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Toward a measurement of weak magnetism in ^{6}He decay[1] XUEYING HUYAN, NSCL/MSU, DANIEL BAZIN, NSCL, ALEXANDRA GADE, MAX HUGHES, SEAN LIDDICK, KEI MINAMISONO, NSCL/MSU, SHUMPEI NOJI, NSCL/Osaka University RCNP, OSCAR NAVILIAT-CUNCIC, NSCL/MSU, STANLEY PAULAUSKAS, NSCL, ANNA SIMON, NSCL/University of Notre Dame, PAUL VOYTAS, Wittenberg University, DIRK WEISSHAAR, NSCL — The simplicity of ^{6}He beta decay has attracted considerable interest for the study of the weak interaction and searches for new physics beyond the standard model (SM). The comparisons between precision correlation measurements and SM predictions require an accurate determination of observables within the SM. At the level of sensitivity of new generation experiments, it is expected that recoil order terms in the hadronic weak current, such as weak magnetism, should have a sizable contribution. We have performed an exploratory experiment using a beam of ^{6}He produced by projectile fragmentation of ^{18}O, with the purpose to assess the conditions for a measurement of the shape of the beta energy spectrum in a geometry where the beta particles do not have to cross any interface and cannot escape from the detector. Particular attention has been devoted to identify possible beam contaminants as well as background produced by beam induced reactions in the detectors. This contribution will describe the experiment and present the status of the data analysis.

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Xueying Huyan
NSCL/MSU

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