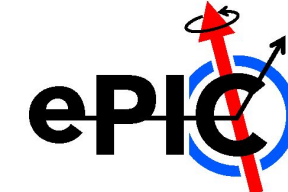


Thresholds in ePIC

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BG TF Meeting
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Where the are currently applied

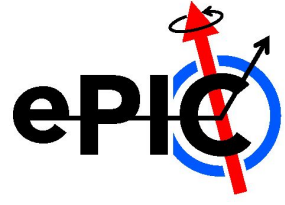


```
62 + # Set energy thresholds for all detectors
63 + # Note: For most detectors we can apply this threshold either here, in
64 + # digitization, or in reconstruction. To allow studies at each stage,
65 + # only some of the threshold may be applied here, so the rest can be
66 + # applied at the digitization. Ideally nothing should be applied at the
67 + # reconstruction stage.
68 + # Ref: https://docs.google.com/spreadsheets/d/1s8oXj36SqIh7TJeHFH89gQ_ayU1_SVEpWQNkx6sETks/
69 + energy_deposit_minimum_cuts = {
70 +     "VertexBarrel": "0.65*keV",
71 +     "SiBarrel": "0.65*keV",
72 +     "MPGDBarrel": "0.25*keV",
73 +     "TrackerEndcap": "0.65*keV",
87 +     "ZDC_PbSci": "100*MeV",
88 + }
89 + for detector, cut in energy_deposit_minimum_cuts.items():
90 +     name = f"EnergyDepositMinimumCut/{detector}/{cut}"
91 +     SIM.filter.filters[name] = dict(name=name, parameter={"Cut": cut})
92 +     SIM.filter.mapDetFilter[detector] = name
```

<src/dd4pod/python/npsim.py>

Concern: Individual particles get lost instead of accumulating energy

Optional: Set thresholds in EicRecon



```
+ struct SiliconTrackerDigiConfig {  
+     // sub-systems should overwrite their own  
+     // NB: be aware of thresholds in npsim! E.g.  
+     https://github.com/eic/npsim/pull/9/files  
+     double threshold = 0 * dd4hep::keV;  
+     double timeResolution = 8;    /// TODO 8 of wha  
+     juggler. Probably [ns]  
+ };
```

```
// Digitization  
SiliconTrackerDigiConfig digi_default_cfg;  
digi_default_cfg.threshold = 0 * dd4hep::keV;  
digi_default_cfg.timeResolution = 0.025;    // [ns]  
app->Add(new JChainFactoryGeneratorT<SiliconTrackerDigi_fac
```

Default: Should stay at 0

Instead: Overwrite for individual detectors
Note: Not implemented for all yet.

[ElCrecon/src/algorithms/digi/SiliconTrackerDigiConfig.h](https://github.com/eic/npsim/pull/9/files)

[ElCrecon/src/detectors/BTOF/BTOF.cc](#)

Supplementary slides