

Pythia Studies:3-jet events

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Dataset

PYTHIA version 8240

pp@13 TeV

HardQCD:3parton = on (default = off)

Number of Events = $7.2e+08$

Event Selection

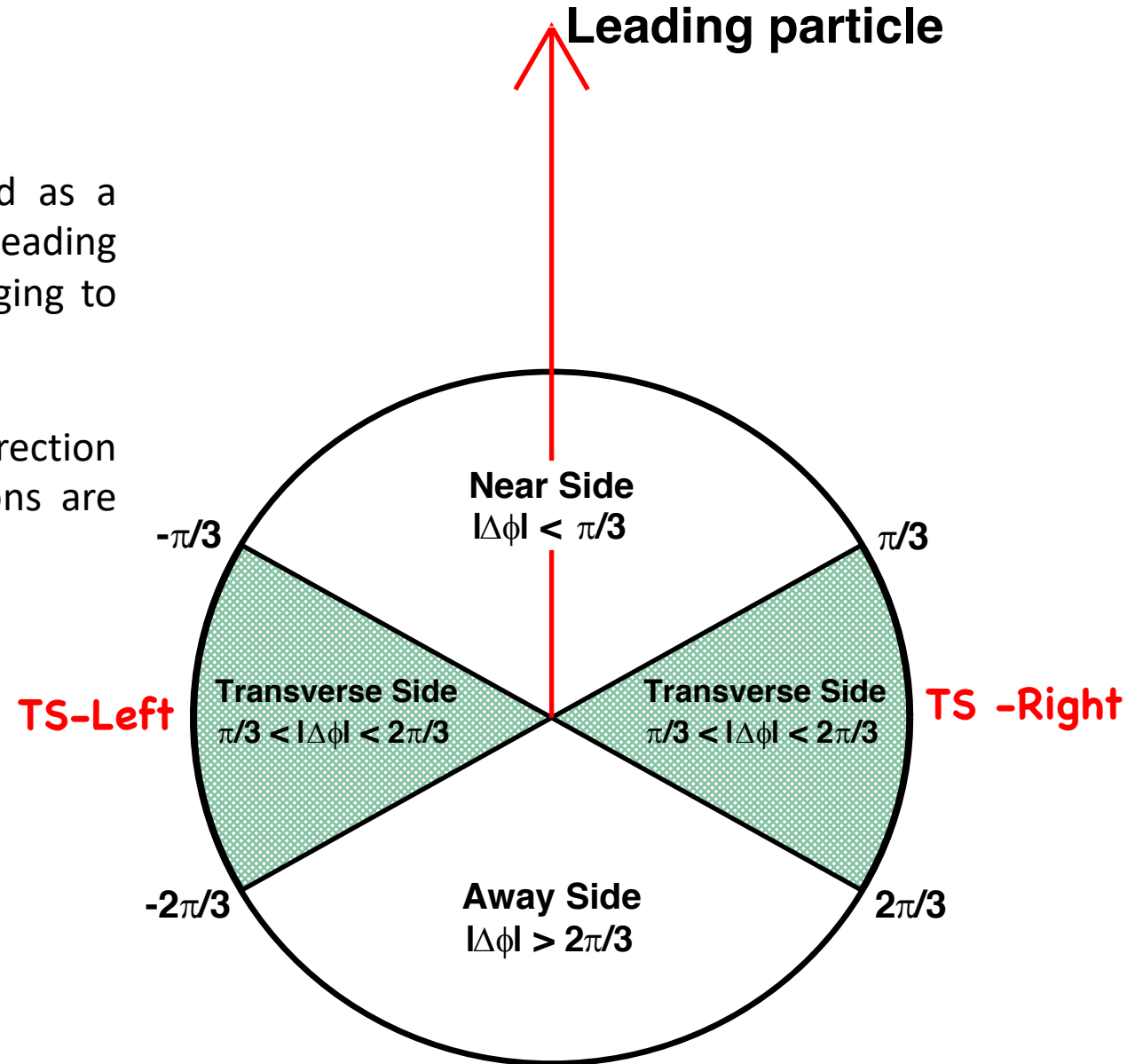
- Inelastic collisions
- Primary charged particles

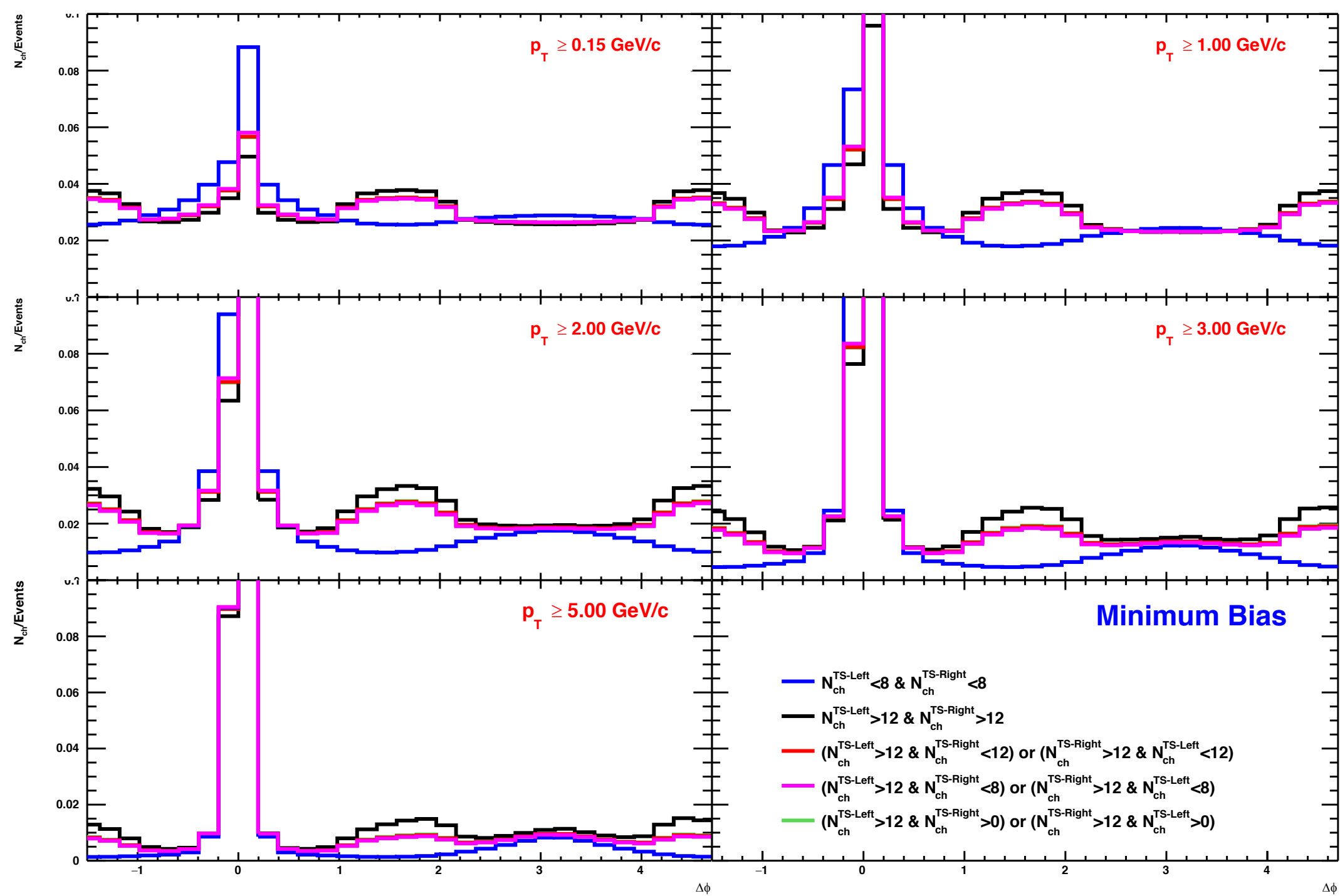
Event Selection Track Selection

- Transverse momentum $p_T > 0.15 \text{ GeV}/c$
- Pseudorapidity $|\eta| < 0.8$

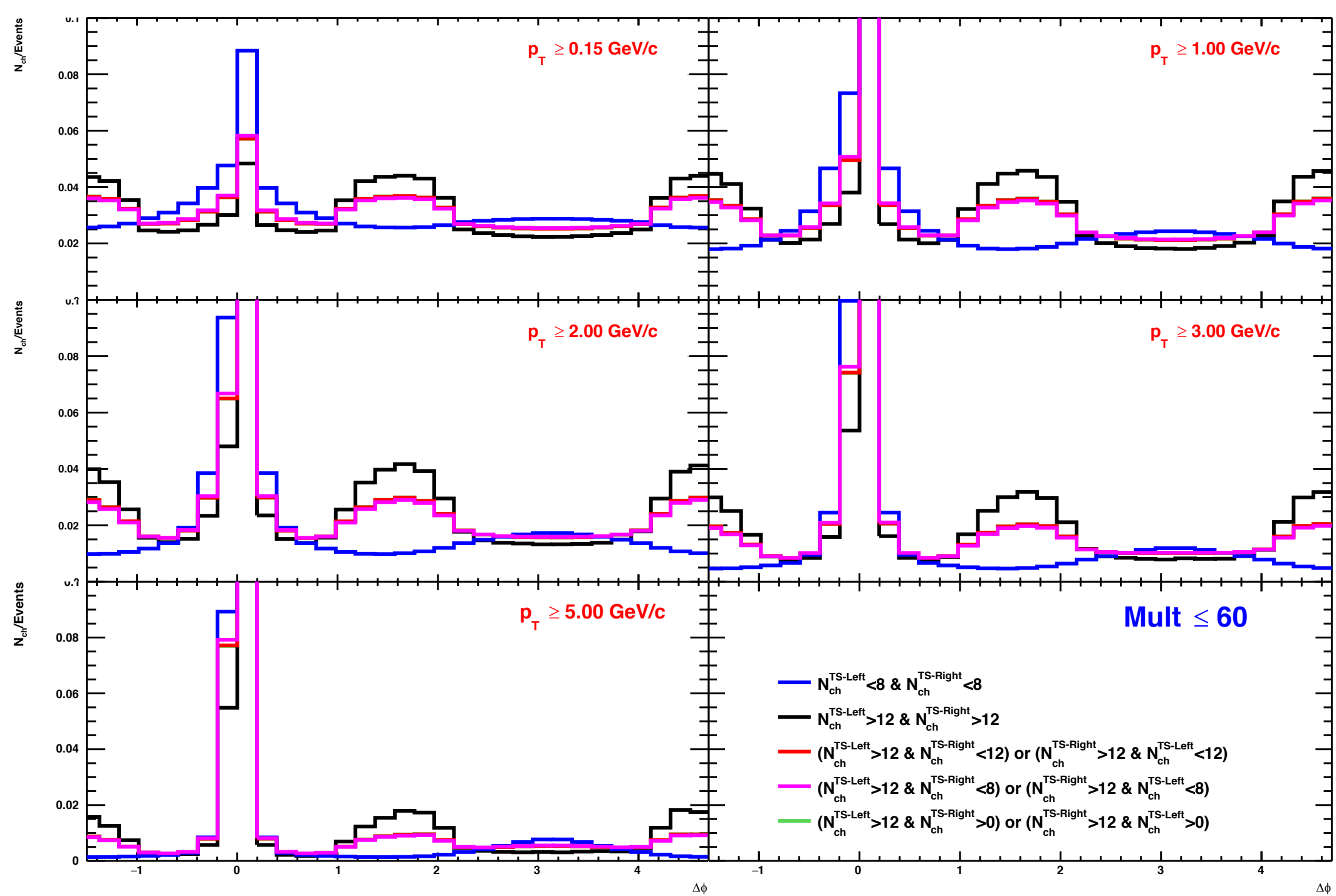
Underlying Events:

- Particle with highest p_T in the particular event is assigned as a leading p_T of the event. The azimuthal angle with the leading particle will be the new reference for other particles belonging to the event.
- **Traditional UE measurement:** according to the azimuthal direction of leading charged particle, three distinct topological regions are defined:
 - Near Side (NS): $|\Delta\Phi| < \pi/3$
 - Away Side (AS): $|\Delta\Phi| > 2\pi/3$
 - Transverse Side (TS): $\pi/3 < |\Delta\Phi| < 2\pi/3$ (sensitive to UE)

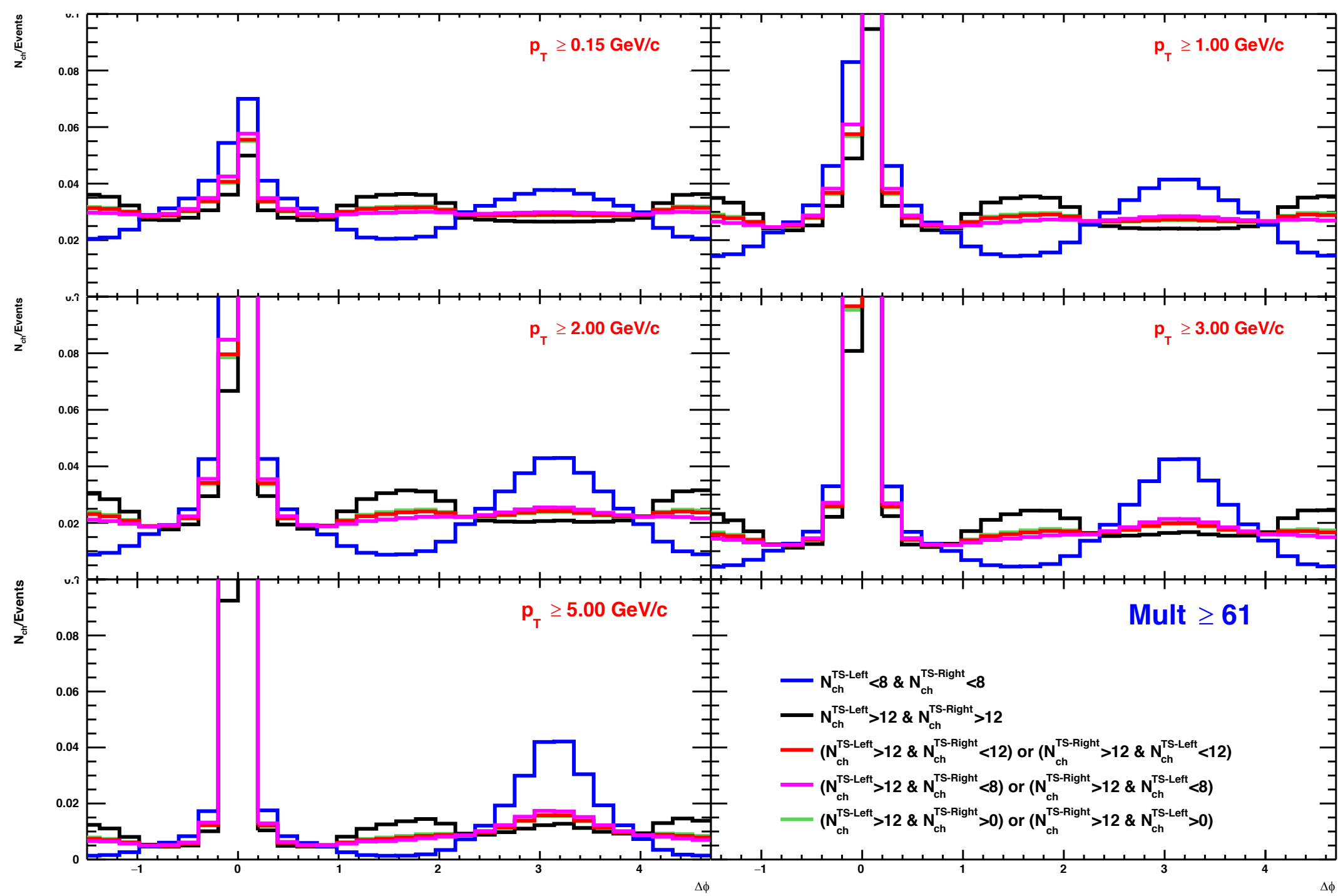




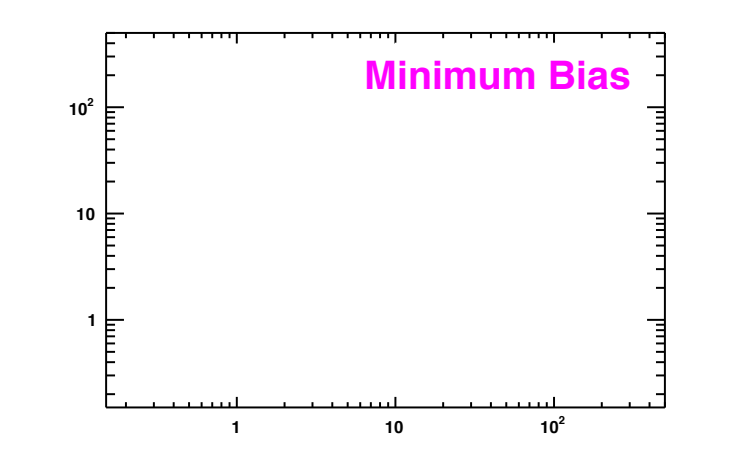
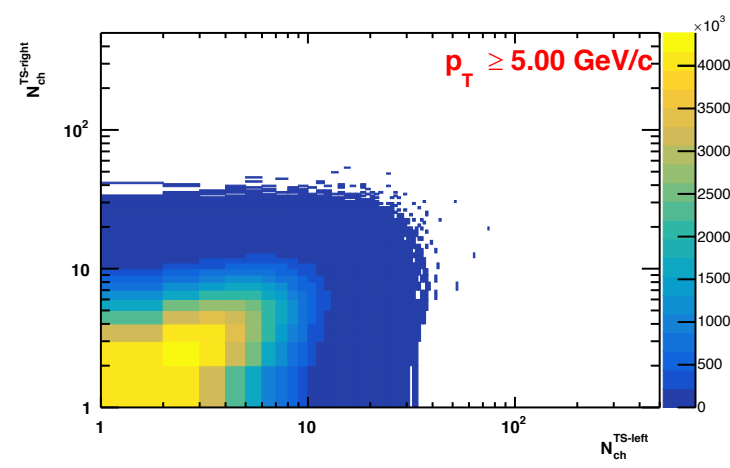
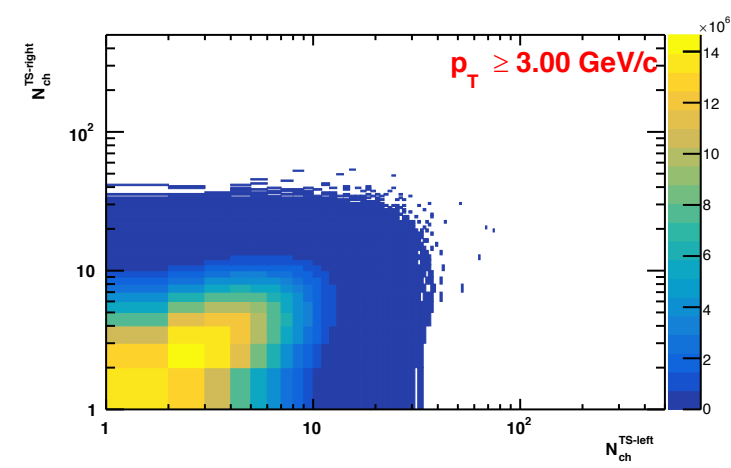
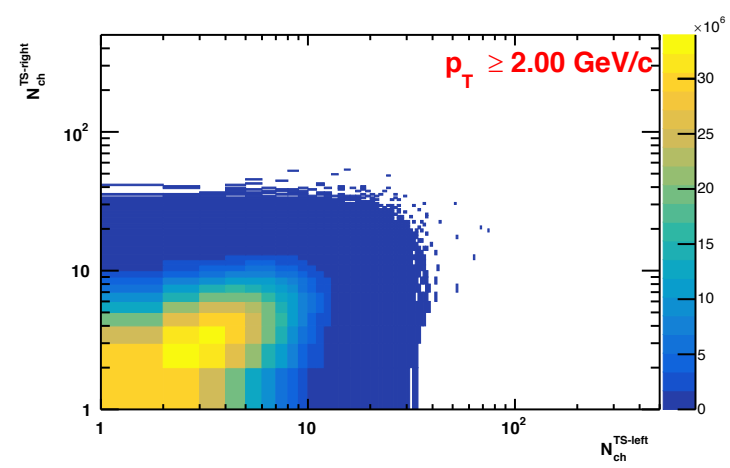
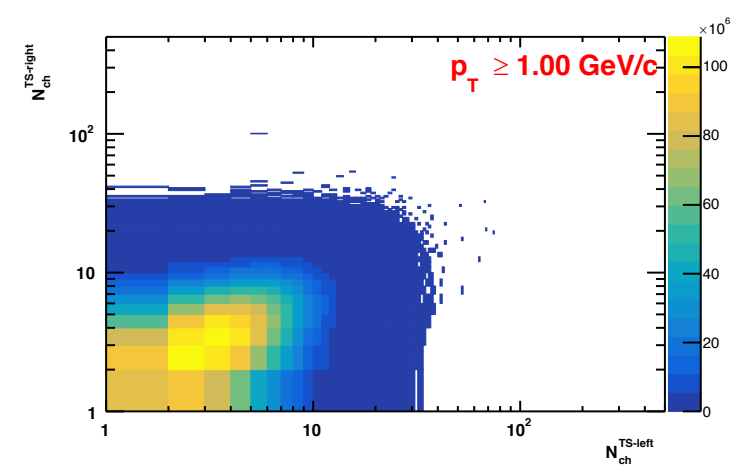
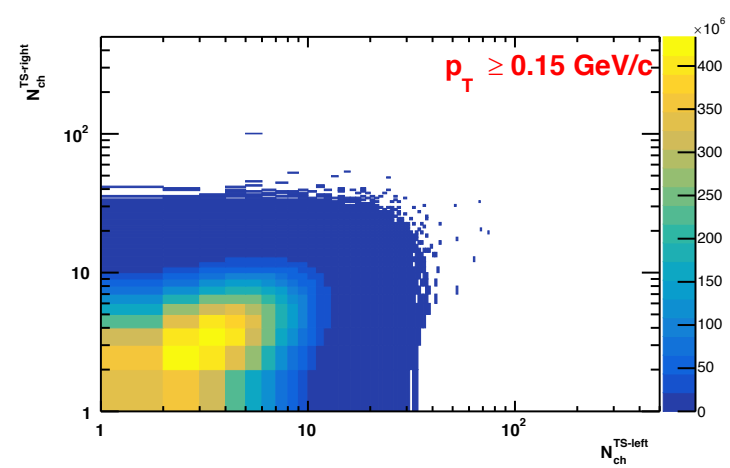
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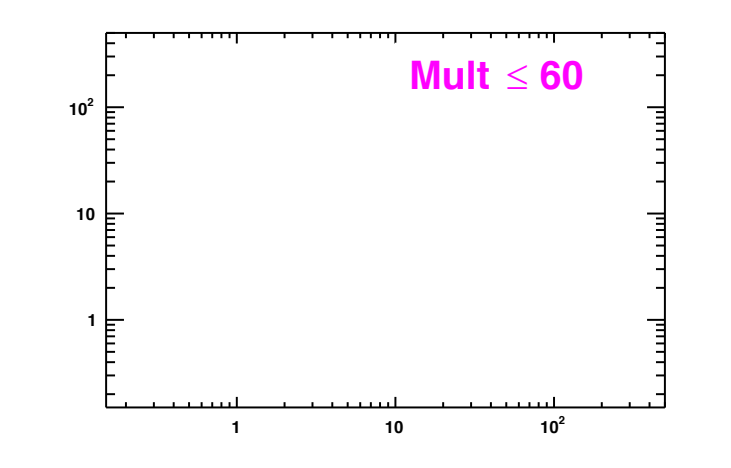
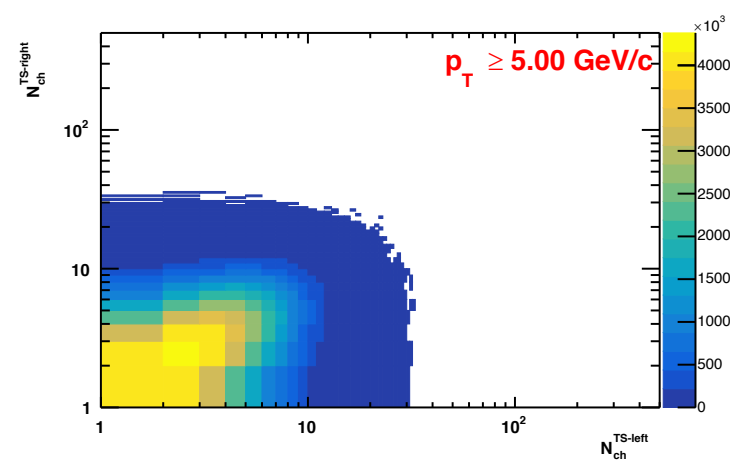
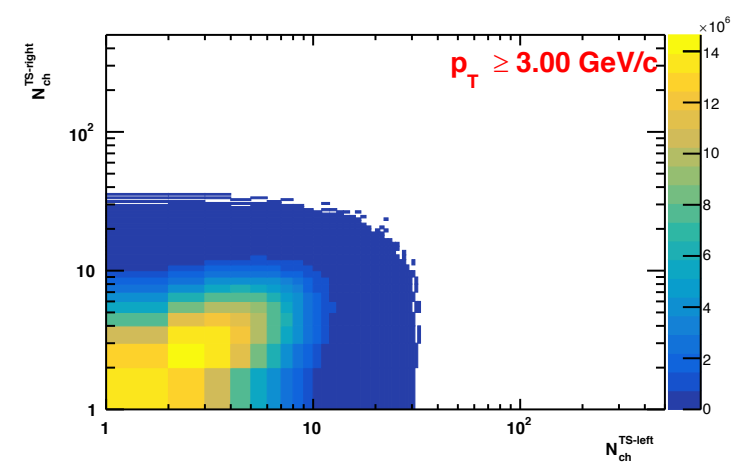
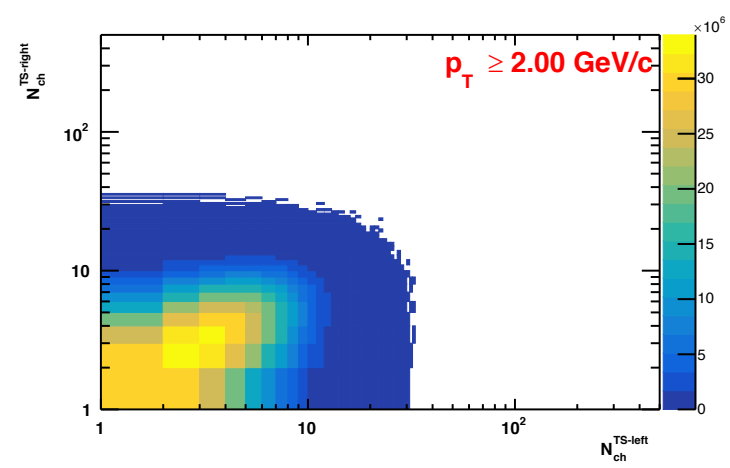
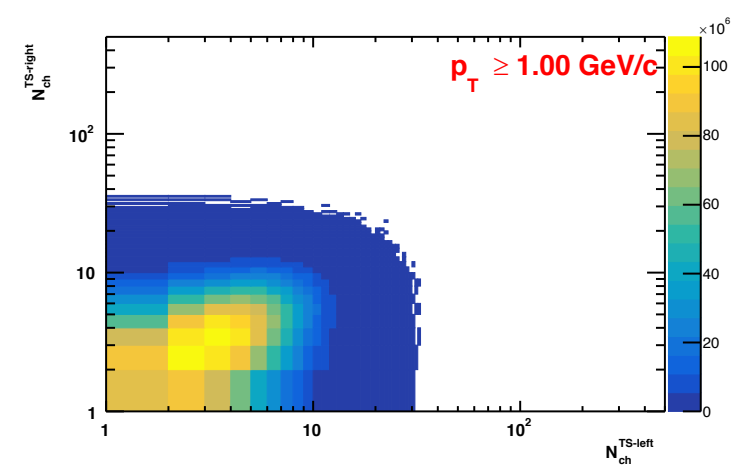
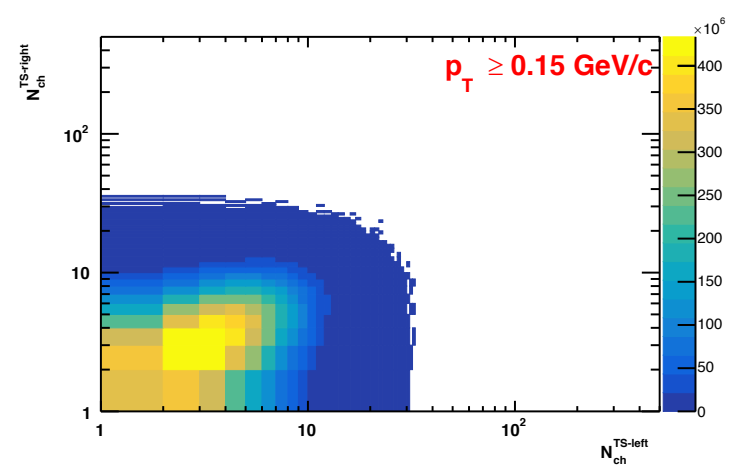
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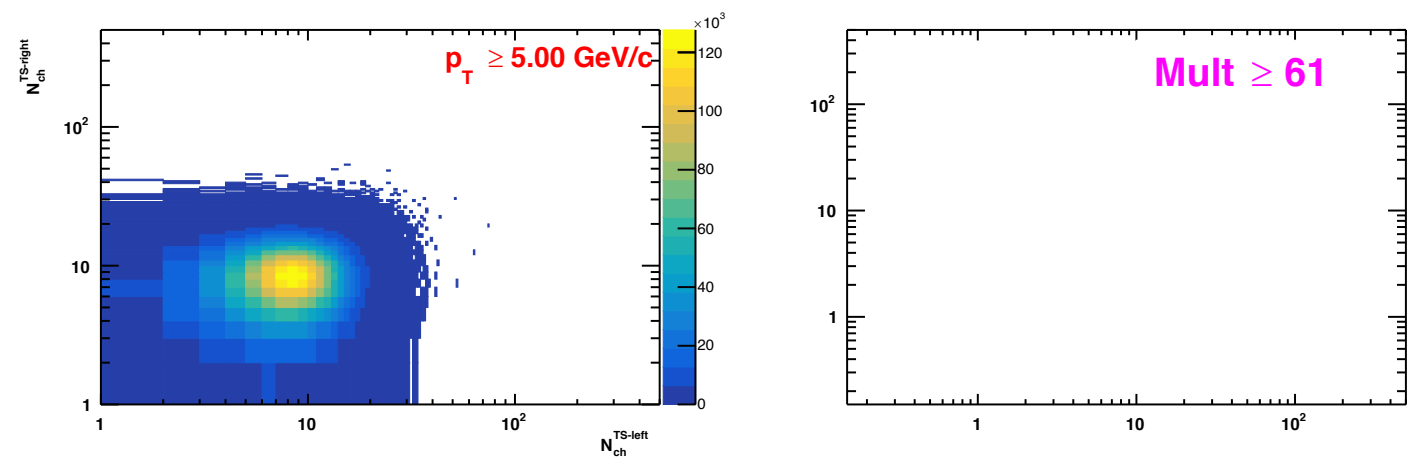
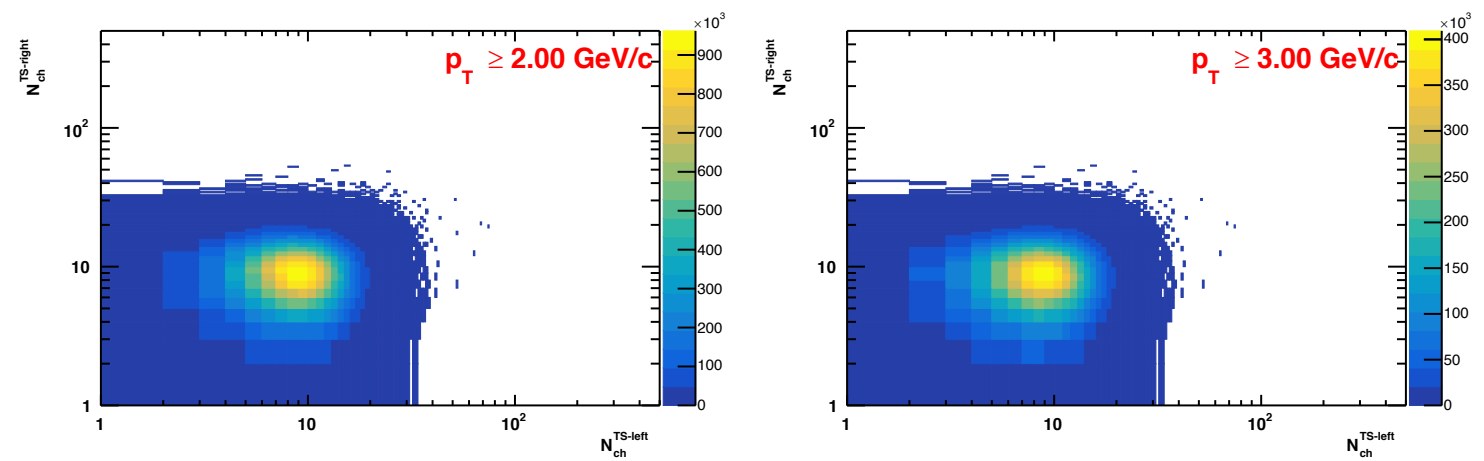
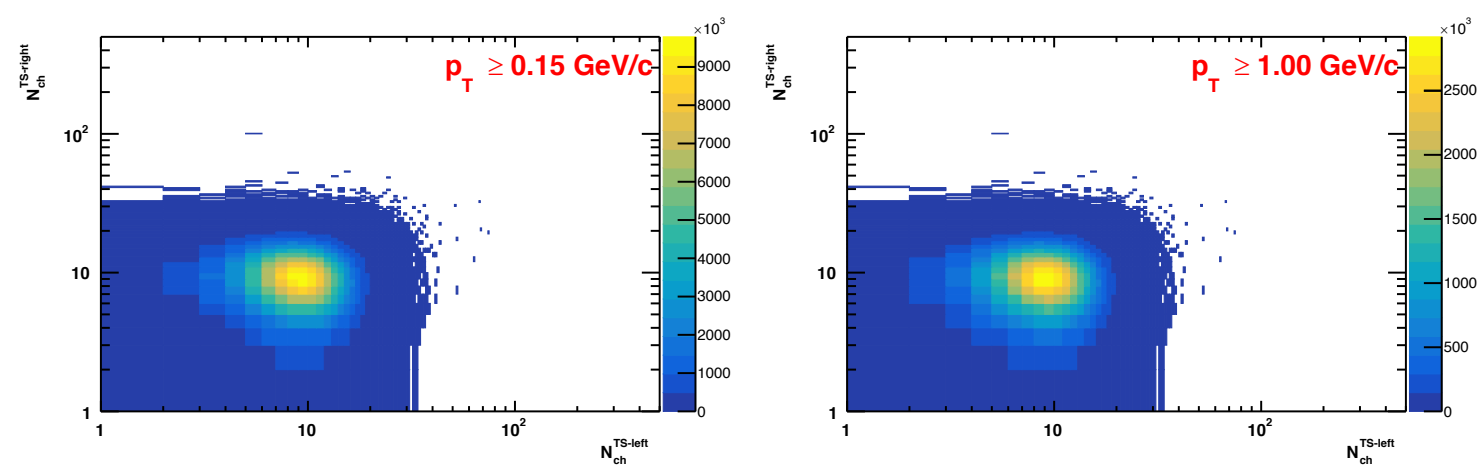
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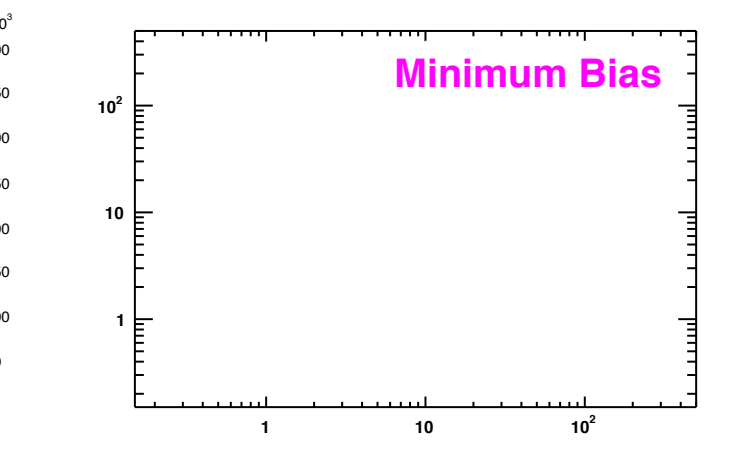
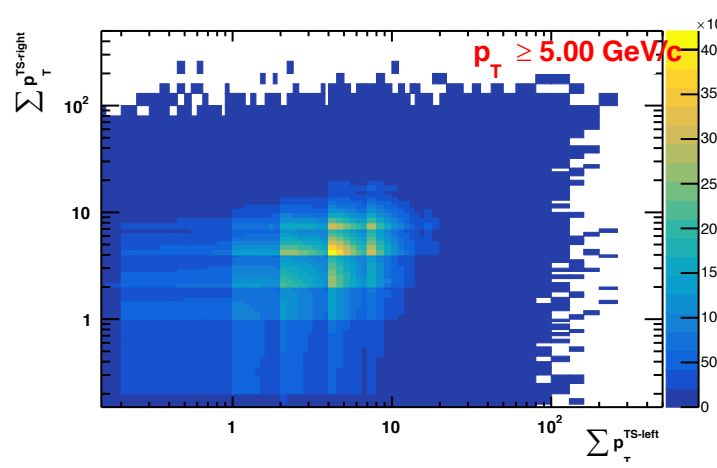
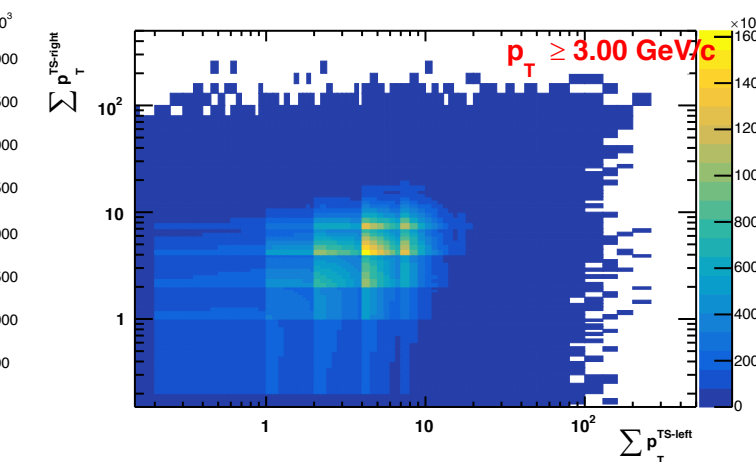
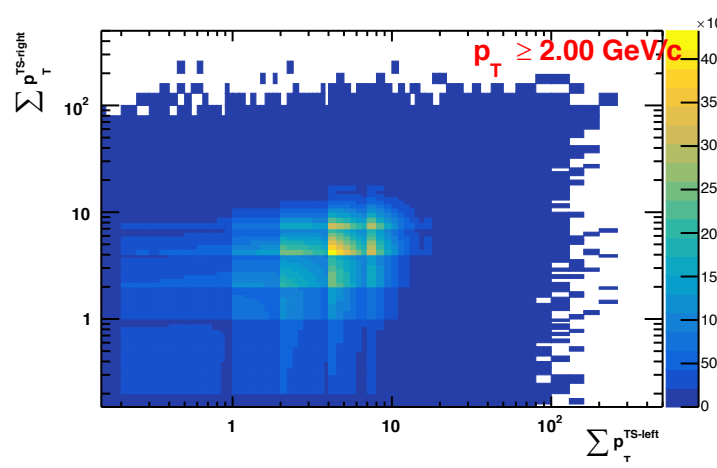
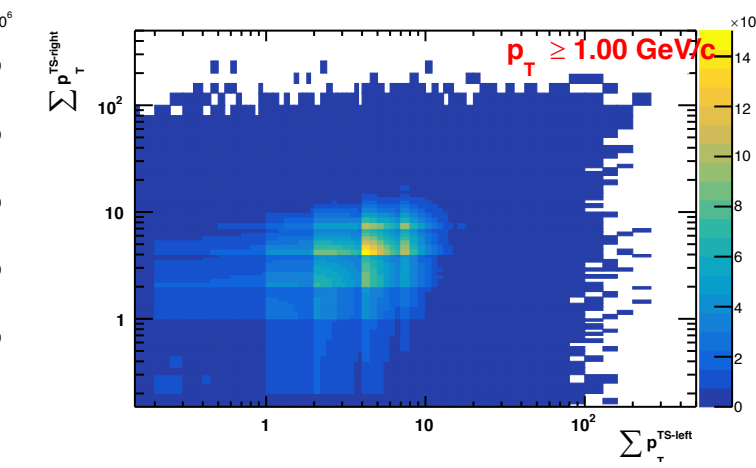
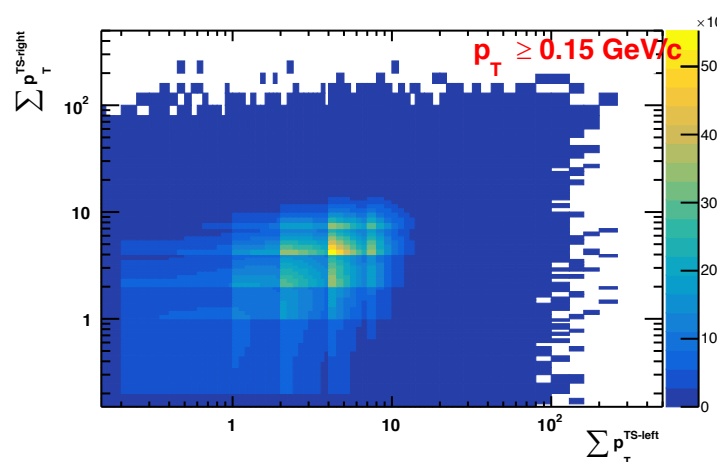
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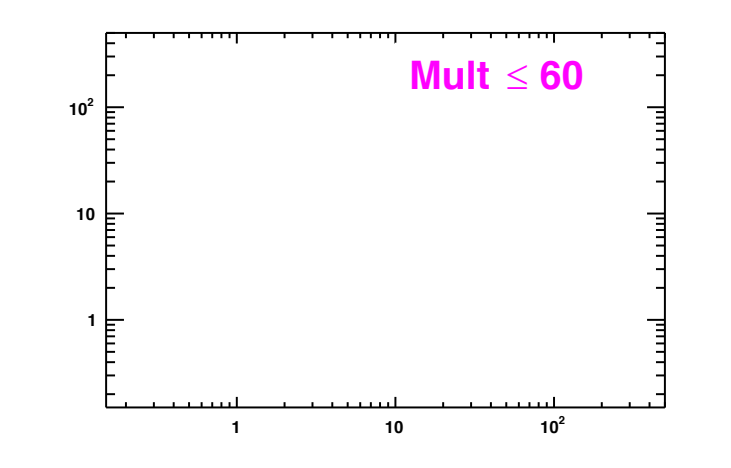
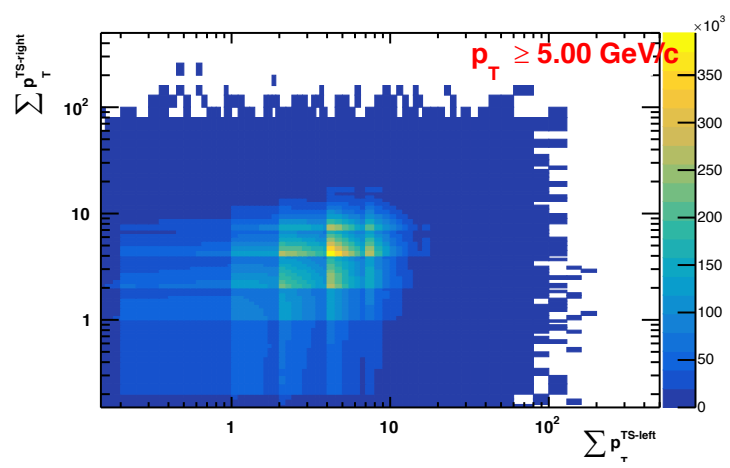
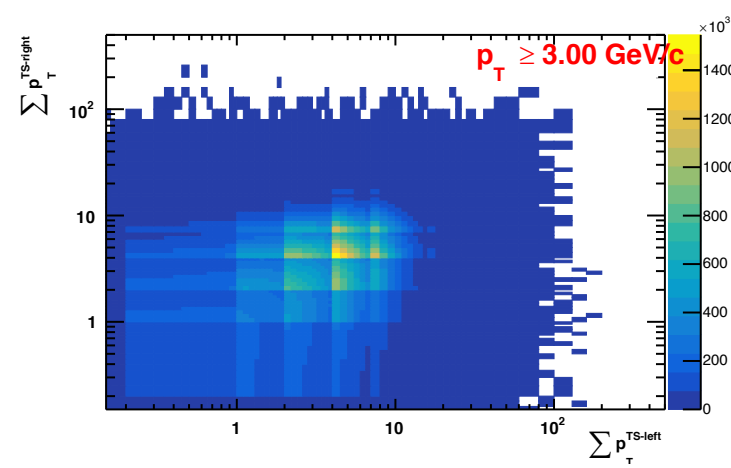
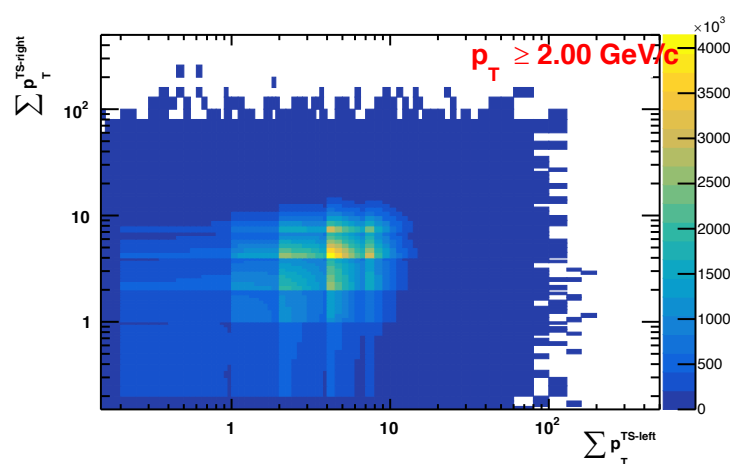
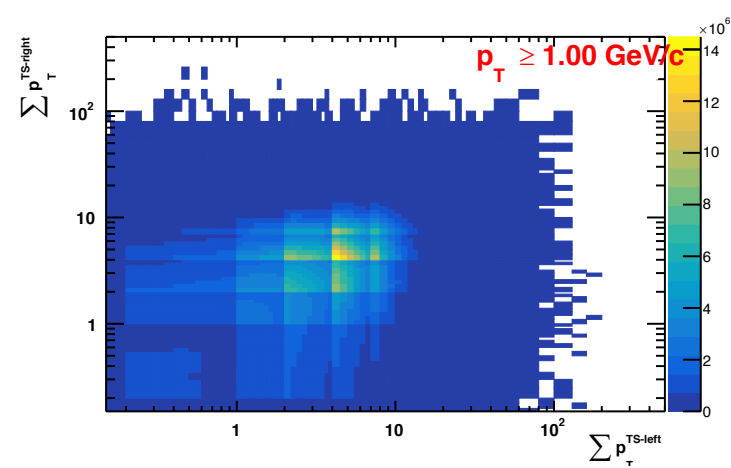
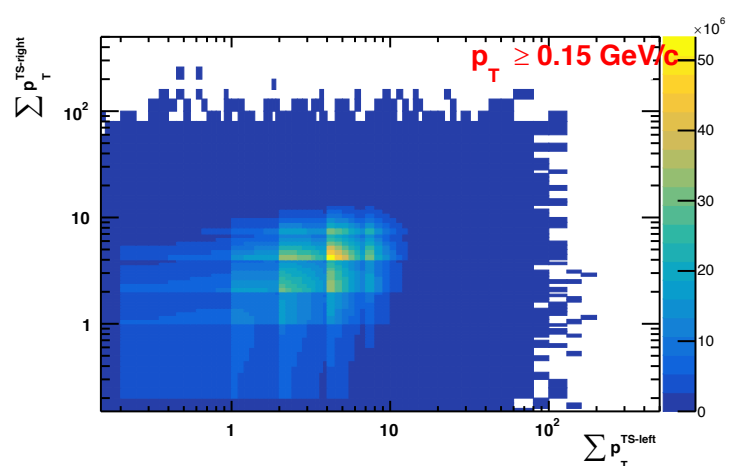
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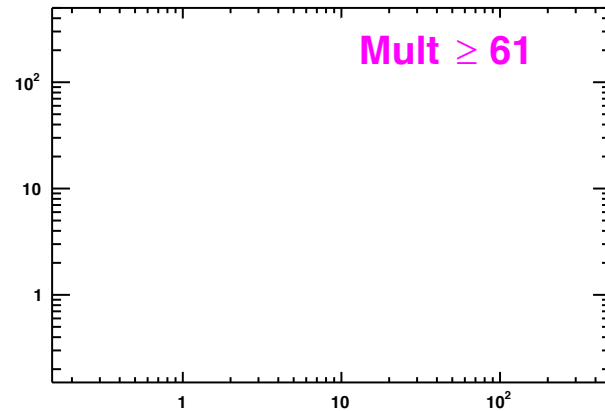
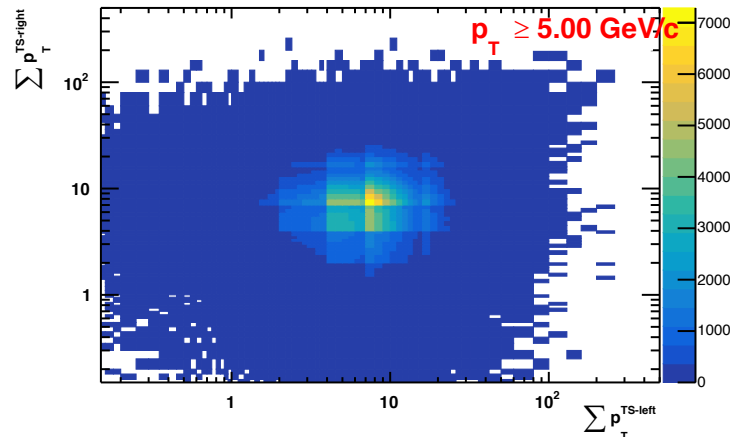
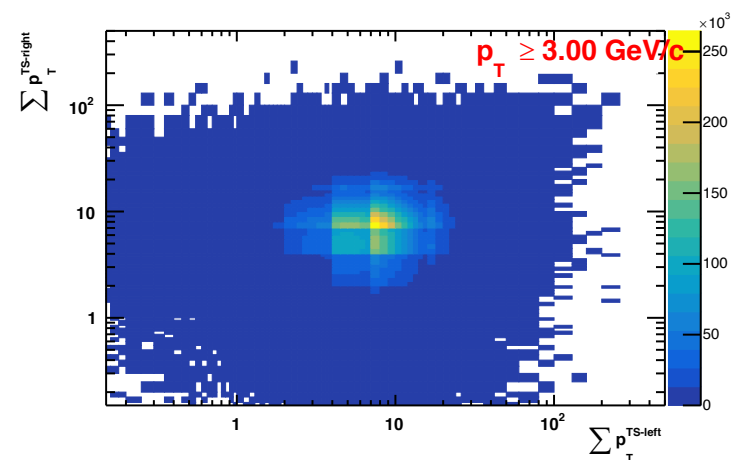
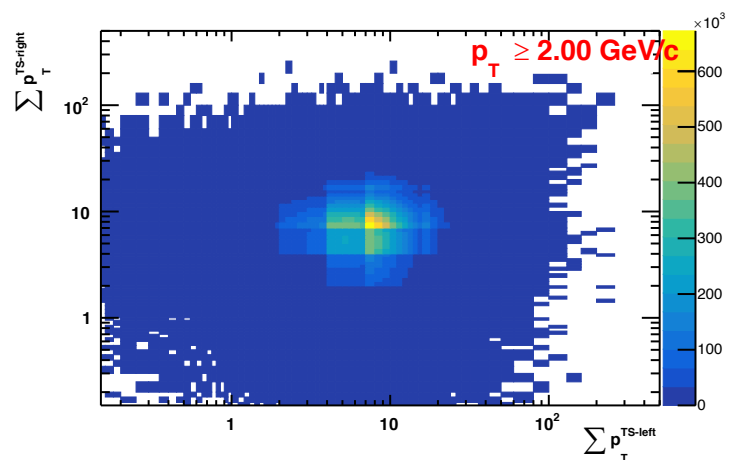
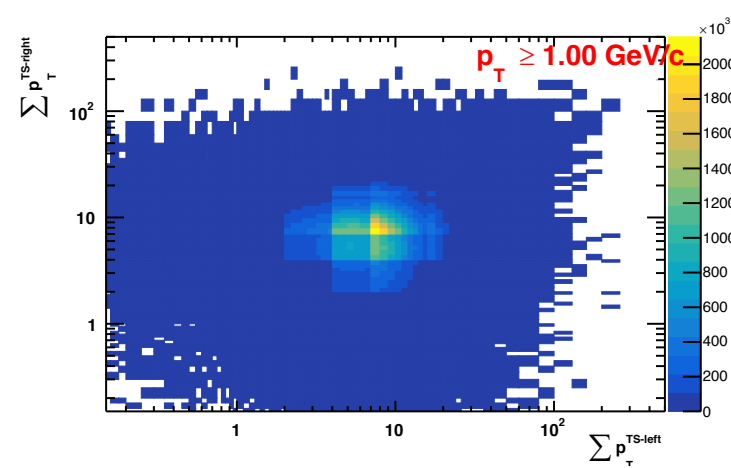
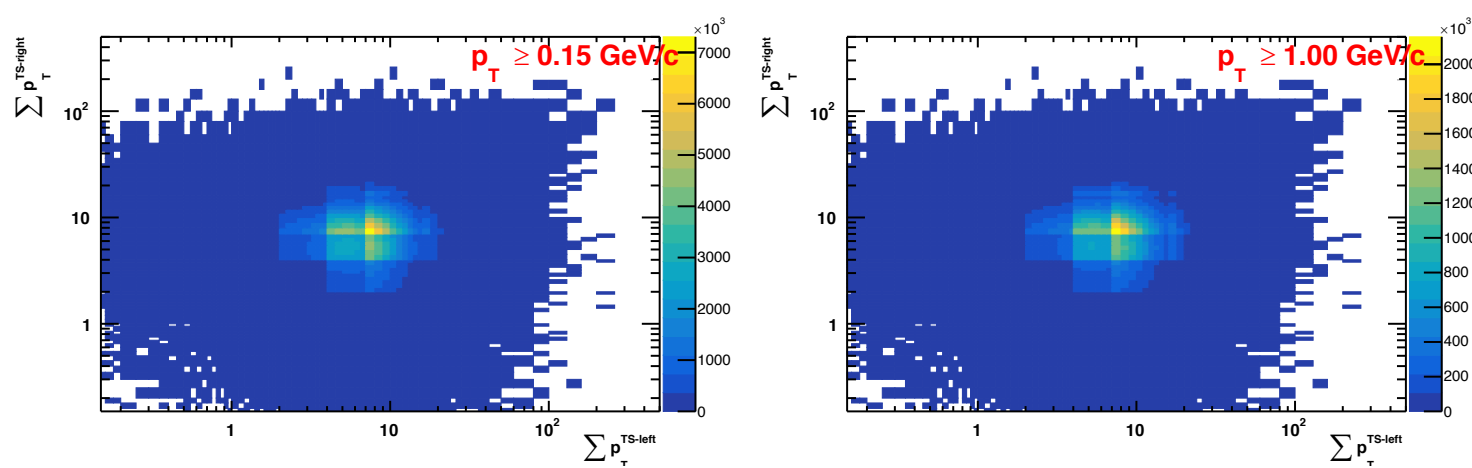
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