

Amendment of JEWEL Jet mass in Pb-Pb collisions



12th October 2016
Hard Probes 2016



ALICE

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Hard Probes 2016

8th International Conference on Hard and Electromagnetic
Probes of High-Energy Nuclear Collisions

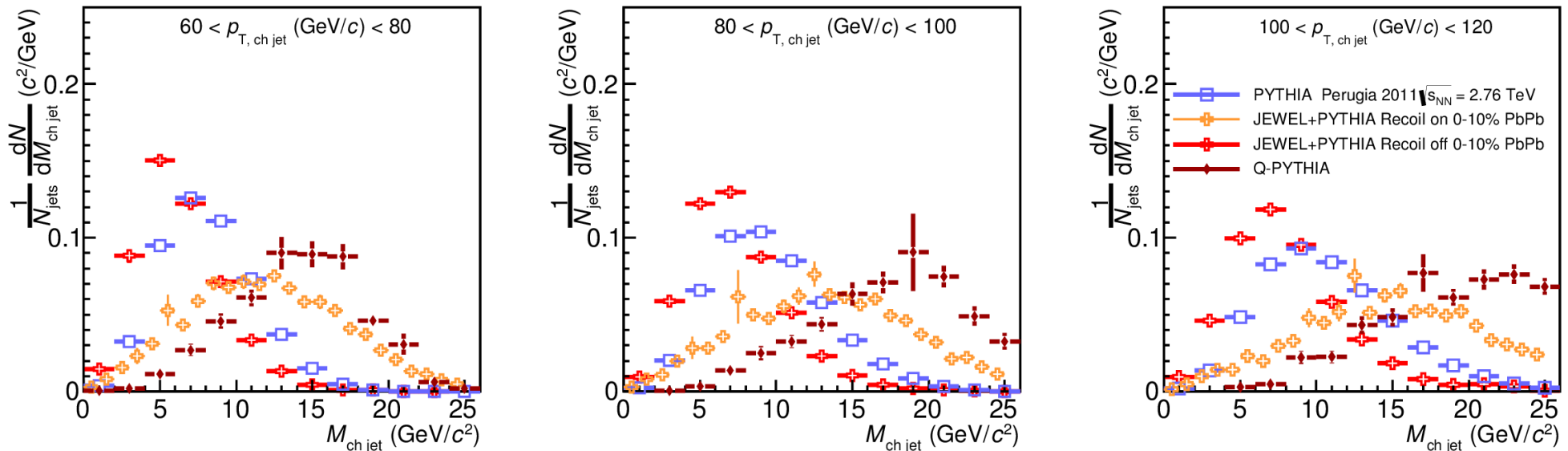
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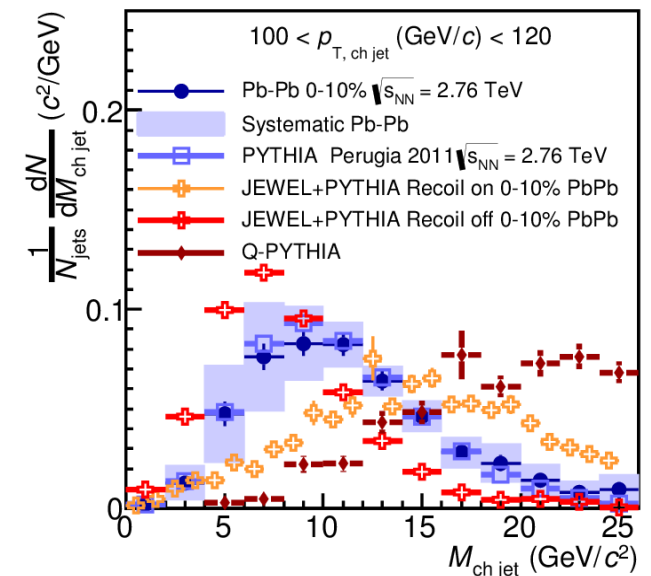
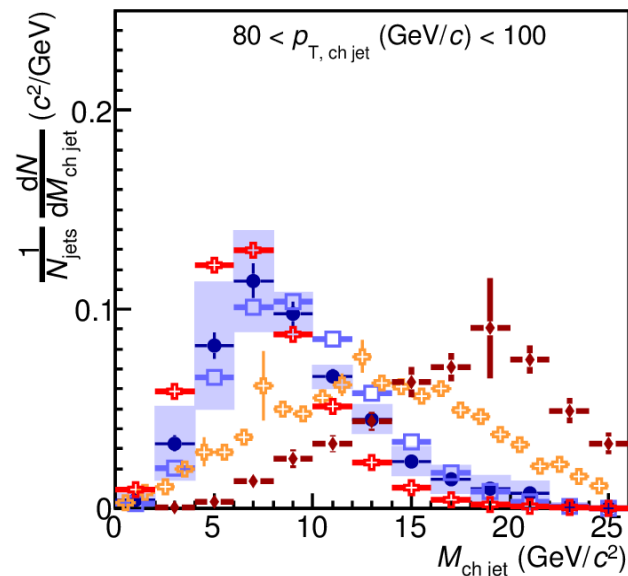
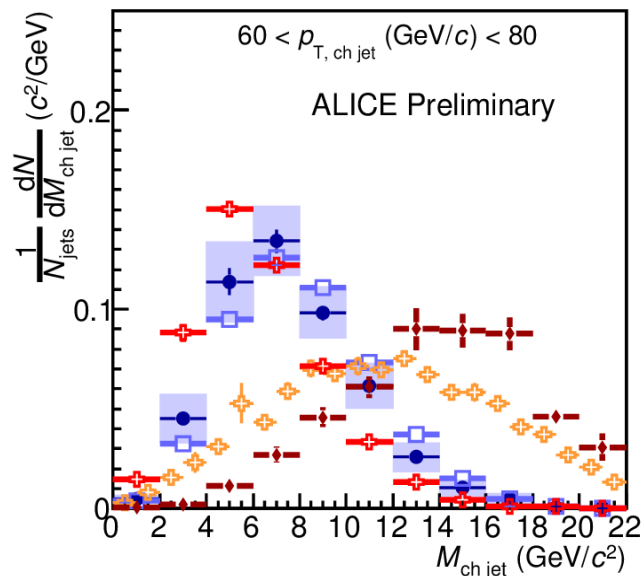
A small white flower logo with a green stem and leaves, positioned to the right of the text 'HP2016'.

Model expectations

- Quenching models (**JEWEL**, **Q-PYTHIA**) show a larger mass than pp-like **PYTHIA** jets
 - JEWEL: $2 \rightarrow 2$ pQCD matrix elements with parton shower taking into account radiation. For charged jets the background subtraction is implemented by shifting the distribution considering the background estimated for full jets and the difference between full and charged jets in pp
 - Q-PYTHIA: PYTHIA with medium effects in the final state branching through an additive term in the splitting functions computed in the multiple-soft scattering approximation
- JEWEL with “recoil off” (removing recoil centres before hadronization) shows a depletion of the jet mass wrt pp due to less low- p_T fragments wrt recoil on
- Pb-Pb measurement can discriminate among these predictions



JEWEL arXiv:1311.0048, arXiv:1212.1599, private communication Q-PYTHIA Eur.Phys.J.C63:679-690,2009



- Data lay in between **PYTHIA** and **JEWEL “recoil off”**
- Models with quenching produce too large mass