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Charmed baryon spectroscopy at Belle[1]

YUJI KATO, KMI, Nagoya University

We report recent results on the charmed baryon spectroscopy at the Belle experiment. We searched for doubly charmed baryon Ξ_{cc}^{+} in the $\Lambda_c^+ K^- \pi^+$ and $\Xi_c^0 \pi^+$ final states. No significant signal was found and we set upper limit on the production cross section. We searched for two excited Ξ_c states, $\Xi_c(3055)^+$ and $\Xi_c(3123)^+$ whose evidence are previously reported by BaBar experiment. We found evidence of the $\Xi_c(3055)^+$ but not for the $\Xi_c(3123)^+$. The production rate of hadrons in the e^+e^- collision as a function of the mass is known to lie on the exponential curve. If we find a hadron whose production rate is deviated from this line, it is a signature of the exotic state. We report measurement of the production rate of various charm and strange baryons.

[1]for the Belle collaboration