

Abstract Submitted
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Tests of the GRETINA triple cluster prototype detector¹ A.O. MACCHIAVELLI, R.M. CLARK, M. CROMAZ, M.A. DELEPLANQUE, M. DESCOVICH, S. ETTENAUER, P. FALLON, I.Y. LEE, E. RODRIGUEZ-VIEITEZ, F.S. STEPHENS, D. WARD, M. WIEDEKING, Lawrence Berkeley National Laboratory — The GRETINA prototype detector consists of a cluster of 3 tapered regular hexagonal HPGe capsules in a common cryostat. The Ge crystals have 36 segments (6 longitudinal x 6 transverse) and a central contact for a total of 111 channels, each instrumented with a cold FET stage. A number of tests have been performed and will be the subject of this presentation. Acceptance tests include: mechanical dimensions, liquid nitrogen holding time, and energy resolution. Characterization tests, which are of importance for the performance in tracking arrays, were carried out and include “singles” segment boundaries scans (Am –source) and “coincidence” scans for pulse shape analysis (Cs source). Preliminary results of an in-beam experiment using the reaction $^{12}\text{C}(^{82}\text{Se},4n)^{90}\text{Zr}$ at 285MeV establish a position resolution (RMS) of $\sigma \sim 2\text{mm}$.

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