Minutes of the Coordinating Committee of Hall A, August 28, 1997

The Hall A Coordinating Committee (CC) meeting was held in Room A110, CEBAF Center, at 2:00 PM. In attendance were Pierre Bertin, George Chang, Kees de Jager, Marty Epstein, Mike Finn, Jeff Templon, and Pascal Vernin. This was a joint meeting of outgoing and incoming board members.

1 Results of the CC Election

Pierre Bertin and Jeff Templon have been elected to replace outgoing committee members Marty Epstein and George Chang. The CC would like to thank Marty and George for the exceptional leadership they have provided to the collaboration in the past two years.

The new committee has elected Mike Finn to serve as chair for the next year. Jeff Templon was elected to act as its secretary.

2 Hall A Status

As the first item of business, Kees de Jager presented an overview of the current status of the Hall. A synopsis of his report follows:

2.1 Commissioning experiments

Two commissioning experiments on ^{16}O using a waterfall target have been completed.

E89-003 performed measurements of the $(e, e'p)$ reaction in quasifree kinematics. A missing energy resolution of about 1 MeV was achieved. Systematic errors were controlled to the level needed to perform a separation of the longitudinal and transverse response functions.

E89-033 performed the first observation of the polarization transfer observables in the $(\vec{e}, e'\vec{p})$ reaction in a complex nucleus with $A \geq 2$. Running the polarized beam was a steep learning curve from which other experiments will benefit. The Møller polarimeter was partially commissioned during this experiment, but is not yet fully operational.

2.2 Scheduling for 1997-1998

We are now in the end-of-summer shutdown. The primary activity during the shutdown will be the installation of the cryotarget, which is needed to carry out the remainder of the EXPINT program. The Hall A schedule for the fall of 1997 begins with commissioning of the cryotarget. This will be followed by the elastic deuteron form factor measurements of the A and B structure functions. At the end of the year, a one week dress rehearsal run for the parity experiment will be undertaken.

The decision of the laboratory to run only 2 of the 3 Halls at a time for the immediate future has had an impact on the schedule for next year. Halls B and C will run in February of next year, extending the planned January shutdown for Hall A. In March, the virtual Compton scattering experiment will run. The first parity production run will occur next. This will be followed in the summer by the G_{Ep} measurements using the FPP. The reordering of the Parity and G_{Ep} measurements was necessary due to the fixed schedule for installing the polarized deuterium target in Hall C. The G_{Ep} experiment can run simultaneously with this Hall C experiment, but the parity experiment requirements are not compatible with the high–polarization source that will be used by the other two experiments. Installation of the polarized deuterium target in Hall C will occur from April to July. On July 1, the strained GaAs crystal will become available. This crystal will allow higher beam polarizations but at the expense of limited current. Four months of running with this crystal is foreseen.

The running of the G_{Ep} experiment will complete the planned initial

experimental program proposed by the EXPINT committee. At this time the schedule is not fixed beyond the summer of 1998. Kees indicated, however, that measurement of the low Q^2 evolution of the extended DHG sum rule using the polarized ^3He target would likely run in the fall. This experiment has the highest PAC rating of the remaining approved experimental program and can benefit from the use of the strained photocathode. (This experiment was originally expected to run in the summer months). Finally, the second parity production run would likely be scheduled to run about six months after the first run.

2.3 Commissioning of major pieces of equipment

1. The Hall A Cryotarget installation has begun. All components are ready. The fast raster system, required for use with the cryotarget, is installed but not yet tested. Target boiling tests will be undertaken at the beginning of October.

2. A solution for the higher power needed by the $^{3,4}He$ cryotargets has not been finalized. Power is limited by the capacity of the end station refrigerator. Replacement of the refrigerator with a more powerful one is two years away. The choices are to either delay running experiments requiring the higher capacity or to impose impacts on other competing demands for cryogenic fluids. Moreover, ^{3}He gas is now on the strategic list making acquisition difficult. The local DOE office is assisting with the latter matter.

3. The (e, p) energy measurement encountered problems with its trigger electronics in its first test run. This should be fixed by October. They expect to achieve 10^{-4} accuracy by early 1998.

4. To minimize the radiation load in the Hall, additional ion chambers will be instrumented along the beam line. The operators will steer the beam to avoid tripping the chambers (which will be incorporated in the machine protection system).

5. The Compton polarimeter will be installed during the Jan-Feb 98 shutdown. The cavity needed to enhance the gain will be installed in fall 98.

2.4 Angle changing methods

Improvement of the methods used to determine the spectrometer angles and pointing accuracy are underway. The full vertical and horizontal alignment systems will be installed during the January 98 shutdown. The elastic $d(e, e')$ measurements scheduled for this fall do not have stringent angle requirements. An intermediate solution based on the circularity of the scattering chamber has been developed for this experiment.

2.5 Arc magnets

Pascal Vernin brought us up to date on the status of the arc method for measuring the beam energy. New measurements of all eight arc dipole magnets are needed if the goal of achieving a energy measurement of 2×10^{-4} accuracy is to be realized. Discussions are underway with the accelerator division to see if time for a magnet calibration can be fit into the schedule. No decision has yet been reached. In answer to a question as to whether the (e, p) measurement technique by itself would suffice, Kees de Jager indicated that two independent measurements of the energy are required to have full confidence in the result. *The CC reiterates its belief that measurement of the beam energy to a accuracy of* 2×10^{-4} *is needed to carry out the experimental program in Hall A.*

2.6 Staffing

Kees de Jager announced that the recent job search has resulted in the hiring of two new Hall A staff members, Eugene Chudakov and Olaf Hansen. A new postdoc, Michael Kuss, has also recently been hired.

3 Update on Graduate Student Thesis Projects

George Chang reported on students assigned to thesis projects in Hall A. Students committed to scheduled experiments include:

- E89-003: Brian Diederich(ODU), Juncai Gao(MIT), Nilange Liyanaga(MIT)
- E89-033: Sergey Malov (Rutgers), Krishni Wijesooriya(W&M)
- E91-010: Bill Kahl(Syracuse), Johann Jardillier(Saclay), Wilson Miller(Princeton), Gary Rutledge(W&M)
- E91-026: Cathy McCormick(ODU), Riad Suleiman(Kent State),
- E93-027: Gilles Quemener(W&M), Dan Zanea(Regina)
- E93-050: Natalie Degrande(Gent), Stephanie Jaminion(Clermont), Christophe Jutier(ODU), Geraud Lavessiere(Clermont), Luminita Todor(ODU)

A compete list of all collaboration students and their contributions to the Hall is being prepared by Kees de Jager.

4 Proposed New Collaboration Members

Ph.D. Dissertation students who 1) have been accepted by the experimental spokesperson for a dissertation project in Hall A, and 2) have made an arrangement with the Hall A manager formalizing their contribution to the Hall are automatically members of the Hall A collaboration. The students listed above, with the exception of Degrande, Jardillier, and Jutier, have met these two criteria. Students and their advisors that have not yet formalized their laboratory commitments should meet with Kees de Jager as soon as possible.

The CC plans to nominate several post docs for membership at the next collaboration meeting. These include Rob van der Meer, Marios Kagarlis, Michael Kuss, and Dave Prout. Van der Meer and Kagarlis of U. Regina are working on the silica aerogel Cerenkov detectors and plan to work on the HARP detector when it is shipped to JLab. Prout is the senior postdoc from Kent State committed to E91-026 and is also working on the cryotarget. Kuss is being nominated by virtue of his joining the Hall A staff.

In considering new members for nomination, the CC looks for specific commitments being made to the program as a whole, such as the building of equipment and software contributions, as well as active participation on specific approved experiments.

5 Official Membership List

George Chang announced that the official collaboration membership list is nearly complete. The list will be posted on the Web after the CC accepts it. (The membership list is distinct from the Hall A mailing list which includes all people expressing interest in the Hall.)

6 New Web pages Planned

Jeff Templon has offered to post a number of Hall A documents on the Web. In addition to the membership list, he plans to post the Charter and CC minutes.

7 Scheduling of Experiments

The next deadline for beam time requests is September 9, 1997. Kees de Jager reviewed the procedures the laboratory is using to determine which experiments to schedule. Experimental spokespersons initiate the process by submitting a request to schedule beam time. Based on the beam time requests for their Hall, Hall Leaders make their priorities known at the JLab Scheduling Committee. A draft recommendation is made by the Committee, which is circulated for comments. After a 3-week review period the proposed schedule is presented at the User Group Meeting. The schedule is then finalized.

The criteria that Kees de Jager uses for making his recommendations include:

1. PAC rating,
2. Equipment readiness,
3. Graduate student involvement and readiness, and
4. Experimental requirements.

In response to a question regarding user feedback early in the recommendation process, de Jager said he plans to distribute his proposed recommendations to the Collaboration before meeting with the Scheduling Committee.

8 Publication Issues

George Chang expressed concern over reports that members are not receiving drafts of abstracts and other publications for review. The Collaboration requires that speakers and authors for talks, presentation and papers about the

Hall A program be approved in advance by the CC, which must also review in advance the content of any such presentation or publication. A loophole is that "presentations that are clearly about a specific experiment are solely the responsibility of the spokespersons for that experiment." Spokespersons, however, clearly have the responsibility to consult with their coauthors and the CC has a responsibility to see that contributors are fairly acknowledged. *Therefore, the CC is asking that spokespersons arranging for talks, presentations, or papers on Hall A Collaboration Experiments submit a final draft of the abstract or paper to the CC for comment in advance of submission. Spokespersons should then allow the CC a minimum of three full working days to comment before submitting the abstract or paper. Spokespersons are also reminded that they have a responsibility to distribute any such communication to all their coauthors. For talks crediting the "Hall A Collaboration" as a whole, notification of the entire collaboration is also required upon submission.*

9 Future of the Collaboration

The Hall A Collaboration was originally created to oversee the design, construction, and commissioning of the initial complement of equipment for Hall A. As such, the Charter provides for a sunset clause which will take effect after the completion of the recommended EXPINT round of experiments. Kees de Jager, among others on the CC, sees a need for continuing the collaboration, if only to provide for continuing user support for major pieces of instrumentation. His vision is that the existing collaboration evolve from an equipment based collaboration to a physics based one. He would like it to continue to play a major role in development of new directions for the Hall as well as development of new instruments for the future. The CC agreed to begin looking at revisions of the charter needed to ensure the continuing vitality of the collaboration. Members with suggestions of how we may best proceed are urged to contact the CC. Comments, ideas, and concerns are welcomed.

10 Dates for the Next Collaboration Meeting

The CC has set Nov 6-7, 1997 as the dates for the next collaboration meeting. The collaboration meeting will begin at 1:00 PM the afternoon of the 6^{th}. The next CC meeting will occur the morning of the 6^{th}. The tentative agenda includes reports of the recently completed commissioning experiments and the scheduled EXPINT experiments. The CC encourages spokespersons considering significant modifications of older, approved but unscheduled, proposals to present their plans at this meeting.

Respectfully submitted by J. Michael Finn,
September 5, 1996.