

Comparison for Atmospheric Filter Papers

Researchers at Pacific Northwest National Laboratory have recently completed construction of a 14 crystal low-background germanium array. A low-background shield system was also built to house a commercial low background germanium spectrometer. This system will be certified to measure atmospheric filter paper samples collected by the International Monitoring System (IMS). Both of these systems are currently operating in a new shallow underground laboratory at PNNL. This work briefly reviews the design and performance of these two gamma spectrometers. The sensitivity of these two systems is compared to that of a typical laboratory gamma spectrometer for the measurement of high fission yield gamma emitters collected on atmospheric filter papers.

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