Collaboration Charter for E12-11-009 (GEn @ Hall C)

The E12-11-009 (G_{En}) experiment collaboration has been formed to construct and carry out experiment E12-11-009 (G_{En}) in Hall C at Jefferson Lab, a measurement of the neutron electric form factor with neutron recoil polarization in quasielastic deuteron electrodisintegration at four-momentum transfer squared up to $Q^2 = 7$ $(GeV/c)^2$. Measurement of the electric form factor of the neutron is motivated in several ways. It is the least known elastic nucleon form factor, which has presently been measured only up to $Q^2 = 3.4$ $(GeV/c)^2$. Knowledge of G_{En} is needed to perform a flavor separation of the nucleon electric form factors, allowing to be compared with Lattice QCD calculations, which are most accurate only for the isovector form factors. In the momentum transfer region probed by E12-11-009, Dyson-Schwinger calculations suggest a depletion of the d-quark contribution below that of the u-quark. Moreover, measurement of G_{En} with a deuteron target presents an important cross check for the measurements of G_{En} with polarized ^{3}He. The latter method is subject to systematic effects whose size and uncertainties are difficult to quantify. On the other hand, the systematic effects with deuterium are considered to be much smaller and allow for a clean validation. The quality of the proposed measurement with deuterium will generally be limited by statistics.

Management Structure

Collaboration Board: Spokespeople and Contact Person

The collaboration has been charged to rejuvenate and to reduce the number of spokespeople. Of the previous list of spokespeople, Brad Plaster and Bryon Anderson have requested to resign from their role a spokespeople. Further, Richard Madey (Kent State) and Stanley Kowalski (MIT) have been asked to resign if they do not intend to take lead roles.

Day-to-day management and overall leadership of the collaboration shall be conducted by the Collaboration Board consisting of four Spokespeople. One Spokesperson is 'Contact' person (single point of contact), which will be rotated. The Spokespeople report to the Collaboration Council consisting of eleven elected Institutional Representatives (one per participating institution) and the Spokespeople, inform them of issues needing attention, and implements their decisions. The Spokespeople represent the collaboration at meetings requiring a collaboration representative. After consultations the Spokespeople appoint Coordinators. Matters of sufficient importance shall be referred to the Collaboration Council or the Collaboration as a whole.

The Spokespeople and Contact Person shall be elected by the collaboration for 2-year terms. Multiple terms are possible. The inaugural Spokespeople are: John Arrington

(ANL), Michael Kohl (Hampton/JLab), Brad Sawatzky (JLab), and Andrei Semenov (Regina). Inaugural Contact Person is Brad Sawatzky.

The approval vote of this charter along with the election of the Contact Person and Spokespeople will be held electronically in fall 2014.

Collaboration Council

The Collaboration Council consists of 15 members: The four spokespeople and a total of eleven (11) Institutional Representatives (max. one member per institution). The group of all Institutional Representatives consists of one member from each of the institutes belonging to the E12-11-009 (G_{En}) collaboration authorized to speak on behalf of that institute. The set of 11 Institutional Representatives in the Collaboration Council are elected by the Institutional Representatives of all participating institutions.

At present the collaboration include 29 institutions:
Argonne National Lab, Duke University, Florida International University, Hampton University, Harvard University, Jefferson Lab, Kent State University, Joint Institute for Nuclear Research (Dubna), Kyungpook National University, Los Alamos National Laboratory, Louisiana Tech, Massachusetts Institute of Technology, Norfolk State University, Northern Michigan University, Northwestern University, North Carolina A&T, Pacific Northwest National Laboratory, Southern University at New Orleans, The College of William and Mary, University of Basel, University of Bonn, University of Kentucky, University of Mainz, University of Maryland University of North Carolina at Wilmington, University of Regina, University of Virginia, University of Winnipeg, Xavier University of Louisiana, Yerevan Physics Institute
(the list of institutes is taken from the proposal and still needs revision)

The Collaboration Council has overall responsibility for the organization, operation, and funding of the E12-11-009 (G_{En}) collaboration. It can vote to remove or admit new collaborators and collaborating institutes. The inaugural Collaboration Council is focused on the funding, construction and preparation of E12-11-009 (G_{En}).

The Collaboration Council shall be chaired by the Contact Person or a Spokesperson. The Collaboration Council may add or remove positions as the need arises and create subcommittees to carry out dedicated tasks.

The election of the Collaboration Council will be held electronically in fall 2014, after the charter has been validated and spokespeople were elected.

Coordinators

Coordinators are responsible for the detailed organization and operation of specific areas of the E12-11-009 (G_{En}) experiment as defined by the Spokespeople.

Current Coordinators are:

- Project Management – B. Sawatzky
- Technical Coordinator – M. Kohl
- Analysis Coordinator – J. Arrington
- Polarimeter design – A. Semenov
- Veto Counters – A. Ahmidouch
- Neutron Counters – W. Tireman

Responsibilities and Rights of Collaboration Members

Ultimately the collaboration shall be governed by majority vote of voting collaboration members either at collaboration meetings or by any convenient and fair electronic means. People attending collaboration meetings electronically shall be permitted to vote. For electronic votes, all collaboration members should be notified by electronic means and given at least one week to vote. The Collaboration may overrule decisions of the Collaboration Council or of the Spokespeople by a 2/3 majority.

The E12-11-009 (G_{En}) collaboration consists of a core group of individuals who have agreed to play a major role in the hardware and/or software construction of the experiment, as well as individuals who have agreed to help run the experiment. Each individual on E12-11-009 (G_{En}) is responsible to take his or her share of experimental shifts.

The Spokespeople shall maintain records of the contributions of collaboration members. The Collaboration Council may decide to excuse people from shifts in compensation for their contributions to other aspects of the experiment.

Student members of the collaboration shall have the usual rights and responsibilities of regular Collaboration members, but will not have voting privileges at Collaboration meetings.

Collaboration members may withdraw by notifying the Spokespeople, or be removed by a 2/3 vote of the voting Collaboration members. Collaboration members may be added by a majority vote of the voting Collaboration Council.

Funding

Each institution in E12-11-009 (G_{En}) is responsible for its own research funding. A common fund for E12-11-009 (G_{En}), typically used by experiments to fund chamber gas, computers, etc., is not expected to be needed. Dedicated funding will be needed for the construction of the neutron polarimeter. A collaborative request to NSF for an MRI (Major Research Instrumentation) will be considered.

Analyses

All data are available to all members of the Collaboration. All analysis efforts shall be coordinated by the Analysis Coordinator in order to ensure independent analyses of important issues leading to a robust physics result, while avoiding excessive duplication of efforts.

Physics results must first be presented to the E12-11-009 (G_{En}) Collaboration for review before presentation outside the Collaboration. The Analysis Coordinator, in consultation with the Spokespeople, will assign reviewers from within the collaboration who are not directly involved in the analysis in question to study the analysis in detail and report on the results. The review may be iterative. The analysis and review materials shall be open to all collaboration members for comment. The Collaboration Council may approve release of preliminary results for talks and published conference proceedings based on the review and its own analysis. In general, final results for publication will rely on analyses passing review by the full collaboration.

Presentations

Presentations concerning the E12-11-009 (G_{En}) experiment must be approved by the Spokespeople prior to the presentation. Requests for presentations should be forwarded to the Spokespeople, and the Spokespeople shall endeavor to make the distribution of presentations given on E12-11-009 (G_{En}) by collaboration members proportional to the members' contribution to the experiment. The abstract, proposed slides, and, specifically, any slides showing E12-11-009 (G_{En}) physics results must be approved by the Spokespeople or the Collaboration Council. Physics results not approved by the collaboration must not be shown in any public venue.

Material presented in previous public presentations may be presumed to be approved for subsequent presentations. While invitations to present E12-11-009 (G_{En}) at conferences shall be distributed amongst collaborators, invitations to seminars, colloquia or more general physics talks are normally given to individuals, and thus do not need to be forwarded to the spokespeople.

Technical Publications

Technical publications on the entire E12-11-009 (G_{En}) experiment must be reviewed and approved by the Collaboration Council.

Technical publications on sub-components of the E12-11-009 (G_{En}) experiment, such as on individual detectors or software, can be published by the individuals responsible for those components as they see fit, following normal practices in the field.

Physics Publications

Publication of E12-11-009 (G_{En}) physics results must be reviewed and approved by the Collaboration. Only results approved by the Collaboration may be included in such publications.

Author Lists

The author list for technical publications shall include all physicists, graduate students, undergraduate students, engineers, and technicians who made a significant contribution to the topic. Papers on technical components can be prepared with restricted author lists. However, any paper that aims to utilize data acquired with the integrated GEn setup during the commissioning and running periods in Hall C, to demonstrate or discuss the performance of the component shall have the full list of physicists and graduate students as co-authors.

The author list for physics publications shall include all physicists and graduate students in the E12-11-009 (G_{En}) collaboration who contributed significantly to the result and satisfied their collaboration responsibilities. In general the author list is expected to be alphabetical. When appropriate, graduate students and postdocs may be moved to the head of the list in recognition of significant contributions.

For published conference proceedings, the author list should generally include the name of the collaboration member giving the talk and the E12-11-009 (G_{En}) collaboration.

All publications shall acknowledge the support of the appropriate funding agencies. The Spokespeople shall maintain a list of the agencies and grants supporting the experiment.

Adoption and Amendments

This charter shall be adopted if accepted by a 2/3 vote of voting collaboration members. All collaboration members voting shall specify their commitments to the experiment. Amendments shall require a 2/3 vote of voting collaboration members.

Collaboration Members

At the time of adoption of this charter, the E12-11-009 (GEn) Collaboration members are:
(Need final revision)

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## Extracted from E12-11-009-collab mailing list June 25, 2014
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