

B-physics @ ATLAS

Friday, 19 January 2018 13:30 (55 minutes)

The talk will give an overview of recent B -physics measurements at the ATLAS experiment, with a focus on the CP violation in $B_s^0 \rightarrow J/\psi(\mu^+\mu^-)\phi(K^+K^-)$ decay channel. In the Standard Model CP violation is described by a phase in the CKM matrix. One of the manifestations of this complex phase is a phase shift between direct and mixing-mediated B_s decays producing a common final state. In the case of $B_s^0 \rightarrow J/\psi(\mu^+\mu^-)\phi(K^+K^-)$ this phase shift is predicted to be small $\phi_s = -0.0368 \pm 0.0018$ rad. New physics can enhance ϕ_s whilst satisfying all existing constraints. Results presented in this talk are compatible with the Standard Model predictions and with other LHC measurements.

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Session Classification: ATLAS physics