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Using Z-boson tags to study parton-medium interactions in PbPb collisions at 5.02 TeV with the CMS detector

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Z bosons can be used to constrain the initial energy, direction, and the flavor of the recoiling parton before its interaction with the quark-gluon plasma. By measuring charged particle yields in Z boson events one can study the in-medium modifications of the recoiling parton showers and as well as the soft particles from medium response. The talk will present measurements of the azimuthal angular distributions, fragmentation functions and p_{T} spectra of charged particles tagged with Z bosons in pp and PbPb collisions at $\sqrt{s_{\mathrm{NN}}} = 5.02\,\mathrm{TeV}$ using data collected with the CMS detector.

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