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A Model Independent Measurement of the Branching Fraction of $\Upsilon(4S)$ Decays to Neutral B Pairs ROMULUS GODANG, University of South Alabama, LUCIEN CREMALDI, DON SUMMERS, University of Mississippi, BABAR COLLABORATION — Isospin violation in $\Upsilon(4S) \to B\bar{B}$ decays induces a difference in the branching fractions $f_{00} = \mathcal{B}(\Upsilon(4S) \to B^0\bar{B}^0)$, and $f_{+-} = \mathcal{B}(\Upsilon(4S) \to B^+B^-)$. These branching fractions are important inputs for many B meson measurements at B factories. Isospin violation in the $\Upsilon(4S)$ resonance decays may be at the level of a few percent mostly due to electromagnetic interactions and the mass difference between the up and the down quarks. We discuss a model independent measurement of the f_{00} branching fraction based on a data sample of $\sim$470 million $B\bar{B}$ pairs collected at the $\Upsilon(4S)$ resonance with the *BABAR* detector. We reconstruct neutral B meson in the channel $\bar{B}^0 \to D^{*+}\ell^-\bar{\nu}_\ell$ using a partial reconstruction technique.

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