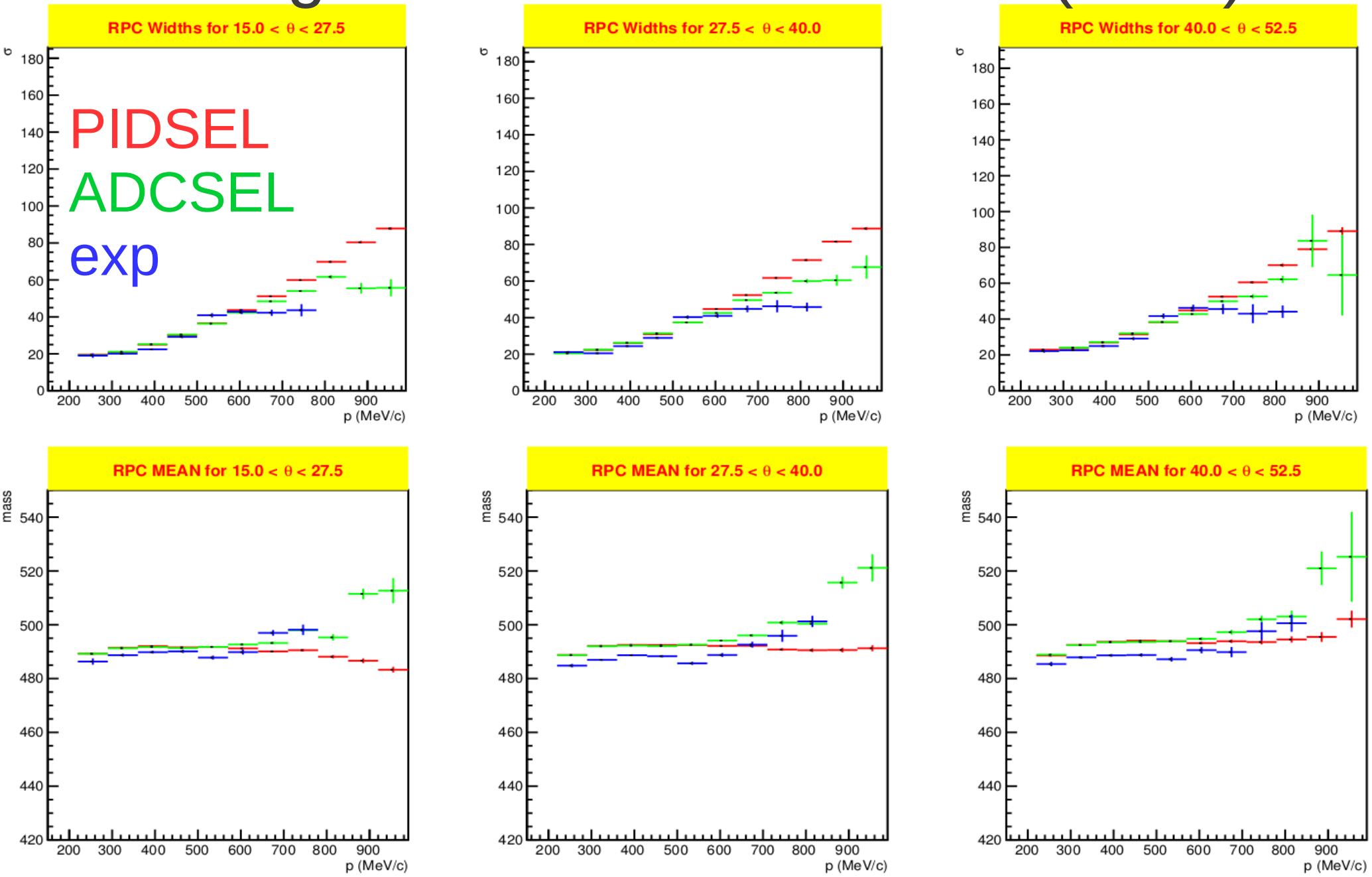
Checking MC vs Data

- Re-checked MC vs Data for:
  - PIDSEL → only PID used for K selection
  - ADCSEL → only TcutG (same as exp data) used

- Compatibility checked for
  - WIDTH (exp vs MC)
  - MEAN (exp vs MC)

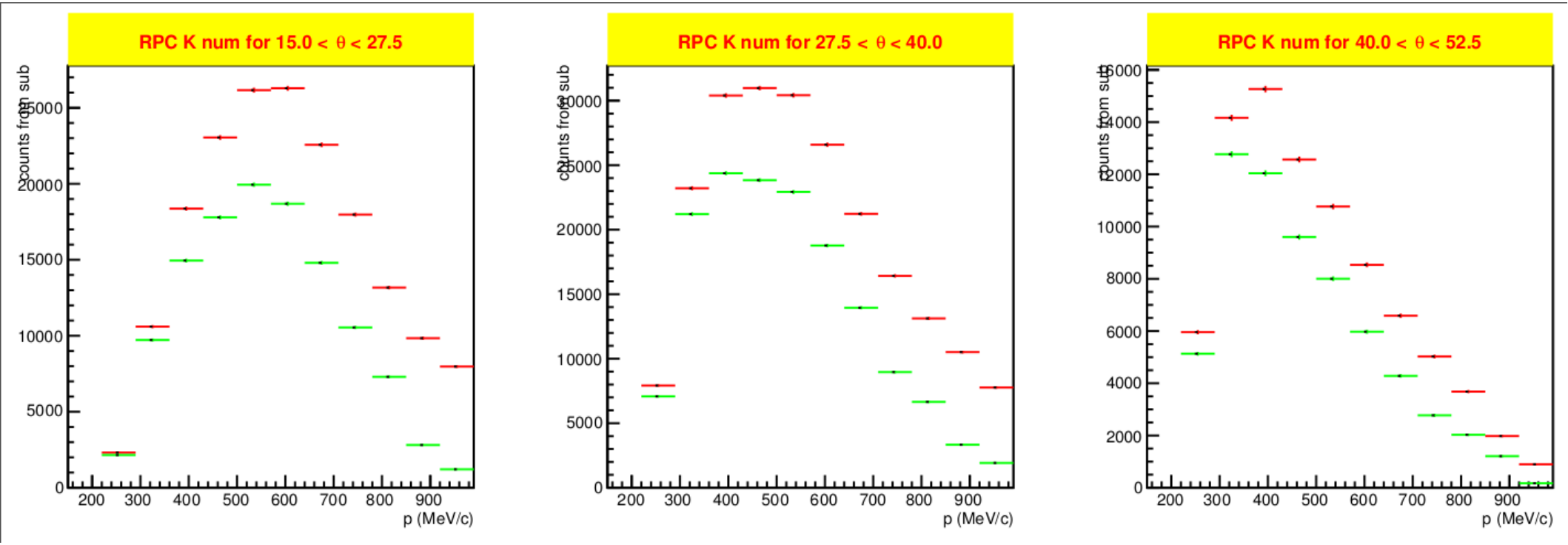
  Exp fits are done without limits from MC just to see trends

Checking σ & mean from MC: C(RPC) K^+

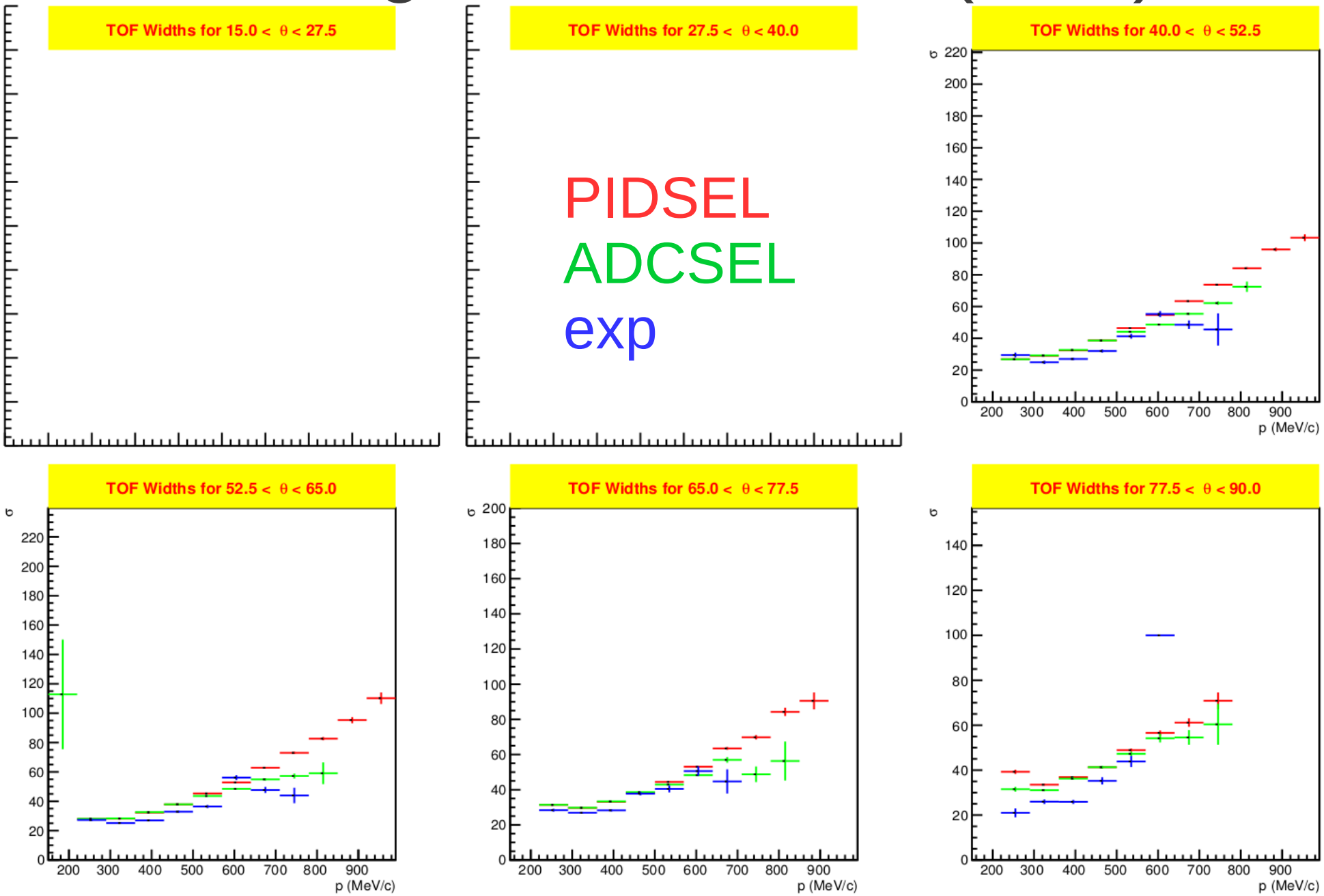


Checking K num from MC: C(RPC) K^+

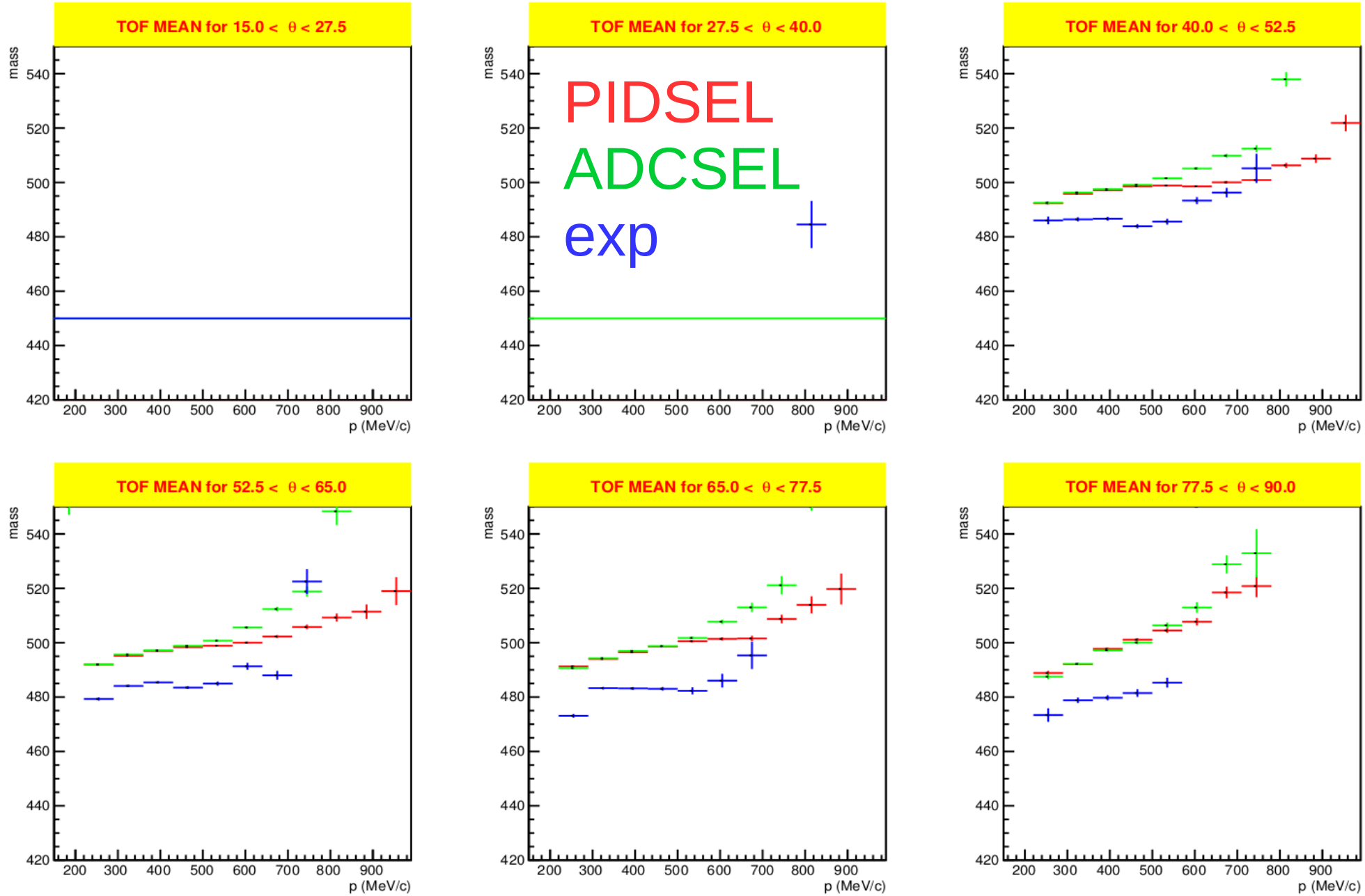
PIDSEL
ADCSEL



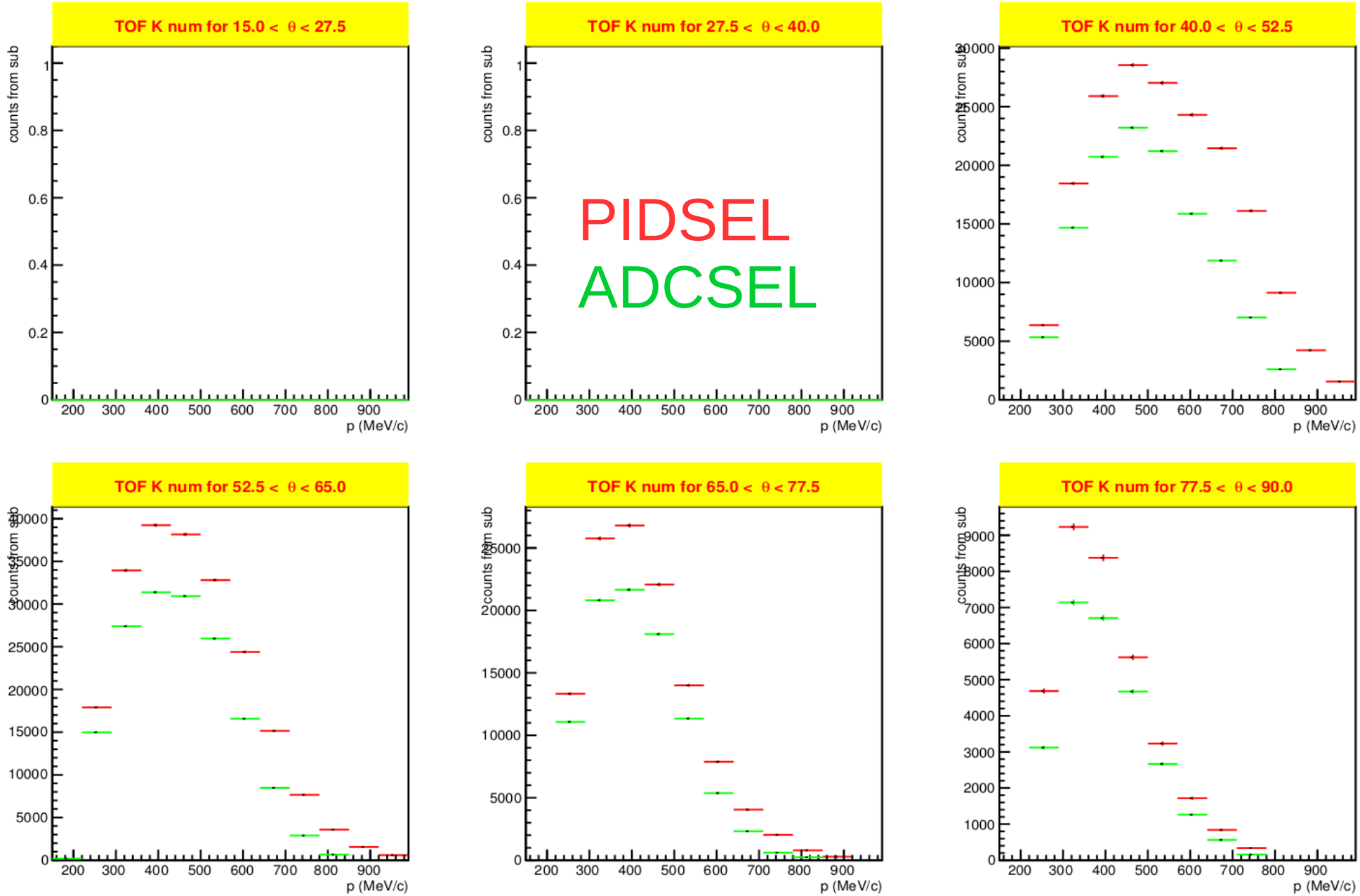
Checking σ from MC: C(TOF) K^+



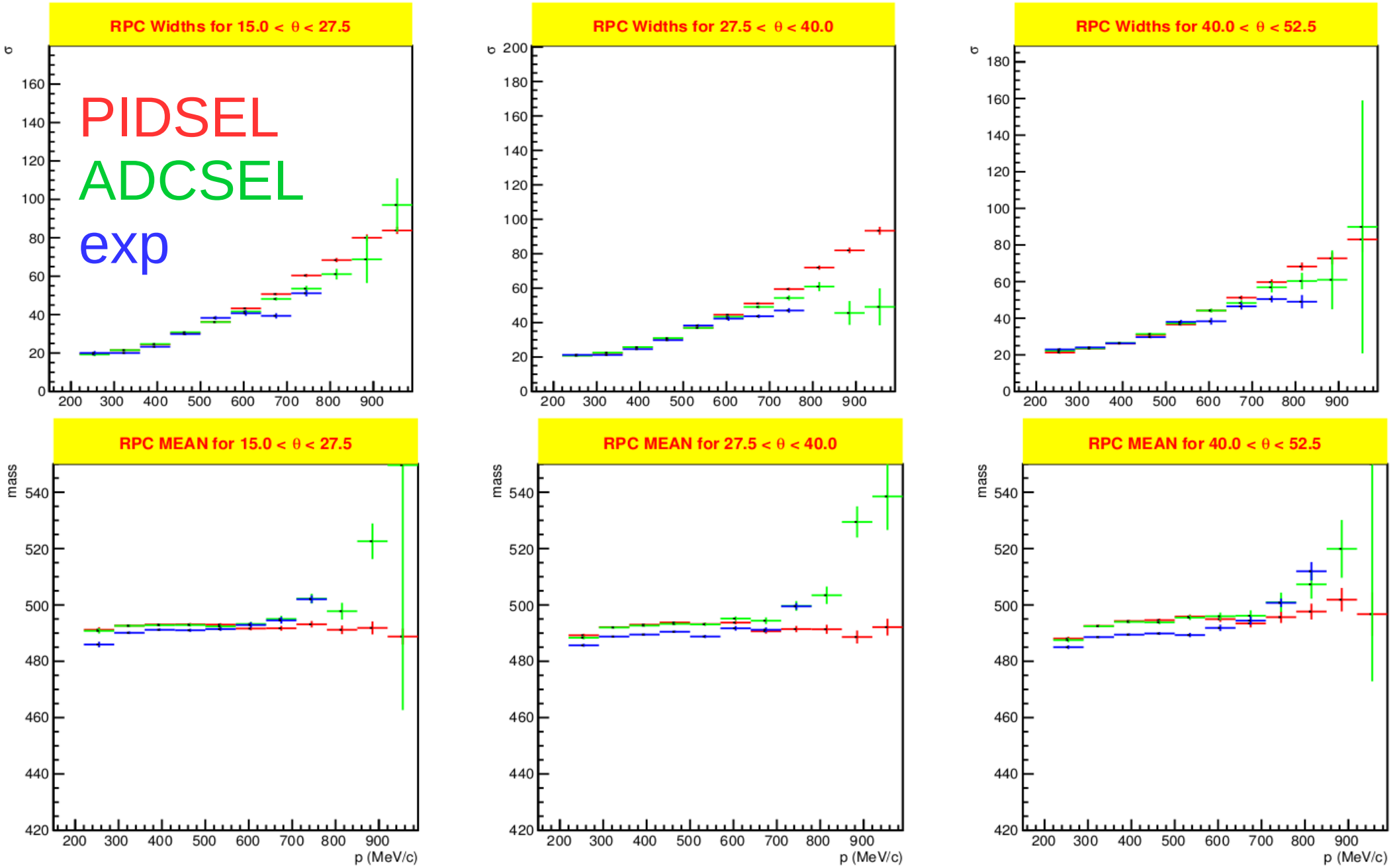
Checking MEAN from MC: C(TOF) K^+



Checking K num from MC: C(TOF) K^+

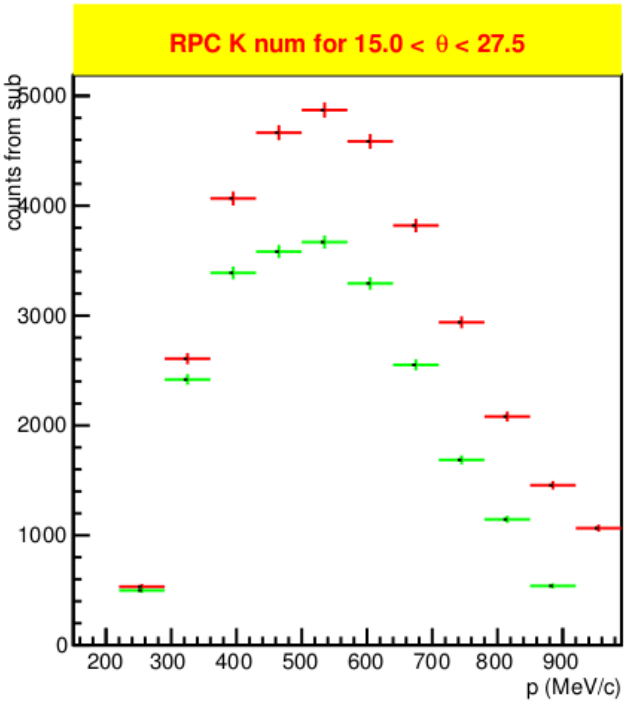


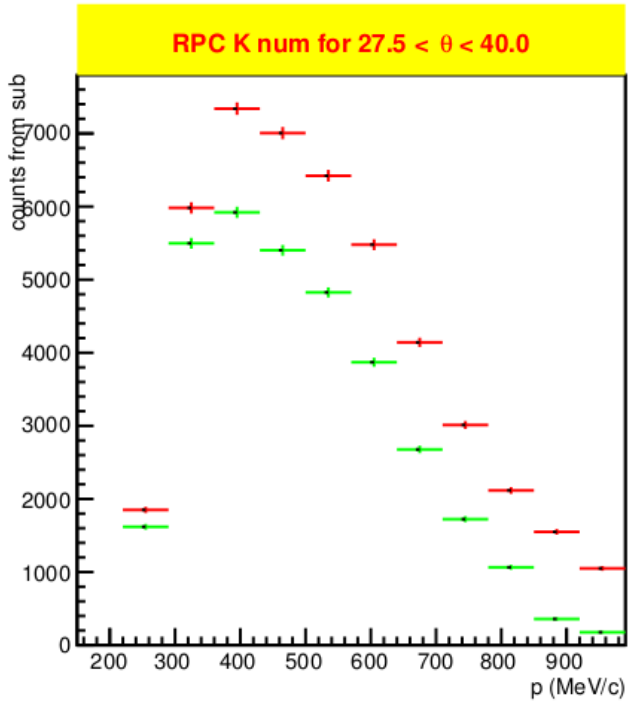
Checking σ & mean from MC: W(RPC) K^+

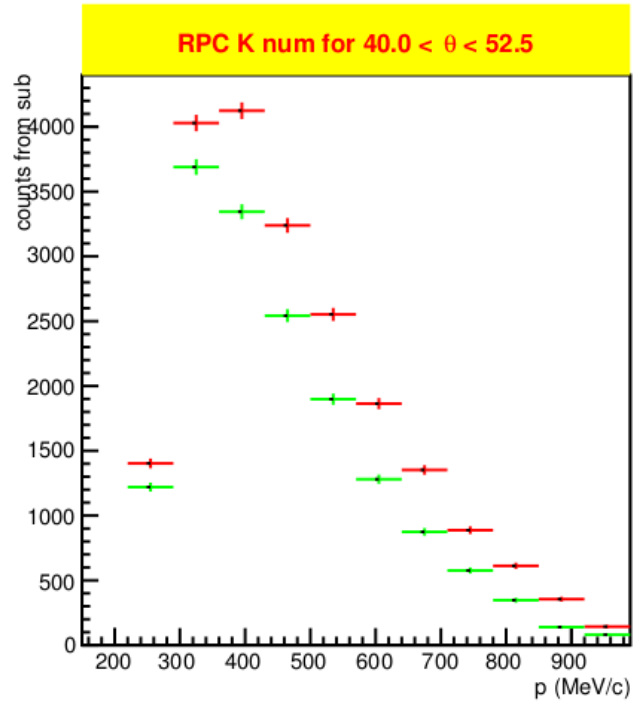


Checking K num from MC: W(RPC) K^+

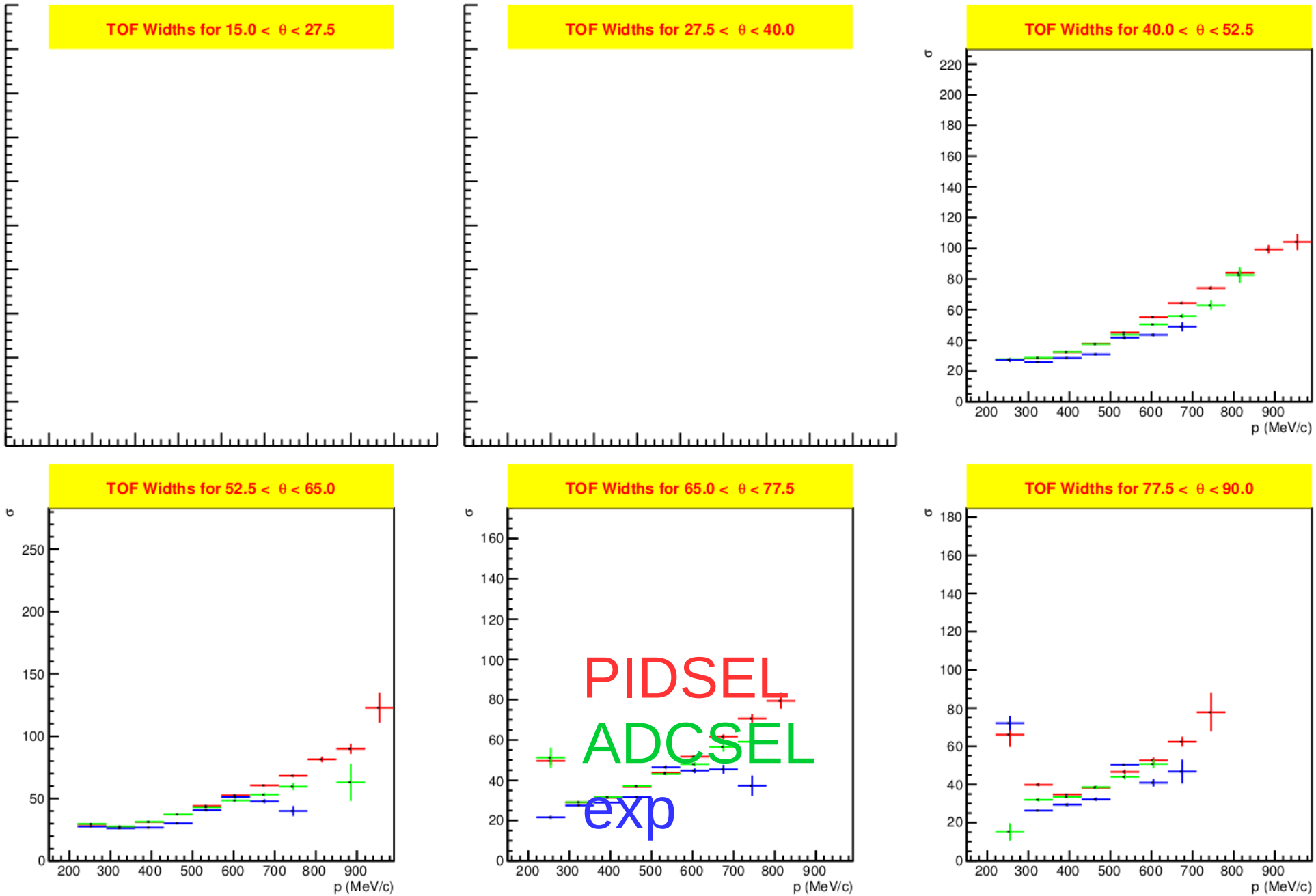
PIDSEL
ADCSEL



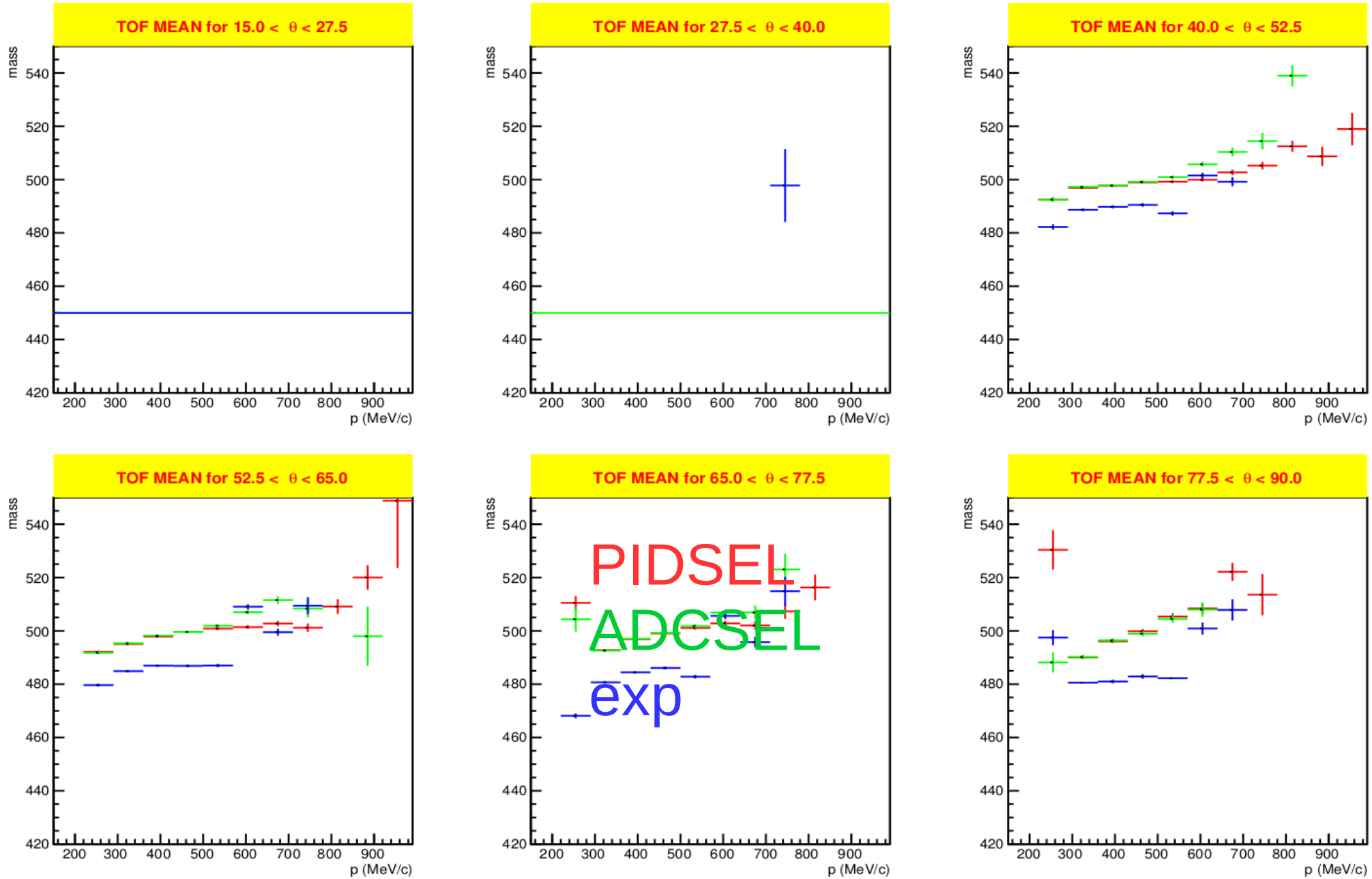




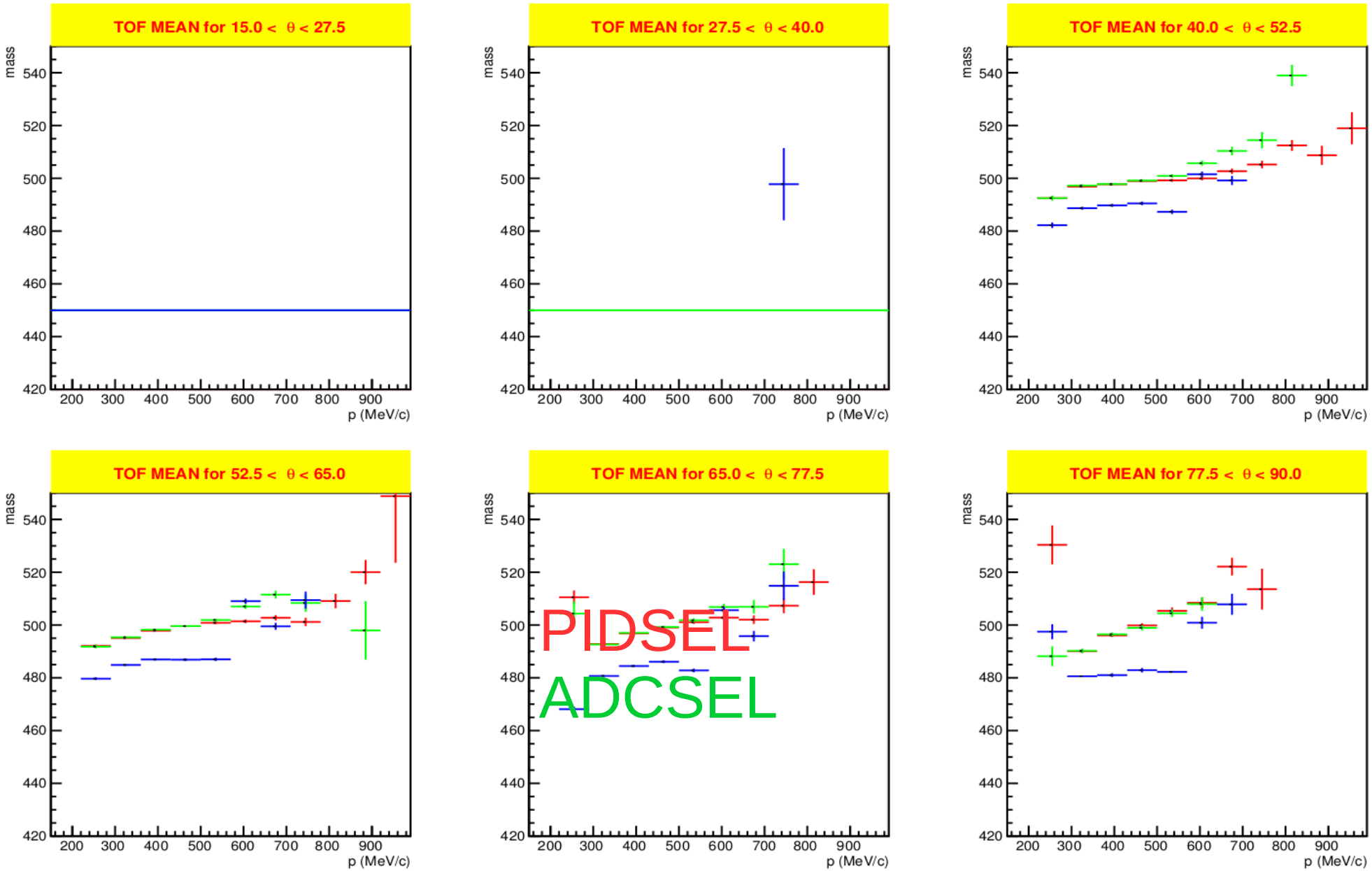
Checking σ from MC: W(TOF) K^+



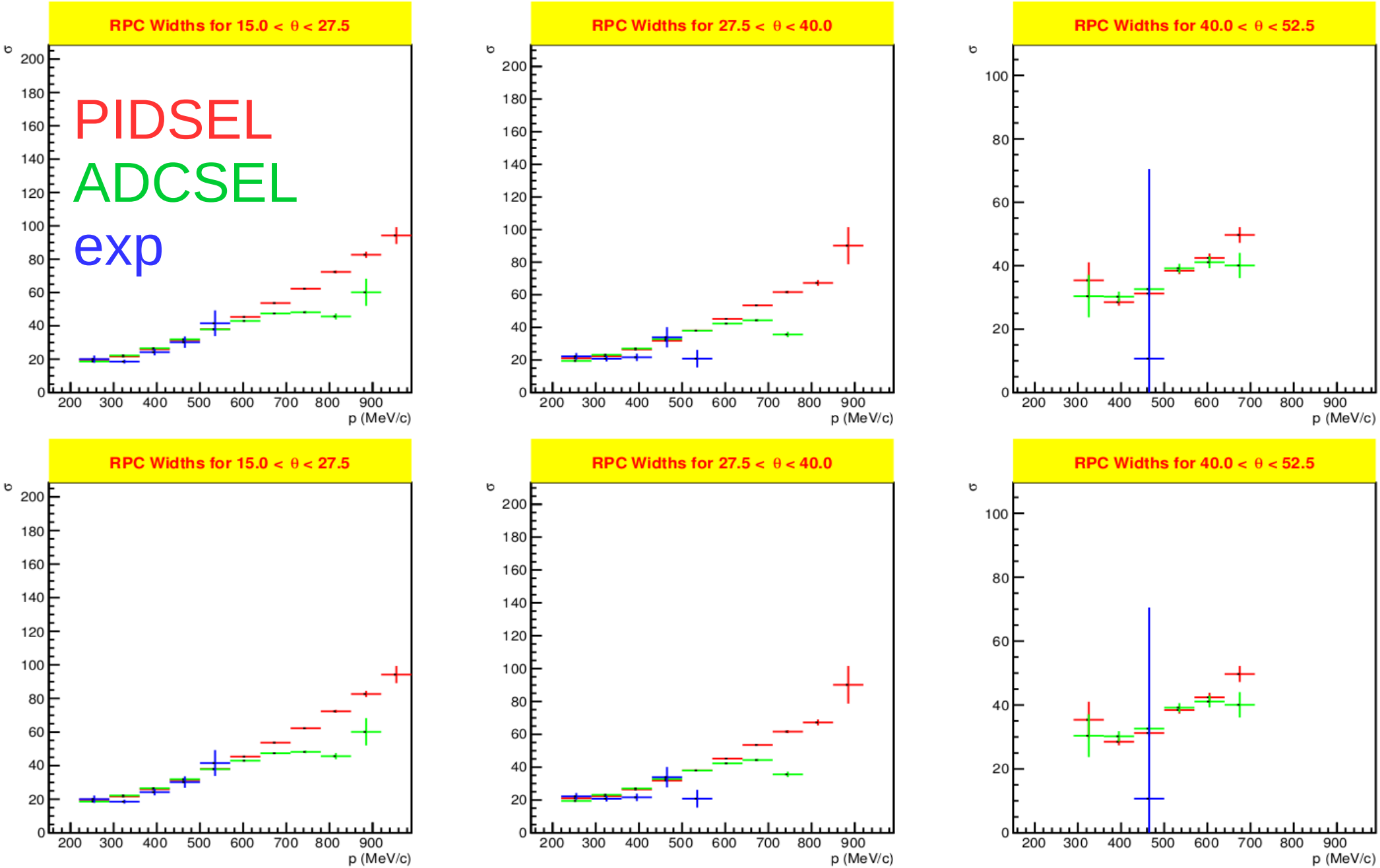
Checking MEAN from MC: W(TOF) K^+



Checking K num from MC: W(TOF) K^+

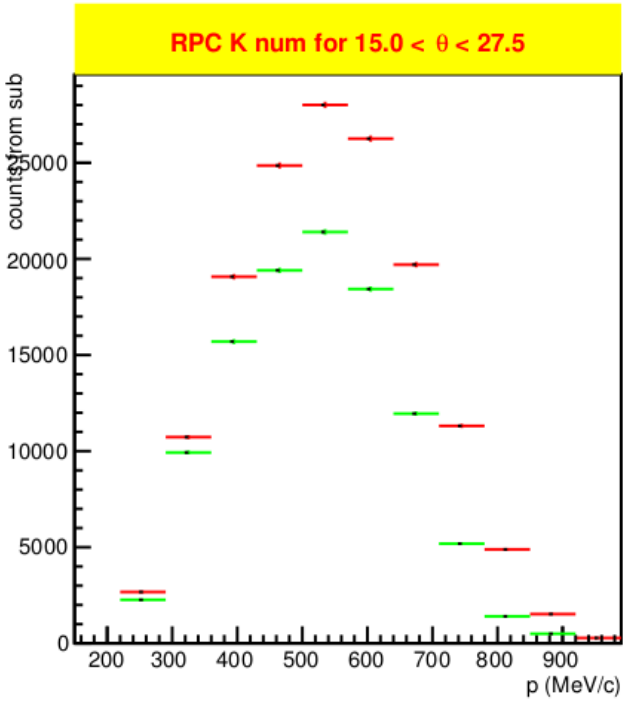


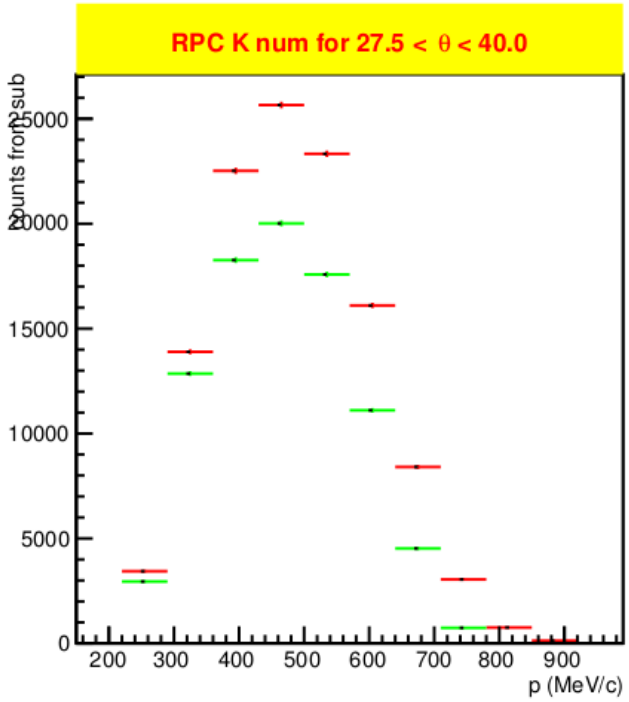
Checking σ & mean from MC: C(RPC) K^-

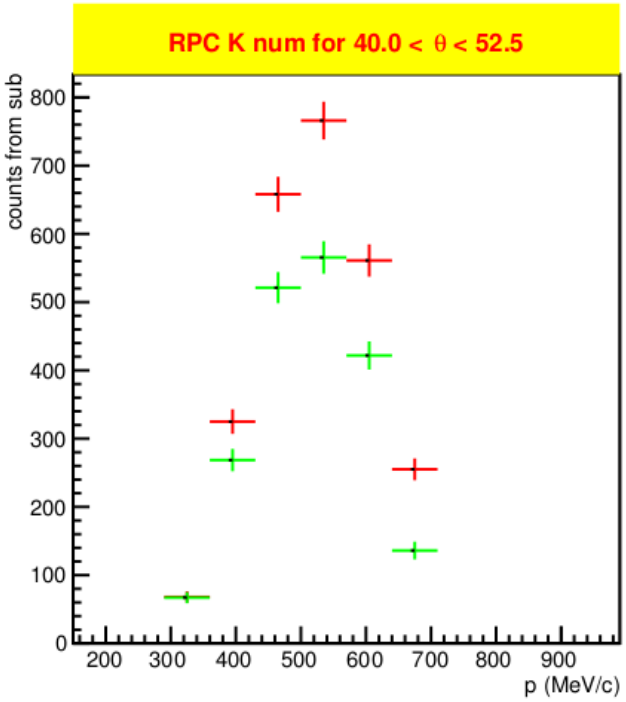


Checking K num from MC: C(RPC) K^-

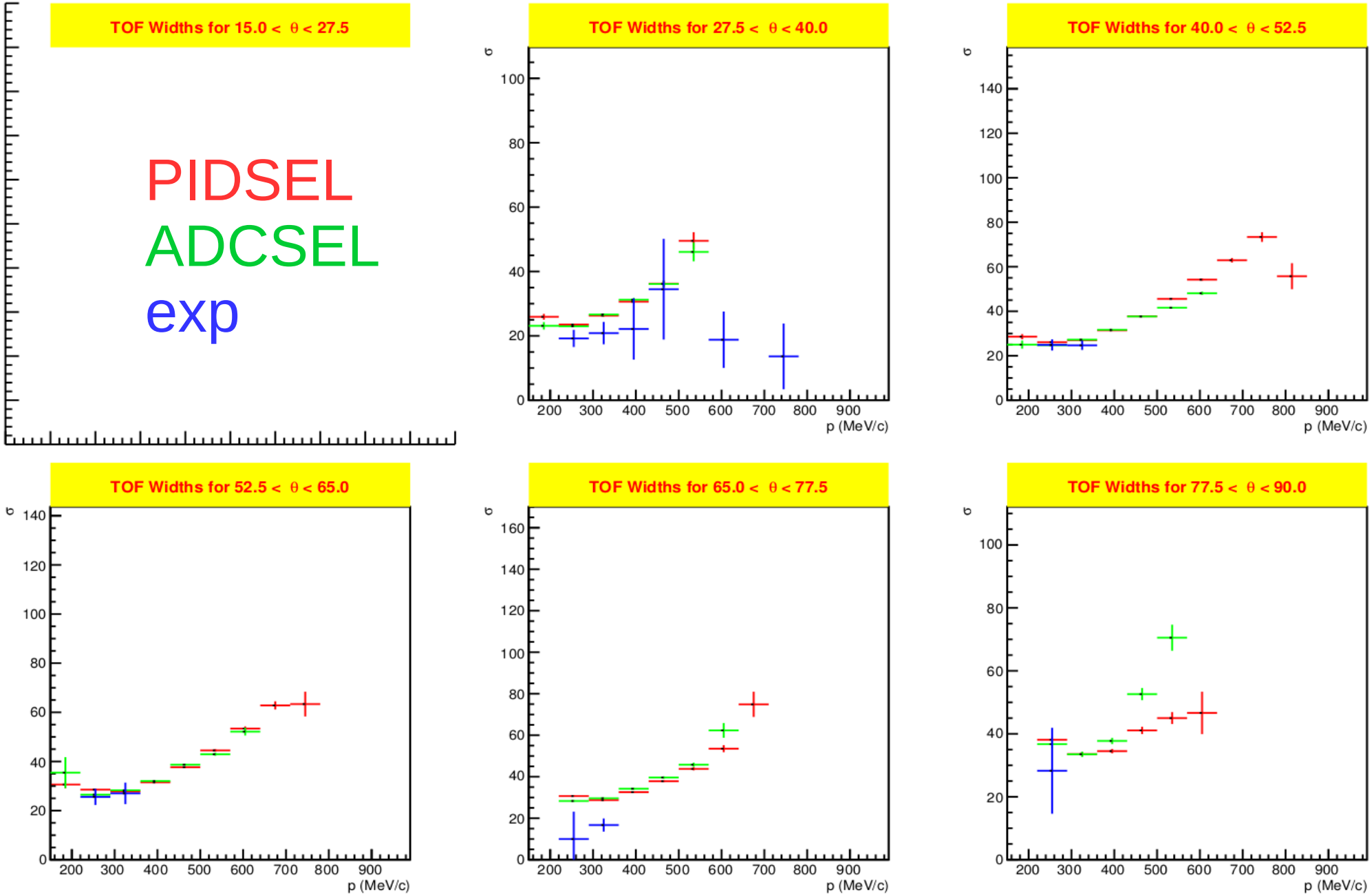
PIDSEL
ADCSEL



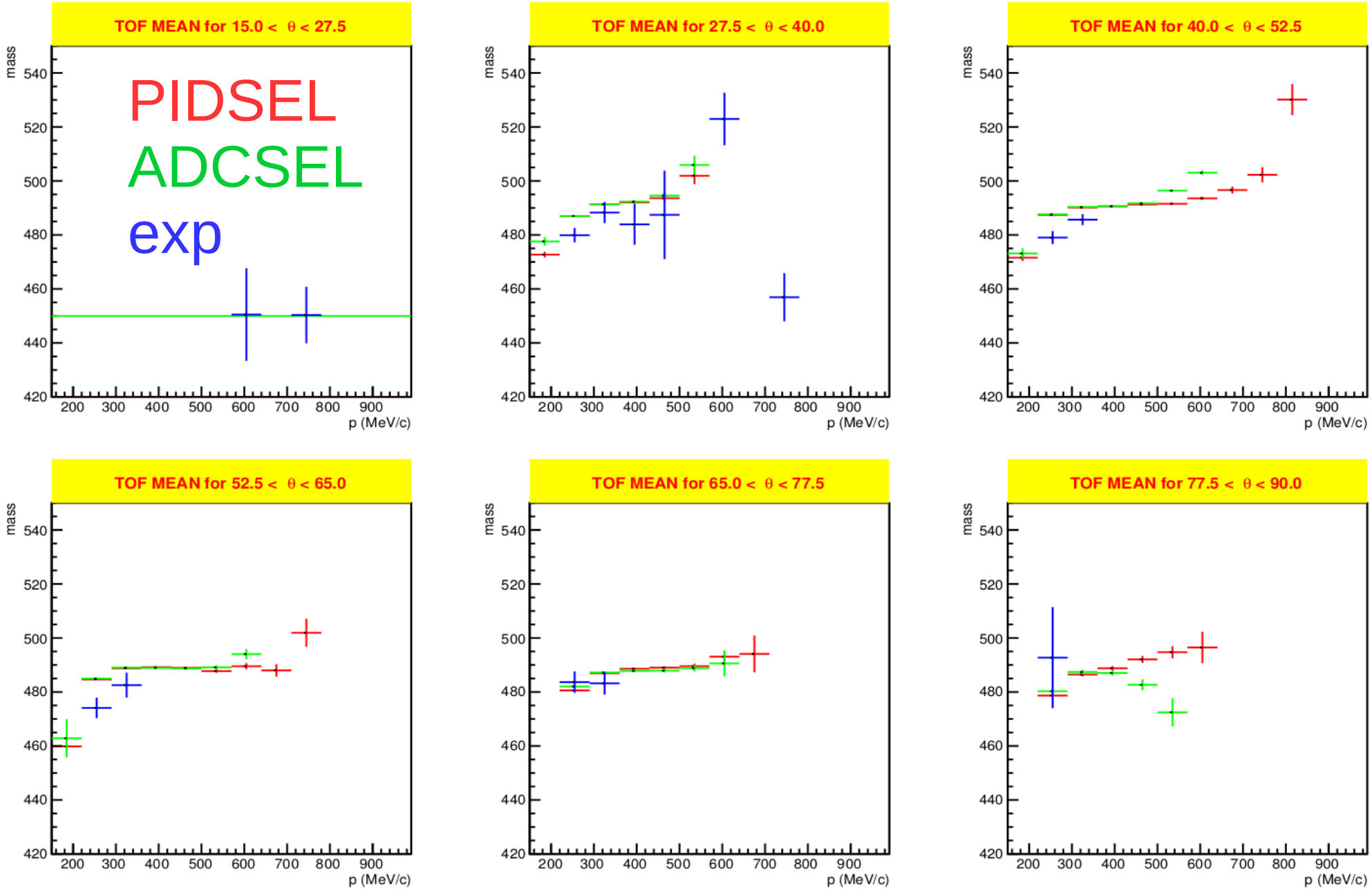




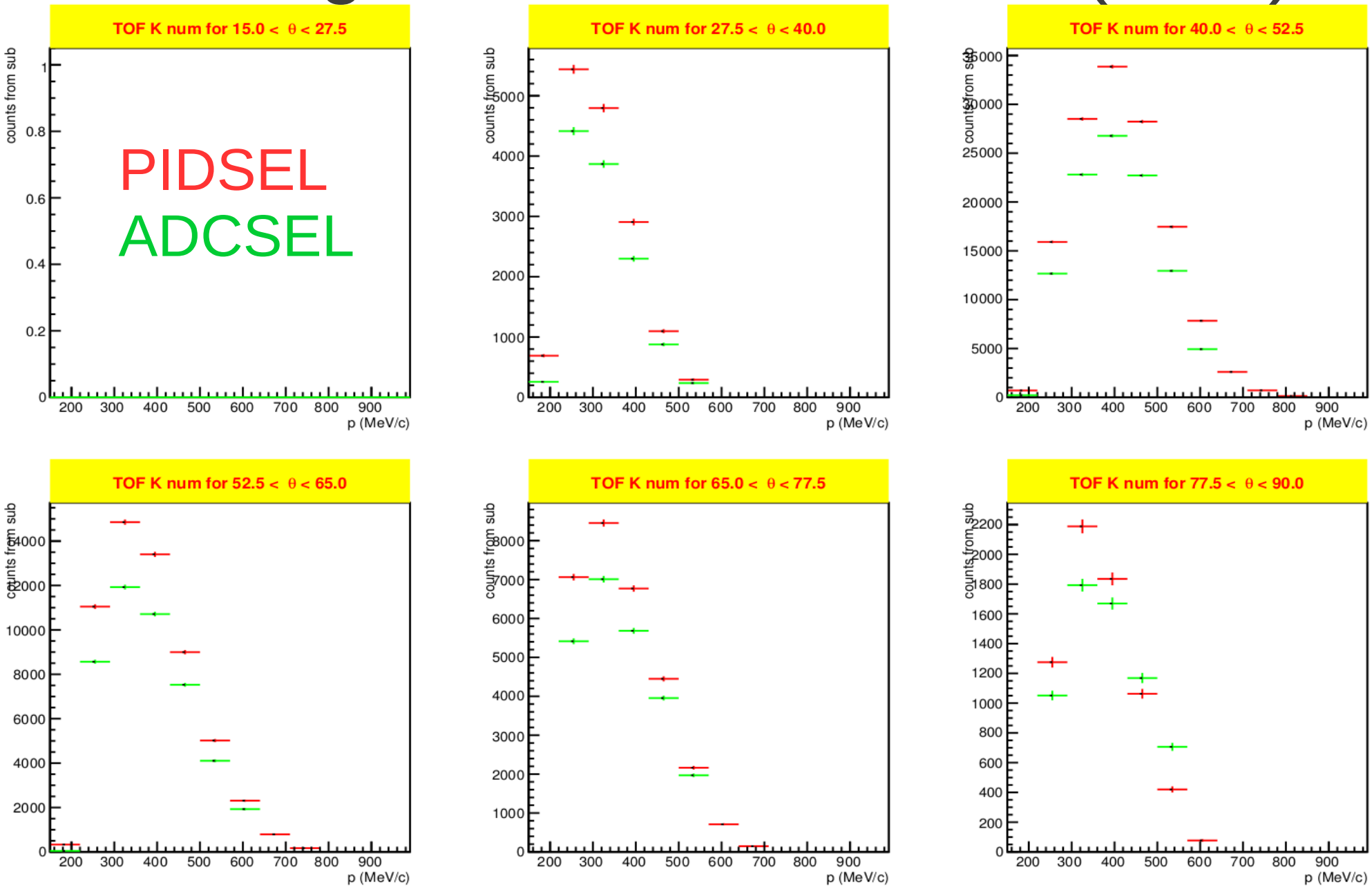
Checking σ from MC: C(TOF) K^-



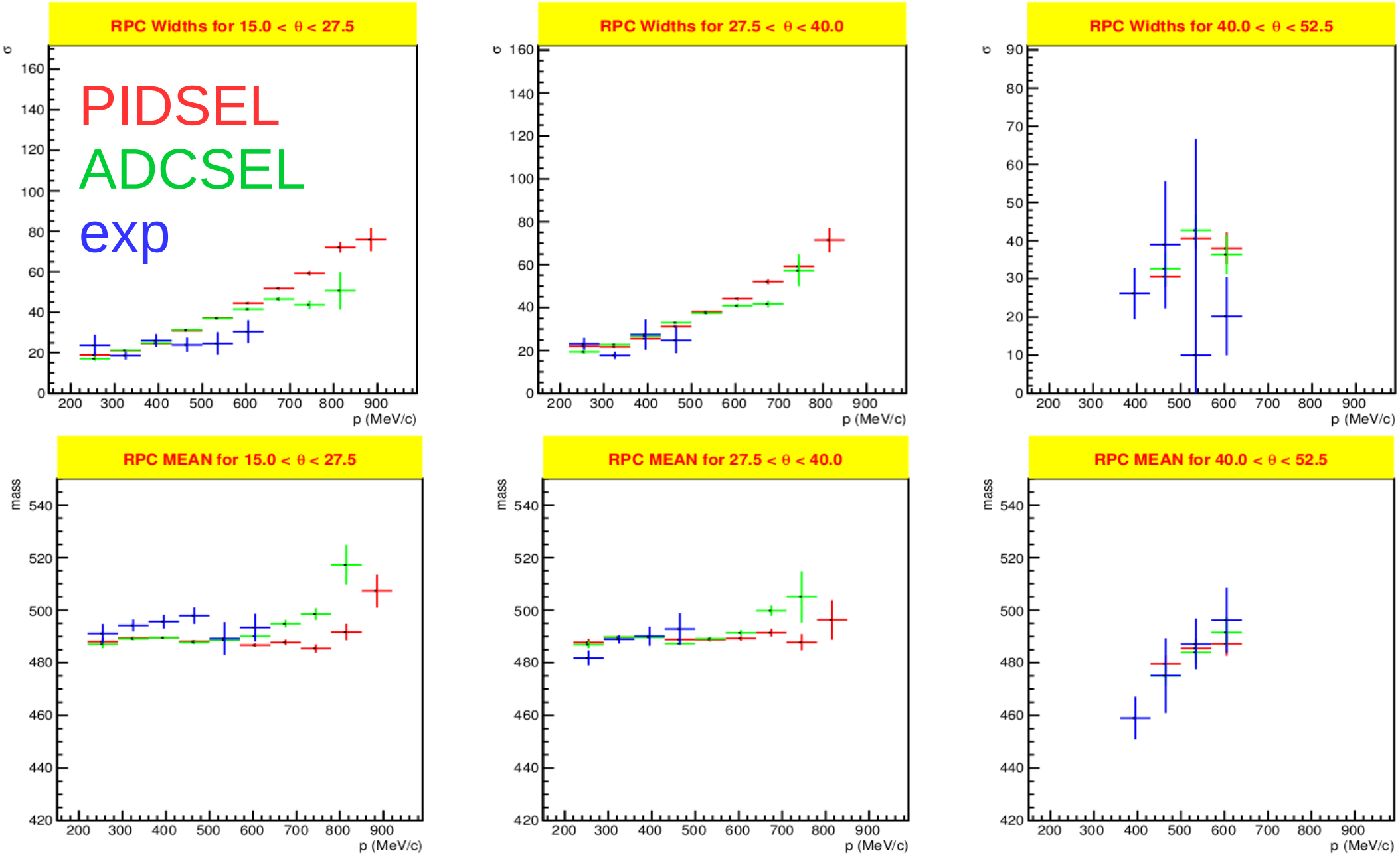
Checking MEAN from MC: C(TOF) K^-



Checking K num from MC: C(TOF) K^-

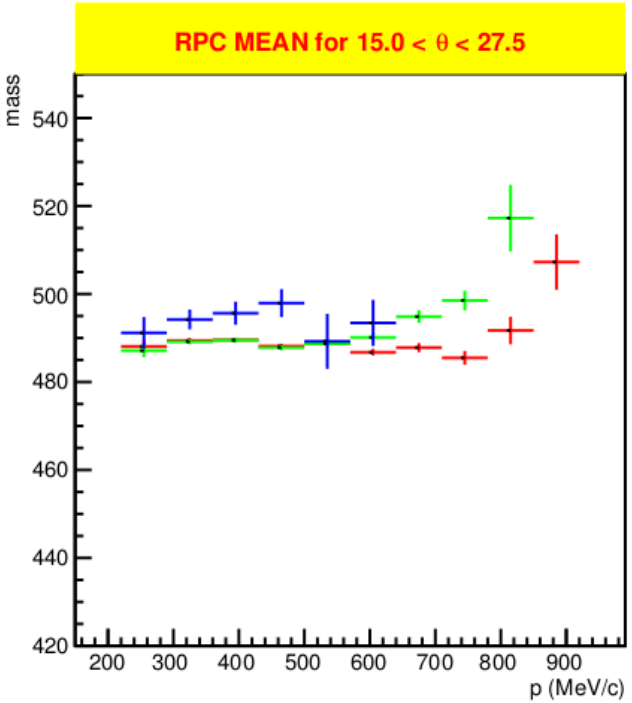


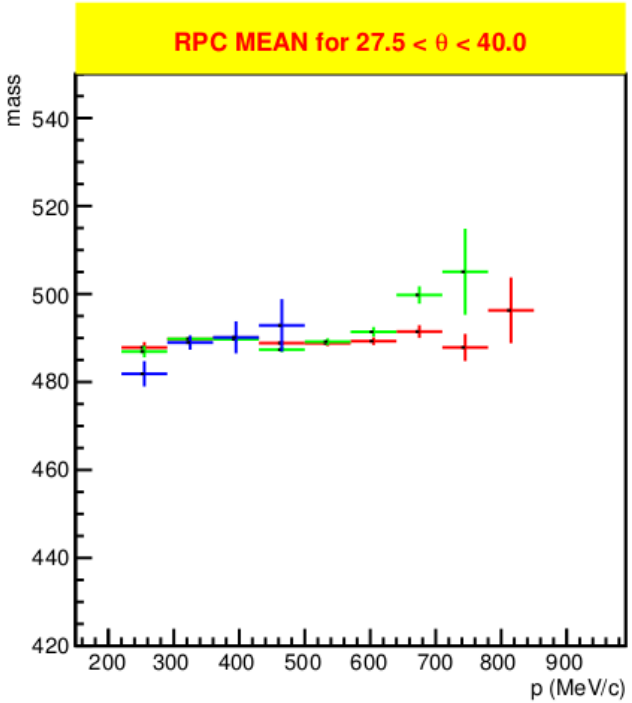
Checking σ & mean from MC: W(RPC) K^-

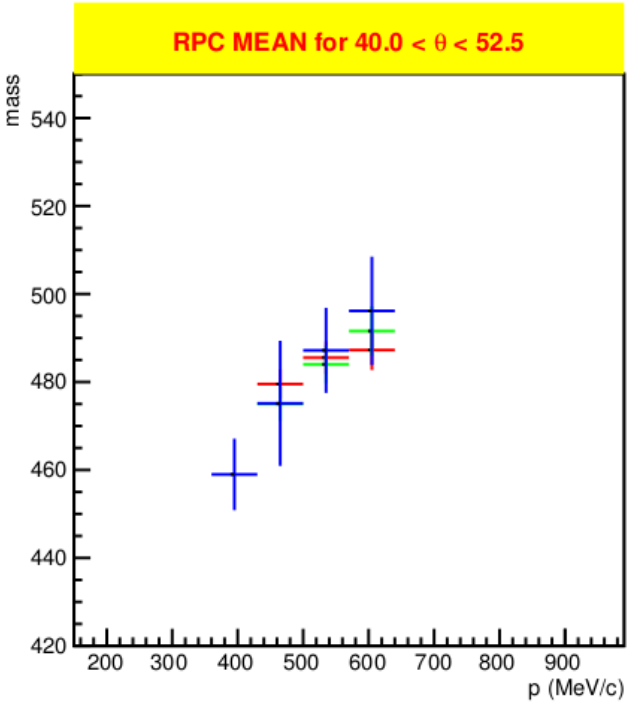


Checking K num from MC: W(RPC) K⁻

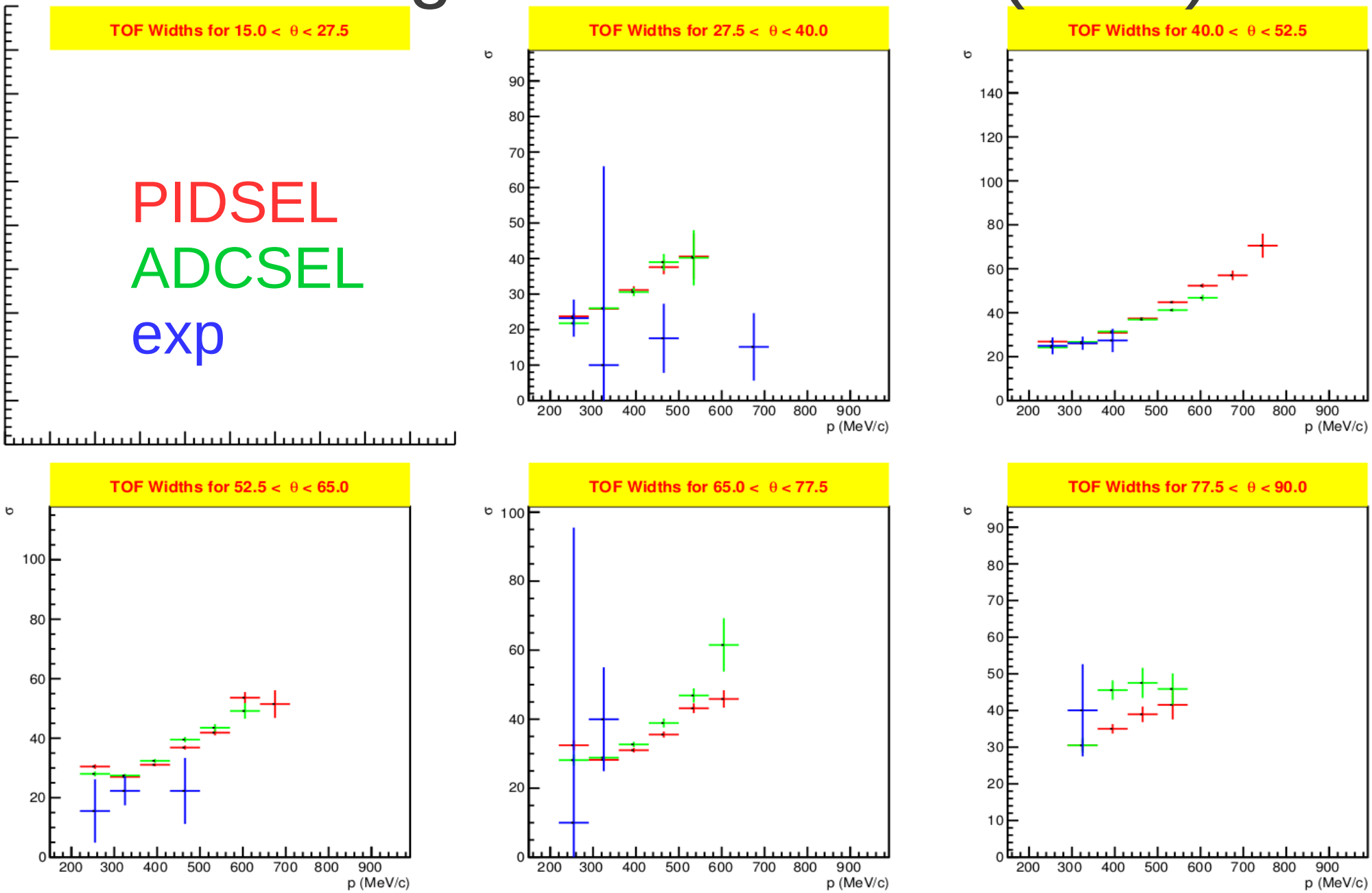
PIDSEL
ADCSEL



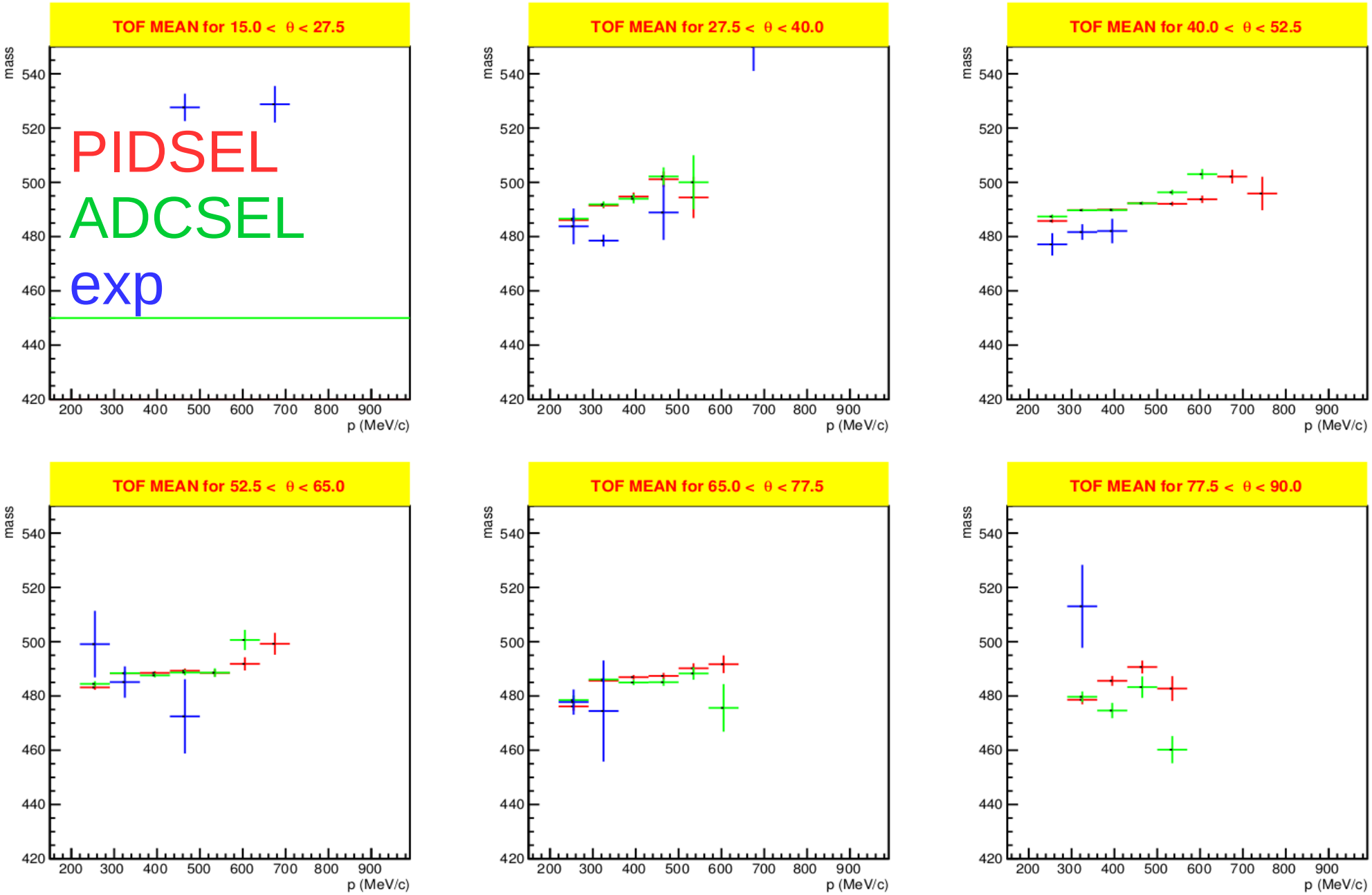




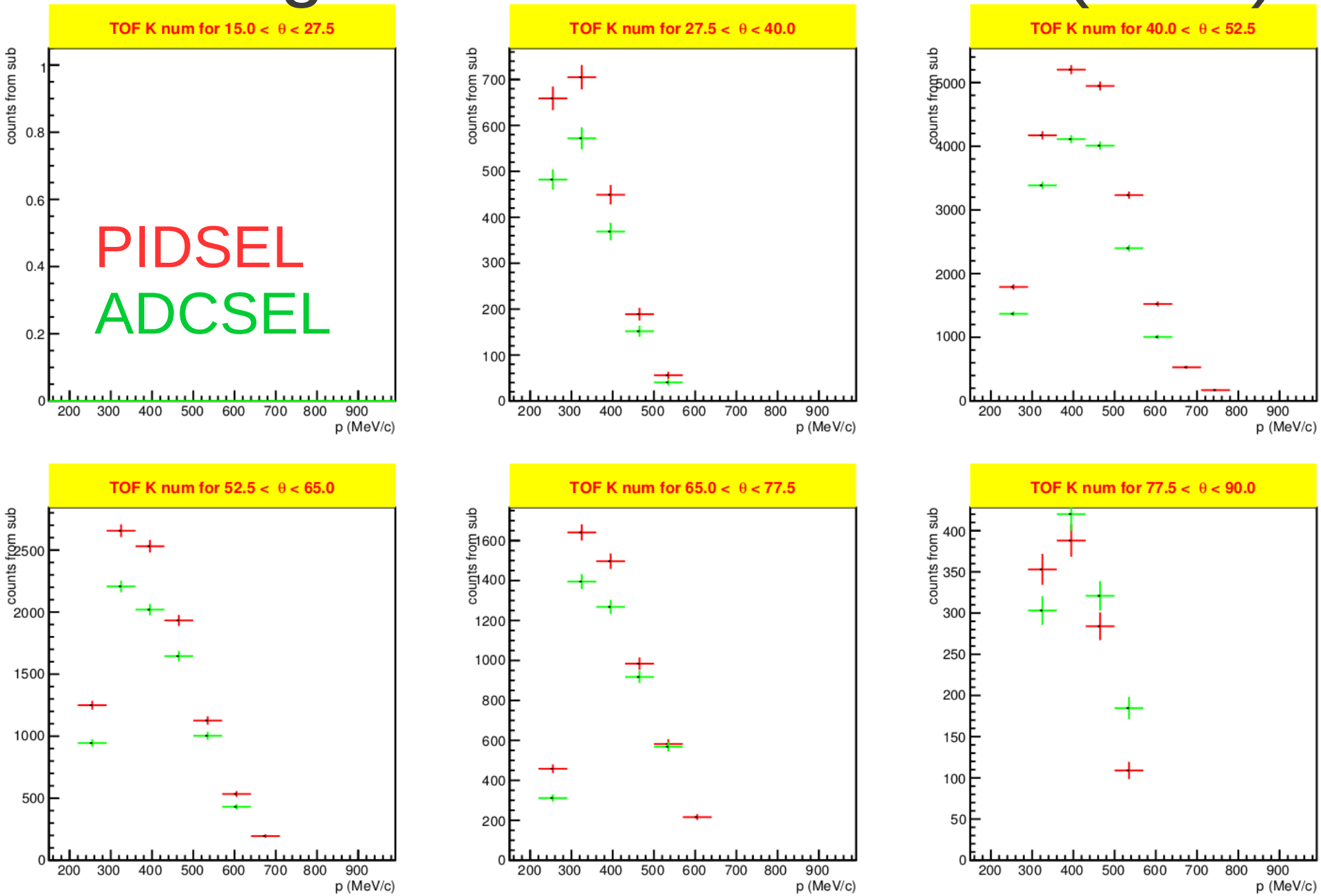
Checking σ from MC: W(TOF) K^-



Checking MEAN from MC: W(TOF) K^-



Checking K num from MC: W(TOF) K^-

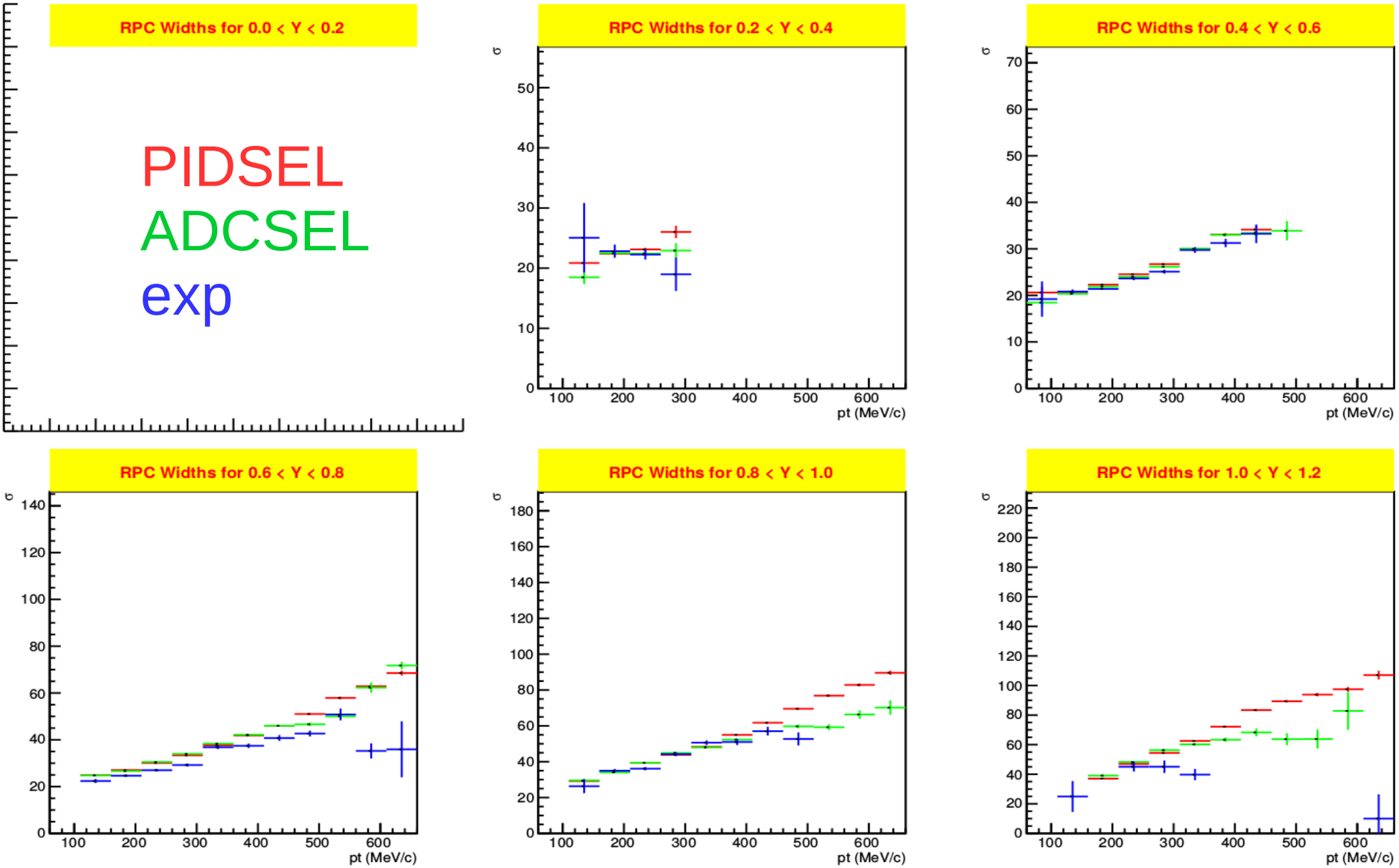


Next steps

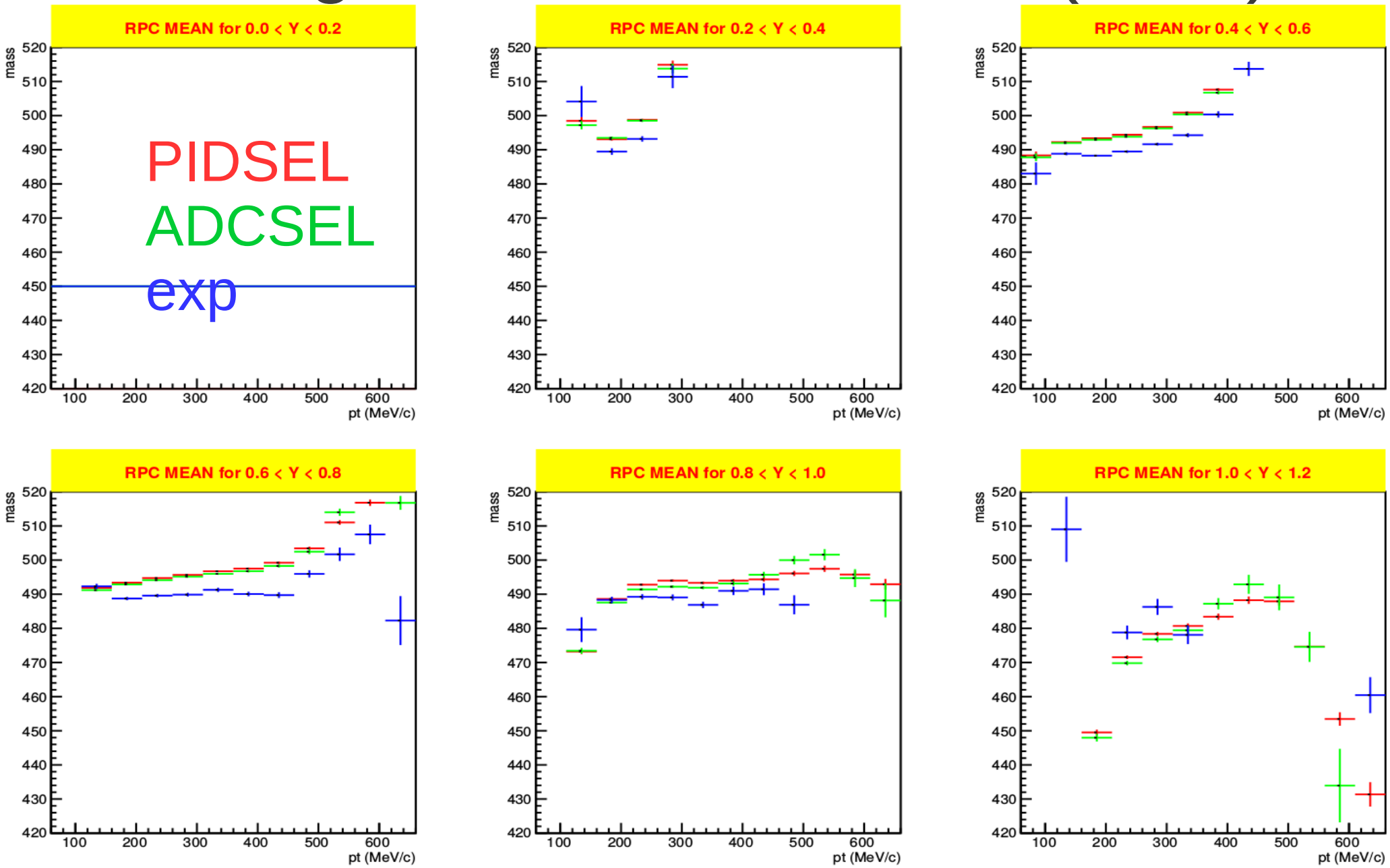
- Re-(again)-analysis of $p\theta$ & $p_T y$ bins with:
  - Mean from MC → bound in 2 or 3 σ ?
  - Width from MC → bound in 2 or 3 σ ?
  - Starting values from MC?
- Which are to be used for limits on exp data fit (red or green)?
- Check consistency in K+/K- W/C ratios between $p\theta$ & $p_T y$

OLD $P_{T}Y$

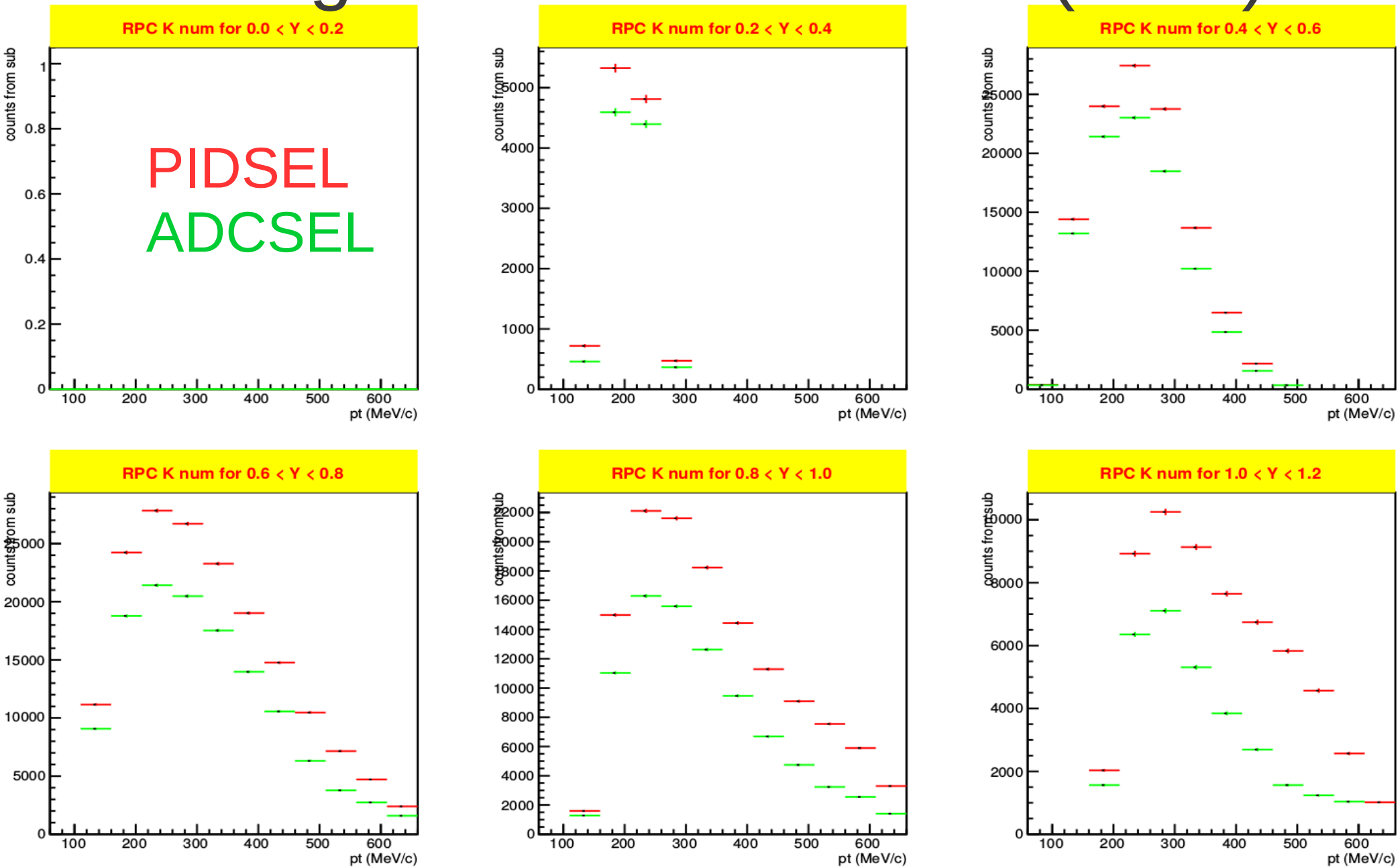
Checking σ from MC: C(RPC) K^+



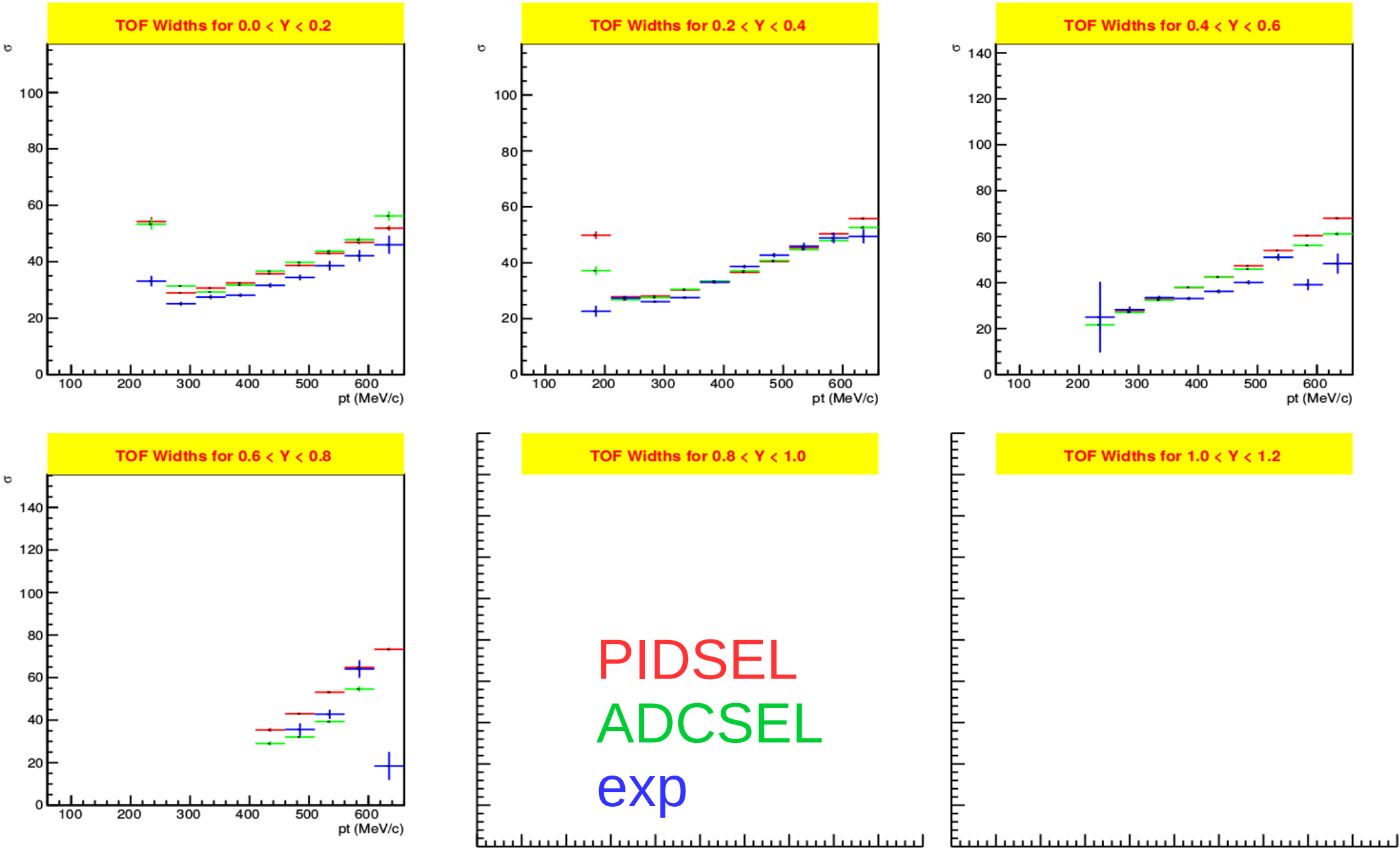
Checking MEAN from MC: C(RPC) K^+



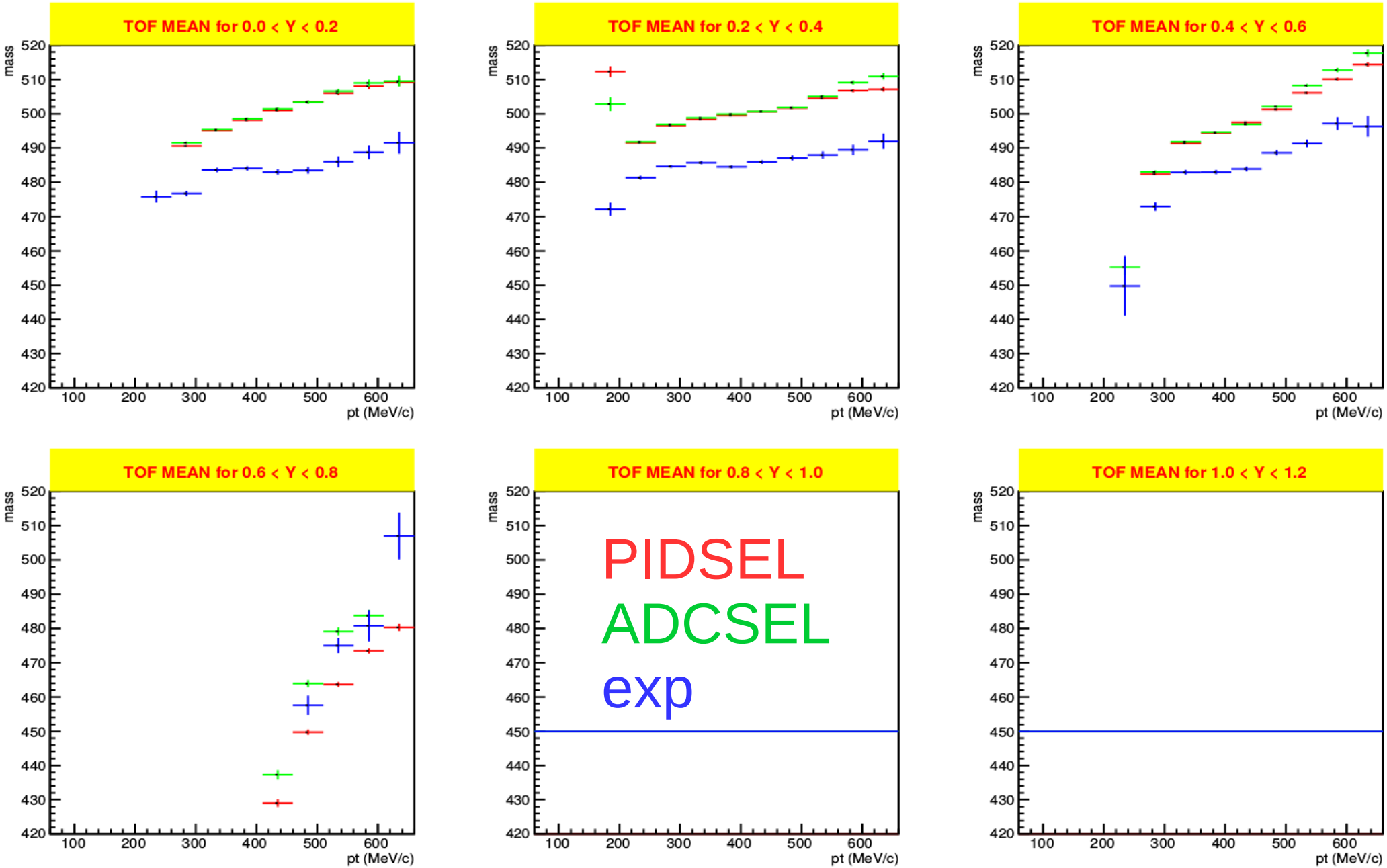
Checking K num from MC: C(RPC) K^+



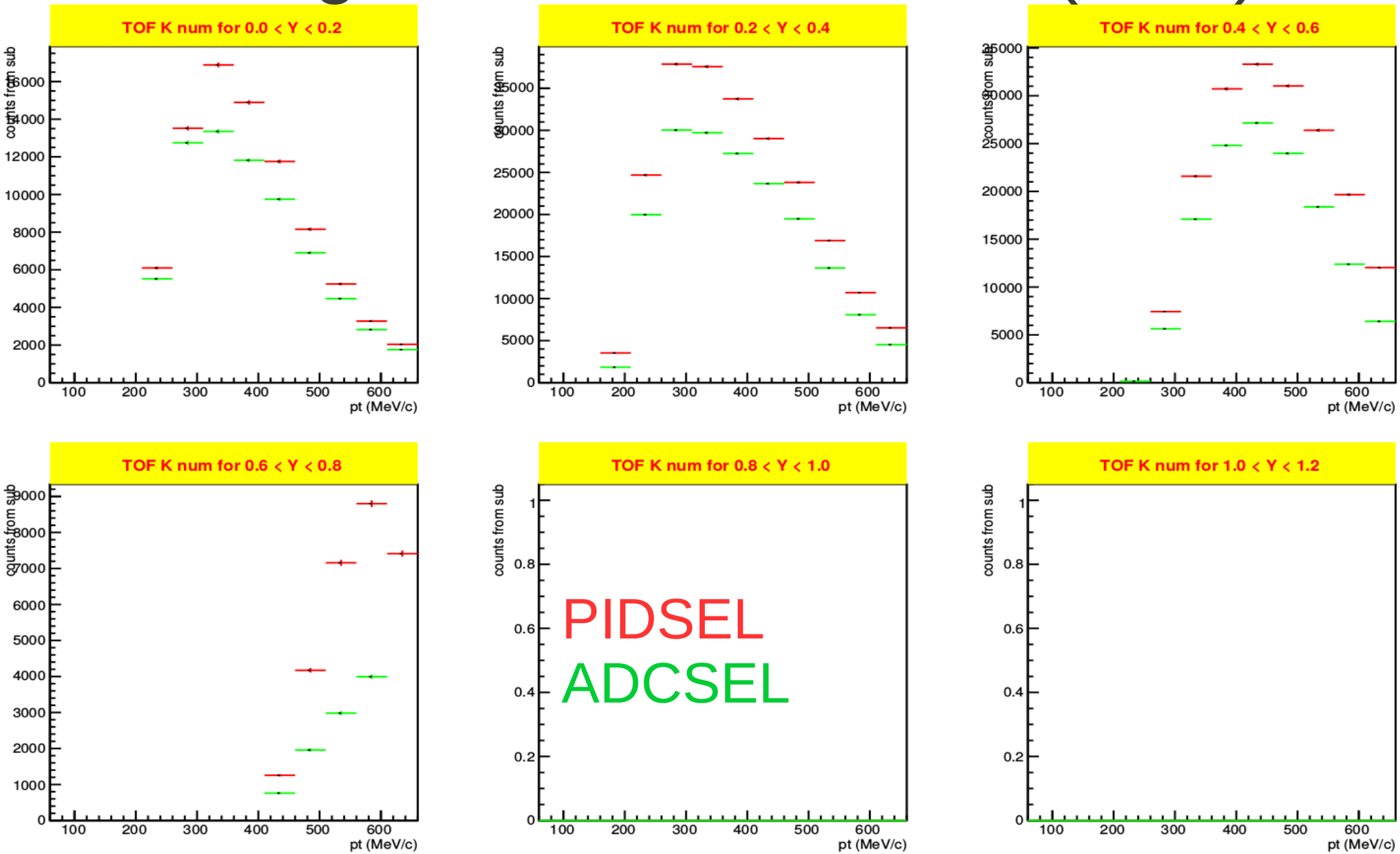
Checking σ from MC: C(TOF) K^+



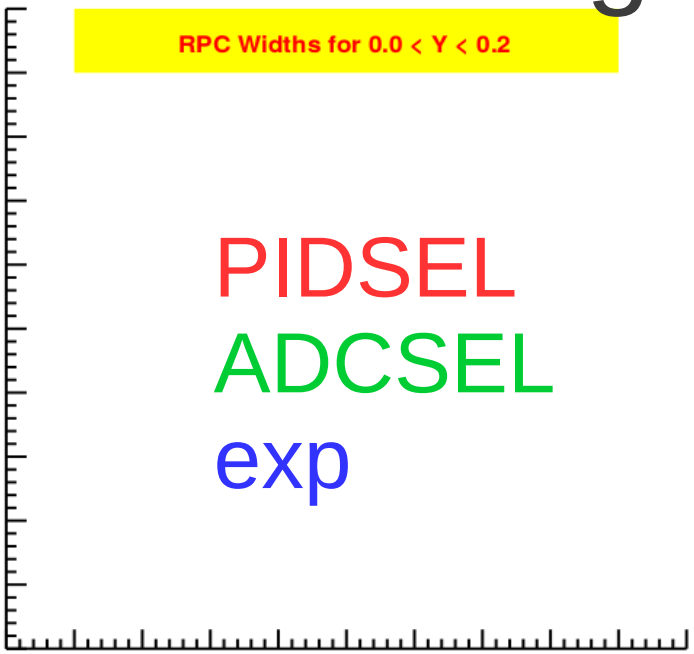
Checking MEAN from MC: C(TOF) K^+



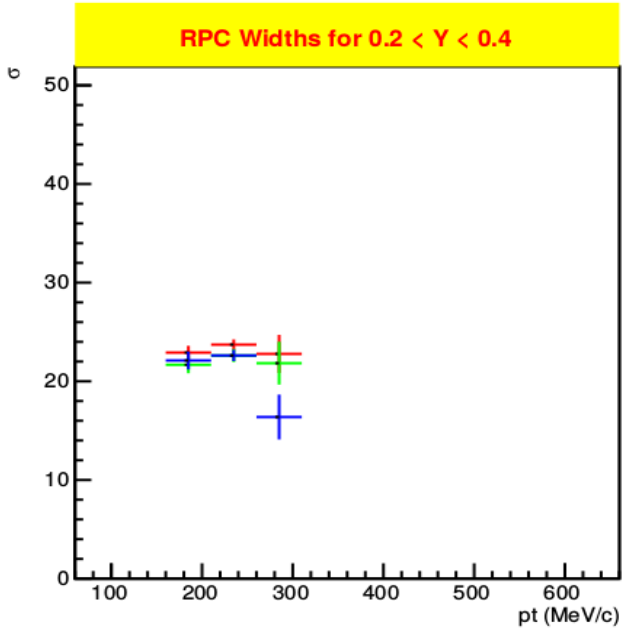
Checking K num from MC: C(TOF) K^+

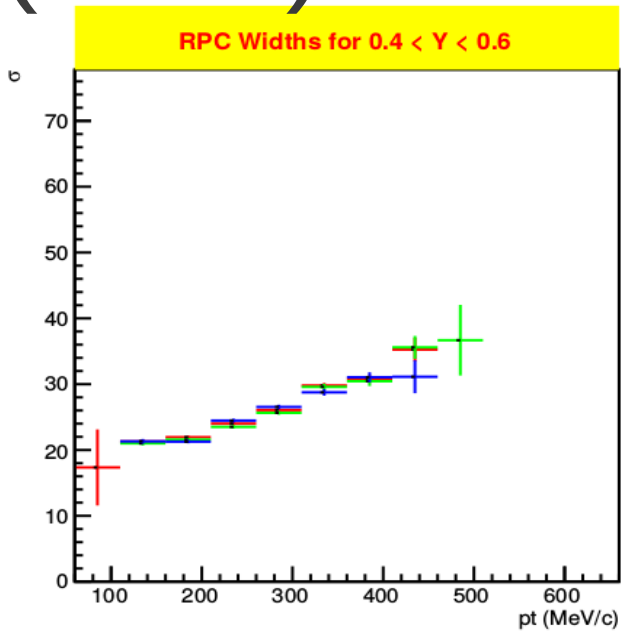


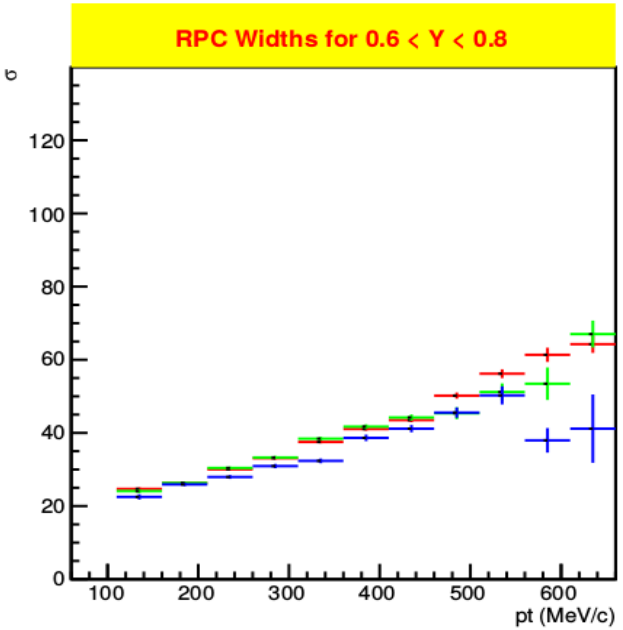
Checking σ from MC: W(RPC) K^+

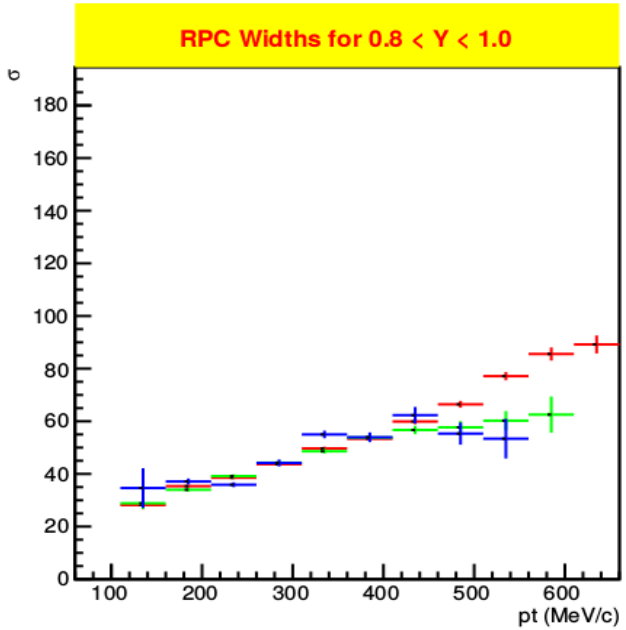


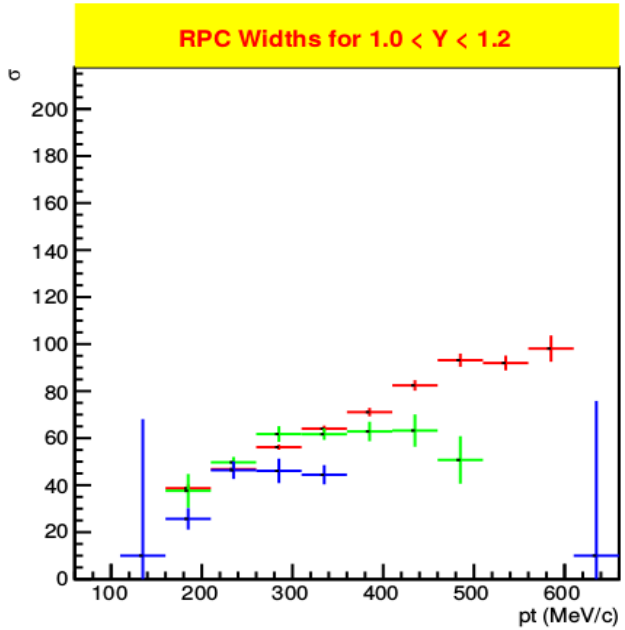
PIDSEL
ADCSEL
exp



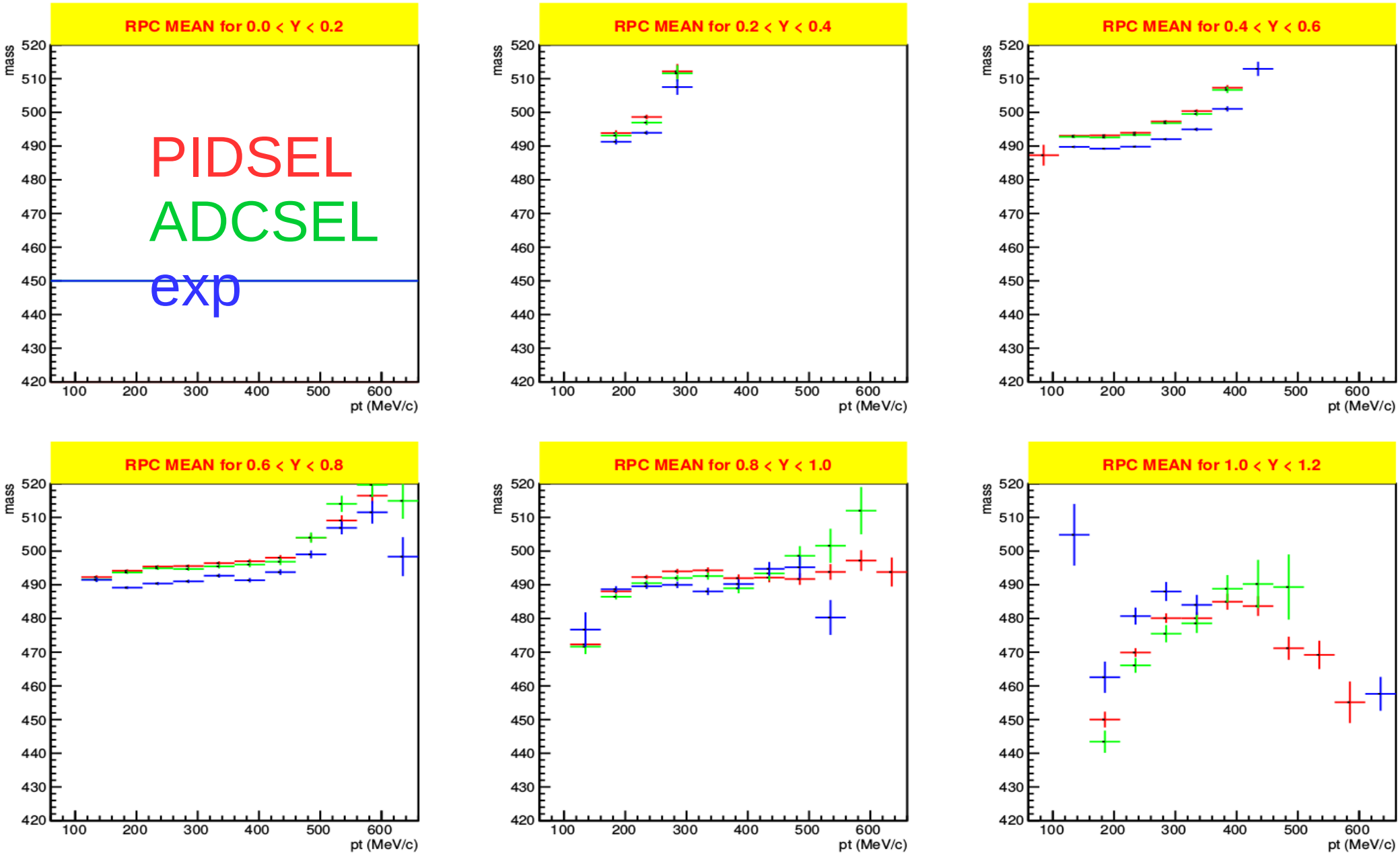




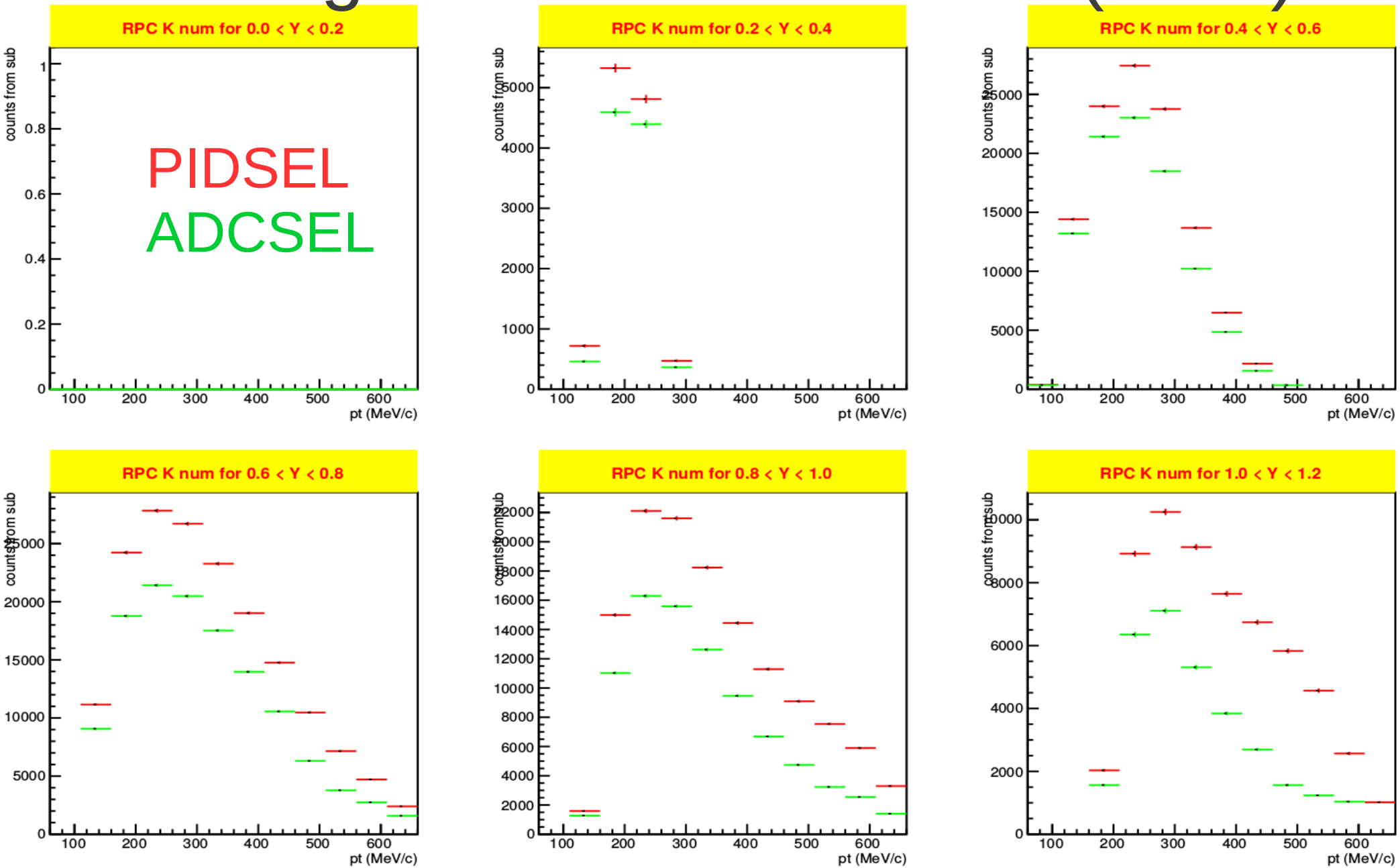




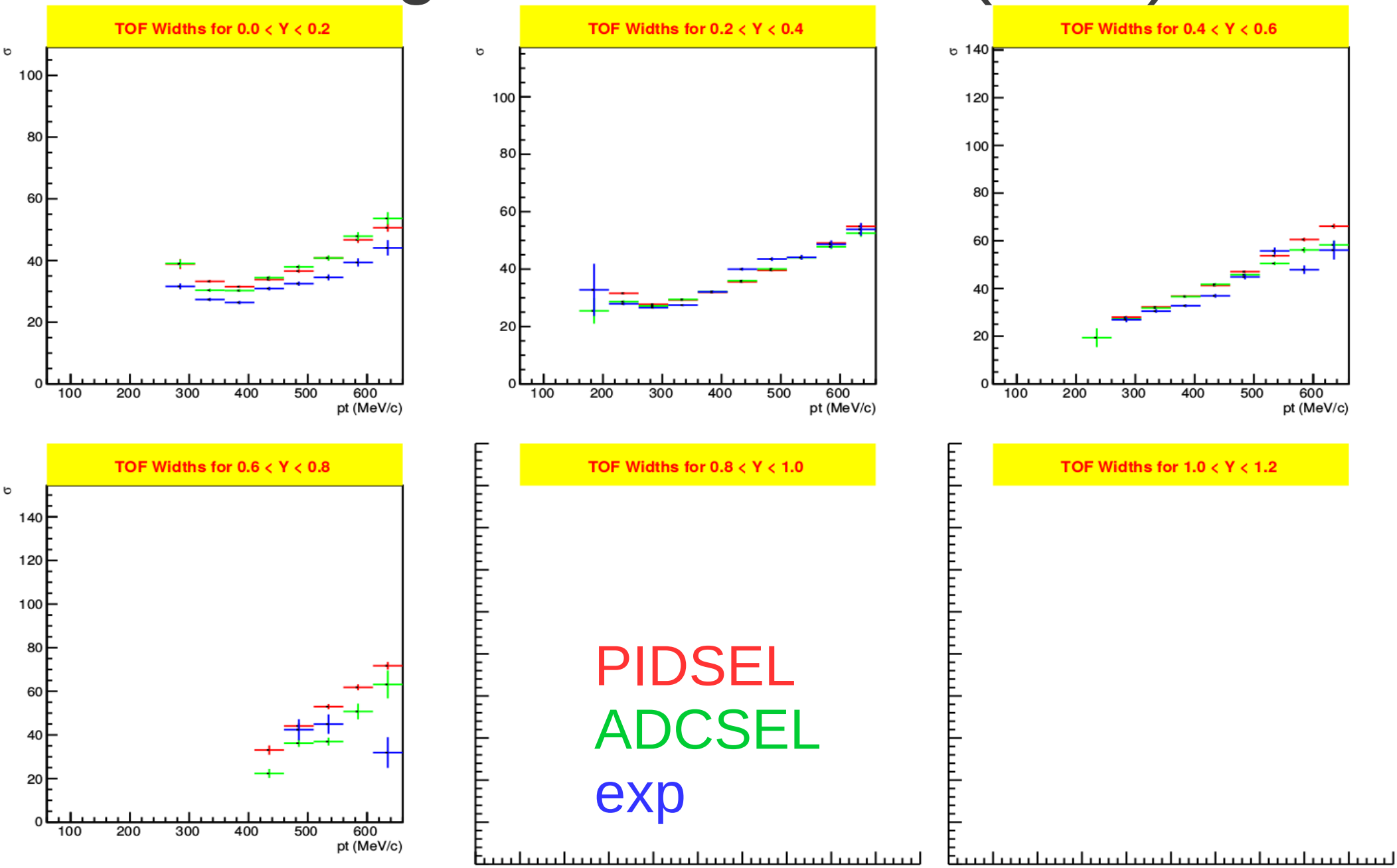
Checking MEAN from MC: W(RPC) K^+



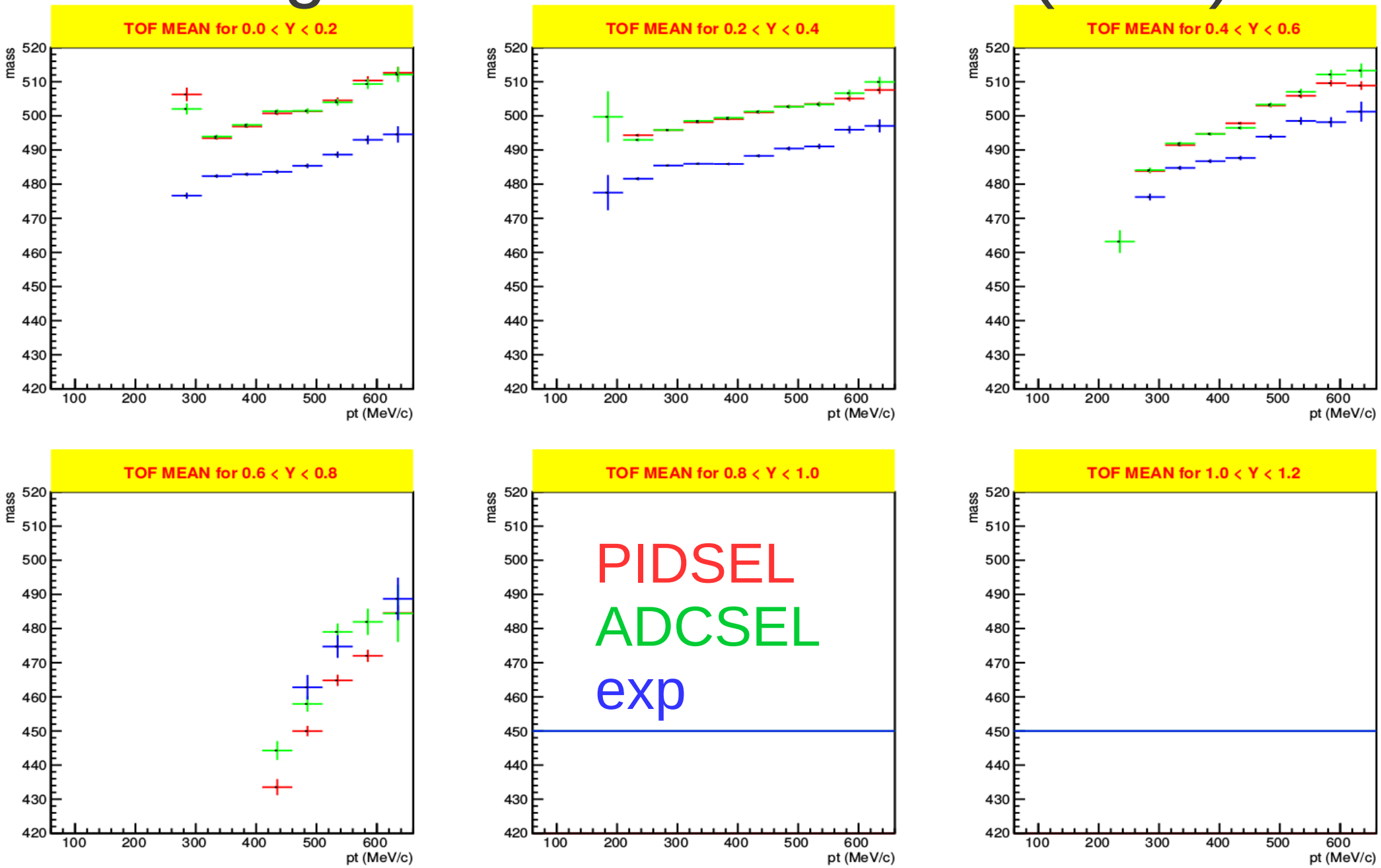
Checking K num from MC: W(RPC) K^+



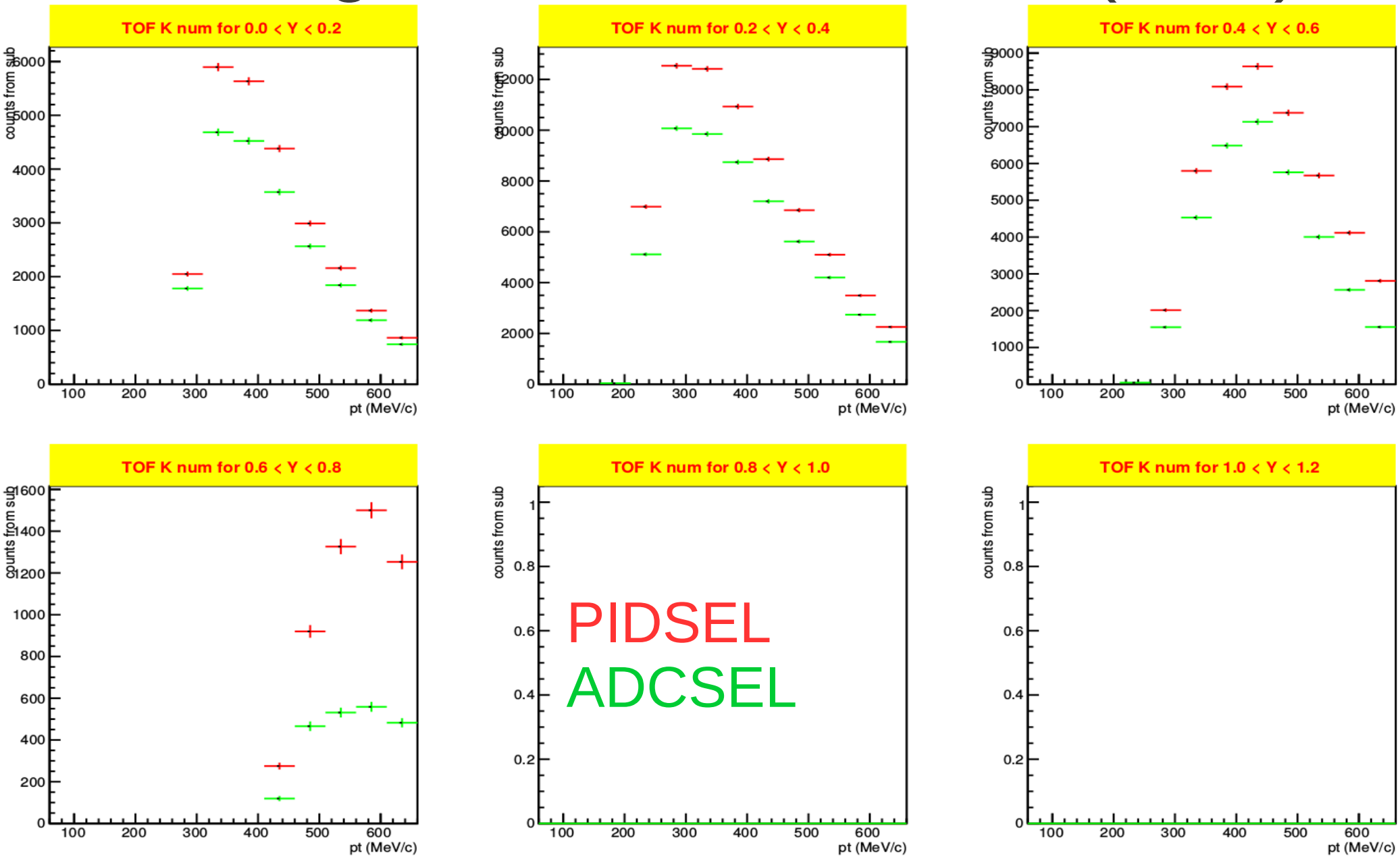
Checking σ from MC: W(TOF) K^+



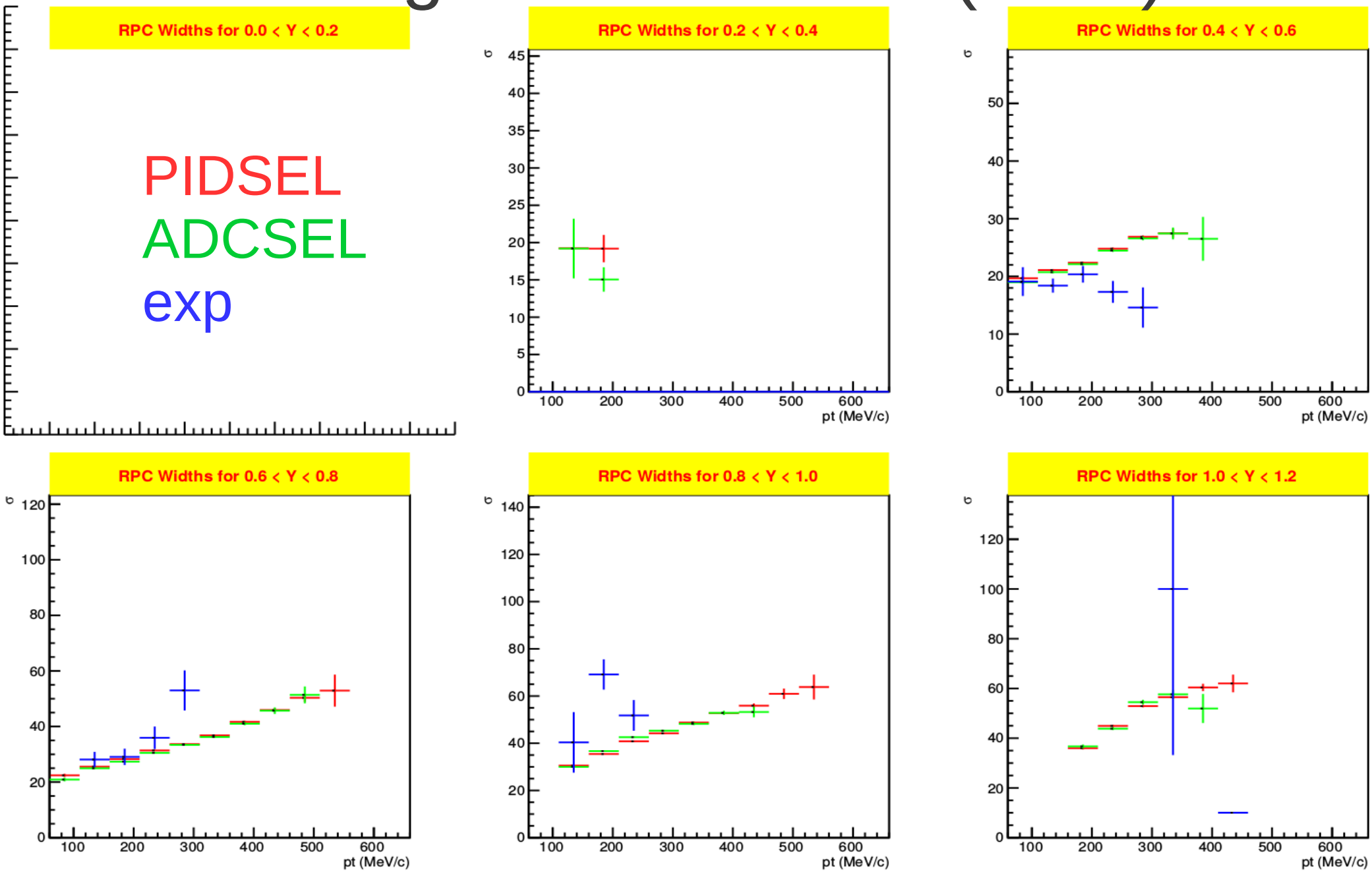
Checking MEAN from MC: W(TOF) K^+



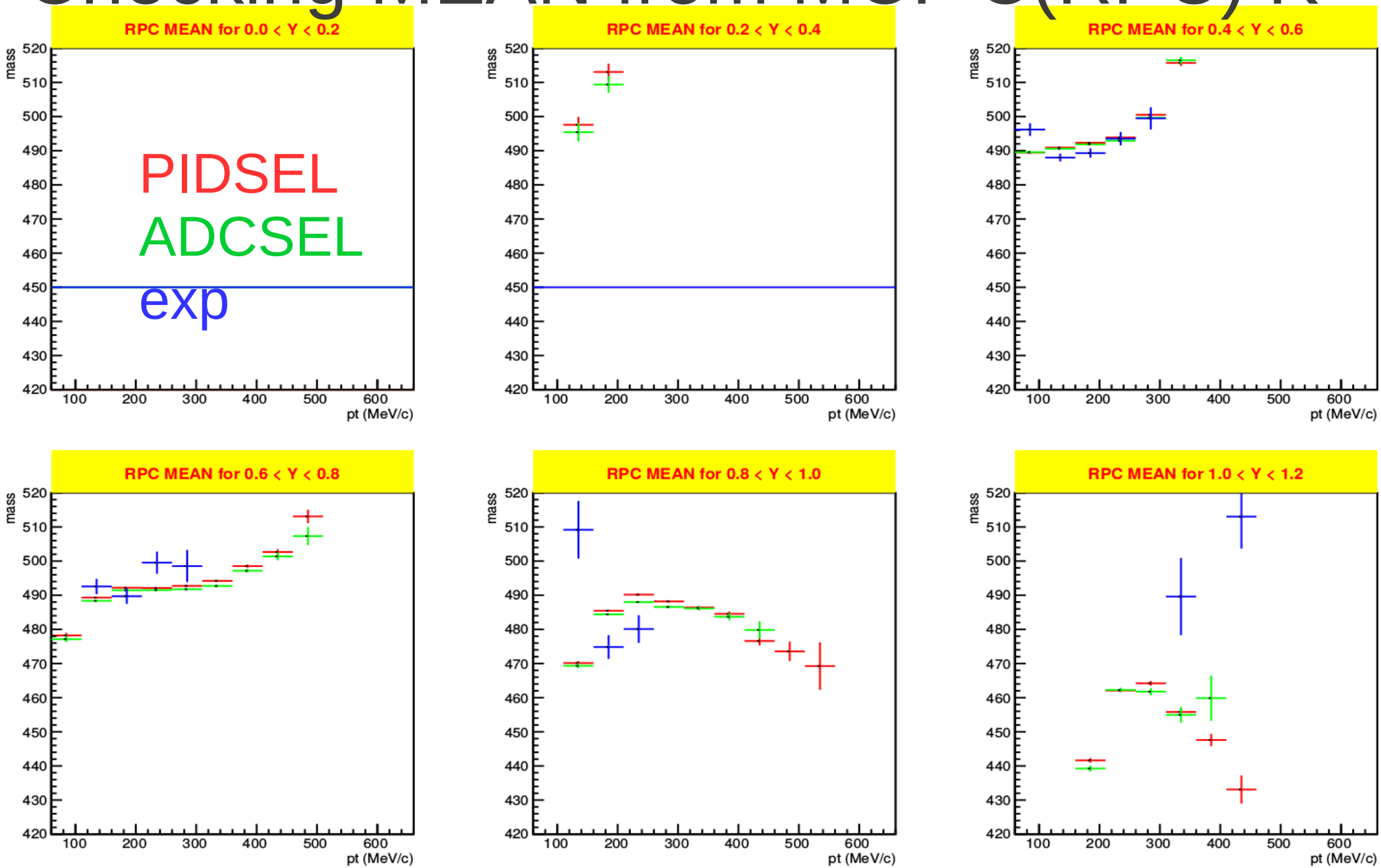
Checking K num from MC: W(TOF) K^+



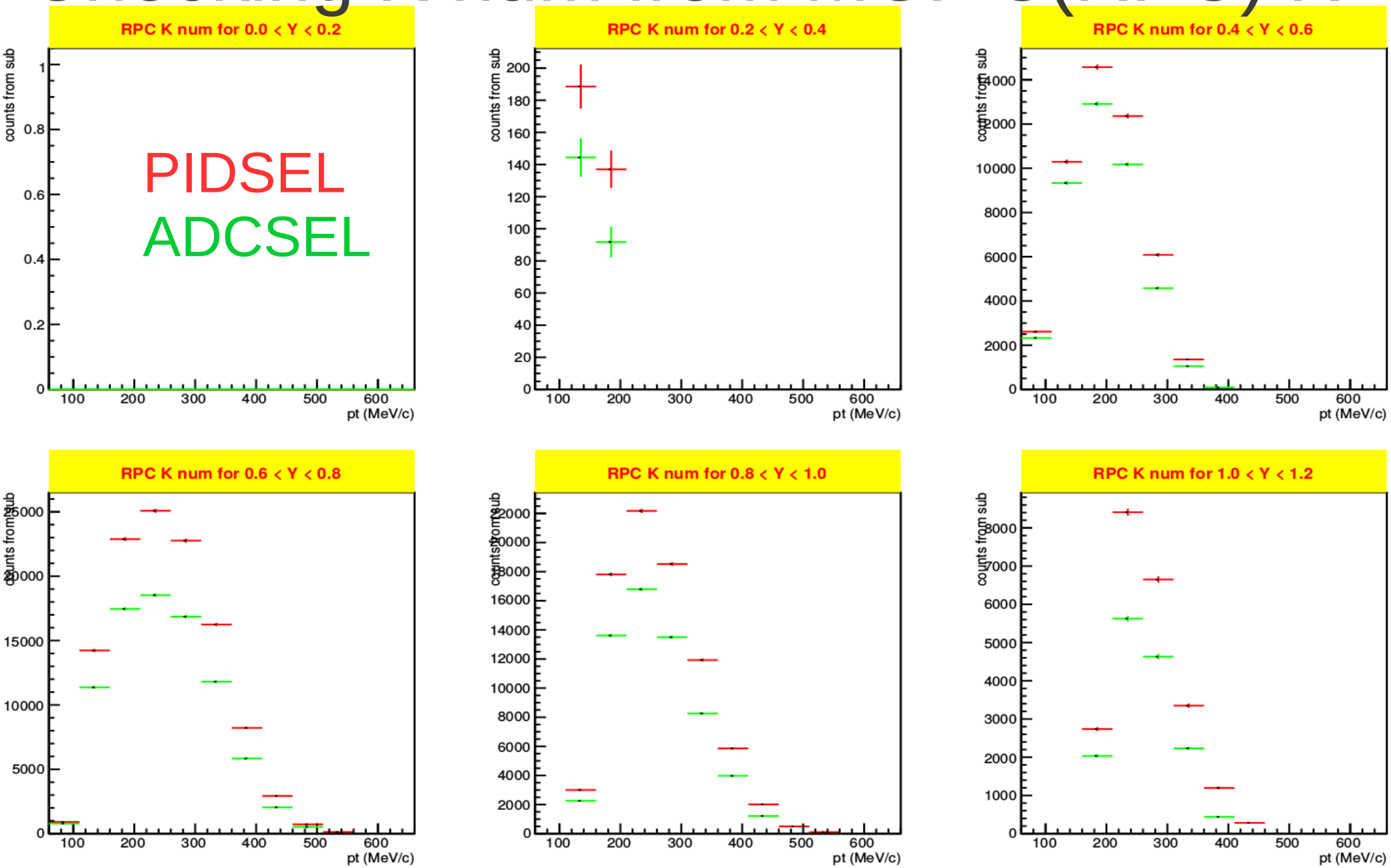
Checking σ from MC: C(RPC) K^-



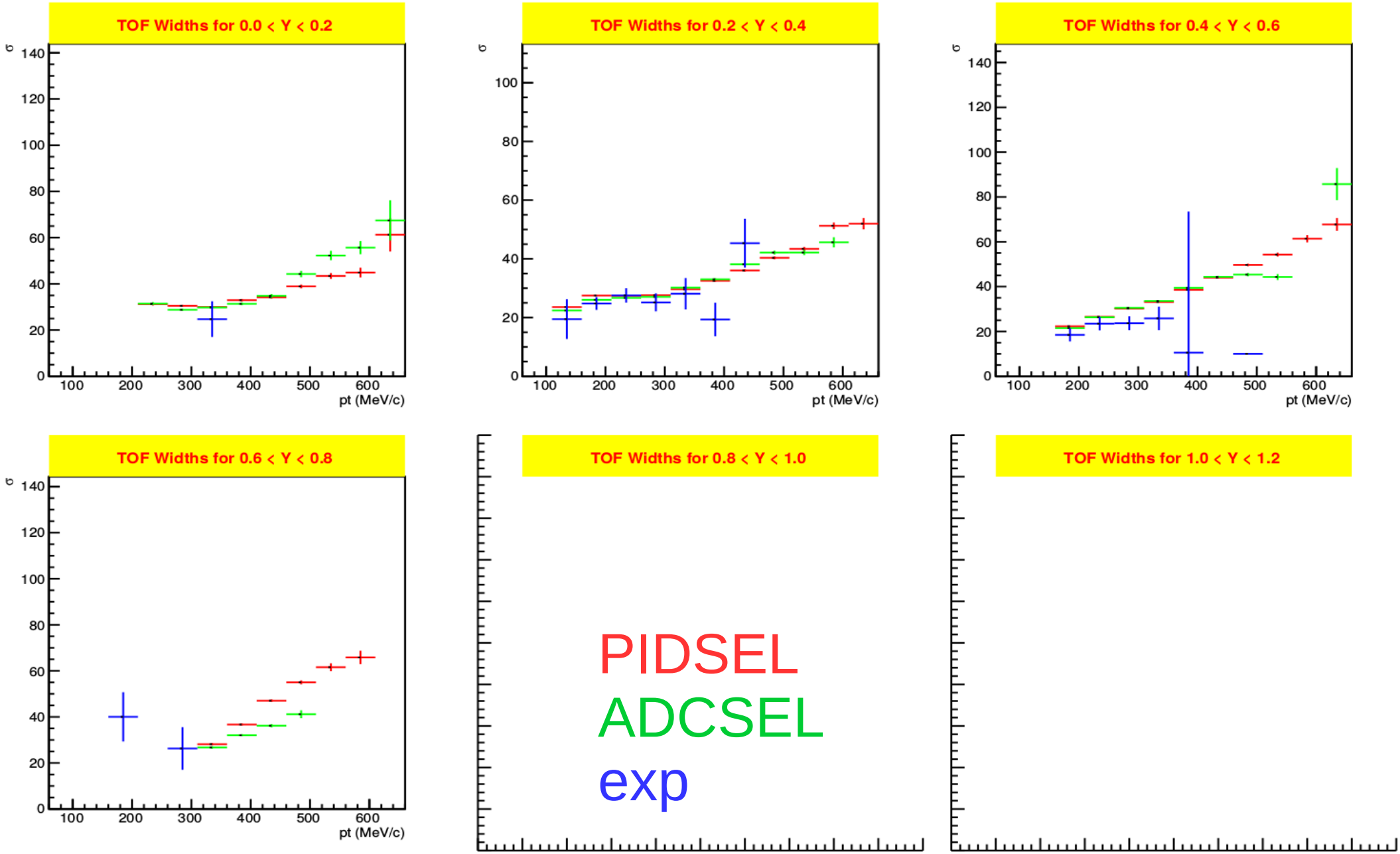
Checking MEAN from MC: C(RPC) K^-



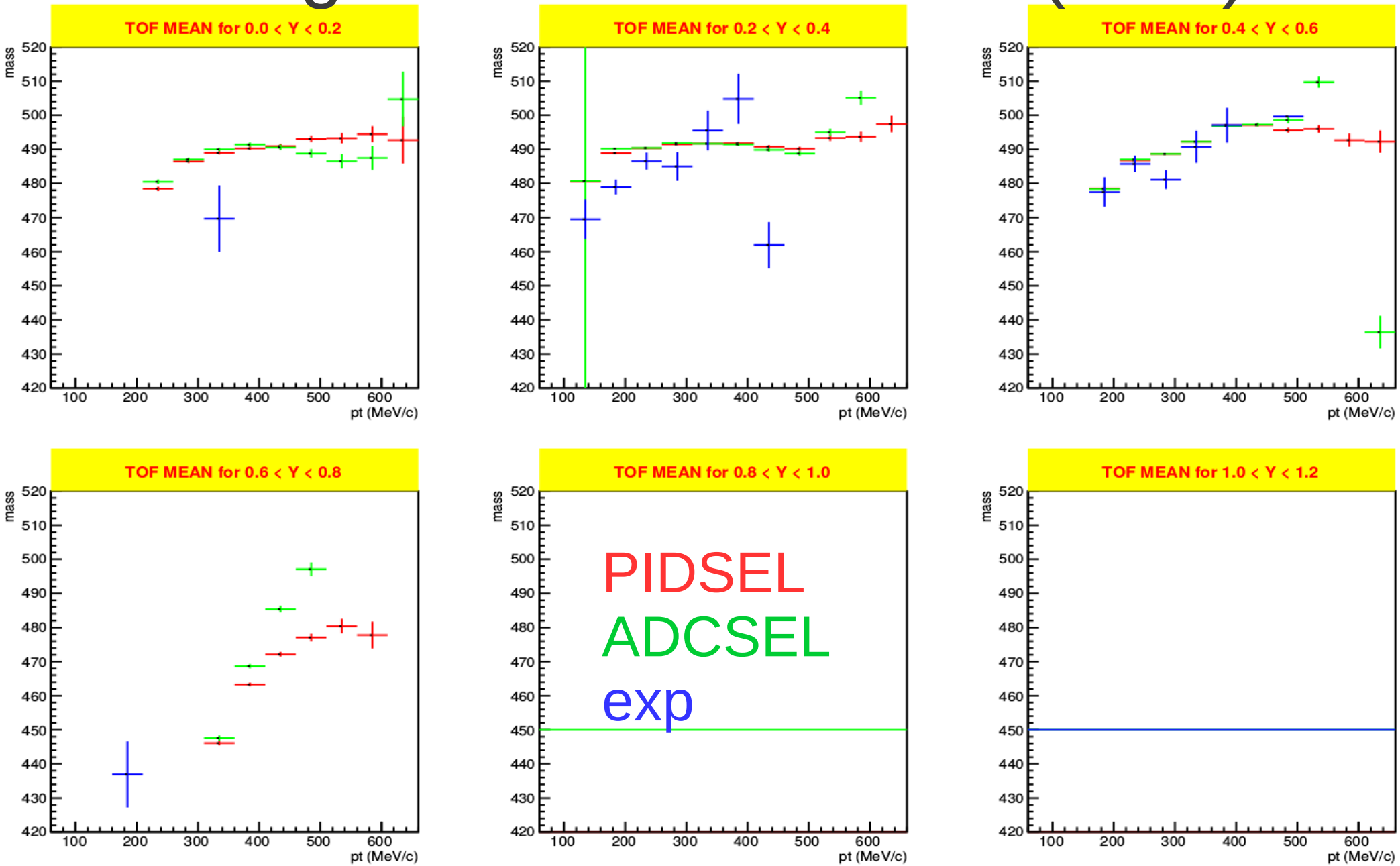
Checking K num from MC: C(RPC) K^-



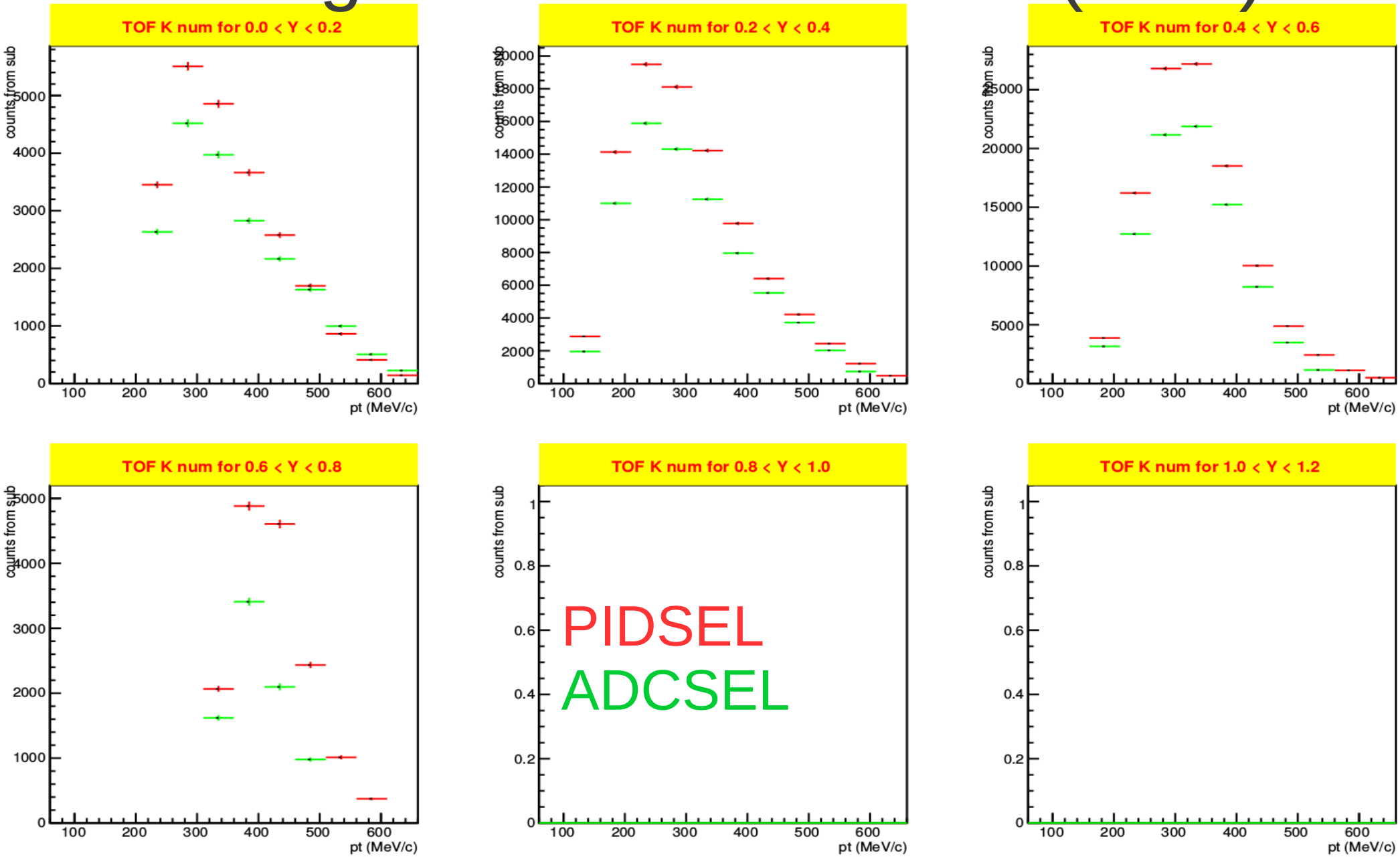
Checking σ from MC: C(TOF) K^-



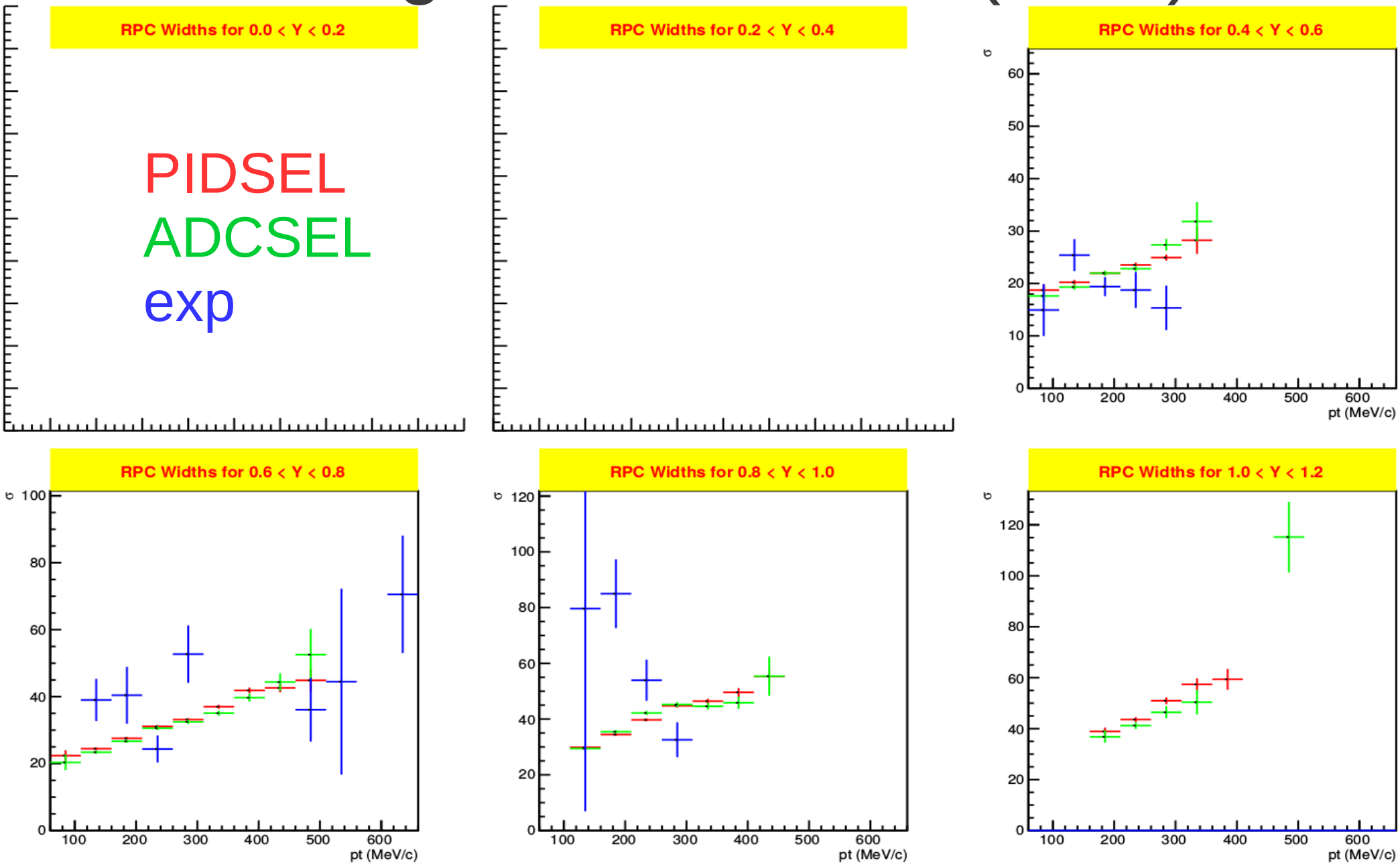
Checking MEAN from MC: C(TOF) K^-



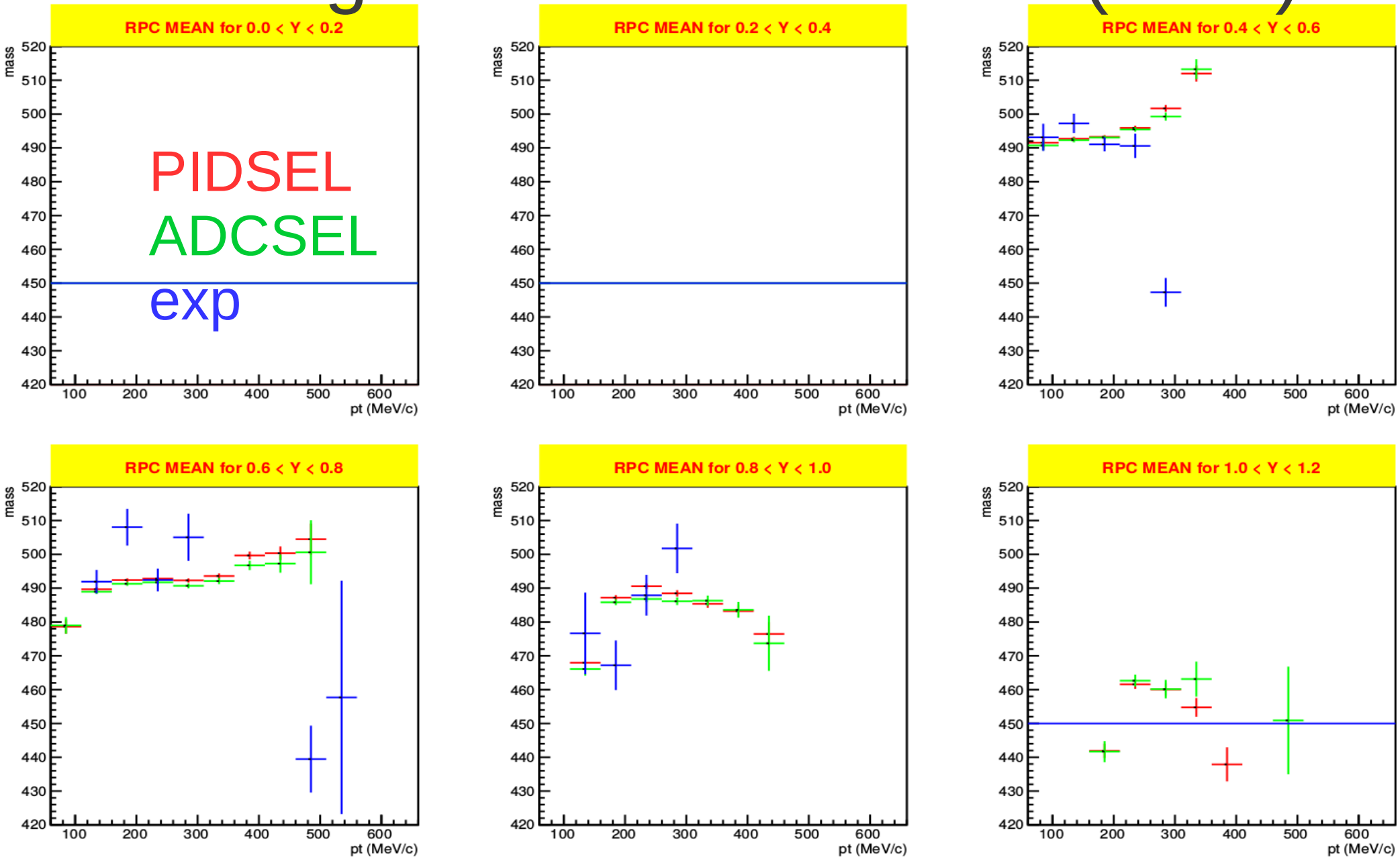
Checking K num from MC: C(TOF) K^-



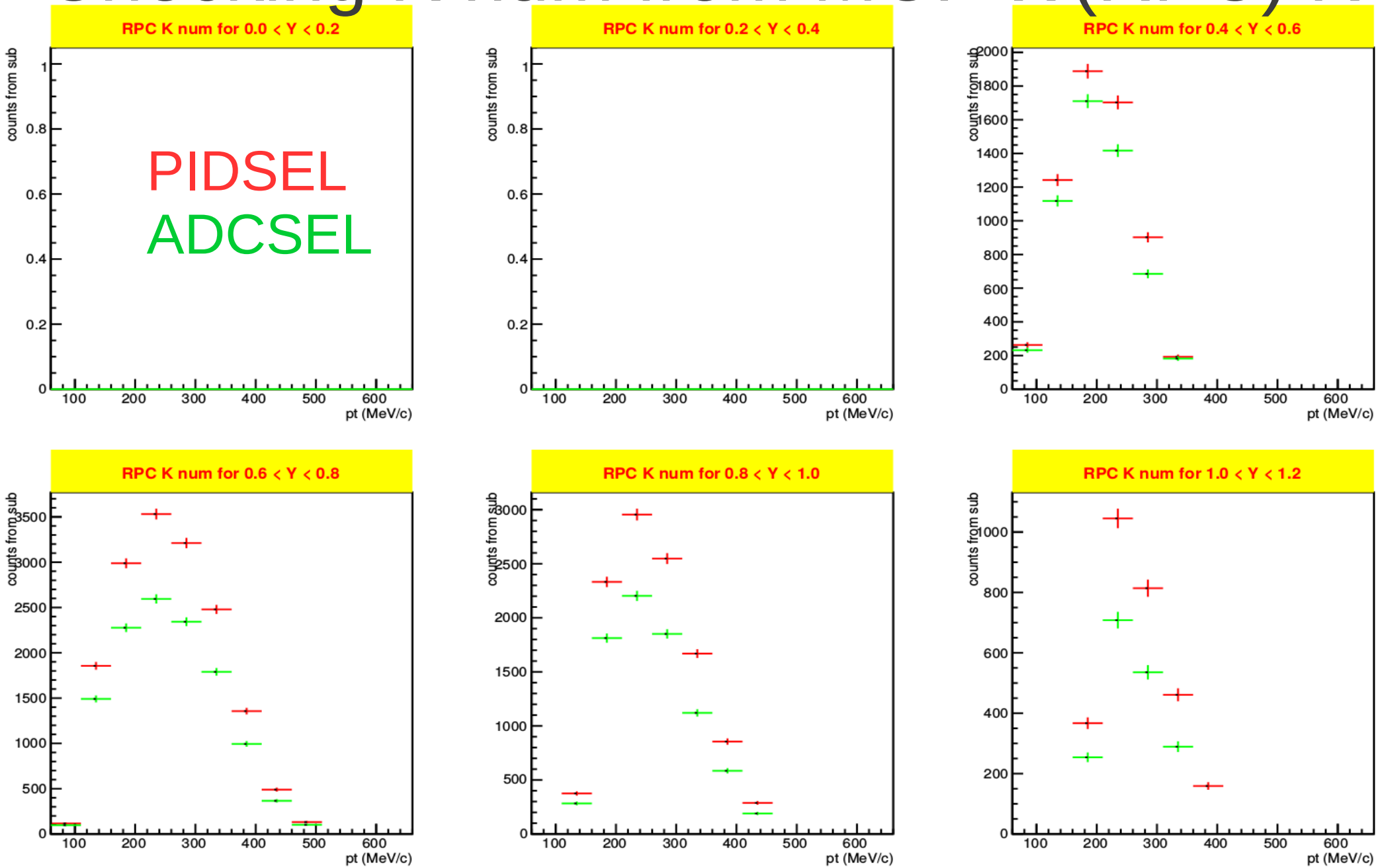
Checking σ from MC: W(RPC) K^-



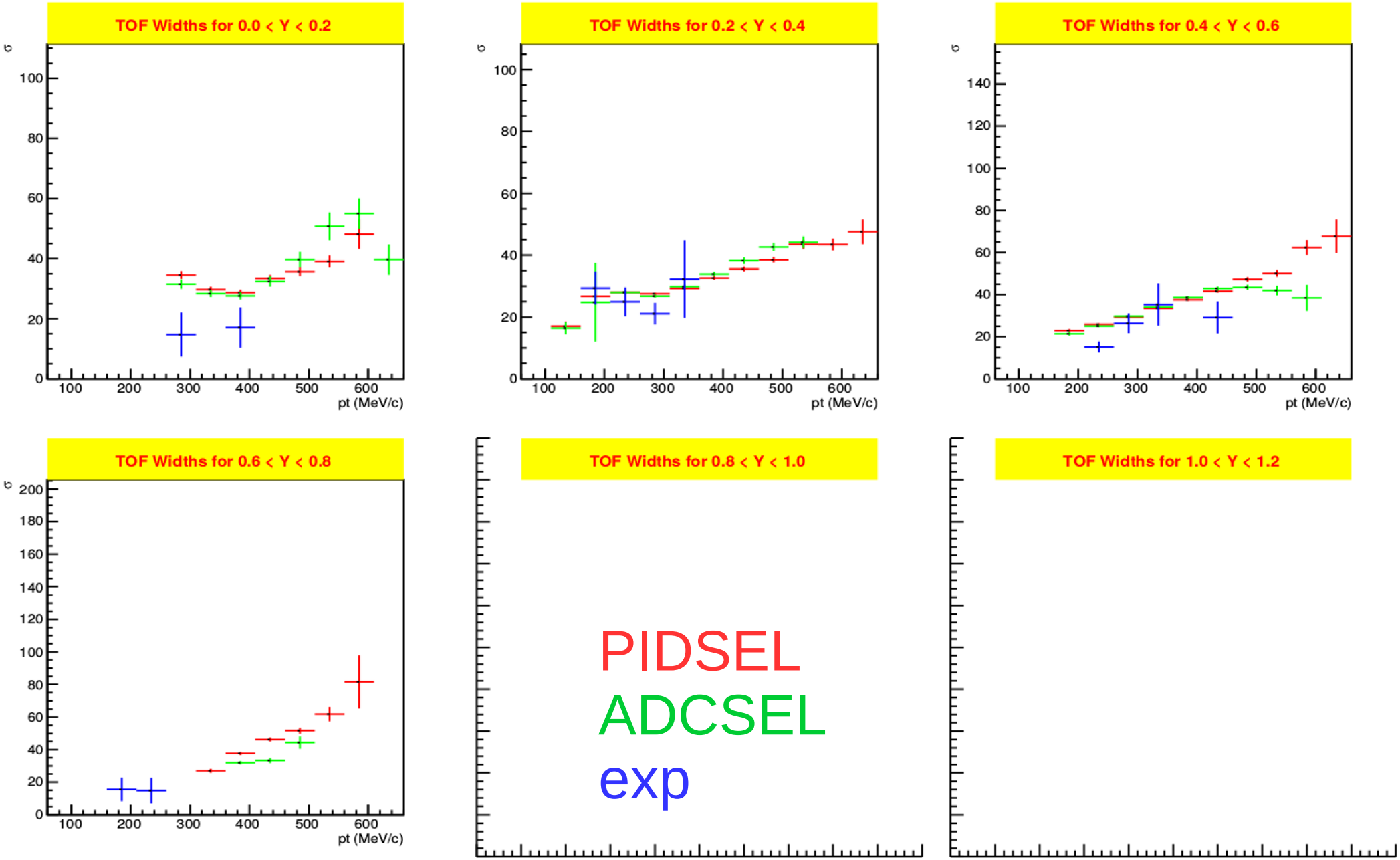
Checking MEAN from MC: W(RPC) K^-



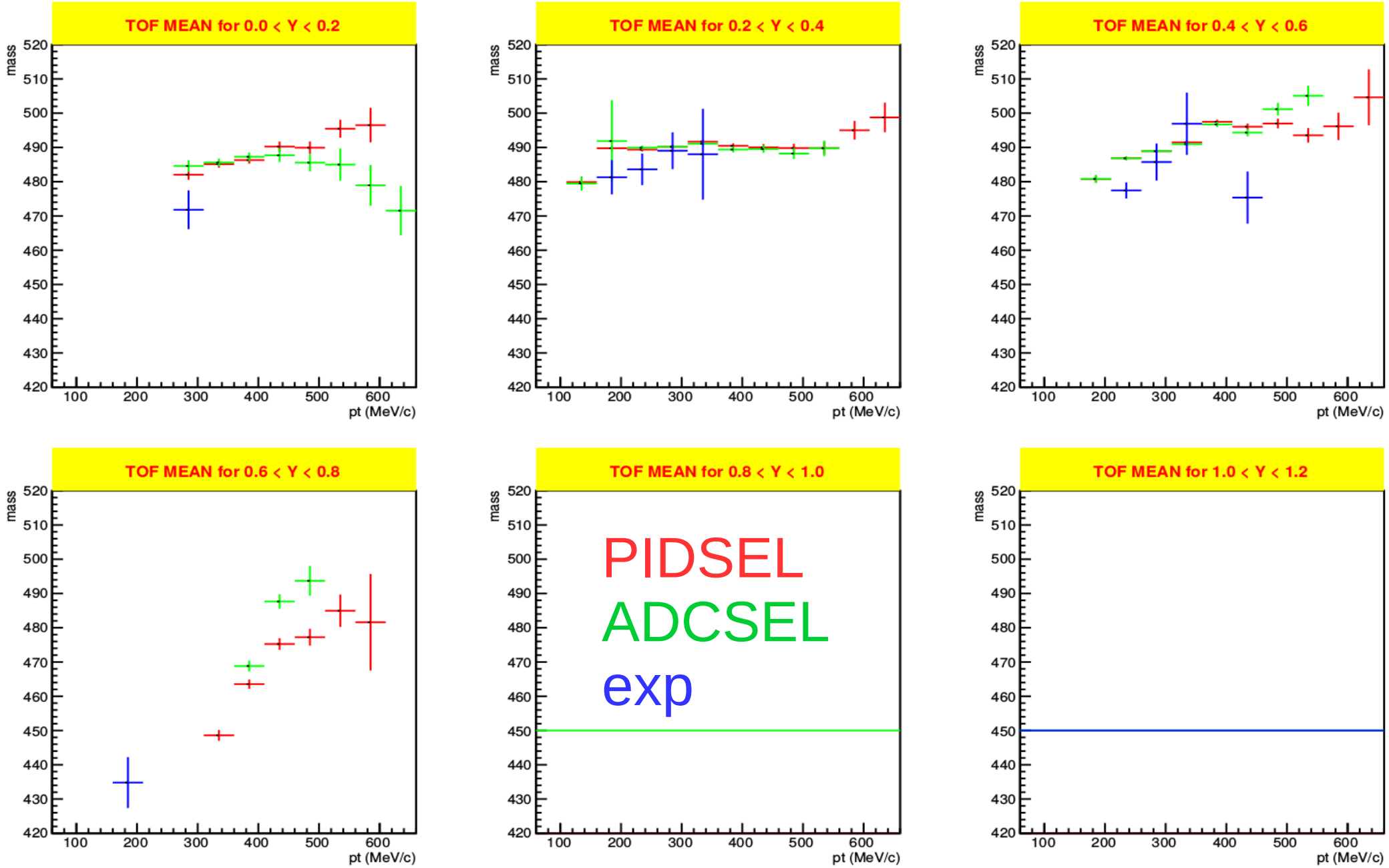
Checking K num from MC: W(RPC) K⁻



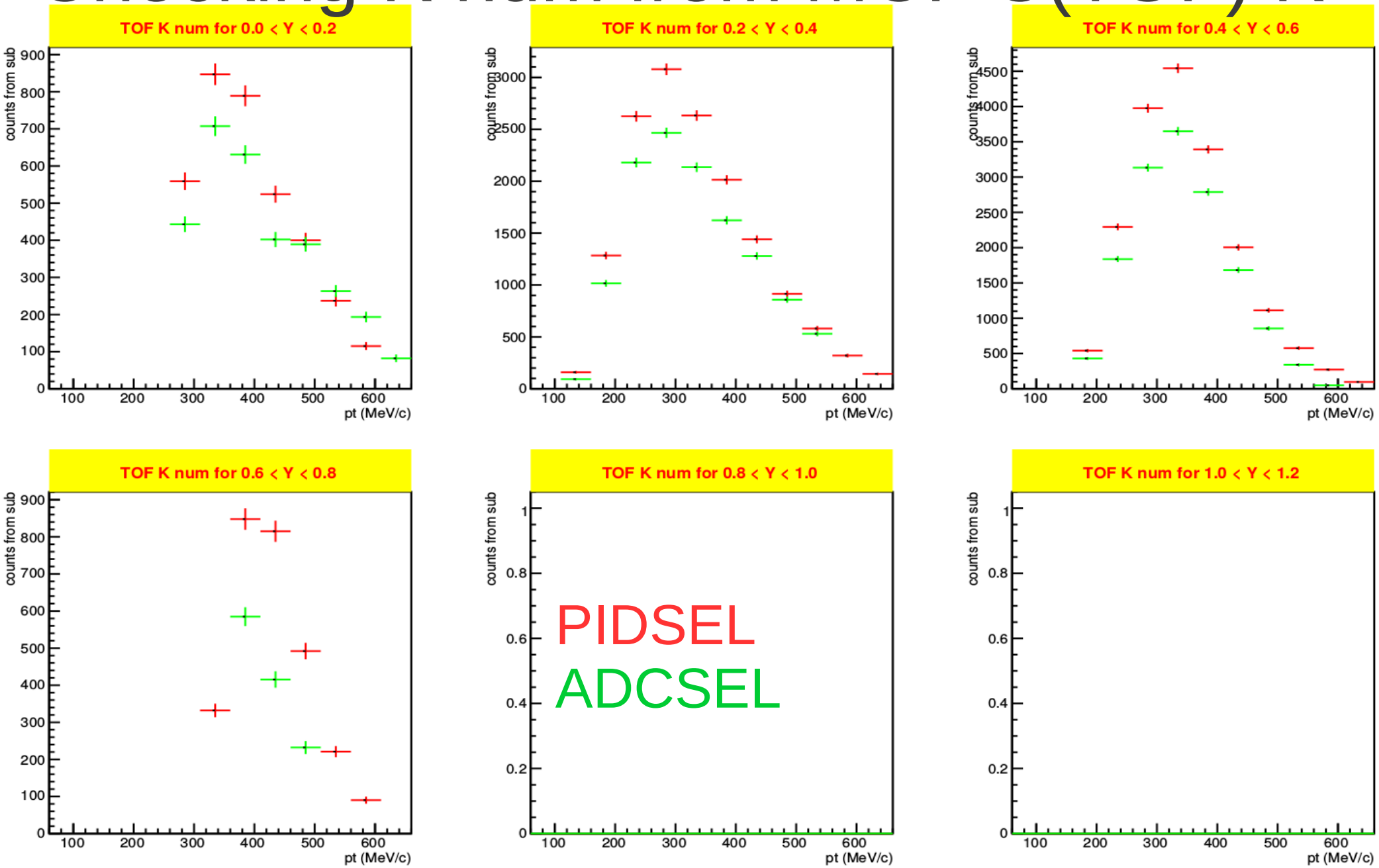
Checking σ from MC: W(TOF) K^-



Checking MEAN from MC: W(TOF) K^-



Checking K num from MC: C(TOF) K^-



Checking MC vs Data

- Differences in MEAN and WIDTH between different MC selection for some bins (but mostly above 500 MeV/c)
- Which are to be used for limits on exp data fit?

- Big difference in K number reconstruction
- Big influence on the efficiency correction → optimization is strongly needed