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Measurement of the $B \to X_s\gamma$ branching fraction and photon energy STEPHEN SEKULA, Royal Holloway University of London, BABAR COLLABORATION — We present a measurement of the branching fraction and photon energy spectrum for the decay $B \to X_s\gamma$. This measurement uses approximately 750,000 $B\bar{B}$ events that are tagged by a fully reconstructed hadronic decay of one of the B mesons. In the decay of the second B meson an isolated high energy photon is identified. The small contribution from $B \to X_d\gamma$ is subtracted using theoretical predictions. The full reconstruction of one of the B mesons results in improved background suppression and allows for an inclusive measurement of the photon energy spectrum in the B rest frame. From the measured spectrum we calculate the first and second moments for different minimum photon energies and use them to extract the heavy quark parameters m_b and μ_π^2. In addition, a measurement of the direct CP asymmetry $A_{CP}(B \to X_{s+d}\gamma)$ is presented.

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