Contribution ID: **63** Type: **Poster presentation**

# Controlling residual chiral symmetry breaking effects of domain wall fermions in QCD thermodynamics

*Wednesday, 15 February 2023 16:03 (1 minute)*

Investigation of QCD thermodynamics for $N_f$=2+1 along the lines of constant physics with Möbius domain wall fermions is underway. At our coarsest lattice $N_t$=12, reweighting to overlap fermions is not successful. To use domain wall fermions with the residual mass larger than average physical $ud$ quarks, careful treatments of the residual chiral symmetry breaking are necessary. One of the examples is the chiral condensate where a UV power divergence associated with the residual chiral symmetry breaking emerges with a coefficient not known a priori. In this presentation we introduce first the setup of the computations and then discuss methodologies to overcome potential problems towards the continuum limit in this setup.

## Recording and publishing

yes

**Primary authors:** AOKI, Yasumichi (RIKEN); AOKI, Sinya (Kyoto University); FUKAYA, Hidenori (Osaka University); GOSWAMI, Jishnu (RIKEN Center for Computational Science); HASHIMOTO, Shoji (KEK); KANAMORI, Issaku (RIKEN); KANEKO, Takashi (KEK); NAKAMURA, Yoshifumi (RIKEN AICS); ZHANG, Yu (RIKEN R-CCS)

**Presenter:** AOKI, Yasumichi (RIKEN)

**Session Classification:** Poster