

Data set

- MC

`/data/scratch/userspace/pretz/daqsim-reconstruction/output/daqsim-baseline-take4/gamma.xcd`

- Data

All run of 2016 & 2017 in the Crab strip

Quality cuts

- `rec.angleFitStatus==0`
- `rec.coreFitStatus==0`
- `rec.nChAvail>=700`
- `rec.zenithAngle<0.785`
- `0.05*rec.nChAvail<rec.nHitSP20`
- `rec.nHitSP20<=1.10*rec.nChAvail`

Script used

- Detector response

http://hawclava.umd.edu/zhampe1/hawc/website/UNFOLDING/detector_response.php

- Reco extractor

http://hawclava.umd.edu/zhampe1/hawc/website/UNFOLDING/reco_extractor.php

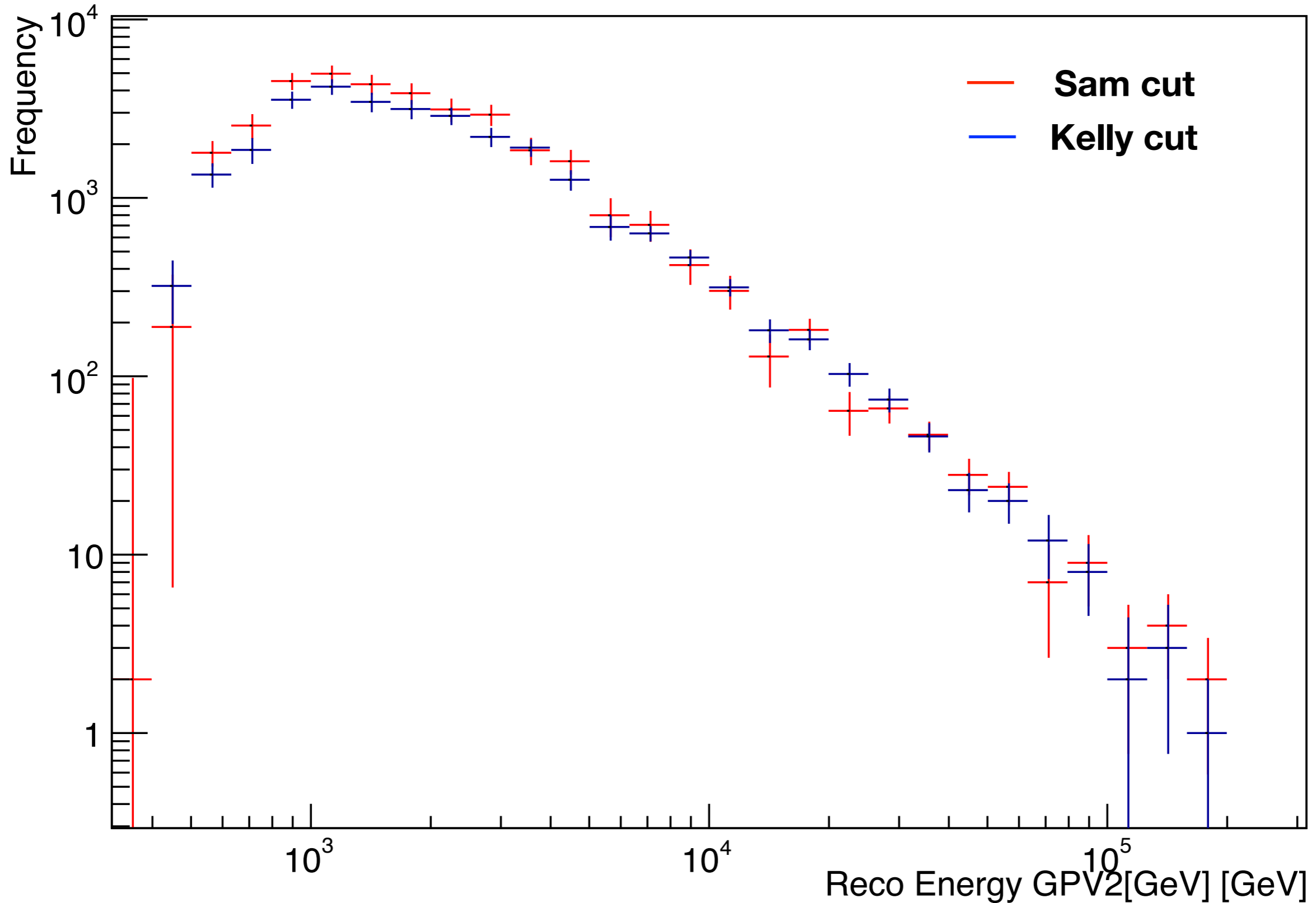
- PyUnfold

<https://jrbourbeau.github.io/pyunfold/>

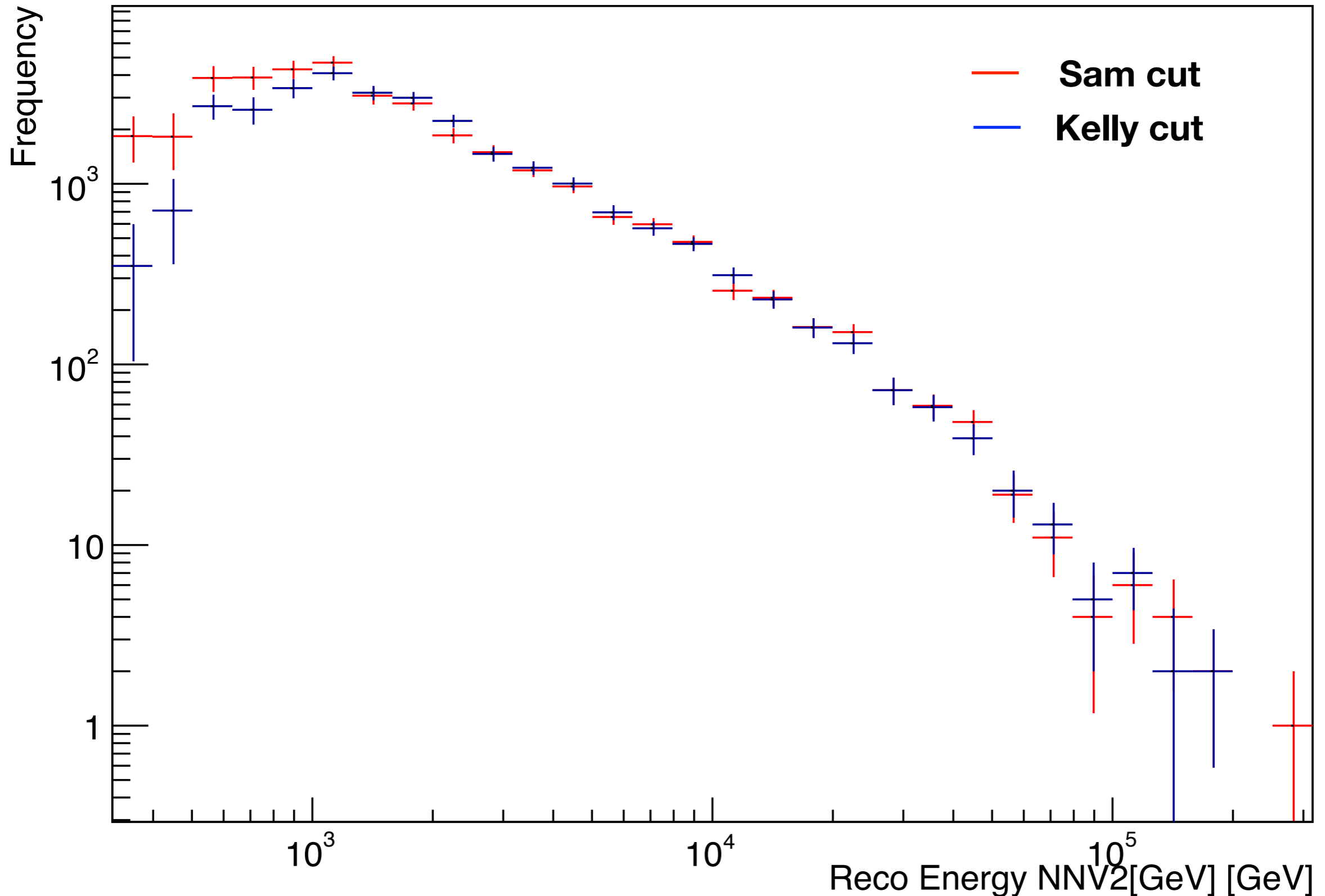
G/H cuts used:

- Sam cuts: [/data/scratch/userspace/pretz/scrappy-platypus-dev/optimize-PINCLICompactOptimizer_FHitNNEnergyBinningLogicCFS/cuts-filtered.cuts](#)
- Kelly cuts: [/data/scratch/userspace/kmalone/sweets-for-systematics/nominal/cuts/cuts-fhit-variable.txt](#)

EnergyGPV2 (Signal)

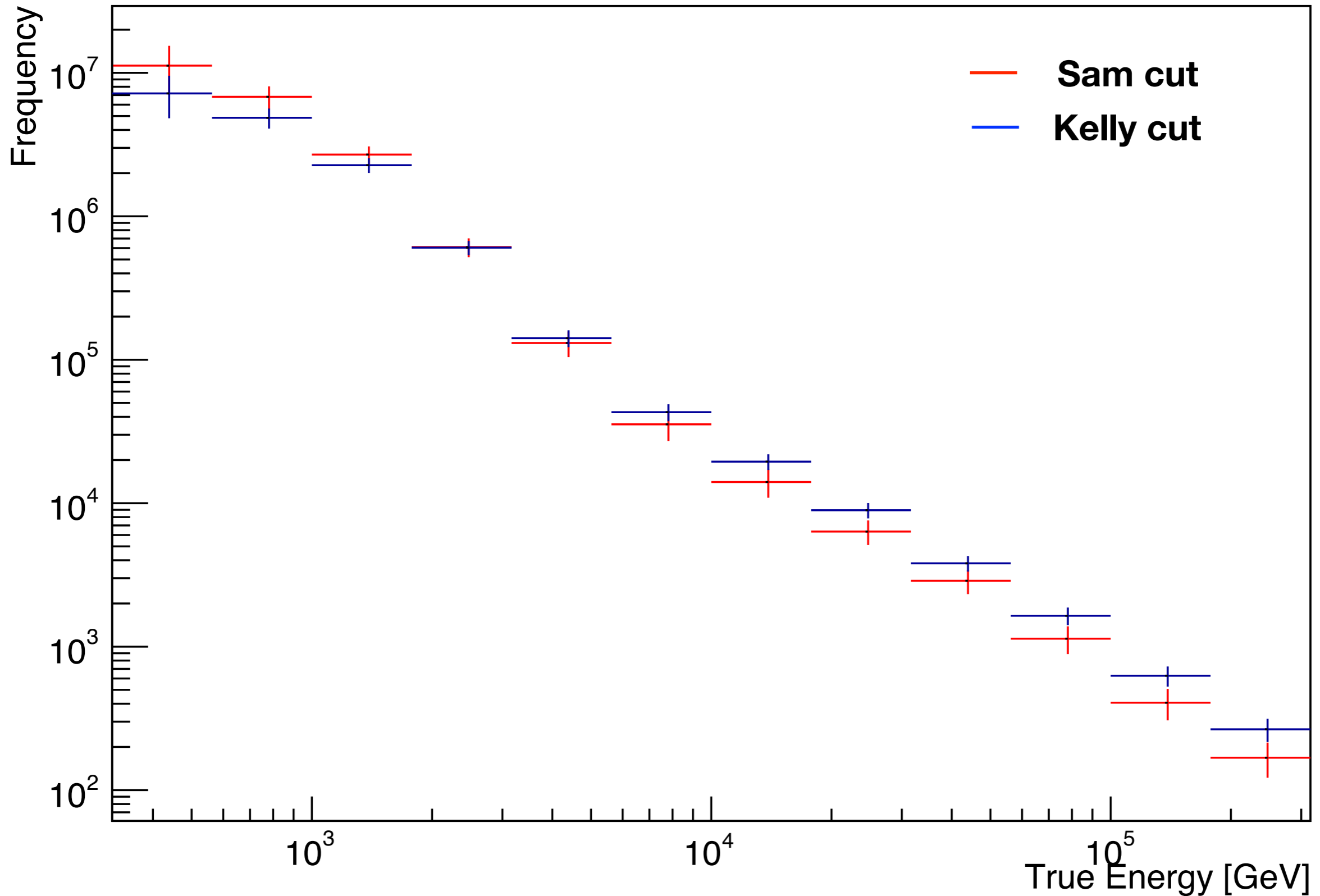


EnergyNNV2 (Signal)



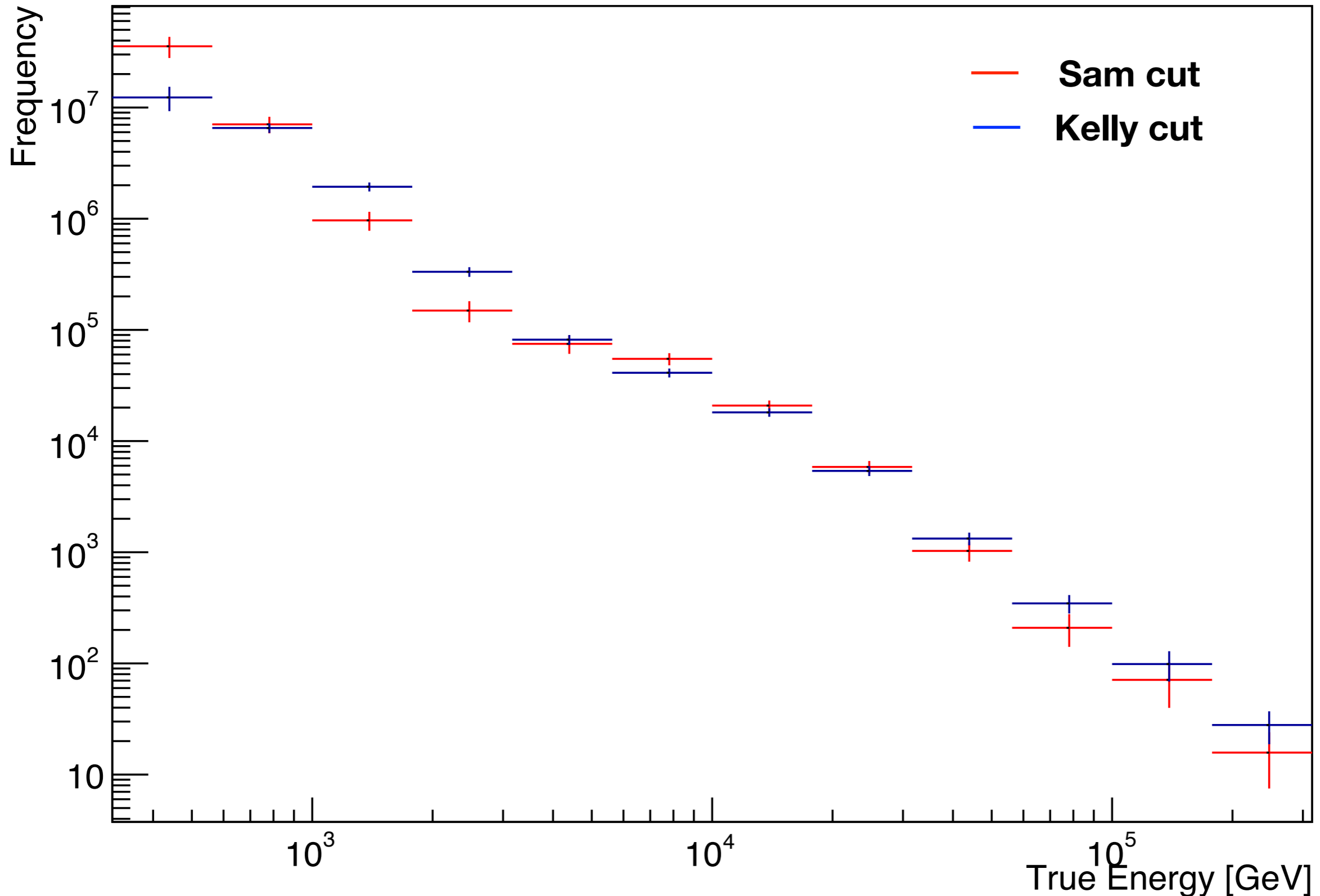
Unfold output, GPEnergy script: PyUnfold

Final Unfolded Cause Distribution bin0



Unfold output, NNEnergy script: PyUnfold

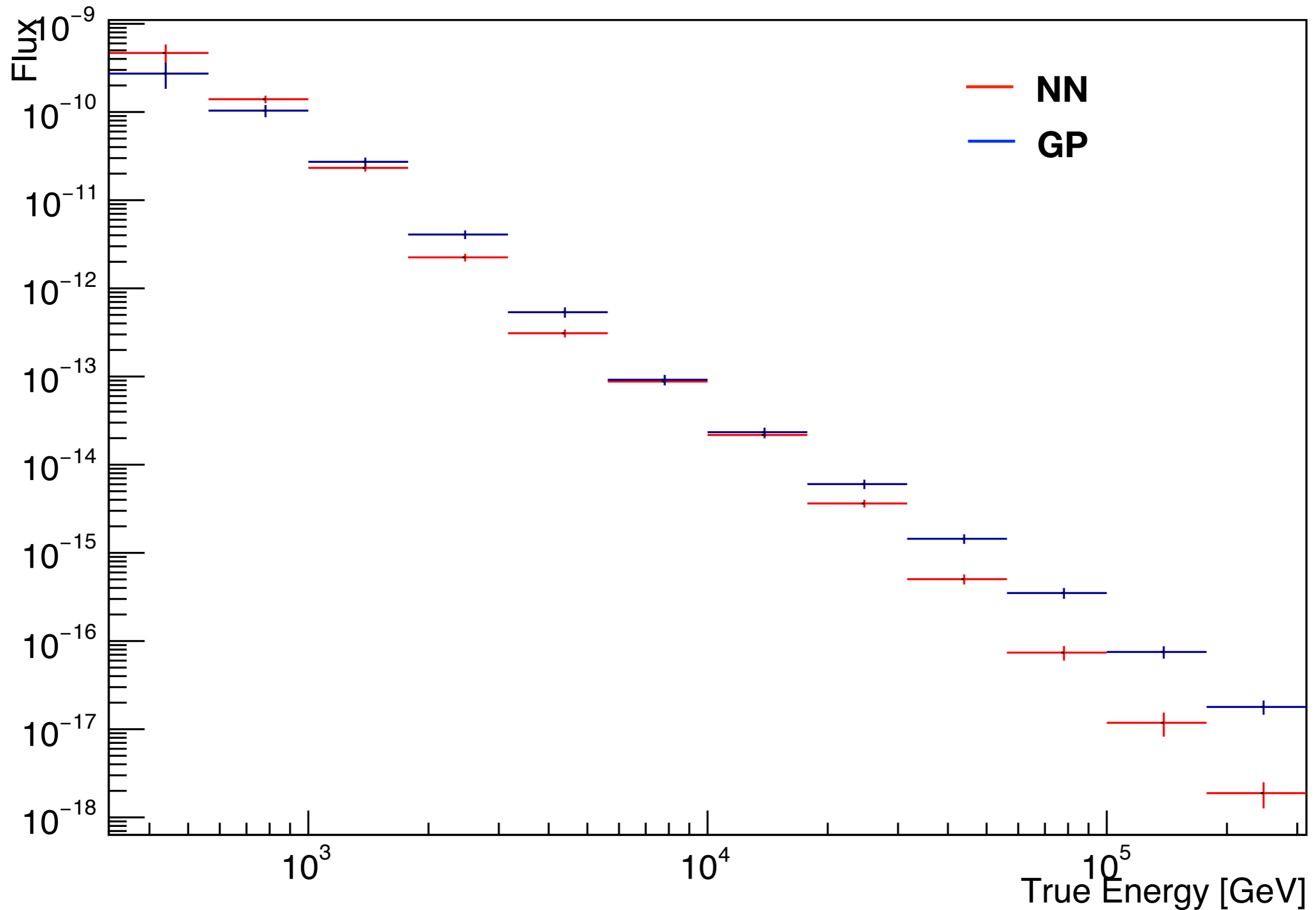
Final Unfolded Cause Distribution bin0



Flux,

GP cut Cause Flux

script: FluxFit.py



Flux,

NN cut Cause Flux

script: FluxFit.py

