

## Photon-Jet Correlations in pp and PbPb collisions at 5.02 TeV with CMS

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Electromagnetic probes such as photons do not participate in the strong interaction, and thus provide a clean measurement of the initial state in nuclear collisions. Correlations of photons balancing with jets in PbPb collisions constitute the golden channel to study parton energy loss in strongly interacting matter, since the photon not only determines the initial transverse momentum of the balancing parton, but also preferentially selects quark jets. We will present results from pp, pPb, and PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV collision energy, including the high statistics data collected with the CMS detector in the 2015 LHC run. The results include detailed studies of azimuthal and momentum correlations of isolated photons and associated jets, as well as jet  $I_{AA}$ , as a function of photon  $p_T$  and collision centrality.

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