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B_c meson production measurement in pp and PbPb collisions with CMS

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Heavy (beauty and charm) quarks are very valuable probes of the quark-gluon plasma created in heavy ion collisions, because they experience the whole evolution of the medium. They can also help understanding the dynamics of hadronization, and how they are affected by the interaction with the medium. In this context, the B_c meson is an interesting and new probe, that could both give new insights on beauty and charm quarks energy loss, and on the charm recombination mechanism.

This talk shows the progress of the first study of the B_c meson in heavy ion collisions, namely in 2018 PbPb data from CMS at $\sqrt{s_{NN}} = 5\text{TeV}$. The equivalent study in 2017 pp reference data at 5TeV is more advanced, and used as a benchmark for the PbPb analysis. Ultimately, the ratio of cross sections is to be calculated, to be interpreted as the nuclear modification factor of B_c in the plasma.

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