

# Kaon B-Parameters for Generic $\Delta S = 2$ Four-Quark Operators in Quenched Domain Wall QCD

**Presenter: Yousuke Nakamura** (University of Tsukuba)

*CP-PACS Collaboration: Y. Nakamura, S. Aoki, M. Fukugita, K-I. Ishikawa, N. Ishizuka, Y. Iwasaki, K. Kanaya, Y. Kuramashi, J. Noaki, M. Okawa, Y. Taniguchi, A. Ukawa, T. Yoshié*

Abstract: We present a study of B-parameters for generic  $\Delta S = 2$  four-quark operators in domain wall QCD. Our calculation covers all the B-parameters required to study neutral kaon mixing in the standard model (SM) and beyond. We evaluate one-loop renormalization factors of the operators employing the plaquette and Iwasaki gauge actions. Numerical simulations are carried out in quenched QCD with both the gauge actions on  $16^3 \times 32 \times 16$  and  $24^3 \times 32 \times 16$  lattices corresponding to the lattice spacing  $1/a \approx 2\text{GeV}$ . We investigate the relative magnitudes of the non-SM B-parameters to the SM one, which are compared with the previous results obtained with the overlap and the clover quark actions.