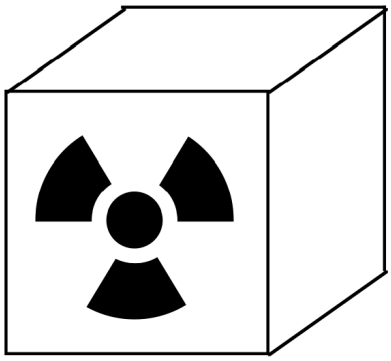

LIVERPOOL PHYSICS OLYMPICS 2013

Gamma Shield

Aim	To determine the thickness of material needed to absorb half of the emission of γ-rays from a source.
Materials	1 sealed γ-ray source. Four sheets of aluminium. Detector system to determine the γ-ray count rate. Weight and size measuring instruments. Excel is available.
Method	Use the activity measured by a NaI(Tl) detector to find the thickness of Al sheets needed to absorb half of the gamma rays emitted by the source. You will have to extrapolate the measurements obtained to get the result.
Conditions	The source must not be touched.
	The result must be given in units of gram / cm^2.
Time Limit	25 minutes.
Ranking	The ranking order will be determined by the closeness to the correct result.

Team ***Result***

Do not write below this line

Rank