

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Evidence for $B^0 \rightarrow \rho^0 \rho^0$ decays ILYA OSIPENKOV, LBNL, BABAR COLLABORATION — We present the results of a search for $B^0 \rightarrow \rho^0 \rho^0$ decays. The analysis is based on a sample of 384 million $B\bar{B}$ pairs recorded with the BaBar detector. We extract $100_{-31}^{+32} \pm 17$ $\rho^0 \rho^0$ events, corresponding to a branching fraction of $(1.07_{-0.32-0.18}^{+0.34+0.19}) \times 10^{-6}$, and a fraction of longitudinally polarized events of $0.87_{-0.13}^{+0.12} \pm 0.04$. The significance of the signal is 3.5σ including systematics. We estimate the systematic uncertainty on the CKM unitarity angle α , due to penguin contributions, to be 18° at the 1σ level.

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Date submitted: 10 Jan 2007

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