

# The 8-Parameter List Mode for $\gamma$ - $\gamma$ Perturbed Angular Correlation Measurements

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A new TDPAC spectrometer which is based on the principle of event by event data acquisition (list mode) in order to reduce a background, avoid systematic errors and increase efficiency of the setup is described. The principal demand on the new spectrometer is the simultaneous measurement of all events containing the time and energy signals of the four detectors appearing in a preset common time window. For this purpose an 8-parameter list mode data acquisition system has been developed.

*Key words:* Time Differential Perturbed Angular Correlations (TDPAC); Spectrometers; List Mode; Event by Event; Data Acquisition.