

Exotic hadron spectroscopy and B_0 s- \rightarrow $\mu\mu$ lifetime measurement in ATLAS

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Overview and recent results on spectroscopy of exotic hadrons in ATLAS with Run-2 data are presented. Four-muon mass spectrum is studied, investigating the structures earlier observed by LHCb experiment in di- J/ψ channel, using di- J/ψ and $J/\psi + \psi(2S)$ final states. Search for exotic resonances is also performed in $\Upsilon(1S) + 2\mu$ final state. ATLAS measurement of $B_s^0 \rightarrow \mu^+\mu^-$ effective lifetime with 2015-2016 data is also presented. This observable, along with the branching fraction of the decay, is sensitive to New physics contributions to the decay amplitude. The measurement result is consistent with the SM.

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