



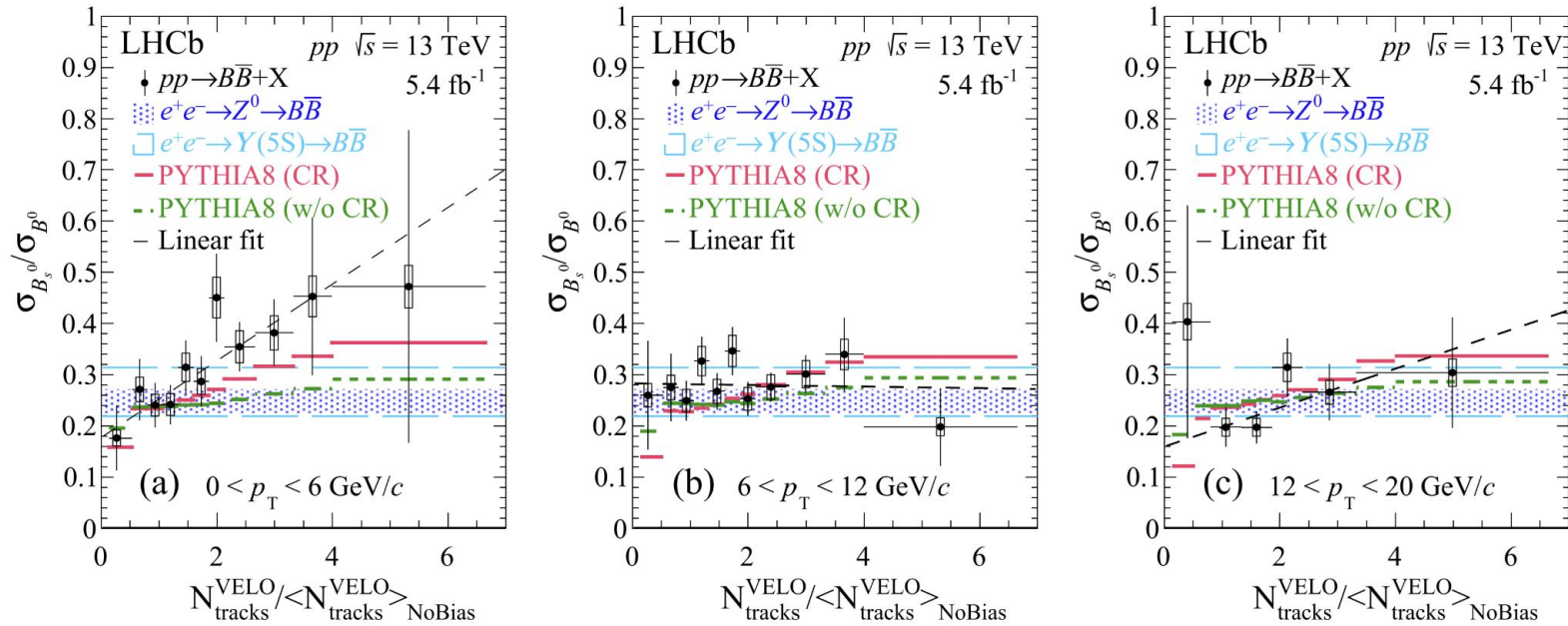
Strangeness enhancement at LHCb

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University of Michigan
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Strangeness enhancement in b-quark hadronization

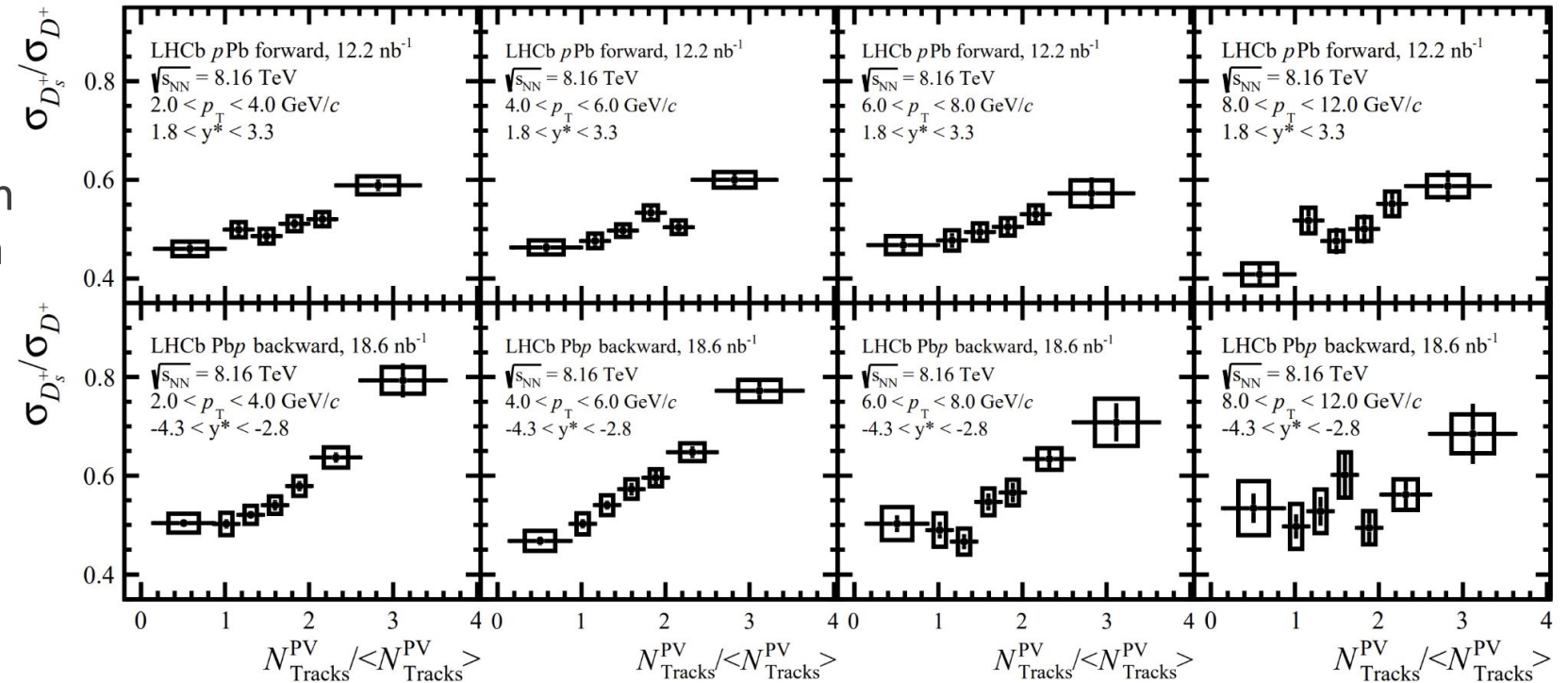
- Dependence on local particle density
- Trend disagrees with purely Lund fragmentation picture at low p_T
- Qualitatively consistent with expectations from coalescence



[Phys.Rev.Lett. 131 \(2023\) 6, 061901](#)

Strangeness enhancement in c-quark hadronization

- Enhancement in both proton-going and ion-going region
- Enhancement persists in a wider p_T range than in beauty

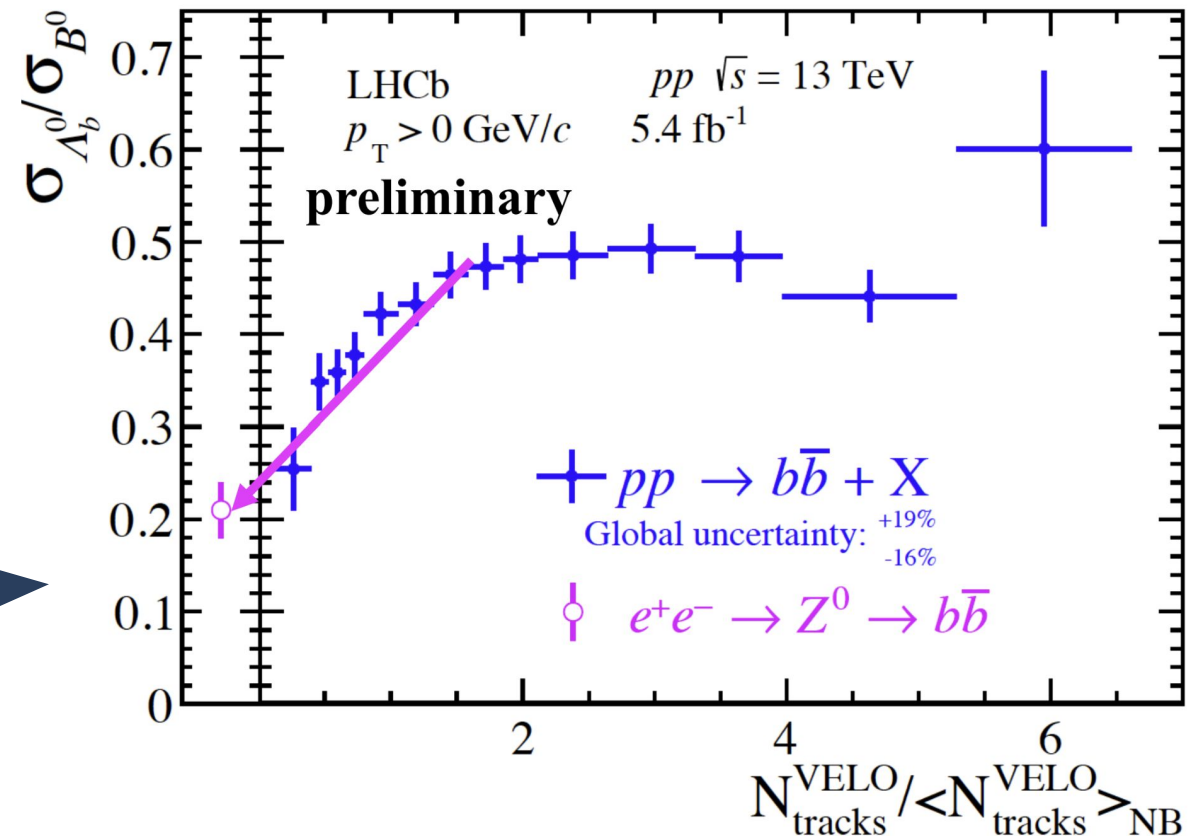


preliminary

Takeaways and Follow-ups

- First observations of small-systems strangeness enhancement in heavy flavor mesons at LHCb
 - Both beauty and charm results display an enhancement in local particle densities at low- p_T
 - The LHCb spectrometer is uniquely suited for probing hadronization mechanisms in heavy flavor and at forward rapidity
- Efforts are continuing at LHCb to continue probing small systems using a variety of species and collisions systems
- Baryon-to-meson ratios in:
 - light flavor (pp)
 - beauty (pp)
 - charm (pp , pPb)
- Further strangeness production
 - light flavor (pp , pPb , pHe^* , pNe^*)
 - charm (pp)

* - Utilizing SMOG2 fixed target program



Thank You

