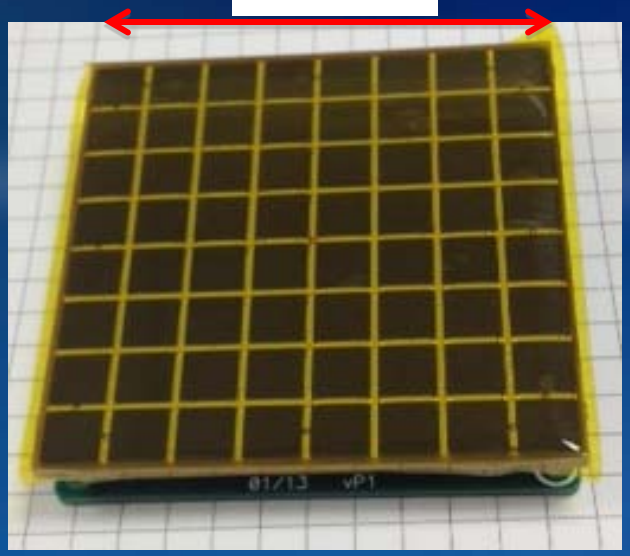
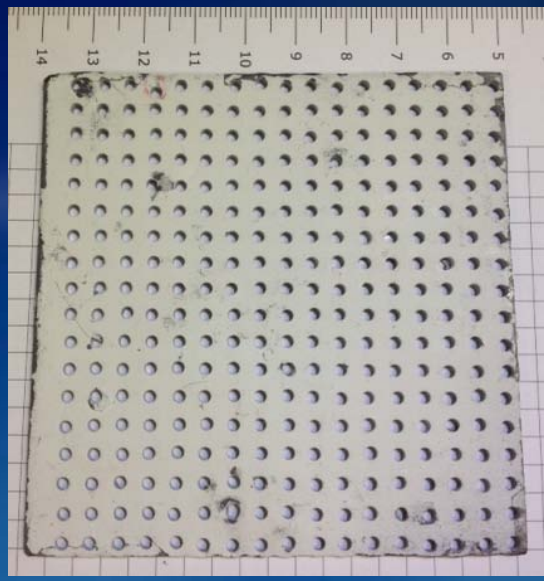
ArraySB-8 and LaBr3



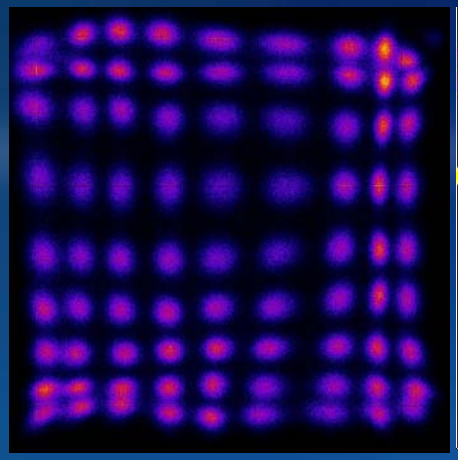


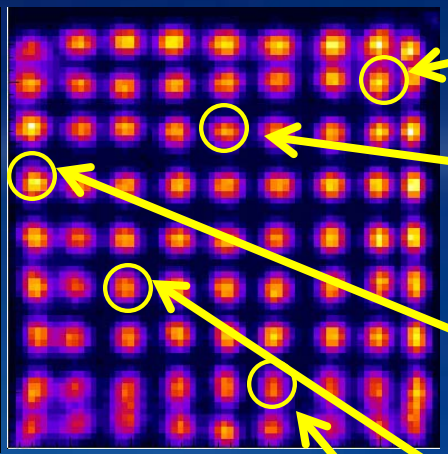
Parameter	Value [a]
Number of pixels	8x8
Pixel active area	6x6mm^2
PCB size	56.6x56.6mm^2
Pixel pitch	7mm
No. of microcells per pixel	18980
Operating voltage (V_{op})	28.9V
Gain [b]	2.4x10^6
Pixel dark current	11μA
Microcell recovery time	90ns
Temperature dependence of V_{br} [b]	20mV/°C

[a] *measured at V_{op} and 20°C*
[b] *measured on a MicroSL-10035*

The Array8 module from SensL equipped with row-and-column 16ch readout from AiT Instruments, and an experimental ~51x51x6mm LaBr3 crystal from Saint Gobain. At right the 2mm thick lead mask used in the tests with a pattern of 2mm holes on a 5mm pitch.

ArraySB-8 LaBr3 continuous crystal





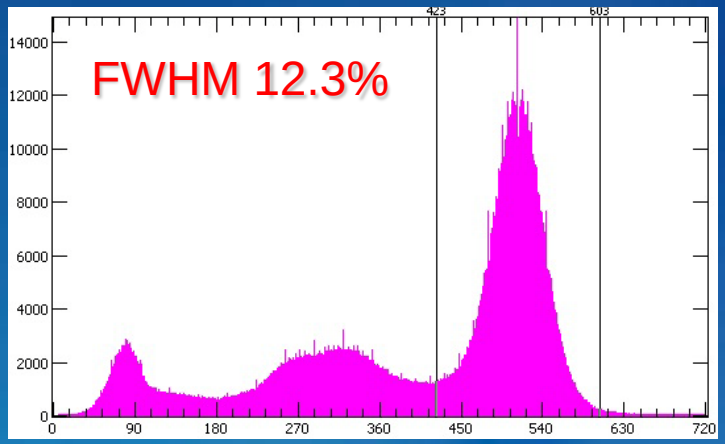
4

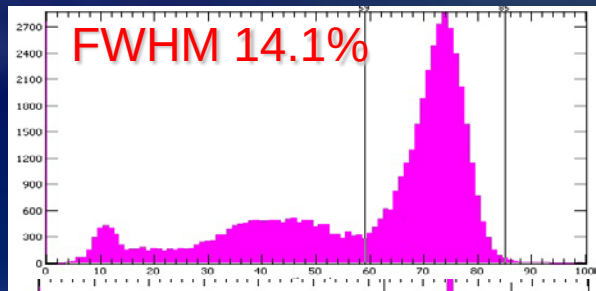
1

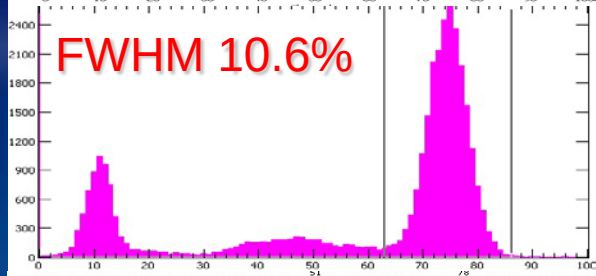
2

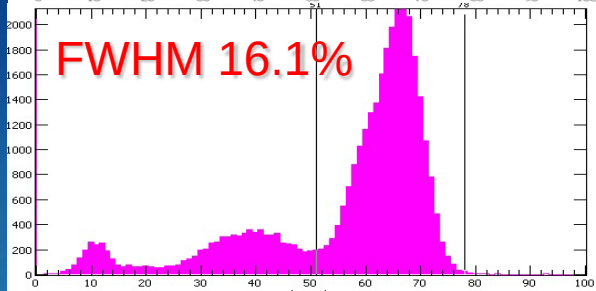
3

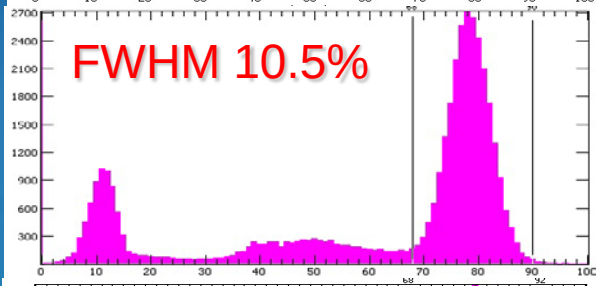
5

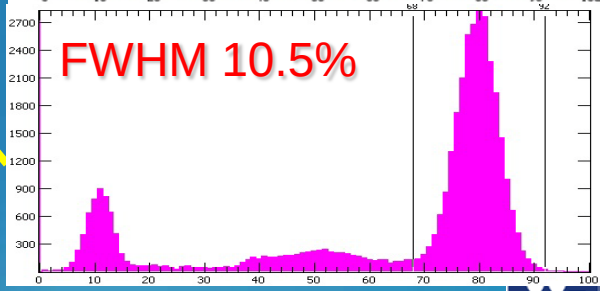












Raw image (left top) and corrected for uniformity mage (right top) of the lead mask with 2mm holes spaced at 5mm, and examples of five regional energy spectra, for the 51x51x6mm thick LaBr3 plate scintillator, and a Tc-99m140 keV gamma source. Above: normalized energy spectrum across the whole surface. All FWHM values are @ 140 keV.