

Direct CP violation in charmed meson decays

Monday, 1 July 2019 10:30 (30)

In 2012 Cheng-Wei Chiang and I have studied direct CP violation in singly Cabibbo-suppressed D decays within the topological diagram approach. We concluded that the direct CP asymmetry difference ΔA_{CP} between $D^0 \rightarrow K^+ K^-$ and $D^0 \rightarrow \pi^+ \pi^-$ is about $(-0.139 \pm 0.004)\%$ and $(-0.151 \pm 0.004)\%$ for the two solutions of W-exchange amplitudes, respectively. The first observation of CP violation in the charm sector was recently announced by LHCb with the result $\Delta A_{CP} = (-0.154 \pm 0.029)\%$. This is a great triumph of the standard model. In this talk I'll discuss its implications and present new predictions in other $D \rightarrow PP$ and VP modes (P: pseudoscalar meson, V: vector meson).

Presenter(s) : ,  ()

Session Classification : Morning sessions