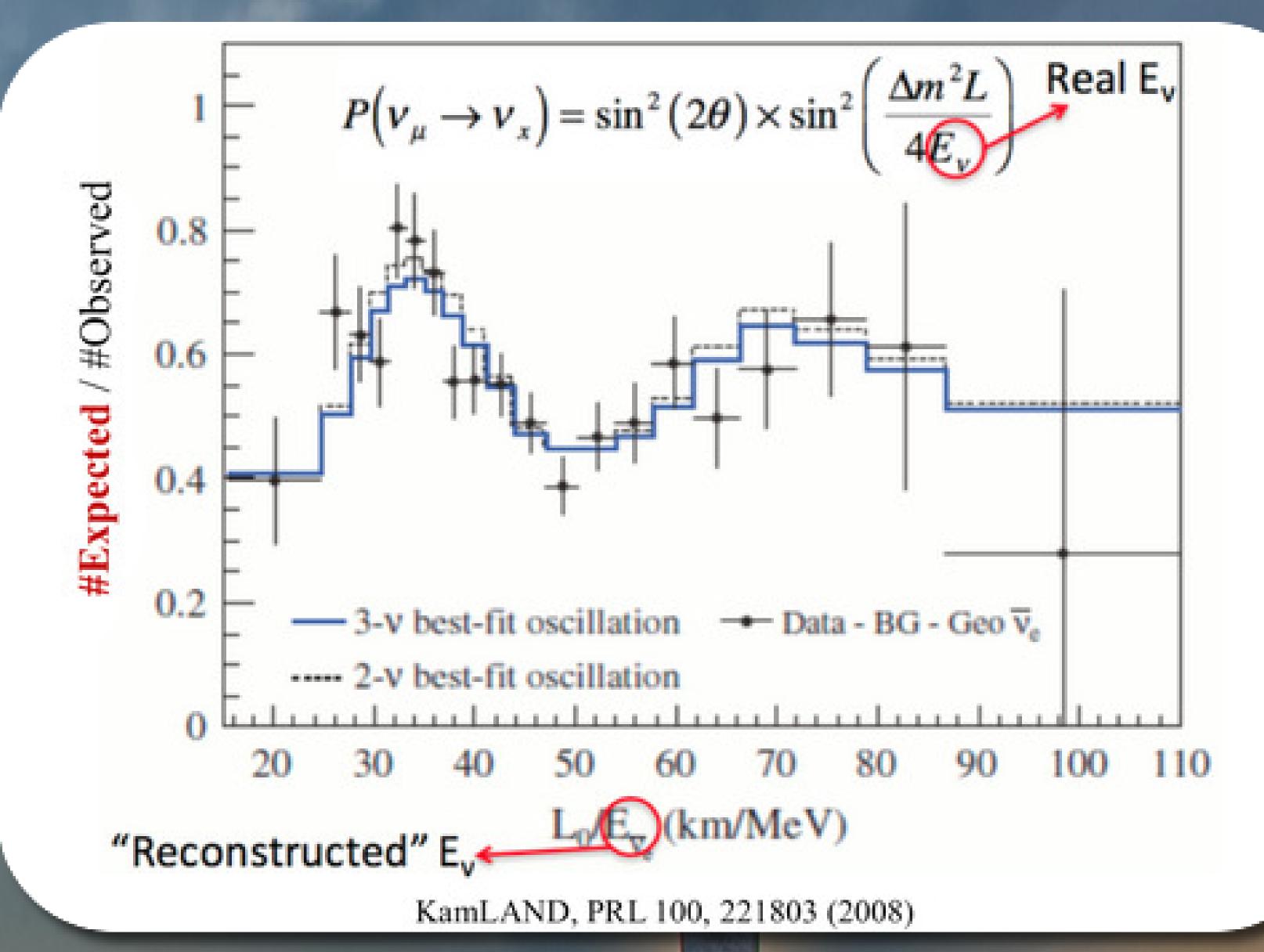
Jefferson Lab EXPLORING THE NATURE OF MATTER

Electrons for Neutrinos שליביסיס Afroditi Papadopoulou ODU TEL AVIV TEL AVIV עליביב עולים עוניברסיטת

Oscillation Physics & Extracted Parameters

Nuclear Cross-sections & Energy Reconstruction

Entering an era of high precision measurements.
Use of broad-band beams: incident neutrino energy



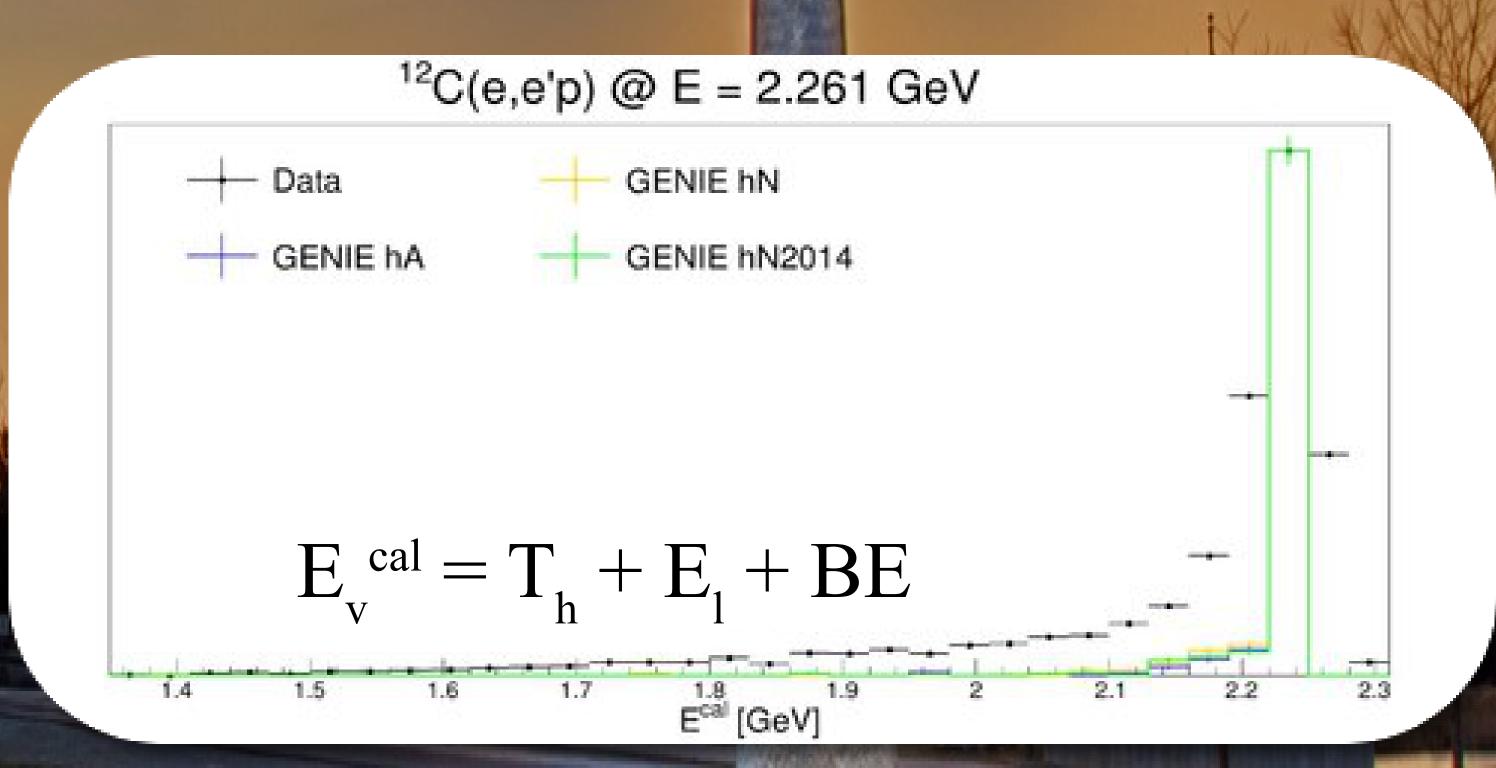
reconstructed from final state particles.
Miss-reconstruction can bias extracted oscillation parameters.

e & v share many common aspects of the interaction

Energy Reconstruction

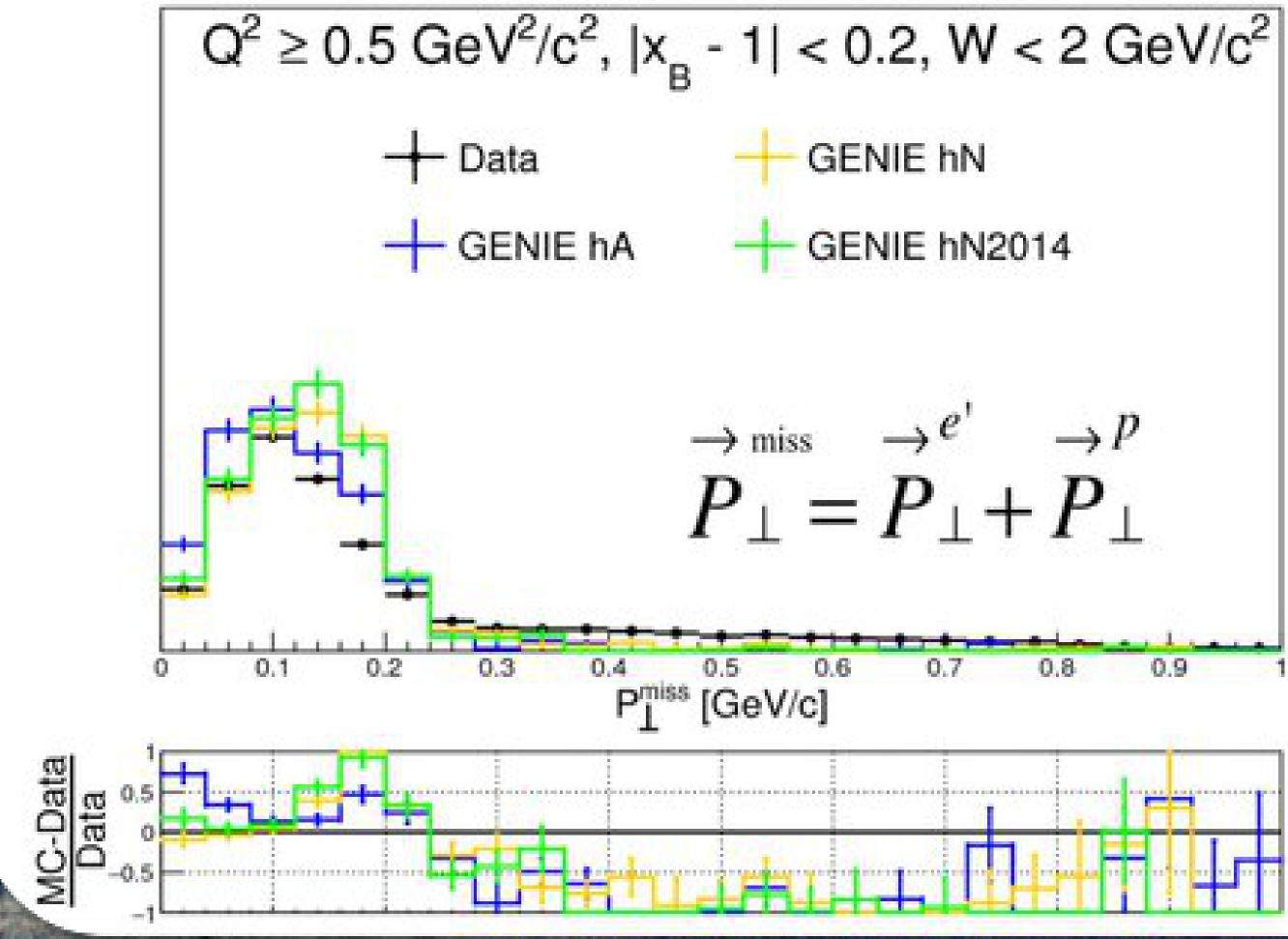
• Simulation fails to reproduce the data.

(isovector part).
CLAS@JLab has a large number of e-scattering data in a wide phase-space.
Beam energy and EM interaction well known.



FSI and Multi-Nucleon Effects:Future PlansMissing Transverse Momentum& Impact

¹²C(e,e'p) @ E = 2.261 GeV



Study the (e,e'p) phase-space to identify regions with good energy reconstruction.
Expand to more generators / reactions / nuclei / energies.
Study impact on bias in oscillation analyses.