

# Centrality dependence of high energy jets in p+Pb collisions at the LHC

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The recently measured centrality dependence of high energy jets in proton-lead collisions at the LHC is investigated. We conjecture that events with jets of very high energy (a few hundred GeV) are characterized by a suppressed number of soft particles thus shifting these events into more peripheral bins. This naturally results in the suppression (enhancement) of the nuclear modification factor,  $R_{pA}$ , in central (peripheral) collisions. Our calculations suggest that a moderate suppression of the order of 20% can quantitatively reproduce the experimental data. We further propose an independent experimental test to verify this mechanism.

**Primary author:** BZDAK, Adam (AGH University of Science and Technology)

**Presenter:** BZDAK, Adam (AGH University of Science and Technology)

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