

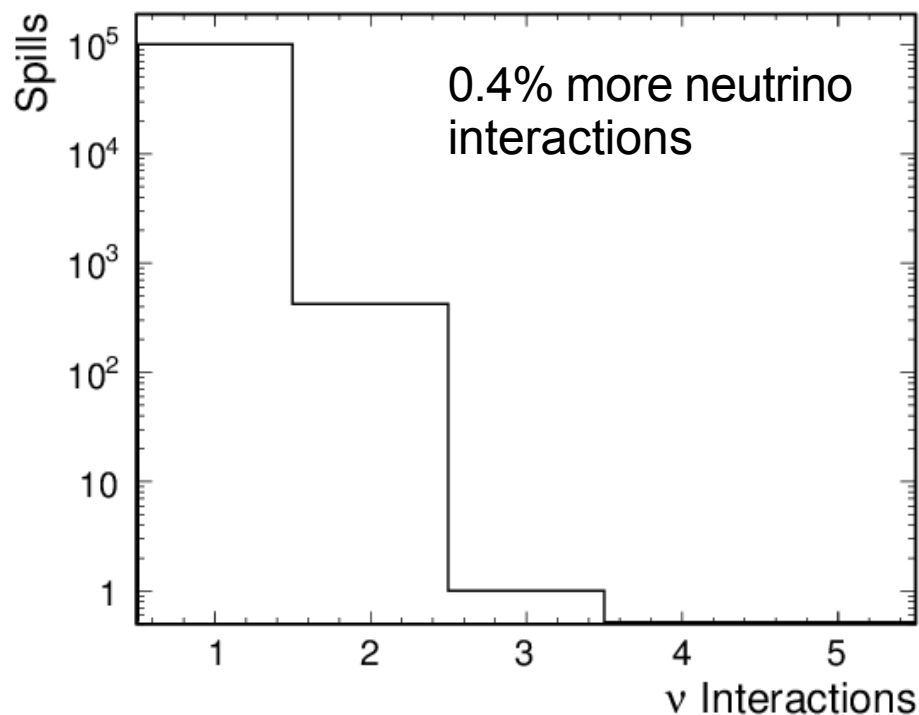
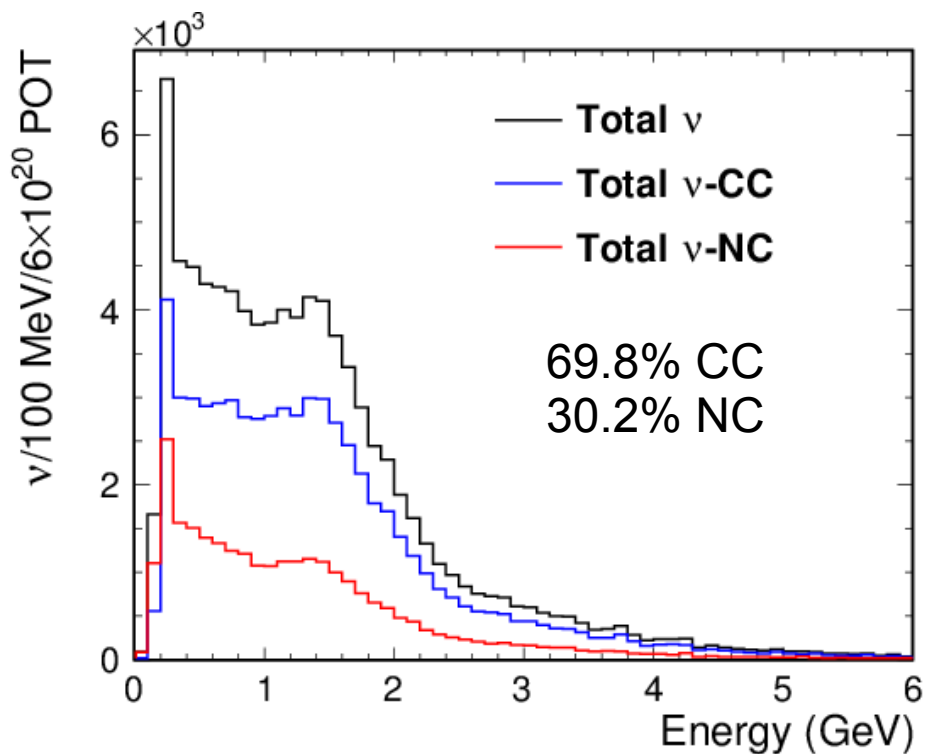
NuMI Flux at MicroBooNE

Used new version of AnalysisTree that records multiple neutrino interactions in a spill, so plots are slightly different than previous versions.

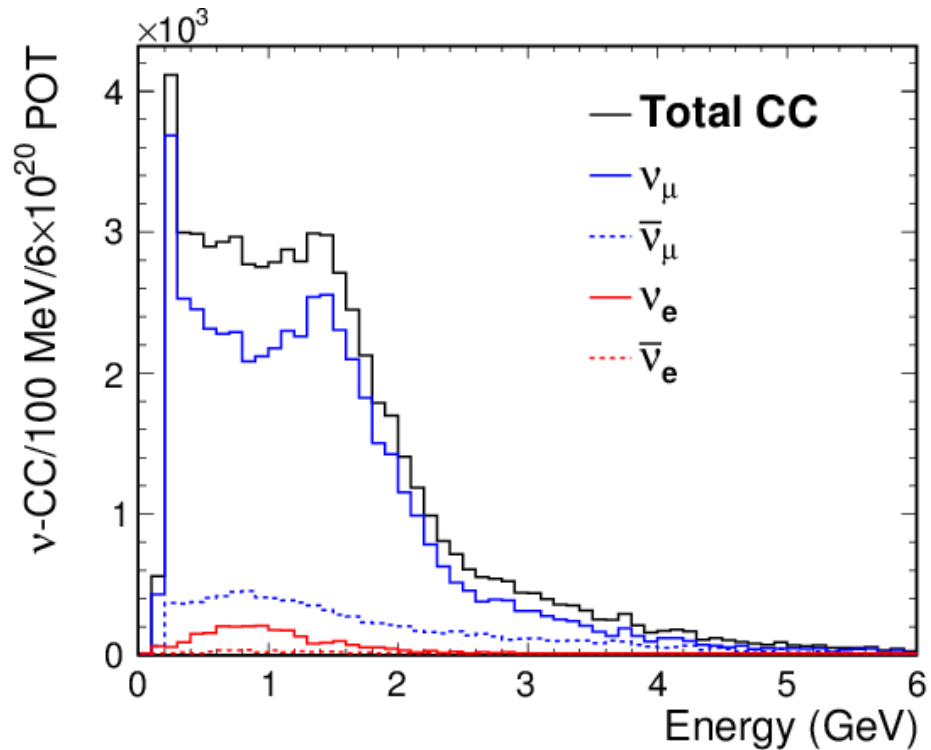
1000 files with 100 events each.

Total of $\sim 6e20$ POT.

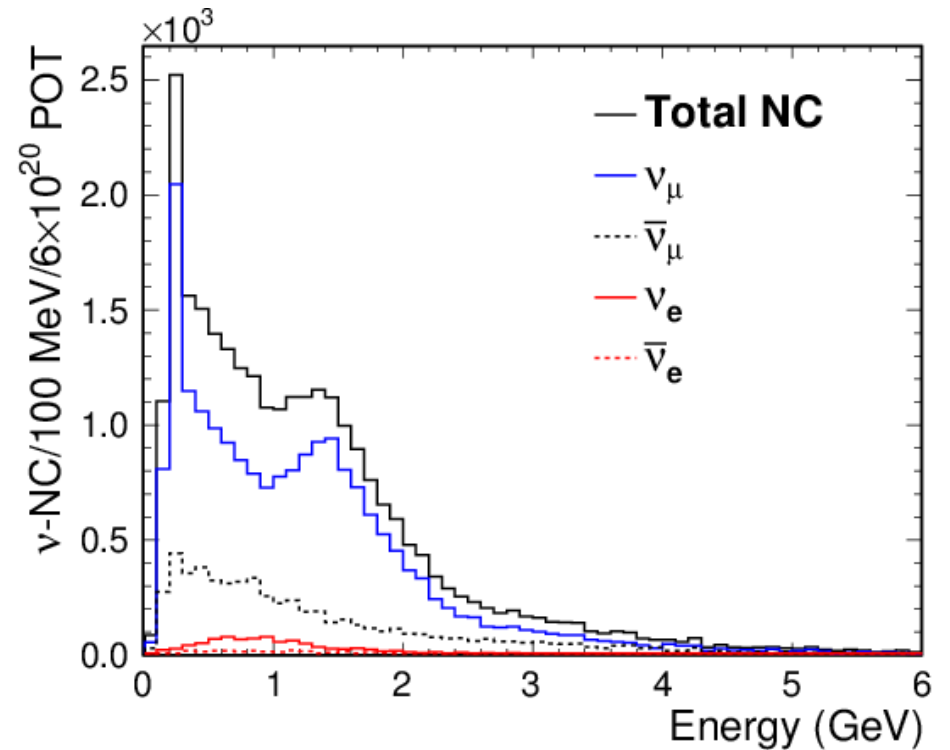
Counting neutrino interactions in Microboone fiducial volume.



Event Rate by Flavor

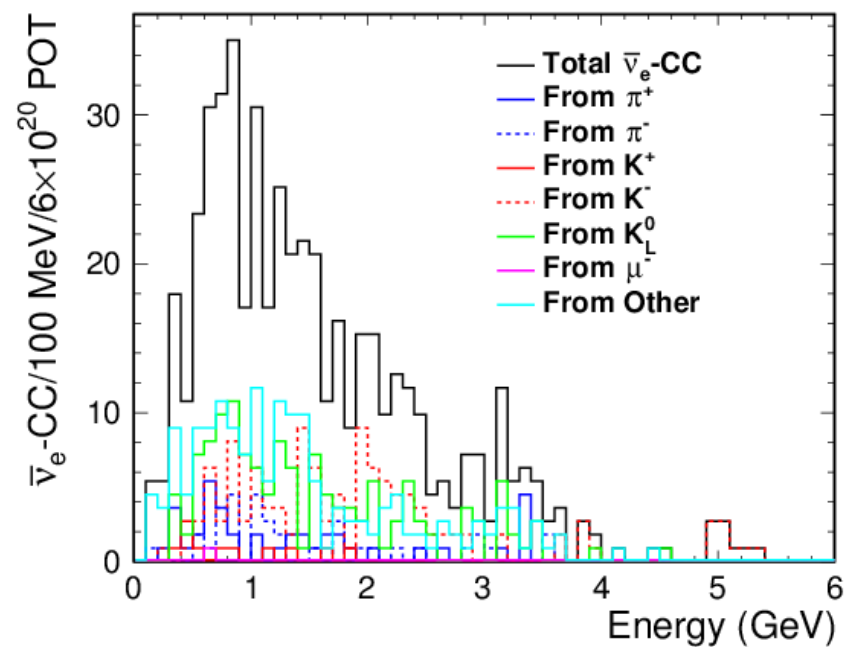
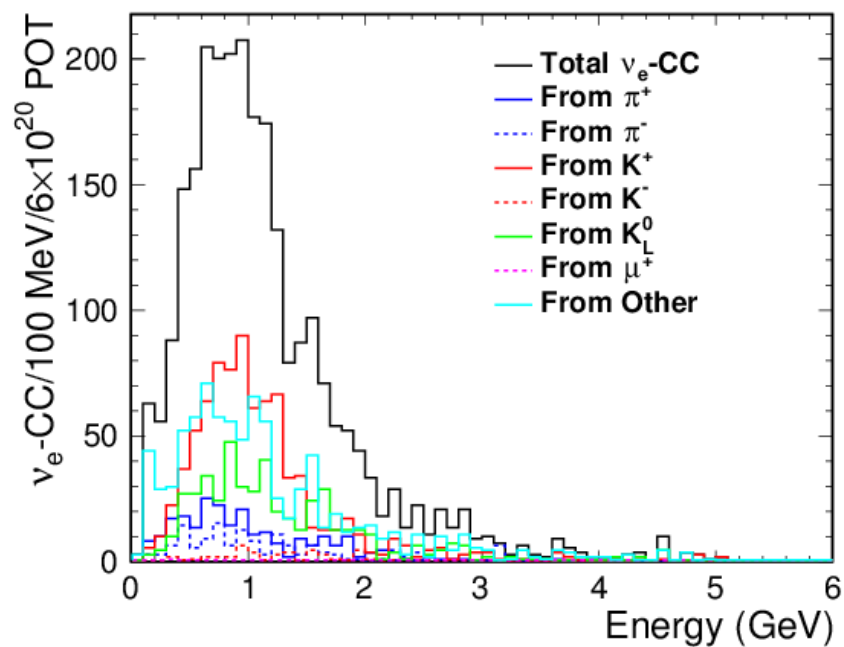
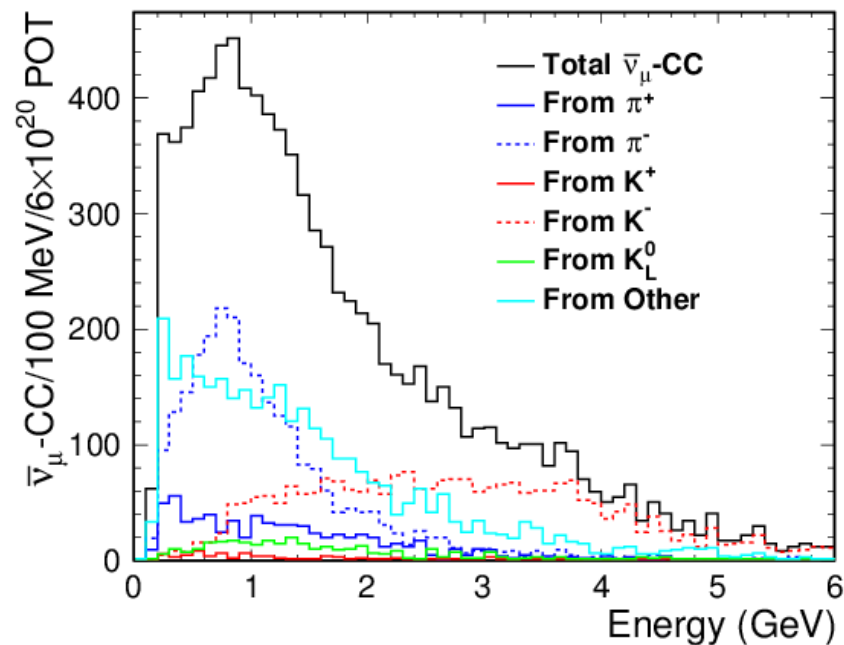
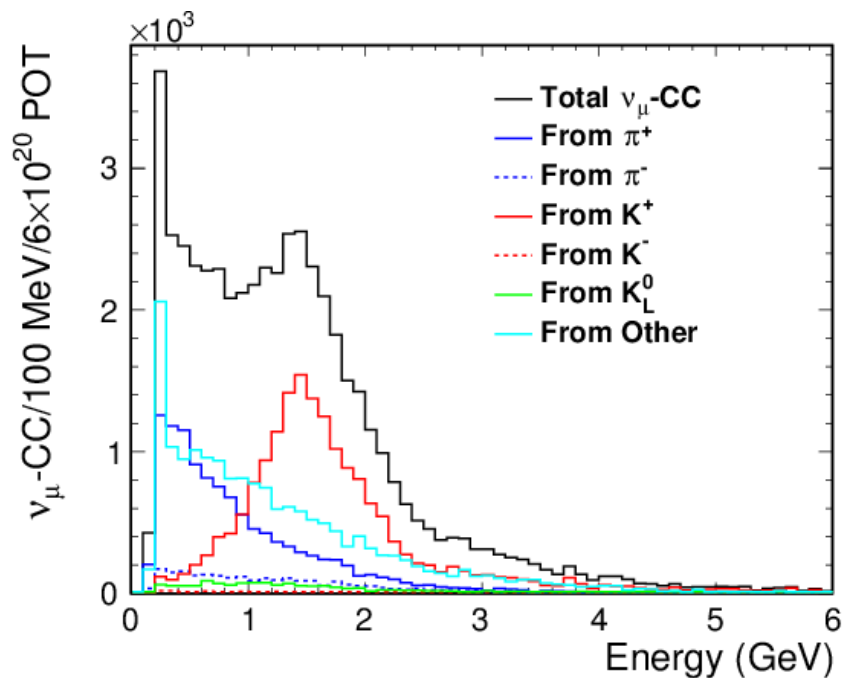


80.2% NuMu
14.9% Anti-NuMu
4.1% Nue
0.8% Anti-Nue

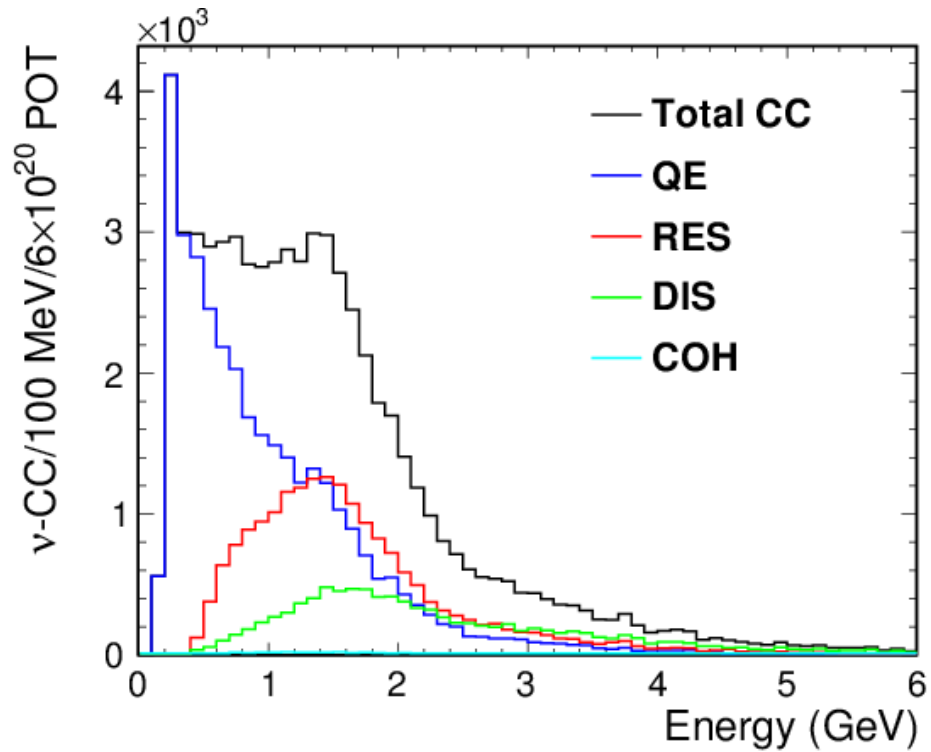


73.3% NuMu
22.1% Anti-NuMu
3.5% Nue
1.1% Anti-Nue

CC Event Rate by Parent

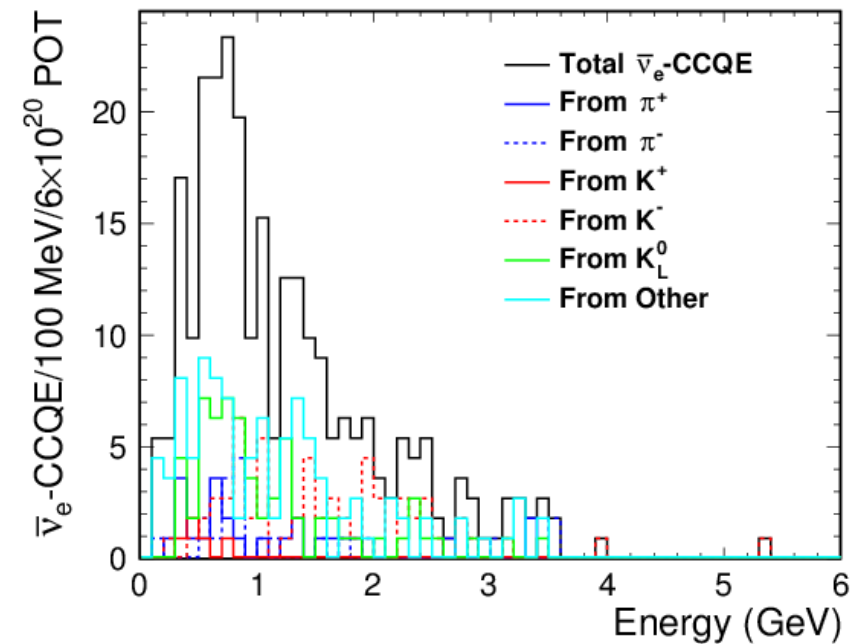
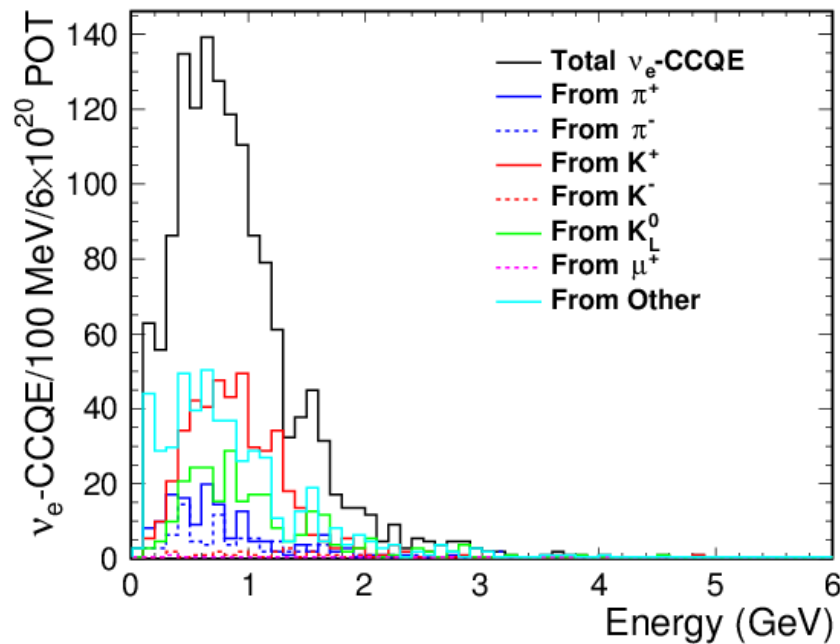
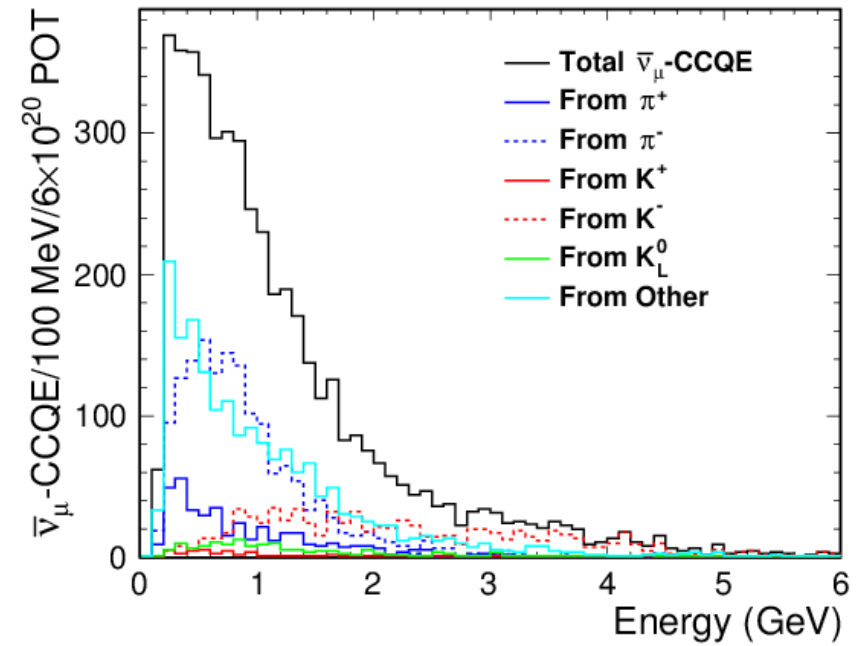
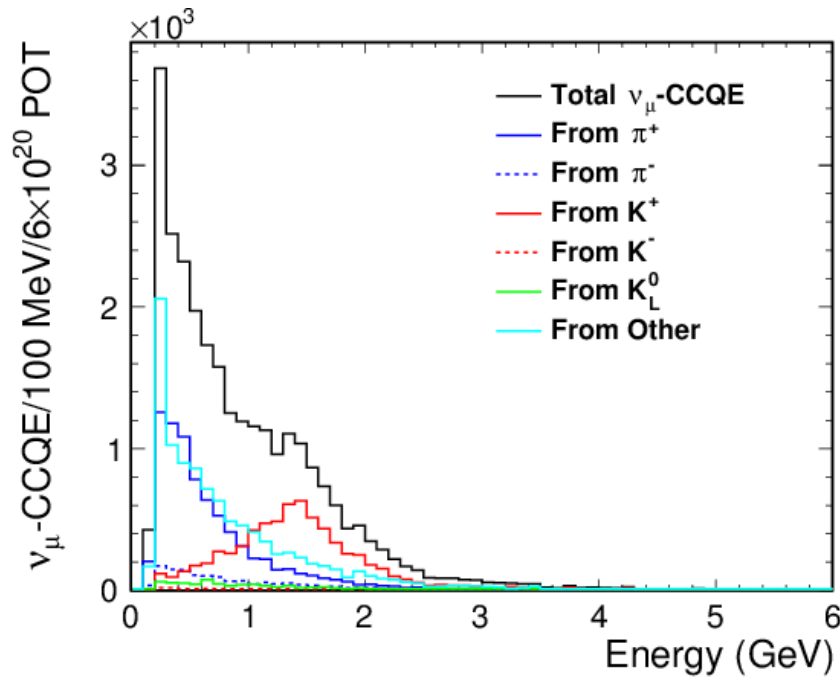


Event Rate by Interaction Type



53.8% QE
30.2% RES
15.4% DIS
0.6% COH

CCQE Event Rate by Parent



Comparing Physics Models

Files available for Flugg and 3 different GEANT physics lists:

Flugg: /nusoft/data/flux/shared/older/nova/2013/flugg_mn000z200i_peanut_lowth/

NuBEAM: /nusoft/data/flux/shared/older/nova/2013/NUBEAM_me000z200i/

FTFP_BERT: /nusoft/data/flux/shared/older/nova/2013/FTFP_BERT_me000z200i/

QGSP_BERT: /nusoft/data/flux/shared/older/nova/2013/QGSP_BERT_me000z200i/

Compare to: /uboone/data/uboonebeam/uboonebeam/numi_gsimple_fluxes_02.09.2015_470/

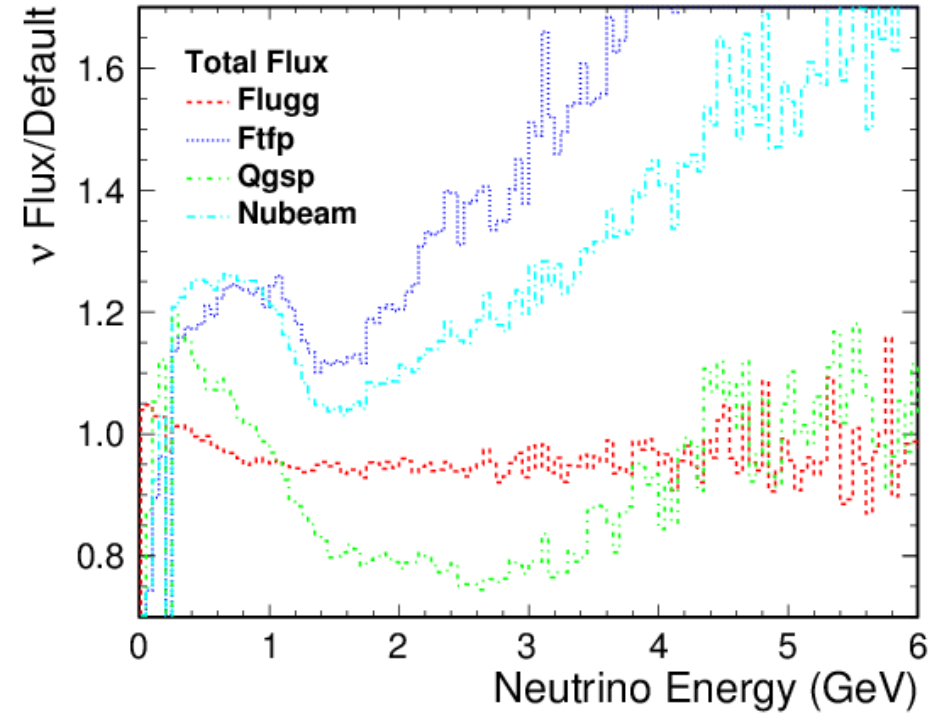
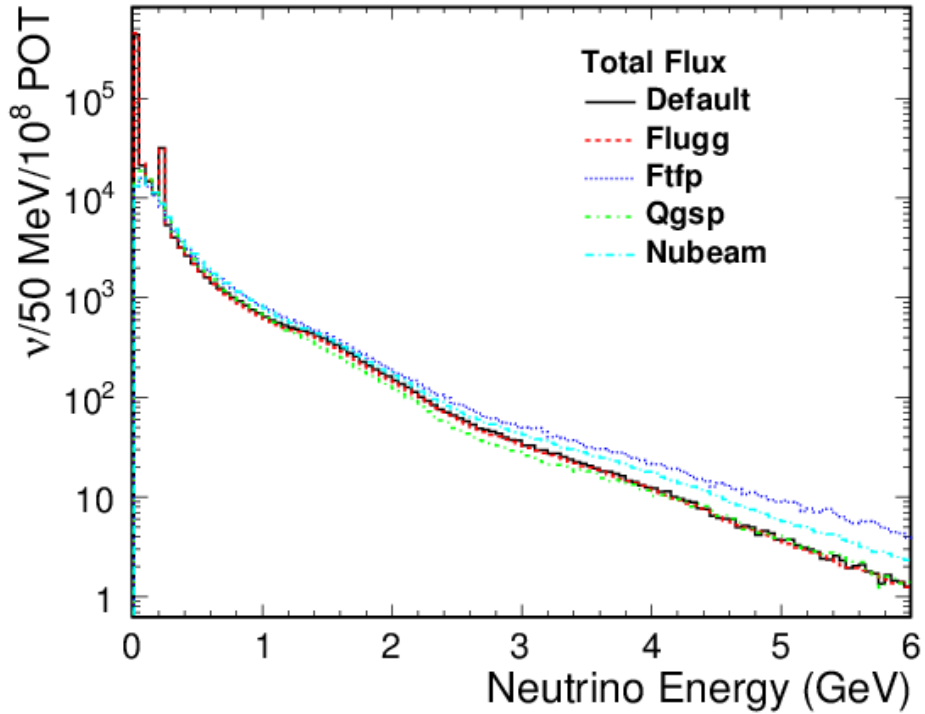
FTFP:

- Standard EM processes
- Bertini-style cascade for hadrons < 5 GeV
- Fritiof string model (FTF) for energies > 4 GeV

QGSP_BERT

- Standard EM processes
- Bertini-style cascade for hadrons < 5 GeV
- Quark Gluon String model (QGS) for energies > 20 GeV
- Low Energy Parameterization models (LEP) for energies in between.

Comparing Physics Models



NuMu

