



Contribution ID: 206

Type: Poster

## Calculation of BSM Kaon B-parameters using improved staggered quarks in $N_f = 2+1$ QCD.

*Tuesday, 24 June 2014 18:10 (2 hours)*

We present results of the Kaon B-parameters calculated using the HYP-improved staggered quarks on the MILC asqtad lattices.

The perturbative matching is done at one-loop level.

We extrapolate the data to physical pion mass using the  $SU(2)$  staggered chiral perturbation theory.

After that, we simultaneously extrapolate results to the continuum ( $a = 0$ ) and physical sea quark mass.

We report our final results evaluated at 2GeV and 3GeV in the  $\overline{MS}$  scheme with naive dimensional regularization.

And we present error budgets for the B-parameters in the conclusion.

This work will lead to a series of constraint equations for the BSM models.

**Primary authors:** Dr YOON, Boram (Los Alamos National Laboratory); JUNG, Chulwoo (Brookhaven National Laboratory); Mr LEEM, Jaehoon (Seoul National University); Prof. SHARPE, Stephen (University of Washington); Prof. LEE, Weonjong (Seoul National University)

**Co-authors:** Mr JEONG, Hwancheol (Seoul National University); Dr KIM, Hyung-Jin (Brookhaven National Laboratory); Mr KIM, Jangho (Seoul National University); Mr PAK, Jeonghwan (Seoul National University); Mr KIM, Sunghee (Seoul National University); Mr PARK, Sungwoo (Seoul National University); Mr JANG, Yong-Chull (Seoul National University)

**Presenter:** Mr LEEM, Jaehoon (Seoul National University)

**Session Classification:** Poster session

**Track Classification:** Weak Decays and Matrix Elements