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Low mass dilepton production in pp, p-Pb and Pb-Pb collisions measured with ALICE at the LHC

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Low mass dilepton production, including light vector mesons ρ, ω, φ, provides key information on the hot and dense state of strongly inter- acting matter produced in high-energy heavy-ion collisions. Among them, strangeness production can be studied through the measure- ment of φ meson production, while the detailed description of the full dilepton mass spectra down to the kinematic threshold can be used to reveal in-medium modifications of hadron properties and the ther- mal emission arising from the medium. Measurements in pp and p-A systems, in absence of hot nuclear matter effects, can be used as a ref- erence to test our knowledge of the processes expected to contribute to dilepton production.
Dilepton production is studied with the ALICE apparatus at the LHC both at central ($|y| < 0.9$) and forward ($2.5 < y < 4$) rapidities, respectively in the dielectron and dimuon channel. Results on low mass dilepton production are shown, for various c.m. energies, in pp, p-Pb, Pb-p and Pb-Pb collisions.

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