



Contribution ID: 367

Type: **Parallel Talk**

Flavor diagonal nucleon charges from clover fermions on MILC HISQ ensembles.

Monday, 31 July 2023 13:30 (20 minutes)

We update our calculation of flavor diagonal nucleon axial, scalar and tensor charges on eight 2+1+1-flavor MILC HISQ ensembles using Wilson-clover fermions. We discuss the signal in the sum of the connected and disconnected contributions for the up, down and strange quarks, control over fits to remove excited state contamination, the simultaneous chiral-continuum fit used to extract the charges. We calculate the renormalization including mixing between flavors nonperturbatively using RI-sMOM. We compare two different determinations of Z_ψ , one from the quark propagator and the other from the nucleon vector charge and the vector Ward identity, and consider the resulting difference in the renormalized flavor diagonal charges.

Topical area

Structure of Hadrons and Nuclei

Primary authors: BHATTACHARYA, Tanmoy (Los Alamos National Laboratory); GUPTA, Rajan (Los Alamos National Lab); LIN, Huey-Wen (MSU); MONDAL, Santanu (National Chiao-Tung University); PARK, Sungwoo (Lawrence Livermore National Laboratory); YOON, Boram (NVIDIA Corporation)

Presenter: PARK, Sungwoo (Lawrence Livermore National Laboratory)

Session Classification: Structure of Hadrons and Nuclei