Physics Opportunities

ν-N quasielastic / exclusive processes.

- Elastic and N->Δ transition form factors.
- Δs for the nucleon.

ν-p, ν-A scattering - structure functions

- A-dependence of structure function.
  - Shadowing, anti-shadowing, EMC effect for quarks, antiquarks, glue.
- Comparisons to muon/electron scattering structure functions.
- Structure function for free proton.

ν-A, $\bar{\nu}$-A scattering - parton distributions.

- Selectivity of quark flavor, valence vs. sea.

ν-p, $\bar{\nu}$-p scattering.

- proton structure function.
- d_v/u_v ratio at large x.

Other future possibilities.

In the short term, we will be limited to ν beam, moderate Q^2.

For now, focusing on low Q^2 exclusive processes and moderate Q^2 structure function measurements.

New JLab data has highlighted some interesting physics in low to moderate Q^2 lepton scattering.