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The Design and Implementation of the aCORN Magnet BRIAN COLLETT, Hamilton College, ACORN COLLABORATION — The aCORN experiment confines the neutron decay products close to an axis using a set of collimators. The electron-antineutrino angular correlation leads to an asymmetry in the number of decay protons emerging parallel to the electron versus the number emerging antiparallel. A measurement of the asymmetry leads to a measurement of the coefficient, "a." aCORN employs a highly uniform magnetic field aligned to within 10^{-4} radians of the collimator axis to limit the maximum transverse momentum of the protons. Errors in uniformity or alignment of the field lead to differences in the phase space for the two proton populations and thus to systematic errors in the value of "a." The design of the magnet system, its power supplies, and the field mapping systems will be presented

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