



Contribution ID: 30

Type: **not specified**

Search for the Higgs boson decay to a pair of muons with the ATLAS detector at the LHC

Monday 8 April 2019 14:15 (15 minutes)

Higgs decay to a muon pair is the most promising way to probe Yukawa couplings to the second generation fermions at the LHC. Experimentally the analysis is challenging due to a small branching ratio ($2.2 \cdot 10^{-4}$) and proceeds as a search for an excess at the Higgs mass in the dimuon invariant mass spectrum dominated by the irreducible Drell-Yan background. This talk presents the search with 79.8 fb^{-1} of data collected with the ATLAS detector at $\sqrt{s}=13 \text{ TeV}$, and prospects for the High Luminosity LHC.

Presenter: ZGUBIC, Miha (University of Oxford (GB))

Session Classification: Parallel stream 2