Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Search for decays Bs -¿ etaprime eta and Bs -¿ etaprime pi0 in Belle data ANTHONY ZUMMO, VLADIMIR SAVINOV, University of Pittsburgh, BELLE COLLABORATION — We search for the decays $B_s \to \eta'\eta$ and $B_s \to \eta'\pi^0$ using 121.4 fb^{-1} of data collected at the $\Upsilon(5S)$ resonance with the Belle detector at the KEKB asymmetric-energy electron-positron collider. These decays are suppressed in the Standard Model of particle physics and proceed through $b \to u$ and $b \to s$ transitions, which are sensitive to new physics. The expected branching fractions in the Standard Model are 33.5×10^{-6} for $B_s \to \eta'\eta$ and 0.12×10^{-6} for $B_s \to \eta'\pi^0$. Neither decay has been observed yet. We use Monte Carlo simulation to study Belle sensitivity to these decays. We report the current status of our investigations to provide the best sensitivity to discovering these decays in the existing data.

Vladimir Savinov
University of Pittsburgh

Date submitted: 30 Sep 2016 Electronic form version 1.4