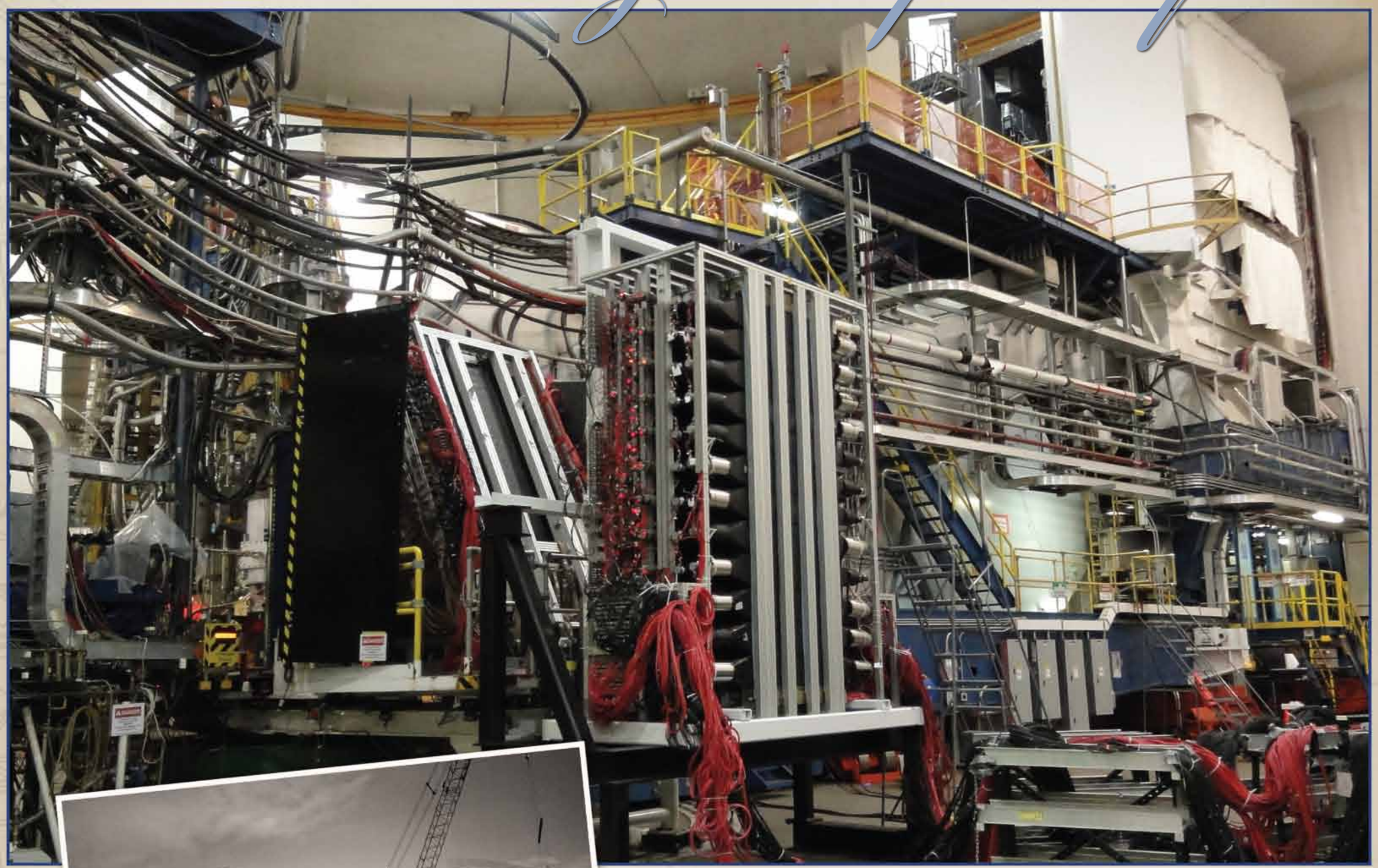
EXPERIMENTAL HALL A

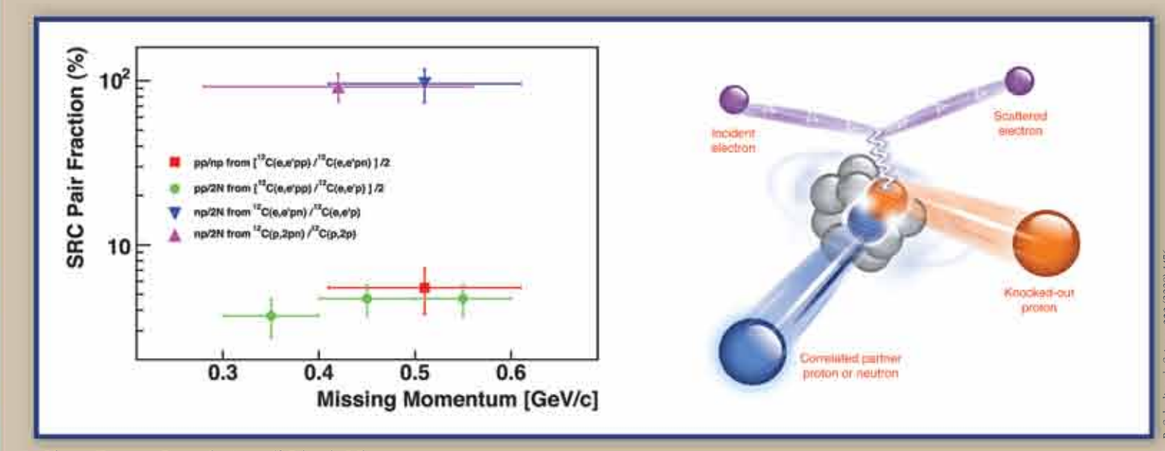
15 Years of Physics

THOMAS JEFFERSON NATIONAL ACCELERATOR FACILITY



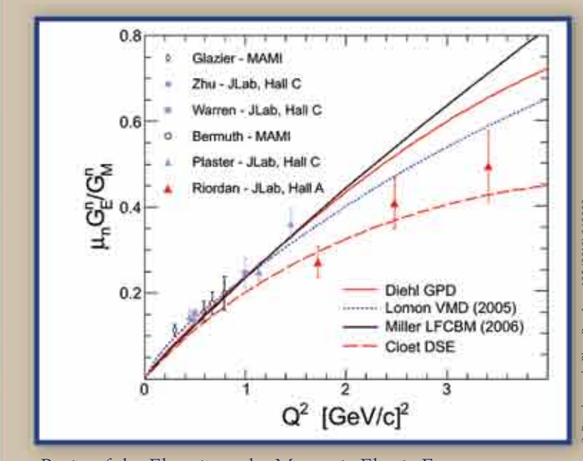
The BigBite Spectrometer and a High Resolution Spectrometer

Hall A Under Construction, March 1991



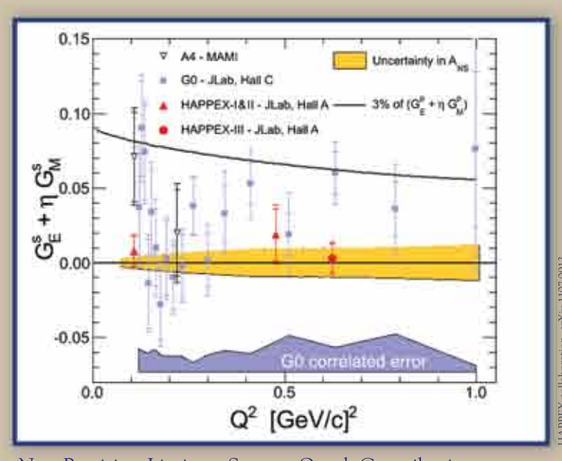
R. Subedi et al., Science 320 (2008) 1476.

Short-Range Correlation: $^{12}C(e,e'pN)$
Tensor component of nucleon-nucleon interaction causes n-p pair dominance



S. Riordan et al., Phys. Rev. Lett. 105 (2010) 262302

Ratio of the Electric to the Magnetic Elastic Form Factors of the Neutron



HAPPEX collaboration, arXiv:1107.0913

New Precision Limit on Strange Quark Contributions to the Proton

Two High Resolution Spectrometers for studying:

- Nucleon form factors to high momentum transfer
- Strange-quark structure of the proton
- Nucleon spin structure
- Few-body form factors to high momentum transfer
- Nuclear structure at small inter-nucleon separations

Collaborators Represent 18 Countries:

Armenia, Belgium, Canada, China, France, Germany, Israel, Italy, Japan, South Korea, Netherlands, Russia, Slovenia, Spain, Tunisia, Ukraine, United Kingdom, United States

More than 70 Institutions:

Argonne National Laboratory, Budker Institute of Nuclear Physics, California Institute of Technology, California State University Los Angeles, Carnegie Mellon University, CEA Le Service de Physique Nucléaire, China Institute of Atomic Energy, Dalhousie University, Duke University, Faculté des Sciences de Monastir, Florida International University, Fudan University, General Electric Co., Gesellschaft für Schwerionenforschung mbH, Hampton University, Harvard Medical School, Harvard University, INFN Gruppo Collegato Sanità, INFN Sezione di Bari, INFN Sezione di Roma, Institut de Physique Nucléaire Orsay, Istituto Superiore di Sanità, Jožef Stefan Institute, Kent State University, Kharkov Institute of Physics and Technology, Laboratoire de Physique Corpusculaire de Clermont-Ferrand, Laboratoire de Physique Subatomique et de Cosmologie, Laboratoire SUBATECH, Lanzhou University, Longwood University, Lund University, Massachusetts Institute of Technology, Nationaal Instituut voor Subatomaire Fysica, National and Kapodestrian University of Athens, Negev Nuclear Research Center, Norfolk State University, North Carolina Central University, Northwestern University, Ohio University, Old Dominion University, Pacific Northwest National Laboratory, Petersburg Nuclear Physics Institute, Princeton University, Renaissance Technologies Corp., Rutgers, Saint Mary's University, Seoul National University, Smith College, Syracuse University, St. Norbert College, Tel Aviv University, Temple University, The College of William and Mary, The Florida State University, Tohoku University, TRIUMF, Universidad Complutense de Madrid, Università di Pavia, Universiteit Gent, University of Glasgow, University of Illinois, University of Kentucky, University of Maryland, University of Massachusetts Amherst, University of New Hampshire, University of Regina, University of Saskatchewan, University of Science & Technology of China, University of South Carolina, University of Virginia, V.N. Karazin Kharkiv National University, Yamagata University, Yerevan Physics Institute (ANSL)

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