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Title:	Measurement of branching fraction and direct CP asymmetry in charmless $B^+ \rightarrow K^+ K^- \ell^+ \ell^-$ decays at Belle
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	charmless hadronic $K^+ K^- \pi^+$ CP asymmetry
Issue Date:	2017
Publisher:	American Physical Society
Citation:	Physical Review D, 96 (3)
Abstract:	We report a study of the charmless hadronic decay of the charged B meson to the three-body final state $K^+ K^- \pi^+$. The results are based on a data sample that contains 772×10^6 $B\bar{B}$ pairs collected at the $\Upsilon(4S)$ resonance with the Belle detector at the KEKB asymmetric-energy e^+e^- collider. The measured inclusive branching fraction and direct CP asymmetry are $(5.38 \pm 0.40 \pm 0.35) \times 10^{-6}$ and $-0.170 \pm 0.073 \pm 0.017$, respectively, where the first uncertainties are statistical and the second are systematic. The $K^+ K^-$ invariant mass distribution of the signal candidates shows an excess in the region below 1.5 GeV/c ² , which is consistent with the previous studies from BABAR and LHCb. In addition, strong evidence of a large direct CP asymmetry is found in the low $K^+ K^-$ invariant-mass region.
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