Application Software for Automatic Time-Dependent Spectral Analysis

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Abstract. The paper presents the software SeGaSA 0.9 (Software for Sequential Gamma-ray Spectra Analysis) for an automatic sequential gamma-ray spectra analysis. It has been developed to support spectral analysis of CdTe detectors suffering from polarization effect, but it is applicable to any set of spectra of the specified input format (.mca). The software enables automated analysis of the arbitrary number of sequentially acquired spectra with the main option to sum user defined number of successive spectra and to evaluate the resultant outputs. The spectral parameters like the photopeak position (centroid), the full width at half maximum (FWHM), the peak height and the net/gross peak area are determined as a result as functions of time or spectra set position number. The software enables an optional user-controlled energy calibration from the first spectrum loaded for analysis. We present here the first version of the software, which is currently under development and integration of other improvements and functionalities will follow.