



MEETING OF THE AMERICAN PHYSICAL SOCIETY DIVISION OF PARTICLES AND FIELDS

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## Search for the Lepton Flavor Violating Decay

$$\Upsilon(3S) \rightarrow e^{\pm} \mu^{\mp}$$

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Charged lepton flavor violating processes are unobservable in the standard model, but they are predicted to be enhanced in several new physics extensions.

Data collected with the BaBar detector at the SLAC PEP-II  $e^+e^-$  collider at a center-of-mass energy of 10.36-GeV were used to search for electron-muon flavor violation in  $\Upsilon(3S) \rightarrow e^{\pm} \mu^{\mp}$  decays.

The search was conducted using a data sample in which 118 million  $\Upsilon(3S)$  mesons were produced, corresponding to an integrated luminosity of  $27\text{-fb}^{-1}$ .

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