The Calibration System for the GERDA Experiment

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ISAPP 2008, Valencia
19. July 2008

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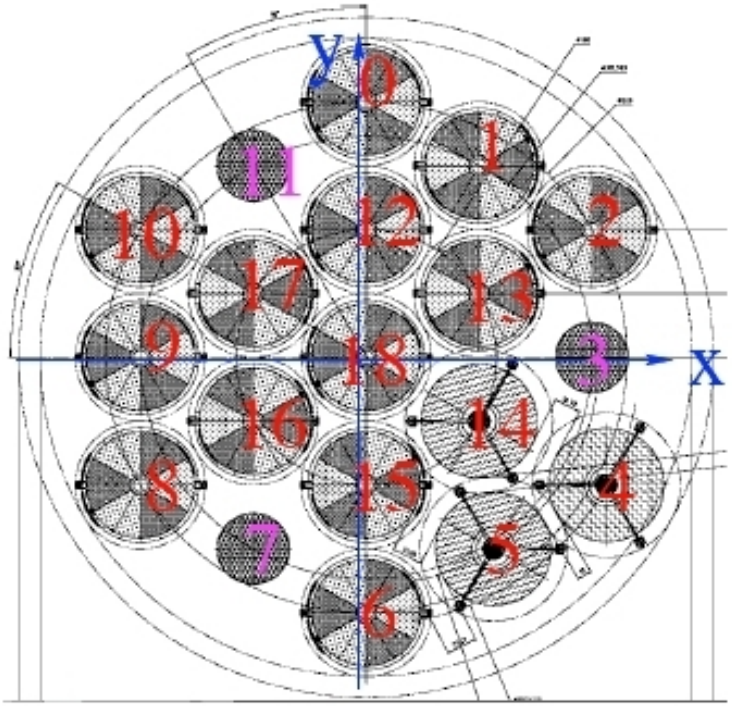
Goals

- Sort and strength of calibration sources
- Collimator material and geometry
- Efficiency of energy deposition in each detector
- Efficiency of pulse shape analysis

Boundary Conditions

- Fixed positions of the sources
- Maximum diameter $\sim$ 4cm
- Minimum weight $\sim$ 4kg
- Park position in the lock of the detector



Options

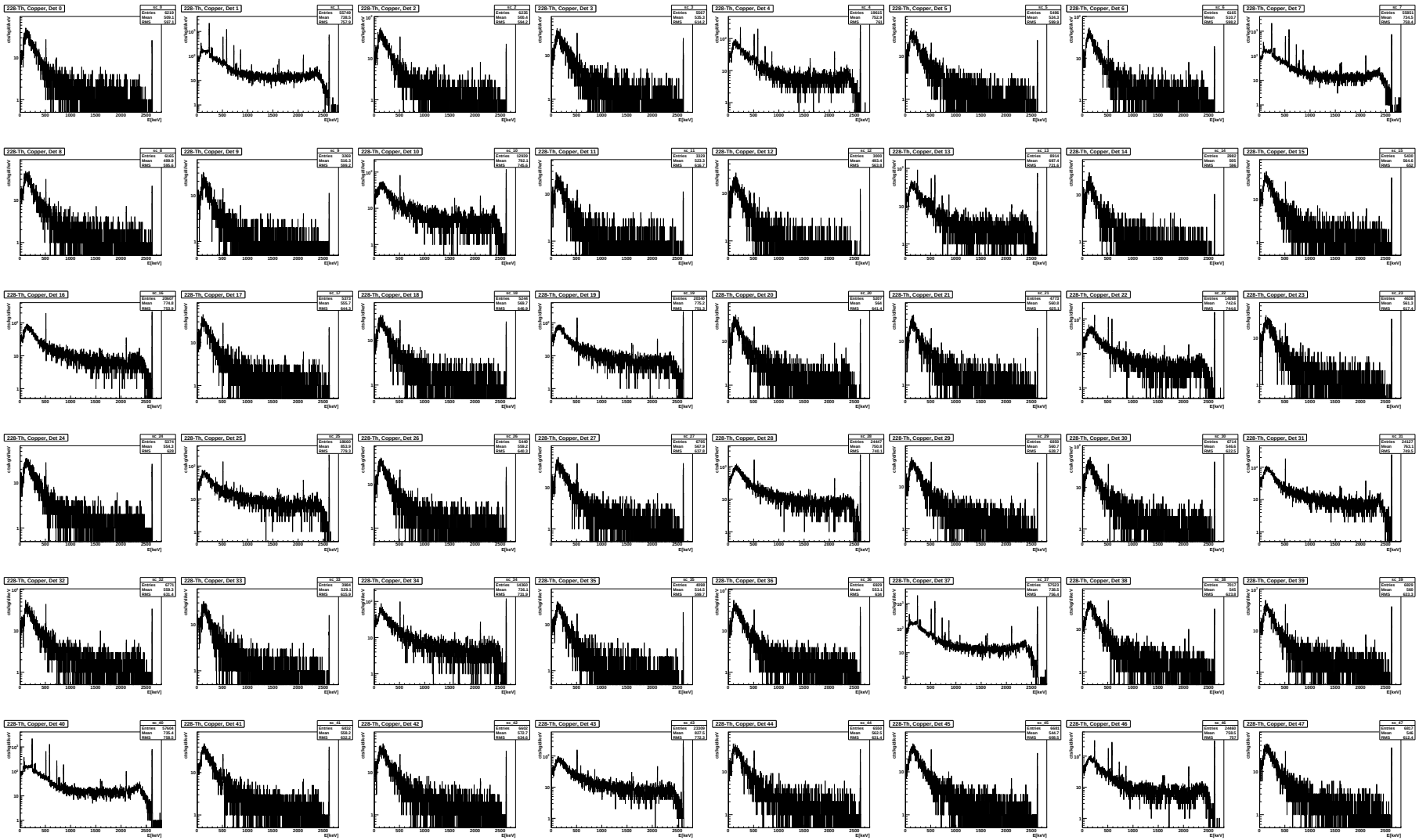
Collimator

- Shield in parking position & weight for lowering system $\Rightarrow$ High density
- High purity for low background
- Materials tested: Copper and Tungsten

Sources

- Enough lines and statistics for energy calibration in each detector, especially one the region of interest
- Sources tested: Co, ^{228}Th, ^{238}U, ^{133}Ba, Eu

Spectra


228-Th, Copper, Det 0
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228-Th, Copper, Det 6
228-Th, Copper, Det 7
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Future Plans

- Comparison of Monte Carlo results with measurements at a test stand in Zurich
- Fixing sort and strength of calibration source(s)
- Fixing collimator material and geometry
- Installing system at LNGS