



Contribution ID: 382

Type: Poster

## Production of $K_S^0$ and $\Lambda$ in charged jets and underlying event in proton–proton $\sqrt{s} = 8\text{TeV}$ collisions with ALICE experiment

*Tuesday, 29 September 2015 16:30 (2 hours)*

It has been found that the baryon to meson ratio at intermediate transverse momentum ( $p_T \sim 3 \text{ GeV}/c$ ) is up to a factor three larger in the systems such as Pb–Pb but also p–Pb collisions than that in proton–proton collisions. This effect has been discussed in terms of collective flow, which could be present in small systems like pp collisions, and/or parton recombination. To discriminate between hard and soft processes contributing to the baryon and meson production, ALICE is studying particle production in reconstructed jets and the underlying event.

In this contribution, we present the  $p_T$  distributions of reconstructed  $K_S^0$  and  $\Lambda$  associated with a charged jet and in the underlying event in pp collisions at the LHC. The hard scatterings are selected on an event-by-event basis by anti- $k_T$  jets with resolution parameter  $R = 0.4$  (or  $R = 0.2$ ) reconstructed from charged particles with a minimum  $p_T$  of  $8 \text{ GeV}/c$ . To investigate the effects of hadronization, we will compare the resulting baryon-to-meson ratio inside and outside jets to PYTHIA 8 simulations with different color reconnection models.

### On behalf of collaboration:

ALICE

**Primary author:** ZHANG, Yonghong (Central China Normal University CCNU (CN))

**Presenter:** ZHANG, Yonghong (Central China Normal University CCNU (CN))

**Session Classification:** Poster Session

**Track Classification:** Jets and High  $p_T$  Hadrons