Status report on

DNNROI sigproc

Hokyeong Nam
Chung-Ang University

Noisy channel handling

```
856         // const float min_rms = m_noisedb->min_rms_cut(ch);
857         // const float max_rms = m_noisedb->max_rms_cut(ch);
858         // // alternative RMS tagging
859         // PDHD::SignalFilter(signal);
860         // bool is_noisy = PDHD::NoisyFilterAlg(signal, min_rms, max_rms);
861         // PDHD::RemoveFilterFlags(signal);
862         // if (is_noisy) {
863         //     WireCell::Waveform::BinRange temp_bin_range;
864         //     temp_bin_range.first = 0;
865         //     temp_bin_range.second = signal.size();
866         //     ret["noisy"][ch].push_back(temp_bin_range);
867         // }
```

Wire-Cell side

1. Noisy channel masking (sigproc/src/ProtoduneHD.cxx)
   a. uncomment the relevant lines in the source code

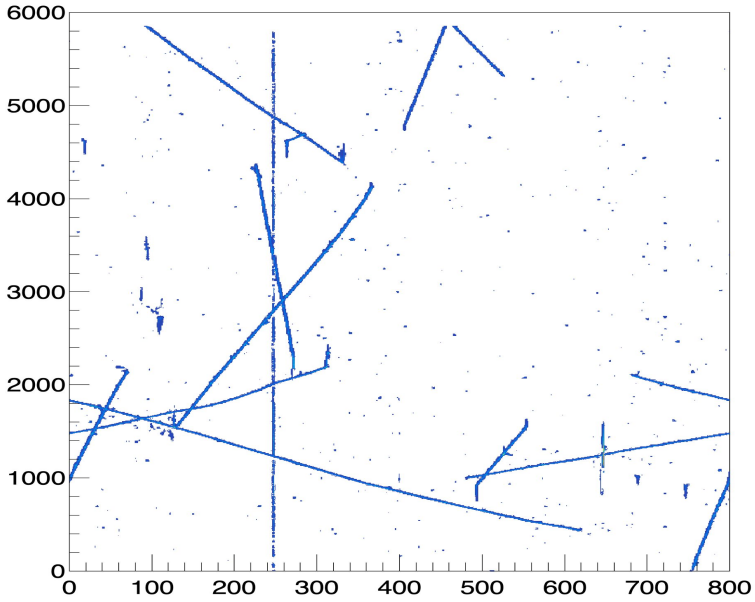
2. Noisy channel database (chndb-base.jsonnet)
   a. add the bad channels in the jsonnet file

```
25      // Externally determined "bad" channels.
26      bad: [],
```

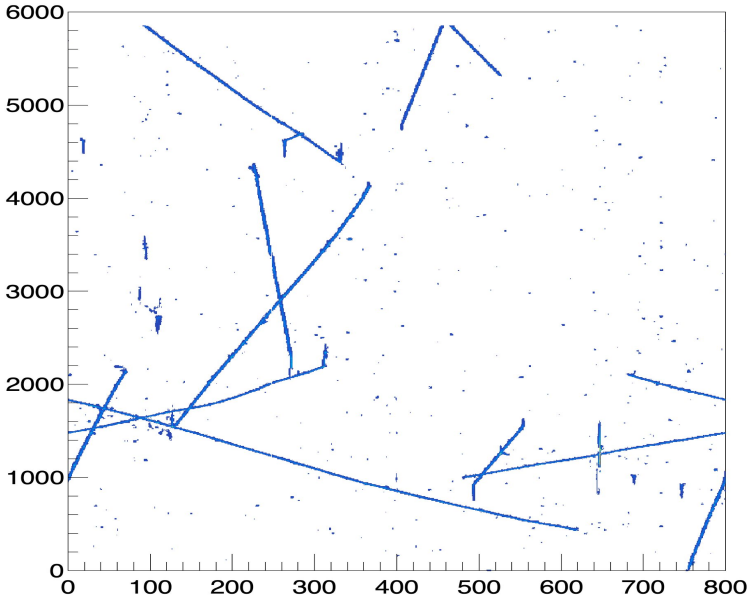
DNN side - work in the progress

1. Let the network know how to handle noisy channel
   a. truth
      i. set the charge value as 0 along the time axis for random channels
   b. training sample
      i. random throw the charge values for the channel (noisy channel)
      ii. set the the charge values for the channel (dead channel)

Wire-Cell side - Masking & Database



- noisy channel masking



- add noisy channel to the database