

Abstract Submitted
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Measurement of the relative strong-phase difference between D^0 and $\bar{D}^0 \rightarrow K_S^0 \pi^+ \pi^-$ DANIEL AMBROSE, University of Rochester, HAJIME MURAMATSU, University of Minnesota, ED THORNDIKE, University of Rochester, BES-III COLLABORATION — We present the BES-III Collaboration preliminary results for a model independent measurement of the strong phase difference between D^0 and $\bar{D}^0 \rightarrow K^0 \pi^+ \pi^-$, through a binned dalitz analysis. The BES-III $\psi(3770)$ dataset generates D^0 and \bar{D}^0 pairs in a quantum-correlated state, which gives information about the CP state of the D^0 decay, allowing for a model independent measurement. The strong phase difference parameters c_i and s_i are determined for each phase bin of the $D^0 \rightarrow K^0 \pi^+ \pi^-$ dalitz plot by measuring the population of CP and flavor states present. These results represent a significant statistical improvement in a previously statically limited measurement, which will allow for increased precision in the measurement of unitarity triangle angle γ/ϕ_3 using the decay $B^\pm \rightarrow D(K_S^0 \pi^+ \pi^-)K^\pm$ through the GGSZ method.

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