

Joint Research Centre (JRC)

Coincidence Summing Corrections Comparison of calculations



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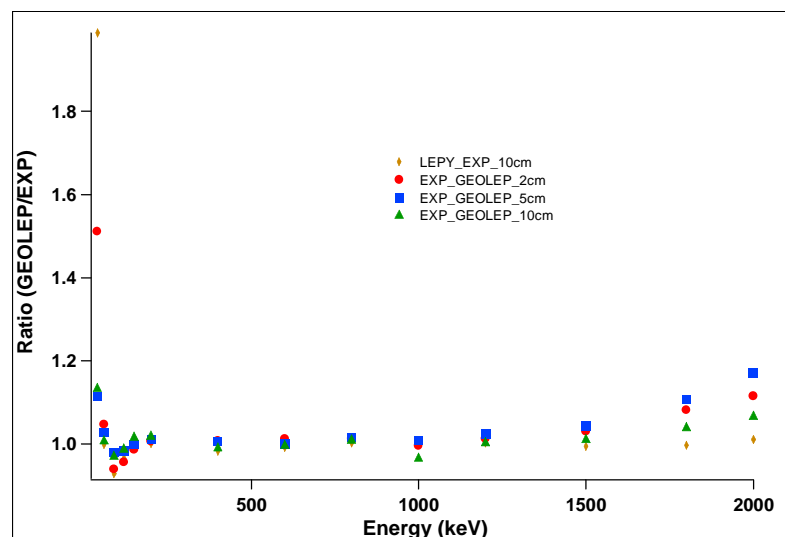
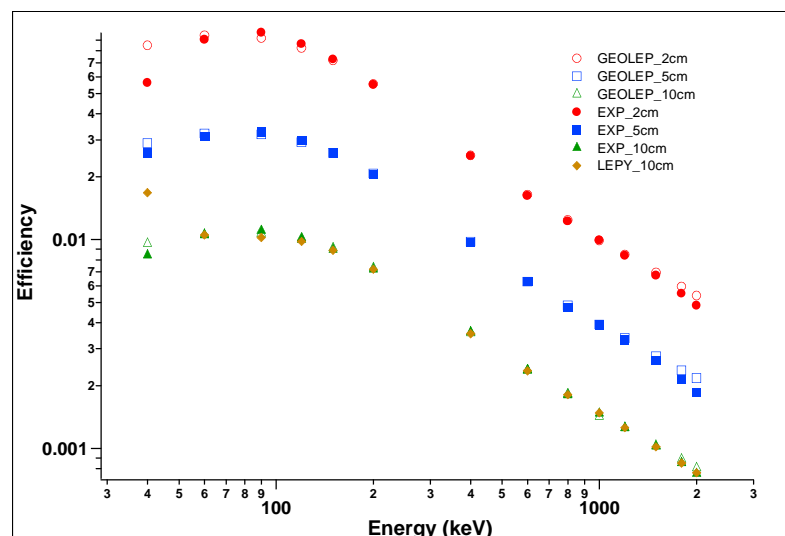
- **Calculation**
 - **KORSUM** (PTB, version 12-12-1989)
- **Nuclear Data**
 - **KORDATEN** (PTB, v. 4.1, 29-11-2004)
- equiv. Monographie BIPM-5
- **Efficiency**
 - **Peak Efficiency**
 - **Total Efficiency**

Experimental

- **GammaVision (v. 6.01)**
- **Polynomial fit (log/log)**

Monte Carlo simulation

- **GEOLEP (A.V. Solé)**
- **Difference from the experiment is less than 2%**
- **Which grows to more than 10% for the energy extremes**

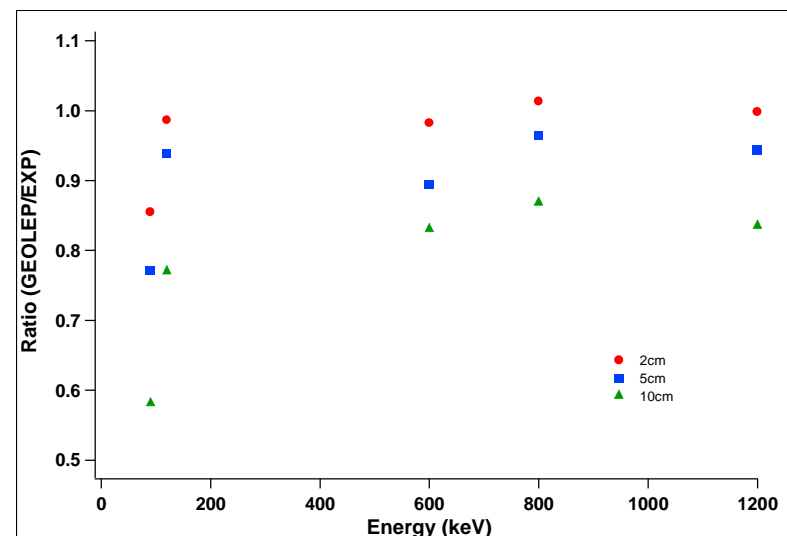
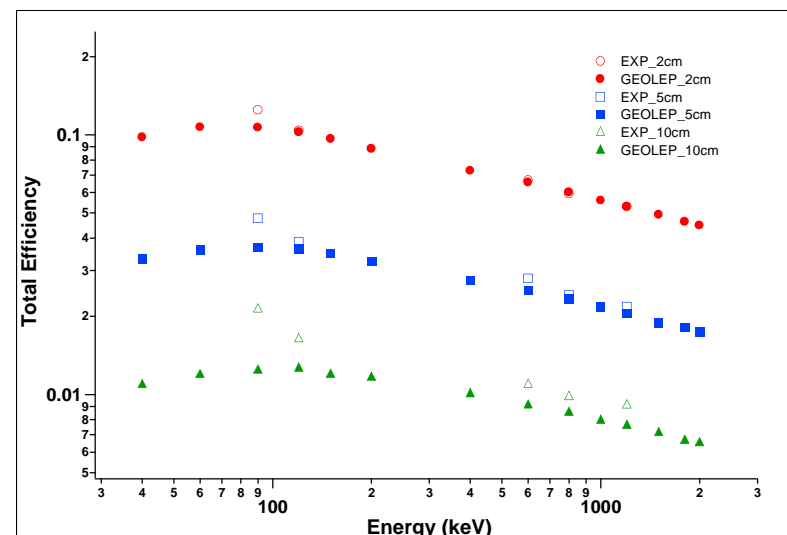


Experimental

- Based on the analysis of a few nuclides (^{57}Co , ^{60}Co , ^{137}Cs , ^{54}Mn)

Monte Carlo simulation

- GEOLEP (A.V. Solé)
- Agreement with the experiment to better than 10-15%
- Which grows to more than 25% for the energy extremes



Two sets of data

- Experimental efficiency
- Monte Carlo calculated efficiency

Conclusions

- Estimated average uncertainty from 0.7 to 6%
- Discrepancy: 0.2 to 0.3% for ^{134}Cs
0.6 to 1.6% for ^{152}Eu

