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Dalitz Plot Analysis of $D^0 \to K_S^0 \pi^+ \pi^-$ and $D^0 \to K_S^0 K^+ K^-$ DIEGO MILANES, IFIC, Universitat de Valencia-CSIC, BABAR COLLABORATION — We present a Dalitz plot analysis of the decays $D^0 \to K_S^0 \pi^+ \pi^-$ and $D^0 \to K_S^0 K^+ K^-$ using data collected by the BaBar detector at the PEP-II asymmetric-energy e^+e^- collider at SLAC. The results of this analysis are a critical input for the determination of the Cabibbo-Kobayashi-Maskawa CP-violating phase γ using a D Dalitz analysis of $B^\pm \to D^{(*)} K^{(*)\pm}$ decays.

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