

DETAILED TABLE OF CONTENTS

Part 1

Sponsors and Staff.	xxxxii
Introduction.	xxxxv
OPENING ADDRESS	
The International Polarization Symposia 1960-1980: An Overview.	1 2
<i>L. C. Biedenharn</i>	
SECTION 1: NUCLEON-NUCLEON AND HIGH ENERGY POLARIZATION PHENOMENA	
	10
1.A Spin Correlation Measurements in Nucleon-Nucleon Scattering at High Energies.	11
<i>D. G. Crabb</i>	
1.B Evidence for Dibaryon Resonances in Nucleon-Nucleon Scattering	31
<i>J. B. Roberts</i>	
1.C Polarization Phenomena in (p, π) Reactions.	62
<i>J. A. Niskanen</i>	
1.D The Interpretation of Recent Measurements of np and pp Cross Sections.	84
<i>J. A. Edgington</i>	
1.E Polarization Analyzing Power Measurements in Coherent Pion Production by Protons	93
<i>E. G. Auld</i>	
1.RR Rapporteur's Report: Nucleon-Nucleon and High Energy Polarization Phenomena	111
<i>L. C. Northcliffe</i>	
1.1 High-Precision np Polarization Data Between 13.5 and 16.9 MeV and the Paris-Potential Predictions	114
<i>J. Côté, M. Lacombe, B. Loiseau, P. Pires, R. de Tourreil, and R. Vinh Mau</i>	
1.2 The Influence of Multiple Scattering Corrections on High Accuracy Neutron-Proton Analyzing Power Data Measured at 16.9 MeV	117
<i>W. Tornow and R. L. Walter</i>	

1.3	Polarization Transfer in n-p Scattering at 50 MeV	120
	H. L. Woolverton, J. C. Hiebert, L. C. Northcliffe, M. J. Marolda, S. Nath, and W. F. Woodward	
1.4	The Measurement of A_{nn} for Free N-P Scattering for Neutron Energies 300-665 MeV.	123
	T. S. Bhatia, G. Glass, J. C. Hiebert, L. C. Northcliffe, W. B. Tippens, B. E. Bonner, J. E. Simmons, C. L. Hollas, C. R. Newsom, R. D. Ransome, and P. J. Riley	
1.5	Measurement of the Free Neutron-Proton Analyzing Power from 300 to 800 MeV	126
	C. R. Newsom, C. L. Hollas, R. D. Ransome, P. J. Riley, B. E. Bonner, J. J. Jarmer, M. W. McNaughton, J. E. Simmons, T. S. Bhatia, G. Glass, J. C. Hiebert, L. C. Northcliffe, and W. B. Tippens	
1.6	A Measurement of the Analyzing Power for n-p Elastic Scattering at 800 MeV for $\theta_{c.m.} > 100^\circ$	129
	C. L. Hollas, P. J. Riley, C. R. Newsom, R. D. Ransome, B. E. Bonner, J. E. Simmons, T. S. Bhatia, G. Glass, J. C. Hiebert, L. C. Northcliffe, and W. B. Tippens	
1.7	Measurement of K_{NN} , K_{SS} , K_{SL} , and K_{LL} in $\vec{n}p \rightarrow \vec{p}n$ at 800 MeV in the CEX Region	132
	R. D. Ransome, C. L. Hollas, P. J. Riley, B. E. Bonner, W. R. Gibbs, M. W. McNaughton, J. E. Simmons, T. S. Bhatia, G. Glass, J. C. Hiebert, L. C. Northcliffe, and W. B. Tippens	
1.8	Quasi-Free $\vec{p} + n$ Analyzing Powers at 800 MeV.	135
	M. Barlett, G. W. Hoffmann, J. McGill, B. Bonner, B. Hoistad, and G. S. Blanpied	
1.9	Analyzing Power of Proton-Proton Scattering at 9.88 MeV. .	137
	M. D. Barker, P. C. Colby, W. Haeberli, and J. Ulbricht	
1.10	Polarization in Proton-Proton Scattering at 52 MeV and Effect of the Electromagnetic LS Force.	140
	K. Imai, T. Matsusue, H. Shimizu, J. Shirai, K. Nisimura, K. Hatanaka, and T. Saito	
1.11	(withdrawn)	

1.12	Measurement of the Spin Correlation Parameters A _{00kk} , A _{00ks} and A _{00ss} in the p-p Elastic Scattering between 400 and 600 MeV.	143
	E. Aprile, R. Hausamann, E. Heer, R. Hess, S. Jaccard, C. Lechanoine-LeLuc, W. Leo, Y. Onel, S. Mango, and D. Rapin	
1.13	Asymmetries for Elastic pp Scattering in the Coulomb Interference Region at 800 MeV.	146
	G. Pauletta, G. S. Adams, G. Igo, J. B. McClelland, A. T. M. Wang, C. A. Whitten, Jr., A. Wriekat, M. Gazzaly, and B. Hoistad	
1.14	Measurement of D _{NN} , D _{Ss} , D _{LS} in pp → pp at 800 MeV. .	149
	M. W. McNaughton, B. E. Bonner, W. D. Cornelius, E. W. Hoffman, O. B. van Dyck, R. L. York, R. D. Ransome, C. L. Hollas, P. J. Riley, K. Toshioka, H. Spinka, P. R. Bevington, and H. B. Willard	
1.15	Energy Dependence of A _{nn} (90°) in pp Elastic Scattering from 1.10 to 2.75 GeV/c.	152
	H. E. Miettinen, D. A. Bell, J. A. Buchanan, M. M. Calkin, J. M. Clement, W. H. Dragoset, M. Furić, K. A. Johns, J. D. Lesikar, T. A. Mulera, G. S. Mutchler, G. C. Phillips, J. B. Roberts, and S. E. Turpin	
1.16	Spin-Dependent Forces in pp→pp at 6 GeV/c	155
	S. Wakaizumi and M. Sawamoto	
1.17	Inclusive Scattering of Protons on Helium and Nickel at 500 MeV	158
	G. Roy, L. G. Greeniaus, G. A. Moss, D. A. Hutcheon, R. Liljestrand, R. M. Woloshyn, D. Boal, A. W. Stetz, K. Aniol, A. Willis, N. Willis, and R. McCamis	
1.18	Measurement of Polarization Parameters in pp → π [±] d at Intermediate Energies.	161
	E. Aprile, R. Hausamann, E. Heer, R. Hess, C. Lechanoine-LeLuc, W. Leo , Y. Onel, D. Rapin, J. M. Cameron, S. Mango, and S. Jaccard	
1.19	Differential Cross Section for Pion Production in the Reaction pp→πd between 500 and 600 MeV.	163
	J. Hoftiezer, Ch. Weddigen, B. Favier, S. Jaccard, P. Chatelain, F. Foroughi, and C. Nussbaum	

1.20	The Measurement of K_{NN} and K_{LL} in $\vec{p}p \rightarrow \vec{n}X$ at 800 MeV. T. S. Bhatia, G. Glass, J. C. Hiebert, L. C. Northcliffe, W. B. Tippens, C. L. Hollas, C. R. Newsom, R. D. Ransome, P. J. Riley, G. P. Pepin, B. E. Bonner, and J. E. Simmons	166
1.21	Polarized Cross Section for the Reaction $p\uparrow p \rightarrow p\pi^+n$. . A. D. Hancock, R. W. Hackenburg, E. V. Hungerford, B. W. Mayes, L. S. Pinsky, J. C. Allred, T. M. Williams, S. D. Baker, J. A. Buchanan, J. M. Clement, M. Copel, D. M. Judd, G. S. Mutchler, G. P. Pepin, E. A. Umland, G. C. Phillips, M. McNaughton, and C. Hwang	169
1.22	Calculation of Asymmetries and Cross Sections for the Reaction $p\uparrow p \rightarrow p\pi^+n$ E. A. Umland, I. M. Duck, and G. S. Mutchler	172
1.23	Deuteron Photodisintegration Induced by Mono- chromatic Linearly Polarized Gamma-Rays W. Del Bianco, L. Federici, G. Giordano, G. Matone, G. Pasquariello, P. Picozza, R. Caloi, L. Casano, L. Ingrosso, M. P. De Pascale, M. Mattioli, E. Poldi, C. Schaerf, P. Pelfer, D. Prosperi, S. Frullani, B. Girolami, and H. Jeremie	175
1.24	Phase Shift Analyses of np and pn Elastic Scattering between 10-750 MeV J. Bystricky, C. Lechanoine-LeLuc, and F. Lehar	177
1.25	Phase Shift Analyses of pp Elastic Scattering between 10-750 MeV. J. Bystricky, C. Lechanoine-LeLuc, and F. Lehar	178
1.26	Effect of Recent np Ay, Ayy Measurements on Scattering Analyses below 850 MeV R. A. Arndt and B. J. VerWest	179
1.27	Coulomb Corrections in Proton-Proton Observables. . . W. Plessas	182
1.28	The Effect of the Coulomb Distortion on Proton- Proton Observables. W. Plessas and L. Mathelitsch	185

1.29	Search for the Dibaryon Bandhead	188
	R. Abegg, J. M. Cameron, D. A. Hutcheon, R. P. Liljestrand, W. J. McDonald, C. A. Miller, L. E. Antonuk, C. E. Stronach, and J. R. Tinsley	
1.30	Some Evidence for the Existence of the $^1S_0^-$ - Dibaryon Resonances	191
	V. V. Komarov, A. M. Popova, and Yu. V. Popov	
1.31	The 3F3 Diproton in πNN Dynamics.	194
	M. Araki, T. Ueda, and Y. Koike	
1.32	Elastic Widths of NN -Resonances from a Momentum- Space One-Boson-Exchange Potential.	197
	L. Heins, K. Holinde, and D. Schlütte	
1.33	Effect of Non-Iterative Isobar Diagrams on NN - Scattering Data	200
	K. Holinde, R. Machleidt, A. Faessler, H. Müther, and M. R. Anastasio	
SECTION 2: POLARIZATION IN NUCLEAR STRUCTURE PHYSICS		203
2.A	Elastic Scattering Potentials for Nucleons and Composite Particles	204
	W. J. Thompson	
2.B	Polarization Effects in Inelastic Proton Scattering at Intermediate Energies	220
	A. D. Bacher	
2.C	Reaction Mechanism Studies with Polarized Ions. . . .	254
	K. Yagi	
2.D	Survey of Direct Reaction Studies with Polarized Tritons	270
	E. R. Flynn	
2.E	Polarization Effects in ^3He Induced Reactions	282
	S. Roman	
2.F	Neutron Density Distribution Studies Using Intermediate Energy Polarized Protons	295
	L. Ray	
2.G	Polarized Neutron Capture Studies in the Giant Resonance Region.	308
	H. R. Weller	

2.H	Polarized Proton Radiative Capture Studies of Giant Resonances	321
	K. A. Snover	
2.I	Polarization Transfer in Inelastic Scattering	334
	J. M. Moss	
2.J	Advances in Neutron Polarization Studies.	344
	R. L. Walter	
2.K	DWBA Analysis of (\vec{p} ,d): A Spectacular Failure. . . .	361
	J. R. Shepard, E. Rost, and P. D. Kunz	
2.RR	Rapporteur's Report: Polarization in Nuclear Structure Physics	373
	R. N. Boyd	
2.1	Polarization Effects in the Small-Angle Scattering of Fast Neutrons by Bismuth	389
	M. Ahmed and F. W. K. Firk	
2.2	Analyzing Power of Lanthanum Using 7.65 MeV Neutrons.	392
	G. Schleussner, J. W. Hammer, K. W. Hoffmann, D. Kollewe, W. Kratschmer, and E. Speller	
2.3	Analyzing Power of Uranium-238 Using 7.65 MeV Neutrons.	395
	J. W. Hammer, G. Schleussner, K. W. Hoffmann, D. Kollewe, W. Kratschmer, and E. Speller	
2.4	Scattering of Polarized Neutrons from ^{54}Fe and ^{65}Cu at 10 MeV.	398
	C. E. Floyd, P. P. Guss, K. Murphy, R. C. Byrd, S. A. Wender, R. L. Walter, and T. B. Clegg	
2.5	Neutron Scattering from ^{58}Ni and ^{208}Pb at 10 MeV. . . .	401
	P. P. Guss, G. Tungate, C. E. Floyd, E. Woye, K. Murphy, R. C. Byrd, R. L. Walter, and T. B. Clegg	
2.6	The Analyzing Power for Elastic Scattering of 9.9, 11.9 and 13.9 MeV Neutrons from Ca.	404
	W. Tornow, E. Woye, G. Mack, C. E. Floyd, K. Murphy, P. P. Guss, S. A. Wender, R. C. Byrd, R. L. Walter, and T. B. Clegg	

2.7	The Scattering of Polarized Neutrons from ${}^9\text{Be}$ between 9 and 15 MeV.	407
	C. E. Floyd, P. P. Guss, R. C. Byrd, K. Murphy, S. A. Wender, W. Tornow, R. L. Walter, T. B. Clegg, and W. J. Thompson	
2.8	Optical-Model and Coupled-Channel Predictions in Comparison to $n-{}^{12}\text{C}$ Analyzing Power Data.	410
	E. Woye, W. Tornow, and G. Mack	
2.9	A Program of Systematic Measurement and Analysis for the Low-Energy Nucleon Optical-Model Potential. . .	413
	R. L. Walter, R. C. Byrd, T. B. Clegg, E. J. Ludwig, and W. J. Thompson	
2.10	Polarized Proton Beam Studies of Very Narrow Resonances.	415
	J. F. Wilkerson, W. J. Thompson, E. J. Ludwig, and T. B. Clegg	
2.11	The Depth of the Imaginary Potential Around $A = 105$ Determined by Proton Scattering	418
	A. Feigel, E. Finckh, B. Rowedder, K. Rüskamp, H. Scheuring, U. Schneidereit, and P. Tröger	
2.12	Investigation of the Reaction Mechanism in the Elastic Scattering of Polarized Protons on ${}^{27}\text{Al}$. . .	421
	W. Kretschmer, J. Jordan, H. Löh, and W. Stach	
2.13	Proton Optical Potential for the Elastic Scatter- ing on Molybdenum Isotopes.	424
	W. Kretschmer, E. Heitz, J. Jordan, H. Löh, W. Schuster, W. Stach, R. Stingl, P. Urbainsky, and M. B. Wango	
2.14	Optical Potential for $p+{}^{208}\text{Pb}$ Scattering below the Coulomb-Barrier	427
	W. Kretschmer, K. H. Frank, E. Heitz, J. Jordan, H. Löh, W. Schuster, K. Spitzer, W. Stach, P. Urbainsky, and M. B. Wango	
2.15	Polarized Proton Scattering from Se Isotopes.	430
	R. L. Varner, J. F. Wilkerson, W. J. Thompson, Y. Tagishi, E. J. Ludwig, T. B. Clegg, and B. L. Burks	

2.16	Analysis of Elastic Scattering with an L-Dependent Optical Potential	432
	P. J. van Hall, R. S. Mackintosh, A. M. Kobos, and W. H. L. Moonen	
2.17	Nuclear Structure Effects in Polarized Proton Scattering.	434
	P. J. van Hall, W. H. L. Moonen, and S. D. Wassenaar	
2.18	Analyzing Power in Proton-Nucleus Elastic Scattering in the Small Angle Region at 65 MeV	437
	T. Matsusue, K. Imai, H. Shimizu, J. Shirai, K. Nisimura, K. Hatanaka, and T. Saito	
2.19	The Shell Effect Observed in the Spin Orbit Part of the Optical Potential.	440
	H. Sakaguchi, M. Nakamura, K. Hatanaka, T. Noro, F. Ohtani, H. Sakamoto, and S. Kobayashi	
2.20	65 MeV Polarized Proton Elastic Scattering and the Effective Two-Body Interaction Range.	445
	H. Sakaguchi, M. Nakamura, K. Hatanaka, A. Goto, T. Noro, F. Ohtani, H. Sakamoto, and S. Kobayashi	
2.21	Even-Odd Effect Observed in the Elastic Scattering of Polarized Protons at 65 MeV.	448
	M. Nakamura, H. Sakaguchi, K. Hatanaka, T. Noro, F. Ohtani, H. Sakamoto, and S. Kobayashi	
2.22	The Isospin Dependence of the 65 MeV Proton Optical Potential in the f-p Shell Nuclei	451
	T. Noro, K. Hatanaka, H. Sakaguchi, M. Nakamura, H. Sakamoto, F. Ohtani, and S. Kobayashi	
2.23	Elastic Scattering of Polarized Protons at 200 to 500 MeV.	454
	D. A. Hutcheon, J. M. Cameron, R. P. Liljestrand, P. Kitching, C. A. Miller, W. J. McDonald, D. M. Sheppard, W. C. Olsen, G. C. Neilson, H. S. Sherif, R. N. MacDonald, G. M. Stinson, D. K. McDaniels, J. R. Tinsley, L. W. Swensen, P. Schwandt, C. E. Stronach, and L. Ray	

2.24	The Spin Dependence of Intermediate-Energy Proton-Nucleus Elastic Scattering.	457
	P. Schwandt, A. D. Bacher, W. W. Jacobs, H. -O. Meyer, and S. E. Vigdor	
2.25	Spin "Length" Scales and Polarization in p-Nucleus Scattering.	461
	J. A. McNeil	
2.26	Origin of the Deuteron Imaginary Spin-Dependent Potential	464
	W. H. Wong and P. A. Quin	
2.27	A Test of Collective Effects in Se(d,d)Se	467
	Y. Tagishi, B. L. Burks, T. B. Clegg, E. J. Ludwig, R. L. Varner, J. F. Wilkerson, and W. J. Thompson	
2.28	Phase Shift Analysis of $^{58}\text{Ni}(d,d_0)$ at 12 MeV.	470
	A. Lindner	
2.29	Mass Dependence of the T_R Tensor Potential for Elastic Scattering of 20 MeV Deuterons.	473
	R. Frick, H. Clement, G. Graw, P. Schiemann, N. Seichert, and Sun Tsu-Hsun	
2.30	On the Optical Potential for Deuteron Scattering at $E_d = 20$ MeV.	476
	H. Clement	
2.31	Measurements of A_{xx} and A_{yy} for Elastic Scattering of 56 MeV Deuterons from ^{28}Si , ^{64}Ni and ^{144}Sm	478
	K. Hatanaka, M. Nakamura, K. Imai, T. Noro, H. Shimizu, H. Sakamoto, J. Shirai, T. Matsusue, and K. Nisimura	
2.32	Features in the Analyzing Powers in Deuteron Elastic Scattering Near 80 MeV.	481
	E. J. Stephenson, C. C. Foster, P. Schwandt, and D. A. Goldberg	
2.33	Measurements of A_y and A_{yy} for 80 MeV Deuteron Elastic Scattering on ^{58}Ni and ^{208}Pb	484
	E. J. Stephenson, J. C. Collins, C. C. Foster, D. L. Friesel, J. R. Hall, W. W. Jacobs, W. P. Jones, S. Kailas, M. Kaitchuck, P. Schwandt, W. W. Daehnick, and D. A. Goldberg	
2.34	Complex $\vec{L} \cdot \vec{S}$ Term in Global Optical Model Potentials for Elastic Deuteron Scattering	487
	W. W. Daehnick	

2.35	The Deuteron Optical Potential. G. H. Rawitscher and S. N. Mukherjee	490
2.36	New Representation of Analyzing Powers in Elastic Scattering of Polarized Deuterons H. Ohnishi, M. Tanifuchi, and H. Noya	493
2.37	Polarized Triton Scattering from ^{26}Mg , ^{27}Al and ^{28}Si at 17 MeV. R. A. Hardekopf, Ronald E. Brown, F. D. Correll, G. G. Ohlsen, and P. Schwandt	496
2.38	Imaginary Spin-Orbit Optical Potential in Triton Elastic Scattering on ^9Be J. Meyer and E. Elbaz	499
2.39	Analyses of the Scattering of Polarized Helions from ^{32}S J. M. Barnwell, N. M. Clarke, and R. J. Griffiths	502
2.40	Elastic and Inelastic Scattering of Polarized Protons through Isobaric Analog Resonances in ^{207}Bi and ^{209}Bi N. L. Back, H. C. Bhang, J. G. Cramer, T. A. Trainor, and R. Von Lintig	505
2.41	Giant Resonance Analysis of the $^{54}\text{Fe}(\vec{p}, p')$ Reaction . P. J. van Hall, S. D. Wassenaar, and J. P. M. G. Melssen	508
2.42	Depolarization in the Inelastic Scattering of Protons from Copper W. G. Weitkamp, T. A. Trainor, I. Halpern, H. Bhang, and S. K. Lamoreaux	511
2.43	Scattering of Polarized Protons from $^{64,66,68,70}\text{Zn}$. . P. J. van Hall, J. F. A. G. Ruyl, J. Krabbenborg, W. H. L. Moonen, and H. Offerman	514
2.44	Study of $^{68,64}\text{Ni}$ and $^{86,88}\text{Sr}$ by Scattering of Polarized Protons S. D. Wassenaar, P. J. van Hall, S. S. Klein, G. J. Nijgh, O. J. Poppema, W. F. Feix, J. H. Polane, and J. F. J. Dautzenberg	517

2.45	Scattering of Polarized Protons from $^{110,112,114}\text{Cd}$ and ^{115}In	520
	S. D. Wassenaar, J. F. J. Dautzenberg, J. H. Polane, P. J. van Hall, S. S. Klein, G. J. Nijgh, and O. J. Poppema	
2.46	Scattering of Polarized Protons from Even Tin Isotopes.	523
	S. D. Wassenaar, P. J. van Hall, S. S. Klein, G. J. Nijgh, O. J. Poppema, J. H. Polane, and J. F. J. Dautzenberg	
2.47	Microscopic Analysis of Polarized Proton Scatter- ing from Tin.	526
	S. D. Wassenaar and P. J. van Hall	
2.48	One- and Two-Step Analysis of $^{14}\text{N}(\vec{p}, p')$ $^{14}\text{N}(2.31 \text{ MeV})$ Reaction at 21.0 MeV and the Effective Interaction. . .	529
	Y. Aoki, K. Nagano, Y. Toba, S. Kunori, and K. Yagi	
2.49	The $^{89}\text{Y}(\vec{p}, p')$ Reaction at 21.1 MeV.	532
	J. P. M. G. Melssen, P. J. van Hall, S. D. Wassenaar, O. J. Poppema, S. S. Klein, and G. J. Nijgh	
2.50	Spin Flip Asymmetry in the Inelastic Scattering of Protons on ^{12}C at Energies from 22.0 to 29.0 MeV . .	535
	T. Fujisawa, N. Kishida, T. Kubo, T. Hasegawa, M. Sekiguchi, N. Ueda, M. Yasue, Y. Wakuta, and A. Nagao	
2.51	Microscopic Analysis of the $^{54}\text{Fe}(\vec{p}, p')$ Reaction Between 20 and 30 MeV	538
	P. J. van Hall, J. P. M. G. Melssen, and S. D. Wassenaar	
2.52	New Evidences for an Imaginary Spin-Orbit Potential in the Inelastic Scattering of Polarized Protons from ^{12}C and ^{16}O	541
	R. de Swiniarski and Dinh-Lien Pham	
2.53	Measurements of Analyzing Powers for 6- States in ^{28}Si and ^{24}Mg by Inelastic Scattering of 65 MeV Polarized Protons	544
	K. Hosono, N. Matsuoka, T. Saito, K. Hatanaka, M. Kondo, T. Noro, H. Shimizu, S. Kato, K. Okada, K. Ogino, and Y. Kadota	

2.54	Analyzing Powers for $^{12}\text{C}(\vec{p}, p')$ ^{12}C at Intermediate Energies	547
	J. R. Comfort, C. C. Foster, C. D. Goodman, D. W. Miller, G. L. Moake, P. Schwandt, J. R. Rapaport, and R. E. Segel	
2.55	New Aspects of the TRIUMF (\vec{p}, π) Program	550
	G. J. Lolas, E. L. Mathie, P. L. Walden, E. G. Auld, G. Jones, and R. B. Taylor	
2.56	$^{90,92}\text{Zr}(\vec{p}, p')$ Reactions at 800 MeV	554
	F. T. Baker, C. Glashausser, A. Scott, G. Adams, M. Grimm, G. Hoffmann, G. Igo, W. G. Love, J. Moss, V. Penumetcha, W. Swenson, and B. E. Wood	
2.57	Nuclear Information from the Wolfenstein Parameters in Inelastic Proton Nucleus Scattering	556
	E. Bleszynski, M. Bleszynski, and Ch. A. Whitten, Jr.	
2.58	Analyzing Powers of the Continuum Spectra (I): 65 MeV Polarized Protons on ^{12}C , ^{28}Si , ^{45}Sc , ^{58}Ni , ^{93}Nb , ^{165}Ho , ^{166}Er and ^{209}Bi	559
	H. Sakai, K. Hosono, N. Matsuoka, S. Nagamachi, K. Okada, K. Maeda, and H. Shimizu	
2.59	Analyzing Powers of the Continuum Spectra (II): 56 MeV Polarized Deuterons on ^{58}Ni , ^{93}Nb and ^{209}Bi	562
	H. Sakai, N. Matsuoka, K. Hatanaka, K. Okada, and H. Shimizu	
2.60	Analyzing Power in the Continuum in Light-Ion Induced Reactions	565
	H. Lenske, T. Tamura, and T. Udagawa	
2.61	Quasi-Elastic $^{40}\text{Ca}(\vec{p}, 2p)$ Scattering at 200 MeV at TRIUMF	568
	P. Kitching, L. Antonuk, C. A. Miller, D. A. Hutcheon, W. J. McDonald, W. C. Olsen, G. C. Neilson, G. M. Stinson, and A. W. Stetz	
2.62	The Nuclear Quadrupole-Quadrupole Interaction in the Inelastic Scattering of Tensor Polarized Deuterons	571
	H. Clement, R. Frick, G. Graw, F. D. Santos, P. Schiemenz, N. Seichert, and Sun Tsu-Hsun	

2.63	Measurement of Quadrupole Moments and P3-Terms by Inelastic Scattering of Vector Polarized Deuterons	573
	H. Clement, R. Frick, G. Graw, F. Merz, P. Schiemenz, N. Seichert, and Sun Tsu-Hsun	
2.64	Inelastic Scattering of Vector Polarized Deuterons from Samarium Isotopes	576
	H. Clement, R. Frick, G. Graw, I. Oelrich, H. J. Scheerer, P. Schiemenz, N. Seichert, and Sun Tsu-Hsun	
2.65	Octupole-Quadrupole Coupling Observed in the Excitation of 3 ⁻ States with Polarized Deuterons	579
	H. Clement, R. Frick, G. Graw, P. Schiemenz, and N. Seichert	
2.66	The Polarization of Break-Up Protons from Vector Polarized Deuteron Induced Reaction	581
	M. Nakamura, H. Sakaguchi, K. Imai, T. Noro, H. Shimizu, H. Sakamoto, S. Kobayashi, S. Kato, N. Matsuoka, and K. Hatanaka	
2.67	On Deformed Tensor Potential for Inelastic Deuteron Scattering	584
	Jacques Raynal	
2.68	Interactions of Polarized ³ He Particles with ²⁴ Mg . .	587
	F. Entezami, A. K. Basak, O. Karban, P. M. Lewis, and S. Roman	
2.69	The Scattering of Polarized ³ He by Oxygen Isotopes . .	590
	P. M. Lewis, O. Karban, A. K. Basak, E. C. Pollacco, and S. Roman	
2.70	Analyzing Powers of (³ He,t) Reactions on Light Nuclei	593
	A. K. Basak, O. Karban, P. M. Lewis, G. C. Morrison, and S. Roman	
2.71	Intermediate Structure in the Giant E1 Resonance of ²⁰ Ne Studied by Polarized Proton Capture	596
	P. M. Kurjan, G. A. Fisher, J. R. Calarco, and S. S. Hanna	
2.72	Polarized Proton Capture to the First Excited State of ⁶⁰ Ni	598
	K. Sparks, J. D. Turner, N. R. Roberson, D. R. Tilley, and H. R. Weller	

2.73	Decay Mechanisms of the Giant E1 Resonance in ^{90}Zr Studied by Polarized Proton Capture.	600
	J. R. Calarco, P. M. Kurjan, G. A. Fisher, and S. S. Hanna	
2.74	Polarized Proton Capture to the First Excited State in ^{31}P	602
	C. Fitzpatrick, C. P. Cameron, Hideo Kitazawa, N. R. Roberson, D. R. Tilley, and H. R. Weller	
2.75	Polarized Proton Capture on ^{88}Sr	605
	R. D. Ledford, C. Cameron, M. Potokar, N. R. Roberson, D. R. Tilley, and H. R. Weller	
2.76	The Unique Extraction of E2 Strength in Polarized Proton Capture Reactions.	608
	J. Sowinski and D. G. Mavis	
2.77	Analyzing Powers and Cross Sections for (p,d) Reactions on Nuclei of N=50-82.	611
	K. Nagano, Y. Aoki, H. Iida, S. Kunori, Y. Toba, and K. Yagi	
2.78	Analyzing Powers for (p,d) Reactions on ^{208}Pb and $^{142,144}\text{Nd}$ Exciting Neutron-Hole States.	614
	Y. Toba, K. Nagano, Y. Aoki, S. Kunori, and K. Yagi	
2.79	The Reaction $^{56}\text{Fe}(\vec{p},d)$ at 24.6 MeV.	617
	J. H. Polane and P. J. van Hall	
2.80	Two-Step Processes in the Reaction $^{58}\text{Ni}(\vec{p},d)$ at 24.6 MeV	620
	J. H. Polane, P. J. van Hall, O. J. Poppema, S. S. Klein, G. J. Nijgh, S. D. Wassenaar, J. F. J. Dautzenberg, and W. Feix	
2.81	Effects of the Deuteron D State on the Polarization of the Residual Nuclear State	623
	N. Kishida, H. Ohnuma, J. Kasagi, T. Kubo, and M. Yasue	
2.82	Measurement of the Analyzing Powers for the Frag- mented $f_{7/2}$ States by the $^{58}\text{Ni}(\vec{p},d)^{57}\text{Ni}$ Reaction at 65 MeV	626
	M. Fujiwara, Y. Fujita, S. Morinobu, I. Katayama, T. Yamazaki, H. Ikegami, and K. Imai	

2.83	The (p,d) Reactions on A=12-94 Nuclei by 65 MeV Polarized Protons	629
	K. Hosono, M. Kondo, T. Saito, N. Matsuoka, S. Nagamachi, T. Noro, H. Shimizu, S. Kato, K. Okada, K. Ogino, and Y. Kadota	
2.84	Spin Determination of Deep Hole States from (\vec{p} ,d) Reactions	632
	J. Kasagi, G. M. Crawley, S. Gales, E. Gerlic, D. Friesel, and A. Bacher	
2.85	(\vec{p} ,d) Analyzing-Power Measurements at 94 MeV.	635
	D. W. Miller, W. W. Jacobs, D. W. Devins, and W. P. Jones	
2.86	Polarization Transfer in the Reaction $^{56}\text{Fe}(\vec{d},p)^{57}\text{Fe}$ by In-Beam Mössbauer Measurements	638
	B. J. vom Feld, Th. Müller, C. Günther, H. Hübel, and H. Paetz gen. Schieck	
2.87	Determination of j-Mixing in $^{53}\text{Cr}(d,p)^{54}\text{Cr}$ from Tensor Analyzing Power Measurements	641
	J. E. Kammeraad, J. A. Bieszk, L. D. Knutson, and W. Haeberli	
2.88	Tensor Analyzing Power of the Reaction $^{64}\text{Ni}(\vec{d},p)^{65}\text{Ni}$	644
	K. Rüsskamp, W. Drenckhahn, A. Feigel, E. Finckh, G. Gademann, and M. Wangler	
2.89	Measurement and DWBA Analysis of the $^{78}\text{Kr}(\vec{d},p)^{79}\text{Kr}$ Reaction.	647
	B. L. Burks, R. R. Cadmus, Jr., T. B. Clegg, and E. J. Ludwig	
2.90	An Investigation of Configuration Mixing in ^{210}Bi Using Polarized Deuterons	650
	C. A. Gossett, L. D. Knutson, and P. A. Quin	
2.91	Analyzing Power of the $^{12}\text{C}(d,p)$ and $^{12}\text{C}(d,n)$ Reaction.	653
	W. Drenckhahn, A. Feigel, E. Finckh, G. Gademann, K. Rüsskamp, M. Wangler, and L. Zemko	
2.92	Vector Analyzing Powers for the $^{12}\text{C}(\vec{d},n)^{13}\text{N}$, $^9\text{Be}(\vec{d},n)^{10}\text{B}$ and $^{28}\text{Si}(d,n)^{29}\text{P}$ Reactions.	656
	F. D. Brooks, P. M. Lister, J. M. Nelson, and K. S. Dhuga	

2.93	Spectroscopy of ^{62}Ni from the $^{61}\text{Ni}(\text{d},\text{p})^{62}\text{Ni}$ Reaction	659
	O. Karban, A. K. Basak, F. Entezami, and S. Roman	
2.94	Spin-Tensor Interaction in Polarization Transfer Reactions	662
	J. W. Hugg and S. S. Hanna	
2.95	Spectroscopy of ^{145}Sm at $E_x \leq 3.2$ MeV via the (d,p) Reaction at $E_{\text{d}} = 19$ MeV	664
	Sun Tsu-Hsun, H. Clement, R. Frick, G. Graw, F. Merz, F. Riess, P. Schiemenz, and N. Seichert	
2.96	Inelastic Transfer in $(\vec{\text{d}},\text{p})$ Reactions from ^{28}Si and ^{54}Cr	667
	N. Seichert, H. Clement, R. Frick, G. Graw, P. Schiemenz, and Sun Tsu-Hsun	
2.97	D-State Effects in (d,p) , (d,t) and $(\text{d},^3\text{He})$ Reactions at $E_{\text{d}} = 22$ MeV	670
	N. Seichert, H. Clement, R. Frick, G. Graw, S. Roman, F. D. Santos, P. Schiemenz, and Sun Tsu-Hsun	
2.98	Contributions of Spin-Dependent Effects to the Vector Analyzing Power and Proton Polarization for $\ell_{\text{n}}=0$ (d,p) Reaction	673
	T. Hasegawa, N. Ueda, T. Kubo, N. Kishida, H. Ohnuma, T. Fujisawa, T. Wada, and K. Iwatani	
2.99	On Some New Effects of the Deuteron D State Observed in Low Energy (p,d) and (d,p) Reactions	676
	H. Ohnuma	
2.100	Mixed-j Transfer in $^{55}\text{Mn}(\vec{\text{d}},\text{t})^{54}\text{Mn}$	679
	J. A. Cameron, E. Habib, and A. A. Pilt	
2.101	Core-Coupled States Excited in the $^{208}\text{Pb}(\vec{\text{d}},\text{t})^{207}\text{Pb}$ Reaction	682
	E. Sugarbaker, W. P. Alford, R. N. Boyd, J. Cameron, E. Flynn, and J. Sunier	

2.102 Configuration Mixing of Particle-Hole States in A = 16 Nuclei Studied by the $^{17}\text{O}(\vec{d},\tau)^{16}\text{O}$ and $^{17}\text{O}(\vec{d},\tau)^{16}\text{N}$ Reaction.	685
G. Mairle, K. T. Knöpfle, H. Riedesel, K. Schindler, G. J. Wagner, V. Bechtold, and L. Friedrich	
2.103 Tensor Analyzing Power of ($d, ^3\text{He}$) Reaction and the D-State of ^3He	688
F. Entezami, K. S. Dhuga, O. Karban, J. M. Nelson, and S. Roman	
2.104 Spin Determination of Deeply-Bound Hole States from ($\vec{d}, ^3\text{He}$) Reactions.	691
A. Stuirbrink, K. T. Knöpfle, G. Mairle, H. Riedesel, K. Schindler, G. J. Wagner, V. Bechtold, and L. Friedrich	
2.105 The (t,d) Reaction on the Ni Isotopes with Polarized Tritons	694
E. R. Flynn, J. A. Cizewski, Ronald E. Brown, R. A. Hardekopf, and J. W. Sunier	
2.106 Measurements of Masses and Spins of Neutron Rich Nuclei by the (\vec{t},α) Reaction.	697
F. Ajzenberg-Selove, E. R. Flynn, Ronald E. Brown, J. A. Cizewski, and J. W. Sunier	
2.107 The $^{194,196,198}\text{Pt}(t,\alpha)^{193,195,197}\text{Ir}$ Reactions with Polarized Tritons	700
J. A. Cizewski, E. R. Flynn, J. W. Sunier, Ronald E. Brown, and D. G. Burke	
2.108 Application of ($^3\vec{\text{He}}, d$) and ($^3\vec{\text{He}}, \alpha$) Reactions in Spectroscopy	703
O. Kartan, A. K. Basak, G. C. Morrison, J. M. Nelson, and S. Roman	
2.109 Reaction Mechanism Studies with Polarized ^3He	706
O. Kartan, A. K. Basak, and S. Roman	
2.110 Unnatural Parity Transition in (p,t) Reaction	709
Y. Toba, Y. Aoki, H. Iida, S. Kunori, K. Nagano, and K. Yagi	

2.111 Multistep Processes in the Reaction $^{116}\text{Sn}(\vec{p}, t)$ at 25.1 MeV	712
W. F. Feix, J. H. Polane, and P. J. van Hall	
2.112 Reaction Mechanisms of the $^{208}\text{Pb}(p, t)^{206}\text{Pb}$ (3^+ Ex=1.34 MeV) Reaction	715
M. Igarashi and K.-I. Kubo	
2.113 Cross Section and Analyzing Power in the $^{206}\text{Pb}(\vec{t}, p)^{208}\text{Pb}(4^-)$ Reaction	718
W. P. Alford, R. N. Boyd, E. Sugarbaker, F. deBoer, Ronald E. Brown, and E. R. Flynn	
2.114 Spin-Parity Determinations from the $^{42}\text{Ca}(\vec{d}, \alpha)^{40}\text{K}$ Reaction Near 0°	721
Shang Ren-cheng, J. A. Kuehner, A. A. Pilt, M. A. M. Shahabuddin, and A. Trudel	
2.115 Investigation of the Reaction $^{14}\text{N}(d, \alpha)^{12}\text{C}$ with Vector Polarized Deuterons	724
W. Kretschmer, G. Pröbstle, and W. Stach	
2.116 Investigation of the Reaction $^{24}\text{Mg}(d, \alpha)^{22}\text{Na}$ with Vector Polarized Deuterons	727
W. Kretschmer, E. Heitz, C. Glashausser, A. B. Robbins, J. Duder, and D. Melnik	
2.117 Tensor Analyzing Powers in the Reaction $^{24}\text{Mg}(d, \alpha)^{22}\text{Na}$	730
W. Kretschmer, E. Heitz, C. Glashausser, A. B. Robbins, J. C. Duder, and D. Melnik	
2.118 Investigation of the Reaction $^{27}\text{Al}(d, \alpha)^{25}\text{Mg}$ with Vector Polarized Deuterons	733
W. Kretschmer, E. Heitz, C. Glashausser, A. B. Robbins, J. C. Duder, and D. Melnik	
2.119 Tensor Analyzing Power Measurements for (d, α) on s-d Shell Nuclei	736
Y. Tagishi, T. B. Clegg, E. J. Ludwig, S. A. Tonsfeldt, and J. F. Wilkerson	

2.120 Spectroscopy of Stretched Configurations with the (d,α) Reaction at 52 MeV	739
G. Mairle, Liu Ken Pao, K. T. Knöpfle, H. Riedesel, K. Schindler, G. J. Wagner, V. Bechtold, J. Bialy, and L. Friedrich	
2.121 The $^{46,48}\text{Ti}(\vec{p},\alpha)^{43,45}\text{Sc}$ Reaction.	742
R. N. Boyd, S. L. Blatt, T. R. Donoghue, H. J. Hausman, E. Sugarbaker, and S. E. Vigdor	
2.122 Asymmetries in $(^3\text{He}, ^7\text{Be})$ Cross Sections and Spin-Orbit Coupling	745
P. Lezoch, H.-J. Trost, Md. A. Rahman, and U. Strohbusch	
2.123 Photonuclear Reactions with Linearly Polarized Photons	747
K. Wienhard, K. Ackermann, K. Bangert, U. E. P. Berg, C. Bläsing, K. Kobras, W. Naatz, D. Rück, R. K. M. Schneider, and R. Stock	
2.124 Antisymmetrization Effects in Deuteron-Nucleus Elastic Scattering.	750
J. A. Tostevin, M. H. Lopes, and R. C. Johnson	
Author Index	753