



Contribution ID: 94

Type: Oral presentation

## Towards a Calculation of the Nucleon Axial Form factor with Highly Improved Staggered Quarks

*Tuesday 27 July 2021 13:15 (15 minutes)*

In this talk, I will report our group's progress on calculating the nucleon axial form factor with the HISQ action for both valence and sea quarks. Nucleon matrix elements with staggered fermions require careful analysis of the staggered symmetry group. I will report a solution based on the generalized Wigner-Eckart theorem that enables us to extract physical observables from staggered observables. I will present published results for nucleon axial and vector charges and preliminary results on the form factors to demonstrate the feasibility of our methodology.

**Primary authors:** MEYER, Aaron (University of California Berkeley); EL-KHADRA, Aida (UIUC); STRELCHENKO, Alexei (F); KRONFELD, Andreas (Fermilab); HUGHES, Ciaran (Fermilab); GAMIZ, Elvira (University of Granada); Dr SIMONE, James (Fermilab); GOTTLIEB, Steven (Indiana University); LIN, Yin (University of Chicago)

**Presenter:** LIN, Yin (University of Chicago)

**Session Classification:** Hadron Structure

**Track Classification:** Hadron Structure