

B \rightarrow $\omega\omega$, $\omega\phi$, CP violation in B to three kaons, and other charmless B-meson decays

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The B decays to $\omega\omega$ and $\omega\phi$ are related to B $\rightarrow \phi K$ via an $SU(3)$ rotation.

The study of these yet unseen decay modes can therefore provide information regarding the unexpectedly small value of the longitudinal spin component (f_L) measured in B $\rightarrow \phi K$ decays.

We present here the results of a new search for these decay modes, as well as other charmless B decays, performed using about 470M B-Bbar events recorded by the BaBar detector. We also present studies of direct CP violation in charmless B decays to kaons. In particular we discuss the K^+K^- mass dependence of the CP-asymmetry of the decay $B^+ \rightarrow K^+K^-K^+$.

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