AN with more narrow pT and xF binning

27 Mar. 2019
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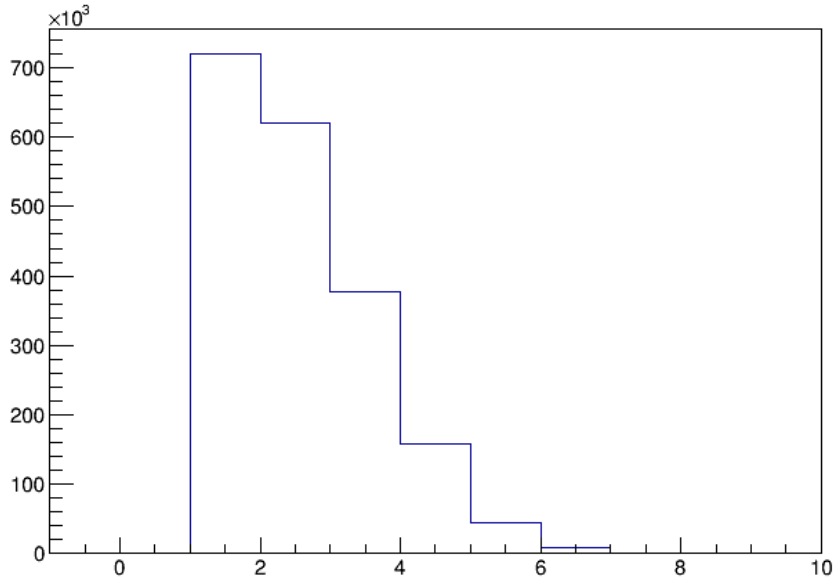
Statistics of every 0.1 GeV/c p_T and 0.1 x_F bins



1: $0.3 < x_F < 0.4$

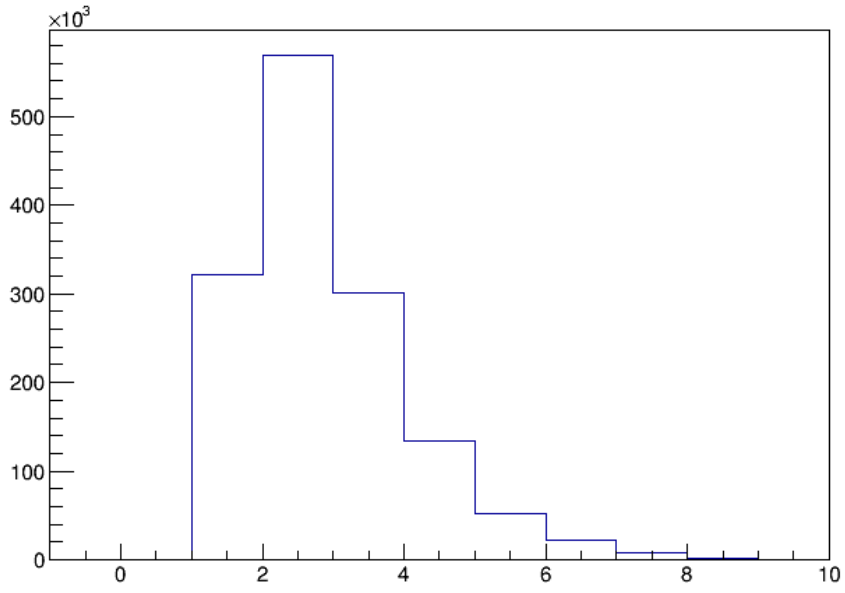
2: $0.4 < x_F < 0.5$

3: $0.5 < x_F < 0.6$

4: $0.6 < x_F < 0.7$

5: $0.7 < x_F < 0.8$

6: $0.8 < x_F < 1.0$



1: $0.0 < p_T < 0.1$

2: $0.1 < p_T < 0.2$

3: $0.2 < p_T < 0.3$

4: $0.3 < p_T < 0.4$

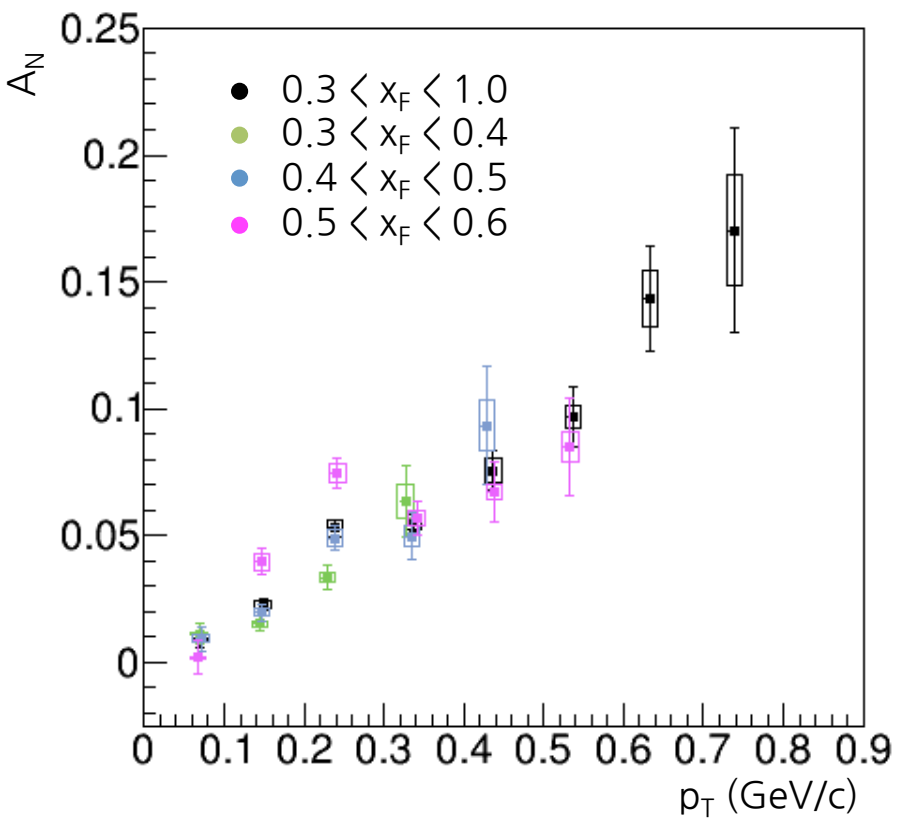
5: $0.4 < p_T < 0.5$

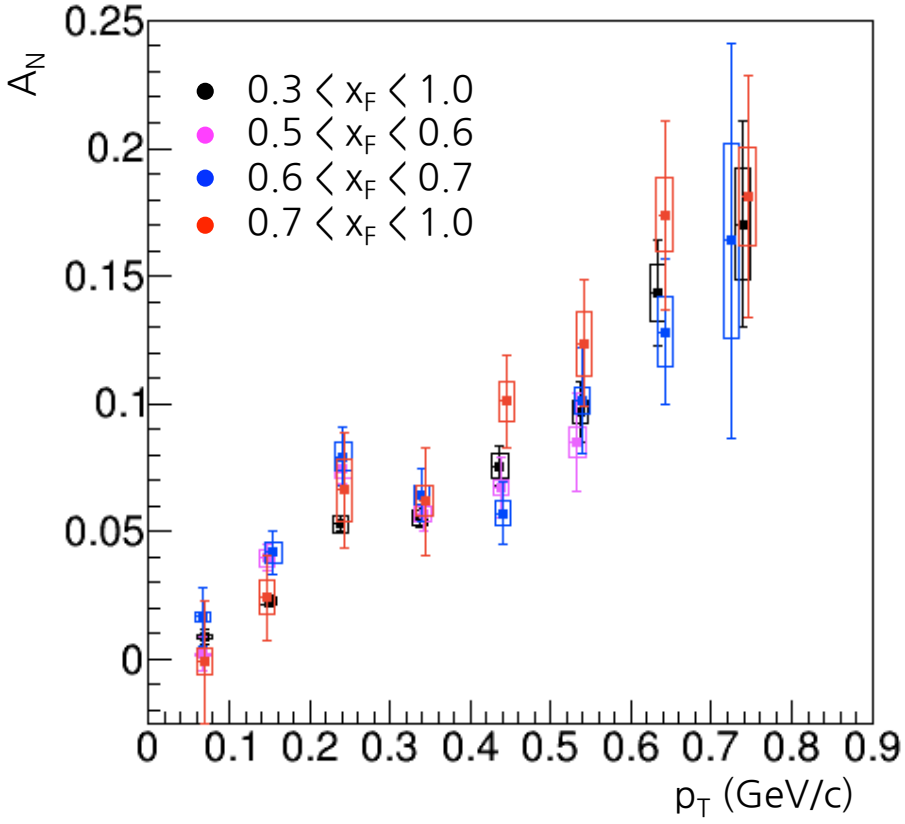
6: $0.5 < p_T < 0.6$

7: $0.6 < p_T < 0.7$

8: $0.7 < p_T < 1.0$

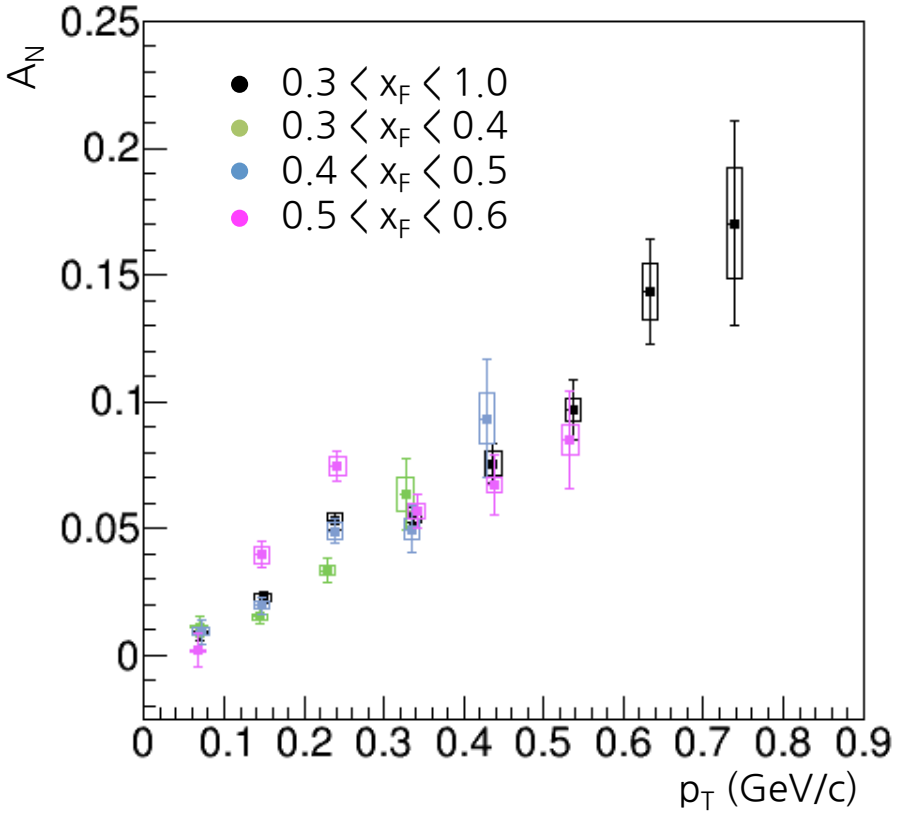
A_N with more narrow x_F binning

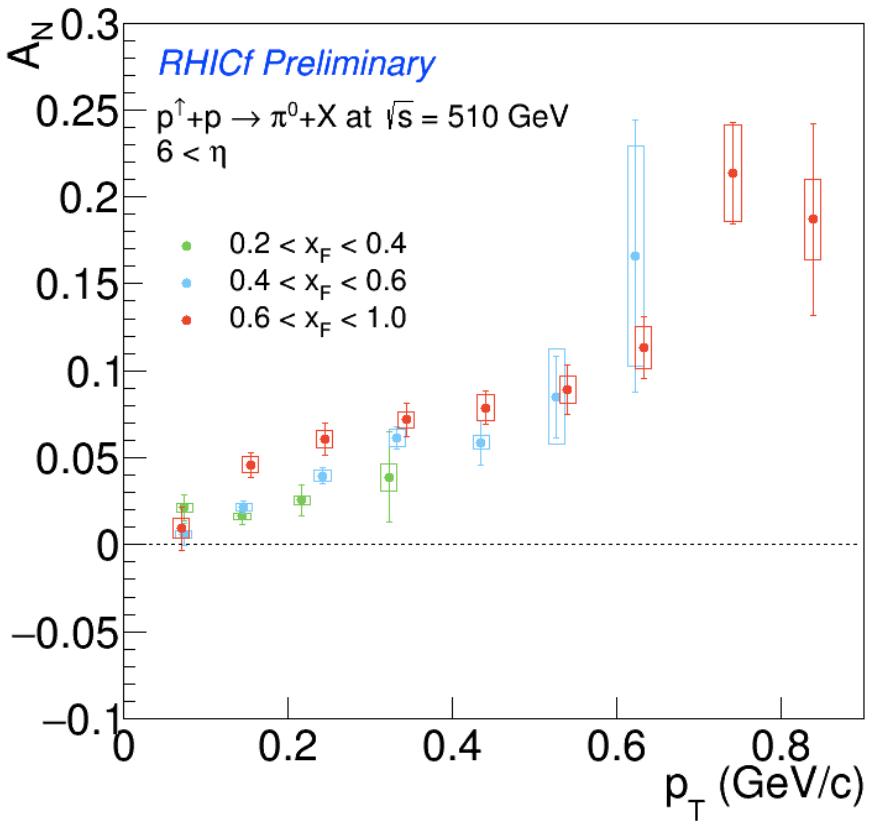




- Only systematic uncertainty by beam center was applied.
- At first when the x_F is larger than ~0.4, A_N with higher x_F range shows an enhancement when p_T is smaller than ~ 0.3 GeV/c.

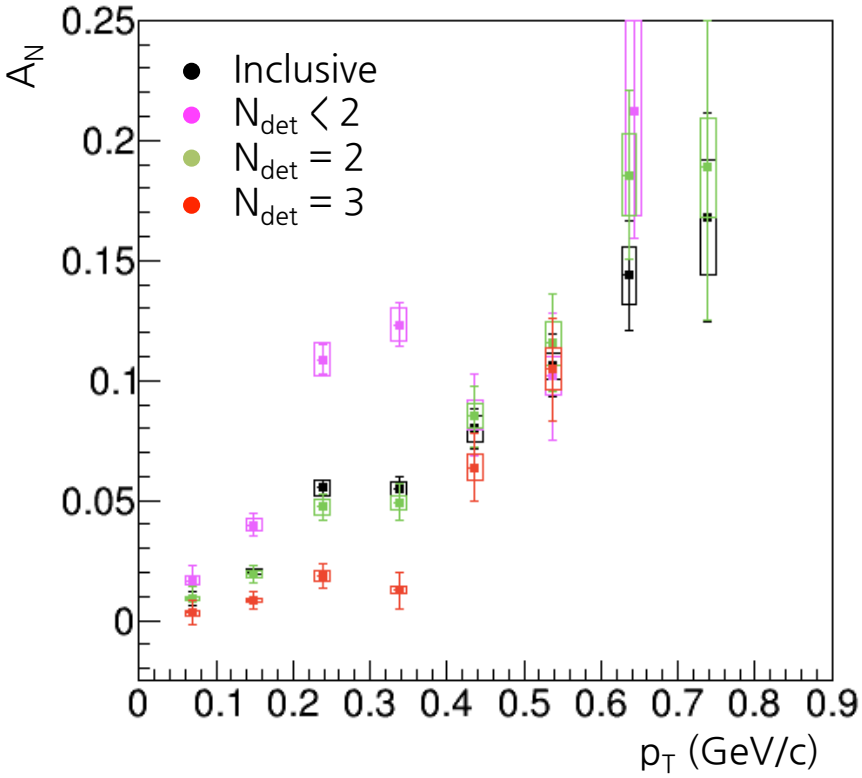
A_N with more narrow x_F binning

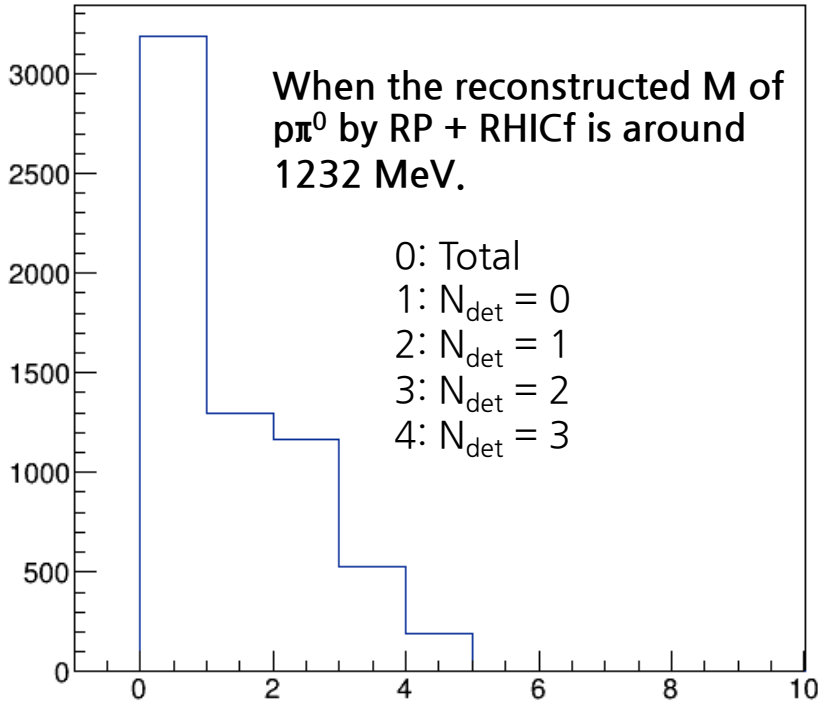




- Preliminary plot also includes this kind of bump curve.
- In preliminary plot, Type-I π^0 energy might be overestimated because the leakage-in correction was not applied.

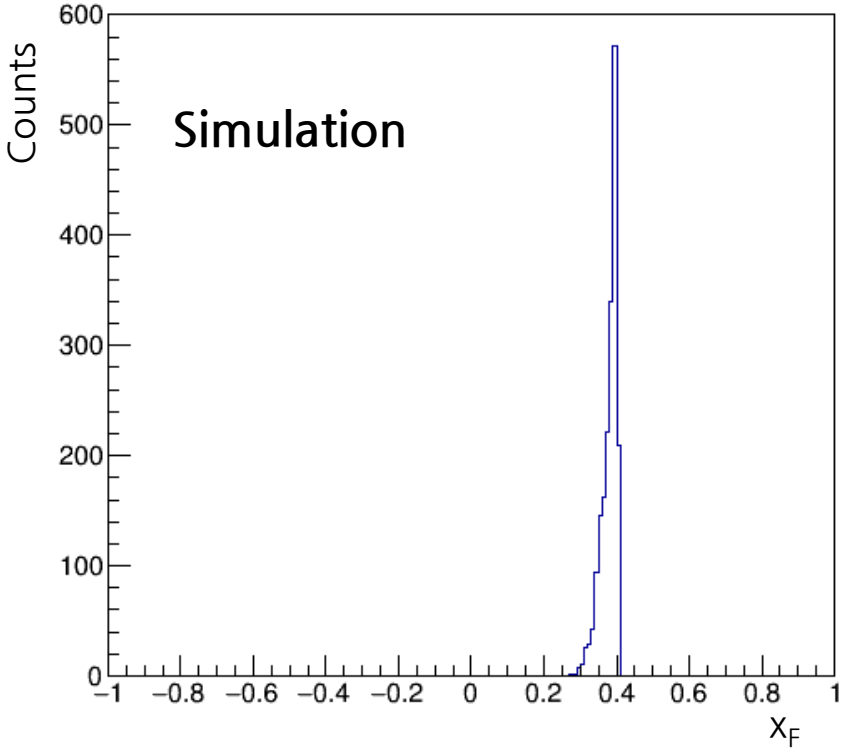
π^0 from Δ resonance

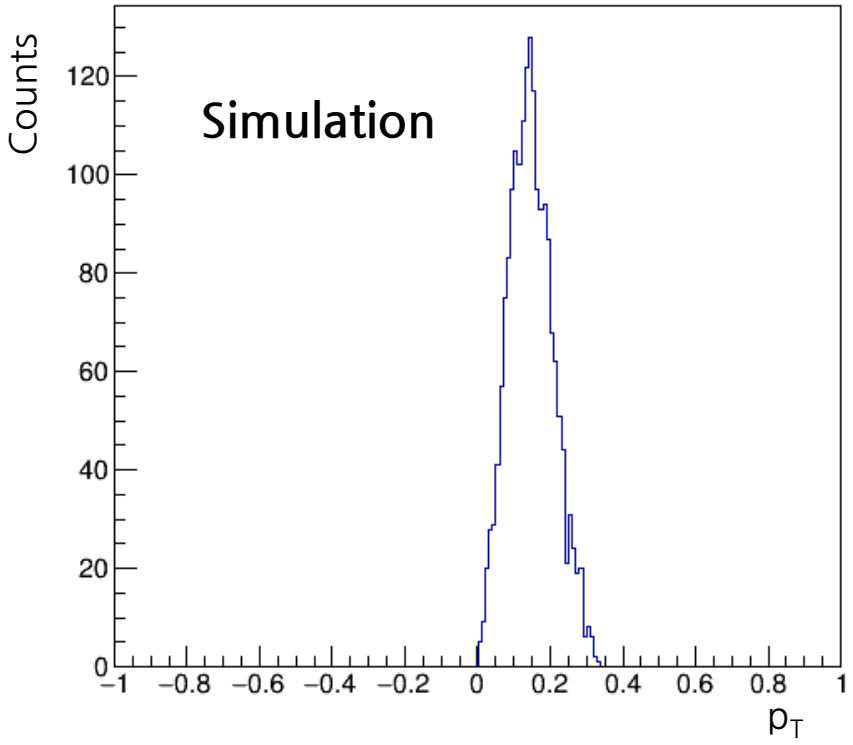




- N_{det} is the number of detector with finite signal among West BBC small and large tiles and VPD.
- The construction of Δ resonance to $N_{det} < 2$ events might be large because ideally $N_{det} = 0$ at Δ resonance .

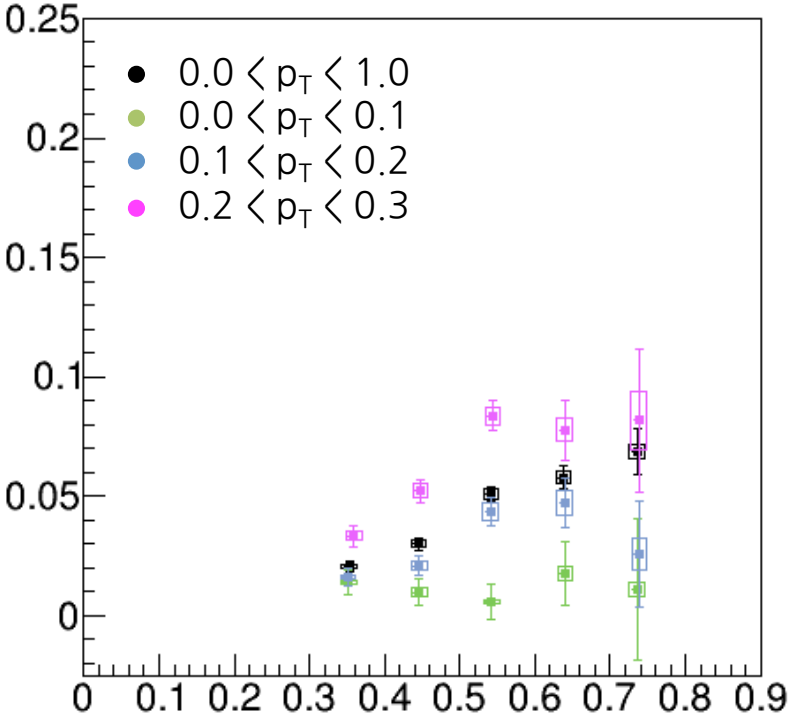
π^0 kinematics from 255 GeV Δ beam

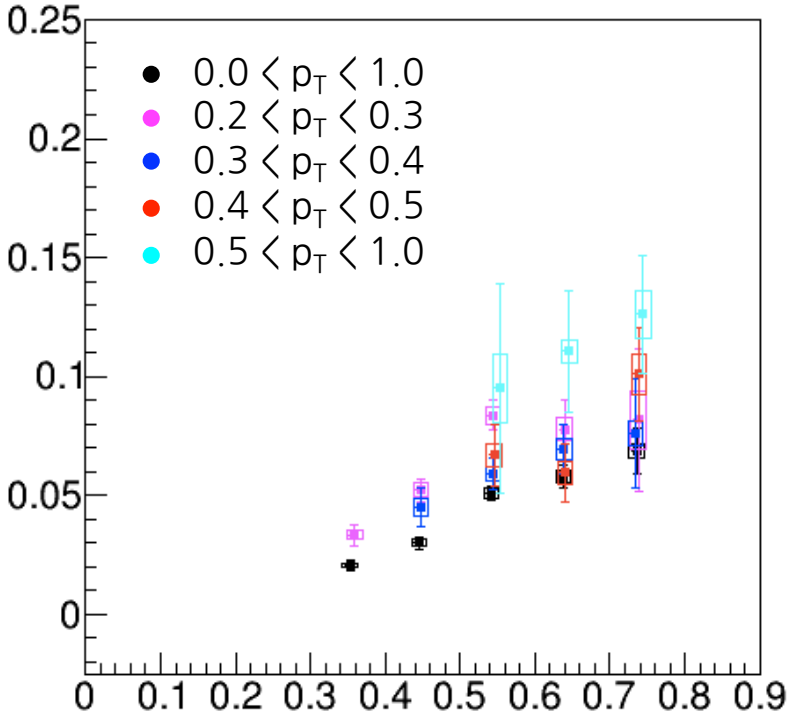




- Kinematic ranges of detected π^0 covers comparable area with the A_N enhancement regions.
- Because 255 GeV Δ was generated with only specific p_T and run type (TS center run) Δ will be generated with broader p_T coverage and corresponding π^0 kinematics will be compared again.

A_N with more narrow p_T binning





- As it can be expected by previous p_T dependence plots, the A_N increases more drama-tically when p_T is smaller than 0.3 GeV/c.
- More fine binning might be necessary when the p_T is smaller than 0.3 GeV/c.