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# Fragmentation patterns of jets in pPb collisions in CMS

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The nuclear parton distribution function and flavor composition of hard scattering processes can be accurately studied using the jet fragmentation functions. Recent measurements of the pPb nuclear modification factor ($R_{pPb}$), with diverging values for inclusive jets and charged hadrons, have raised question on jet fragmentation properties in pPb collisions. These spectra measurements are performed with pp reference at 5.02 TeV constructed by interpolation or extrapolation from different $\sqrt{s}$, and on steeply falling power-law spectra. As the jet fragmentation function is only evolving logarithmically with $\sqrt{s}$, this further underscores the importance of a direct measurement. Together with the CMS results in pPb inclusive jets and charge hadron $R_{pPb}$, we introduce the new CMS measurement of fragmentation function in pPb collisions, where within our uncertainties, jets in pPb is found to have identical fragmentation property vs. pp jets. We will further discuss the consistency and tension among the results, and their possible origins. This measurement also gives important reference for the interpretation of the fragmentation function in PbPb collisions.

## On behalf of collaboration:

CMS

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