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Final state interactions: the troublemaker

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Hadronic final state interactions (FSI) play a major role in hadronic decays. They can generate new mechanisms for CP violation in $B \to 3h$ decays at low and high mass regions. We explained LHCb observation for CP violation in $D \to 2h$ as a FSI mechanism, contrary to QCD-based approaches that claim new physics. It is also needed to explain unexpected large branching fractions of some rare processes and, more recently, we show that we can understand the barionic $B \to p\bar{p}\pi$ and $B \to p\bar{p}K$ opposite angular signature with an FSI model. I will present an overview of those different "trouble-solver" FSI mechanisms, focusing on our last founds.

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