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**Search for the radiative leptonic decay  $B \rightarrow \gamma \ell \bar{\nu}_\ell$**  GREGORY DUBOIS-FELSMANN, California Institute of Technology, BABAR COLLABORATION — We present the results of a search for charged  $B$  meson decays into  $\gamma \ell \bar{\nu}_\ell$ , where  $\ell = e, \mu$ . We use a sample of approximately 232 million  $B\bar{B}$  pairs recorded at the  $\Upsilon(4S)$  resonance by the BaBar detector at the PEP-II asymmetric-energy  $B$  Factory at SLAC. This decay mode is related to the theoretically clean purely leptonic decay, but with a larger branching fraction due to the lack of helicity suppression. An observation of this decay could be used either to evaluate the  $B$  meson pseudoscalar decay constant  $f_B$  or, with an independent determination of  $f_B$ , to test theoretical models of charmless  $B$  decays.

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