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ALICE strange particles and fragmentation measurements (15+3)

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The results from the ALICE pp and p-Pb program show intriguing trends resembling those of nucleus-nucleus collisions usually attributed to quark-gluon plasma formation. One of these measured effects is enhanced production of (multi-)strange particles with respect to pions (a.k.a. the strangeness enhancement) gradually rising from low-multiplicity to high-multiplicity pp or p-Pb collisions where production rates of (multi-)strange particles similar to peripheral Pb-Pb collisions are reached.

In pp or p-Pb collisions, the strange quarks can be created either in hard processes (jets) or soft processes (underlying events). Two experimental approaches can address the strange quark production in the jet fragmentation: direct one using strange hadron tagged jet reconstruction or via two-particle correlations with strange particles. Both the approaches benefit from excellent identification of strange hadrons up to high transverse momentum in the ALICE detector. In the presentation, we report on strange mesons and baryons production in the jet and out-of-the jet and the role of particles produced from jet fragmentation in the strangeness production in high-multiplicity pp or p-Pb collisions.

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