

## Calculating $B_K$ using the mixed action

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Abstract: We review a recent progress in calculating  $B_K$  using the mixed action (Asqtad Sea + HYP valence). We smear, using the HYP blocking transformation, the MILC gauge configurations which was generated originally with the 2+1 AsqTad staggered sea quarks. We constructed the operators and calculated the quark propagators over these HYP blocked gauge configurations. We present preliminary results of  $B_K$  matched at the tree level. Here the analysis for only degenerate quark masses are discussed.