

NPS-RG1a analysis meeting

Minutes of the 07/11/24 NPS RG1a analysis meeting.

Attending: C. Morean, C. Hyde, J Crafts, P. Bosted, C. Munoz, A. Camsonne, A. Singh, Cidra (?), E. Kinney, H Huang, M. Nycz, T. Song, T. Horn, W. Hamdi and J. Roche.

Recording:

<https://jlab-org.zoomgov.com/rec/share/mrmpUGirkZXd27kTf9yC7BCodqOt5sjSpiynr458mk4tqPzN4PNdZCX-VWuzeuje.MueqdL1fWViSaKBh>

- Peter: Naming kinematic convention.
 - <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/10>
 - Peter has identified 56 different configurations of the HMS+NPS+beam energy but only 17 distinct HMS/beam configurations. NPS angles and distances get us from 17 to 56.
 - Note that we have three kinematics at $x=0.48$ and one at $x=0.46$. This is not a typo: we ran it like that.
 - Peter proposed a naming convention for the HMS part of the kinematics $x[valx[_q\{valq2\}_p[valpass]]$, where $valx$ is $100*x$, $valq$ is $10*Q2$, and $valpass$ is beam energy pass number (3, 4, or 5).
 - We agreed to adopt Peter's standard nomenclature for the HMS/beam.
- Casey: HMS calibrations, general considerations.
 - <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/15>
 - Casey reminded us that reference times and timing windows must be checked for each kinematic and trigger configuration.
 - Casey stressed the importance of doing the calibrations in order: ref timing, then timing window, then hodoscope, then wire chamber, etc.
 - Casey advocates for dividing the work between multiple people. JR: two people are working on the ref time and timing window for now. Let us see how they progress.
 - Peter: The reference time and timing window used so far look good to him, but someone should check them. First, the hodoscope and drift chambers should be calibrated.

- JR: Mitch Kerver set the reference times and timing window for NPS in September 2023. Mark Mathison performed one initial calibration of the hodoscope in September 2023 (after Mitch's work on timing). Both calibrations were uploaded on GitHub. Casey stressed that they need to be checked throughout the data.
- Avnish: update on HMS calibrations, including reference times, hodoscopes, and checks for drift chambers.
 - Avnish and Yaopeng have split the data into two groups. Yaopeng works on $x=0.60$ and $x=0.25$, while Avnish works on the two others.
 - Avnish exercised ref timing calibration and drift chambers calibration scripts for one run and is working on a script to calibrate all runs. <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/14>
 - Avnish showed Yaopeng's check for a reference time for $x=0.60$ and $x=0.25$. <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/16> Yaopeng found that the reference times already in GitHub are acceptable for T3, T4, and T6. One value of cut for all triggers is appropriate. Yaopeng will move to check timing windows.
- Mitch: HMS PID calibration
 - Mitch will start working on the PID calibration, at least for the runs for which Yaopeng has checked the reference time.
 - Someone should work on this with Mitch (dividing the runs a la Avnish/Yaopeng): please volunteer.
- Alex uploaded a recording of Peter's description of how to work with SIMC on this ELOG entry: <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/12>. Peter noted that he is working with D. Gaskell on making SIMC Alma9 compatible.

Not discussed in today's meeting but posted in the ELOG:

- Status update of Peter's analysis. Peter will speak during the afternoon session of the upcoming collaboration on Thursday. <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/13>

The next weekly meeting will be on

Wednesday, July 24 at 8 am EDT (not next week)

We will start with updates on the calorimeter analysis and luminosity studies.

See you next week at the collaboration meeting!