Characterisation of AGATA detectors
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AGATA - Advanced GAmma Tracking Array

Basics of γ-ray tracking [1, 2]
Point like interactions of γ-rays in Germanium
- Compton scattering (0.18 - 8 MeV)
- Photo effect (< 0.18 MeV)
- Pair production (> 8 MeV)

Data processing of AGATA for γ-ray tracking
- Interaction with a segmented HPGe-detector
- Reconstruction of the path (gamma ray tracking)
- Digital recording and preprocessing of the pulses
- Pulse shape analysis

Pulse shape analysis (PSA)

Crystal
- Electron and hole drift velocities
- Geometry of the detector
- Orientation of the crystal axis
- Impurity concentration

Detector and Electronics
- Crosstalk
- Response functions

Pulsar peak position for different voltages of detector C006

Impurity concentration of AGATA detectors
- New method to determine impurity concentration
- Based on capacitance voltage analysis
- Pulser of AGATA preamplifier used to measure capacitance of core and segments
- Fast reliable method
- Feasible with standard configuration
- Agreement with computer simulations in cylindrical segments
- Simulations needed for hexagonal part

Impurity concentration of last four rings of AGATA detector S002 using a cylindrical approximation

Computer simulations using AGATA Detector Library [6]