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| Title:                  | Study of $\bar{B}^0 \rightarrow D + h - (h = K/\pi)$ decays at Belle  |
| Authors:                | Bhardwaj, Vishal (/jspui/browse?type=author&value=Bhardwaj%2C+Vishal)<br>Patra, Sourav (/jspui/browse?type=author&value=Patra%2C+Sourav)  |
| Keywords:               | Study of $\bar{B}^0$<br>$\bar{B}^0 \rightarrow D + h - (h = K/\pi)$<br>decays at Belle  |
| Issue Date:             | 2022  |
| Publisher:              | American Physical Society   |
| Citation:               | Physical Review D, 105(1), 012003 (1-9).  |
| Abstract:               | We present a measurement of the branching fractions of the Cabibbo favored $\bar{B}^0 \rightarrow D + \pi -$ and the Cabibbo suppressed $\bar{B}^0 \rightarrow D + K -$ decays. We find $B(\bar{B}^0 \rightarrow D + \pi -) = (2.48 \pm 0.01 \pm 0.09 \pm 0.04) \times 10^{-3}$ and $B(\bar{B}^0 \rightarrow D + K -) = (2.03 \pm 0.05 \pm 0.07 \pm 0.03) \times 10^{-4}$ decays, where the first uncertainty is statistical, the second is systematic, and the third uncertainty is due to the $D \rightarrow K - \pi + \pi +$ branching fraction. The ratio of branching fractions of $\bar{B}^0 \rightarrow D + K -$ and $\bar{B}^0 \rightarrow D + \pi -$ is measured to be $R_D = [8.19 \pm 0.20 (\text{stat}) \pm 0.23 (\text{syst})] \times 10^{-2}$ . These measurements are performed using the full Belle dataset, which corresponds to $772 \times 10^6 \bar{B}^0 \bar{B}^0$ pairs and use the Belle II software framework for data analysis |
| Description:            | Only IISER Mohali authors are available in the record.  |
| URI:                    | <a href="https://doi.org/10.1103/PhysRevD.105.012003">https://doi.org/10.1103/PhysRevD.105.012003</a> ( <a href="https://doi.org/10.1103/PhysRevD.105.012003">https://doi.org/10.1103/PhysRevD.105.012003</a> )<br><a href="http://hdl.handle.net/123456789/4567">http://hdl.handle.net/123456789/4567</a> ( <a href="http://hdl.handle.net/123456789/4567">http://hdl.handle.net/123456789/4567</a> )  |
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