HBT (Kaons)
7.7 GeV and 11.5 GeV
(Hydro 1PT, Hydro XPT, UrQMD)

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Analysis

- Datasets location
  - Hydro: /zfs/store7.hydra.local/pbatyuk/mcDst/vHLLE_UrQMD/AuAu/
  - UrQMD: /zfs/store7.hydra.local/gnigmat/mcDst/urqmd/

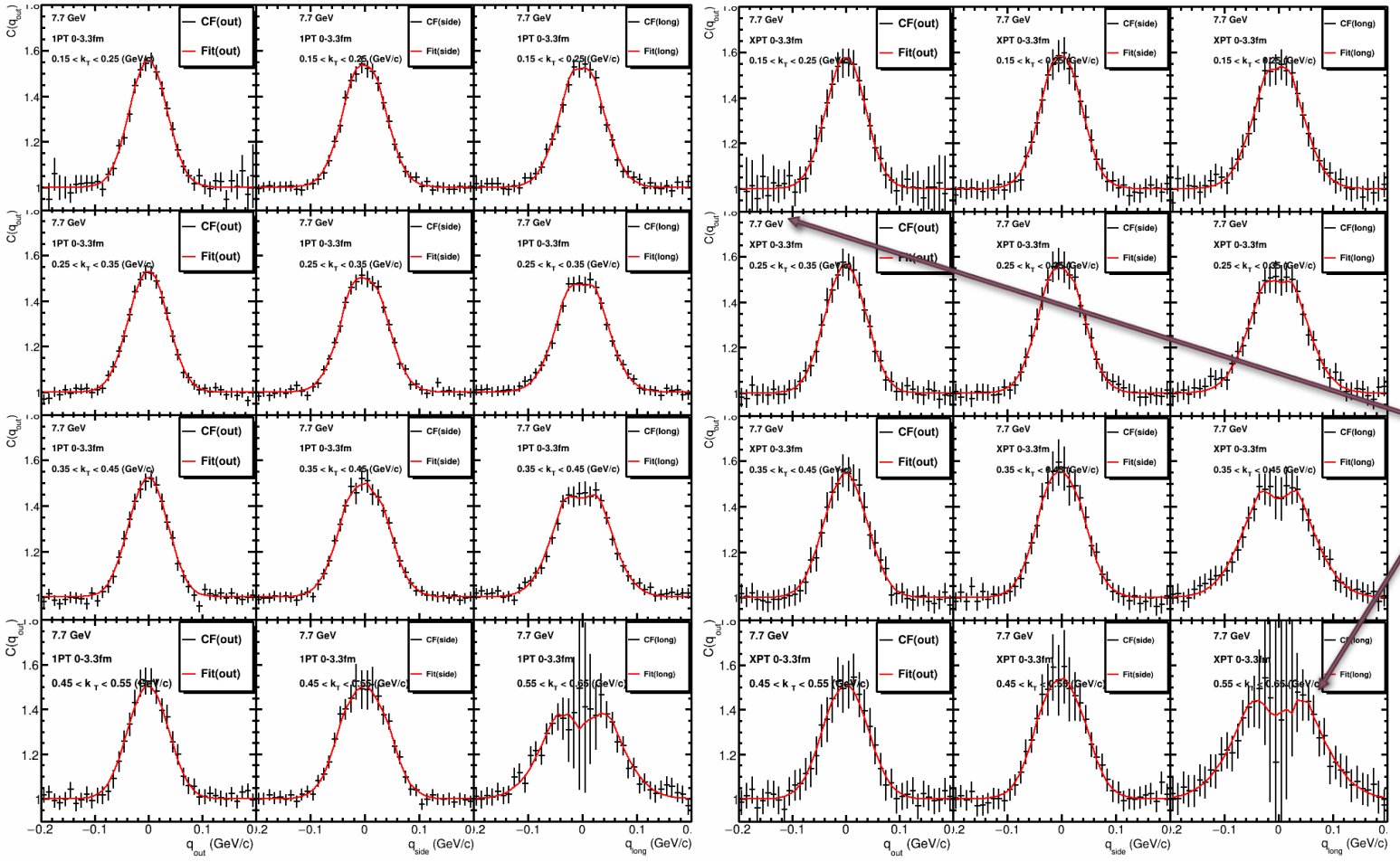
- Analysis procedure:
  - Correlation function construction: $C(q) = \frac{A(q)}{B(q)}$ { $A(q)$ – q distribution with $Weight = lednicky\ codes$; $B(q)$ – q distribution with $Weight = 1$
  - Fit: $C(q) = 1 + \lambda G(q)$

$$G(q) = e^{-q_{out}^2 R_{out}^2 - q_{side}^2 R_{side}^2 - q_{long}^2 R_{long}^2}$$

Example of Cfs (Hydro 7.7 GeV)

1PT

XPT

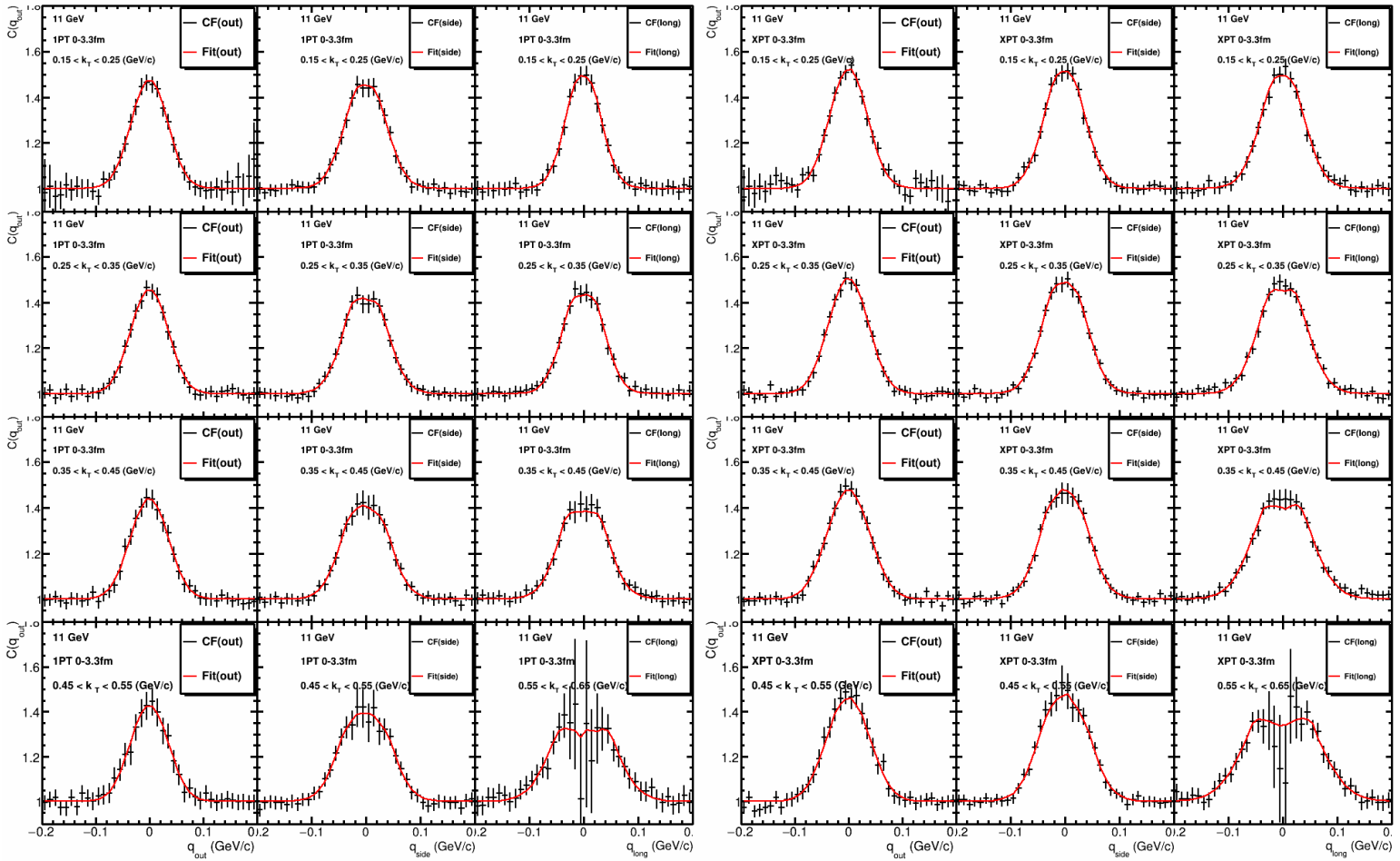


- Fits of CFs look good
- Not enough statistics for fit stability

Example of Cfs (Hydro 11.5 GeV)

1PT

XPT



- Fits of CFs look good
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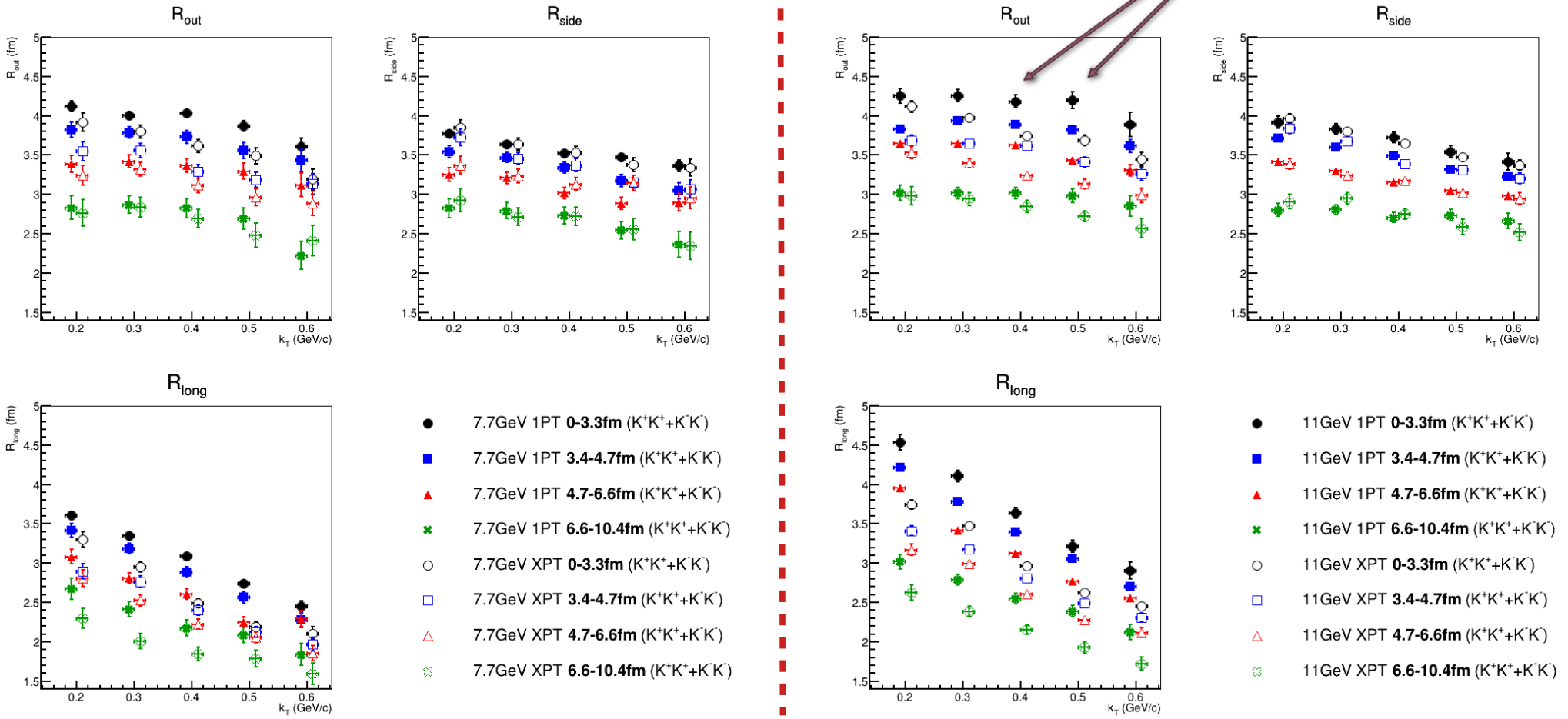
Hydro $R_{o,s,l}$ Vs. k_T

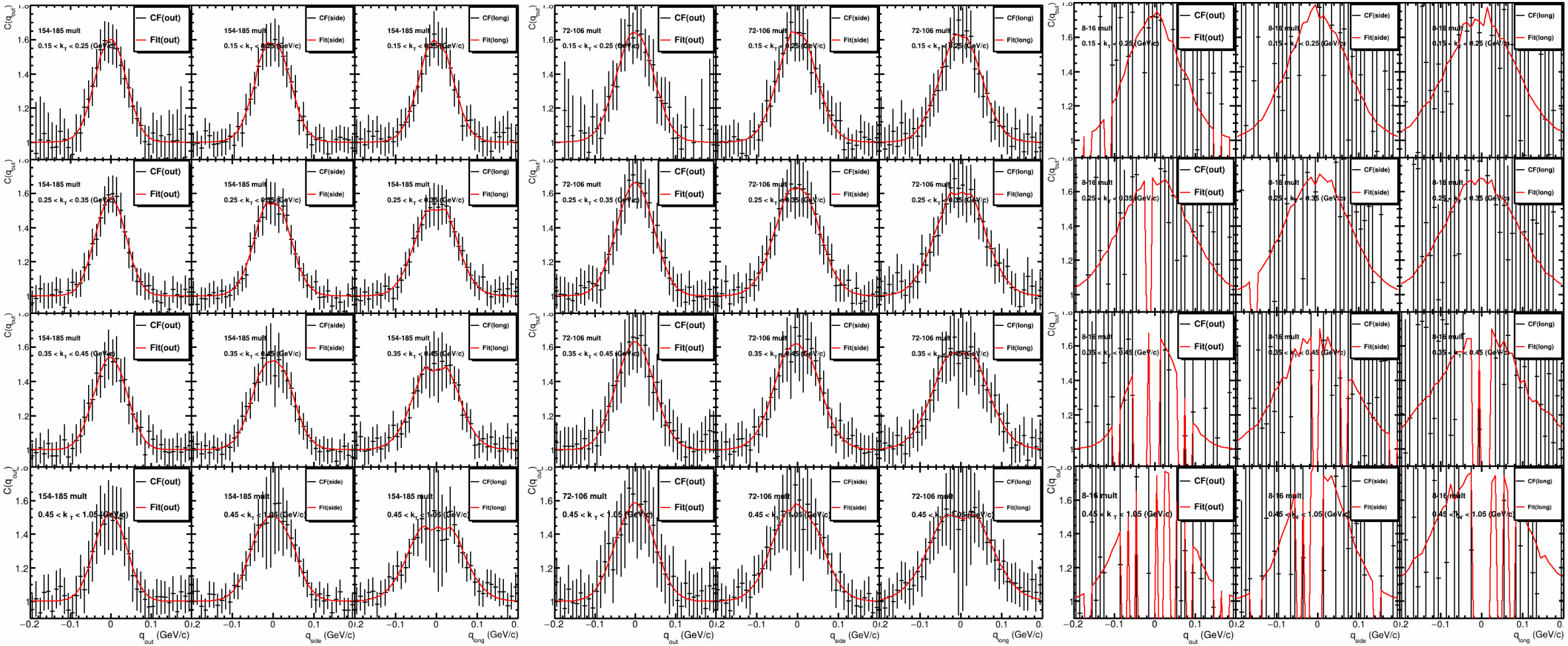
Points "jump" due to insufficient statistics (fit instability)



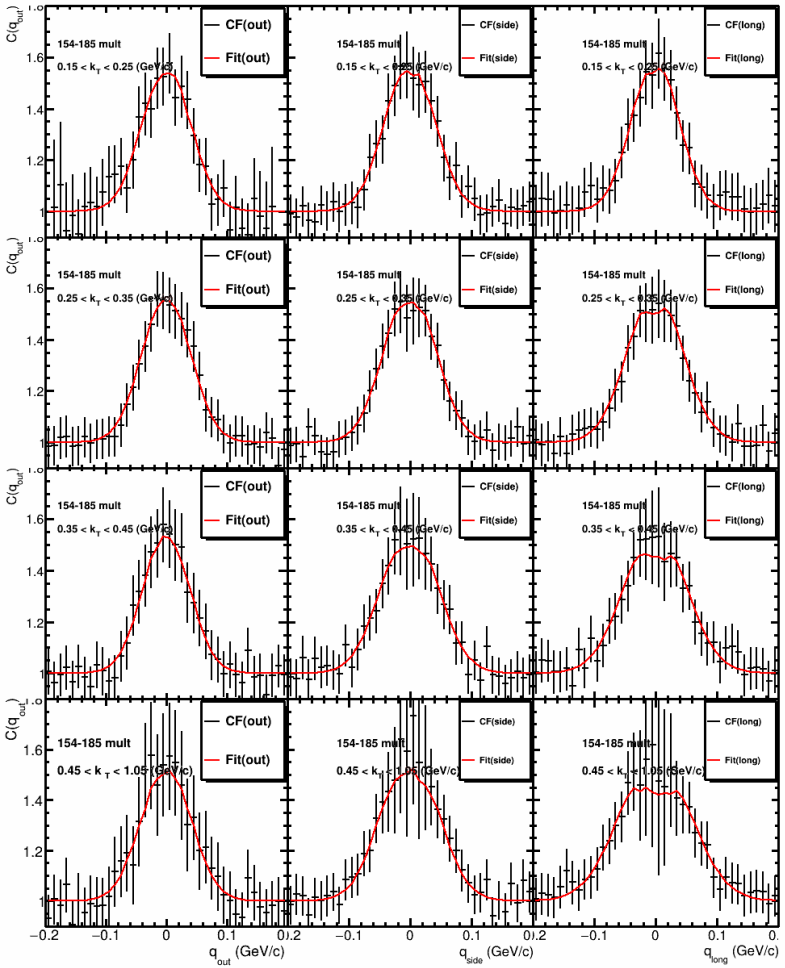
- Radii decreases with increasing k_T
- Radiii increases with decreasing impact parameter

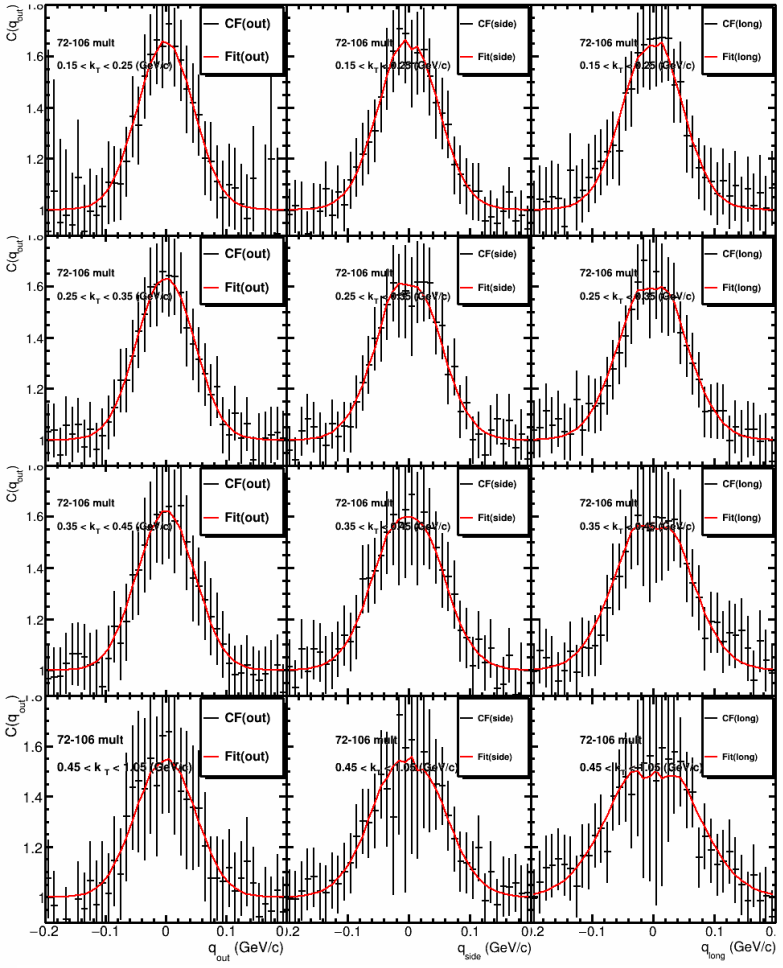
- Clear difference between R_l obtained from 1PT and XPT and small difference for R_s and R_o

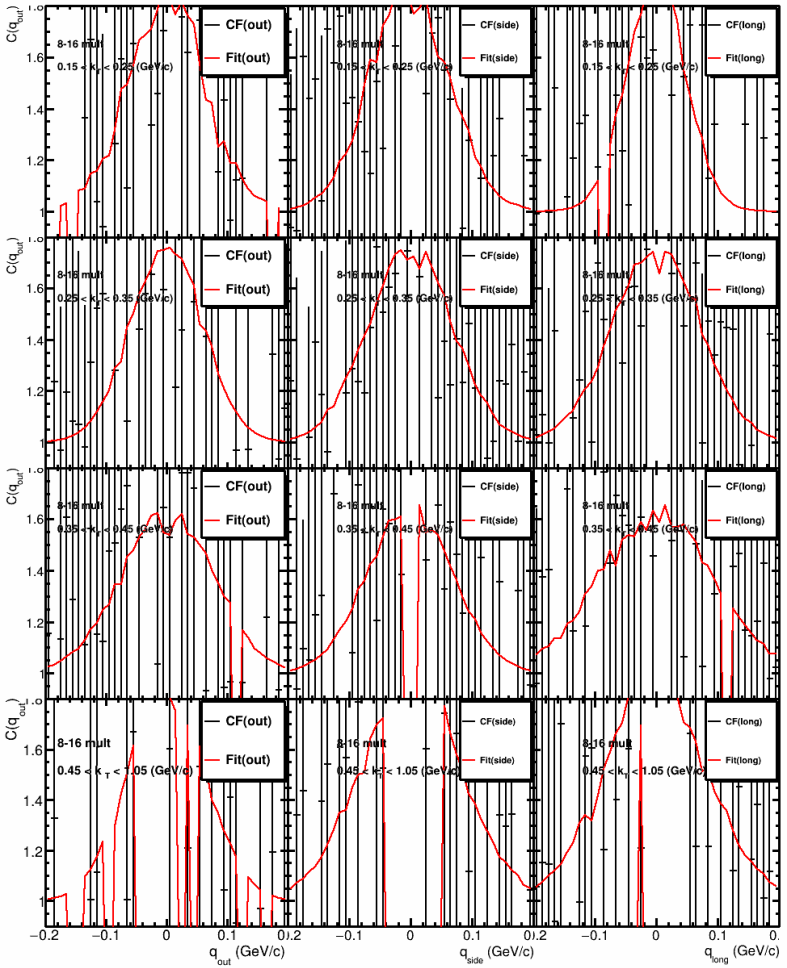
Cfs (UrQMD 7.7 GeV)



Cfs (UrQMD 11.5 GeV)

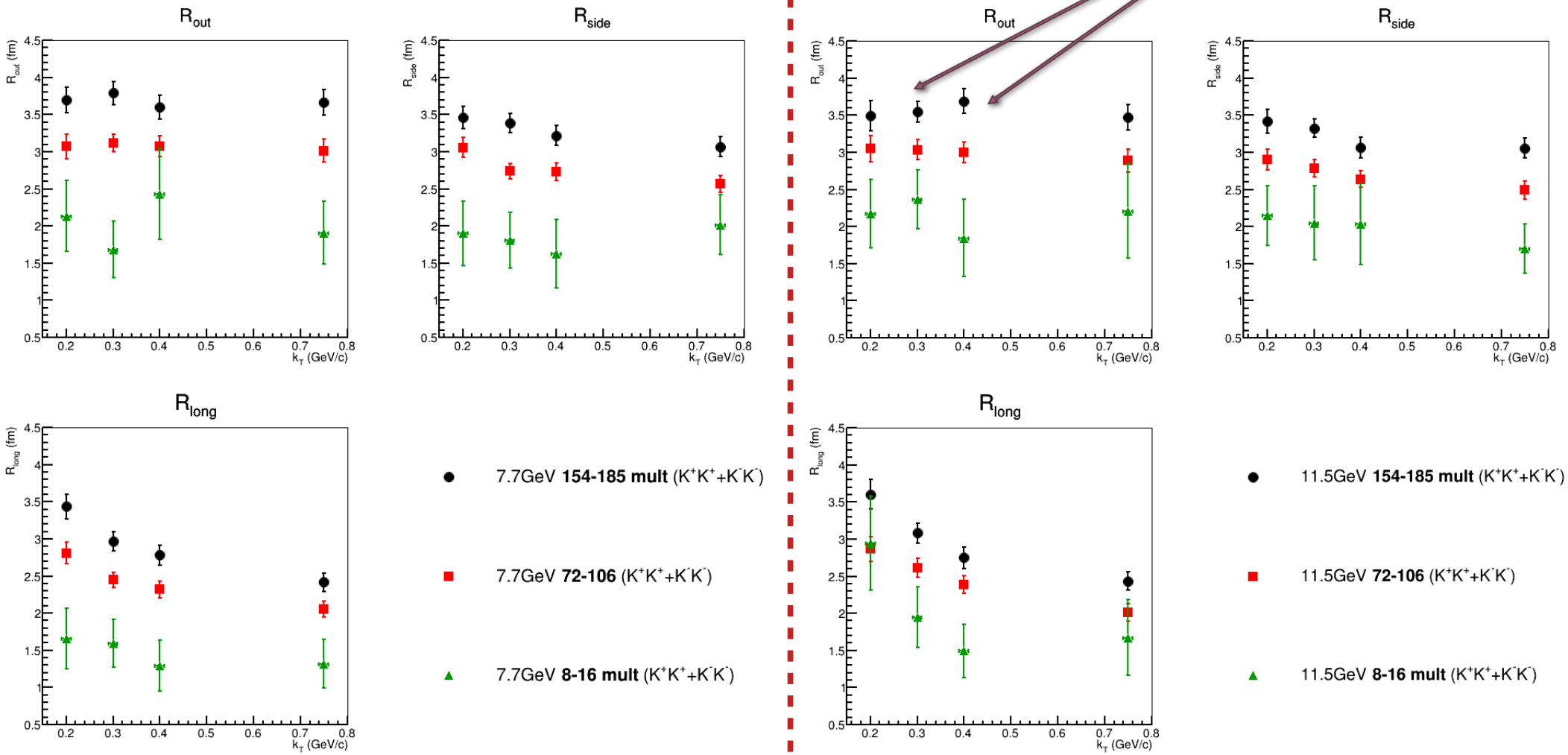






UrQMD $R_{o,s,l}$ Vs. k_T

Points "jump" due to insufficient statistics (fit instability)



- Need more statistics

Summary

- Radii decreases with increasing k_T for both UrQMD and Hydro
- Radiii increases with decreasing impact parameter (increasing particle multiplicity) for both UrQMD and Hydro
- Clear difference between R_l obtained from 1PT and XPT and small difference for R_s and R_o

Need more statistics for both UrQMD and Hydro

Thank you for your attention!