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Hadronic b -> c decays at Belle

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We present a measurement of the unitarity triangle angle phi_3 using Dalitz plot analysis of three-body neutral D decays from the Bˆ+ −> Dˆ{()}Kˆ{()+} process. The results are based on a large sample of B anti-{B} pairs recorded at the Upsilon(4S) resonance with the Belle detector at the KEKB eˆ+eˆ- collider. The decay B −> Dˆ{()} Kˆ{()} (D = D0 or anti-{D}0) includes the b −> u transition and plays a crucial role in the measurement of the CP-violating angle phi_3. We present the result of a study of the decay B −> Dˆ{()} Kˆ{()} where the D meson is reconstructed from Kˆ+ \piˆ-. We also report improved measurements of the branching fractions for the decays B0 −> D_sˆ{()+} \piˆ- and anti-{B}0 −> D_sˆ{()+} Kˆ-. Based on these results, we determine the ratio between the amplitudes of the doubly Cabibbo suppressed decay B0 −> Dˆ{()+} piˆ- and the Cabibbo favored decay B0 −> Dˆ{()-} \piˆ+. We studied the three-body baryonic Bˆ+ decays, Bˆ+ −> p \anti-Lambda Dˆ{()0. The branching fractions as well as the differential branching fractions as a function of the mass of the p anti-Lambda system are presented. These results are compared with theoretical predictions based on the generalized factorization approach. We present a study of the exclusive decays B0 −> D_sˆ- K0_S piˆ+ and Bˆ- \to D_sˆ+ Kˆ-Kˆ-. We use the D_sˆ- −> phi piˆ-, anti-{K}{}ˆ{}(892)0 Kˆ- and K0_S Kˆ- decay modes for D_s reconstruction.

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