

# Correlation Studies & $x_f$ vs $p_t$

ppfx

Deepika Jena<sup>1</sup>

<sup>1</sup>Fermilab

Dune Update

# Fully Correlated Case with all pions

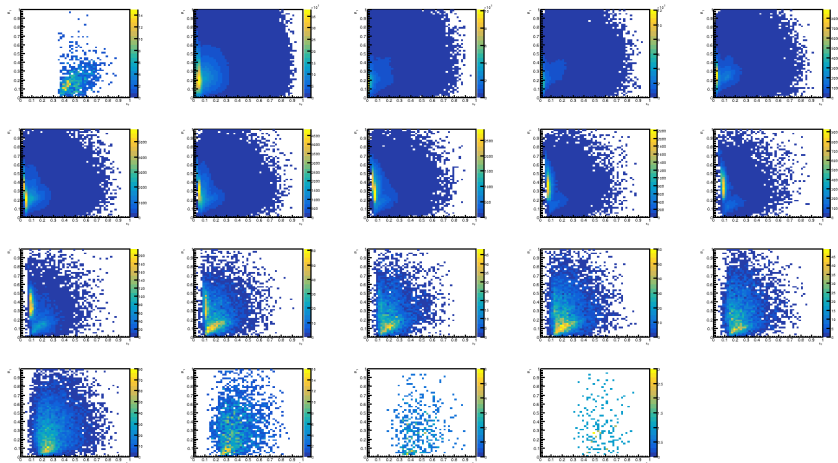


Figure:  $xf$  vs  $pt$  plot for  $pC \rightarrow \pi$  for 19 neutrino energy bins: (0-0.5), (0.5-1), (1-1.5), (1.5-2), (2-2.5), (2.5-3), (3-3.5), (3.5-4), (4-4.5), (4.5-5), (5-5.5), (5.5-6), (6-7), (7-8), (8-12), (12-16), (16-20), (20-40), (40-100) GeV

# Uncorrelated Case with all pions

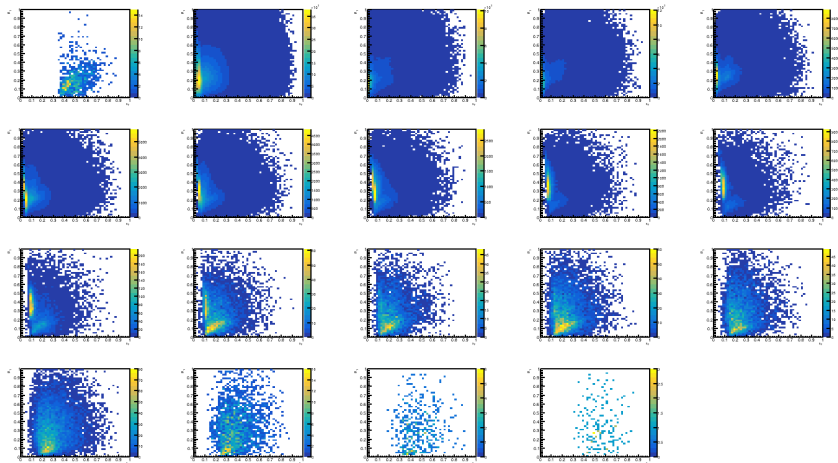


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# Fully Correlated case with only primary pions

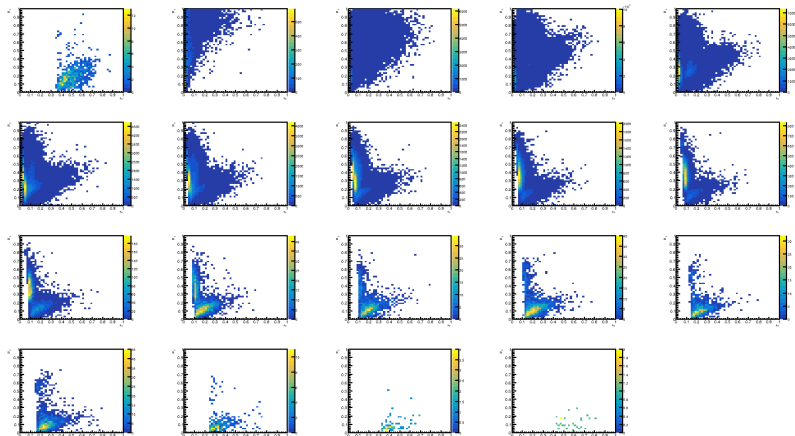


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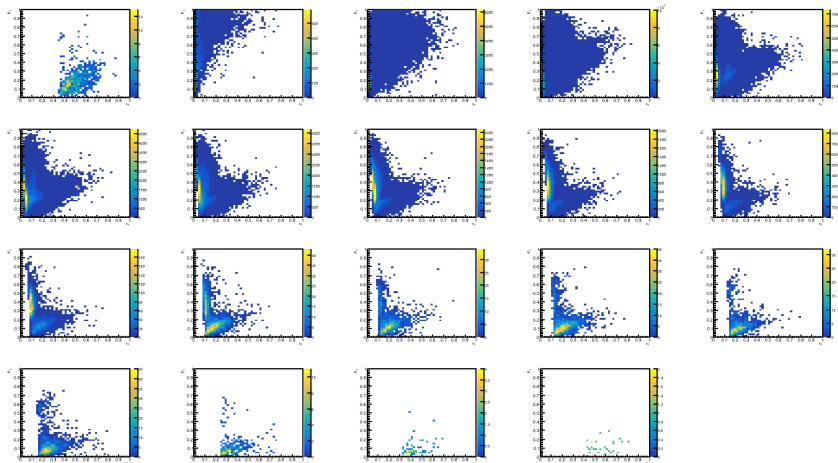
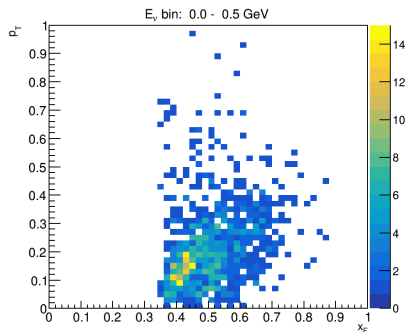
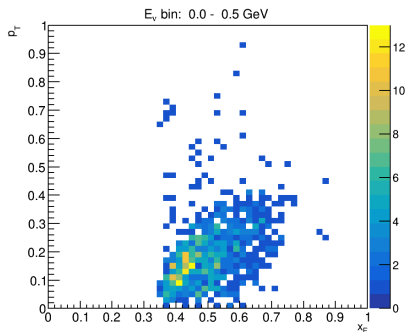


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# Fully Correlated Case - binwise

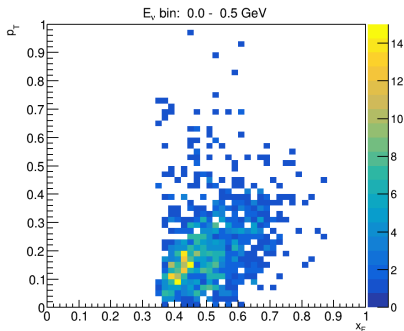


All pions

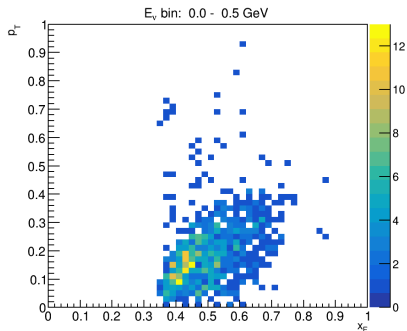


Primary pions

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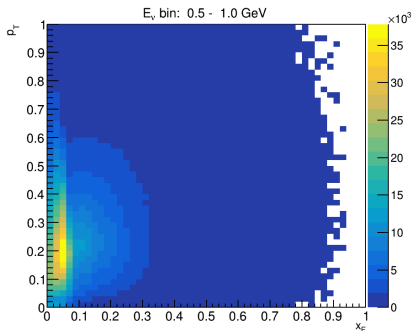


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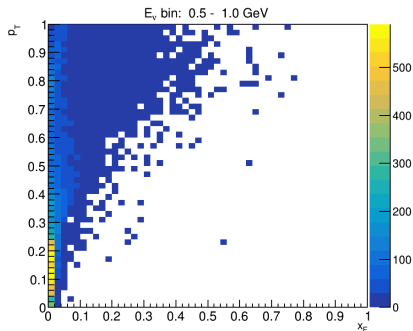


Primary pions

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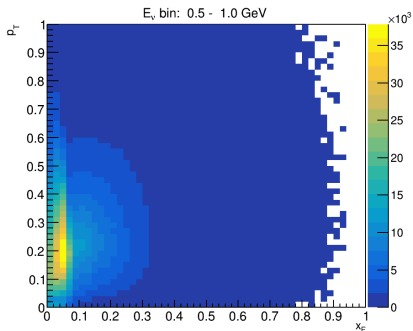
All pions



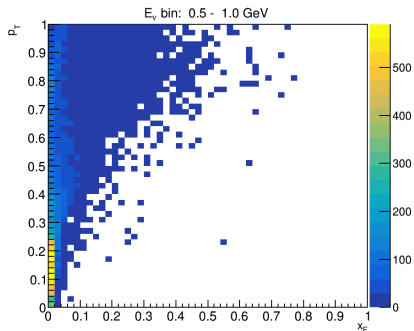
Primary pions



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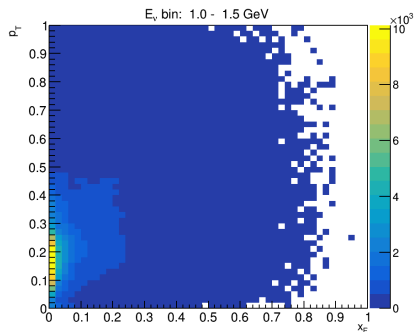


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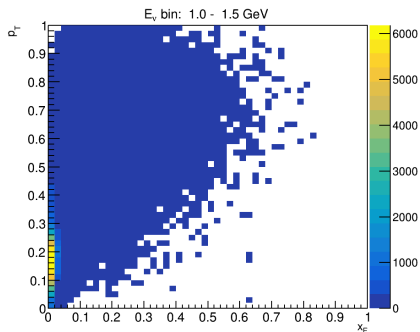


Primary pions

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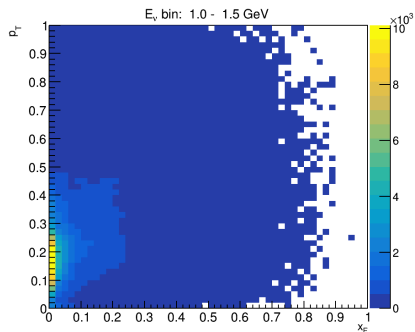


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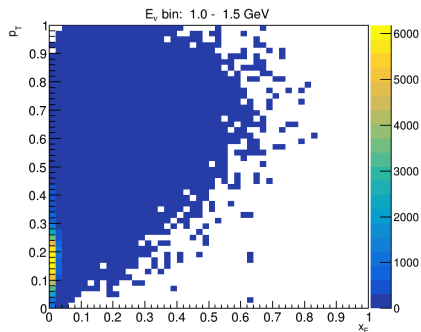


Primary pions

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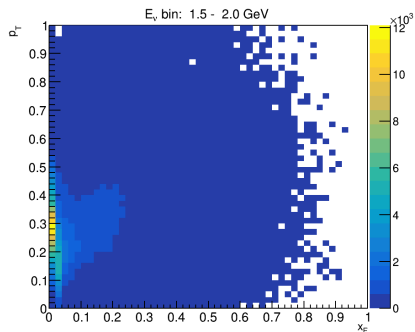


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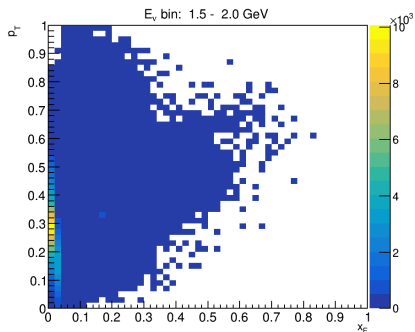


Primary pions

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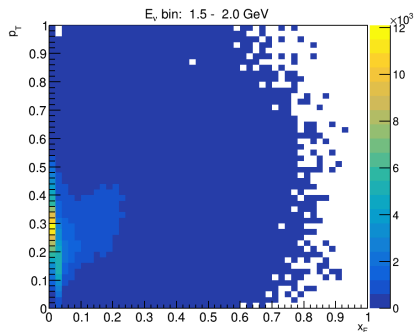


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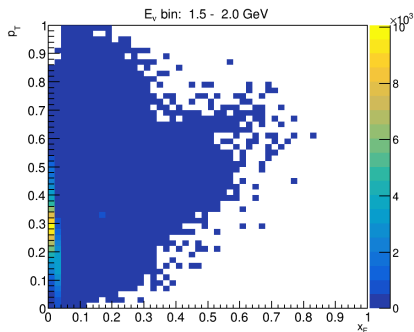


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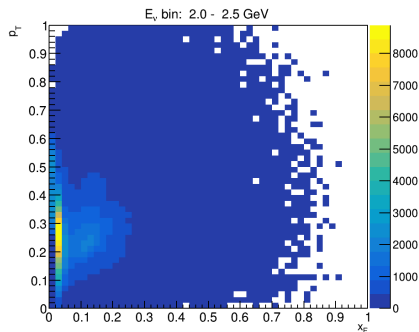


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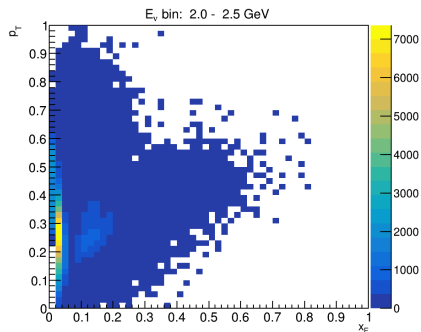


Primary pions

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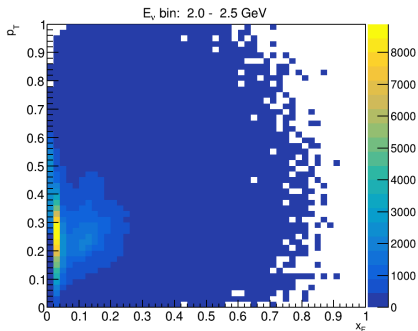


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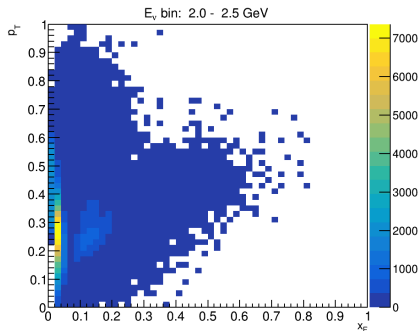


Primary pions

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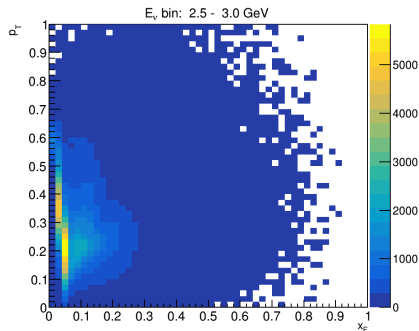


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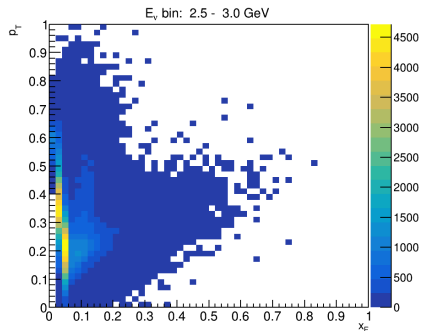


Primary pions

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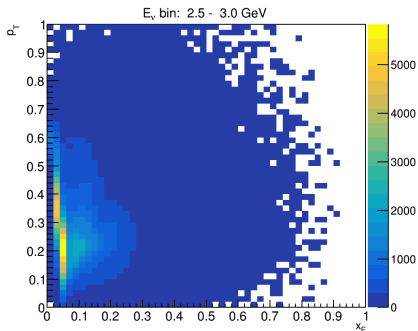
All pions



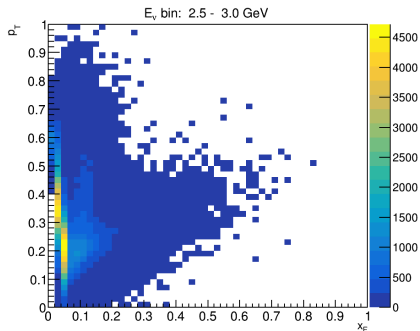
Primary pions



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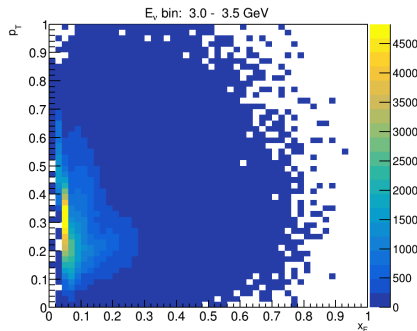


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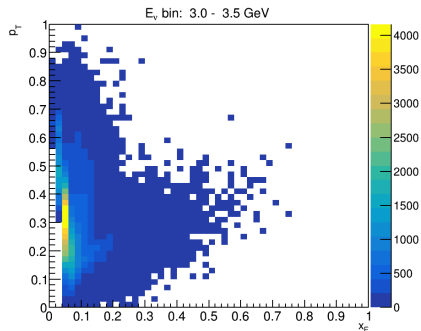


Primary pions

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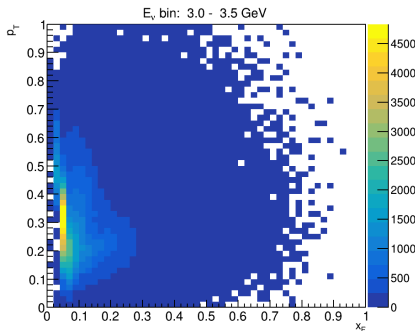


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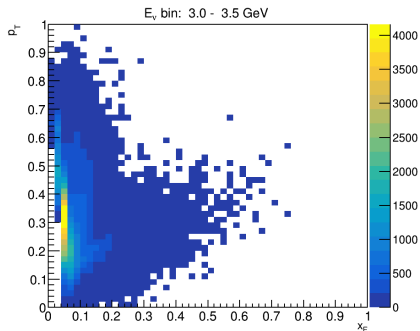


Primary pions

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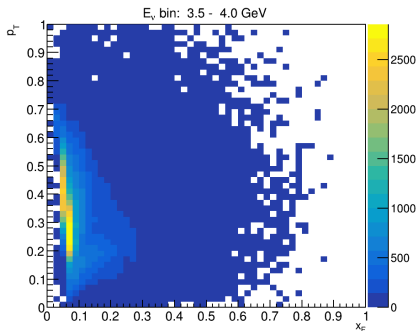


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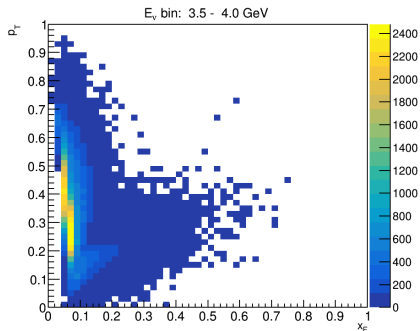


Primary pions

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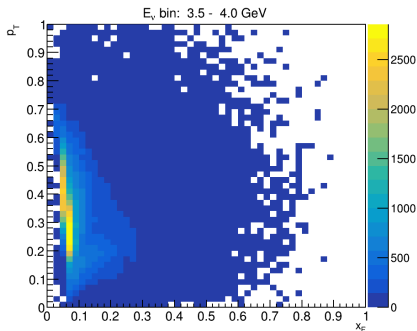


All pions

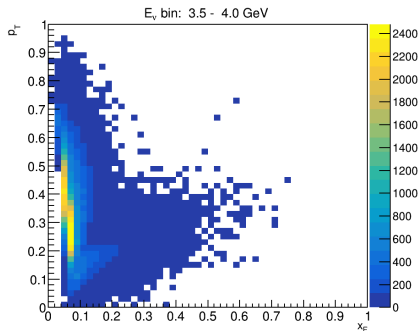


Primary pions

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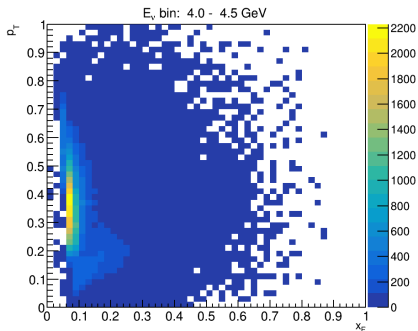


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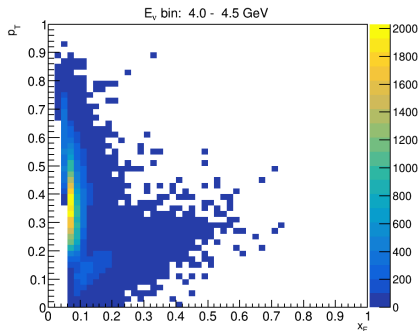


Primary pions

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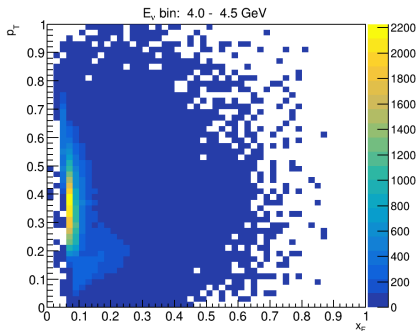


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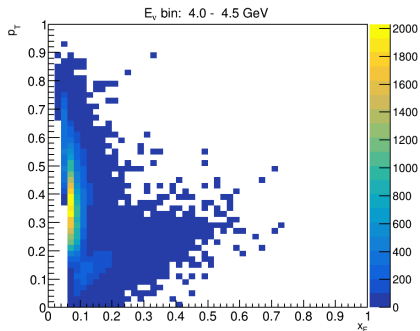


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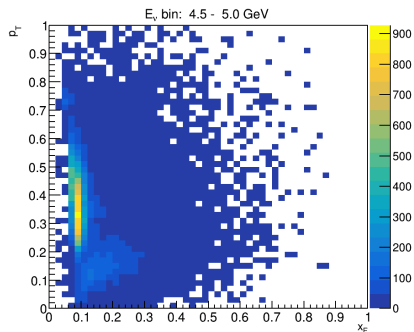


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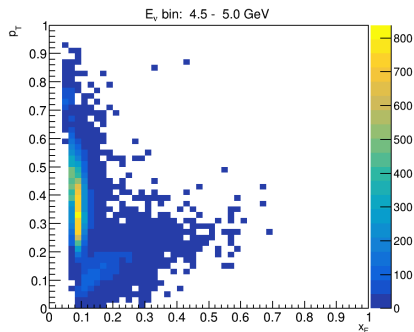


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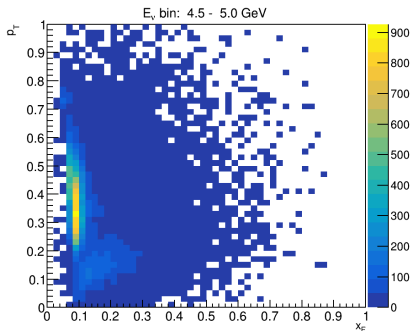
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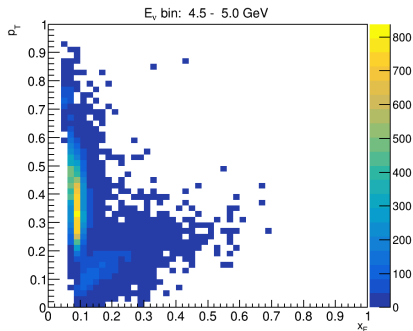
Primary pions



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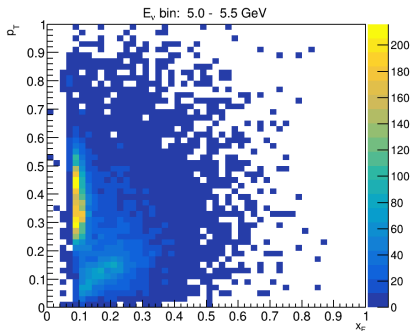


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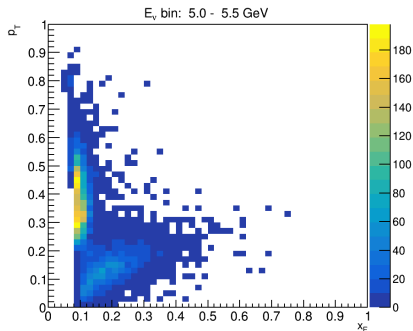


Primary pions

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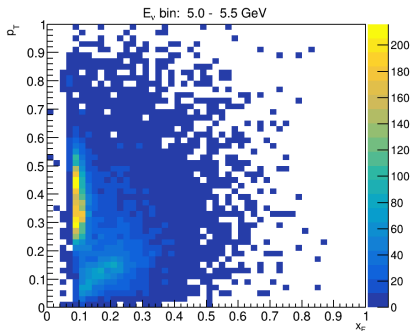


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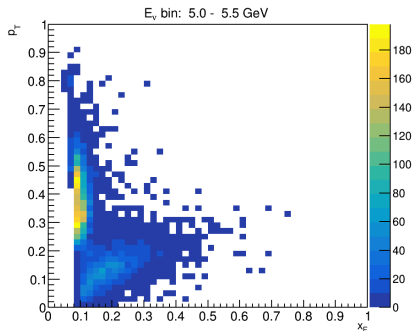


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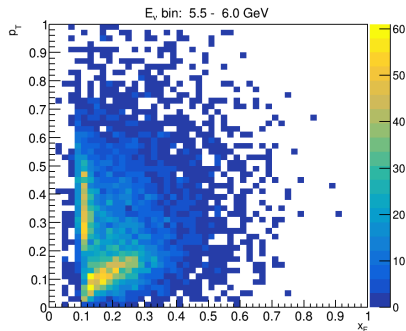


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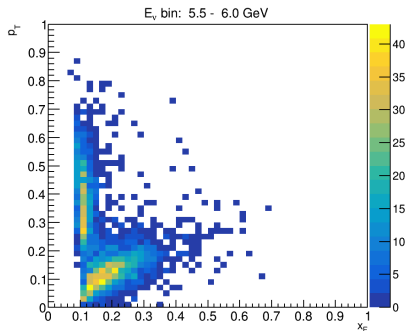


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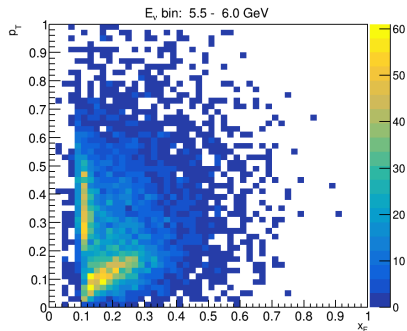


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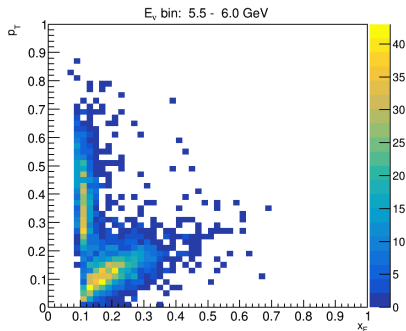


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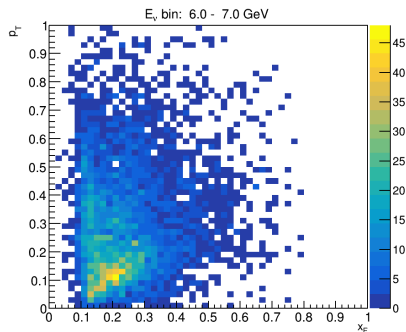


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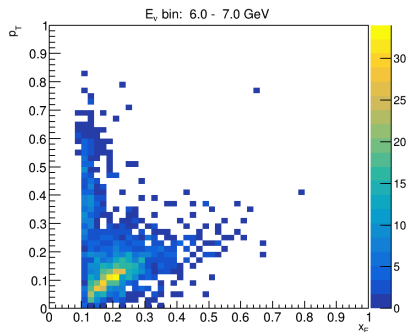


Primary pions

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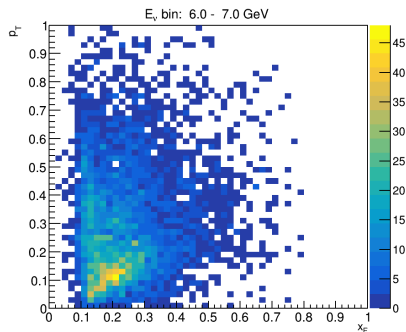


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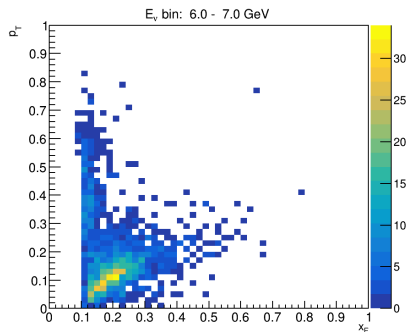


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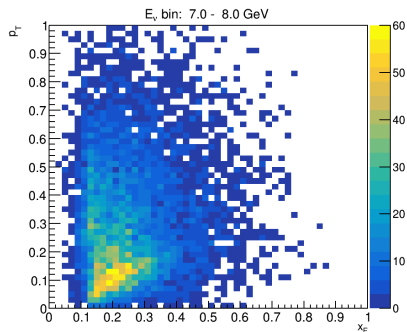


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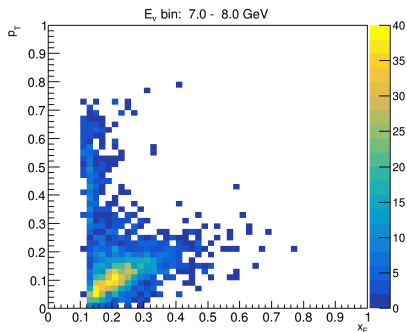


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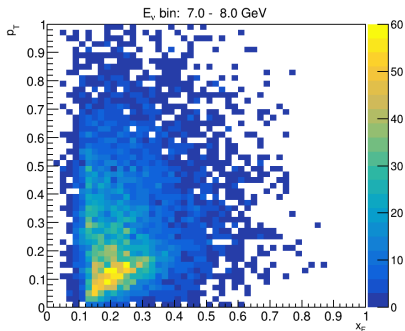
All pions



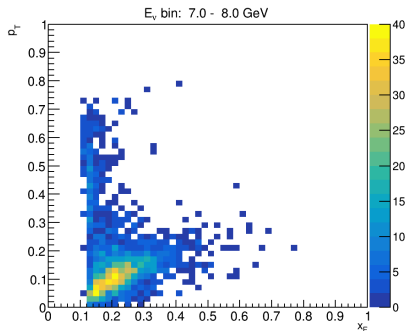
Primary pions



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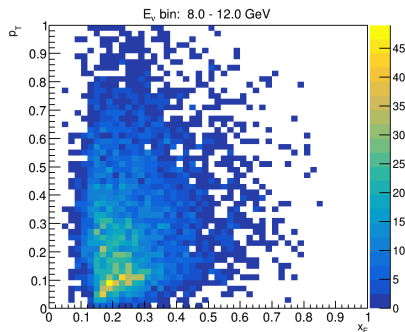


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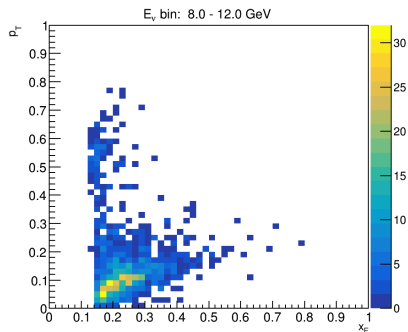


Primary pions

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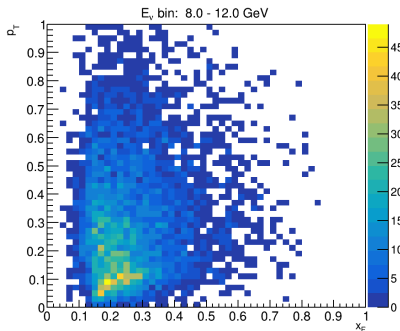


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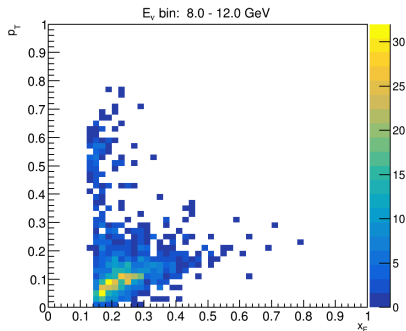


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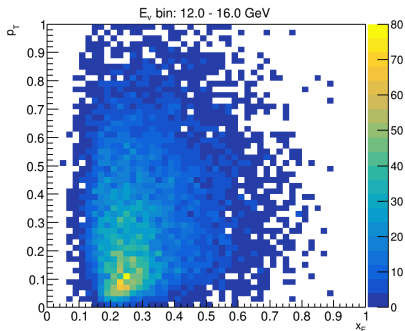


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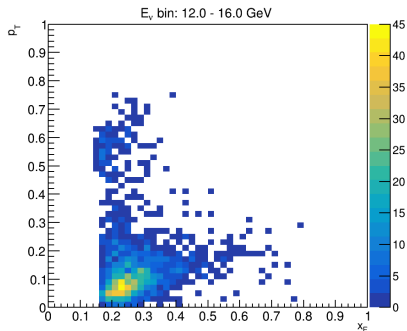


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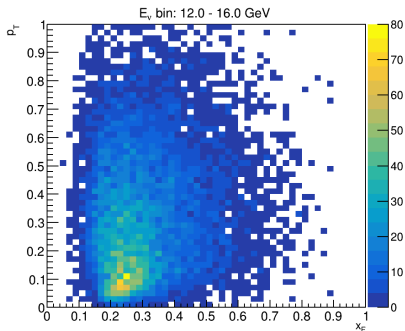


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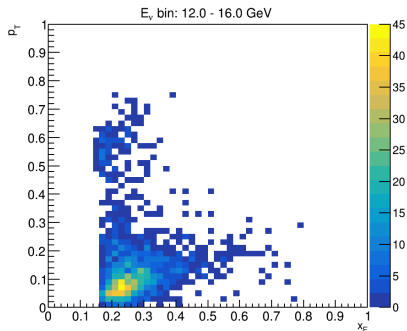


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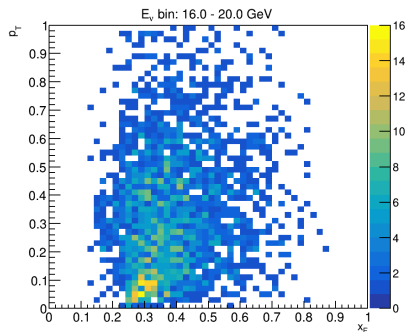


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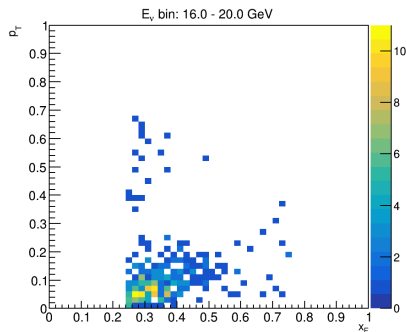


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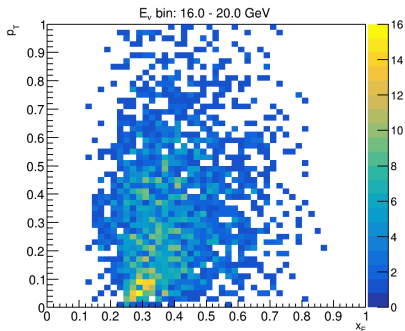


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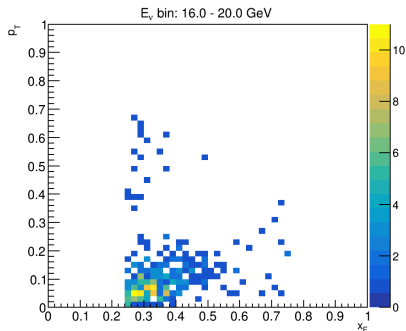


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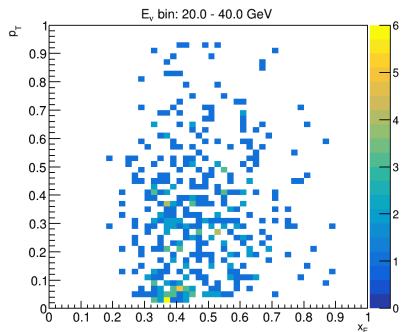


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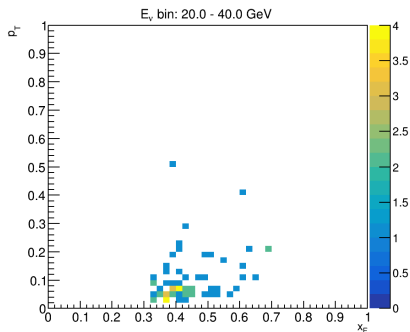


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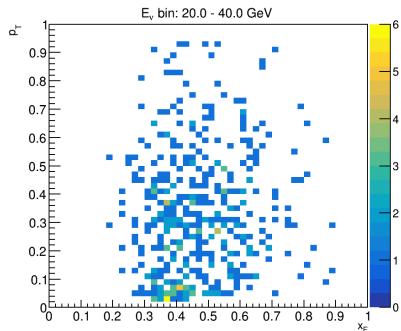
All pions



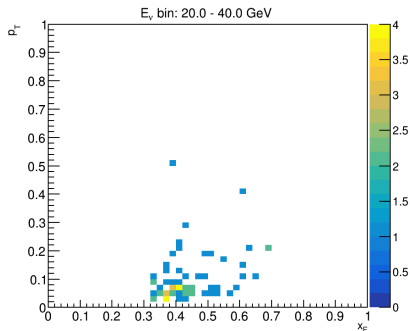
Primary pions



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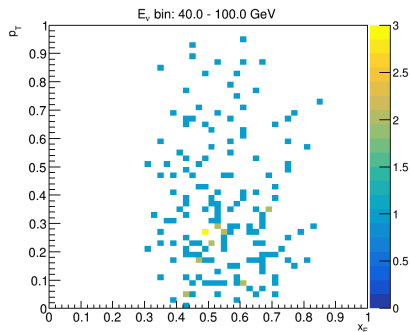


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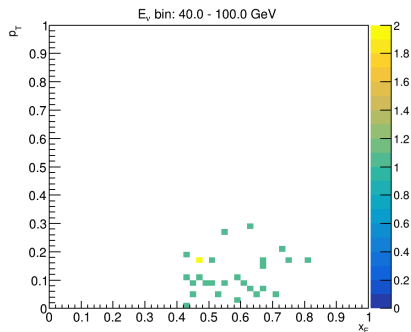


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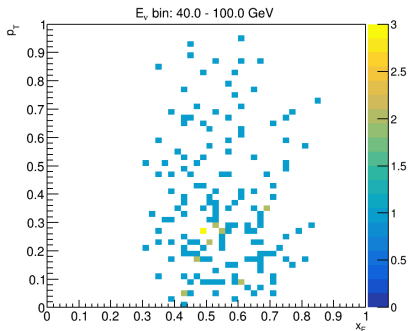


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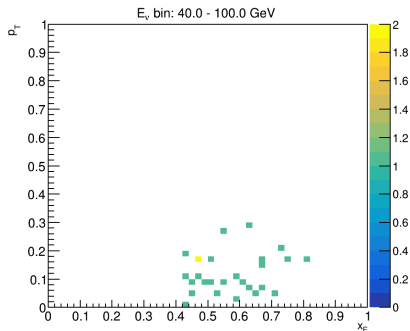


Primary pions

# Un-Correlated Case - binwise



All pions



Primary pions