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Measurement of $B_0\bar{B}_0$ Oscillation Frequency and Calibration of Flavour Tagging with $B \rightarrow D\ell X$ Decays GAVRIL GIURGIU, Carnegie-Mellon, CDF COLLABORATION — Using $p\bar{p}$ collision data at $\sqrt{s} = 1.96$ TeV collected with the CDF II experiment at the Fermilab Tevatron collider, we measure the oscillation frequency Δm_d of $B_0\bar{B}_0$ mixing using partially reconstructed semileptonic decays $B \rightarrow D\ell X$. The charge of the lepton in the final state identifies the flavour of the B_0 meson at its decay. The flavour of the B_0 meson at production is inferred by an opposite side lepton or jet charge tag. This study also serves as calibration of the flavour tagging algorithms used in a search for B_{0_s} mixing using semileptonic $B_{0_s} \rightarrow D_s^+\ell X$ decays.

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