

## Top Physics with soft muons in ATLAS

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Top Physics in ATLAS is one of the crucial sector of the physics programme of the ATLAS experiment at the LHC. Data collected, are usually analysed to explore top properties or search for heavy resonances, in final states characterised by the presence of jets, lepton(s) and missing transverse momentum. Nevertheless, the abundance of top quarks produced at LHC gives the possibility to focus also on other specific decay channels, such as the ones involving the presence of muons (called “soft-muons”) coming from the semileptonic decays of the b-quarks that in turn come from top/antitop decays. In this seminar I will explore the possibility to use these “soft-muons” to measure quantities such as the top mass and the amount of CP violation in the semileptonic b-decays in Run2 data.

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