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Title:	First measurement of the CKM angle ϕ_3 with $B_{\pm} \rightarrow D(K_0 S \pi^+ \pi^- \pi^0) K_{\pm}$ decays
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	B physics CKM angle gamma CP violation e+-e- Experiments
Issue Date:	2019
Publisher:	Springer Link
Citation:	Journal of High Energy Physics, 2019(10).
Abstract:	We present the first model-independent measurement of the CKM unitarity triangle angle ϕ_3 using $B_{\pm} \rightarrow D(K_0 S \pi^+ \pi^- \pi^0) K_{\pm}$ decays, where D indicates either a D^0 or D^{*0} meson. Measurements of the strong-phase difference of the $D \rightarrow K_0 S \pi^+ \pi^- \pi^0$ amplitude obtained from CLEO-c data are used as input. This analysis is based on the full Belle data set of 772×10^6 events collected at the $Y(4S)$ resonance. We obtain $\phi_3 = (5.7^{+10.2}_{-8.8} \pm 3.5 \pm 5.7)^{\circ}$ and the suppressed amplitude ratio $r_B = 0.323 \pm 0.147 \pm 0.023 \pm 0.051$. Here the first uncertainty is statistical, the second is the experimental systematic, and the third is due to the precision of the strong-phase parameters measured from CLEO-c data. The 95% confidence interval on ϕ_3 is $(-29.7, 109.5)^{\circ}$, which is consistent with the current world average.
Description:	Only IISERM authors are available in the record.
URI:	https://link.springer.com/article/10.1007/JHEP10(2019)178 (https://link.springer.com/article/10.1007/JHEP10(2019)178) http://hdl.handle.net/123456789/1813 (http://hdl.handle.net/123456789/1813)
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