

## $B \rightarrow \pi \ell \nu$ and $B \rightarrow \pi \ell \ell$ decays with HISQ/NRQCD valence quarks on $N_f = 2 + 1$ asqtad ensembles.

*Friday, 27 July 2018 16:50 (20 minutes)*

We discuss a calculation of the form factors for the flavor-changing charged current  $b \rightarrow u$  and the flavor-changing neutral current  $b \rightarrow d$  semileptonic decays,  $B \rightarrow \pi \ell \nu$  and  $B \rightarrow \pi \ell \ell$ . HISQ light and NRQCD  $b$  valence quarks are simulated on the MILC  $N_f = 2 + 1$  asqtad ensembles, including pion momenta that cover the full kinematic range of the decay. These data are analyzed using a hard pion ChPT motivated modified  $z$ -expansion developed in previous work. Preliminary results and phenomenological implications are discussed.

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**Session Classification:** Weak Decays and Matrix Elements

**Track Classification:** Weak Decays and Matrix Elements