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## New physics searches, spectroscopy and decay properties of b-hadrons with the ATLAS experiment

*Tuesday 5 May 2015 18:00 (15 minutes)*

Latest results in the ATLAS programme of searches and precision measurement of heavy hadrons are presented. It includes observation of an excited  $B_c(2S)$  state, measurement of the  $B_c$  meson decays, as well as new decay modes of b-hadrons and search for New Physics signatures in processes that are naturally suppressed in the Standard Model. We present the latest search for rare  $B_s \rightarrow \mu^+\mu^-$  decay and angular analysis of the semileptonic rare decay  $B_d \rightarrow K^*\mu^+\mu^-$  and an updated study of mixing and CP violation in the  $B_s$  system with full ATLAS Run-1 data.

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