

SECTION III
EXPERIMENTS APPROVED AT
PROGRAM ADVISORY COMMITTEE MEETINGS
(PAC-2 AND PAC-3)

APPROVED EXPERIMENTS NSCL PAC2 -- SEPTEMBER 30, 1983.

| Experiment Number | Title and Authors (Spokesperson Underlined) | Hours | |
|-------------------|--|-------|------|
| | | Apvd | Rsvd |
| 83001 | Cellular Microirradiation: Cell Survival vs. LET <u>W.C. Parkinson</u> , J. Bardwick, F.L. Vaughn, Univ of Michigan. | 6 | |
| 83002 | Absorptive Fragmentation of 20 MeV/u - ^{14}N Projectiles, <u>H. Utsunomiya</u> , D.J. Morrissey, R.A. Blue, L.H. Harwood, R.M. Ronningen. J. van der Plicht, MSU | 91 | |
| 83003 | Complete and Incomplete Fusion at Intermediate Energies, <u>G.T. Seaborg</u> , W. Loveland, T.T. Sugihara, K. Aleklett, D.J. Morrissey, LBL, Oregon State Univ. MSU, SRL Studsvik. | 24 | |
| 83005 | Spallation and Fragmentation of Medium-A Targets by Heavy Ions, <u>N.T. Porile</u> , Y.H. Chung, J. Herrmann, D.J. Morrissey, Purdue, MSU. | 24 | |
| 83006 | Particle Response Function to High Excitation Energy <u>G.M. Crawley</u> , J.E. Duffy, R. Tickle, S. Gales, E. Gerlic, C.P. Massolo, J. Finck, MSU, Univ. of Michigan, IPN/Orsay, UNLP/Argentina, Central Michigan Univ. | 72 | |
| 83008 | Study of Multi-Particle Correlations and Search for Jets in Intermediate Energy Heavy Ion Collisions, <u>Z.M. Koenig</u> , G.D. Westfall, G.M. Crawley, B.E. Hasselquist, B.V. Jacak, R.S. Tickle, H. Utsunomiya, MSU and Univ. of Michigan. | 150 | |
| 83009 | Mass Measurements of Proton Rich Nuclei Using the (^7Li , He) Reaction, <u>B. Sherrill</u> , W. Benenson K. Beard, B.A. Brown, E. Kashy, J.A. Nolen, Jr. A.D. Panagiotou, J. Van der Plicht, MSU. | 104 | |
| 83010 | Test of the Validity of the Assumption of Thermal Equilibrium in Heavy ion Collisions, <u>D.J. Morrissey</u> , W. Benenson, J. van der Plicht, E. Kashy, A.D. Panagiotou, A. Utsunomiya, B. Sherrill, R. Ronningen, R. Blue, MSU. | 72 | 58 |
| 83011 | Neutral Pion Production at $E_{\text{lab}} < 35$ MeV/u, <u>P. Braun-</u> <u>Munzinger</u> , P. Paul, L. Ricken, J. Stachel, <u>P.H. Zhang</u> , T. Awes, F. Plasil, F. Obenshain, G.R. Young, Stony Brook, Oak Ridge. | 250 | 67 |
| 83013 | $^{12}\text{C}({}^6\text{Li}, d)$ and $({}^7\text{Li}, t){}^{16}\text{O}$: Study of α -Cluster States in ${}^{16}\text{O}$, F. Becchetti, J. Janecke, P. Lister, Univ. of Michigan. | 48 | |
| 83014 | Giant Resonances Excited with High Energy ${}^6\text{Li}$ Scattering, <u>J. van der Plicht</u> , W. Benenson, G. Crawley, E. Kashy, B. Sherrill, K. Beard, H. Utsunomiya, MSU. | 48 | |
| 83015 | Investigation of Denitrification Using $^{13}\text{-N}$, <u>J.M. Tiedje</u> , D. Morrissey, J. Nolen, G. Phillip Robertson, D. Myroid, U. Ronner, G. Mileski, C. Rice, MSU. | 48 | 12 |

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| 83017 | Measurement of Total Reaction Cross Sections at 15 to 35 MeV/A, <u>J.G. Cramer</u> , L.H. Harwood, R.A. Loveman, W.G. Lynch, A.J. Lazzarini, A.G. Seamster, J. van der Plicht, Univ. of Washington, MSU. | 72 |
| 83019 | Decay Measurements of Neutron-Rich Isotopes Produced by Fragmentation of ^{22}Ne Beams, <u>J. Nolen</u> , L.H. Harwood, M.S. Curtin, W.E. Ormand, Z.Q. Xie, MSU. | 149 |
| 83021 | Measurements of Intermediate Mass Fragments to Study Liquid-Gas Phenomena, <u>M.S. Curtin</u> , D.K. Scott, C.B. Chitwood, D.J. Fields, C.K. Gelbke, B.V. Jacak, W. Lynch, A.D. Panagiotou, M.B. Tsang, MSU. | 140 |
| 83023 | Giant Resonance Studies Using Inelastic Scattering of 35 MeV/A ^{14}N , <u>Umesh Garg</u> , W.G. Lynch, A. Galonsky, J. van der Plicht, D.H. Youngblood, Univ. of Notre Dame, MSU, Texas A&M. | 72 |
| 83024 | Neutron Emission in Deep-Inelastic Scattering, <u>G. Caskey</u> , A. Galonsky, B. Remington, M.B. Tsang, <u>J. Kasagi</u> , A. Kiss, F. Deak, Z. Seres, J. Kolata, J. Hennefeld, C.K. Gelbke, MSU, Tokyo Inst. Tech. Eotvos Univ., Notre Dame, CRI Budapest. | 88 |
| 83025 | Investigation of Light Particle Correlations for ^{14}N Induced Reactions, <u>W. Lynch</u> , C.B. Chitwood, D.J. Fields, C.K. Gelbke, M.B. Tsang, D.R. Klesch, F. Plasil, T.C. Awes, G.R. Young, MSU, ORNL. | 130 |
| 83026 | Exclusive Studies of Low-Energy, Intermediate-Mass Fragments in the $^{14}\text{N} + ^{238}\text{U}$ Reaction at E/A = 35 MeV, <u>Vic Viola</u> , K. Kwiatkowski, M. Fatyga, B. Tsang, B. Lynch, C.K. Gelbke, C. Chitwood, D. Fields, D. Klesch, IUCF, MSU. | 144 |
| 83027 | Pion Production Far Below the N-N Threshold, <u>K. Beard</u> , W. Benenson, E. Kashy, B. Sherrill, J. van der Plicht, MSU. | 90 |
| 83028 | Emission of Low energy Intermediate Mass Fragments <u>C.K. Gelbke</u> , D.J. Fields, C.B. Chitwood, D.R. Klesch, W.G. Lynch, M.B. Tsang, MSU | 72 |
| 83029 | Elastic Scattering of ^6Li Ions, <u>A. Nadasen</u> , P. Schwandt, F. Becchetti, J. Janecke, G. Ciangaru, C.W. Wang, Univ. of Mich., IUCF, Univ. of Maryland. | 0 72 |
| 83030 | An Exploratory Study of the (^6Li , ^6He) Reaction at 25 and 35 MeV/nucleon, <u>N. Anantaraman</u> , S.M. Austin, A. Galonsky, J. van der Plicht, C.C. Chang, G. Ciangaru, MSU, Maryland. | 72 |
| 83031 | Partial Wave Distributions in Total Momentum Transfer Reactions at 35 MeV/u, <u>J.B. Natowitz</u> , M.N. Namboodiri, P. Gonthier, H. Ho, R.P. Schmitt, G. Berkowitz, K. Hagel, D. Fabris, G. Nebbia, Z. Majka, Texas A&M, LLNL, Hope College, Max Planck Inst., Heidelberg. | 120 |
| 83032 | Study of Charge-Exchange Reaction (^{12}C , ^{12}N) at 35 MeV/Nucleon, <u>N. Anantaraman</u> , S.M. Austin, L.H. Harwood, A.D. Panagiotou, J. van der Plicht, A.F. Zeller, MSU. | 18 |

APPROVED EXPERIMENTS NSCL PAC3 -- JULY 2, 1984

| Experiment Number | Title and Authors (Spokesperson Underlined) | Hours Apvd | Hours Resvd |
|-------------------|--|---------------|----------------|
| 84001 | Projectile Fragmentation and Correlated Multiparticle Emission, <u>D. Horn</u> , R. Bougault, G.C. Ball, E. Hagberg, G.D. Westfall, Z.M. Koenig, D. Fox, AECL, ORNL, MSU. | 125 | |
| 84002 | Elastic Scattering of ${}^6\text{Li}$ Ions, <u>A. Nadasen</u> , P. Schwandt, R.E. Warner, F. Becchetti, J. Janecke, P. Lister, A.A. Cowley and S. Mills, U. of Michigan, IUCF, Oberlin, CSIR, (Faure, South Africa). | 72 | |
| 84003 | Mass Measurements of Proton-Rich Nuclei, <u>W. Benenson</u> , B. Sherrill, B.A. Brown, E. Kashy, J.A. Nolen, J. van der Plicht, C. Bloch, J.S. Winfield, NSCL. | 72 | |
| 84004 | Giant Resonances Excited with High Energy ${}^6\text{Li}$ Scattering, <u>J. van der Plicht</u> , W. Benenson, G. Crawley, E. Kashy, B. Sherrill, H. Utsunomiya, J. Winfield, NSCL | 24 | |
| 84005 | Exploratory Study of Deep-Lying Two-Proton-Hole States by ${}^{14}\text{Sm}({}^6\text{Li}, {}^8\text{B})$, <u>A. Saha</u> , N. Anantaraman, G.M. Crawley, H. Van der Plicht, J. Winfield, R.S. Tickle, Northwestern Univ., NSCL, U. of Michigan. | 48 | |
| 84007 | Test for Statistical Equilibrium in Heavy Ion Collisions, <u>D.J. Morrissey</u> , W. Benenson, E. Kashy, H. Utsunomiya, J. van der Plicht, B. Sherrill, C. Bloch, R. Blue, R. Ronningen, NSCL. | 184 | |
| 84008 | Importance of Direct vs. Thermal Contributions, <u>G.D. Westfall</u> , Z.M. Koenig, D. Fox, D. Horn, R. Bougault, NSCL, Chalk River | 48 | 76 |
| 84009 | Nonequilibrium Emission from 25 and 35 MeV/u ${}^{16}\text{O} + {}^{58}\text{Ni}$, <u>Peter L. Gonthier</u> , G.D. Westfall, H. Ho, R.S. Tickle, Z.M. Koenig, D. Fox, M. Kort, D. Mogdrige, A. Cummins, Hope College, Max-Planck-Institut, (Heidelberg), U. of Michigan NSCL. | 120 | |
| 84014 | Determination of Y-ray Polarization Associated with Non-Equilibrium Light Particles at Intermediate Energies, <u>W. Trautman</u> , M.B. Tsang, C.B. Chitwood, D.J. Fields, C.K. Gelbke, W.G. Lynch, R. Ronningen, J. Pochodzalla, Brookhaven, NSCL | 162 | |
| 84015 | Search for Pion Precursor Effects through Isovector Charge-exchange on ${}^{12}\text{C}$, <u>J.S. Winfield</u> , S.M. Austin, Z.P. Chen, A. Galonsky, B. Sherrill, NSCL. | 0 | 96 |
| 84016 | Investigation of Denitrification Using ${}^{15}\text{N}$ <u>James M. Tiedje</u> , D. Morrissey, J. Nolen, G.P. Robertson, U. Ronner, M. Klug, C. Rice, E. Aerssans, Crop & Soil Sciences (MSU), Kellogg Biological Station (MSU), NSCL. | 48 | |

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| 84017 | In-Beam Gamma-Ray Spectroscopy of Odd-Odd Deformed Nuclei in the Re Region, <u>Wm. C. McHarris</u> , W. Olivier, Wen-Tsae Chou, Jane Kupstas-Guido, NSCL | 48 | |
| 84018 | Giant Resonance Studies using Inelastic Scattering of 35-40 MeV/A ^{14}N , <u>Umesh Garg</u> , W.G. Lynch, A. Galonsky, M.B. Tsang, J. van der Plicht, W.A. Hollerman, M.W. Drigert, D.H. Youngblood, Notre Dame, Texas A&M, NSCL | 88 | |
| 84020 | Measurement of Target Residues from Collisions of ^{14}N (40 MeV/u) with ^{60}Ni and ^{107}Ag , <u>N. Anantaraman</u> , J. Wilczyński, W.G. Lynch, M. Maier, K. Siwek-Wilczynska, M.B. Tsang, J. Winfield, R.S. Tickle, NSCL, U. of Michigan. | 88 | |
| 84021 | Pion Production Far Below the N-N Threshold, <u>K. Beard</u> , W. Benenson, E. Kashy, D. Morrissey, J. van der Plicht, J. Winfield, B. Sherrill, C. Bloch, NSCL | 115 | |
| 84022 | Particle Response Function to High Excitation Energy, <u>G.M. Crawley</u> , J.E. Duffy, J. van der Plicht, R. Tickle, S. Gales, E. Gerlic, C.P. Massolo, J. Finck, U. of Michigan, IPN(Orsay) UNLP (Argentina), Central Michigan, NSCL. | 48 | 60 |
| 84023 | Lifetime Measurement of ^6He , <u>J. Nolen</u> , L.H. Harwood, Z.Q. Xie, B. Sherrill, D. Milojas, R.G.H. Robertson, NSCL, LASL | 103 | |
| 84024 | Measurement of Final State Interactions between Non-Equilibrium Light Particles in Coincidence with Full Momentum Transfer Trigger, <u>W.G. Lynch</u> , C.K. Gelbke, C.B. Chitwood, D.J. Fields, P. Pochodzalla, M.B. Tsang, NSCL. | 168 | |
| 84025 | Limitation of Linear Momentum Transfer in Nucleus-Nucleus Collisions, <u>Vic Viola</u> , K. Kwiatkowski, M. Fatyga, M.B. Tsang, C. Chitwood, C.K. Gelbke, D. Fields, D. Klesch, IUCF, NSCL. | 72 | |