



# XXIV QUARK MATTER DARMSTADT 2014

Contribution ID: 157

Type: Poster

## Measurement of Neutral Pions via their $e^+e^-\gamma$ Decay in p-Pb Collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE at the LHC

*Tuesday 20 May 2014 16:30 (2 hours)*

The study of neutral meson production in p-Pb collisions is of importance to confirm that the strong suppression observed in central Pb-Pb collisions is a final-state effect of the produced dense medium. Furthermore the neutral pion production is essential for the extraction of the direct photon spectra, as it is the main source of background for direct photons. ALICE measures neutral pions using either calorimetry or the photon conversion on the material of inner detectors. The latter is measured in the ITS and TPC detectors for both decays  $\pi^0 \rightarrow \gamma\gamma$  and  $\pi^0 \rightarrow e^+e^-\gamma$  (Dalitz decay). By comparison with a pp reference scaled to the respective centre-of-mass energy, we determine the nuclear modification factor of neutral pions in p-Pb. In this poster a detailed study of the Dalitz decay channel will be presented. The transverse momentum spectra and the nuclear modification factor of neutral pions, will also be given.

### On behalf of collaboration:

ALICE

**Primary author:** GONZALEZ ZAMORA, Pedro (Centro de Investigaciones Energ. Medioambientales y Tecn. - (ES)

**Presenter:** GONZALEZ ZAMORA, Pedro (Centro de Investigaciones Energ. Medioambientales y Tecn. - (ES)

**Session Classification:** Poster session

**Track Classification:** Jets