



SPEAKER: Leticia Cunqueiro Mendez
TITLE: **Jet and jet substructure physics in pp and heavy ion collisions with ALICE**
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ABSTRACT

Recent ALICE results on jet and jet substructure will be reviewed. The excellent tracking capabilities of ALICE allow to measure jets in a wide kinematic regime and to resolve substructure at small angles. The pp results comprise inclusive jet cross sections measured with different resolution R and their ratios, jet shapes like angularities and observables that use the declustering of the jet, like N -subjettiness, the momentum imbalance of a two prong structure exposed by grooming z_g , or the number of hard prongs, n_{SD} , obtained via the iterative declustering of the jet. These results probe the parton shower at different scales and are of interest to constrain pQCD models and calculations, but also serve as reference for the heavy ion measurements. Jets are well-calibrated probes of the dense medium created in heavy ion collisions. The modification of their yields and structure relative to pp collisions is used to explore the inner workings of QCD at high densities and temperature. Recent results from will be reviewed, and new ideas and prospects will be discussed, such as the use of iterative declustering of heavy flavour jets to expose the dead cone at colliders, for charm and beauty and the use of the Lund plane to map medium-induced modifications of the jet structure.