

# HQ fragmentation in PYTHIA at LHC

## Outline

- ALICE HQ measurement in the muon channel
- Fragmentation in PYTHIA
- What about HI?

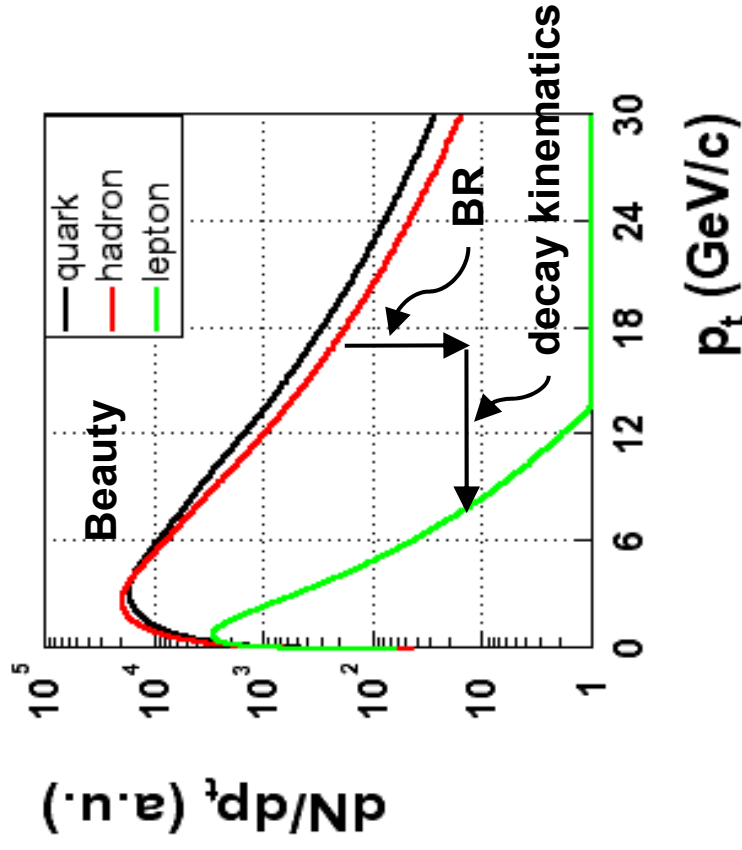
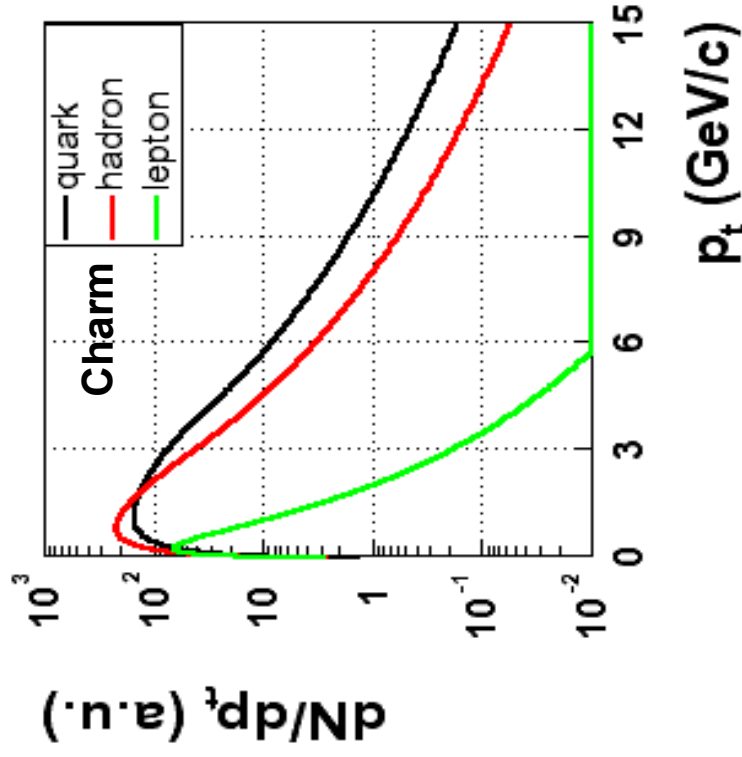
# HQ w/ muons in ALICE

- ALICE is equipped with a forward muon spectrometer dedicated to **both open and hidden** HQ measurements
  - Geometrical aperture  $2.5 \leq y \leq 4$
  - Good acceptance **down to low  $p_t$**
- HQ in the context of HIC
  - **Nuclear gluon distributions**
  - **Screening** effects on quarkonia } pp QCD baseline
  - **Energy loss** in dense medium }

# HQ w/ muons

- ALICE measures HQ using **semimuonic** decay muons

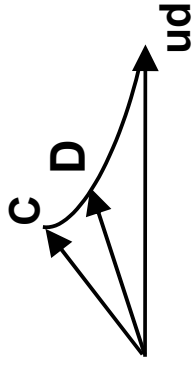
$$B \rightarrow D \mu \nu \quad BR \sim 10\%$$



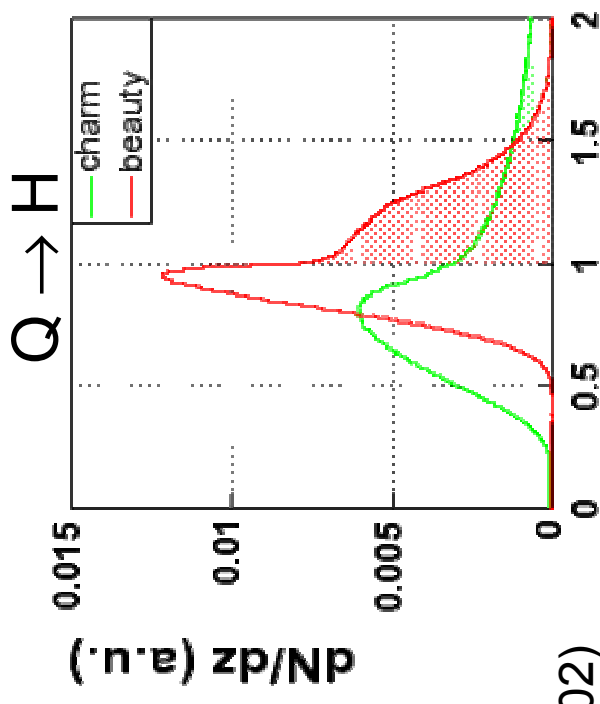
# HQ fragmentation in PYTHIA

In the **Lund string fragmentation** model

- **Beam drag effects**
  - Color connection between the produced HQ and the beam remnants in the string model
- Clearly have to be measured **experimentally** to be trusted!



Beam remnant



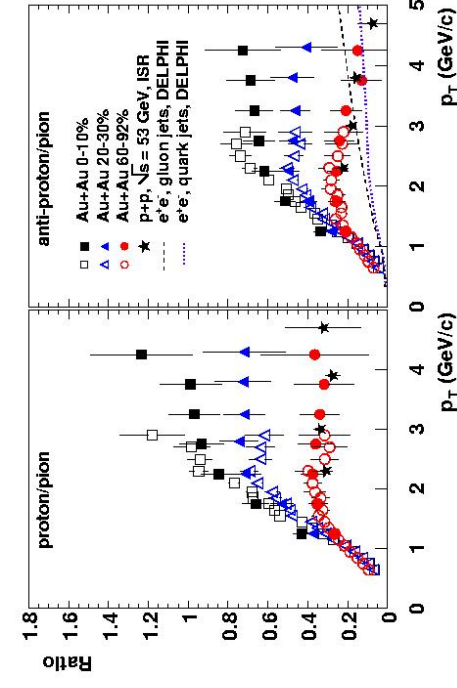
E791 **Asymmetry of D mesons in forward direction**

Braaten, Jia, Mehen: Phys. Rev. Lett. 89, 122002 (2002)

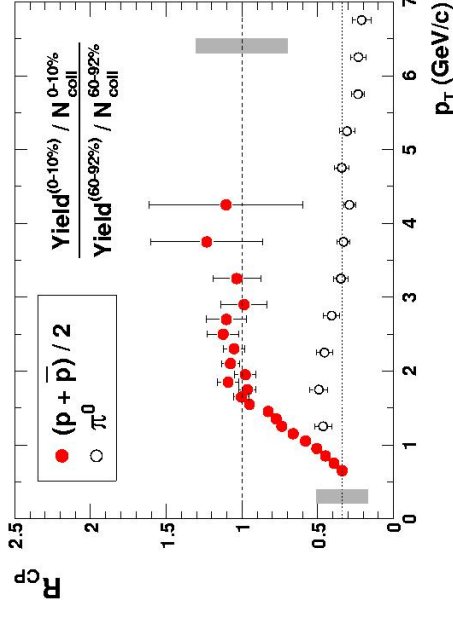
# Fragmentation in HIC

hadronization via coalescence: hints from RHIC data

## Anomalous baryon enhancement



$$p / \pi \sim 1$$



## Constituent scaling of flow

