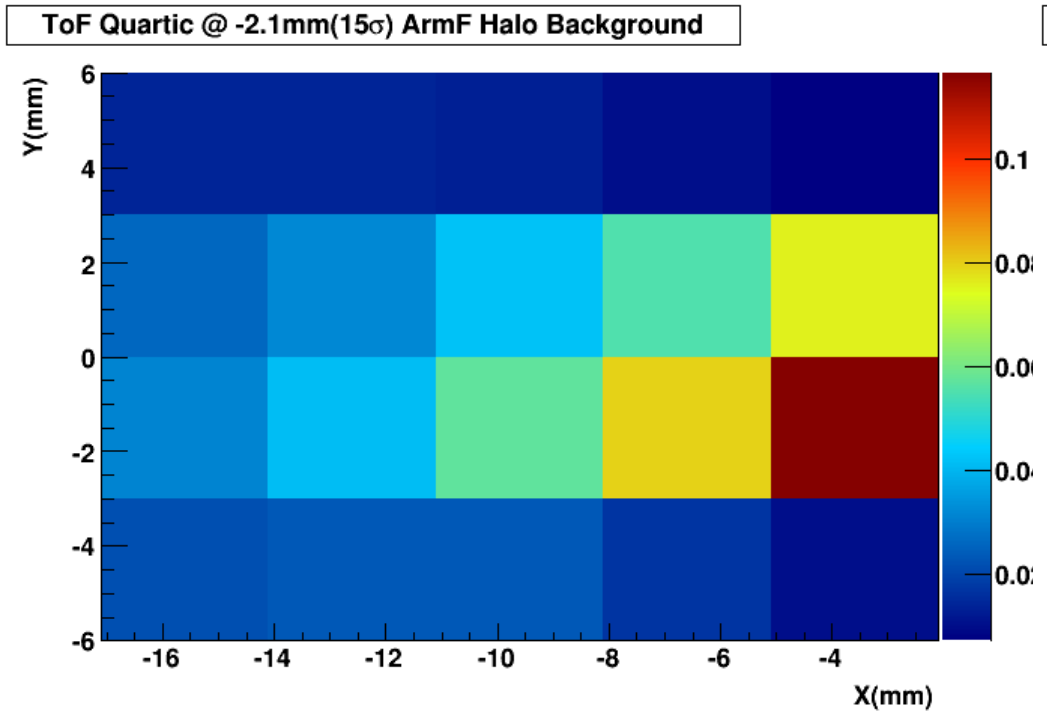
- Select jets from the same vertex as the leading jet
  - pT (j1,j2) > 50 GeV/c
  - |η| (j1,j2) < 2.0

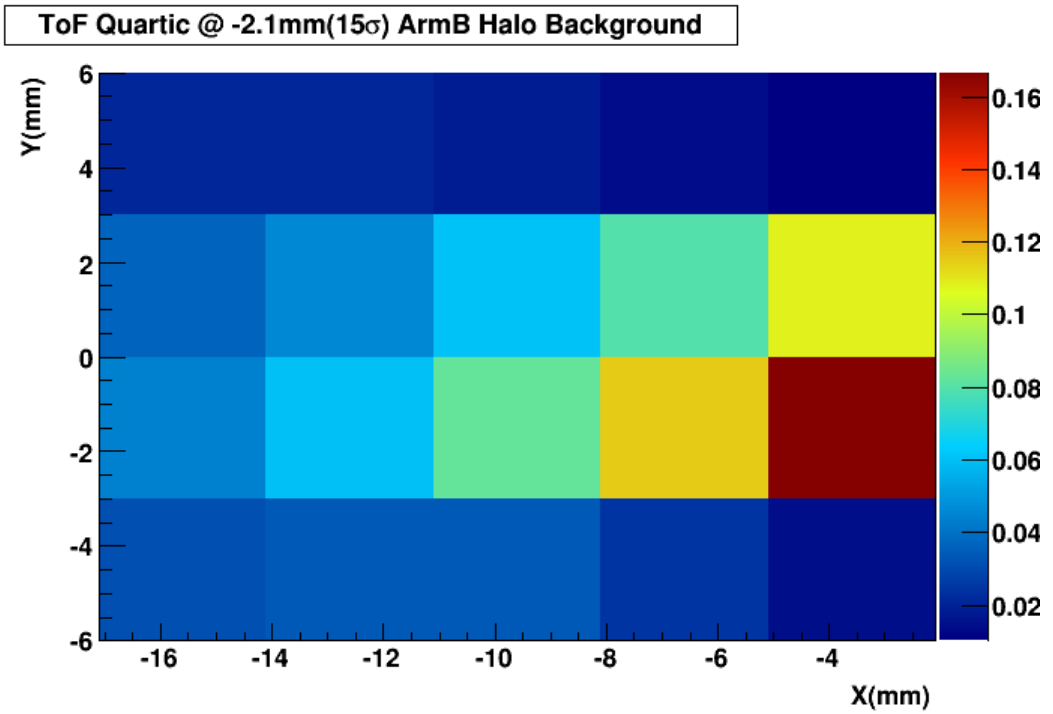
Beam background

- Using the Jonathan procedure (see slides in the April 23th meeting)
- Mixing each entry of the Mirko's ntuple, which corresponds to the background measured in the RP in data for one BX, extrapolated to pileup mu=50, with one entry of the dijet samples.
- The central dijets cuts were applied

Dijets and halo background

Halo background only

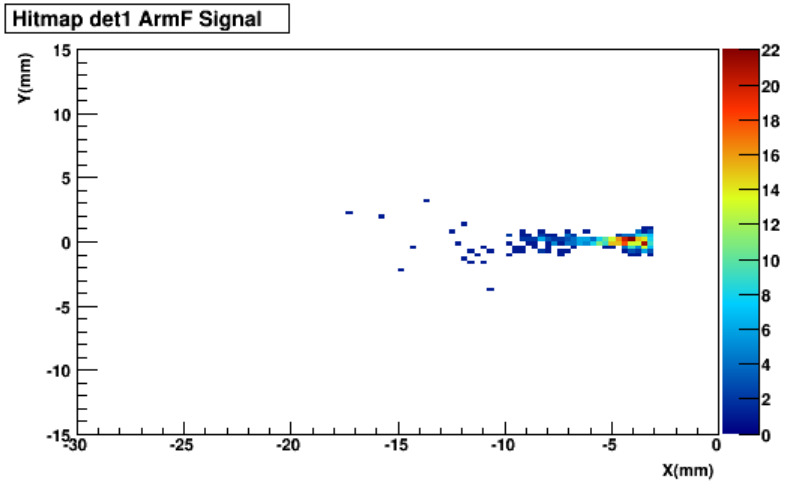


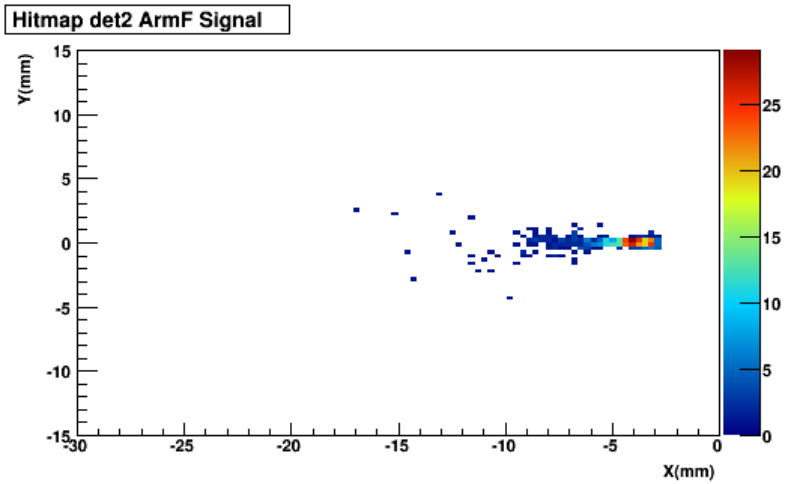


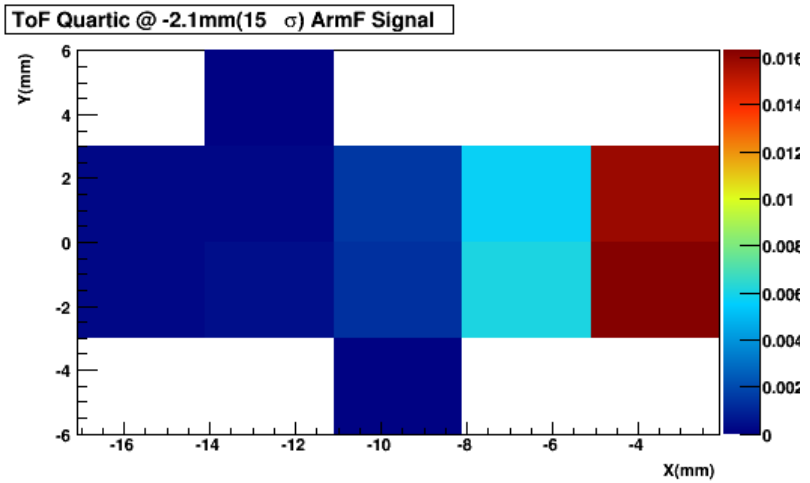
What is forward and backward? We call forward CMS z>0 (counterclockwise from IP)

Dijets and halo background

Signal only Forward Arm: Selected dijet events

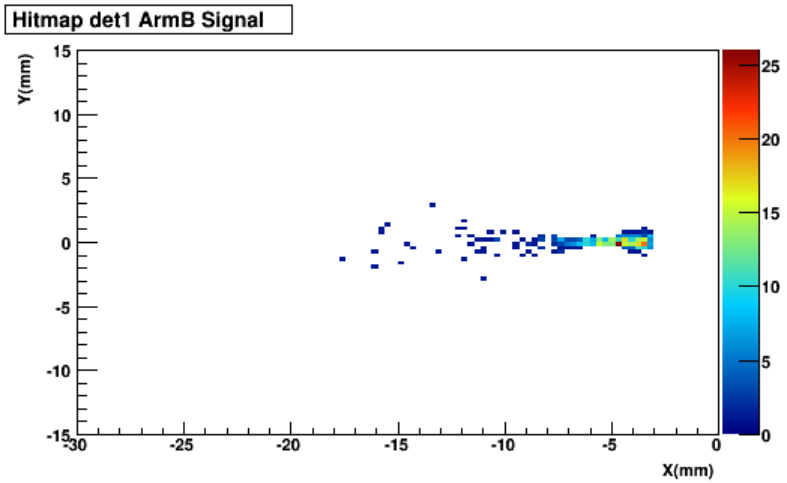


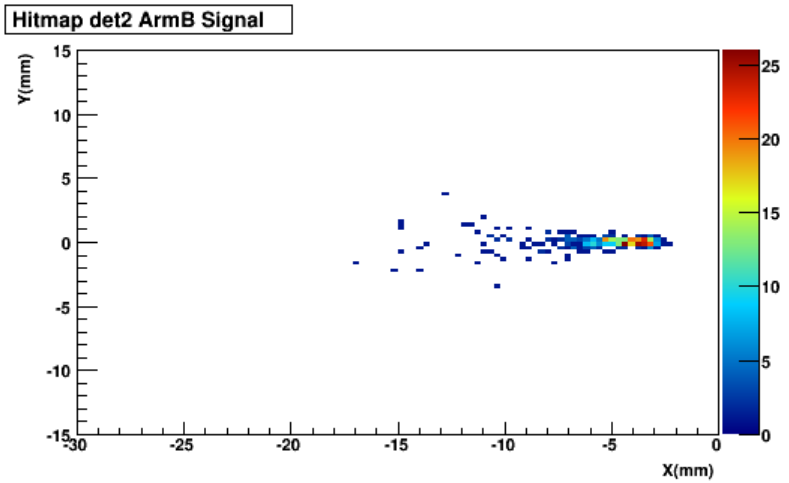


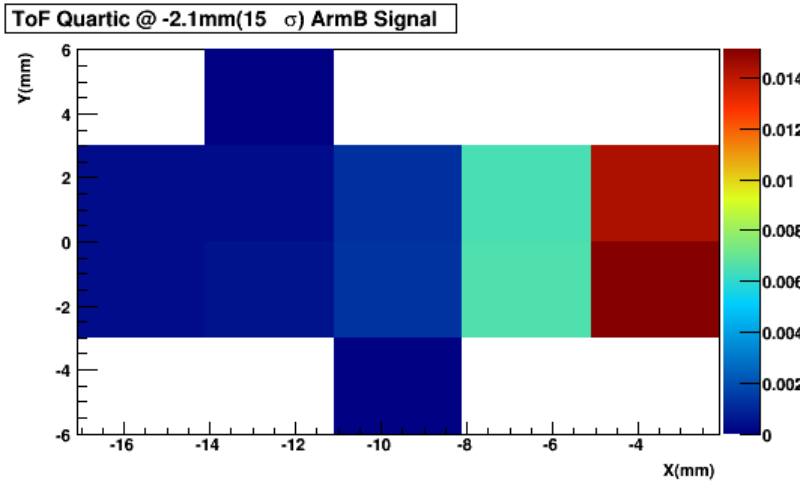


Dijets and halo background

Signal only Backward Arm: Selected dijet events







Dijets and halo background

Signal + Background : only 1 hit per cell

SOON.....