

The background of the slide is a photograph of the Golden Gate Bridge in San Francisco, taken at sunset. The bridge's towers and suspension cables are silhouetted against a sky transitioning from orange near the horizon to a deep blue at the top. The water in the foreground reflects the colors of the sky and the bridge's lights.

The ATLAS Level-1 Topological Trigger Performance in Run 2

Imma Riu (IFAE Barcelona)
on behalf of the ATLAS Collaboration
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