

Intensity Frontier Closeout Report – Steven Dytman – 12/18/2018

My time at the lab was only 3.5 months, but a lot was accomplished. The environment was excellent for getting things done as many key workers are at Fermilab. Having experts "down the hall" was a big advantage. I also had opportunity to learn much more about the MicroBooNE experiment.

My main accomplishment was providing guidance to numerous researchers working on GENIE, a Monte Carlo program used by essentially all Fermilab neutrino experiments for event generation. I gave a seminar on GENIE v3, a major software release. It was well attended and well received. There was also ample opportunity to work closely with GENIE workers in both Computing and Neutrino Divisions. Building the first version of reweighting compatible with the GENIE generator was a large effort done by FNAL researchers working with me. I also worked with young people in Theory Division, giving 3 tutorials on the use of GENIE from the ground up.

I was also able to work closely with various people working on MicroBooNE analyses, providing guidance based on my MINERvA and GENIE experiences. A small group of us are close to a publication on CC0pi cross sections and I helped another group start a new analysis on detecting low energy photons. These efforts will continue into 2019 and beyond.

Living in the Village was an excellent experience. I liked being close to work and both my wife and I liked being close to an excellent area for hiking and bird watching.