Abstract Submitted
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Monitor Detector for Relative Normalization with ^{6}He-CRES Experiment REGAN ZITE, University of Washington — The ^{6}He Cyclotron Radiation Emission Spectroscopy (CRES) experiment at the University of Washington aims to precisely measure the Fierz coefficient by analyzing the cyclotron radiation of beta-decay electrons in a magnetic trap. This experiment takes data over a finite bandwidth which does not cover the entire beta spectrum. In order to *stitch together* each piece of the spectrum, we use a silicon beta detector. We are testing the stability of a Passivated Implanted Planar Silicon (PIPS) detector and digitizer to be used to monitor beta activity. Initial tests were done with an ^{241}Am alpha source, cooled to -10 C to optimize resolution. With this system, we've achieved stability on the level of 10^{-4} as shown via an Allan deviation analysis. Our next measurements will be taken with a ^{90}Sr beta source whose energy spectrum more closely resembles that of ^{6}He.

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