Answer on Question #49148, Physics, Nuclear Physics

what is the maximuim energy resolution necessary to resolve two peaks at 720 KeV and 755 KeV?

Solution.

By definition energy resolution is the minimum energy difference between centers of two peaks when they are still distinguishable.

So it is possible to resolve peaks at 720 keV and 755 keV with any detector whose energy resolution is less or equal to:

$$755\ keV - 720\ keV = 35\ keV$$

This is the maximum value of possible ones.

Answer: $35\ keV$