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Title:	Study of $B \rightarrow p^- p \pi \pi$
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	Belle detector KEKB Asymmetric energy
Issue Date:	2020
Publisher:	American Physical Society
Citation:	Physical Review D 101(5),052012
Abstract:	Using a data sample of $772 \times 10^6$ $B^- B$ pairs collected on the $Y(4S)$ resonance with the Belle detector at the KEKB asymmetric energy $e^+e^-$ collider, we report the observation of $B^0 \rightarrow p^- p \pi^+ \pi^-$ and the first observation of $B^+ \rightarrow p^- p \pi^+ \pi^0$ . We measure a decay branching fraction of $(0.83 \pm 0.17 \pm 0.17) \times 10^{-6}$ in $B^0 \rightarrow p^- p \pi^+ \pi^-$ for $M_{\pi^+ \pi^-} < 1.22$ GeV/c <sup>2</sup> with a significance of 5.5 standard deviations. The contribution from $B^0 \rightarrow p^- p K^0$ is excluded. We measure a decay branching fraction of $(4.58 \pm 1.17 \pm 0.67) \times 10^{-6}$ for $B^+ \rightarrow p^- p \pi^+ \pi^0$ with $M_{\pi^+ \pi^0} < 1.3$ GeV/c <sup>2</sup> with a significance of 5.4 standard deviations. We study the difference of the $M_{p^- p}$ distributions in $B^0 \rightarrow p^- p \pi^+ \pi^-$ and $B^+ \rightarrow p^- p \pi^+ \pi^0$ .
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.052012">https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.052012</a> ( <a href="https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.052012">https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.052012</a> ) <a href="http://hdl.handle.net/123456789/3378">http://hdl.handle.net/123456789/3378</a> ( <a href="http://hdl.handle.net/123456789/3378">http://hdl.handle.net/123456789/3378</a> )
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