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## Tuning of hopping parameters in Oktay-Kronfeld action for heavy quarks on the $N_f = 2 + 1 + 1$ MILC HISQ ensemble.

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We determine hopping parameters of the Oktay-Kronfeld (OK) action for charm and bottom quarks. We use  $N_f = 2 + 1 + 1$  MILC HISQ ensembles (with  $a \approx 0.12\text{fm}$ ,  $am_l = 0.0102$ ,  $am_s = 0.0509$  and  $am_c = 0.635$ ). As a key ingredient, we compute the masses of pseudoscalar and vector mesons  $B_s^*$ ,  $D_s^*$  and their hyperfine splittings; the valence light quark is simulated with HISQ action. We also monitor the inconsistency parameters to confirm the improvement.

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