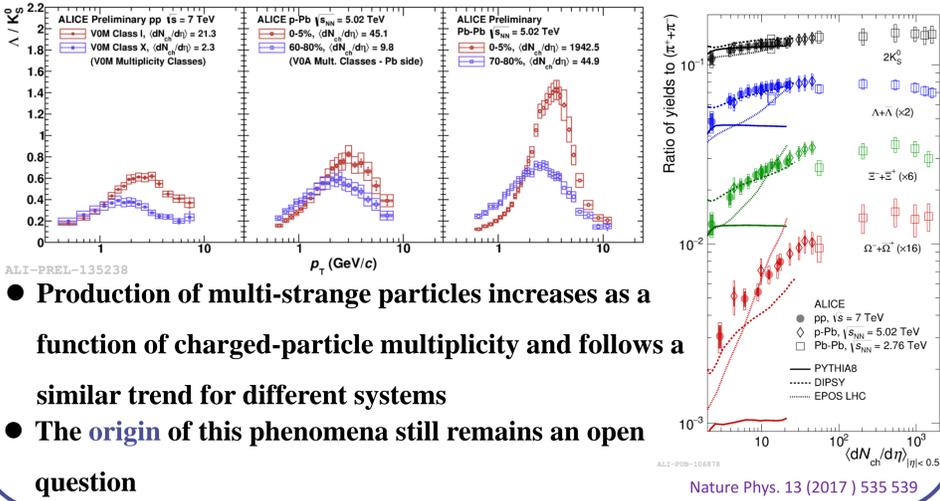


Motivation

- Enhancement of Λ/K_S^0 ratio observed at intermediate p_T in high multiplicity pp, p-Pb and Pb-Pb collisions w. r. t minimum bias



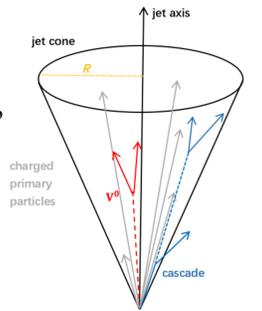
- Production of multi-strange particles increases as a function of charged-particle multiplicity and follows a similar trend for different systems
- The origin of this phenomena still remains an open question

This Contribution

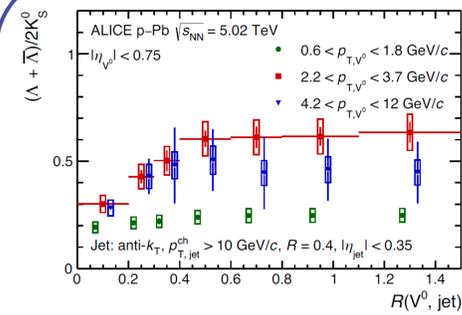
- Constrain particle production mechanisms in different collision systems by looking separately at particles produced by high- p_T jets and the underlying event
- pp
 - Study the jet fragmentation properties in vacuum
 - Provide a reference for p-Pb and Pb-Pb systems
- p-Pb
 - A new insight into understanding the origin of flow-like behavior observed at high multiplicity in small systems

Strategy

- Hard scattering tagged with high- p_T charged-particle jets
- Reconstruct V^0 s and cascades within the “jet region” and the “underlying Event” region (UE)
- UE: Obtained with perp. cone method
- Normalization: $\frac{d\rho}{dp_T} = \frac{1}{N_{ev}} \times \frac{1}{\langle \text{Acc Area} \rangle} \times dN_S/dp_T$

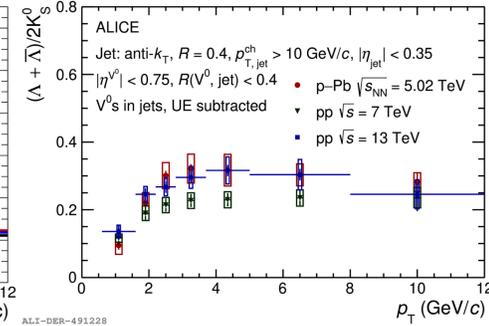
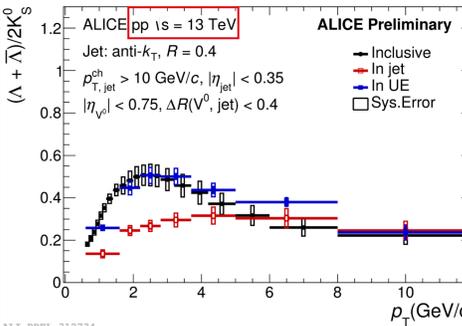


Ratios

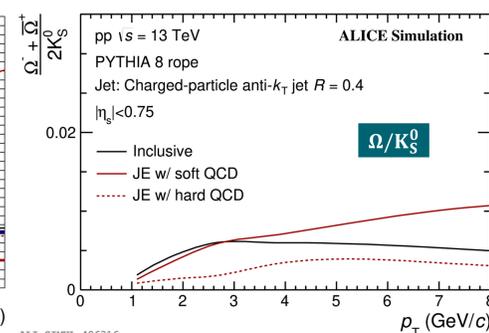
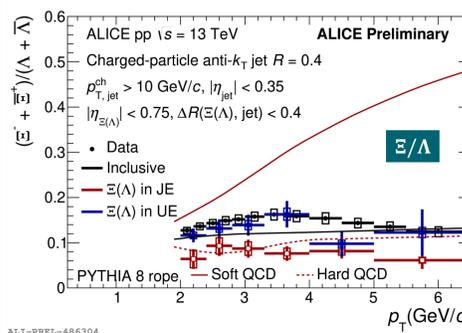


The Λ/K_S^0 in jet cone without UE subtraction

- at low p_T is independent of the distance to the jet axis ($R(V^0, \text{jet})$)
- at intermediate- p_T shows an increase at small $R(V^0, \text{jet})$
- lack of enhancement close to the jet axis

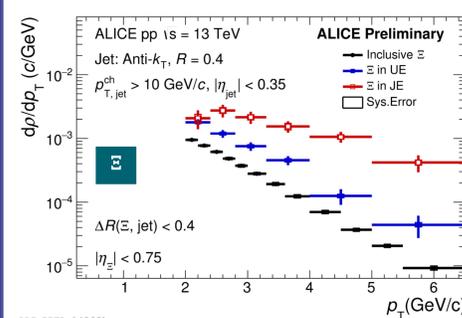
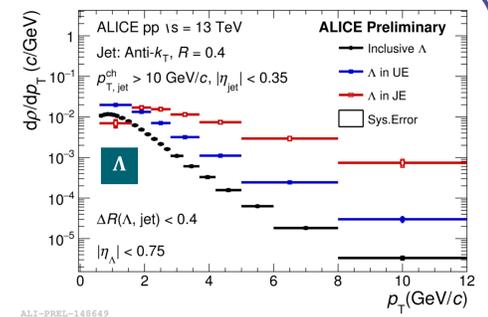
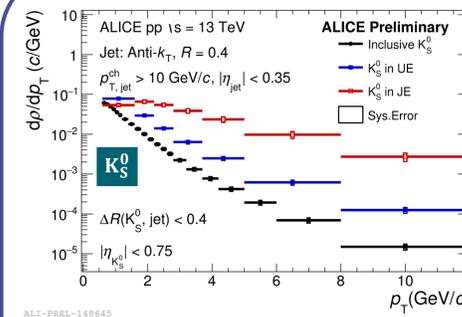


- The enhancement of Λ/K_S^0 ratio is not present in case that V^0 s are constituents of high- p_T jets in pp collisions.
- Λ/K_S^0 ratio measured in jet in pp and p-Pb are consistent with each other

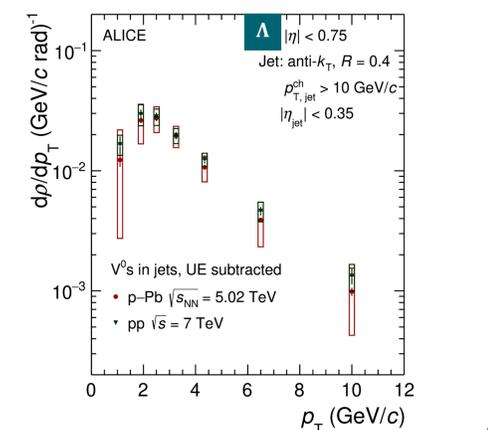
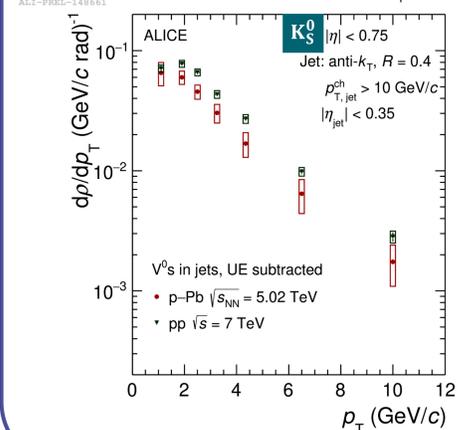


- Ξ/Λ measured in a jet is almost p_T independent
- PYTHIA 8 soft QCD shows a strong increase, inconsistent with data

Spectra



- The spectra of K_S^0 , Λ and Ξ in jets are always harder than in UE
- Weak collision system dependence for particles produced in jets



Conclusions

- The enhancement of baryon to meson ratio in high-multiplicity events can be attributed to soft processes taking place during a collision
- The enhanced production of multi-strange hadrons in high-multiplicity events may also be explained by soft components of the collisions
- These soft processes are also responsible for the enhanced production of multi-strange hadrons in high-multiplicity events

