SnT 2025 CTBT: SCIENCE AND TECHNOLOGY CONFERENCE
8 SEPTEMBER ONLINE DAY
9 TO 12 SEPTEMBER AT HOFBURG PALACE, VIENNA & ONLINE

Development of a background model for coincidence gamma-ray spectrometry measurements in radionuclide monitoring

LIGHTNING TALK

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Our poster provides insights related to the development of a realistic source background model using Geant4 simulation toolkit which is aimed to play a key role in optimizing the minimum detectable activity of coincidence gamma-ray spectrometers for detection of CTBT-relevant radionuclides. Measurements with a single-crystal HPGe detector were used to characterize background contributions from the detector environment, air filter materials, and air borne radionuclides. These measurements were used to build and validate simulation models that replicate the observed background spectra.

For further details and results, please visit our poster in the poster session.

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