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Title:	Inclusive and exclusive measurements of B decays to χ_{c1} and χ_{c2} at Belle
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	B decays χ_{c1} and χ_{c2} KEKB asymmetric-energy
Issue Date:	2016
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Citation:	Physical Review D, 93(5)
Abstract:	We report inclusive and exclusive measurements for χ_{c1} and χ_{c2} production in B decays. We measure $B(B \rightarrow \chi_{c1} X) = (3.03 \pm 0.05(\text{stat}) \pm 0.24(\text{syst})) \times 10^{-3}$ and $B(B \rightarrow \chi_{c2} X) = (0.70 \pm 0.06(\text{stat}) \pm 0.10(\text{syst})) \times 10^{-3}$. For the first time, χ_{c2} production in exclusive B decays in the modes $B^0 \rightarrow \chi_{c2} \pi^+ K^-$ and $B^+ \rightarrow \chi_{c2} \pi^+ \pi^- K^+$ has been observed, along with first evidence for the $B^+ \rightarrow \chi_{c2} \pi^+ K^0$ decay mode. For χ_{c1} production, we report the first observation in the $B^+ \rightarrow \chi_{c1} \pi^+ \pi^- K^+$, $B^0 \rightarrow \chi_{c1} \pi^+ \pi^- K^0$ and $B^0 \rightarrow \chi_{c1} \pi^0 \pi^- K^+$ decay modes. Using these decay modes, we observe a difference in the production mechanism of χ_{c2} in comparison to χ_{c1} in B decays. In addition, we report searches for $X(3872)$ and $\chi_{c1}(2P)$ in the $B^+ \rightarrow (\chi_{c1} \pi^+ \pi^-) K^+$ decay mode. The reported results use 772×10^6 BB-events collected at the (4S) resonance with the Belle detector at the KEKB asymmetric-energy e+e- collider.
Description:	Only IISERM authors are available in the record.
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