

# Weekly Report

## 2/22/19

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# Initial work

Tried to install pytpc on the HPC; however the hough clean wrapper (.pyx file) is not recognized - I suspect this is a version issue with pyximport.

Decided for now we are using the lab computer instead, running events in batches

# Running \_proton.py files locally

1. Started with 5000 events at a time, and plotted fitting results on Jupyter Notebook
2. However, there was a larger peak at around  $\chi = 60$ , suggesting that the indices may be wrong (we were fitting noisy events most of the time)

# Debugging

1. MC is giving lower chi values than DE and BH
  - a. MC is actually giving out energy chi information
2. The indices are not correct
  - a. Revisited the event deletion process and fixed it
3. Problems with writing/reading .h5 file
  - a. Error message :only integers, slices (``:```), ellipsis (``...``), numpy.newaxis (``None``) and integer or boolean arrays are valid indices
  - b. Saved output in .txt file instead using numpy

# Changes made

Saved fitting results in .txt files instead of .h5 files, with the chi value for each proton event and the fitting time

Wrote file to read and plot the output

Updated the indices

Started fitting batch1 again (5000 events)

# Tasks next week

- Finish fitting & plot all events
- compute average chi and time for each method