

# NuWro: future plans

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## Outline

- electron scattering mode
- more ambitious upgrades
- smaller upgrades
- manpower

## Electron scattering mode

Motivation:

- validation of NuWro cascade model
- to use exactly the same cascade model in electron-nucleus scattering comparing to the data
- take profit from Steve Manly data mining for GENIE



## More ambitious upgrades

Require dedicated work for longer period of time

- more realistic nuclear potential in the cascade model
- better coherent  $\pi$  production model
- upgrade formation length using PYTHIA information
- implement photon interaction mode
  - motivation: study of FSI effects
- better resonance background model in  $\pi$  production



## Smaller upgrades

There are many places we know NuWro should (and can) be improved within reasonable time.

A severe problem for NuWro is manpower.

- the problem will be even more dramatic because since June 1st Tomasz Golan will work for GENIE rather than for NuWro
- it takes years to train young people so that they are able to give important contributions to the code
- our experience is that research focused on MC motivations and needs provides good background for young researches (Jarek Nowak, Krzysztof Graczyk, Artur Ankowski, Jakub Zmuda, Tomasz Golan)
- it would be great if creation of NuSTEC opens new opportunities in this respect so that the NuWro group is able to continue its work
- if you help NuWro today, this will help GENIE in  $\sim 5$  years.

