

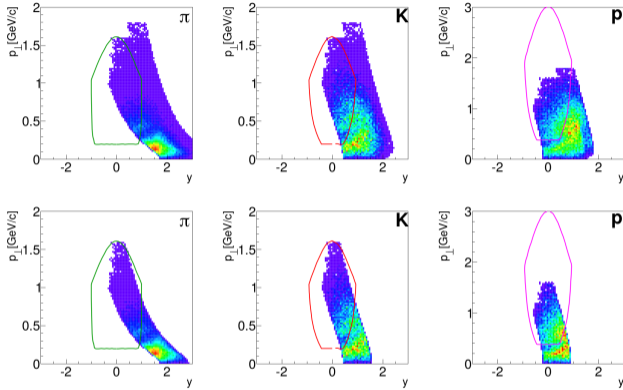


## NA61/SHINE acceptance for analysis of higher-order moments of multiplicity and net-charge

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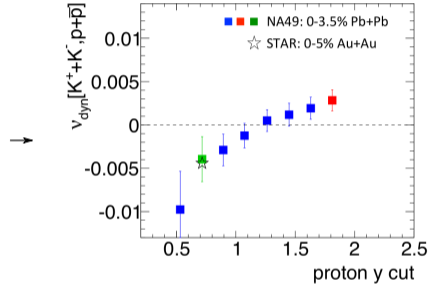
Fluctuations measurements are limited to the momentum acceptance of modern experiments → wider acceptance allows for better results.  
Thus, **acceptance is an important element of fluctuation results.**

# Acceptance – source of potential discrepancy



line - STAR acceptance; distribution - NA49 acceptance

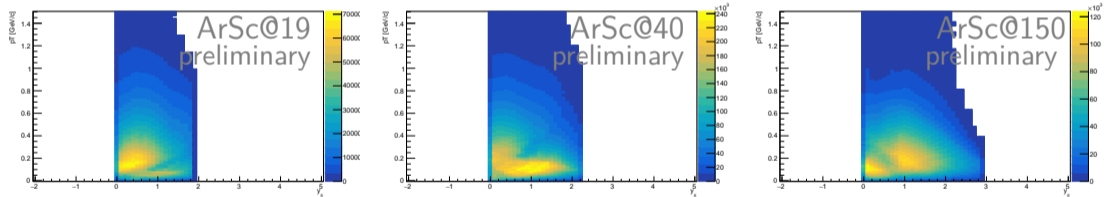
NA49, Phys. Rev. C 89, 054902 (2014)



Analysis performed in a wider acceptance can be restricted to smaller ones

# Acceptance definition – NA61/SHINE higher order moments analysis

Acceptance is defined by the high-resolution kinematic range of NA61/SHINE detector for Ar+Sc interactions and limited by rapidity cut:  $0 < y_\pi < y_{beam}$ . High resolution is defined by the detector's track efficiency above 90%.



Examples of fractions of accepted particles (in p+p interactions):

$\sqrt{s_{NN}}$ GeV	6.3	8.8	17.3
$\langle h^+ - h^- \rangle_{acc} / \langle h^+ - h^- \rangle_{tot}$	0.23	0.23	0.25
$\langle h^- \rangle_{acc} / \langle h^- \rangle_{tot}$	0.43	0.30	0.26