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**Time-dependent Dalitz-plot analysis of  $B^0 \rightarrow K_S \pi^+ \pi^-$**  JELENA ILIC, University of Warwick, BABAR COLLABORATION — We report on a time-dependent Dalitz-plot analysis of the decay  $B^0 \rightarrow K_S \pi^+ \pi^-$  performed by the BABAR experiment. An isobar model including scalar, vector and tensor components is fitted to the data and the Unitarity Triangle (UT) angle  $\beta_{eff}$  is extracted for the modes  $B^0 \rightarrow f_0 K_S$  and  $B^0 \rightarrow \rho^0 K_S$ . In addition, the phase difference between  $B^0 \rightarrow K^{*+} \pi^-$  and  $\bar{B}^0 \rightarrow K^{*-} \pi^+$  is determined. This phase difference is a critical input for a recently developed method for extracting the UT angle  $\gamma$ .

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