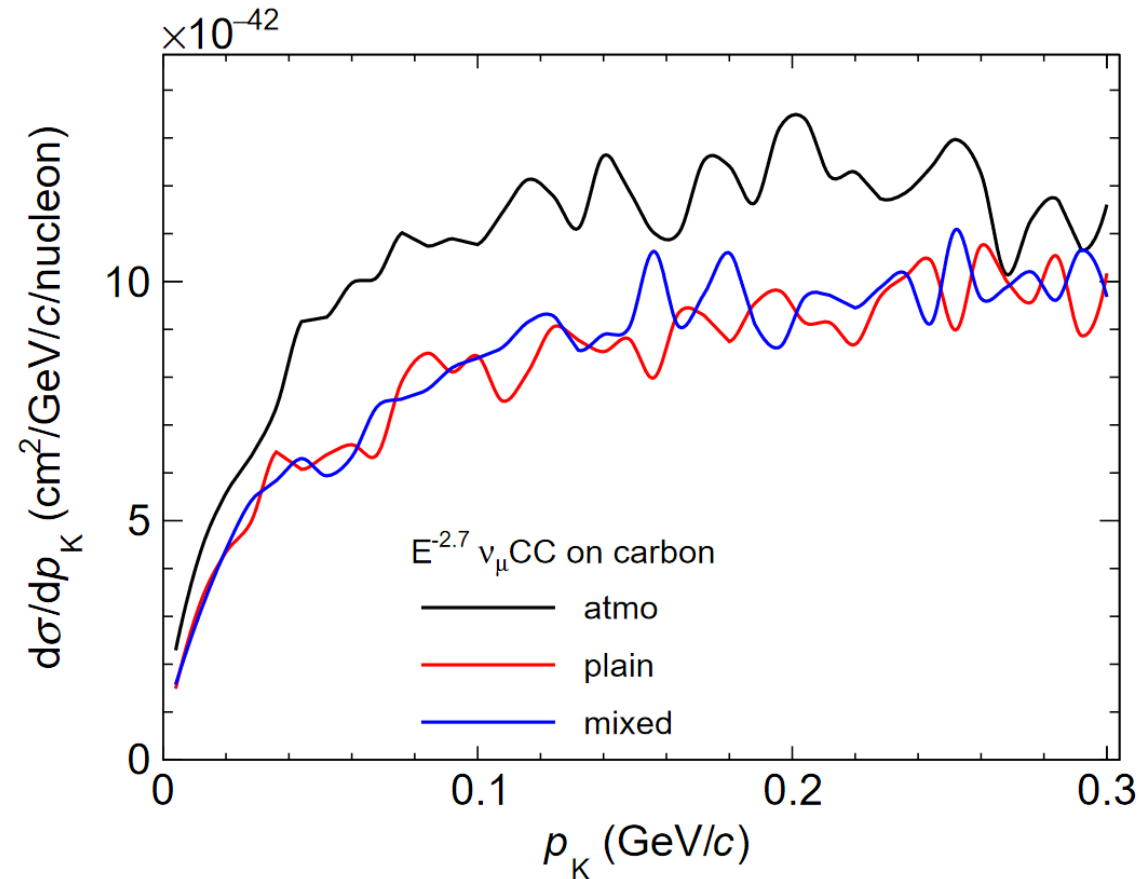


# Gevgen and gevgen\_atmo

- gevgen and gevgen\_atmo generates different output for same flux input
  - And same tune, same target, same neutrino flavor
- Input flux is  $E^{-2.7}$  flux
- Can be noticed easily when looking at  $K^+$  momentum spectrum
  - Count  $K^+$  particle by particle, normalize histogram as doing differential cross section plots.
  - No selection, all  $K^+$  in output is counted.
- gevgen\_atmo generates greater  $K^+$  generation cross section

# Result



Atmo: result from gevgen\_atmo

Plain: result from gevgen

Mixed: result from gevgen, using  
flux from  
`GHAKKMAAtmoFlux::FillFluxHisto`

- Not a simple problem from binning, using histogram from `GHAKKMAtmoflux::FillFluxHisto` rule out the contribution from different binning of `GHAKKMAtmoflux`

- A guide of how to reproduce the problem (and actual executed commands):
- <https://files.niconi.org/genie-kaon-spectrum-simple.zip>
- Please refer to README.md in the file