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Suppressed B decays at CDF

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Quantities related to B decays that are strongly suppressed in the standard model may provide early indications of non-SM physics. The CDF experiment at the Tevatron collider has the world's largest heavy flavor samples and can explore rare decays with unprecedented sensitivity.

We present the first observation of $B^0_s \rightarrow \Phi \mu^+ \mu^-$ decays (the rarest B^0_s decays observed), a measurement of forward-backward asymmetry in $B^0 \rightarrow K \mu^+ \mu^-$ *competitive with world-leading results, and the first measurement of polarization amplitudes in $B^0_s \rightarrow \Phi \Phi$ decays. We also present new measurements on the following suppressed B^0_s decay modes:*

$B^0_s \rightarrow J/\psi K(892)$, $B^0_s \rightarrow J/\psi f_0(980)$, and $B^0_s \rightarrow J/\psi K^0_{\text{short}}$, all of which potentially informative on lifetime difference and CP asymmetries in B^0_s decays.

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