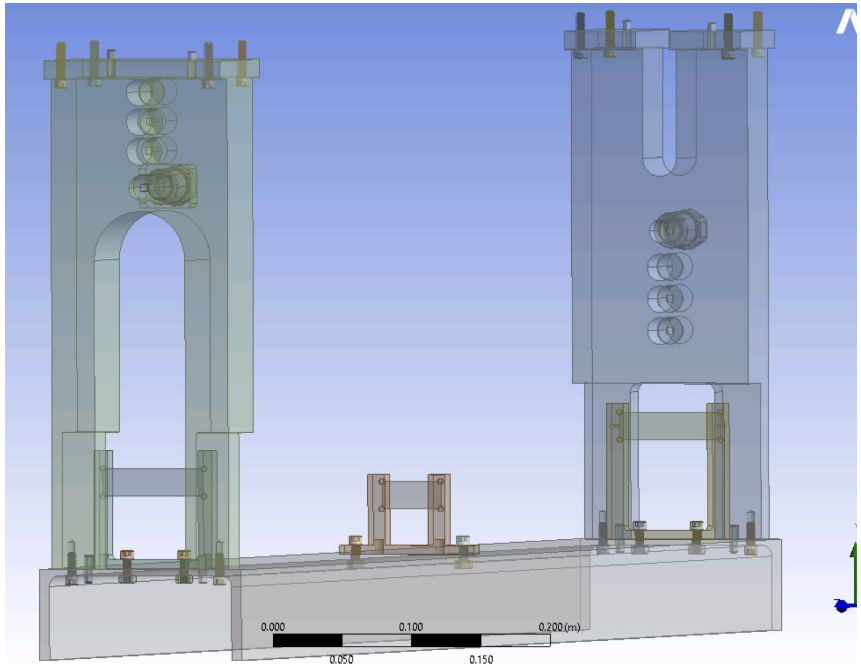
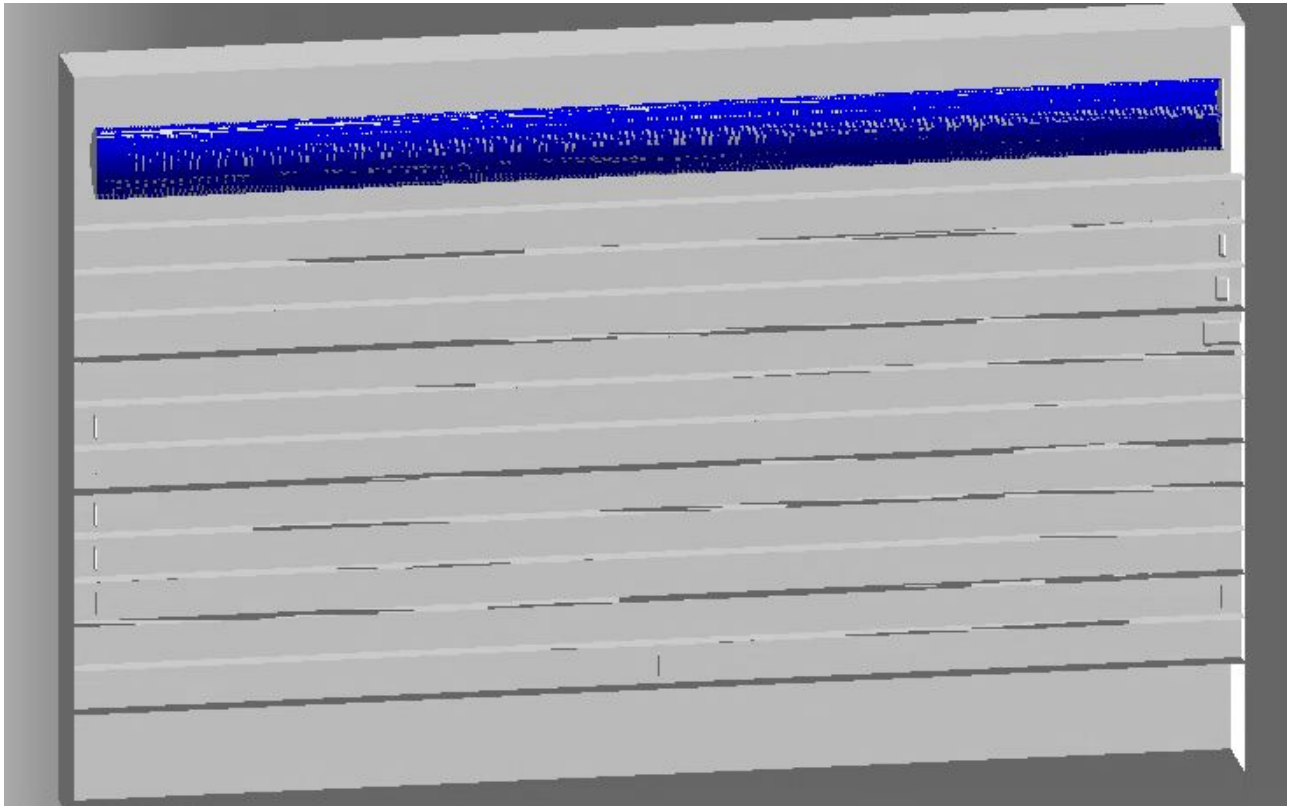
Remoll solid targets

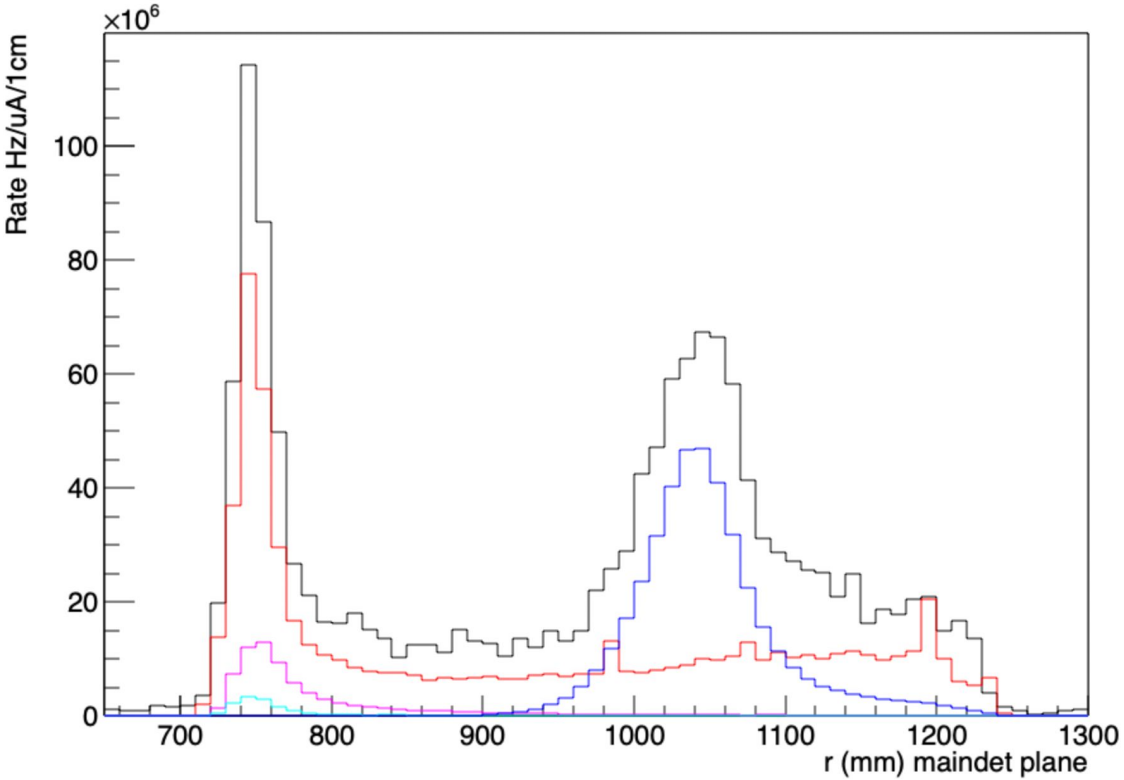
James Shirk

Other targets

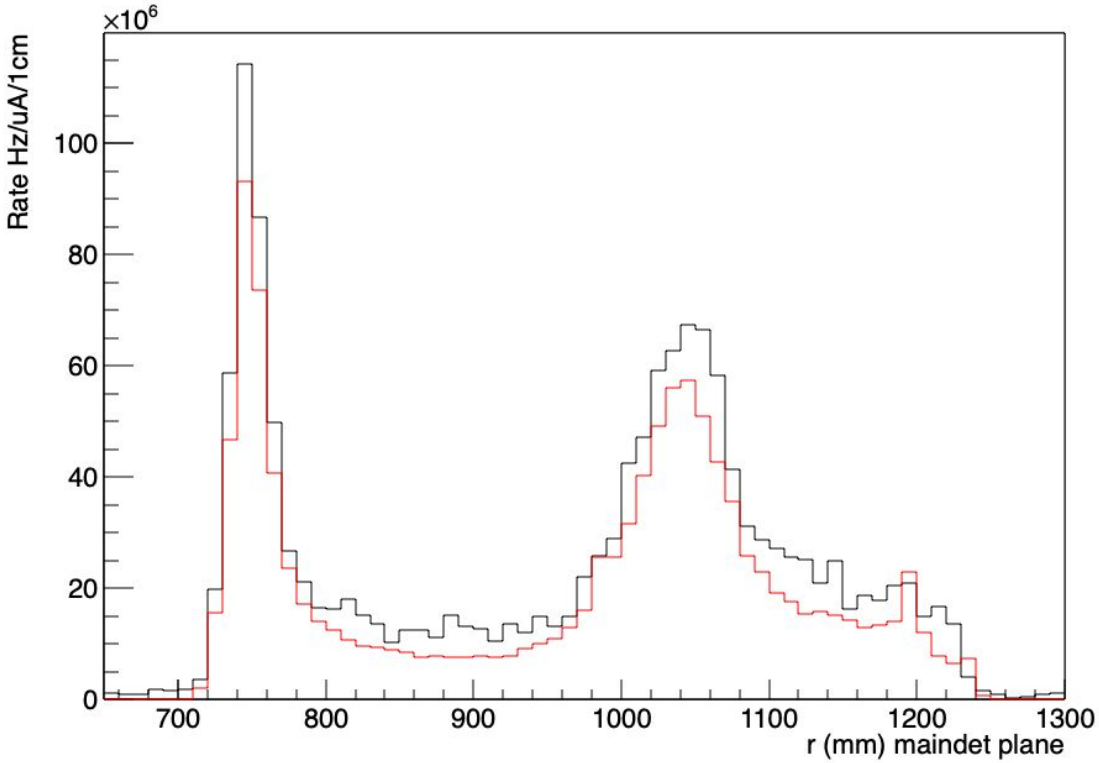


1. Downstream 2 mm hole
2. Downstream 27Al 6 mm thick
3. Downstream 27Al 12.5 mm thick
4. Downstream 12C 40 mm thick
5. Upstream 12C 2 mm thick
6. Upstream 2 mm hole
7. Upstream 27Al 1 mm thick
8. Upstream 27Al 2 mm thick
9. empty (no target in beam)
10. Optics 1: Upstream 12C foil, 0.254 mm thick
11. Optics 2: Downstream 12C foil, 0.254 mm thick
12. Optics 3: Middle 12C foil, 0.254 mm thick





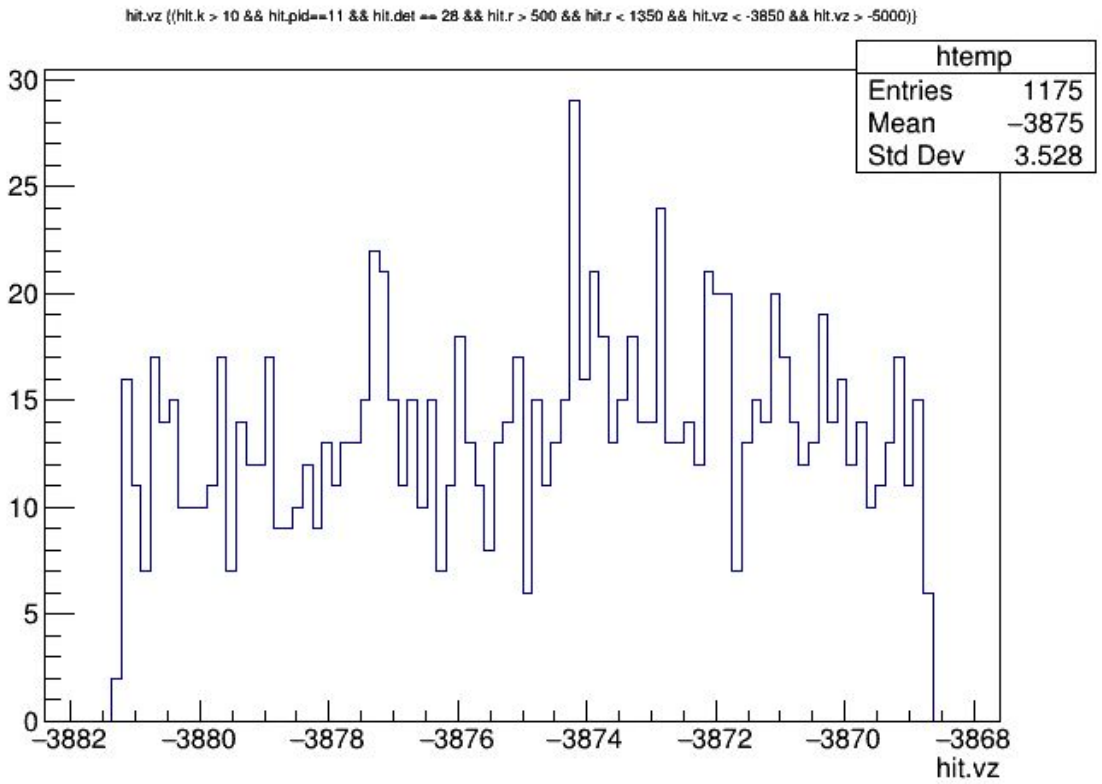
Black: beam
Red: elasticAl
Magenta: inelasticAl
Cyan: qelasticAl
Blue: møller



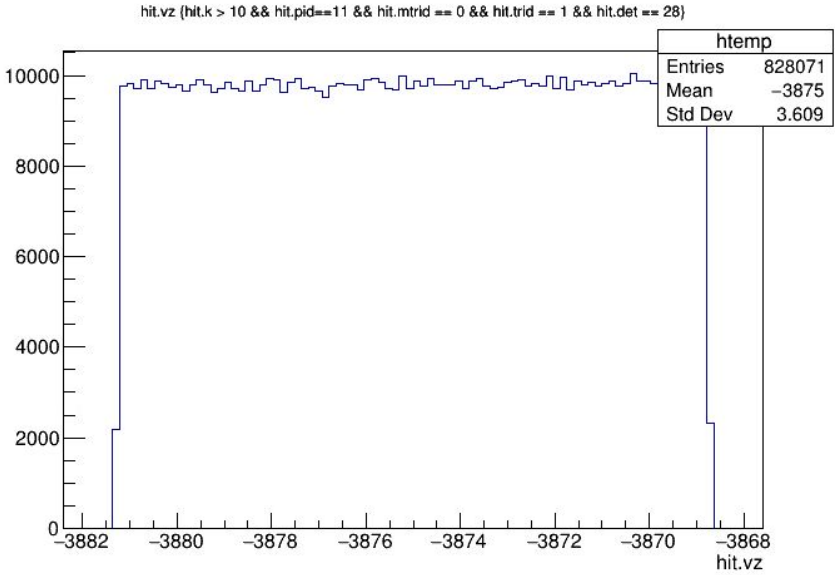
Black: beam

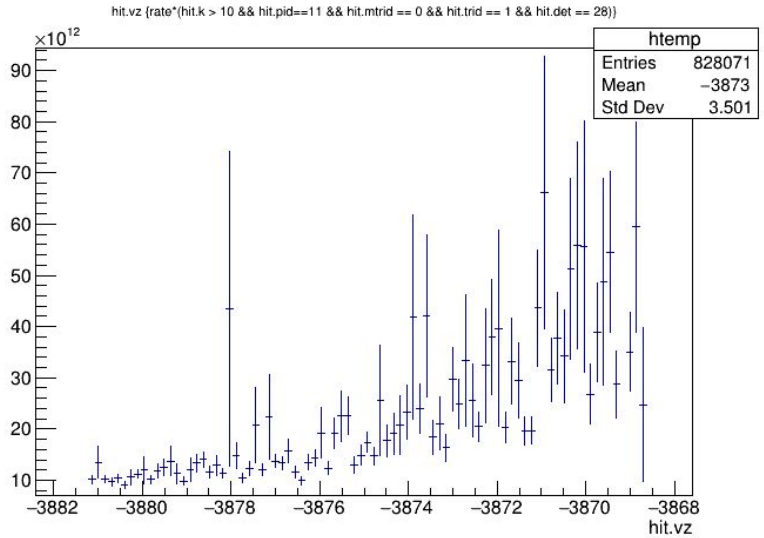
Red: ∑ generators

Beam vz

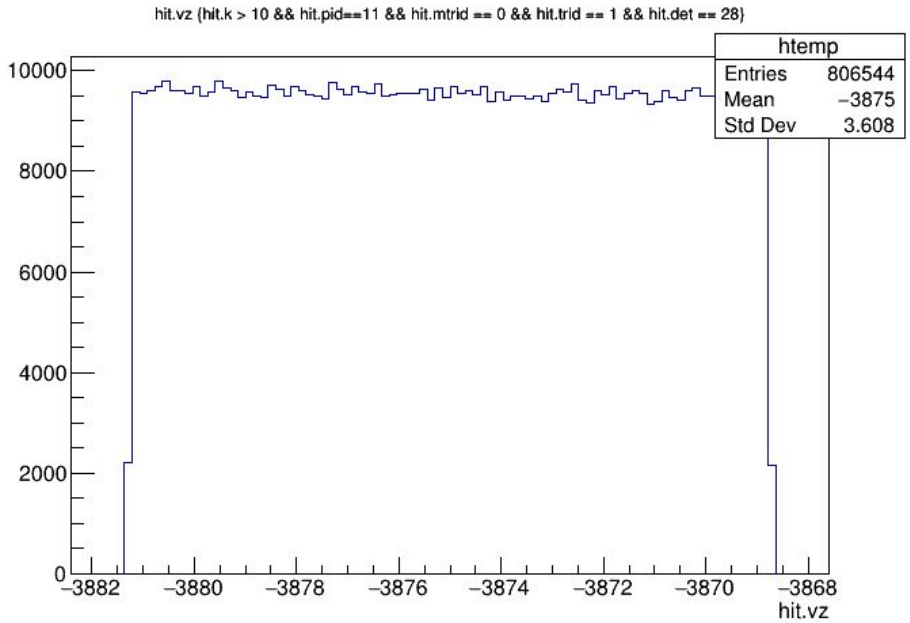

hit.vz ((hit.k > 10 && hit.pid==11 && hit.det == 28 && hit.r > 500 && hit.r < 1350 && hit.vz < -3850 && hit.vz > -5000))
htemp
Entries 1175
Mean −3875
Std Dev 3.528
30
25
20
15
10
5
0
−3882
−3880
−3878
−3876
−3874
−3872
−3870
−3868
hit.vz

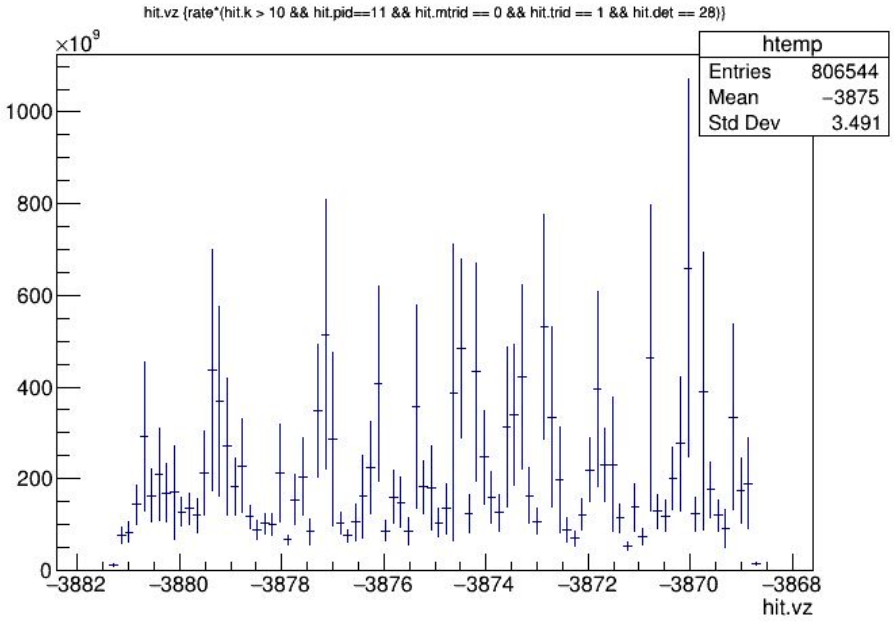
elasticAl vz



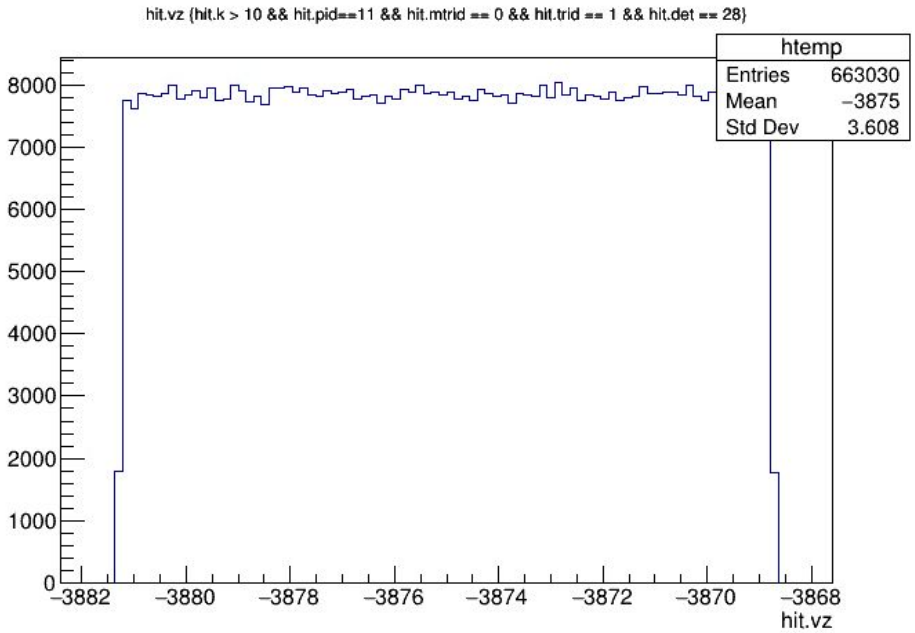


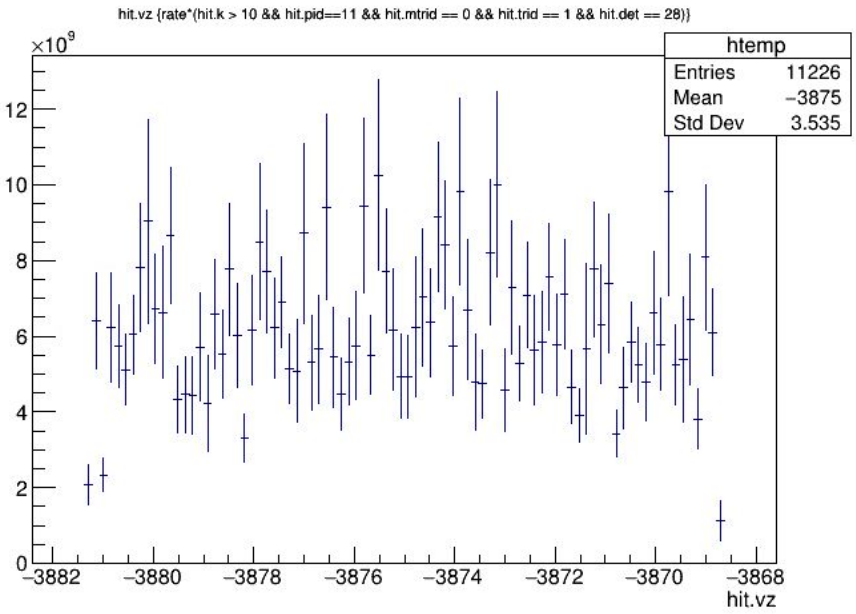
InelasticAl vz



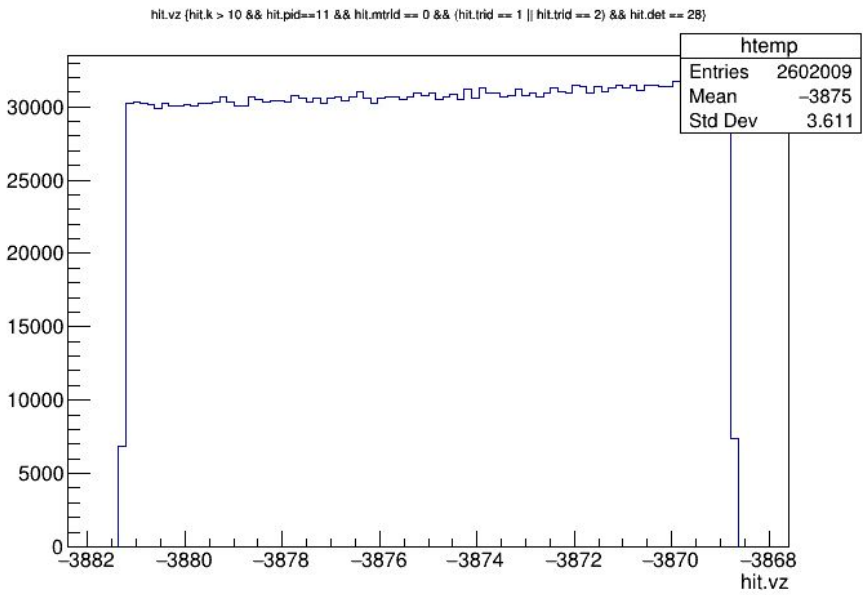


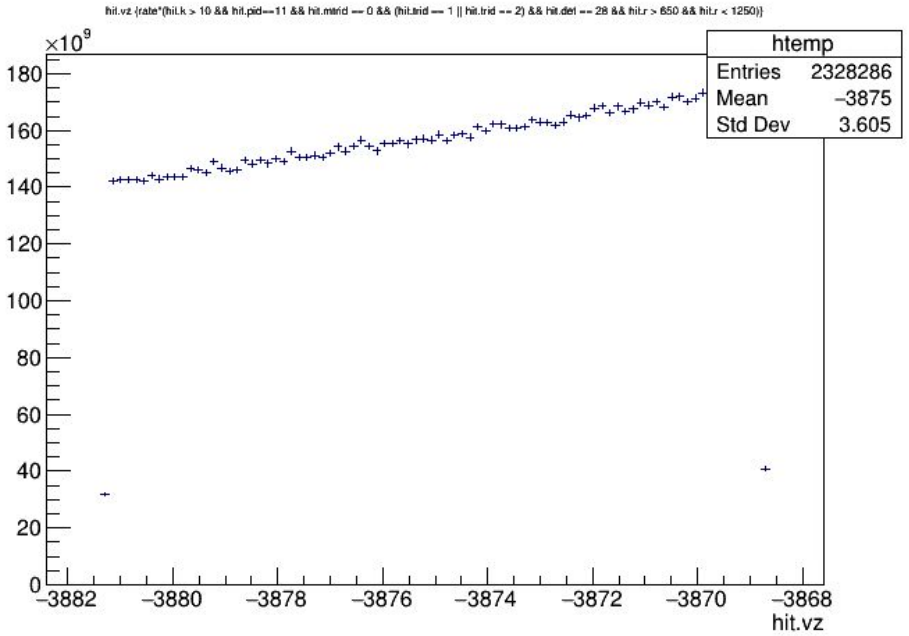
qelasticAl vz





Moller vz





The rate corrected vz distribution has roughly the same distributions as the moller generated electrons for the LH2 target

Running with targets

Targets are in macros/targets/X.mac

```
f.write("/remoll/beamene 11 GeV\n")
f.write("/remoll/beamcurr 65 microampere\n")
f.write("/control/execute macros/target/Al12_5mmDS.mac\n")
f.write("/remoll/SD/disable_all\n")
```

Add the 3rd line to your submit script to add the target in