

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Measurement of the differential top-quark pair-production cross section for top quarks with high transverse momentum** SUSAN DITTMER, Cornell University, MARAL ALYARI, SUNY Buffalo, MATTHEW BELLIS, Cornell University, SALVATORE RAPPOCCIO, SUNY Buffalo, LOUISE SKINNARI, JULIA THOM, Cornell University, CMS COLLABORATION — We report a measurement of the differential top-quark pair-production cross section for top quarks with high transverse momentum ( $p_T$ ) in pp collisions at a center-of-mass energy of 8 TeV. The data sample was collected with the CMS detector during 2012 and corresponds to an integrated luminosity of  $19.7 \pm 0.5 \text{ fb}^{-1}$  for events in the muon+jets final state where the hadronically decaying top quark has  $p_T > 400 \text{ GeV}$  and is reconstructed as a single, wide, top-tagged jet. The background normalizations and the inclusive signal yield are extracted simultaneously with the top-tagging efficiency through template likelihood fits.

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Date submitted: 09 Jan 2015

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