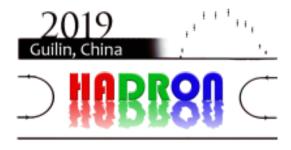
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Curious link of 3-body Exclusive and Inclusive CP Violation in Charmless B Decays

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The LHCb experiment has measured CP violation (CPV) across the Dalitz plot of charmless decays of B mesons to 3 charged tracks, namely in $K\pi\pi$, KKK, $\pi\pi\pi$, and π KK final states, with strikingly large CPV and strong variations with Dalitz variables. If one identifies these processes with $b \to sqq(bar)$, sss(bar) and $b \to dqq(bar)$, dss(bar), where q = u, d, then the "sum rule" that requires two-loop absorptive parts by unitarity works well for inclusive $b \to s$ CPV, but less well for the inclusive $b \to d$ case. The situation is discussed and remedied, making the 30 years old unitarity argument valid to this day, and affirming quark-hadron duality.

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