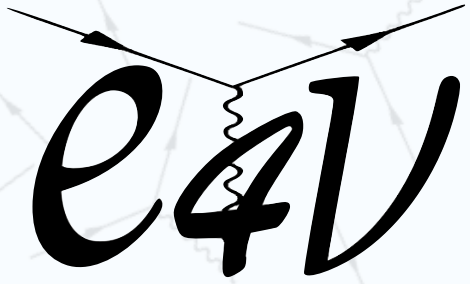

First Collaboration meeting

Discussion and Weekend Plans

Electron Data - Analysis Wishlist

1. Inclusive
2. (e,e’π)
3. (e,e’pπ)
4. (e,e’2N)
5. P transparency
6. Π transparency
7. (e,e’ππ)
8. (e,e’K)

Electron Data - Ongoing Analyses

Analysis	CLAS	Leader	EB	Weekend tasks
Inclusive	12	Matan	Steve+Florian	1. Momentum correction 2. Empty target 3. Charge symm
(e,e'π)	6	Brittany	Steve + Adi	1. Run on radiated samples 2. Systematics 3. W-Q^2 distribution
D(e,e'π)	12	Caleb	Larry + Florian	1. Radiative effects 2. Additional pion
(e,e'pπ)	6	Julia	Brandon	1. Analysis note 2. Normalization uncertainty
(e,e'2p)	12	Alon	Larry + Florian	1. N-γ separation 2. Ar implementation 3. Run on radiated samples
Π transparency	6	Peter	Steve + Julia	1. Investigating BG subtraction 2. Smearing 3. Extracting the transparency

Electron Data - Near Future Plans

Electron Data - Inclusive - Matan

AC : Steve + Florian

1. Acceptance and efficiency correction:
    1. Verify the method with Eric (Matan will send a mail)
    2. Ask Eric for the code pushing electron radiated distribution to a Lund file
    3. Adding noise from random trigger:
        1. For each target & energy check how many reconstructed good electrons in data (tracking efficiency) normalized by current, divide by the ratio of the number of good electrons in the lowest current run to that current (Florian will send a program)
        2. Add detector noise which will cause the same decrease in the tracking efficiency
    4. Add smearing to output GMC reco file and potentially momentum correction
2. Detector background
3. Empty target background
4. Charge symmetry background
5. Identifying detector problems:
    1. Compare data to MC in each sector (for target, theta, energy)
    2. For mismatches, go over logbook to find bad sectors at selected runs, eliminate relevant runs / sectors
6. Back to uncertainties

Electron Data - Π transparency - Peter

AC: Steve + Adi

1. Explore BG subtraction
    1. understand 300 MeV photon threshold
        1. if there's angular dependence
        2. can add other cuts to remove this BG?
        3. Steve will send CLAS paper which determined the 300 cuts
    2. Explore Julia's BG subtraction applicability - Julia will send code
    3. Explore extra pions BG
2. Smearing - done
3. Extract 1st transparency - by April
4. Partial closure test - by end of summer

Electron Data - (e,e’pπ) - Julia

AC: Brandon

1. Analysis note - 1/5/25
2. Normalization uncertainty
3. Correlations for double differential

We aim for two back to back papers:
PRD with all relevant plots aimed for model builders
PRL summarizing the effort with statements about the analysis impact

Ideas for PRL:
1. Ecal in bins of TKI
2. Show both charged pions together
3. For NOvA 2108.08219v2 Ehad . Enu is MC based parametrization in Ehad and Elep phasespace
    1. Suggestions: difference in Emiss(data) and Emiss(MC) as a function of Ehad and Elep
4. Reconstructing the delta mass from the pion and proton
5. Explore DUNE/T2K approach.

Models - Transition region

1. Modern form factors N* -> hN
2. Non-res parametrization to get the peak shape
3. Boundary RES vs. DIS to get the W cut
4. Modern DIS
5. Hadronic tensor of (e,e') non-resonance

Models - QE + MEC

1. (e, e'NN) MEC
2. Hadronic part for the SuSA model

Model Constraints and Tuning

Set RES-DIS border at 2 GeV - can be done immediately

Eric's proton fit, C

We realize that most tuning efforts require previous work on the models :

Modern form factors, new parameters (exp, polynomials)
First need to finish implementing the model (6 months)
Tuning of GENIE new parameters

Non-resonance parametrization
First need to fix the model

Weekend plans

Wed	Thu	Fri	Sat	Sun
Welcome to JLab	FSI morning	Look into the Future	Hands-on work	
New from CLAS	Let's get these analyses rolling	Tour & Tutorials		Weekend work presentation & summary
Dinner			Workshop Party	

Fri	Sat	Sun
Look into the Future Binding energy	09:00 git tutorial	
14:00 Tour 16:00 Stepan's advice BG subtraction	14:00 1p1pi dive	14:00 Weekend work presentation & summary
Jumanji night	Workshop PARTY @ Cowboy Cactus	