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Horn, step in p+p interactions

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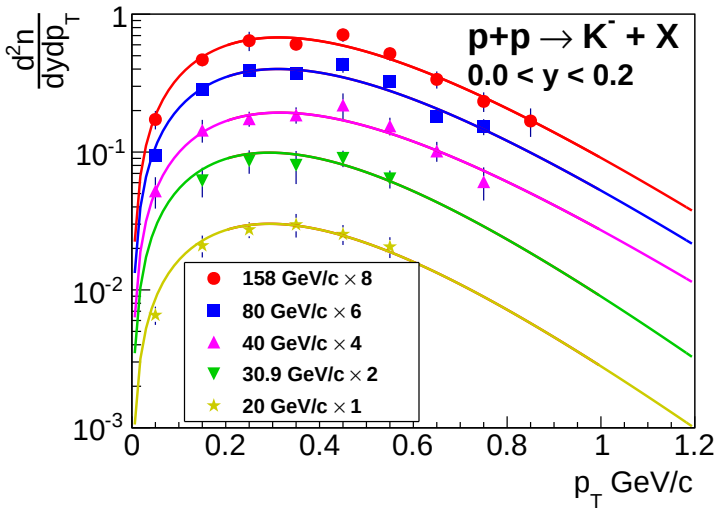
How Inverse slope and multiplicities was obtained

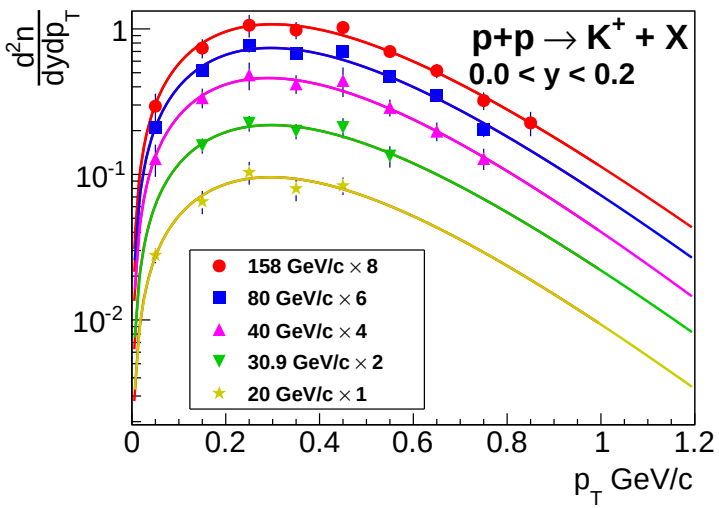
- Spectra in p_T were fitted
- Fit function:

$$\frac{d^2n}{dp_T dy} = \frac{Sp_T}{T^2+m_K T} \exp\left(-\frac{\sqrt{p_T^2+m_K^2}-m_K}{T}\right)$$

- Fit was performed in full measurement range
- dn/dy was calculated as sum of:
  - Measure points
  - Extrapolation from fit function

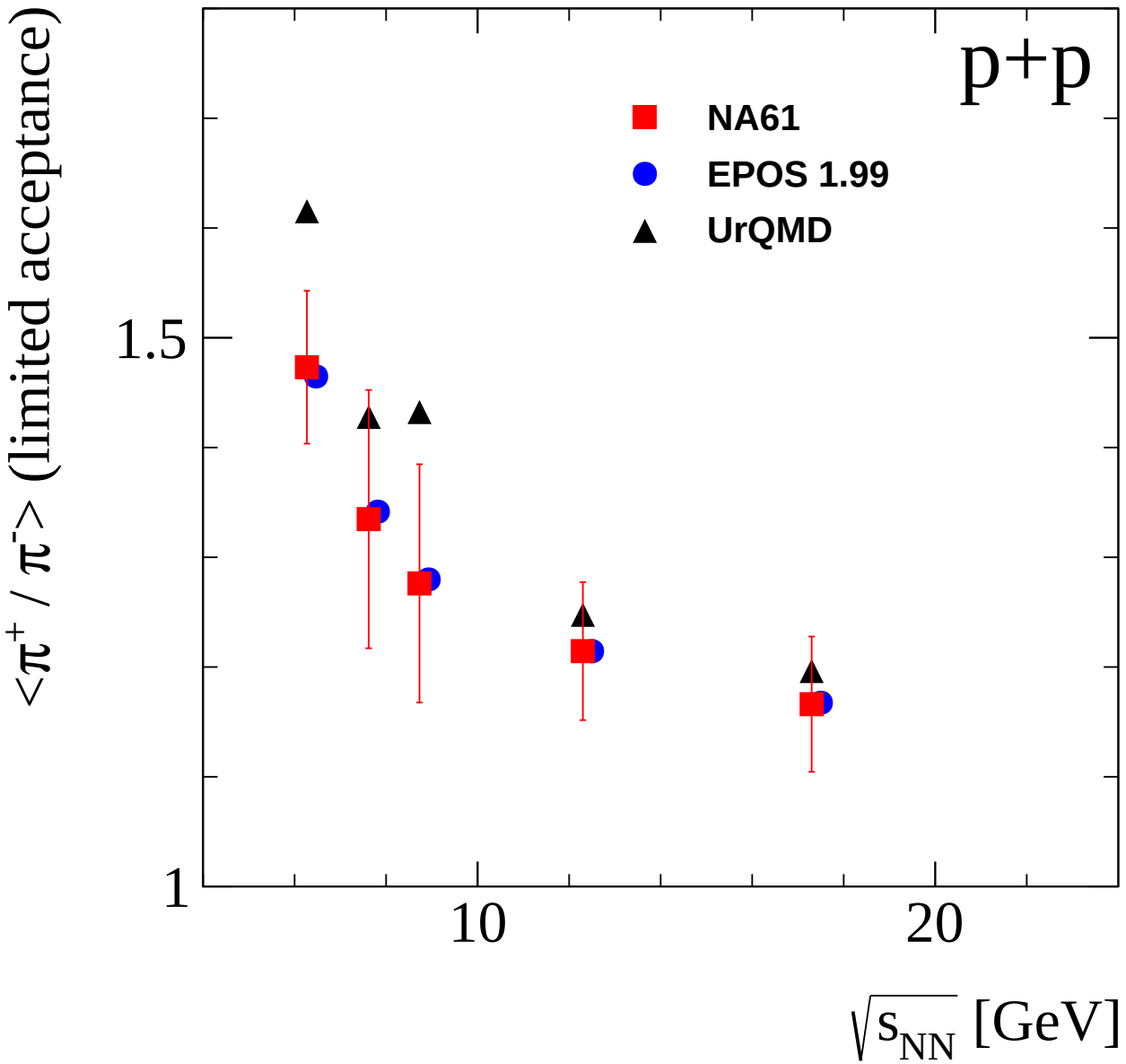
Fit and results



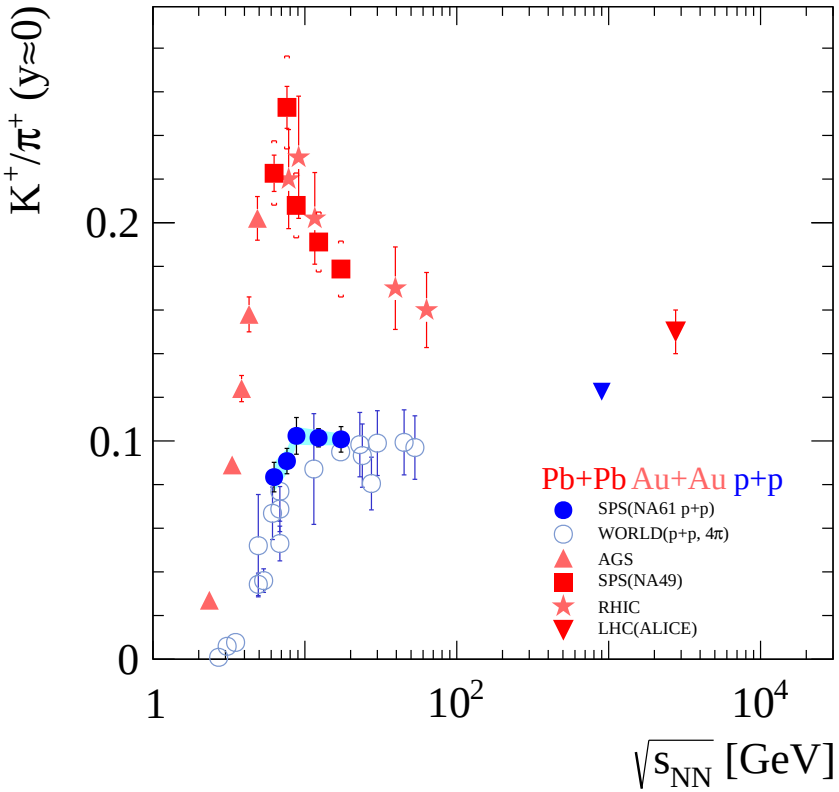


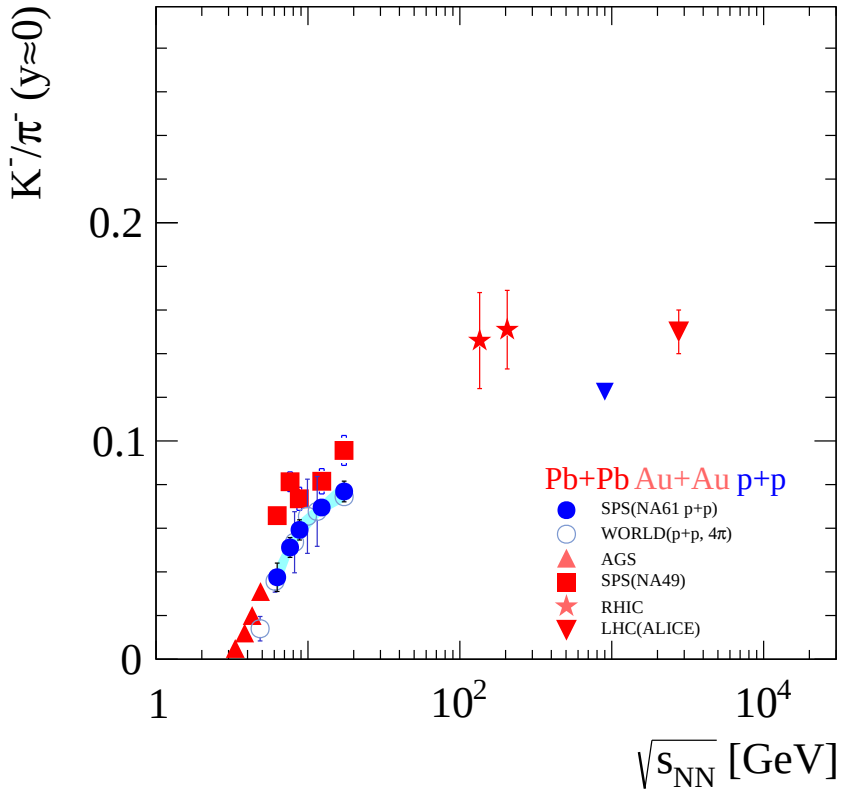
$\frac{K}{\pi}$ ratios

Mean π^+ over π^- ratio in ToF vs dE/dx acceptance



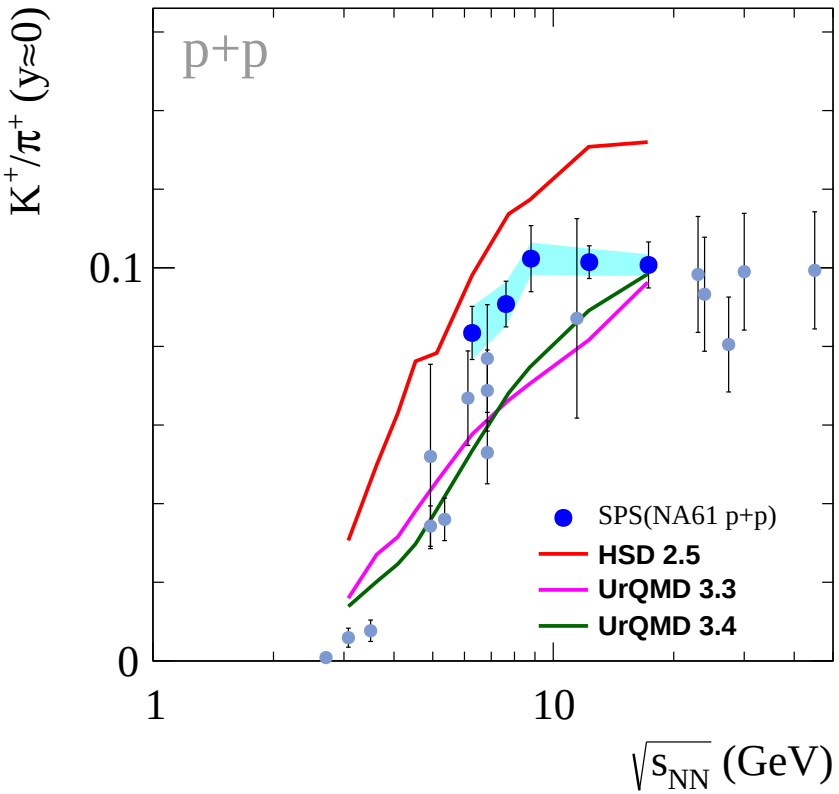
$\frac{K}{\pi}$ ratio

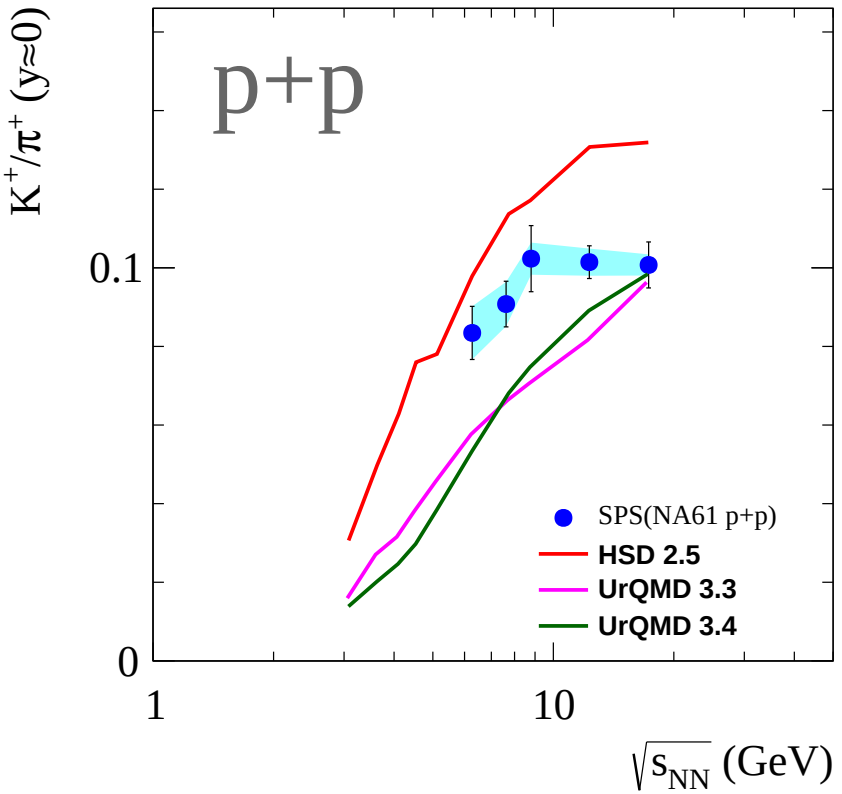




world p+p based on:
Z.Phys. C65 (1995) 215-223 (π)
Z.Phys. C71 (1996) 55-64 (K)

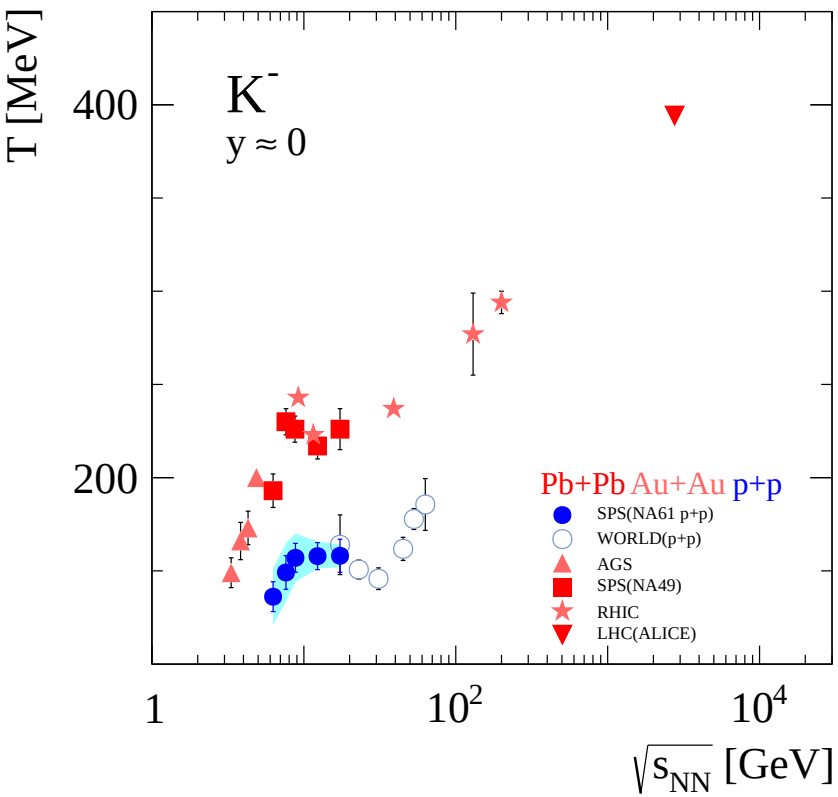
$\frac{K}{\pi}$ ratio from p+p - Comparison to models

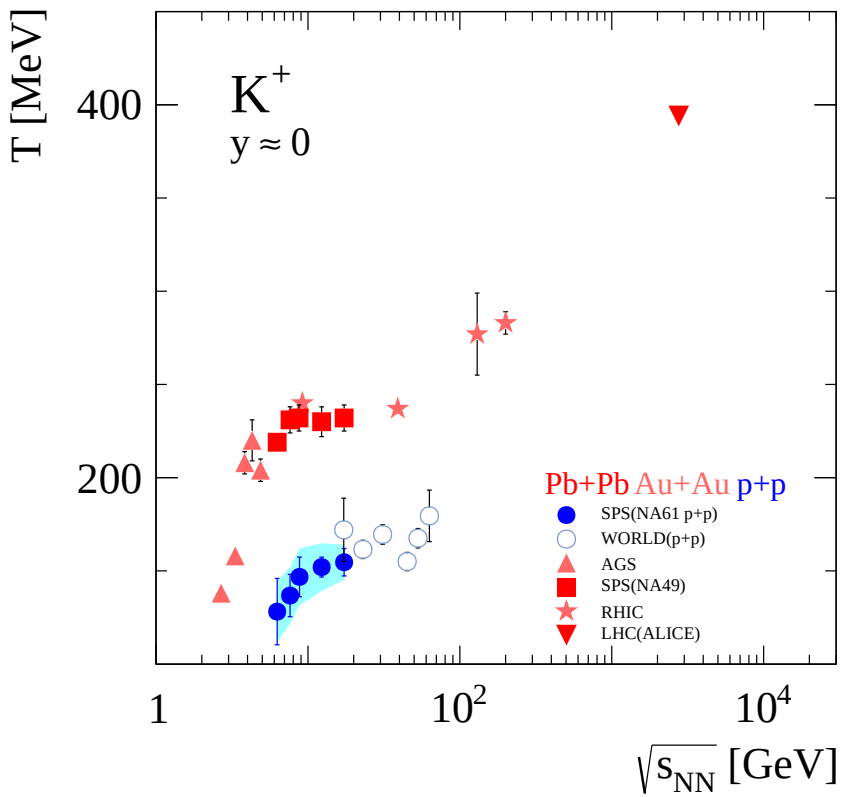




Inverse slope parameter

Inverse slope parameter T





Inverse slope of world data based on:
Phys.Rev. C69 (2004) 044903

Summary

- K/π ratio at mid rapidity was presented.
- Inverse slope of kaon p_T spectra was calculated.
- Even in p+p the energy dependence of K^+/π^+ and T exhibits rapid changes in the SPS energy range
- The structures (horn,step) are significantly reduced / modified when compared to Pb+Pb

Thank you.