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Study of jet modification at LHC-ALICE MASATO SANO, University of Tsukuba and Research Fellow of the Japan Society for the Promotion of Science, ALICE COLLABORATION — ALICE is the experiment at CERN-LHC to study the property of quark-gluon-plasma (QGP) which is the QCD phase of matter at high temperature and density, and which is expected to be created by high energy heavy-ion collision. In heavy-ion collision, the initial hard scattered partons interact with the matter and lose its energy, and the effects appear as the modifications of the jet energy and structure compared to proton-proton collision. This means the jet modification can be a good probe to understand the property of QGP especially at CERN-LHC compared to BNL-RHIC because the jet production is significantly increase due to the higher collision energy. And jet tomography can be done by researching gamma/jet-hadron correlations. In this talk we report the capability of jet tomography at ALICE, comparing gamma/jet-hadron correlations in heavy-ion collision with the ones in proton-proton collision.

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