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Title:	Evidence of a structure in $K\bar{A}^0\bar{b}c^+$ consistent with a charged $\bar{\Xi}_c(2930)^+$, and updated measurement of $B\bar{A}^0\bar{b}c^+K\bar{A}^0\bar{b}c^+\bar{A}^0c^-$ at Belle: Belle Collaboration
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	$K^0\Lambda+c$ Belle Collaboration $B^0\rightarrow K^0\Lambda+c\Lambda^-c$ updated measurement
Issue Date:	2018
Publisher:	Springer New York LLC
Citation:	European Physical Journal C, 78(11).
Abstract:	We report evidence for the charged charmed-strange baryon $\Xi_c(2930)^+$ with a signal significance of 3.9σ with systematic errors included. The charged $\Xi_c(2930)^+$ is found in its decay to $K^0S\Lambda+c$ in the substructure of $B^0\rightarrow K^0S\Lambda+c\Lambda^-c$ decays. The measured mass and width are $[2942.3\pm 4.4(\text{stat.})\pm 1.5(\text{syst.})]\text{ MeV}/c^2$ and $[14.8\pm 8.8(\text{stat.})\pm 2.5(\text{syst.})]\text{ MeV}$, respectively, and the product branching fraction is $\mathcal{B}(B^0\rightarrow\Xi_c(2930)^+\Lambda^-c)\mathcal{B}(\Xi_c(2930)^+\rightarrow K^0\Lambda+c)=[2.37\pm 0.51(\text{stat.})\pm 0.31(\text{syst.})]\times 10^{-4}$. We also measure $\mathcal{B}(B^0\rightarrow\bar{A}^0\Lambda+c\Lambda^-c)=[3.99\pm 0.76(\text{stat.})\pm 0.51(\text{syst.})]\times 10^{-4}$ with greater precision than previous experiments, and present the results of a search for the charmonium-like state $Y(4660)$ and its spin partner, $Y\eta$, in the $\Lambda+c\Lambda^-c$ invariant mass spectrum. No clear signals of the $Y(4660)$ or $Y\eta$ are observed and the 90% credibility level (C.L.) upper limits on their production rates are determined. These measurements are obtained from a sample of $(772\pm 11)\times 10^6 B\bar{B}$ pairs collected at the $Y(4S)$ resonance by the Belle detector at the KEKB asymmetric energy electron-positron collider.
Description:	Only IISERM authors are available in the record.
URI:	https://link.springer.com/article/10.1140/epjc/s10052-018-6425-5 (https://link.springer.com/article/10.1140/epjc/s10052-018-6425-5) http://hdl.handle.net/123456789/1747 (http://hdl.handle.net/123456789/1747)
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