

# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Few Body Nuclear Properties: Approved

|    | <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>                     | <u>Institutions</u>           | <u>Beam days</u> | <u>Rating</u> |
|----|-------------------|-------------|--|---|-------------------------------|------------------|---------------|
| ★  | E-89-012          | C           | Two-Body Photodisintegration of the Deuteron at Forward Angles and Photon Energies between 1.5 and 4.0 GeV             | R. Holt                                 | ANL                           | 10               | A-            |
| ★  | E-89-019          | A           | Measurement of Proton Polarization in the $d(\chi,p)n$ Reaction  | R. Gilman*<br>R. Holt<br>Z. E. Meziani  | Rutgers U<br>ANL<br>Temple U  | 18               | B+            |
| ★  | E-89-028          | A           | Polarization Transfer Measurements in the $D(e,e'p)n$ Reaction   | J. Finn*<br>P. Ulmer                    | W&M<br>ODU                    | 8                | B-            |
| ★  | E-89-044          | A           | Selected Studies of the $^3\text{He}$ and $^4\text{He}$ Nuclei through Electrodisintegration at High Momentum Transfer | M. Epstein<br>A. Saha*<br>E. Voutier    | California SU<br>JLab<br>ISN  | 30               | B+            |
| ☆  | E-91-003          | C           | A Study of Longitudinal Charged Pion Electroproduction in $D_2$ , $\text{He}_3$ , and $\text{He}_4$                    | H. Jackson                              | ANL                           | 21               | B+            |
| ★  | E-91-026          | A           | Measurement of the Electric and Magnetic Structure Functions of the Deuteron at Large Momentum Transfers               | J. Gomez<br>G. Petratos*                | JLab<br>Kent State U          | 24               | B+            |
| ★/ | E-93-017          | B           | Study of $\gamma d \rightarrow pn$ and $\gamma d \rightarrow p\Delta^0$ Reactions for Small Momentum Transfers         | E. De Sanctis<br>P. Rossi*              | INFN<br>INFN                  | 23               | B+            |
| ☆  | E-93-044          | B           | Photoreactions on $^3\text{He}$  | G. Audit<br>B. Berman*<br>P. Corvisiero | SACLAY<br>GWU<br>INFN         | 25               | B             |
| ★  | E-93-049          | A           | Polarization Transfer in the Reaction $^4\text{He}(e,e'p)^3\text{H}$ in the Quasi-elastic Scattering Region            | R. Ent<br>P. Ulmer<br>J. Van Den Brand* | JLab<br>ODU<br>U of Wisconsin | 12               | B+            |
| ★/ | E-94-004          | A           | In-Plane Separations and High Momentum Structure in $d(e,e'p)n$  | M. Jones<br>P. Ulmer*                   | JLab<br>ODU                   | 29               | B             |

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|---|-------------------|-------------|--|---|------------------------------|------------------|---------------|
| ★ | E-94-018          | C           | Measurement of the Deuteron Tensor Polarization at Large Momentum Transfers in D(e,e'd) Scattering   | E. Beise<br>S. Kox*                       | U of Maryland<br>ISN         | 47               | A-            |
| ★ | E-94-019          | B           | Measuring Nuclear Transparency in Double Rescattering Processes  | K. Egiyan<br>K. Griffioen*<br>M. Strikman | Yerevan<br>W&M<br>Penn State | 16               | B+            |
| ★ | E-94-102          | B           | Electron Scattering from a High Momentum Nucleon i Deuterium   | K. Griffioen<br>S. Kuhn*                  | W&M<br>ODU                   | 16               | B+            |
| ★ | E-94-104          | A           | The Fundamental gamma n->pi rho Process in <sup>2</sup> H, <sup>4</sup> He, and <sup>12</sup> C in   | H. Gao*<br>R. Holt                        | MIT<br>ANL                   | 18               | B+            |
| ★ | E-95-001          | A           | Precise measurements of the Inclusive Spin-dependent Quasi -elastic Transverse Asymmetry AT from <sup>3</sup> He(e,e') at low Q <sup>2</sup> | H. Gao*<br>J. O. Hansen                   | MIT<br>JLab                  | 15               | B             |
| ★ | E-96-003          | C           | Two-Body Photodisintegration of the Deuteron at High Energy  | R. Holt                                   | ANL                          | 18               | A-            |
| ★ | E-97-001          | B           | Electroproduction of the ppp̄ System off the Deuteron Beyond the Quasifree Region  | N. Pivniouk*<br>L. Vorobyev               | ITEP<br>ITEP                 | 16               | B-            |
| ★ | E-99-008          | A           | Large Angle Two-Body Photodisintegration of the Deuteron at High Energy  | R. Gilman*<br>R. Holt<br>Z. E. Meziani    | Rutgers U<br>ANL<br>Temple U |                  | B             |
|   | E-00-007          | A           | Proton Polarization Angular Distribution in Deuteron Photo-Disintegration  | R. Gilman*<br>R. Holt<br>Z. E. Meziani    | Rutgers U<br>ANL<br>Temple U | 7                | A-            |
|   | E-00-107          | A           | Proton Polarization in Deuteron Photodisintegration to E <sub>γ</sub> > 3 GEV at θ <sub>cm</sub> =90°  | R. Gilman*<br>R. Holt<br>Z. E. Meziani    | Rutgers U<br>ANL<br>Temple U | 11               | A-            |

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|-------------------|-------------|--|--|---|------------------|---------------|
| E-00-118          | A           | Elastic Electron Scattering off $^3\text{He}$ and $^4\text{He}$ at Large Momentum Transfers  | J. Gomez<br>G. Petratos*   | JLab<br>Kent State U                        | 30               | A-            |
| E-01-107          | C           | Measurement of Pion Transparency in Nuclei   | R. Ent<br>K. Garrow*   | JLab<br>JLab                                | 17               | A-            |
| E-01-108          | A           | Detailed Study of the $^4\text{He}$ Nuclei Through Response Function Separations at High Momentum Transfers  | K. Aniol<br>S. Gilad<br>D. Higinbotham<br>A. Saha*                             | California SU<br>MIT<br>JLab<br>JLab        | 20               | B+            |
| ☆ E-01-020        | A           | PR-01-007 and PR-01-008 Combined   | W. Boegli n*<br>M. Jones<br>A. Klein<br>J. Mitchell<br>P. Ulmer*<br>E. Voutier | FIU<br>U of MD<br>ODU<br>JLab<br>ODU<br>ISN | 30               | A-            |
| E-02-004          | A           | $A(Q)$ at Low $Q$ in $ed$ Elastic Scattering   | R. Gilman  | Rutgers U                                   | 5                | B+            |
| E-02-108          | A           | Measurement of $A_x$ and $A_z$ Asymmetries in the Quasi-elastic $^3\overline{\text{He}}(\overline{e}, e'd)$ Reaction                                 | Z. Zhou*<br>W. Bertozzi<br>D. Higinbotham<br>B. Norum<br>S. Sirca              | MIT<br>MIT<br>JLab<br>UVA<br>U. Ljubljana   | 15               | B+            |
| E-02-010          | A           | The $\text{Gamma} + n \rightarrow \pi^- + p$ Process from $^2\text{H}$ and $^{12}\text{C}$ and the $\text{gamma} + p \rightarrow \pi^+ + n$ Reaction | D. Dutta<br>H. Gao<br>R. Holt  | MIT<br>MIT<br>ANL                           | 8                | B+            |

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|---|-------------------|-------------|---|---|--|------------------|---------------|
| ☆ | E-89-037          | B           | Electroproduction of the $P_{33}(1232)$ Resonance   | V. Burkert*<br>R. Minehart  | JLab<br>U of Virginia                                      | 120              | B+            |
| ☆ | E-89-038          | B           | Measurements of $p(e,e'\pi^+)n$ , $p(e,e'p)\pi^0$ , and $n(e,e'\pi^-)p$ in the Seco   | D. Buckle<br>V. Burkert<br>M. Gai<br>K. Hokansson<br>R. Minehart*<br>R. Whitney | JLab<br>JLab<br>U of Conn<br>JLab<br>U of Virginia<br>JLab | 80               | B+            |
| ☆ | E-89-039          | B           | A Study of the $S_{11}(1535)$ and $P_{11}(1710)$ in $p(e,e'p)_2$ .  | S. Dytman*<br>K. Giovanetti   | U of Pittsburgh<br>JMU                                     | 48               | B+            |
| ☆ | E-89-042          | B           | Measurement of the Electron Asymmetry in $p(e,e'p)\pi^0$ and $p(e,e'\pi^+)$ in the Mass Region of the $P_{33}$  | V. Burkert*<br>R. Minehart  | JLab<br>U of Virginia                                      | 80               | A-            |
| ☆ | E-91-002          | B           | The study of Excited Baryons at High Momentum Transfer with the CLAS Spectrometer PR-89-040 D   | V. Burkert<br>P. Stoler*<br>M. Taiuti   | JLab<br>RPI<br>INFN  | 32               | B             |
| ★ | E-91-008          | B           | Photoproduction of $\eta$ and $\eta'$ Mesons  | B. Ritchie  | Arizona SU   | 65               | A-            |
| ★ | E-91-011          | A           | Investigation of the $N \rightarrow \Delta$ Transition via Polarization Observables in Hall A (previously titled- High-Precision Separation of Polarized Structure Function | S. Frullani<br>J. Kelly<br>A. Sarty*  | INFN<br>U of Maryland<br>St. Marys                         | 45               | A-            |
| ☆ | E-91-024          | B           | Search for "Missing" Resonances in the Electroproduction of omega Mesons  | V. Burkert<br>H. Funsten*<br>D. Manley<br>B. Mecking                            | JLab<br>W&M<br>Kent State U<br>JLab                        | 32               | B+            |
| ☆ | E-93-006          | B           | Two Pion Decay of Electroproduced Baryon Resonances   | V. Burkert<br>M. Ripani*  | JLab<br>INFN   | 80               | B+            |

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|----|-------------------|-------------|--|--|-----------------------------------|------------------|---------------|
| ☆  | E-93-012          | B           | Electroproduction of Light Quark Mesons  | H. Collaboration<br>M. Collaboration<br>M. Kossov* | JLab<br>JLab<br>ITEP              | 42               | B+            |
| ★  | E-93-031          | B           | Photoproduction of Vector Mesons at High t   | M. Anghinolfi<br>J. Laget<br>C. Marchand*          | INFN<br>SACLAY<br>SACLAY          | 17               | A-            |
| ★/ | E-93-033          | B           | A Search for Missing Baryons Formed in $\gamma p \rightarrow p\pi^+\pi^-$ Using the CLAS at CEBAF                | J. Napolitano*<br>D. Weygand                       | RPI<br>JLab                       | 65               | B+            |
| ★  | E-93-036          | B           | Measurement of Single Pion Electroproduction from the Proton with Polarized Beam and Polarized Target Using CLAS | R. Chasteler<br>R. Minehart<br>H. Weller*          | Duke U<br>U of Virginia<br>Duke U | 42               | B+            |
| ★  | E-93-050          | A           | Nucleon Structure Study By Virtual Compton Scattering  | P. Bertin*<br>G. Fournier                          | UCF<br>SACLAY                     | 10               | A-            |
| ☆  | E-94-005          | B           | Determination of the $N\Delta$ Axial Vector Transition Form Factor $G_A^{N\Delta}$ from the $ep \rightarrow e'$  | L. Elouadrhiri*<br>D. Heddle                       | JLab<br>CNU                       | 53               | B+            |
| ★/ | E-94-008          | B           | Photoproduction of $\eta$ and $\eta'$ Mesons from Deuterium  | B. Ritchie   | Arizona SU                        | 23               | B-            |
| ★  | E-94-012          | A           | Measurement of Photoproton Polarization in the $H(\gamma,p)\pi^0$ Reaction                                       | R. Gilman*<br>R. Holt                              | Rutgers U<br>ANL                  | 8                | B+            |
| ★  | E-94-014          | C           | The $\Delta(1232)$ Form Factor at High Momentum Transfer   | P. Stoler  | RPI                               | 10               | B             |
| ★/ | E-94-015          | B           | Study of the Axial Anomaly using the $\gamma\pi^+$ to $\pi^+\pi^0$ Reaction Near Threshold                       | R. Miskimen*<br>K. Wang<br>A. Yegneswaran          | U Mass<br>U of Virginia<br>JLab   | 65               | A-            |
| ★  | E-94-016          | B           | A Measurement of Rare Radiative Decays of the $\phi$ Meson   | A. Dzierba*<br>J. Napolitano                       | Indiana U<br>RPI                  | 30               | A             |

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|----|-------------------|-------------|--|---|--------------------------------------|------------------|---------------|
| ★/ | E-94-103          | B           | The Photoproduction of Pions   | W. Briscoe<br>J. Ficenece*<br>D. Jenkins              | GWU<br>VPI<br>VPI                    | 65               | B             |
| ☆  | E-94-109          | B           | Photoproduction of the Rho Meson from the Proton with Linearly Polarized Photons | P. Cole*<br>J. Connelly*<br>K. Livingston             | U of Texas<br>CISCO<br>Glasgow       | 20               | B+            |
| ★  | E-94-110          | C           | Measurement of R= Sigma L/Sigma T in the Nucleon Resonance Region                | C. Keppel   | Hampton U                            | 9                | B+            |
| ★  | E-99-005          | B           | Meson Spectroscopy in Few-Body Decays  | G. Adams<br>C. Salgado*<br>D. Weygand                 | RPI<br>NSU<br>JLab                   | 10               | B+            |
| ☆  | E-99-013          | B           | Photoproduction of omega mesons off protons with linearly polarized photons      | P. Cole<br>F. Klein*                                  | U of Texas<br>CUA                    | 10               | B+            |
| ★  | E-99-105          | B           | Deeply Virtual Electroproduction of Vector Mesons                                | M. Garcon*<br>M. Guidal<br>E. Smith*                  | SACLAY<br>IPN ORSAY<br>JLab          | 30               | B+            |
| ★  | E-99-107          | B           | N* Excitations at High Q <sup>2</sup> in the p pi, p , and n pi+ Channels        | V. Burkert*<br>R. Minehart<br>P. Stoler*<br>M. Taiuti | JLab<br>U of Virginia<br>RPI<br>INFN | 30               | B+            |
| ★  | E-99-108          | B           | N* Excitations at High Q <sup>2</sup> in the Two-Pion Channel                    | V. Burkert*<br>M. Ripani                              | JLab<br>INFN                         | 30               | B+            |

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|---|-------------------|-------------|--|--|---|------------------|---------------|
| ★ | E-99-114          | A           | Exclusive Compton Scattering on the Proton   | C. Hyde-Wright<br>A. Nathan<br>B. Wojtsekhowski*           | ODU<br>U of Illinois<br>JLab                      | 18               | A-            |
| ★ | E-99-117          | A           | Precision Measurement of the Neutron Asymmetry $A_1^n$ at Large x using CEBAF at 6 GeV   | J. P. Chen<br>Z. E. Meziani*<br>P. Souder                  | JLab<br>Temple U<br>Syracuse U                    | 21               | B+            |
| ★ | E-99-118          | C           | Measurement of the Nuclear Dependence of $R=\sigma_L/\sigma_T$ at Low $Q^2$  | A. Bruell<br>J. Dunne<br>C. Keppel*                        | MIT<br>MSU<br>Hampton U                           | 16               | B+            |
|   | E-00-002          | C           | $F_2^N$ at Low $Q^2$   | C. Keppel<br>M. I. Niculescu*                              | Hampton U<br>GWU                                  | 8                | A-            |
|   | E-00-116          | C           | Update E97-010: Measurement of Hydrogen and Deuterium Inclusive Resonance Cross Sections at Intermediate $Q^2$ for Parton-Hadron Duality Studies | C. Keppel  | Hampton U   | 3                | B+            |
|   | E-01-002          | C           | Update to E97-101: Baryon Resonance Electroproduction at High Momentum Transfer  | V. Frolov<br>V. Koubarovski<br>J. Price<br>P. Stoler*      | RPI<br>RPI<br>U of California<br>RPI              | 25               | B+            |
| ★ | E-01-006          | C           | Update to 96-002 - Precision Measurement of the Nucleon Spin Structure Functions in the Region of the Nucleon Resonances                         | O. Rondon-Aramayo  | U of Virginia                                     | 14               | B+            |
|   | E-01-014          | A           | Precision Measurement of Electroproduction of $\pi^0$ near Threshold: A Test of Chiral QCD Dynamics  | J. Annand<br>D. Higinbotham<br>R. Lindgren*<br>V. Nelyubin | Glasgow<br>JLab<br>U of Virginia<br>U of Virginia | 16               | B+            |

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|-------------------|-------------|---|---|--|------------------|---------------|
| ★ E-01-017        | B           | Extension to E99-005: Meson Spectroscopy in Few-Body Decays   | G. Adams<br>C. Salgado*<br>D. Weygand   | RPI<br>NSU<br>JLab   | 6                | A-            |
| E-01-112          | B           | Photoproduction of Vector Mesons off Nuclei - Update to 94-002  | C. Djalali<br>M. Kossov<br>D. Weygand*  | USC<br>ITEP<br>JLab  | 18               | A-            |
| E-02-012          | B           | Coherent Vector Meson Production off the Deuteron   | F. Klein<br>L. Kramer*<br>S. Stepanyan  | CUA<br>FIU<br>ODU  | 50               | A-            |
| E-02-103          | B           | A Precision Measurement of the Neutral Pion Lifetime via the Primakoff Effect – Previously E99-014                            | D. Dale<br>S. Danagoulian<br>A. Gasparian*<br>R. Miskimen<br>Et al  | U of<br>Kentucky<br>NCAT State<br>Hampton U<br>U Mass  | 22               | A             |
| E-02-109          | C           | Measurement of $R=\sigma_L/\sigma_T$ on Deuterium in the Nucleon Resonance Region   | M. Christy<br>C. Keppel *<br>D. Gaskell<br>E. Kinney<br>P. Markowitz<br>J. Reinhold<br>I. Niculescu<br>P. Bosted<br>J. Dunne<br>A. Gasparian<br>H. Blok | HU<br>HU<br>U. Colorado<br>U. Colorado<br>FIU<br>FIU<br>JMU<br>U. Mass.<br>Miss. State<br>NCA&T<br>Vrije Univ. | 13               | B+            |
| E-02-112          | B           | Search for Missing Nucleon Resonances in the Photoproduction of Hyperons Using a Polarized Photon Beam and a Polarized Target | F. Klein*<br>Et al  | Catholic U.  | 20               | A-            |

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|---|-------------------|-------------|--|--|--|------------------|---------------|
| ★ | E-91-023          | B           | Measurement of Polarized Structure Functions in Inelastic Electron Proton Scattering using the CEBAF Large Acceptance Spectrometer                                       | V. Burkert*<br>D. Crabb<br>R. Minehart   | JLab<br>U of Virginia<br>U of Virginia | 42               | A             |
| ★ | E-93-009          | B           | The Polarized Structure Function $G_{1n}$ and the $Q^2$ Dependence of the Gerasimov-Drell-Hearn Sum Rule for the Neutron   | G. Dodge<br>S. Kuhn*<br>M. Taiuti        | ODU<br>ODU<br>INFN                     | 40               | A             |
| ★ | E-93-018          | C           | Longitudinal/Transverse Cross Section Separation in $p(e,e'K^+)\Lambda(\Sigma)$ for $0.5 \leq Q^2 \leq 2.0$ (GeV/c) <sup>2</sup> , W                                     | O. Baker                                 | Hampton U                              | 15               | B+            |
| ★ | E-93-021          | C           | The Charged Pion Form Factor   | D. Mack                                  | JLab                                   | 9                | B+            |
| ★ | E-93-026          | C           | The Charge Form Factor of the Neutron  | D. Day                                   | U of Virginia                          | 60               | A             |
| ★ | E-93-027          | A           | Electric Form Factor of the Proton by Recoil Polarization  | C. Perdrisat*<br>V. Punjabi              | W&M<br>NSU                             | 16               | B+            |
| ★ | E-93-038          | C           | The Electric and Magnetic Form Factors of the Neutron From the $d(e,e'n)p$ Reaction based on PR-89-005 [originally two proposals PR-93-038(electric) and -039(magnetic)] | B. Anderson<br>S. Kowalski<br>R. Madey*  | Kent State U<br>MIT<br>Hampton U       | 60               | A             |
| ★ | E-94-010          | A           | Measurement of the Neutron ( <sup>3</sup> He) Spin Structure Function at Low $Q^2$ ; a connection between the BJ and DHG sum rules                                       | G. Cates<br>J. P. Chen<br>Z. E. Meziani* | U of Virginia<br>JLab<br>Temple U      | 31               | A-            |
| ★ | E-94-017          | B           | The Neutron Magnetic Form Factor from Precision Measurements of the Ratio of Quasielastic Electron-Neutron to Electron-Proton Scattering in Deuterium                    | W. Brooks*<br>M. Vineyard                | JLab<br>U of Richmond                  | 15               | B+            |

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| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>                                 | <u>Institutions</u>               | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|--|---|-----------------------------------|------------------|---------------|
| ★ E-97-103        | A           | Search for Higher Twist Effects in the Neutron Spin Structure Function $g_2^n(x, Q^2)$         | T. Averett<br>W. Korsch*                            | W&M<br>U of Kentucky              | 16               | B+            |
| E-97-110          | A           | The GDH Rule and the Spin Structure of $^3\text{He}$ and the Neutron Using Nearly Real Photons | G. Cates<br>J. P. Chen*<br>F. Garibaldi             | U of Virginia<br>JLab<br>INFN     | 18               | A-            |
| ★ E-99-007        | A           | Measurement of $G_{EP}/G_{MP}$ to $Q^2 = 5.6 \text{ GeV}^2$ by the Recoil Polarization Method  | E. Brash<br>M. Jones<br>C. Perdrisat*<br>V. Punjabi | U of Regina<br>JLab<br>W&M<br>NSU | 28               | B+            |
| E-00-101          | C           | A Precise Measurement of the Nuclear Dependence of Structure Functions in Light Nuclei         | J. Arrington  | ANL                               | 12               | B+            |
| E-00-108          | C           | Duality in Meson Electroproduction   | R. Ent*<br>H. Mkrtchyan<br>G. Niculescu             | JLab<br>Yerevan<br>Ohio U         | 20               | B+            |
| ★ E-01-001        | A           | New Measurement of $(G_E/G_M)$ for the Proton  | J. Arrington*<br>R. Segel*                          | ANL<br>Northwestern U             | 10               | A-            |
| E-01-004          | C           | Extension to E93-021: The Charged Pion Form Factor   | H. Blok*<br>G. Huber*<br>D. Mack*                   | Vrije U<br>U of Regina<br>JLab    | 14               | A-            |
| E-01-012          | A           | Measurement of Neutron ( $^3\text{He}$ ) Spin Structure Functions in the Resonance Region      | J. P. Chen<br>S. Choi<br>N. Liyanage*               | JLab<br>Temple U<br>U of Virginia | 17               | B+            |
| E-01-109          | C           | Measurement of $G_{ep}/G_{mp}$ to $Q^2=9 \text{ GeV}^2$ via Recoil Polarization                | E. Brash<br>C. Perdrisat*<br>V. Punjabi             | U of Regina<br>W&M<br>NSU         | 40               | A             |

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\* *Contact Person for Experiments with Multiple Spokespersons*

# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## *Nucleon and Meson Form Factors and Sum Rules: Approved Cont'd*

| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>  | <u>Institutions</u>                           | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|--|--|---|------------------|---------------|
| E-01-113          | B           | Deeply Virtual Compton Scattering with CLAS at 6 GeV                                   | V. Burkert<br>L. Elouadrhiri<br>M. Garcon<br>S. Stepanyan* | JLab<br>JLab<br>SACLAY<br>ODU                 | 60               | A             |
| E-02-013          | A           | Measurement of the Neutron Electric Form Factor G <sub>En</sub> at High Q <sup>2</sup> | G. Cates<br>K. McCormick<br>B. Reitz<br>B. Wojtsekhowski*  | U of Virginia<br>Kent State U<br>JLab<br>JLab | 32               | A             |

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 \* *Contact Person for Experiments with Multiple Spokespersons*

# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Properties of Nuclei: Approved

|    | <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>                                  | <u>Institutions</u>                             | <u>Beam days</u> | <u>Rating</u> |
|----|-------------------|-------------|--|--|---|------------------|---------------|
| ★/ | E-89-003          | A           | Study of the Quasielastic (e,e'p) reaction in $^{16}\text{O}$ at High Recoil Momentum  | W. Bertozzi<br>K. Fissum<br>A. Saha*<br>L. Weinstein | MIT<br>U of Lund<br>JLab<br>ODU                 | 20               | B-            |
| ★  | E-89-008          | C           | Inclusive Scattering for Nuclei at $x>1$ and High $Q^2$  | D. Day<br>B. Filippone*                              | U of Virginia<br>CIT                            | 8                | B             |
| ★  | E-89-009          | C           | Investigation of the Spin Dependence of the AN Effective Interaction in the P Shell  | R. Chrien<br>E. Hungerford<br>L. Tang*               | BNL<br>U of Houston<br>Hampton U                | 25               | B+            |
| ★  | E-89-015          | B           | Study of Coincidence Reactions in the Dip and Delta-Resonance Regions<br>Resubmitted as PR-91-009  | H. Baghaei   | U of Texas                                      | 33               | B             |
| ★  | E-89-017          | B           | Electroexcitation of the $\Delta(1232)$ in Nuclei Resubmitted as PR-91-009 (request changed from 336), Approved by PAC5  | R. Sealock   | U of Virginia                                   | 33               | B             |
| ★  | E-89-027          | B           | Coincidence Reaction Studies with the LAS With PR-89-015 Resubmitted as PR-91-009 (request changed from 600)   | W. Bertozzi<br>W. Boeglin<br>L. Weinstein*           | MIT<br>FIU<br>ODU                               | 33               | B+            |
| ★  | E-89-031          | B           | Study of Multi-Nucleon Knockout With the CEBAF Large Acceptance Spectrometer Resubmitted as PR-91-009  | F. Hersman<br>J. Lightbody<br>R. Miskimen*           | U of NH<br>NSF<br>U Mass                        | 33               | B+            |
| ★  | E-89-032          | B           | Study of the Local Properties of Nuclear Matter in Electron-Nucleus and Photon-Nucleus Interactions with Backward Particle Production Using the CLAS Detector -> PR-91-009 | V. Gavrilov*<br>G. Leksin                            | ITEP<br>ITEP                                    | 33               | B-            |
| ★/ | E-89-033          | A           | Measurement of Recoil Polarization in the $^{16}\text{O}$ (e,e'p) Reaction with 2.4 GeV Electrons  | C. Chang<br>C. Glashausser*<br>S. Nanda<br>P. Rutt   | U of Maryland<br>Rutgers U<br>JLab<br>Rutgers U | 20               | B-            |

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\* Contact Person for Experiments with Multiple Spokespersons

# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Properties of Nuclei: Approved Cont'd

|    | <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>   | <u>Institutions</u>                     | <u>Beam days</u> | <u>Rating</u> |
|----|-------------------|-------------|--|---|---|------------------|---------------|
| ★  | E-89-036          | B           | Study of Short-Range Properties of Nuclear Matter in Electron-Nucleus and Photon-Nucleus Interactions with Backward Particle Production using the CLAS Detector resub as PR-91-009 | K. Egnyan   | Yerevan                                 | 33               | C+            |
| ★  | E-91-013          | C           | The Energy Dependence of Nucleon Propagation in Nuclei as Measured in the (e,e'p) Reaction   | D. Geesaman   | ANL                                     | 24               | B-            |
| ★/ | E-93-008          | B           | Inclusive $\eta$ Photoproduction in Nuclei   | M. Vineyard   | U of Richmond                           | 23               | B             |
| ★  | E-93-019          | B           | Photoabsorption and Photofission of Nuclei   | B. Berman*<br>N. Bianchi<br>V. Muccifora                              | GWU<br>INFN<br>INFN                     | 3                | B-            |
|    | E-94-107          | A           | High Resolution 1p Shell Hypernuclear Spectroscopy in the Valence Quark Region   | S. Frullani<br>F. Garibaldi*<br>J. LeRose<br>P. Markowitz<br>T. Saito | INFN<br>INFN<br>JLab<br>FIU<br>Tohoku U | 24               | B+            |
| ★  | E-94-139          | C           | Measurement of the Nuclear Dependence and Momentum Transfer Dependence of Quasielastic (e,e'p) Scattering at Large Momentum Transfer   | R. Ent<br>R. Milner*  | JLab<br>MIT                             | 11               | B-            |
| ★  | E-97-006          | C           | Correlated Spectral Function and (e,e'p) Reaction Mechanism  | I. Sick   | U of Basel                              | 15               | A-            |
| ★  | E-97-111          | A           | Systematic Probe of Short-Range Correlations   | J. Mitchell<br>B. Reitz*<br>J. Templon                                | JLab<br>JLab<br>NIKHEF                  | 12               | B+            |
| ★  | E-98-104          | B           | Measurement of the polarized electron beam asymmetry on exclusive reactions in nuclei with CLAS  | F. Hersman*<br>M. Holtrop   | U of NH<br>U of NH                      | 35               | N/            |

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# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Properties of Nuclei: Approved Cont'd

| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>                                     | <u>Institutions</u>                 | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|--|---|-------------------------------------|------------------|---------------|
| ★ E-00-102        | A           | Testing the Limits of the Single Particle Model in $^{16}\text{O}(e, ep)$ : An update to E89-003   | W. Bertozzi*<br>K. Fissum*<br>A. Saha*<br>L. Weinstein* | MIT<br>U of Lund<br>JLab<br>ODU     | 20               | A-            |
| E-01-011          | C           | Spectroscopic Study of Lambda Hypernuclei Up To Medium-Heavy Mass Region Through the $(e, e'k^+)$ Reaction   | O. Hashimoto*<br>J. Reinhold<br>L. Tang                 | Tohoku U<br>FIU<br>Hampton U        | 19               | A-            |
| E-01-016          | A           | Precision Measurement of Longitudinal and Transverse Response Functions of Quasi-Elastic Electron Scattering in the Momentum Transfer Range $0.55 \text{ GeV}/c <  q  < 1.0 \text{ GeV}/c$ | J. P. Chen<br>S. Choi*<br>Z. E. Meziani                 | JLab<br>Temple U<br>Temple U        | 26               | A-            |
| E-02-017          | C           | Direct Measurement of the Lifetime of Heavy Hypernuclei at CEBAF   | A. Margaryan<br>L. Tang*                                | Yerevan<br>Hampton U                | 7                | B+            |
| E-02-019          | C           | Inclusive Scattering from Nuclei at $x > 1$ and High $Q^2$ with a 6 GeV Beam   | J. Arrington<br>D. Day<br>B. Filippone<br>A. Lung*      | ANL<br>U of Virginia<br>CIT<br>JLab | 28               | A-            |
| E-02-104          | B           | Quark propagation through Cold QCD Matter  | W. Brooks*<br>Et al                                     | JLab                                | 20               | B+            |
| E-02-110          | B           | $Q^2$ Dependence of Nuclear Transparency for Incoherent $\rho^0$ Electroproduction   | K. Hafidi*<br>Et al                                     | Argonne                             | 24               | B+            |

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# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Strange Quarks: Approved

|    | <u>Experiment</u> | <u>Hall</u> | <u>Title</u>  | <u>Spokesperson</u>   | <u>Institutions</u>                               | <u>Beam days</u> | <u>Rating</u> |
|----|-------------------|-------------|---|---|---|------------------|---------------|
| ★/ | E-89-004          | B           | Electromagnetic Production of Hyperons  | R. Schumacher   | CMU   | 15               | B+            |
| ★/ | E-89-024          | B           | Radiative Decays of the Low-Lying Hyperons With PR-89-004   | G. Mutchler   | Rice U  | 65               | B+            |
| ☆  | E-89-043          | B           | Measurements of the Electroproduction of the $\lambda$ (gnd), $\lambda^*(1520)$ and $f_0(975)$ via the $K^+ K^- p$ an | L. Dennis<br>H. Funsten*  | FSU<br>W&M  | 48               | A-            |
| ★/ | E-89-045          | B           | Study of Kaon Photoproduction on Deuterium  | B. Mecking  | JLab  | 23               | B+            |
| ★  | E-91-010          | A           | Parity Violation in Elastic Scattering From the Proton and $^4\text{He}$  | J. Finn<br>P. Souder*   | W&M<br>Syracuse U                                 | 42               | A             |
| ☆  | E-91-014          | B           | Quasi-Free Strangeness Production in Nuclei   | C. Hyde-Wright  | ODU   | 25               | B-            |
| ★  | E-91-016          | C           | Electroproduction of Kaons and Light Hypernuclei  | J. Reinhold*<br>B. Zeidman  | FIU<br>ANL  | 21               | A-            |
| ☆  | E-93-022          | B           | Measurement of the Polarization of the $\phi(1020)$ in Electroproduction  | H. Funsten<br>P. Rubin<br>E. Smith*                               | W&M<br>U of Richmond<br>JLab                      | 15               | B+            |
| ☆  | E-93-030          | B           | Measurement of the Structure Functions for Kaon Electroproduction   | K. Hicks<br>M. Mestayer*  | OhiCMo U<br>JLab                                  | 50               | B+            |
| ☆  | E-95-003          | B           | Measurement of Kzero Electroproduction  | K. Dhuga*<br>R. Magahiz<br>R. Schumacher                          | GWU<br>CMU<br>UMD                                 | 80               | B+            |
| ★  | E-98-108          | A           | Electroproduction of Kaons up to $Q^2=3$ (GeV/c) <sup>2</sup>   | O. Baker<br>C. Chang<br>S. Frullani<br>M. Iodice<br>P. Markowitz* | Hampton U<br>U of Maryland<br>INFN<br>INFN<br>FIU | 21               | B+            |

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# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Strange Quarks: Approved Cont'd

| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>  | <u>Spokesperson</u>                             | <u>Institutions</u>                      | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|---|---|--|------------------|---------------|
| ☆ E-98-109        | B           | Photoproduction of phi Mesons with Linearly Polarized Photons                       | P. Cole<br>J. Mueller<br>D. Tedeschi*           | U of Texas<br>U of Pittsburgh<br>USC     | 13               | B+            |
| ☆ E-99-006        | B           | Polarization observables in the $^1\text{H}(e,e'K^+)\Lambda$ Reaction               | D. Carman*<br>K. Joo<br>L. Kramer<br>B. Raue    | Ohio U<br>U of Virginia<br>FIU<br>FIU    |                  | B             |
| E-99-115          | A           | Constraining the Nucleon Strangeness Radius in Parity Violating Electron Scattering | K. Kumar*<br>D. Lhuillier                       | U Mass<br>SACLAY                         | 30               | A             |
| ★ E-00-112        | B           | Exclusive Kaon Electroproduction in Hall B at 6 GeV                                 | D. Carman*<br>K. Joo<br>G. Niculescu<br>B. Raue | Ohio U<br>U of Virginia<br>Ohio U<br>FIU | 1.25             | B             |
| E-00-114          | A           | Parity Violation from $^4\text{He}$ at Low $Q^2$ : A Clean Measurement of $\rho_s$  | D. Armstrong*<br>R. Michaels                    | W&M<br>JLab                              | 30               | A             |
| E-01-115          | C           | Measurement of the Parity Violating Asymmetry in the N to Delta Transition          | N. Simicevic<br>S. Wells*                       | LTU<br>LTU                               |                  | B+            |

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# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Other Approved

| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>    | <u>Institutions</u> | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|--|------------------------|---------------------|------------------|---------------|
| E-02-020          | C           | The Q (Weak) Experiment: A Search for Physics at the TeV Scale via a Measurement of the Proton's Weak Charge | R. Carlini             | JLab                | 23               | A             |
| E-02-102          | Accelerator | CEBAF Energy Recovery Experiment   | A. Bogacz<br>A. Hutton | JLab<br>JLab        | 12               | None          |

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# Jefferson Lab Experiments, PACs 4-22, Grouped By Category:

## Conditionally Approved

| <u>Experiment</u> | <u>Hall</u> | <u>Title</u>   | <u>Spokesperson</u>                                 | <u>Institutions</u>                          | <u>Beam days</u> | <u>Rating</u> |
|-------------------|-------------|--|---|--|------------------|---------------|
| ★ E-94-003        | B           | Study of the $\Delta(1232)$ Using Double Polarization Asymmetries  | V. Burkert<br>R. Minehart<br>P. Stoler*             | JLab<br>U of Virginia<br>RPI                 |                  |               |
| E-00-003          | A           | A Clean Measurement of the Neutron Skin of $^{208}\text{Pb}$ Through Parity Violating Electron Scattering                              | R. Michaels*<br>P. Souder<br>G. Urciuoli            | JLab<br>Syracuse U<br>INFN                   | 30               | A-            |
| E-00-110          | A           | Deeply Virtual Compton Scattering at 6 GeV   | F. Sabatie  | SACLAY                                       | 20               | A-            |
| E-01-015          | A           | Proposal 97-106 (update) Studying the Internal Small-Distance Structure of Nuclei via the Triple Coincidence ( $e,e'p+N$ ) Measurement | W. Bertozzi<br>E. Piasezky<br>J. Watson<br>S. Wood* | MIT<br>U of Tel Aviv<br>Kent State U<br>JLab | 23               | B+            |
| E-01-104          | B           | Helicity Structure of Pion Photoproduction - Update of Experiment 91-015   | D. Crabb<br>M. Khandaker<br>D. Sober*               | U of Virginia<br>NSU<br>CUA                  | 22               | B+            |
| E-01-116          | C           | The G0 Experiment Backward Angle Measurements  | D. Beck   | U of Illinois                                | 60               | A             |
| E-02-101          | A           | Exclusive Study of Deuteron Electrodisintegration Near Threshold   | K. Wang*<br>Et al                                   | U. of VA                                     | 16               | B+            |

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