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CP sensitivity Dalitz plot analysis of the decay $B^0 \rightarrow K_S K K$

I study the weak three-body decay $B^0 \rightarrow K_S K K$ generated at the LHCb experiment (Large Hadron Collider beauty) in the LHC (Large Hadron Collider) at CERN (Conseil Européen pour la Recherche Nucléaire). Validating the current results from run 1 (2010-2012) and run 2 (2015-2017) and studying the expected results from run 3 (2019-2022). The simulation of the experimental conditions for run 3 like the tagging (flavour of the B^0), the detector efficiency and the number of expected events will determine the sensitivity of the mass phase space (Dalitz plot) to the isobar amplitudes for the many resonance modes in the three-body decay, expecting to determine the CP-violating asymmetries of the flavour specific modes.

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