Cyclotron Radiation Detection Strategy for the $^6$He CRES experiment\textsuperscript{1} BREN'T GRANER, University of Washington, HELIUM 6 CRES COLLABORATION — The $^6$He CRES experiment at the University of Washington CENPA aims to produce a precision measurement of the Fierz interference parameter $b_{Fierz}$ by observing the cyclotron radiation of beta-decay electrons emitted in a magnetic trap. This talk will focus on our detection strategy and compare to the pre-existing CRES experiment, Project 8. Particular consideration will be given to maximizing detection bandwidth as well as the advantages that can be achieved by simultaneously observing cyclotron radiation from both directions normal to the particle orbit.

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