

Hall C Business Meeting

HALL C UB: MARIE BOER, DIPANGKAR DUTTA,
BILL HENRY, STEPHEN KAY (SECRETARY), PETE
MARKOWITZ, IOANA NICULESCU(CHAIR)

2024 Hall C UB Election Results

Election opened on May 20th, closed on June 20th.

- 4 excellent candidates
- 92 votes (out of 144 listed members)
 - Garth Huber (U Regina)
 - Carlos Yero (CUA)
 - Marie Boer (VTech)
 - Dipangkar Dutta (MSU)
 - Stephen Kay (U. York)
 - Ioana Niculescu (JMU)

Hall C Working groups

Spectrometer Performance and Future Upgrades

Convener: Stephen Kay (U. York)

AI/ML in Hall C

Conveners/contacts: Casey Morean(CUA)

Hall C Futures

Conveners/contacts: Ioana Niculescu (JMU)

Experiment/Theory Interface

Conveners/contacts: Marie Boer (VTech), Christian Weiss (JLab)

Analysis Meetings

(Documents on [Analysis](#))

Date	Time	Title	Location	Topic(s)
04 Jun 2024	13:00 – 14:30	Quarterly Analysis Meeting - VII	Virtual	Analysis
06 Feb 2024	13:00 – 14:45	Quarterly Analysis Meeting - VI	Virtual	Analysis
06 Nov 2023	13:00 – 15:00	Quarterly Analysis Meeting - V	Virtual	Analysis
27 Apr 2023	13:00 – 14:40	Quarterly Analysis Meeting - III	Virtual	12 GeV Experiments Analysis Computing
26 Jan 2023	13:00 – 15:00	Quarterly Analysis Meeting - II	Virtual	12 GeV Experiments Analysis Computing
20 Oct 2022	13:00			
23 Feb 2012	10:00			

[[DocDB Home](#)] [[New](#)]

[DocDB](#) Version 8.8.6, contact [Document Database Administrators](#)

SHMS_NIM_paper_1st_Draft_Clean.pdf

The SHMS 11GeV/c Spectrometer in Hall C at Jefferson Lab

S. Ali^a, G.R. Ambrose^b, A. Asaturyan^c, V. Berdnikov^{a,d}, P. Brindza^d, R. Carlini^d, M. Carmignotto^a, D. Day^{e,k}, A. Dittmann^f, D. Dutta^e, R. Ent^d, H. Fenker^d, M. Fowler^d, D. Gaskell^d, W. Henry^d, N. Hlavin^a, T. Horn^{a,d}, G.M. Huber^g, Y. Illieva^l, M. K. Jones^{d,*}, S.J.D. Kay^{h,i}, V. Kumar^b, S. Lassiter^d, W.B. Li^{b,j}, A. Mkrchyan^a, H. Mkrchyan^e, P. Nadel-Turonski^d, I. Pegg^a, A. Ramos^h, J. Reinhold^h, I. Sapkota^a, B. Sawatzky^d, V. Tadevosyan^c, R.L. Trotta^a, M. Yurov^k, S. Zhamkochyan^c, S. A. Wood^d, J. Zhang^k

^aThe Catholic University of America, Washington, DC 20064, USA
^bUniversity of Regina, Regina, Saskatchewan S4S 0A2, Canada
^cA. I. Alikhanyan National Science Laboratory, Yerevan 0036, Armenia
^dThomas Jefferson National Accelerator Facility, Newport News, Virginia 23606, USA
^eMississippi State University, Mississippi State, Mississippi 39762, USA
^fUniversity of South Carolina, Columbia, South Carolina 29208, USA
^gUniversity of Illinois, Urbana-Champaign, Illinois, USA
^hFlorida International University, University Park, Florida 33199, USA
ⁱUniversity of York, Heslington, York, YO10 5DD, UK
^jStony Brook University, Stony Brook NY 11794, USA
^kUniversity of Virginia, Charlottesville, Virginia 22904, USA

Abstract

Deleted Items 955

Hi Ioana, Thank you. I wil... Inbox

AI/ML Working Group

⚠ Please visit Jefferson Lab Event Policies and Guidance before planning your next event: https://www.jlab.org/conference_planning.



🕒 US/Eastern ▾ 🌐 English (United States) ▾ 🔑 Login

AI4HallC Working Group Meeting

📅 Friday Feb 9, 2024, 3:00 PM → 5:20 PM US/Eastern

👤 Casey Morean (Catholic University of America) , Cristiano Fanelli (William & Mary, Jefferson Lab) , Mark Jones (Jefferson Lab) ,
Tanja Horn (Catholic University of America)

Description AI/ML has become ubiquitous in nuclear physics in the last few years and new possibilities have been emerging. This is an opportune time for Hall C to take advantage of these developments in computing technologies and statistical methods and define its path forward. The main goal of the Hall C AI/ML Working Group will be to provide a forum for discussion for anyone interested in defining this path, exploring possible applications of AI/ML in Hall C, and connecting to data scientists.

Hall C is the precision measurements hall at JLab providing pillars of measurements to constrain physics quantities like Parton Distribution Function and Parton Distribution Amplitudes. Because of this Hall C has a unique role and very different equipment and operation requirements from the other halls, e.g., Hall C operation has multiple subsystems (beam, spectrometer, target) whose drifts/changes must be monitored as they all directly impact performance and physics output of Hall C.

We had two previous productive meetings where two major needs were identified and discussed:

- 1.) Operations composed of optics, data preparation, and equipment and operation
- 2.) Uncertainty quantification for global physics analysis, e.g., PDF/PDA

For operations, a list of parameters relevant for monitoring was determined. A need for hands-on examples was also identified. More details are

Recent Publications



Experimental Hall C

Users **Public Interest**

print version



Closeup of the center of the G0 detector showing the phototubes

Hall C Journal Publications

Publications in Refereed Journals:

Exp #	Title	Reference
E12-10-008	First Measurement of the EMC Effect in 10B and 11B (2207.03850)	Phys. Rev. C 108, 035201 (Sept 2023)
E08-016	The Qweak High Performance LH2 Target (arXiv:2303.07497)	NIM A, Vol 1053, 168316
E12-06-107	Constraints on the onset of color transparency from quasi-elastic $^{12}\text{C}(e,e'p)$ up to $Q^2=14.2\text{ GeV}/c^2$ (2205.13495)	Phys. Rev. C 108, 025203 (Aug 2023)
E12-16-007	Determining the Proton's Gluonic Gravitational Form Factors (2207.05212) Searching for an Enhanced Signal of the onset of Color Transparency in Baryons with $D(e,e'p)n$ scattering (2209.14400)	Nature 615, 813-816 (2023) Physics 2022, 4(4), 1426-1439
E12-15-001	Measured proton electromagnetic structure deviates from theoretical predictions	Nature volume 611, 265 (2022)
E94-110	Performance of photosensors in high rate environment for gas Cherenkov (2011.11769) Measurements of $R = \sigma_L/\sigma_T$ and the Separated Longitudinal and Transverse Structure Functions in the Nucleon Resonance Region (nucl-ex/0410027)	JINST 17 P08022 Phys. Rev. C 105, 065205 (2022)

PhD Theses



 [print version](#)

[SIGN IN](#)

[HOME](#)

[INSIGHT](#)

[MY LINKS](#)

Search



Hall C PhDs & Master's Theses

Author	Title	Date	Citation	Experiment	Advisor(s)
Richard Trotta	Determination of Pion and Kaon Structure Using the Sullivan Process at Moderate to large Fractional Momentum	May 2024		E12-09-011	Tanja Horn (The Catholic University of America)
Casey Morean	Short Range Correlation measurements in the quasielastic region with an 11 GeV beam	December 2023			Nadia Fomin (TENN) Dave Gaskell (JLAB)
Mingyu Chen	Precision Measurement of the Neutron Asymmetry A_n at Large Bjorken x at 12GeV Jefferson Lab	November 2023		E12-06-110	Jian-Ping Chen (JLAB) Xiaochao Zheng (UVA)
Melanie Rehfuss	Measuring the Neutron Spin Asymmetry A_{1n} in the Valence Quark Region in Hall C at Jefferson Lab	May 2023		E12-06-110	Mark Jones (JLAB)
Andres Vargas Hernandez	Search for Resonant WZ Production in the Fully Leptonic Final State at 13 TeV With the CMS Detector	May 2023			Rolf Ent (JLAB) Tanja Horn (Catholic)
Ruonan Li	MEASUREMENT OF THE GENERALIZED POLARIZABILITIES OF THE PROTON IN VIRTUAL COMPTON SCATTERING	December 2023		E12-15-001	Nikos Sparveris (Temple University) Mark Jones (Jefferson Lab)

Summary

Exciting **12 GeV program** is ongoing in Hall C:

Many analyses are approaching completion.

(see Hall A/C - Recent Results and Research Highlights)

Publications 😊

Working Groups have been established to explore and push forward topics of interest

Great potential for Hall C physics **beyond 12 GeV**

(see Hall A/C - Prospects for Positrons and 20+ GeV)