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First two-sided limit for the $B_s \rightarrow \mu^+ \mu^-$ decay rate

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We report the latest results of a CDF search for $B \rightarrow \mu^+ \mu^-$ decays using 6.9 fb^{-1} of data.

Doubled statistics with respect to the previous iteration and several analysis improvements provide results that are among the most sensitive from a single-experiment to date. We observe an excess of B_s candidates, whose probability to be produced by background processes alone is 0.27%.

We determine $4.6 \cdot 10^{-9} < Br(B_s \rightarrow \mu^+ \mu^-) < 3.9 \cdot 10^{-8}$ at the 90% CL. A search of B_0 decays is shown as well.

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