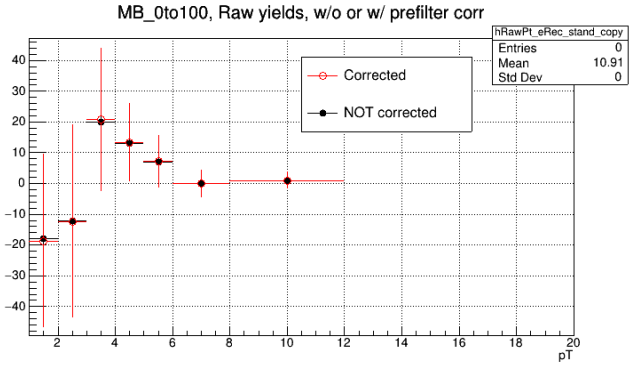
Status Weekly Ξ^0_c analysis meeting, Dec. 3

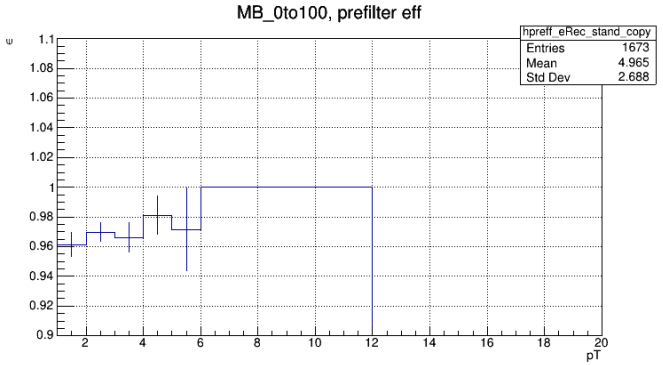
- **Status**
  - Main task code (AliAnalysisTaskSEXic0…) prepared and sitting in GIT repository
    a. Crosschecked w/ Dr. Bok, also now uses same steering macro (for Grid or Lego train)
    b. The code works fine in the Grid, either by using ROOT5 (KIAF) or ROOT6 (alidock)
    c. The code didn't pushed to AliPhysics yet, nor tested in the Lego train
  - Following later steps of the analysis
    a. Got small sample of data (whole LHC18p) and MC (LHC18MC3)
    b. Finished porting Jinjoo's histogram production macro (*MakeROOTResultsXic0*):
       now it can produce output w/ various trigger/multiplicity percentile setup (ex. HMV0 + [0.1, 30])
    c. At least, the macro at b-2 runs fine and make an output successfully for these setups:
       c-1. MB + [0, 100], MB + [0.1, 30], MB + [30, 100]
       c-2. HMV0 + [0.1, 30], HMV0 + [30, 100]
       c-3. HMSPD + [0.1, 30], HMSPD + [30, 100]
    d. Question 1: in later analysis steps,
       d-1. MCROOTFile: output histograms obtained by using default fit parameters [1.0, 1.0]
       d-2. WeightedMCROOTFile: by using fit parameters from study (currently using " 1.97848e-00, -3.68931e-01 ")
    e. Question 2: is it meaningful applying trigger (ex. HMV0) on MC files?
  - Sample plot of early steps: prefilter corrected, bottom corrected distributions

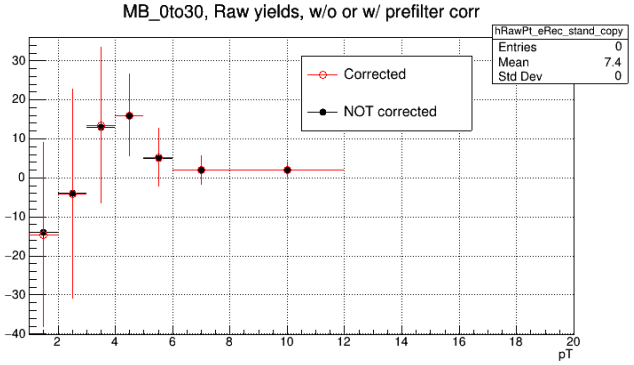
New cuts Eventwise cuts added on “MakeROOTResultsXic0”

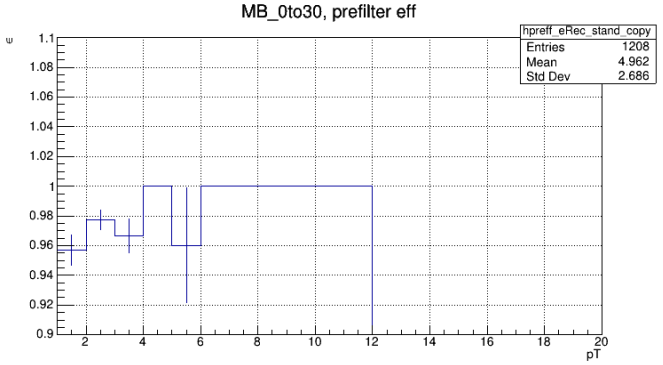
- **Eventwise cuts added**
  - On “ MakeROOTResultsXic0 “, during loop over entries of eXi pair tree,
    a. 252,000 < runNumber < 295,000
    b. Specific trigger: one and only one trigger required
       b-1. MB
       b-2. HMV0
       b-3. HMSPD
    c. Multiplicity percentile:
       c-1. Require the event’s multiplicity percentile to be within given range (ex. [0.1, 30])
       c-2. Use centrality by V0 (fCentrality) for triggers MB or HMV0
       c-3. Use centrality by SPD (fCentralSPD) for HMSPD
    d. Reject duplicated events:
       c-1. Outcome of the makeshift solution (check last report in Sep. 3)
       c-2. Accept only events w/ “ fNeXiPair = 0 “ (duplicated events’ number is > 0)
  - Some lines in the original code were modified or masked out, since
    a. Not used at all
    b. Causes segmentation fault

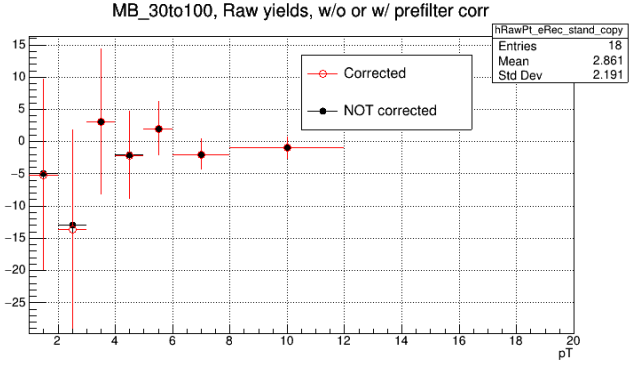
Prefilter corrected plots MB

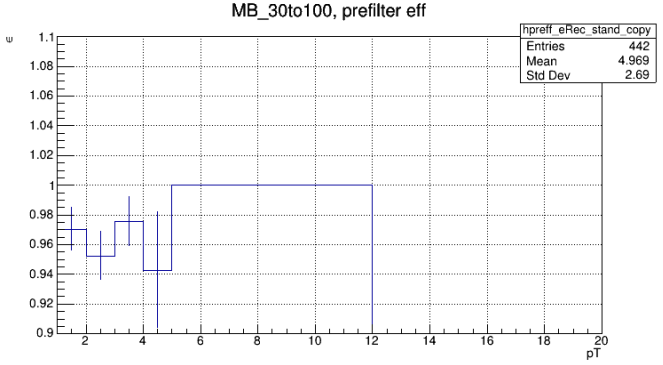




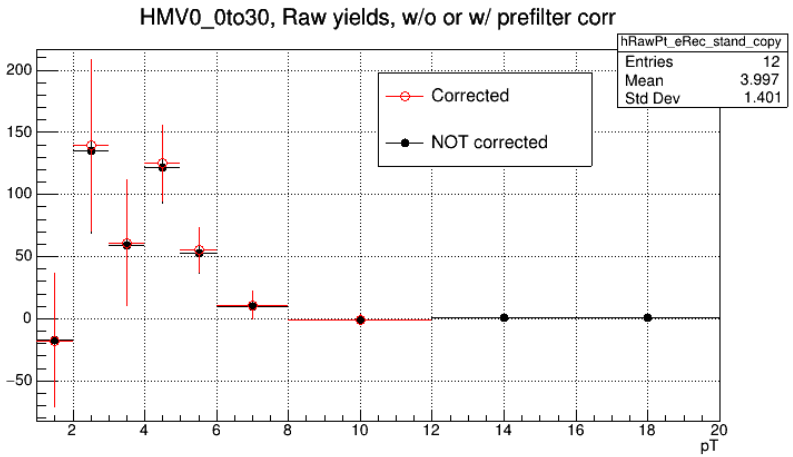


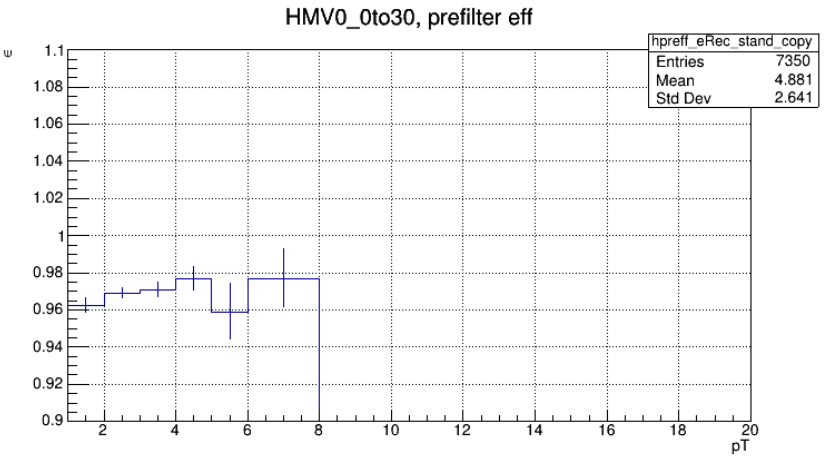


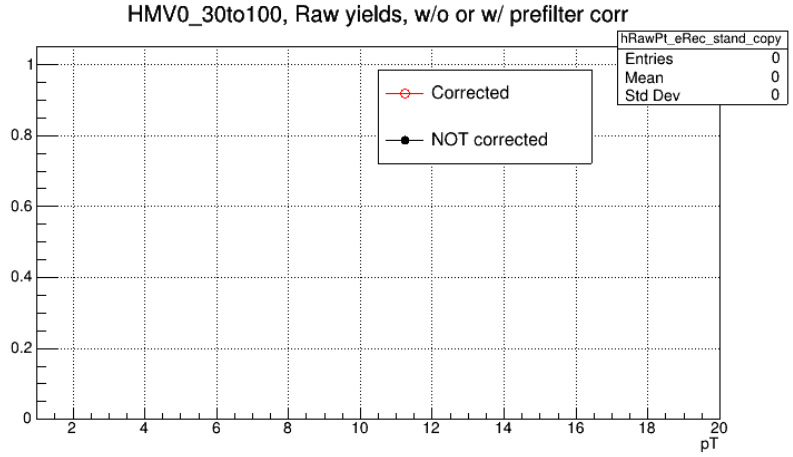


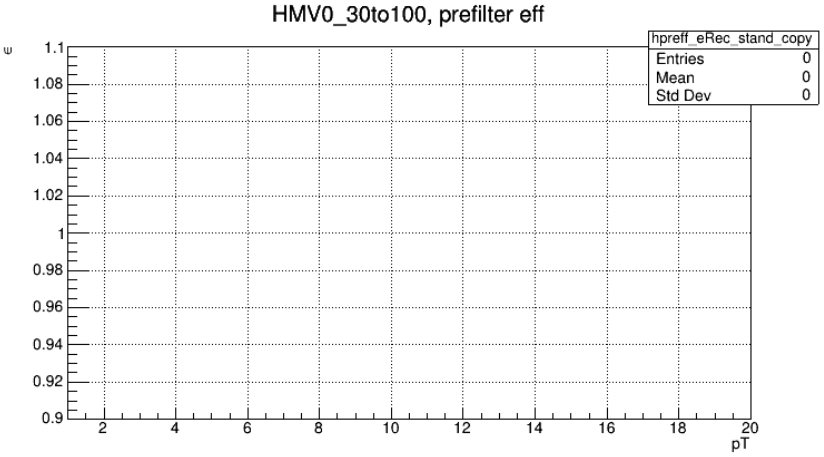


Prefilter corrected plots HMV0

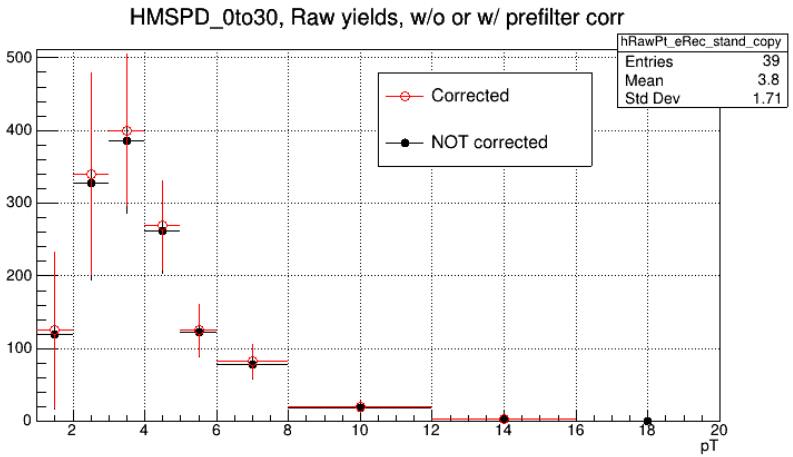


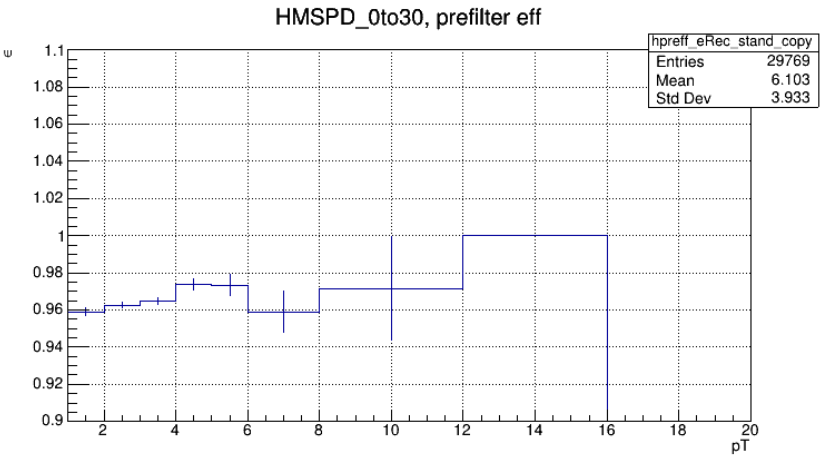


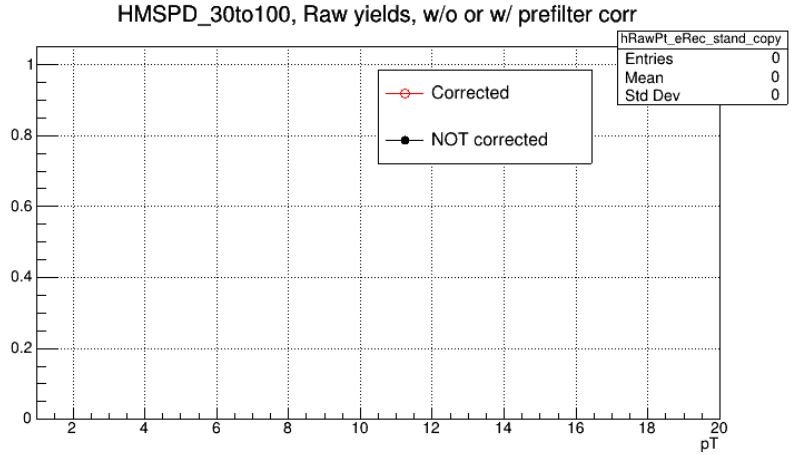


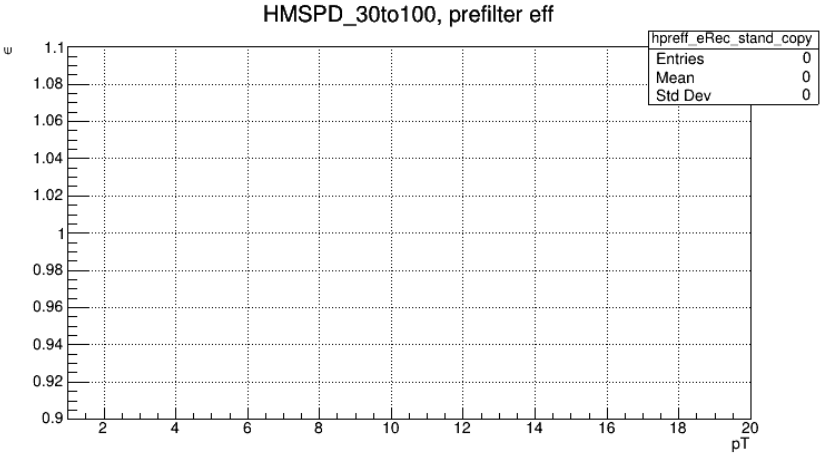


Prefilter corrected plots HMSPD

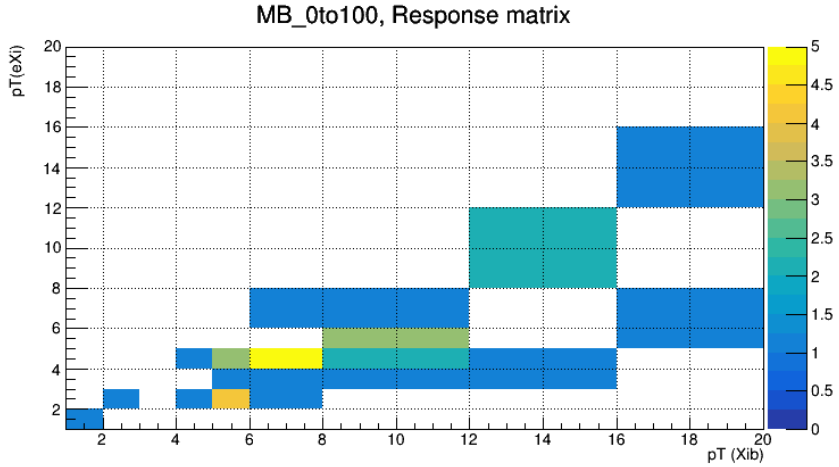


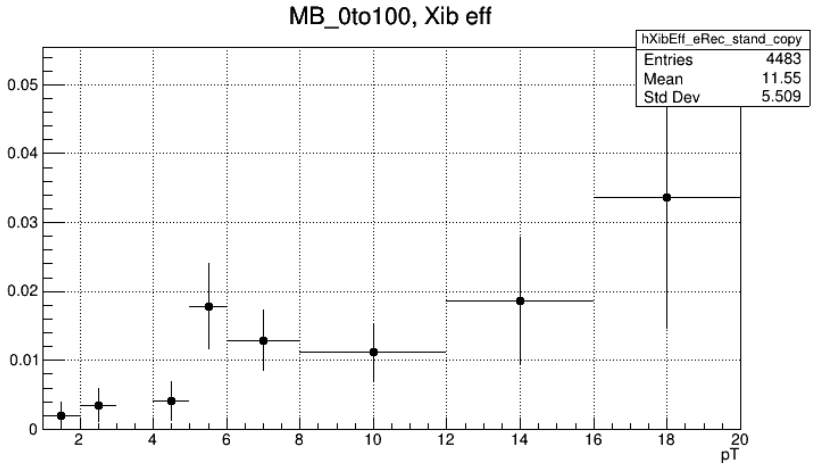


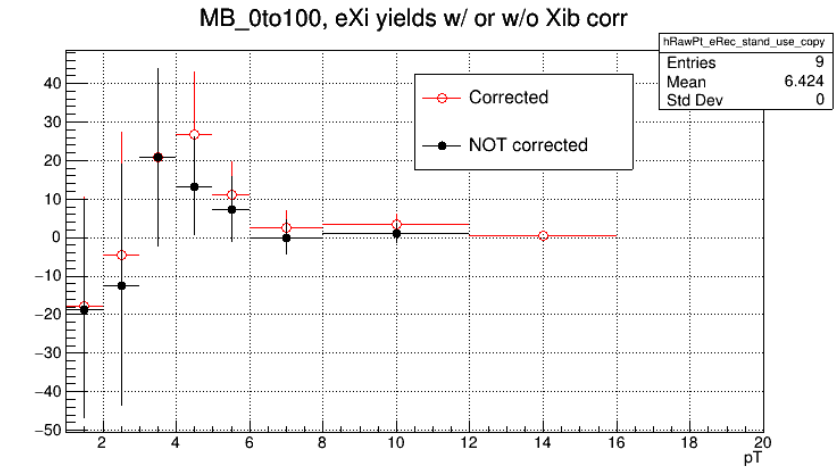


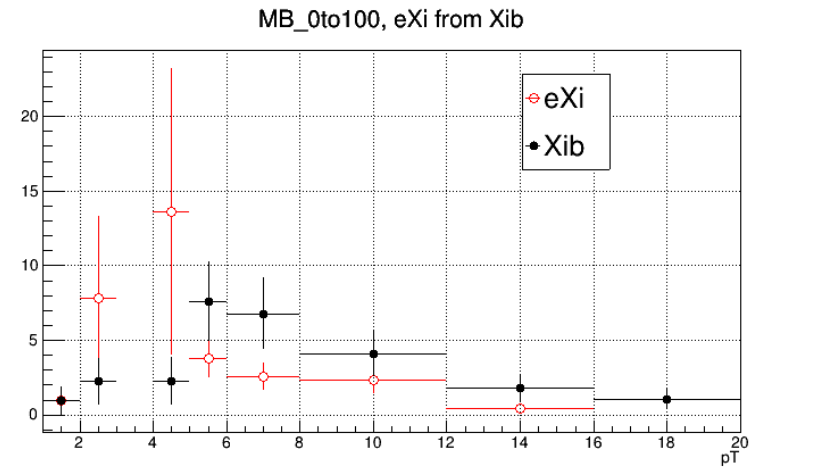


Bottom corrected plots MB, [0, 100]



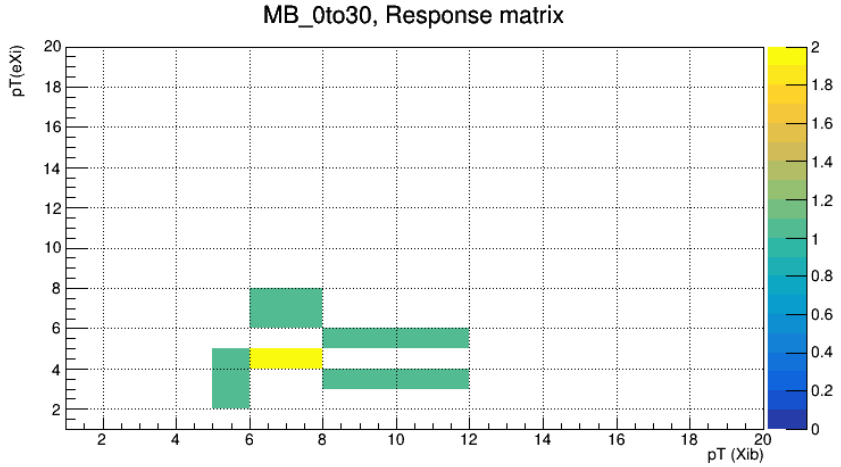


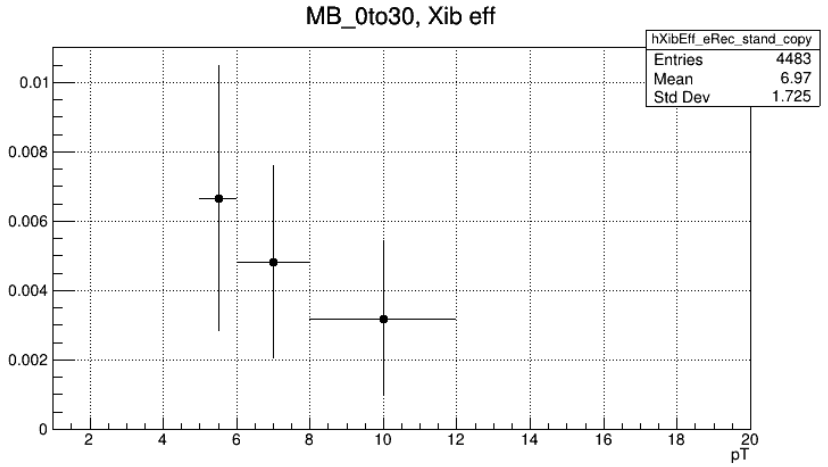


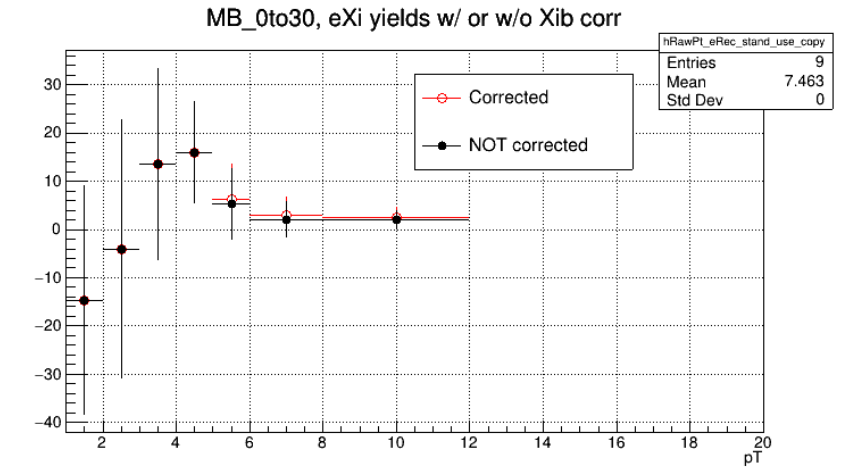


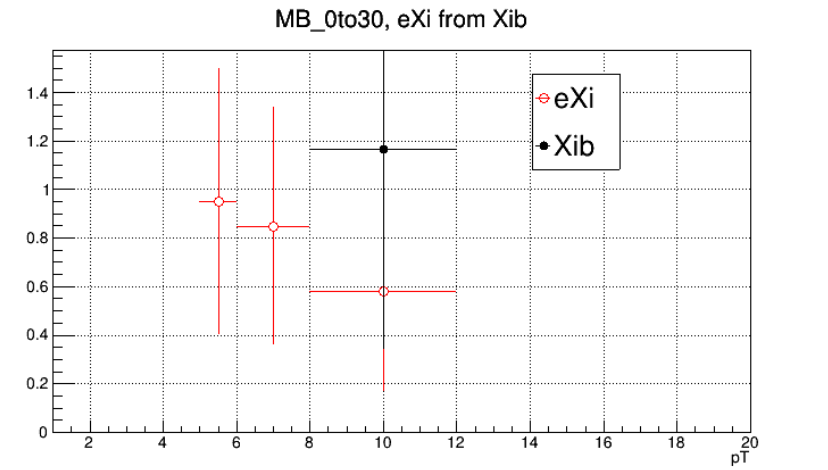
LAST SLIDE

Backup Bottom corrected plot, MB + [0.1, 30]

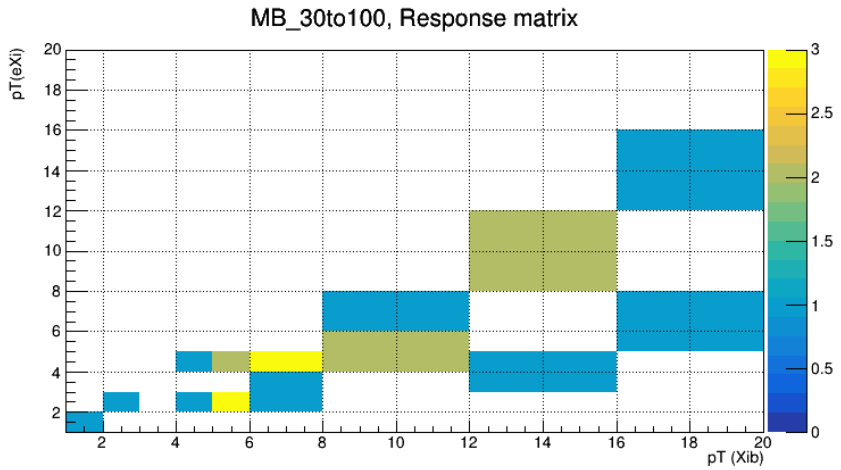


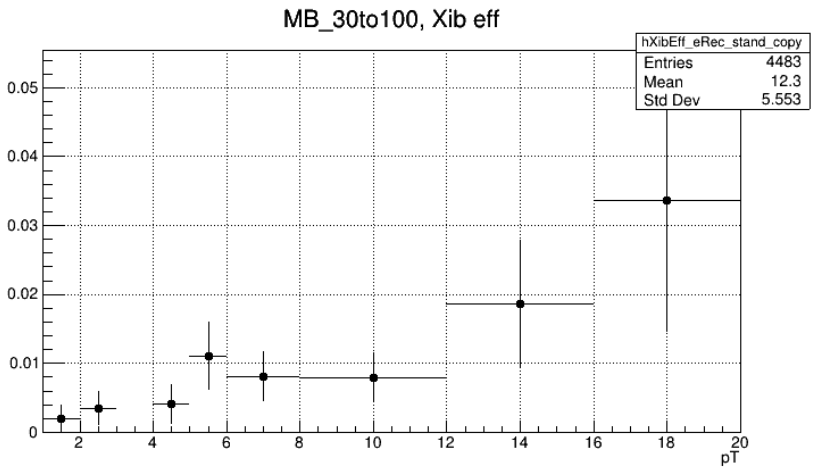


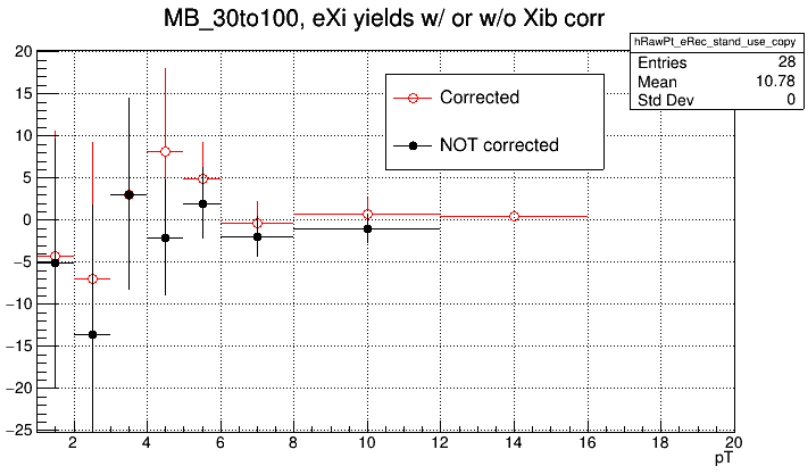


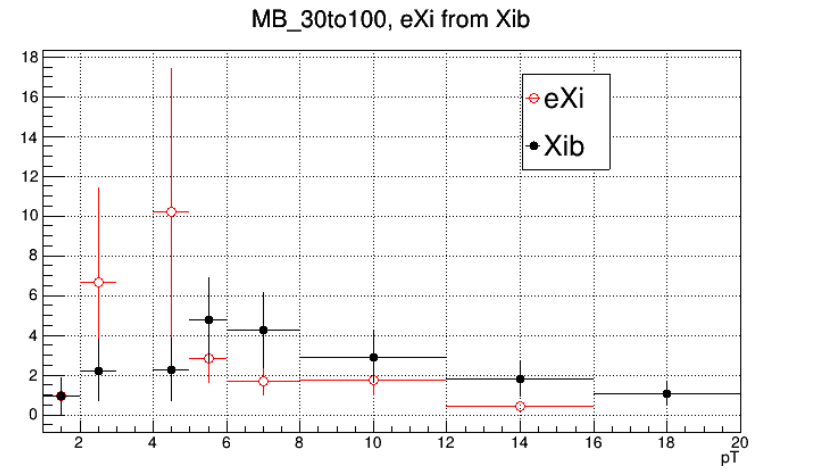


Backup Bottom corrected plot, MB + [30, 100]

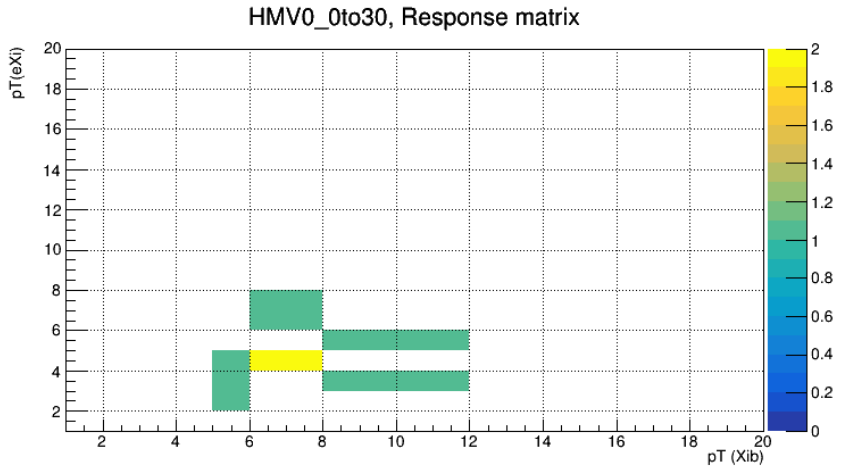


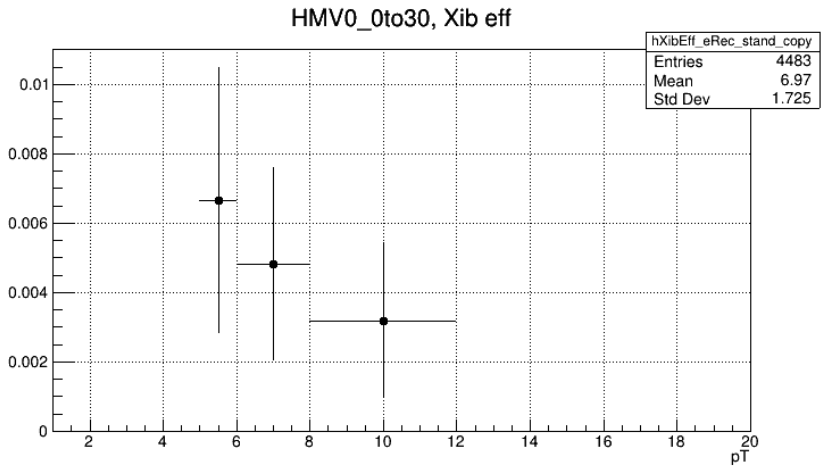


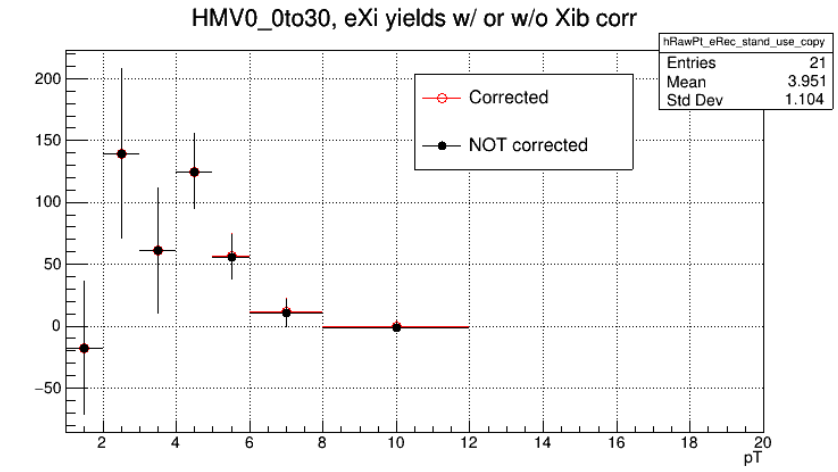


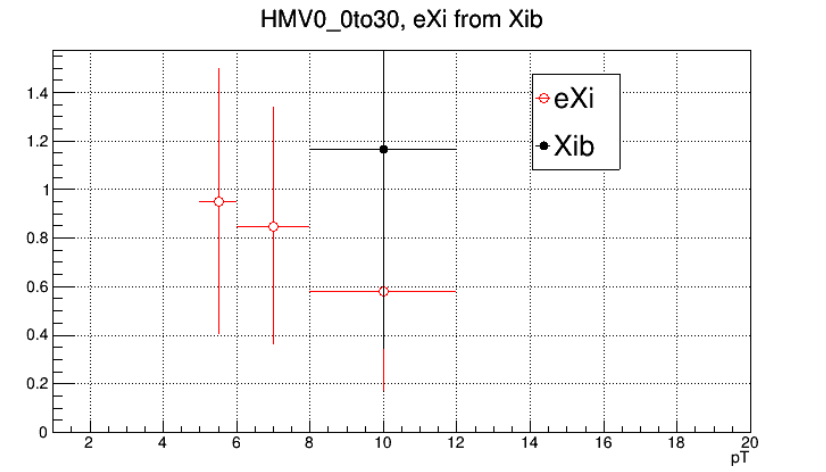


Backup Bottom corrected plot, HMV0 + [0.1, 30]

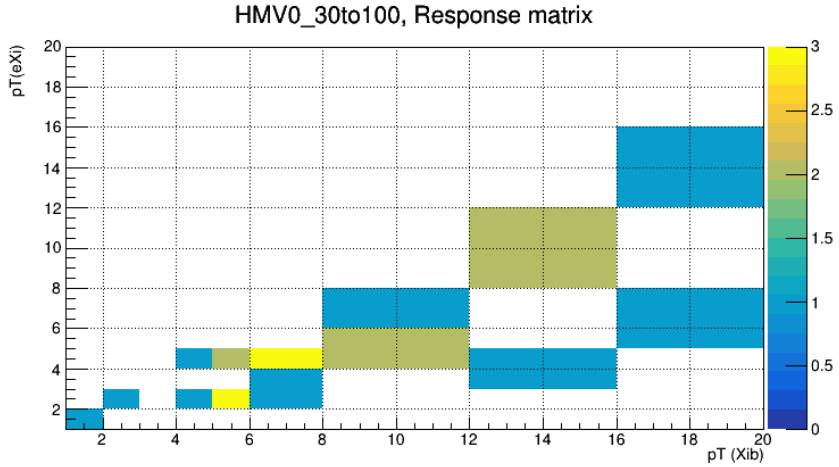


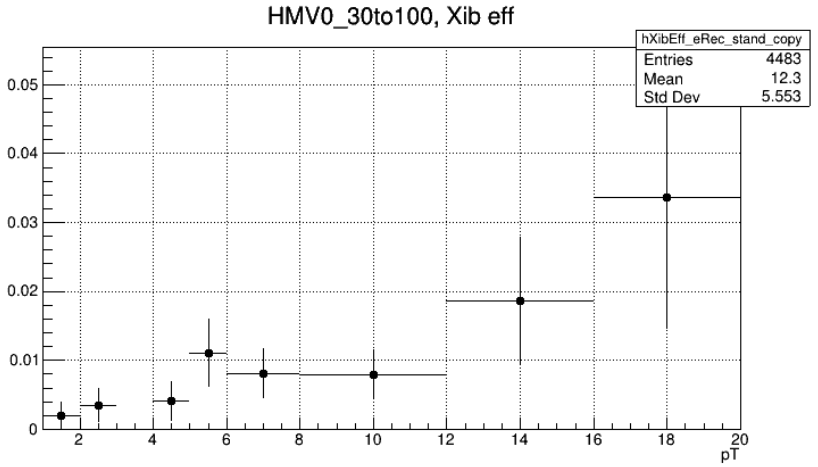


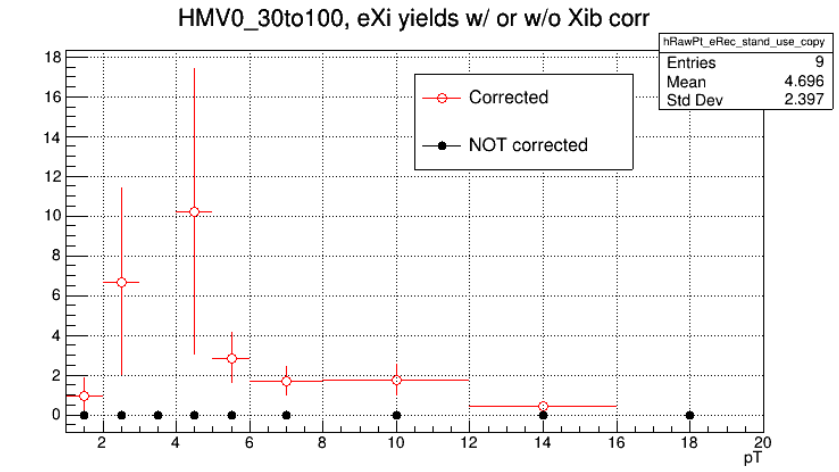


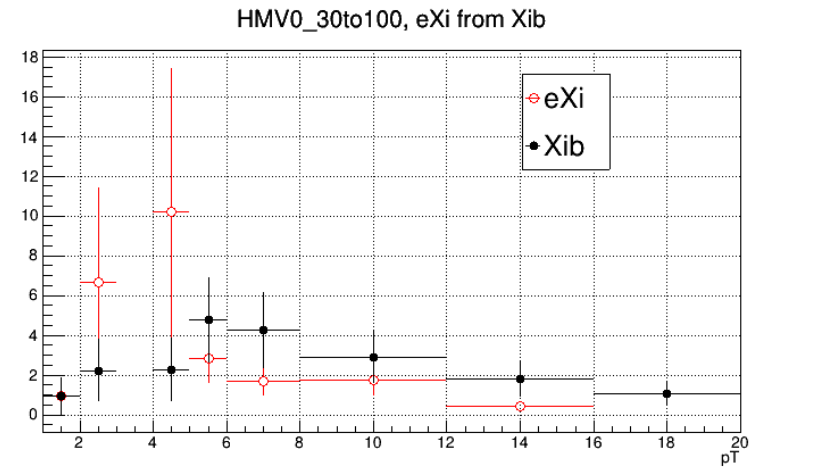


Backup Bottom corrected plot, HMV0 + [30, 100]

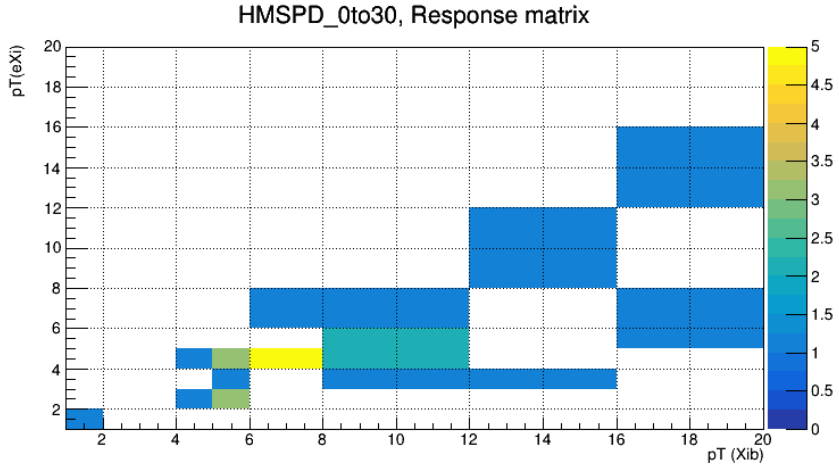


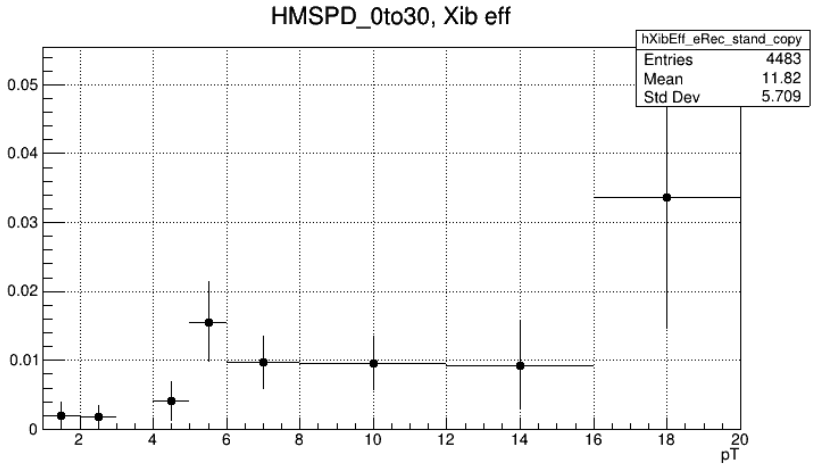


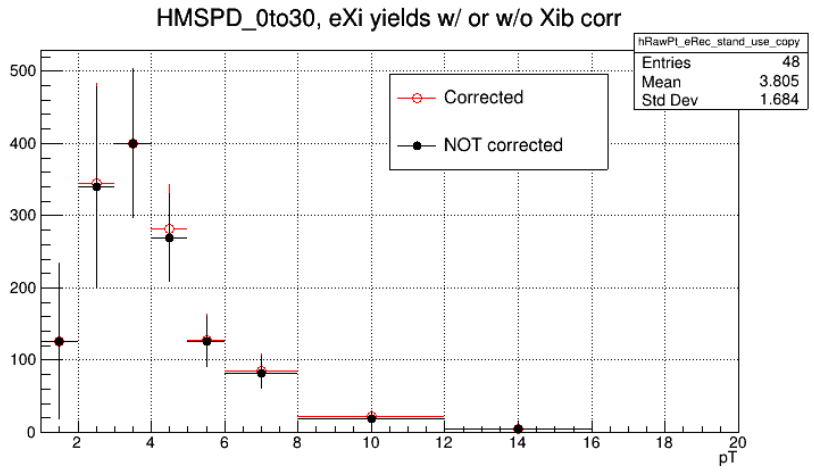


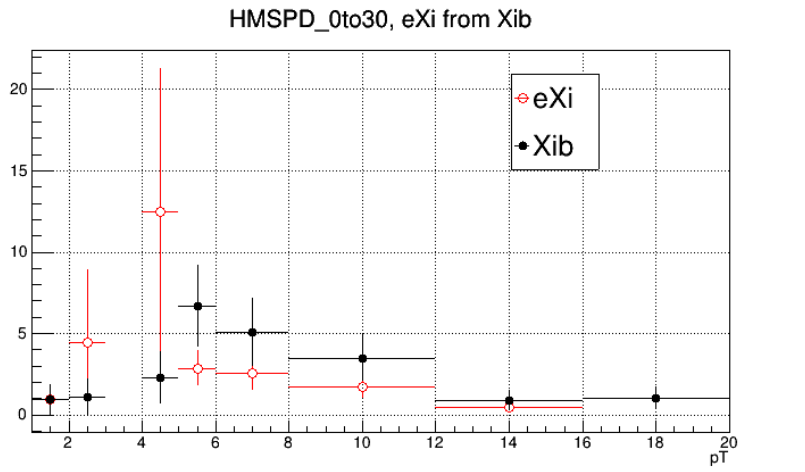
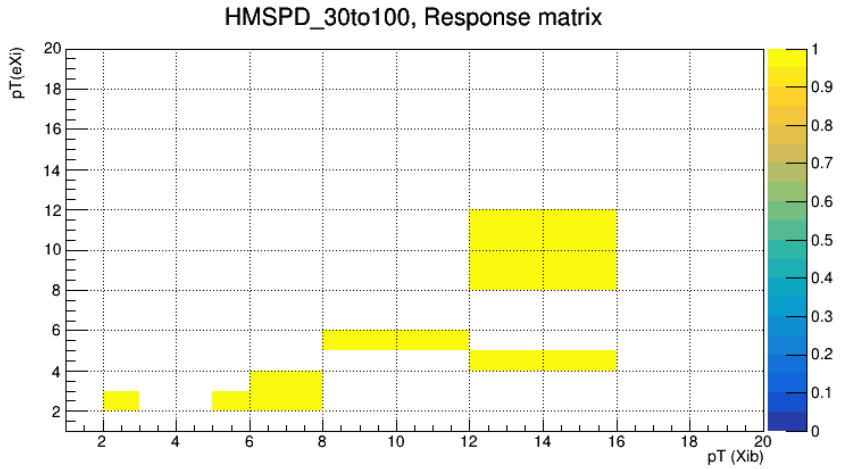
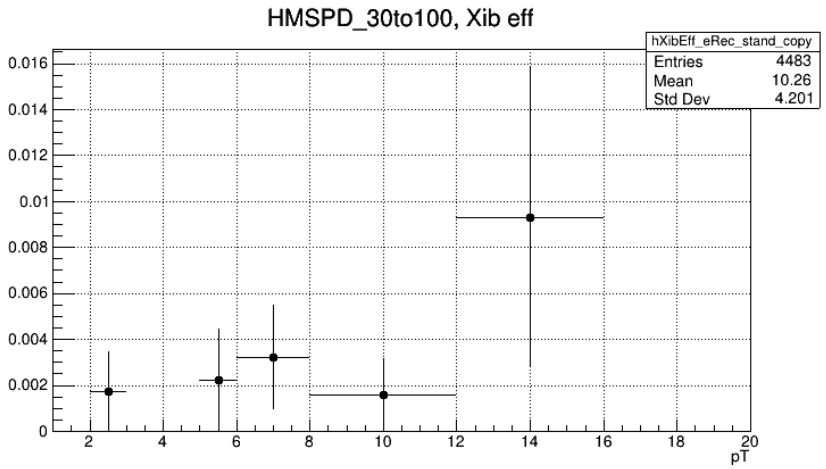
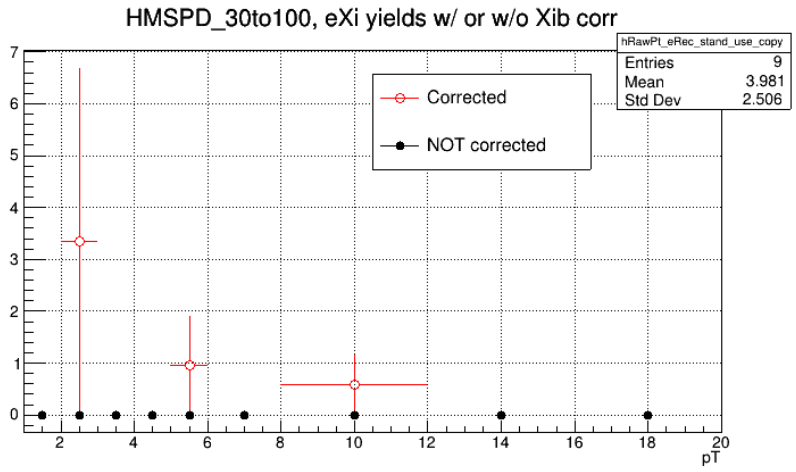
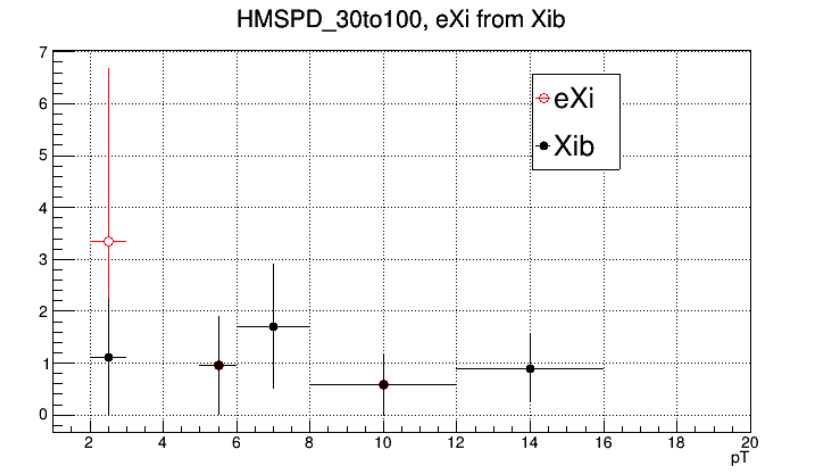


Backup Bottom corrected plot, HMSPD + [0.1, 30]









Backup Bottom corrected plot, HMSPD + [30, 100]