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【443】 Machine Learning in the Analysis of Low-mass Dielectrons in ALICE

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Relativistic heavy-ion collisions produce hot and dense strongly interacting matter. Dielectrons (e^+e^-) offer a way to investigate, e.g. the temperature of this medium and signatures of chiral-symmetry restoration. The dominant background in the analysis of dielectrons originates from tracks produced via photon conversions in the detector material. Numerous observables allow for discrimination of this background which motivates a multivariate approach in the classification of dielectrons. Machine learning algorithms were evaluated positively for this purpose. In addition, we present novel methods to reduce the systematic uncertainty inherent to supervised learning on MC simulations, and a status update on the analysis of latest LHC Pb-Pb data.

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