

Hall C: 2006-2010/11



Stephen Wood, Hall C

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Hall C Leadership

Subject: Hall C Leadership – a message from Larry Cardman

From: Rachel Harris <harris@jlab.org>

Date: Wed, 15 Nov 2006 11:47:29 -0500

To: cuga@jlab.org

After more than five years of service to the community, during which he oversaw a series of major installation experiments (in particular, GO forward and backward, and HKS), a broad variety of measurements using the base equipment in the hall, and an impressive effort to plan for Hall C's 12 GeV equipment and research program, Rolf Ent has accepted a new position as the project scientific lead for the 12 GeV Upgrade. In this new role Rolf will be responsible for maximizing the scientific reach of the project, and work closely with both the project team and the Physics Division staff to realize this essential next step for science at Jefferson Laboratory. Given this major new responsibility, Rolf will no longer be able to continue as Hall C Leader. Steve Wood, who has often served as Acting Hall Leader during Rolf's absence from the lab, has agreed to serve as Interim Hall Leader until a new hall leader has been identified and is in place.

I hope you will join me in thanking Rolf for his superb efforts on the community's behalf, and join the laboratory in its effort to identify the best possible individual to assume this key leadership role on the JLab staff. The search for a new Hall Leader will start immediately. The search committee is chaired by Dennis Skopik, and includes Rolf, Hari Areti, Volker Burkert, John Domingo, Kees de Jager, Allena Opper, and Wally Melnitchouk. We welcome your suggestions for candidates for the position and look forward to the continued excellence of the Hall C program.

Hall C Approved Experiment Summary



Base Equipment Experiments (2.6 experiments, 25 days):

E04-001	Measurements of F_2 and R on Nuclear Targets	3 days (0.6)	B+
E05-017	Measurement of Two-Photon Exchange in Unpolarized Elastic e-p Scattering	13 days	A-
E06-009	Measurement of $R = \sigma_L/\sigma_T$ on Deuterium in the Nucleon Resonance Region and Beyond	9 days	A-

Large Installation Experiments beyond G0 (8 experiments, 204+ days):

E04-108	Measurement of G_E^p/G_M^p to $Q^2 = 9 \text{ GeV}^2$	40 days	A
E04-019	Measurement of the Two-Photon Exchange Contribution in e-p Elastic Scattering Using Recoil Polar.	18 days	A-
E03-109	Spin Asymmetries on the Nucleon Experiment	27 days (CA)	A-
E04-113	Semi-Inclusive Spin Asymmetries on the Nucleon	25 days	A-
E05-101	Helicity Correlations in Wide-Angle Compton Scattering	14 days	A-
E05-008	The Qweak Experiment: A Search for Physics at the TeV Scale via a Meas. of the Proton's Weak Charge	35 days	A
E04-110	The Neutron Electric Form Factor at $Q^2 = 4.3 \text{ GeV}^2$ from the $D(e, e'n)$ Reaction via Recoil Polarimetry	25 days	A-
E05-115	Spectroscopic Investigation of Hypernuclei in ... (II)	20 days	A-

Color coding indicates experiments using similar apparatus



Experiments 2007-2010

2007	E04-115	G0-Backward Angle, $E = 687$ MeV (LD2)
	E06-008	G0-Backward Angle, $E = 362$ MeV (LD2)
	E04-001	$R = \sigma_L/\sigma_T$ in A up to $Q^2 = 4$ (JUPITER)
	E06-009	$R = \sigma_L/\sigma_T$ in D up to $Q^2 = 4$
	E05-017	2γ Exchange in ep Rosenbluth Separation
	E04-019	2γ Exchange in ep Polarization Transfer
2007-8	E04-108	G_E^p/G_M^p up to $Q^2 = 9$ (Gep-III) (Finish early 2008)
2008	E03-109	Spin Asymmetries on the Nucleon Exp. (SANE)
	E05-101 (**)	Helicity Correlations in Wide-Angle Compton
2008-9	E05-115	Hypernuclear Spectroscopy (HKS/HES)
	E05-008	Qweak Experiment – Installation and Phase I
	E05-008	Qweak Experiment – Phase II
2011?	E04-110 (**)	G_E^n at $Q^2 = 4.3$ (8.0) from the ${}^2\text{H}(e,e'n)$ Reaction
??	E04-113 (**)	Semi-Inclusive Spin Asymmetries (semi-SANE)

(**) not clear yet whether schedule constraints will preclude some of these..., need to see next iteration of long-term schedule

Near Term Schedule

First part of the schedule is draft after G0 extension (NPES meets today)

- **G0 (E04-115, E06-008)** until mid-March 23, 2007
- **R in Nuclei (E04-001/E06-009)** and 2γ Exchange in ep (E05-017) thru June 2007
- GEP-III & 2γ Exchange in ep Polarization Transfer (E04-019) thru October 2007

Guesses

- **G_E^p/G_M^p up to $Q^2 = 9$ (GEP-III) thru February/March 2008**
- **Spin Asymmetries on the Nucleon Exp. (SANE, E03-109)** and
- **Helicity Correlations in Wide-Angle Compton (E05-101) May 2008**
- thru July 2008

Readiness Review

- Safety/Readiness review for SANE and WACS
- Thoughts/motivation
 - Review safety preparations, documentation (COO, ESAD...)
 - Help me do my job
 - Is manpower adequate? (for installation, running, analysis)
 - Is there enough time to install? (Current plans -> 5 weeks)
 - Is physics optimized to available beam time
 - Identify how Hall C staff can help/be involved

Hall C Collaboration Meeting

January 25-26, 2007

Cebaf Center L102/4

Need speaker for SANE

Flash ADC Progress – Electronics Group

FADC250 - VME64x (6U) Flash ADC Module Specifications

16 Channel

250 MSPS -> 10bit or 12bit ADC

Latency & Memory – 8 μ S

Data Processing:

Sparsification

Windowing

Charge, Pedestal, Peak

Time over threshold

Trigger outputs

Costs - \$250/channel

Milestones:

Dec 2006 – Prototype

March 2007 – Complete Testing

June 2007 – Pilot Module

October 2007 - Production

