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The data acquisition system for the aCORN experiment[1] MAYNARD DEWEY, NIST - Natl Inst of Stds & Tech, ACORN COLLABORATION — The aCORN experiment measures the angular correlation between the electron and neutrino emitted in free neutron beta decay, via an electron-proton momentum correlation asymmetry. Doing so requires detecting neutron beta decay protons and electrons in coincidence. Protons are detected with a surface barrier detector while electrons are detected with a large scintillator whose light output is parceled into 19 photomultiplier tubes. Additionally there are eight scintillators that detect backscattered electrons so that these events may be removed from the data stream. This talk will discuss the novel data acquisition system (both hardware and software) that has been developed to handle the high throughput rates observed.

[1]NIST, DOE and NSF

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