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Nota di contenuto	Introduction -- CP violation in the SM and the CKM angle -- The LHCb experiment at the LHC -- Reconstruction and selection -- Background studies -- The simultaneous fit -- Results -- Conclusions -- Distributions of the BDT input variables -- Validation of the ApT variable -- Histograms of systematic errors -- Bibliography.
Sommario/riassunto	CP violation is a well-established phenomenon in particle physics, but until 2001 it was only observed in kaons. In the last decade, several matter-antimatter asymmetries have been observed in neutral B mesons in line with the expectations of the Standard Model of the weak interaction. Direct CP violation is also expected in the decay rates of charged B+ mesons versus that of B- mesons, though the greatest effects are present in a decay that occurs just twice in 10 million decays. Such rarity requires huge samples to study and this is exactly what the LHC, and its dedicated B-physics experiment LHCb provide. This thesis presents an analysis of the first two years of LHCb data. The author describes the first observation of the rare decay, B-DK-, D -K+ and the first observation of direct CP violation in this B decay. The work constitutes essential information on the experiment's

measurement of a fundamental parameter of the theory and stands as a benchmark against which subsequent analyses of this type will be compared.