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## ATLAS measurements of CP violation and rare decays processes with beauty mesons

*Monday 24 May 2021 18:30 (15 minutes)*

The ATLAS experiment has performed measurements of B-meson rare decays proceeding via suppressed electroweak flavour changing neutral currents, and of mixing and CP violation in the neutral B meson systems.

This talk will focus on the latest results from the ATLAS collaboration, such as rare processes  $B^0_s \rightarrow \mu\mu$  and  $B^0 \rightarrow \mu\mu$ , and CP violation in the  $B_s^0 \rightarrow J/\psi \phi$  decays. In the latter, the Standard Model predicts the CP violating mixing phase,  $\phi_s$ , to be very small and its SM value is very well constrained, while in many new physics models large  $\phi_s$  values are expected. The latest measurements of  $\phi_s$  and several other parameters describing the  $B_s^0 \rightarrow J/\psi \phi$  decays will be reported.

### Summary

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