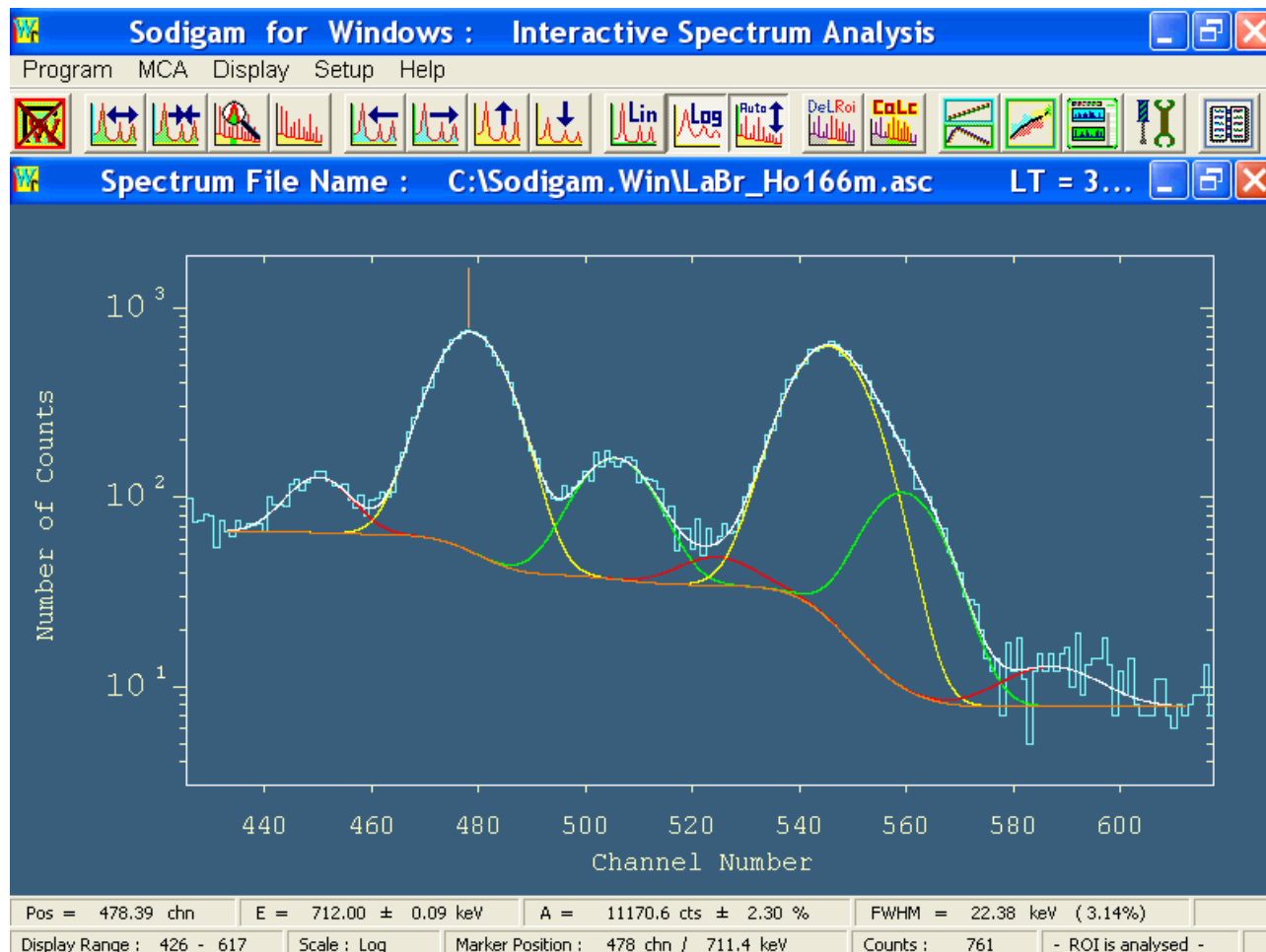


Spectrometry using BrillanCe detectors = LaBr₃(Ce)



Fit of peaks in the Ho-166m multiplet around 700-750 keV, measured for 301seconds only

The SODIGAM program “knows” the physical shape of the baseline (i.e. the background under peaks), the correct peak-shape and systematics of various parameters for modern BrillanCe detectors. Therefore even strongly overlapping peaks can be analysed correctly and quantitatively. Figure 1 shows the deconvolution with SODIGAM of the multiplet around 700-750 keV. Different peaks of Ho-166m are plotted in various colours; the sum function of all peaks is the white line going through the experimental histogram data.

The SODIGAM program can correctly analyse even strongly overlapping peaks in spectra from BrillanCe detectors. Thus, these new detectors with good resolution can now be used for quantitative gamma-ray spectrometry at room temperature. Using portable spectrometers, one is able to make in-situ measurement and high-precision on-the-spot spectrum analysis for substantiated decisions.