

and Validation of Coincidence Analysis/Quantification Software for Gamma-Gamma Coincidence Counting

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Gamma-gamma coincidence techniques are known to improve the detection of particulate radionuclides relevant for Treaty monitoring purposes. To that end, Pacific Northwest National Laboratory (PNNL, USA) has developed a novel γ - γ coincidence analysis and radionuclide quantification software package. The software's execution has been tested for radionuclides relevant to Comprehensive Nuclear-Test-Ban Treaty and other radionuclides with complex decay schemes. This presentation discusses software's details, challenges encountered in its development, and its experimental validation. The validation was performed by experimentally measuring 15 radionuclides (including Ba-140, La-140, and Y-88) using the Advanced Radionuclide Gamma-spectrometer (ARGO) located in the Shallow Underground Laboratory (SUL) at PNNL.

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Promotional text

The presentation covers a novel gamma-gamma coincidence analysis and radionuclide quantification software developed at Pacific Northwest National Laboratory, USA.

Oral preference format

online live

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