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Measurement of gamma from three-body B decays

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It was recently shown that the weak phase γ can be extracted from three-body B decays. Using a flavor-SU(3)-symmetric approach, we extract γ from the BaBar measurements of the Dalitz plots of $B \to K\pi\pi$ and $B \to KK\bar{K}$ decays. We find four possible solutions: 31^{+2}_{-3} , 77 ± 3 , 258^{+4}_{-3} and 315^{+3}_{-2} , in degrees. In all cases the error includes first-order flavor-SU(3) breaking effects. One solution – 77 ± 3 – is consistent with the standard model; its error is smaller than that obtained using two-body B decays. We present recent updates of the results.

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