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Jet reconstruction and b-jet identification in PbPb collisions with CMS

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The flavor dependence of jet quenching is a powerful handle to discriminate models of parton energy loss in heavy ion collisions. While there is evidence for a strong energy loss of heavy quarks from single particle measurements, heavy flavor tagging of fully reconstructed jets has thus far not been achieved in heavy ion collisions. In this talk we demonstrate the capacity of CMS to identify jets initiated by bottom quarks using displaced vertices reconstructed in the silicon tracking system. Identification of b-jets is shown to be feasible even in the dense environment of PbPb collisions. We discuss the status and prospects for measurements of identified b-jets in PbPb collisions with CMS.

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