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## **Measurement of the hadronic cross sections for $e^+e^-$ to final states with neutral kaons with the BABAR detector**

*Saturday 6 August 2016 18:00 (2 hours)*

Measurements of low-energy  $e^+e^-$  hadronic cross sections are of fundamental importance because of the approximately three sigma discrepancy between the current measured value of the muon anomalous magnetic moment ( $g-2$ ) and the Standard Model prediction.

By means of the initial-state-radiation technique, we present the first measurements of the  $e^+e^- \rightarrow KS KL \pi^0$ ,  $KS KL \eta$  and  $KS KL \pi^0 \pi^0$  cross sections, and the study of their intermediate resonance structure, using  $469 \text{ fb}^{-1}$  of data collected with the BaBar detector at SLAC. Initial-state radiation events are also used to study the processes  $e^+e^- \rightarrow KS K^+ \pi^- \pi^0$  and  $KS K^+ \pi^- \eta$ , and their intermediate states.

**Presenter:** Dr PILLONI, Alessandro (Jefferson Lab)

**Session Classification:** Poster Session

**Track Classification:** Strong Interactions and Hadron Physics