Analysis of Gamma-Ray Spectroscopy Using the LabVIEW Programming Environment[1] JAMES PHELPS, PHILLIP WOMBLE, DOUG HARPER, ALEXANDER BARZILOV, Western Kentucky University, Applied Physics Institute — The LabVIEW programming language is very popular for creating data acquisition and analysis software. However analysis systems which require a heavy amount of data manipulation and comparison algorithms, such as for spectral analysis, are typically approached with languages such as C. Our goal is to create an analysis system for γ-ray spectroscopy using the LabVIEW programming language. This system will accept data in the form of delimited text and plot the spectra. An algorithm will be implemented to find peaks within the data and identify γ-rays in the spectra by comparing the measured γ-ray intensities with tables containing known γ-ray intensities. By approaching this problem using LabVIEW, which would more typically be used for the acquisition process, we hope to be able to create a more fully-functional and robust software approach to γ-ray spectroscopy in the future.

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