

LEDEX meeting minutes – 2006/05/05 (rg)

Beam polarization: RG and DH have estimates ranging from 27 – 52 % polarization in Hall A, when beam polarization is 100 % in Hall C. The differences are from what one assumes about the ratio of injector to linac energy. Doug thinks since the beam is one pass in both Halls, there is probably added flexibility as regards the phase matching and setup. JR reminds us accelerator is thinking of turning off the SL and only running the NL, so our estimates are not right anyway. Doug will talk to Hari, and try to use Joe Grames' code, which is more flexible. After all this, Doug recalls that the only difference in Hall A/C spins is the arcs, since we are at the same energies, so the polarization is fixed at ~50% of the Hall C polarization (since they will want 100 %). If the angle of the arcs is +/- 37.5 degrees, then the relative angle between spins at 362 MeV in Halls A and C is $(g-2)/2 * \gamma * 75 \text{ deg} = 0.00116 * 708 * 75 \text{ deg} = 61.6 \text{ deg}$, for which the cosine is 0.475.

Adam talks about run planning. The FPP gets increasingly difficult at low momenta, and runs become prohibitively long to get good uncertainties. RG gives background description to the students about what happens. Adam wants to redo kinematics himself, figuring out the acceptable region from the endpoint to the onset of pion production.

The Hall opens on Wednesday, May 10 for the day, gets beam over the night, and opens again on Thursday for de-cabling.

Emily has a draft web page, <http://hallaweb.jlab.org/experiment/LEDEX>. Half the links work, some still need to be implemented.

How many shift workers do we need? We have something like 45 days * 3 shifts * 2-3 people per shift, so asking for 5 shifts per person leads to about 50 – 80 people needed. This seems to be a reasonable request.

Jackie is working on the database, and on calling the espace tracking routines from the C code. Ron Guy will work with Jackie at identifying the standard Hall A software package. Our model is that everything but the FPP analysis can be taken from previous work for other experiments.

Doug and Ron will worry about overseeing that everything gets done to prepare for the experiment. Adam is leaving in two days.

Doug indicates the collimator will be 2 msr.

RG says the radiator is proceeding. Ed Folts mentioned the cables for the old radiator were found. RG has ordered RTDs for the radiator.

There is some discussion of the beam calorimeter installation schedule. The tungsten slug is off now for gold plating. With the aluminum slug in air, the RTDS have been calibrated and agree nicely to +/-50 mK. With the tungsten slug in vacuum, we are hopeful we can quickly do better; we would like to do about +/-10 mK. Julie has agreed to look into the BCM calibration procedure, by which we would transfer the beam calorimeter calibration to the BCMS. We do not yet know how stable the BCMS are at ~1 microamp current.