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Recent algorithm developments on methods for the analysis of radioxenon beta/gamma coincidence spectrum

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The evolution of the SPALAX systems, now equipped with a high resolution beta/gamma detection equipment (PIPSBox/HPGe), led CEA/DAM to develop dedicated spectrum analysis algorithms. The first developments were presented to CTBTO noble gas experts during the “Paris equation” meeting in March 2018.

Lately, CEA/DAM conducted a computer-based study to evaluate those algorithms. A large low count rate spectra database was generated by Monte-Carlo simulations for several detector configurations. It permitted the production of counts statistical distributions and the proper evaluation of associated uncertainties, the critical and detection limits.

The discrepancies between algorithms and detector configurations will be presented.

Promotional text

Come, see, and discuss!

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