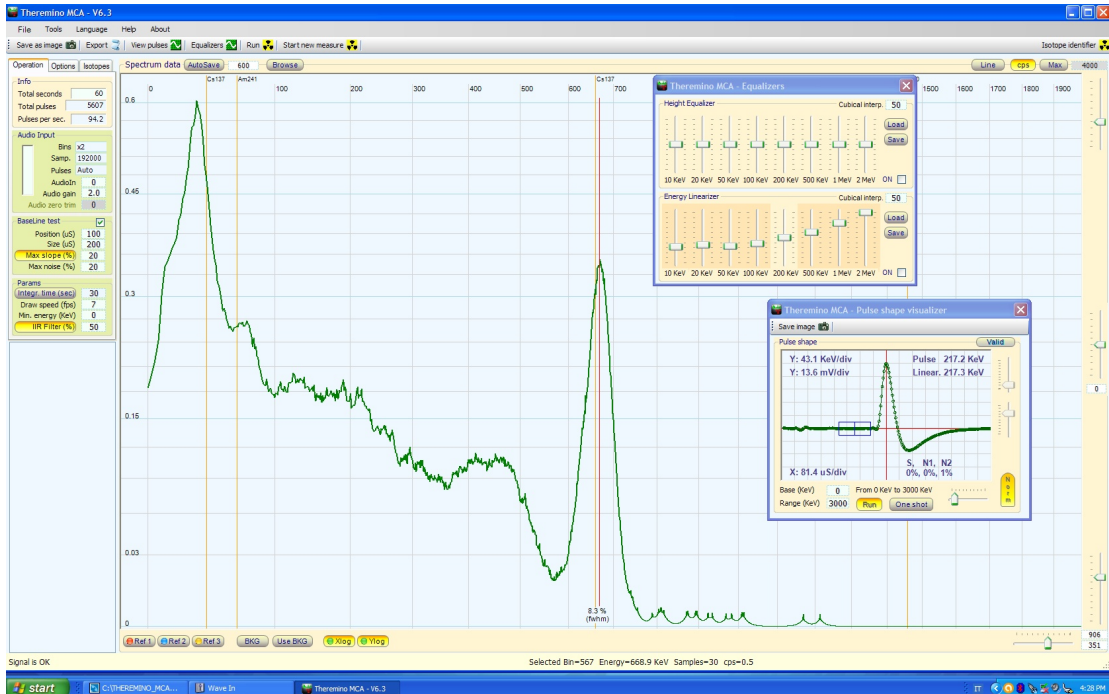
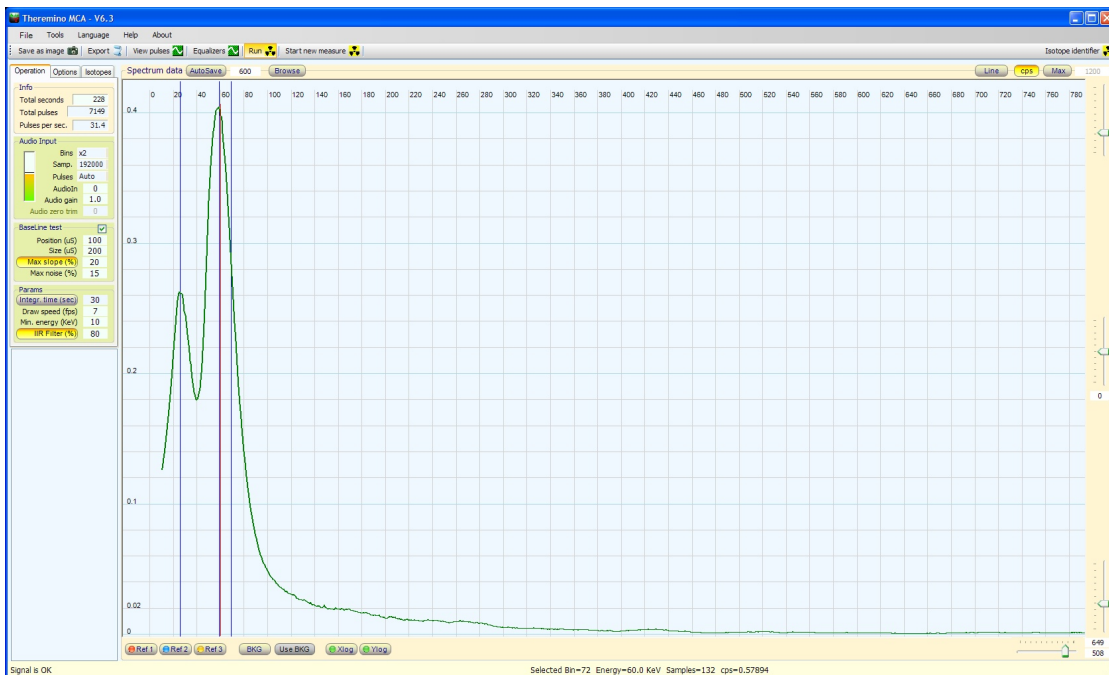


# CdWO<sub>4</sub> crystal 10 x 10 x 8 mm.

I have recently carried on a few experiments using this uncommon hi stopping power crystal. All the test have been done without any shielding. The used pmt is an EMI9111B.



Cs137 shows a FWHM of 8.3 % at 662 keV, quite good for this kind of crystal



The two peaks of Am241 are well defined.

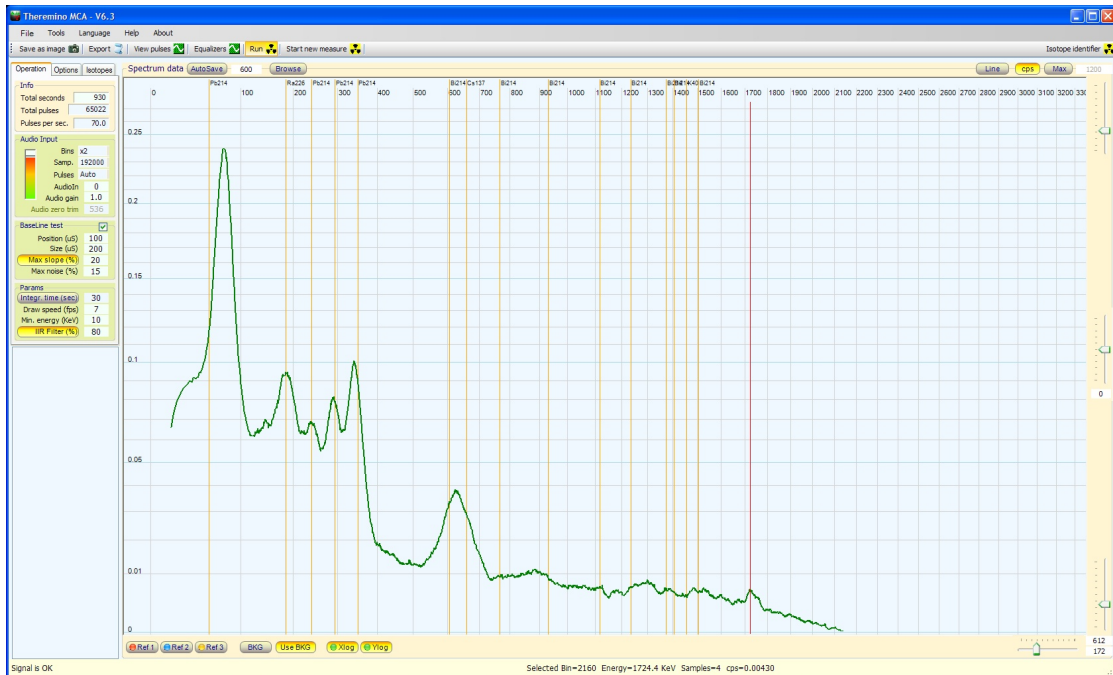


Achieving the 1332 keV of Co60 in one minute with a crystal thickness of just 8 mm. is not very usual. The FWHM is 7.4%.



44 grams of KCl clearly show the 1460 keV. of K40 after just ten minutes.

All the above graphs were taken without stripping the background. The following two have instead the background stripped.



Two radium hands - the 1729 keV. of Bi214 is the maximum observable energy.



One thoriated mantle, unfortunately I have not detected the 2614 keV. of Th208.

The maximum observable energy, with my equipment and present settings, seems to be around 2 MeV

The 9111B EMI pmt is long only 5 cm. and adding this CdWO4 crystal to this photomultiplier allow to build a real pocket size detector (less than 10 cm.length) but able to get energies from 30 to 2000 keV., with ease.

Thank you Luuk and Scionix for let us play also with this uncommon material