

LEDEX meeting minutes – 2006/07/19 (rg)

Steffen report that Jack has components to do a remote S0 motion system, and he is optimistic about getting it set up by next week. Today he is checking PMTs. Steffen and Guy will help Jack here.

Yesterday there was an off line physics discussion, about tools to prepare for start of experiment, etc. There has been talk about how fast we can replay data. Ed suggests analyzing on line on counting house machines, but physics on batch farm. There is some concern about being able to replay ~1/4 of the data within 24 hours using the farm.

Schedule: cryotarget cooling today, and beam delivery trials to start tonight. For communication purposes, Steffen and Doug are now co-administrators of ledex. JP needs to train target operators. The gamma d run plan is final enough; the first 17 kinematics points are roughly fixed, but the remaining 21 might be affected by the comparison of initial results to Schwamb's calculations. Seonho's CSR plan is also posted. The ed run plan is starting to take shape; we need to finish the systematics study plans, rates are a concern at the very low Q now accessible with 362 MeV. A 1 msR collimator is being developed, it needs another cycle with Ron and Doug.

Mark has prepared some FPP macros, updated the data base for T0's and demuxes from the cosmic data, and found a few minor problems. The Ar-CO2 appears to have a long time tail and the 5th order polynomial seems insufficient. We need to recheck this with the correct FPP voltage. Aside: the FPP motion system is disabled.

Julie has been trying to understand what G0 will do. There is a question about whether Hall C feed back affects the Hall A charge asymmetry. We plan on a Moller early next week; will Hall C do a spin dance afterward?

The plan for Monday and Tuesday: Spectrometers move to new angle and get surveyed. Jack moves stack out, removes JP's blocks, and installs chamber 2. We cable it up and start gas flowing. After everything is closed up, we can do some beam calibrations and Moller; chamber 2 needs to flush for ~24 hours before we can use it.

RG submitted paperwork for E05-004; an FPP debugging page was written and linked from the ledex page. Jonathan is updating related documentation.

Ed has completed a first round of FPP simulations. The good news is the batch farm works. The physics result is it is hard to do low energy experiments, with 10-12 MeV/g/cm² energy loss. For the 3 inch doors, we can go down to 600 MeV/c, while for the 1.5 inch doors we can go to about 500 MeV/c. It looks like using S2 only at lower momenta decreases our figure of merit a factor of 3. We discuss options including replacing S2 with S2m, using S0 and S1 as analyzers for the front FPP chambers (dual analyzers), and re-enabling the 3/4" carbon door. We have no firm conclusion, but Ed will study various options.

Sharon has been doing rate estimates for ed runs.

Guy has finished ep elastic single arm proton software. PALM needs to be tested. We briefly discuss ed vector polarizations; these look doable enough that we should study them further.

Mike reports that the singles trigger is working. There will be no coincidence trigger until September.

Jackie tested the alignment code on NDelta data. We have no cosmic data after the chambers were pinned, before ch 2 was removed for CSR test. Alignment and analysis macros are set up. We should be able to do simple spin transport or PALM.

Emily has been working on start and end of run GUIs, and lists of EPICS variables to read/write out. Bob Michaels is going to make sure various scripts work.

Yannick has finished the RTD calibration. The uncertainty is about 0.5% for a 5 K rise in temperature.

Alex has been busy with CSR test setup.

Doug reports that one of the two scattering chamber windows was never used before and was built incorrectly. The left window is 16 mils thick, the right window is 30 mils thick. The left side might lose acceptance at angles below 14 degrees. The windows are Aluminum.