

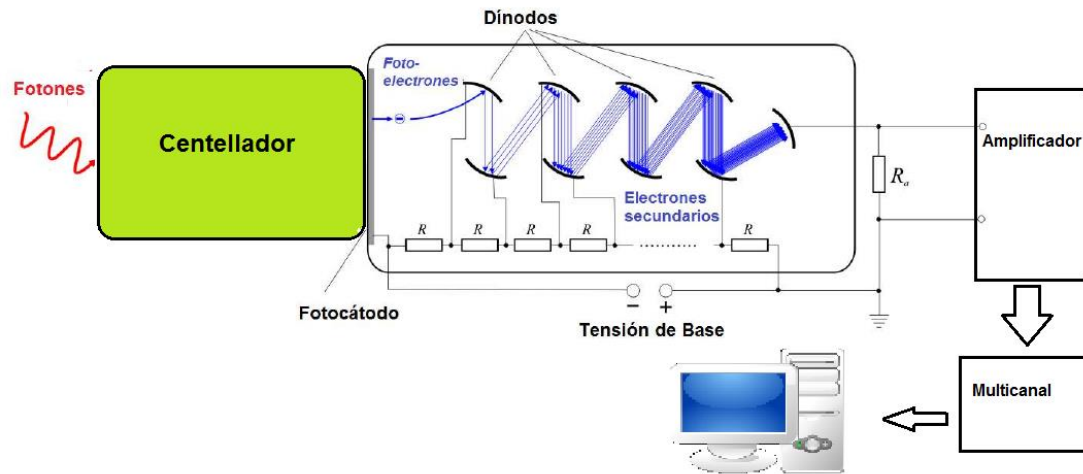
Espectroscopía gamma de alta resolución

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Centelladores empleados

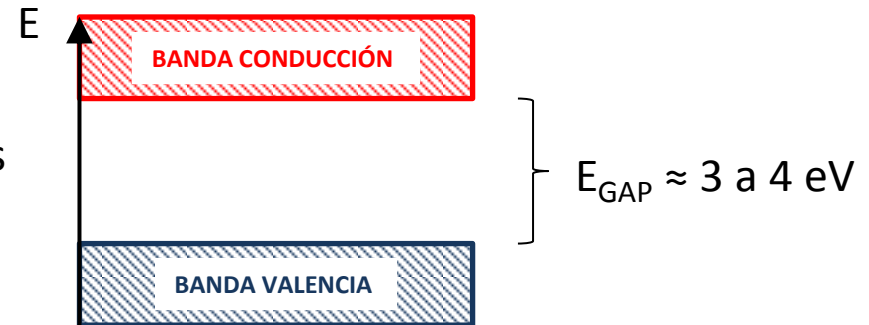
- NaI



$$CANAL \propto N_e = \frac{E_\gamma}{E_{GAP}}$$

- GeLi
 - HP Ge (HP: high pure)
- } Semiconductores

$$P_{TERMICA} \propto T^{3/2} \cdot e^{-E_{GAP}/KB \cdot T}$$



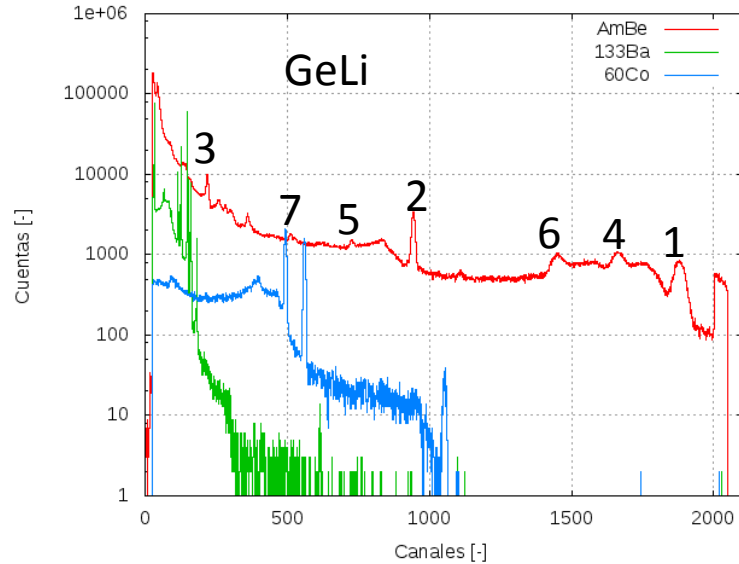
Fuentes utilizadas

$$^{60}\text{Co}: \gamma_1 = 1,17 \text{ MeV} - \gamma_2 = 1,33 \text{ MeV}$$

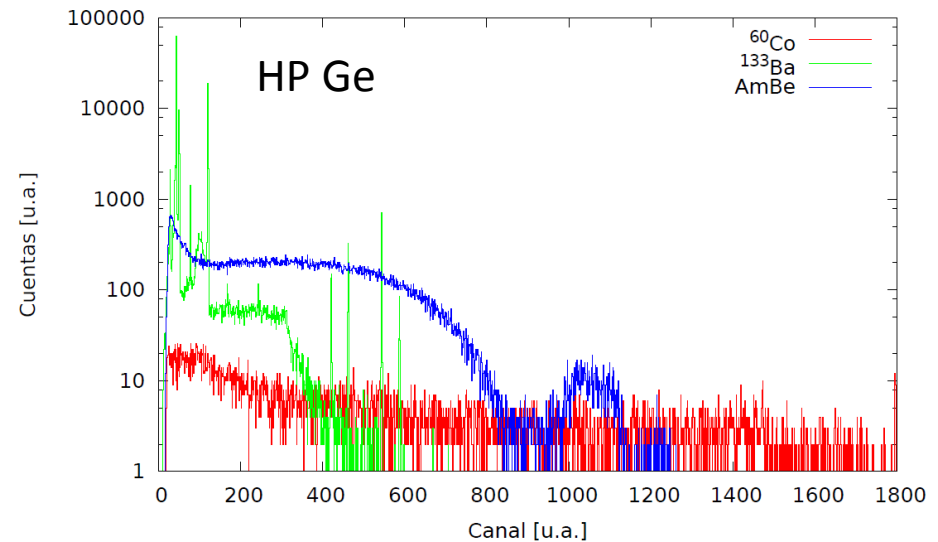
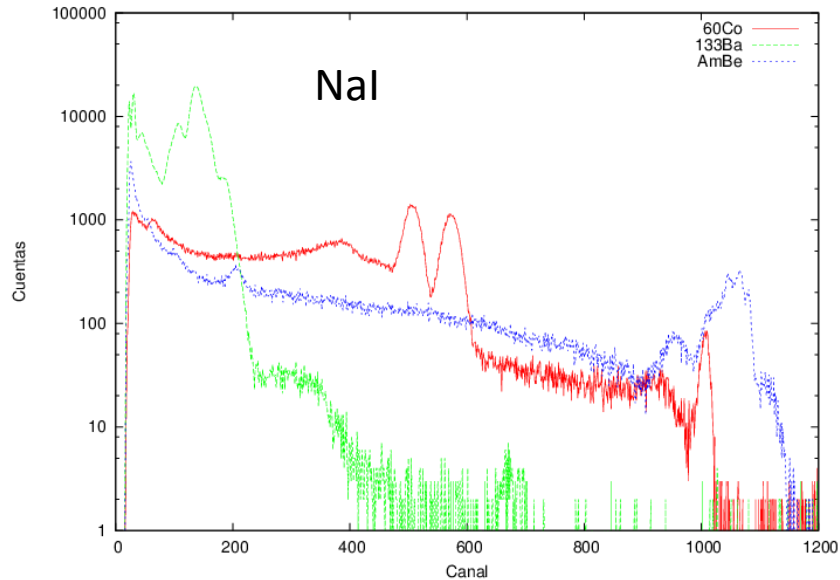
$$^{133}\text{Ba}: \gamma_1 = 0,276 \text{ MeV} - \gamma_2 = 0,302 \text{ MeV} - \\ \gamma_3 = 0,356 \text{ MeV} - \gamma_4 = 0,383 \text{ MeV}$$

$$^{241}\text{AmBe}: \gamma_1 = 2,22 \text{ MeV} - \gamma_2 = 4,44 \text{ MeV}$$

Espectros

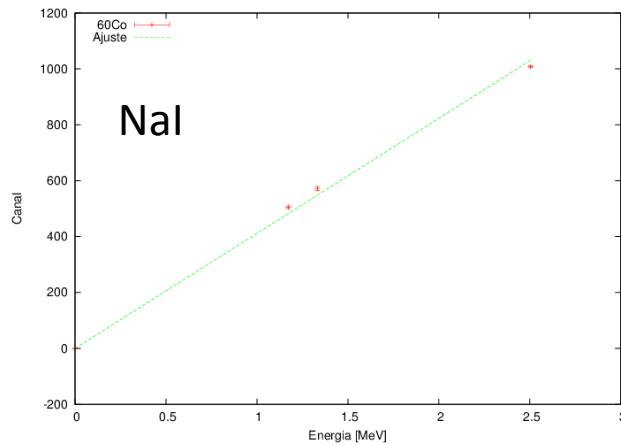


1. 4,4 MeV
2. 2,2 MeV
3. 0,511 MeV
4. 4,4 MeV – 0,511 MeV
5. 2,2 MeV – 0,511 MeV
6. 4,4 MeV – 2 x 0,511 MeV
7. 2,2 MeV – 2 x 0,511 MeV



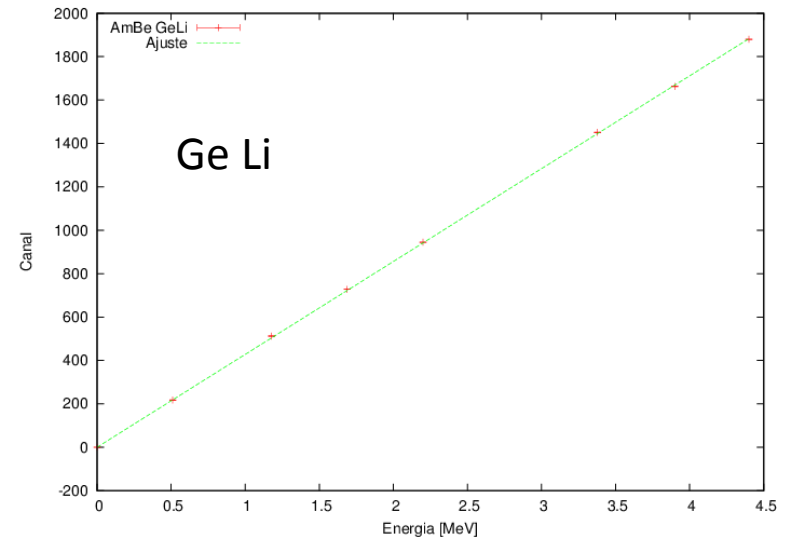
Ajustes

$$\text{Canal} = E[\text{MeV}] \cdot a + b$$



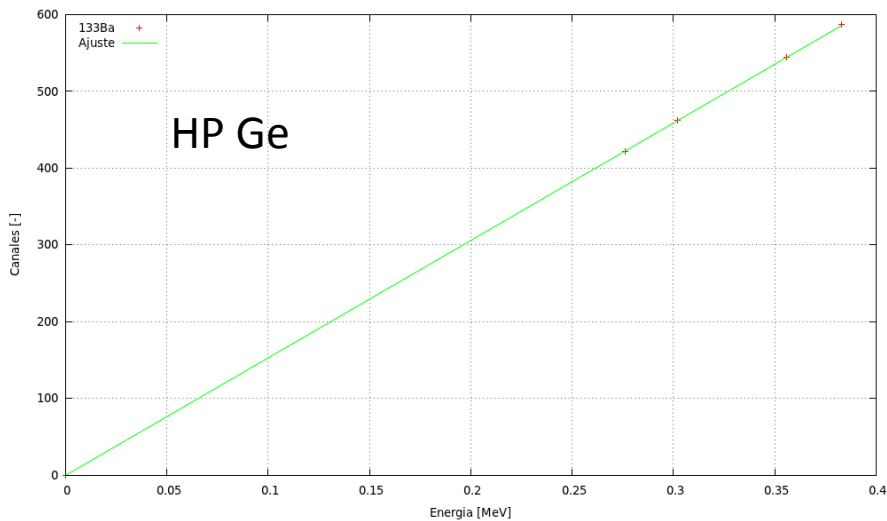
$$a = 411 \pm 9$$

$$b = 5,6 \cdot 10^{-31} \pm 0,07$$



$$a = 427,9 \pm 0,6$$

$$b = 6,5 \cdot 10^{-31} \pm 0,009$$



$$a = 1530 \pm 1$$

$$b = 1,2 \cdot 10^{-31} \pm 0,0009$$

Espectros finales

