The ATLAS Level-1 Topological Trigger Performance in Run 2

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CHEP 2016, 10 October 2016
San Francisco, US
Summary and outlook

• To cope with the increase of energy and luminosity in Run 2, ATLAS upgraded both the Level-1 and High Level triggers during the Long Shutdown 1

• A new topological trigger system was built and installed at Level-1
  - It allows to select events by combining L1 calorimeter and L1 muon objects

• Commissioning of the L1 topological system took place early in Run 2

• Validation studies show a very good agreement between hardware and simulation topological trigger decisions

• Initial performance results show that topological triggers increase acceptance for physics channels

• More topological triggers are to be expected in the run in 2017