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Search for Baryogenesis and Dark Matter in *B*-meson decays at *BABAR*.

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We present the most recent BABAR searches for reactions that could simultaneously explain the presence of dark matter and the matter-antimatter asymmetry in the Universe. This scenario predicts exotic *B*-meson decays of the kind $B \rightarrow \psi_D calB$, where

calB is an ordinary matter baryon (proton, Λ , or Λ_c) and ψ_D is a dark-sector anti-baryon, with branching fractions accessible at the B factories. The hadronic recoil method has been applied with one of the B mesons from $\Upsilon(4S)$ decay fully reconstructed, while only one baryon is present in the signal B-meson side. The missing mass of signal B meson is considered as the mass of the dark particle ψ_D . Stringent upper limits on the decay branching fraction are derived for ψ_D masses between 0.5 and 4.3 GeV/c². The results are based on the full data set of about 430 fb^{-1} collected at the $\Upsilon(4S)$ resonance by the BABAR detector at the PEP-II collider.

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