



Contribution ID: 107

Type: **Parallel Talk**

Chiral susceptibility and axial U(1) anomaly near the (pseudo-)critical temperature

Tuesday, 1 August 2023 17:00 (20 minutes)

We investigate a possible relation between the chiral susceptibility and axial U(1) anomaly in lattice QCD at high temperatures. Employing the exactly chiral symmetric Dirac operator, we can separate the purely axial U(1) breaking effect in the connected and disconnected chiral susceptibilities in a theoretically clean manner. Preliminary results for 2 and 2+1 flavor lattice QCD near the critical temperature will be presented.

Topical area

QCD at Non-zero Temperature

Primary authors: WARD, David (Osaka Univ.); FUKAYA, Hidenori (Osaka Univ.); KANAMORI, Issaku (RIKEN R-CCS); SUZUKI, Kei (JAEA); HASHIMOTO, Shoji (KEK); AOKI, Sinya (Yukawa Institute for Theoretical Physics, Kyoto University); KANEKO, Takashi (KEK); AOKI, Yasumichi (RIKEN R-CCS); NAKAMURA, Yoshifumi (Riken)

Presenter: FUKAYA, Hidenori (Osaka Univ.)

Session Classification: QCD at Non-zero Temperature