

Abstract Submitted  
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**The aCORN Magnetic Field and Collimation Systems<sup>1</sup>** GEORGE NOID, Indiana University, ACORN COLLABORATION — The aCORN instrument's sensitivity to the electron-anti neutrino correlation in neutron decay depends on measuring the counting asymmetry between two kinematically distinct groups of decay events. This asymmetry is proportional to the correlation parameter “a”. Decay particles are selected by a highly uniform axial magnetic field and a series of tungsten apertures. An electrostatic mirror reflects all protons toward the proton detector. Misalignment of the collimator axis to the magnetic field axis, internal misalignment of the collimators, and transverse components of the magnetic field can all result in a false counting asymmetry between the two groups. Alignment of the collimator assembly and trimming to the design magnetic field will be presented.

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