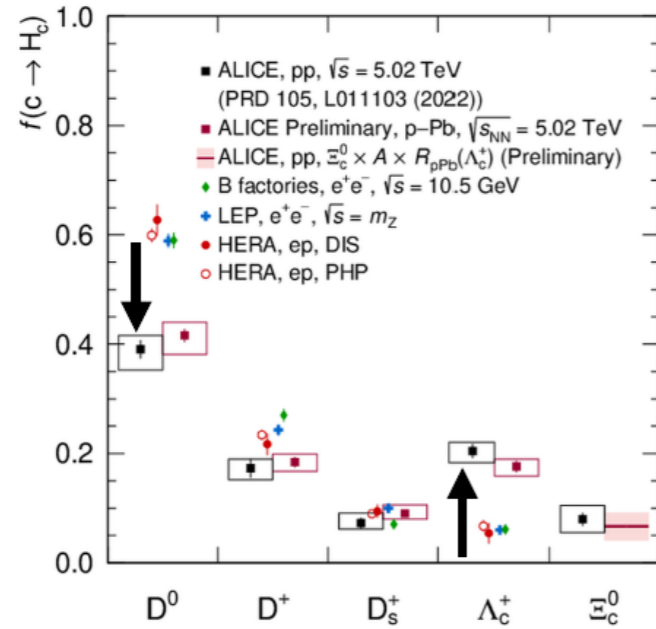


Flavor dependent hadronization studies at the LHC

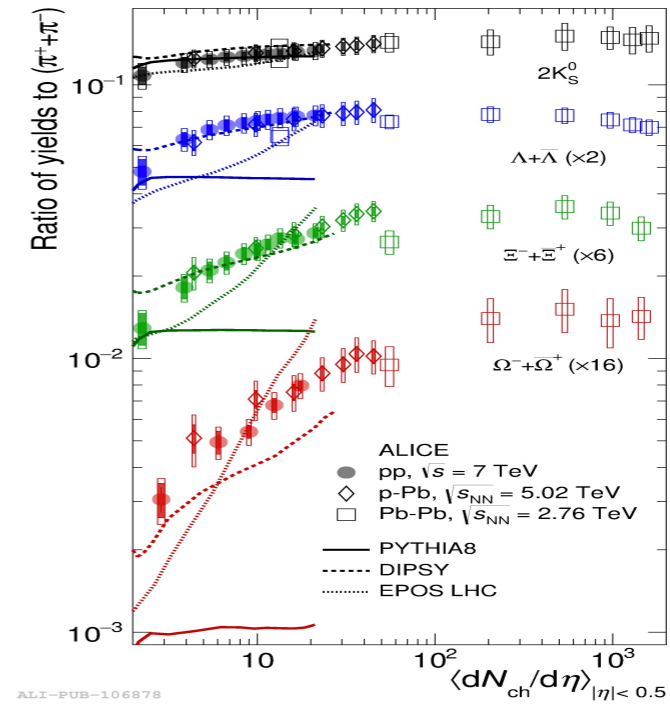
Small systems discoveries: significant impact on hadronization modeling

Non-universality of charm fragmentation



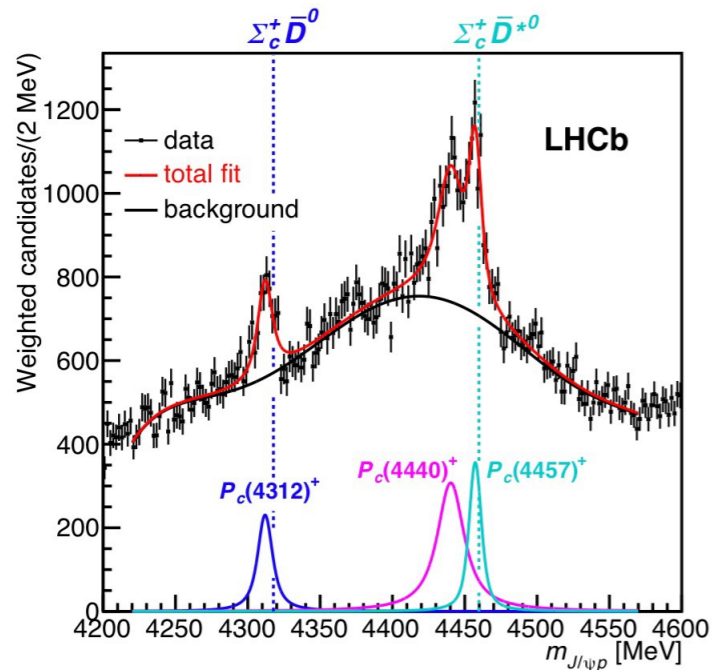
ALICE, Phys.Rev.D 105, L011103(2022)

Strangeness enhancement as function of centrality



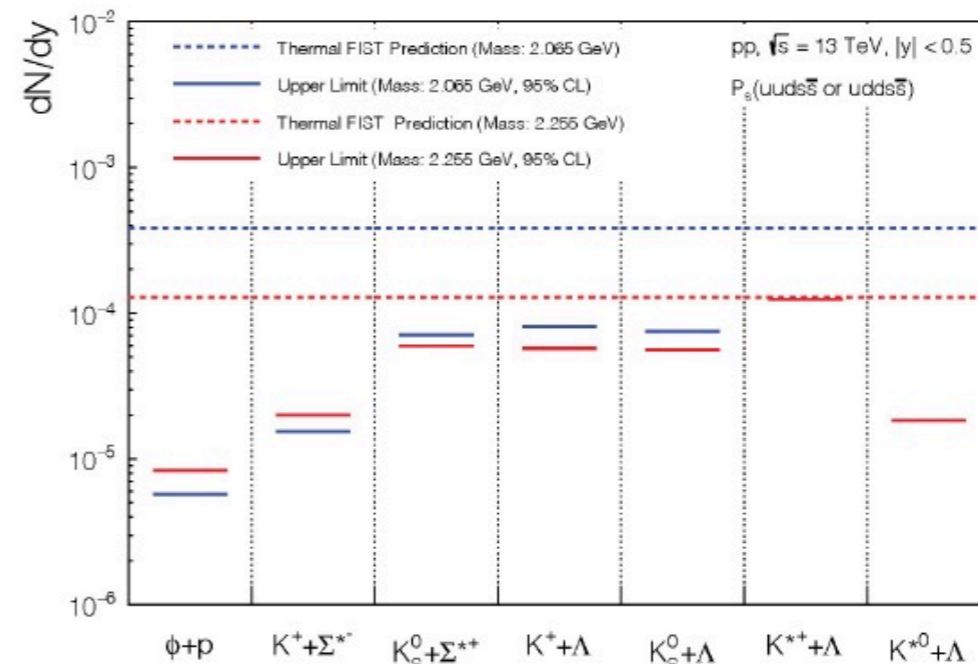
ALICE, Nature Physics 13, 535 (2017)

Multi-quark states in charm sector



LHCb, Phys.Rev.Lett. 122,222001 (2019)

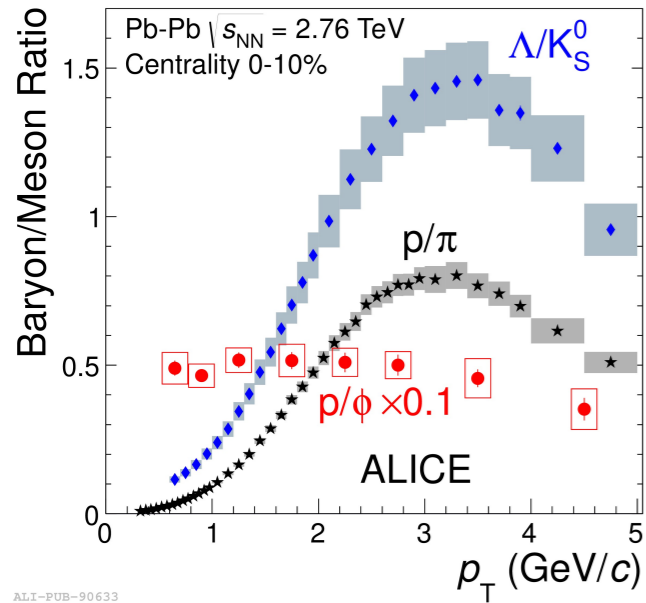
No multi-quark states in strange sector



ALICE preliminary

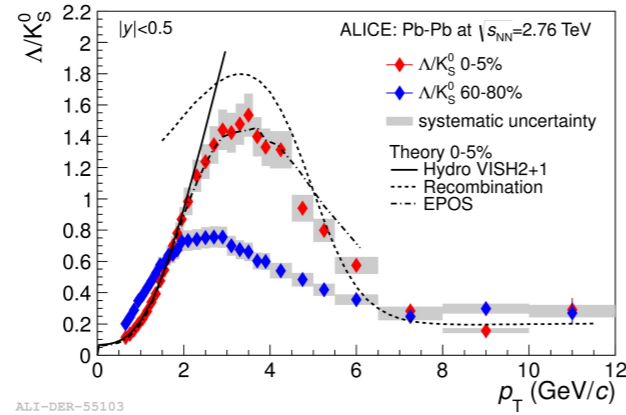
Large systems discoveries:

Comparable B/M pattern for all flavors and system sizes (magnitude changes as f(flavor & system size))



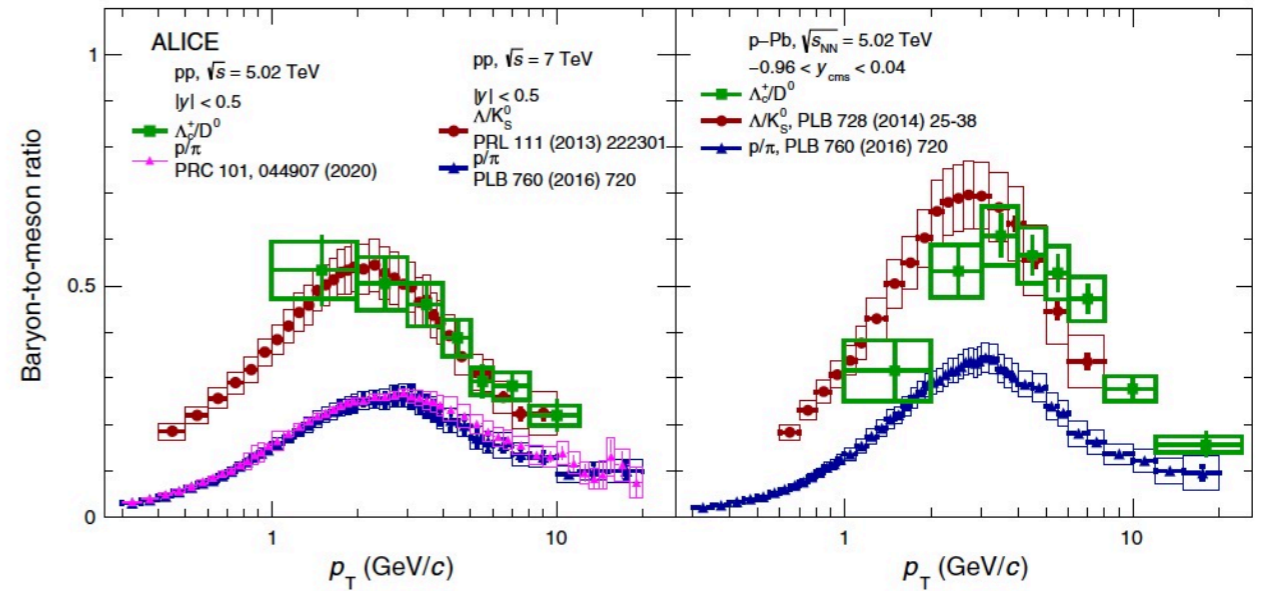
ALI-PUB-90633

ALICE, Phys.Rev.C91, 024609 (2015)



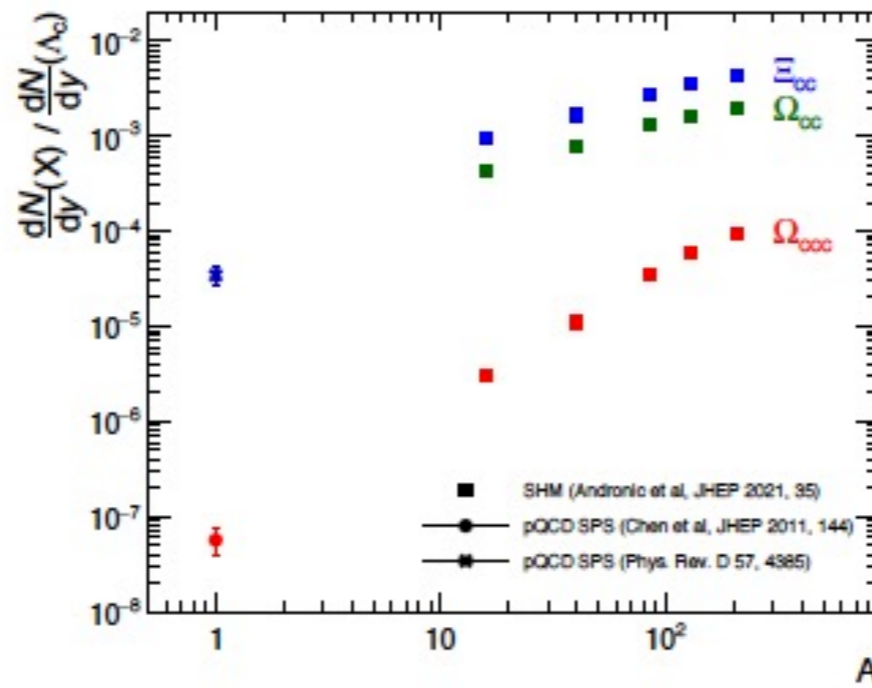
ALI-DER-55103

ALICE, Phys. Rev.Lett. 111,22301 (2013)

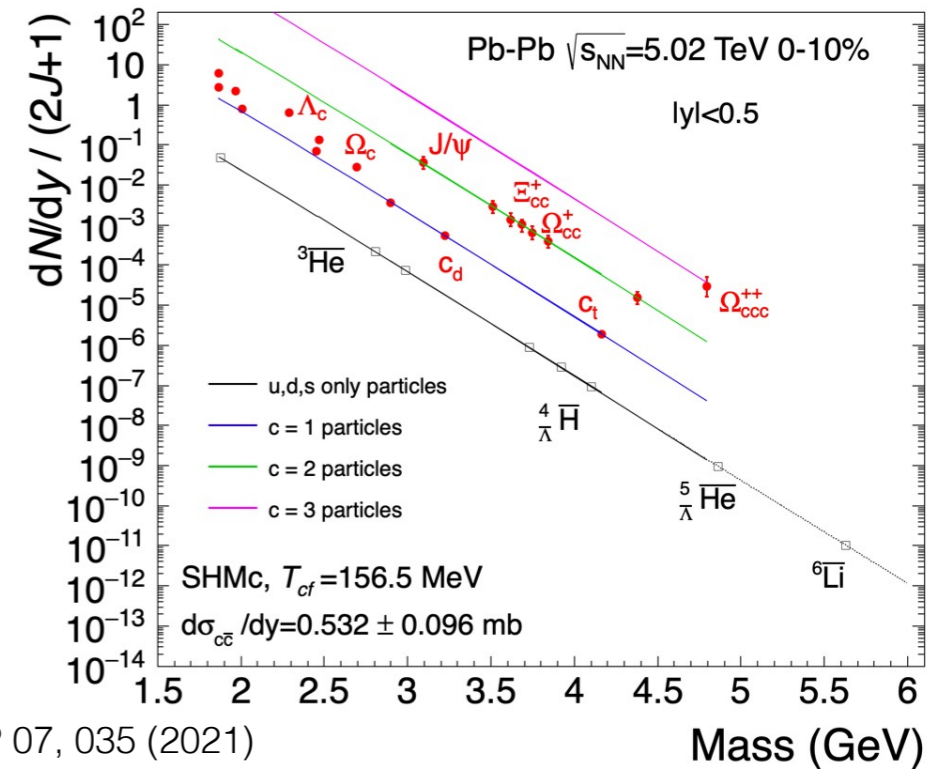


ALICE, Phys. Rev. Lett. 127, 202301 (2021)

Program for ALICE Runs 3-6



Alice-3 Lol & Andronic et al., JHEP 07, 035 (2021)



Significant questions to be answered:

- role of entanglement in initial/final state, fragmentation/coalescence,
- flavor dependent formation models in quark and hadronic state,
- probability of hypermatter in high T and ρ systems