

Abstract Submitted
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A repair station for HpGe detectors¹ ROBERT SHEARMAN, University of Massachusetts Lowell/University of Surrey, CHRISTOPHER LISTER, A.J. MITCHELL, PATRICK COPP, University of Massachusetts Lowell, STEVEN JEPEAL, University of Notre Dame/University of Massachusetts Lowell, PARTHA CHOWDHURY, University of Massachusetts Lowell — Hyper-pure Germanium detectors (HpGe) offer the highest energy resolution for gamma-ray nuclear spectroscopy (about 1.5 keV @ 1 MeV), and are used in all the world's leading detector arrays such as GammaSphere, AGATA and GRETINA. The detector crystals are operated in cryostats at 100 K to reduce thermal noise. To maintain low leakage current and low operating temperatures, cryostat hygiene is very important. Detectors must be regularly maintained by using a high-vacuum, oil-free annealing station. At elevated temperatures above 373 K the process of pumping and baking can also anneal away neutron damage to the detector crystals. This poster will show the design and building of a new HpGe repair station at U. Mass Lowell, and make comparisons of results obtained from this new station to the Gammasphere annealing factory at Argonne.

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