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Results using data from proton-proton collisions at the LHC collected using the CMS Barrel Muon Trigger electronics for Phase-2

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The Barrel Muon Trigger (BMT) is a part of the upgraded CMS Level-1 Trigger and is the subsystem responsible for searching and reconstructing Muons crossing the barrel region of the detector at Phase-2. Muons crossing the Barrel Muon detector are measured by Drift Tubes and Resistive Plate Chambers. Hits are transmitted to the back end processors via optical links. BMT Layer-1 then uses the hits to generate Trigger Primitives in the form of track segments (track stubs) for each chamber and transmits the results to Layer-2. The Layer-2 processors match them to produce Muon candidates. During the past year, one sector of the barrel was instrumented with Phase-2 electronics, providing the opportunity to perform a BMT slice test in situ with proton-proton collisions data. A description of this system as well as results from studies using these data are presented here.

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