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Measurement of time-dependent CP asymmetries in $B^0 \to J/\psi\pi^0$ decays KATHERINE GEORGE, University of Liverpool, BABAR COLLABORATION — We present new results on the measurement of CP asymmetries in $B^0 \to J/\psi\pi^0$ decays using approximately 230 million $\Upsilon(4S) \to B\bar{B}$ decays collected by the BaBar detector at the PEP-II asymmetric-energy B factory. The Cabibbo-suppressed $b \to ccd$ tree amplitude has a time-dependent asymmetry in these decays that is related to the unitarity triangle angle β. Penguin amplitudes in these decays contribute at the same order, thus the measured CP asymmetry probes the size of the penguin decay amplitudes.

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