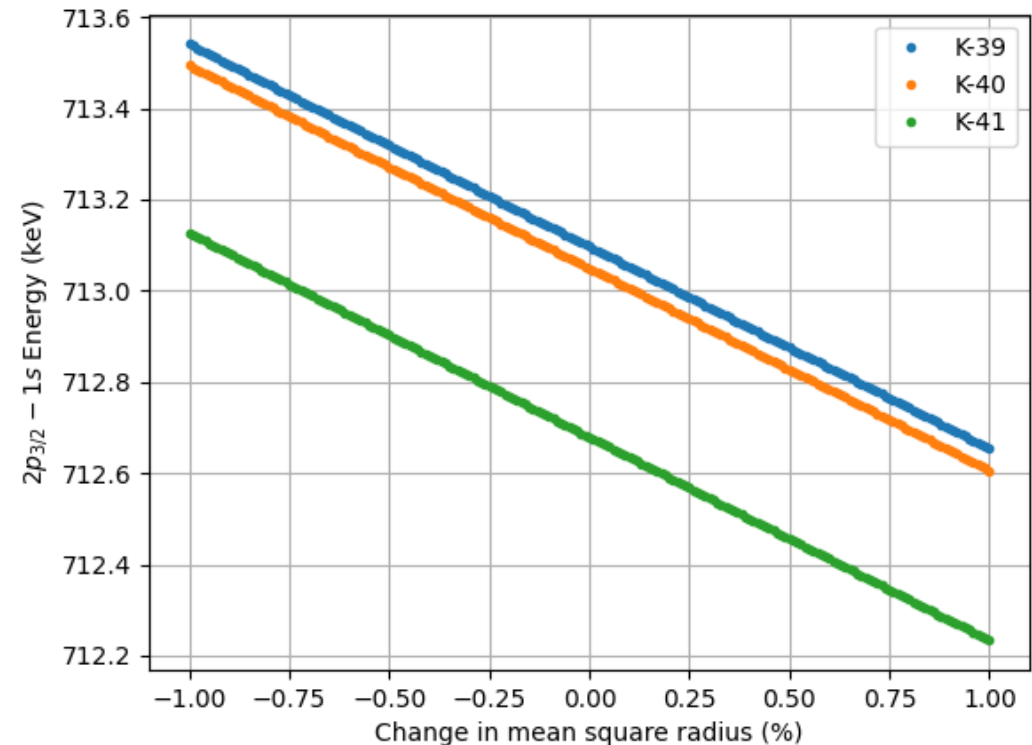


Update muX meeting 28/07

Michael Heines

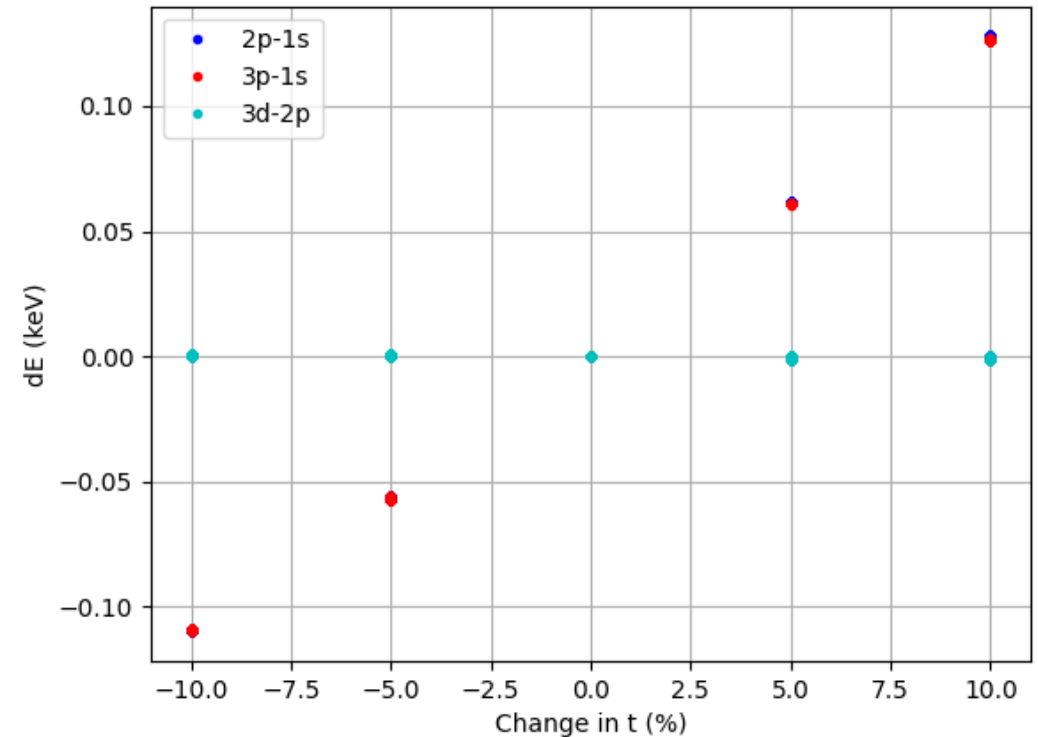
Mudirac

- Code to automatize mudirac
 - Run a range of radii
 - Run multiple isotopes
- New input tFermi:
 - Vary skin thickness
 - Fix skin thickness to value other than 2.3 fm



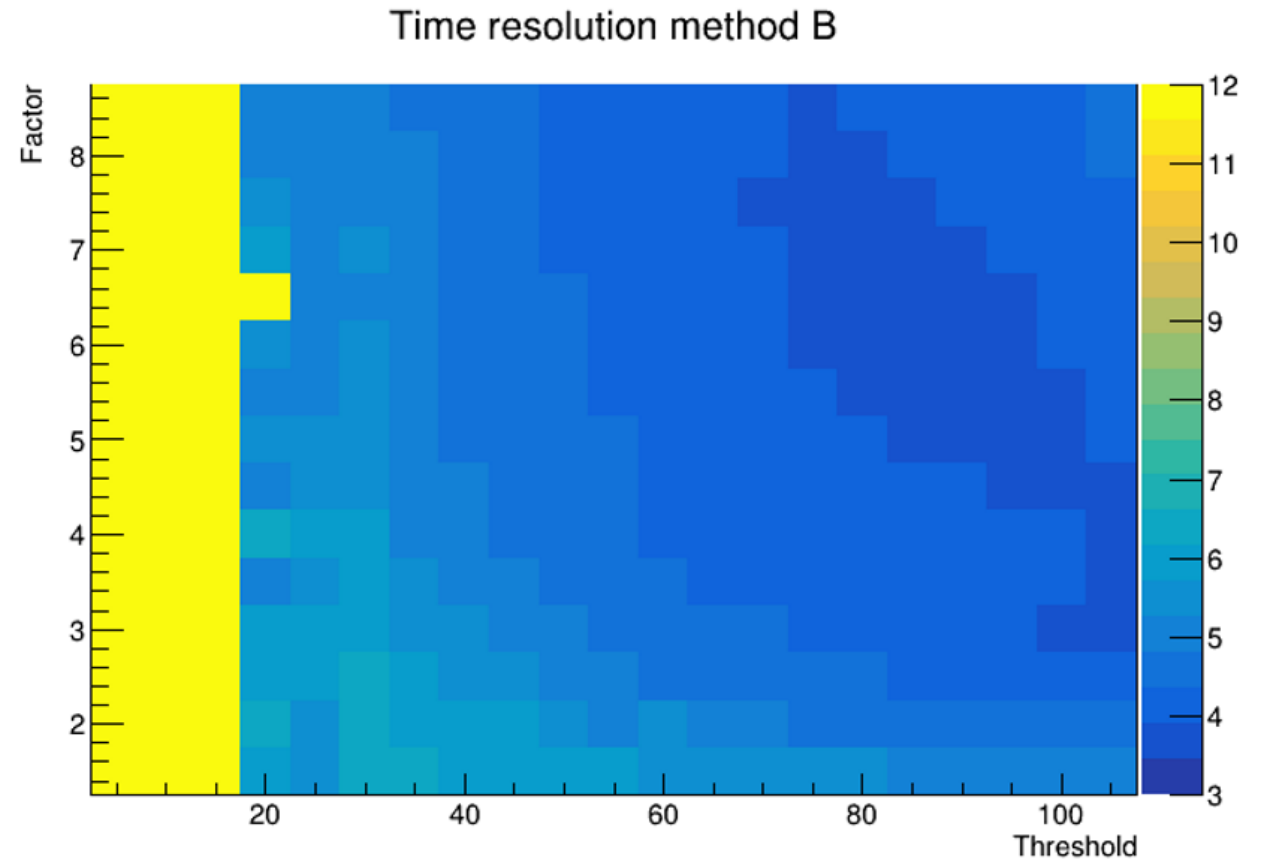
Mudirac

- Code to automatize mudirac
 - Run a range of radii
 - Run multiple isotopes
- New input tFermi:
 - Vary skin thickness
 - Fix skin thickness to value other than 2.3 fm

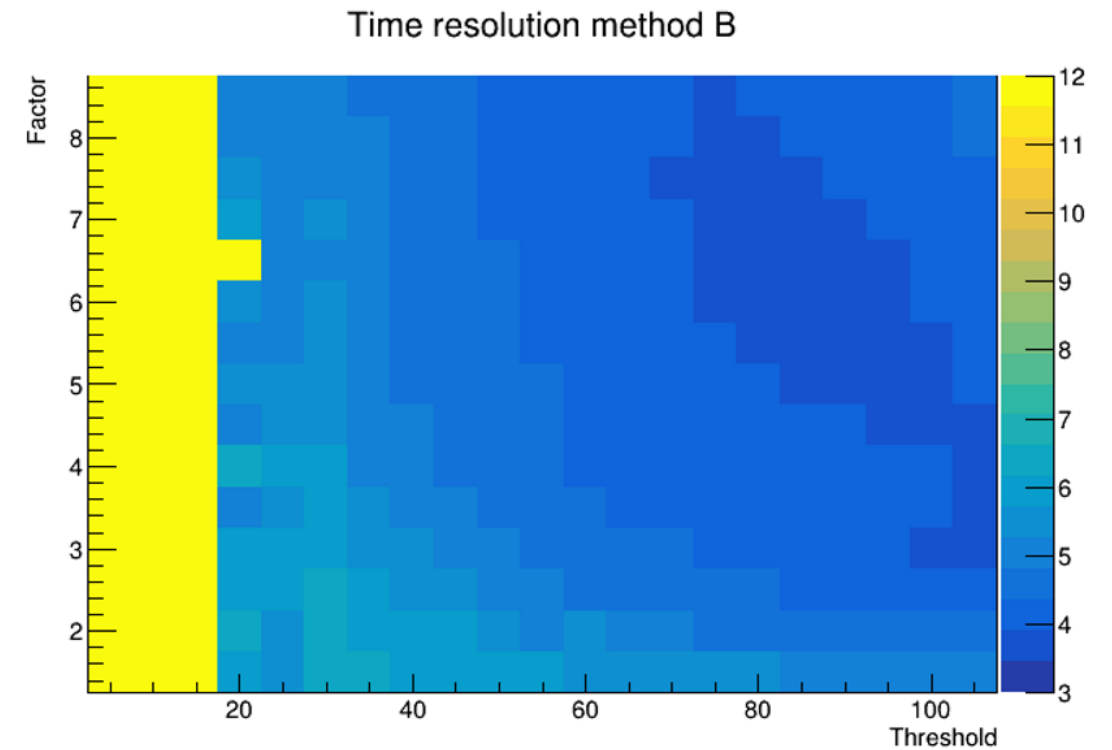
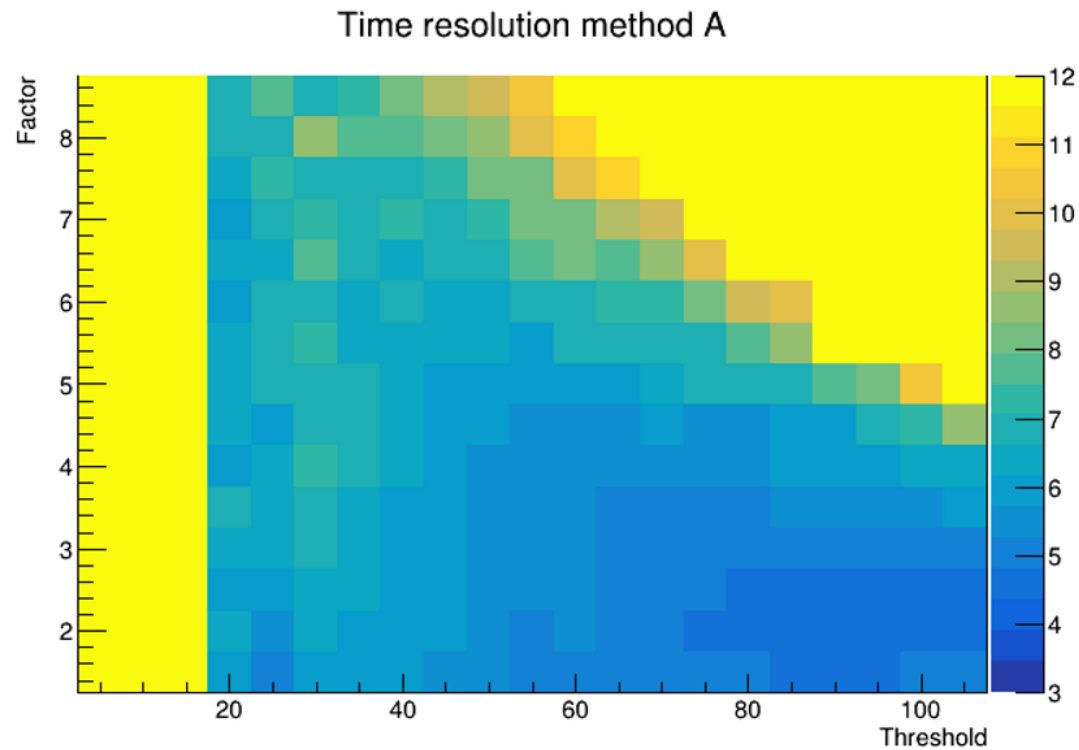


Back to ELET

- Run analyzer → Save waveforms → Optimize ELET without analyzer
- Methods:
 - A: $t_{ELET} = 2 t_{lower} - t_{upper}$
 - B: $t_{ELET} = \frac{f t_{lower} - t_{upper}}{f - 1}$
- A works better for normal germanium detectors
- B is better for BEGE and minibal

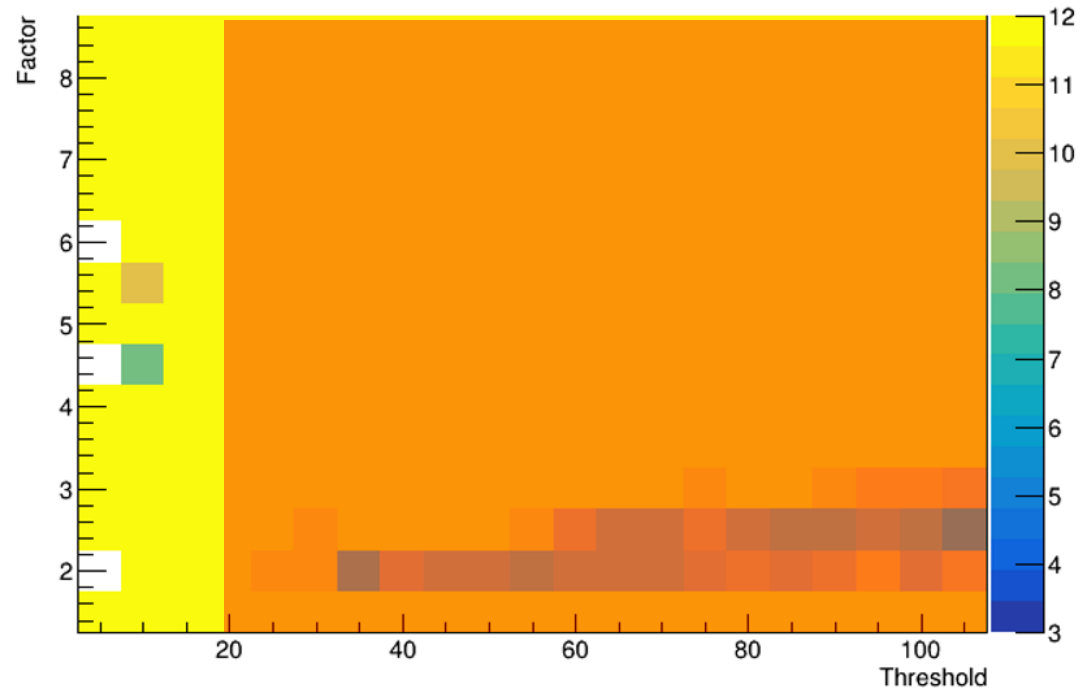


Method A Vs B – MB01B

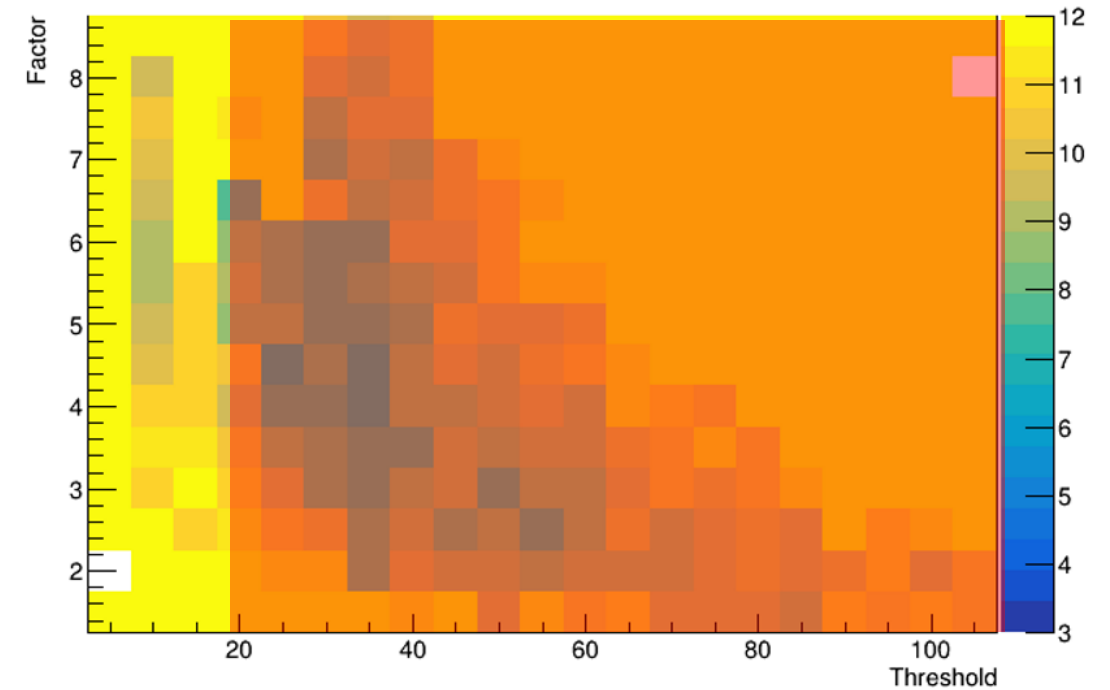


Method A Vs B – Ge04 (BEGE)

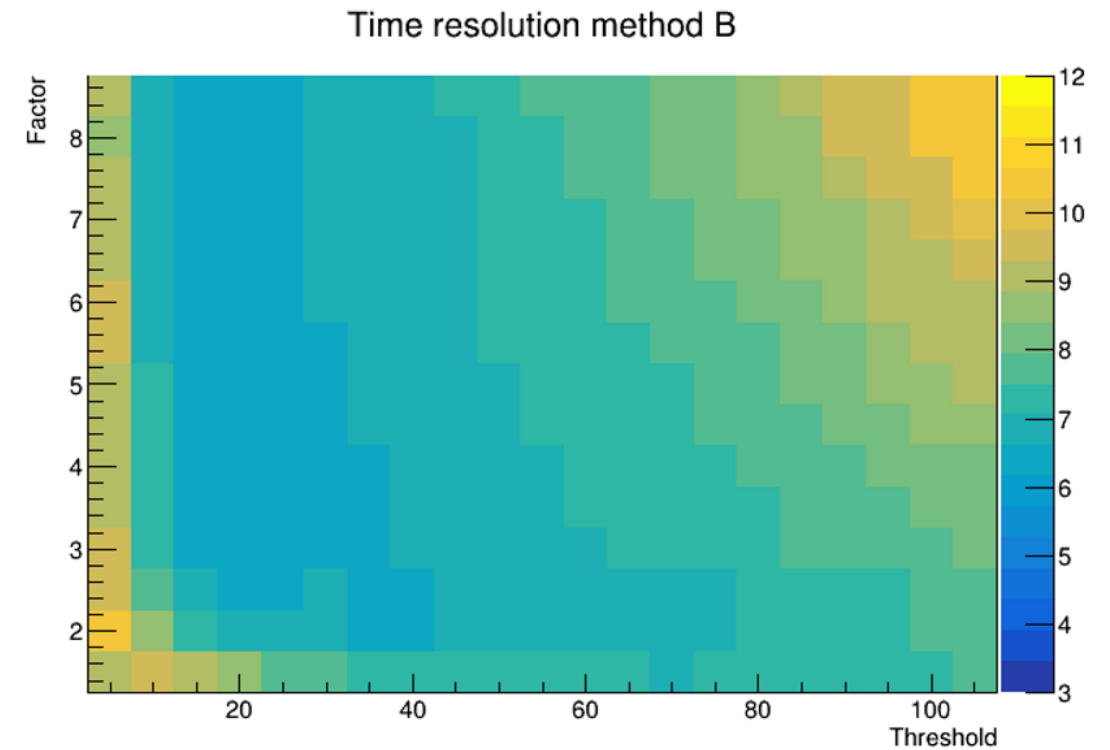
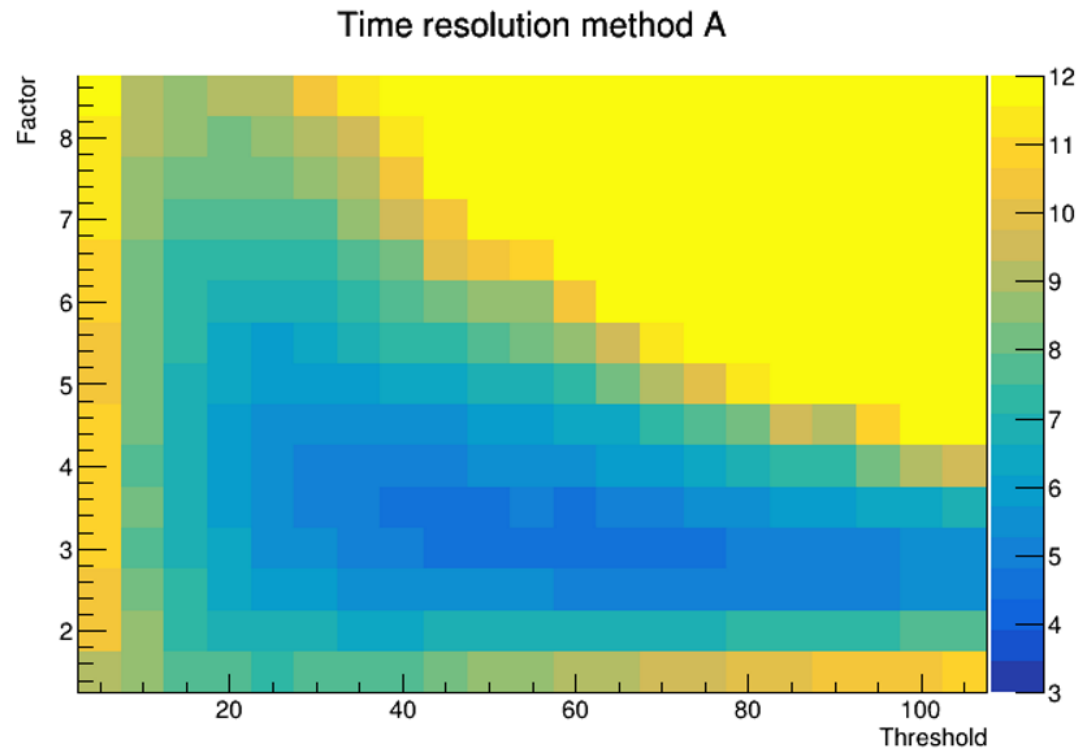
Time resolution method A



Time resolution method B



Method A Vs B – Ge08 (REGE 95%)



Muons in SRIM

- Simulated stopping distribution in plastics:
 - Range 1.0-1.5 mm
 - Straggling $\sim 50 \mu\text{m}$
- Stopping range in KCl $\sim 1\text{mm}$
- Available thickness
 - K-39: 8.5 mm
 - K-41: 1.7 mm
- Any suggestions for KCl target?

Material	Range (mm)	Straggling (μm)
Bakelite	1.03	37
Epoxy (cast)	1.26	57
Polycarbonate	1.27	47
Polyethylene marlex	1.46	55
Polyethylene terephthalate	1.11	44
Polypropylene	1.50	56
Polystyrene	1.39	57
PVC	1.28	60

