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BaBar Searches for Double Charm Baryons ADAM EDWARDS, Stanford University, BABAR COLLABORATION — We present the results of searches for $\Xi_{cc}^{+} \to \Lambda_c^{+} K^{-} \pi^{+}$ and $\Xi_{cc}^{++} \to \Lambda_c^{+} K^{-} \pi^{+} \pi^{+}$. The decay $\Lambda_c(2880) \to \Lambda_c^{+} \pi^{-} \pi^{+}$ is used as a control and reference mode. We search wide mass regions for the Ξ_{cc}^{+} and Ξ_{cc}^{++} baryons that include several previously reported signals and theoretical predictions. Experimentally observing double charm baryons is a major step in scrutinizing predictions involving diquarks in theoretical QCD. Our data set was collected with the BaBar detector at the PEP-II $e^{+}e^{-}$ storage rings and consists of 210 fb^{-1} collected on the $\Upsilon(4S)$ resonance, and 22 fb^{-1} collected approximately 40 MeV below this resonance.

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