

Abstract Submitted
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A search for baryon and lepton number violation in B decays using the BaBar dataset MATT BELLIS, Stanford University, BABAR COLLABORATION — A search is performed for the decay $B \rightarrow$ baryon lepton, where the baryon is either a Λ_c^+ or Λ^0 and the lepton is a muon or electron. This decay would violate baryon (B) and lepton (L) number individually. In some of the decays in which we search, the difference (B-L) is conserved. The $B - L$ -conserving process is generally interpreted as being mediated by a boson that carries both color and lepton number and is fractionally charged. This boson is a signature of some unification theories. The flavor/generation dependence of this type of interaction can be constrained by a comprehensive search for decays involving different flavors of quarks and leptons. At the SLAC National Accelerator Laboratory, the PEP-II storage rings provided e^+/e^- beams from 1999-2008, during which time the BABAR experiment collected 429 fb^{-1} of data at the $\Upsilon(4S)$ resonance giving this analysis access to 1 billion B mesons. In the event of a null result, upper limits on the B branching fractions for these processes will be calculated in order to provide experimental constraints. The status of the search will be presented.

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