

Abstract Submitted
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Observation of Resonances in the $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^+ \pi^- \pi^-$ Decay Mode at CDF II PATRIZIA BARRIA, University of Siena, CDF COLLABORATION
— In a sample of events, collected with a displaced secondary vertex trigger at the CDF II experiment and corresponding to about 2.4 fb^{-1} of integrated luminosity, the decay $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^+ \pi^- \pi^-$ is observed. In addition, the $\Lambda_c^+ \pi^+ \pi^- \pi^-$ final state is studied and clear signals of the following exclusive decay channels are observed: $\Lambda_b^0 \rightarrow \Lambda_c^{*+}(2593, 2625)[\Lambda_c^+ \pi^+ \pi^-] \pi^-$, $\Lambda_b^0 \rightarrow \Sigma_c^{*+}[\Lambda_c^+ \pi^+] \pi^- \pi^-$, $\Lambda_b^0 \rightarrow \Sigma_c^0[\Lambda_c^+ \pi^-] \pi^+ \pi^-$, and $\Lambda_b^0 \rightarrow \Lambda_c^+ \rho^0 \pi^-$. The observation of such exclusive decay modes will allow for additional interesting measurements in the Λ_b^0 sector.

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