



Contribution ID: 516

Type: **not specified**

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

Thursday, 1 September 2011 14:50 (20 minutes)

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 improvement 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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Session Classification: Parallel Session 9