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Search for the decay $B^+ \to K^+ \nu \bar{\nu}$ DAVID DOLL, California Institute of Technology, BABAR COLLABORATION — We present a search for the decay $B^+ \to K^+ \nu \bar{\nu}$ performed with data collected by the BaBar detector at the PEP-II asymmetric energy storage rings. The analysis is carried out in the recoil of a reconstructed B using semileptonic tags (the tagged B decays in a $D^{(*)0}\ell^+\nu$ channel). We performed this study using both a cut-and-count method (BumpHunter tool in StatPatternRecognition), and multivariate approach (Random Forest tool included in StatPatternRecognition). A comparison of these studies is given.

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