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# Forward-Backward Asymmetry of b quarks in B->J/psi K decays at DZero

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I present an analysis of the forward-backward asymmetry A_FB in the B −> J/psi K decay channel at the DZero experiment. This asymmetry reflects the probability for b-bbar pairs to be produced without directional bias. We use the tools of DZero flavor physics analyses to measure this asymmetry in charged B decays. The charged B −> J/psi K process is not affected by neutral B meson mixing, and regular magnet polarity changes allow for cancellation of many first-order detector effects.

A_FB is extracted from a maximum likelihood fit to the difference between forward and backward B+/- mass distributions, using a boosted decision tree to reduce background. Corrections are made for reconstruction asymmetries of the decay products. In this blinded trial A_FB is consistent with zero, with a statistical uncertainty of 0.3%.

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