

The study of the rare decays $B_s^0 \rightarrow \mu^+ \mu^-$ at $\sqrt{s} = 13$ TeV with the ATLAS detector

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The flavour-changing neutral currents of the rare decays $B_s^0 \rightarrow \mu^+ \mu^-$ provide a favourable environment to observe new physics. The study of these decays, using the data collected by the ATLAS detector, is presented. Their branching ratios are measured relative to the reference decay mode $B^{+/-} \rightarrow J/\psi K^{+/-}$, which is abundant and has a well-measured branching fraction $B(B^{+/-} \rightarrow J/\psi K^{+/-}) \times B(J/\psi \rightarrow \mu^+ \mu^-)$. The event yields of the reference and the rare-decay channels are extracted employing the unbinned maximum likelihood fit approach.

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Secondary track (number)

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