LA--10699-MS

DE86 012837

LA-10699-MS

UC-34C

Issued: April 1986

Bibliographic Survey of Medium Energy Inclusive Reaction Data

E. D. Arthur
D. G. Madland
D. M. McClellan

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

MASTER

Los Alamos Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

TABLE OF CONTENTS

OVERVIEW AND APPROACH.....	1
TABLE I - PROTON-INDUCED REACTIONS.....	5
TABLE II - DEUTERON-INDUCED REACTIONS.....	95
TABLE III - TRITON- AND ^3He -INDUCED REACTIONS.....	113
TABLE IV - ALPHA-PARTICLE INDUCED REACTIONS.....	121
TABLE V - $^6,^7\text{Li}$ INDUCED REACTIONS.....	145
TABLE VI - EXPERIMENTAL DATA REFERENCE TABLE FOR PROTON ELASTIC SCATTERING AT MEDIUM ENERGIES.....	151
TABLE VII - EXPERIMENTAL DATA REFERENCE TABLE FOR PROTON TOTAL REACTION CROSS SECTIONS AT MEDIUM ENERGIES.....	155

BIBLIOGRAPHIC SURVEY OF MEDIUM ENERGY INCLUSIVE REACTION DATA

by

E. D. Arthur, D. G. Madland, and D. M. McClellan

ABSTRACT

A bibliographic survey of inclusive reaction data (experimental and theoretical) for several projectile types having energies between 50 and 1000 MeV has been completed. Approximately one thousand references selected from this survey describe the current state of knowledge for particle-induced inclusive reaction data.

I. OVERVIEW AND APPROACH

This report provides results of a recently completed search of bibliographic information pertaining to currently available inclusive reaction data. Particularly emphasized were medium energy data describing experimental and theoretical results for particle and gamma-ray emission. Other types of information that were included pertain to the use of appropriate medium-energy theoretical models and to experimental results for materials damage, nuclear recoils, and radiation effects produced by medium-energy projectiles.

The search covered data for the following projectiles: p, d, t, ^3He , ^4He , and lithium ions, over an incident energy range extending from approximately 50 MeV to 1000 MeV. The search utilized the US Department of Energy RECON* (Remote Console) bibliographic data system and spanned the time period from 1947-1985. Initially, more than 17 000 possible entries were identified using key word techniques. Subsequently, approximately 1000 references were selected by scanning abstracts, and in some cases, text. These have been judged appropriate for describing the current state of knowledge concerning inclusive reaction data, both from an experimental and theoretical viewpoint. We have also included bibliographic information needed for assessment, validation, and refinement of nuclear model capabilities.

For the selected bibliographic entries, the following is provided: reference, author(s), title, target materials, and descriptor(s) characterizing the content of the bibliographic entry. Tables I-V list such information for incident protons, deuterons, tritons, ^3He , alpha-particles, and $^6,^7\text{Li}$ ions.

The bibliographic entries in Tables I-V follow a rough sequence where more recent data precedes older publications. Additionally, an attempt was made to place entries for higher energy data ($100 \leq E \leq 1000$ MeV) before those appropriate for lower energies. This ordering was followed for publications appearing between 1975-1985; but for entries occurring before 1975, such a grouping became more difficult. Particularly for data occurring between 1947-1960, no energy ranges could be specified, so that a mixture of higher and lower energy data results.

Finally, Tables VI and VII summarize selected references for proton elastic scattering and total reaction cross-section data. Such information is provided because of the important constraints it imposes upon the several theoretical models that are currently used to calculate proton-induced inclusive reaction data.

11. OTHER SOURCES OF CHARGED-PARTICLE REACTION DATA

The following is a partial list of other sources of bibliographic data for charged-particle reaction data.

1. N. E. Holden, S. Ramavataram, C. L. Dunford, "Integral Charged-Particle Nuclear Data Bibliography," Brookhaven National Laboratory report BNL-NCS-51771, First Edition (1984) and Supplement One (1985).
2. N. E. Holden and T. W. Burrows, "The Bibliography of Integral Charged Particle Nuclear Data," Brookhaven National Laboratory report BNL-NCS-50640 (1982), Fourth Edition, Supplement 2.
3. T. W. Burrows and G. Wyant, "The Bibliography of Integral Charged Particle Nuclear Data," Brookhaven National Laboratory report BNL-NCS-60640 (1981), Fourth Edition, Supplement 1.
4. T. W. Burrows and P. Dempsey, "The Bibliography of Integral Charged Particle Nuclear Data," Brookhaven National Laboratory BNL-NCS-50640 (1980), Fourth Edition (Archival Edition).
5. F. K. McGown and W. T. Milner, Reaction List for Charged-Particle-Induced Reactions. Atomic Data Nuclear Data Reprints 2 (Academic Press, New York, 1974).
6. K. A. Keller, et al., Q-Values and Excitation Functions of Nuclear Reactions. Landholt-Boernstein, Group I, Vol. 5 Parts A-C (Springer-Verlag, Berlin, 1973).

TABLE I
PROTON INDUCED REACTIONS

<u>TARGET</u>	<u>TITLE</u>	<u>REFERENCE</u>	<u>DESCRIPTORS</u>
^{208}Pb	Relativistic vs Nonrelativistic Description of Proton Elastic Scattering in the Energy Range 200-500 MeV	Phys Lett <u>B152</u> , 319(1985) R.Dymarz	optical model, Dirac equation
$^9\text{Be}, ^{12}\text{C}$	Contribution of Quasi-Electric Mechanism to Inclusive Spectra of Light Fragments Emitted to the Back Hemisphere	Bull Acad Sciences USSR, Phys Series <u>47</u> , 2130 (1983) L.I.Galanina, N.S.Zelenskaya	knock-out reactions
C, Pb, Ag	Production Mechanism of Backward Energetic Protons Studied from Two-Particle Correlations in 800 MeV Proton-Nucleus Collisions	Phys Rev <u>C31</u> , 2168 (1985) Y.Miake et al	quasi elastic scattering
$^{27}\text{Al}, ^{197}\text{Au}$ $^6\text{Li}, ^{58}\text{Ni}$ ^{28}Si	Energetic Protons at Large Angles in Coincidence with Gamma Rays	Workshop on Coincident Particle Emission from Continuum States, Bad Honnef, W.Germany, INIS-MF-9280(1984) M.Avan et al	inclusive interactions
^{51}V	$^{51}\text{V}(p,n)^{51}\text{Cr}$ Reaction at $E_p=160$ MeV	Nucl Phys <u>A427</u> , 332,(1984) J.Rapaport et al	neutron spectra
$^{27}\text{Al}, ^{12}\text{C}$ $^{63}\text{Cu}, ^4\text{He}$ $^{208}\text{Pb}, ^{118}\text{Sn}$	Energy Dependence of Nuclear Reaction Cross Sections	Phys Lett <u>B146</u> , 370 (1984) N.H.Wong, J.Huefner	total cross sections
$^{27}\text{Al}, \text{Cu}$	Experimental Study of Direct Knockout of Proton Pairs from Nuclei by 640-MeV Protons	Sov J Nucl Phys <u>40</u> , 17(1984) V.S.Nadezhdin et al	proton spectra
$^{56}\text{Fe}, ^{51}\text{V}$ $^{75}\text{As}, ^{59}\text{Co}$ ^{63}Cu	Systematics of Spallation Yields with a Four-Parameter Formula	Rad Acta <u>35</u> , 121 (1984) M.Foshina et al	spallation
$^{207}, ^{208}\text{Pb}$	Microscopic Analyses of Proton Scattering from Lead	Nucl Phys <u>A426</u> , 496 (1984) L.Rikus, H.V. Von Geramb	optical models

Table I (Cont.)

27Al, 59Co 55Mn, 58Ni 48Ti, 51V	Proton Induced Reactions on Ti, V, Mn, Fe, Co and Ni. Measurement and Hybrid Model Analysis of Integral Excitation Functions and Their Appli- cation in Model Calculation For the Production of Cosmogenic Nuclides	Koeln Univ, W. Germany report INIS-MF--9214 p.165(1983) R.Stueck	knock-out reactions
7Li	Activation Measurements of the 7Li(p,n)7Be Reactions from 60-480 MeV	Phys Rev <u>C30</u> , 1999 (1984) J.D' Auria et al	proton reactions
208Bi	Inclusive Measurement of Quasi-free (p,xn) Charge Exchange Reactions on Bismuth from 62 to 800 MeV	Phys Rev <u>C30</u> , 236 (1984) J.M.D' Auria et al	quasi-free reactions, nuclear cascades
238U	Comparison of High-Energy Fission Models	Nucl Inst Meth <u>222</u> , 540(1984) T.W.Armstrong	cascade theory, fission neutrons
27Al, 197Au, 6Li, 58Ni	200 MeV Proton Scattering on Nuclei, Energetic Proton Analysis at Large Angle	Thesis, Clermont- Ferrand Univ France(1983) G.Chaigne	knock-out reactions, quasi- elastic scattering
58Ni, 16O 28Si, 90Zr	Neutron Deep-Hole States from the (p,pn) Reaction	J de Physique <u>45</u> , 91(1984) J.W. Watson	knock-out reactions
40, 48Ca	Neutron-Knockout Reactions from 2H, 40Ca and 48Ca	Nucl Phys <u>A424</u> , 92 (1984) M.Ahmad et al	knock-out reactions, neutron spectra
12C, 64Cu Pb	Role of the Delta-Resonance in Intranuclear Cascades	Dubna report JINR- R-2-83-768 p.10 (1983) N.S.Amelin	nuclear cascades
27Al, 6Li 197Au, 58Ni 28Si	Energetic Proton Analysis at Large Angle by 200 MeV Proton Scattering on Nuclei: Inclu- sive Spectra; Proton-Gamma Coincidence Spectra	Thesis, Clermont- Ferrand Univ. France(1984) M.Al-Zoubidi	gamma radiation, nuclear cascades
182W	Inelastic Scattering of Inter- mediate Energy Protons from Tungsten	Tenth Nuclear Physics Conf, Can- berra, Aust INIS-MF-9064, p.34 (1984) B.Lay	inelastic scattering

Table I (Cont.)

Al,Ca,Fe Mg	Measurement of Cross Sections for ^{22}Na , ^{20}Ne , ^{22}Ne and ^{36}Ar - ^{42}Ar in the Spallation of Mg, Si, Ca and Fe. Production Ratios of Some Cosmogenic Nuclides in Meteorites	J de Physique <u>45</u> , 855(1984)F.Baros, S.Regnier	spallation
^{40}Ca , ^{56}Fe	Nucleon Optical Potential	Nuovo Cimento <u>81</u> , 250 (1984) P.E.Hodgson	optical models
^{27}Al , ^{58}Ni ^{28}Si , ^6Li	Backward Emission of Energetic Protons	J de Physique <u>45</u> , 25(1984) M.Avan et al	proton interactions, nuclear cascades
^{27}Al , ^{209}Bi ^{58}Ni , ^{90}Zr	New Developments in the Study of Continuum Spectra	J de Physique <u>45</u> , 3(1984)H.Machner	proton reactions, precompound-nucleus, exclusive, inclusive interactions
	Statistical Simulation of Hadron-Nucleus and Light Nucleus-Nucleus Interaction Intranuclear Cascade Model	Gosudarstvennyj Inst. Moscow, ITEF-91(1983) S.Y.Yader et al NTIS #PC A03/MF A01	hadron reactions, nuclear cascades
Bi,Pb	Evaluation of Computational Models for Fission and Spallation Reactions used in Accelerator Breeding and Transmutation Analysis Code	J.Nucl Sci & Tech <u>20</u> , 511(1983) Y.Nakahara	spallation, evaporation, nuclear cascades
^{27}Al , ^{197}Au	Quasi-Free Scattering and Exciton Model Analysis at 200 MeV	Phys Lett <u>B138</u> , 39 (1984) H.Machner et al	quasi-free reactions, inclusive interactions
^{27}Al ^{197}Au , ^6Li	Backward Emission of Energetic Protons	Phys Rev <u>C30</u> , 521 (1984)M.Avan	inclusive interactions
^9Be	Survey of Neutron Energy Spectra and Angular Distributions of the $^9\text{Be}(p,n)^9\text{B}$ Reaction for Fast Neutron Radiotherapy	IAEA report INDC (NDS)--153/L p. 31 (1984) M.Aliab	neutron spectra, charge-exchange reactions
Mo	Medium-Energy Spallation Cross Sections. 2. Mo Irradiation with 800-MeV Protons	Int J Appl.Rad & Iso. <u>34</u> , 1631(1983) P.M.Grant et al	spallation, fragments

Table I (Cont.)

84Kr 107Ag 132Xe	Fragmentation Reactions on Nuclei: Condensation of Vapour or Shattering of Glass	Phys Lett <u>136</u> ,15 (1984) J.Aichelin	proton reactions, inclusive interactions
	Model Predictions of Neutron and Isotope Production from Proton Induced Fission at High Energies	Proc Int Conf on Nuclear Data for Sci & Tech, Antwerp p.391(Sept6-10,1982) T.Armstrong et al	fission, spallation, evaporation model, nuclear cascades
	Inclusive Quasi-Elastic Knockout of Composite Particles at Large Momentum Transfers	Sov J Nucl Phys <u>38</u> ,805(1983) S.G.Kadmenskii, Y.L.Ratis	proton reactions, inclusive interactions
Pb,U	Model Predictions of Differential Neutron Production Cross Sections for Lead and Uranium Bombarded by 590-MeV Protons	Nucl Data Sci & Tech Int Conf Antwerp(Sept6-10,1982) p.387 T.W.Armstrong, D.Filges	proton knockout reactions, spallation
27Al,C,I, Fe,Pb,Nb Ta,U	Differential Neutron Production for 590 MeV Protons	Nucl Data Sci & Tech Int Conf Antwerp(Sept6-10,1982) p.383 S.Cierjacks et al	spallation
12C	Analysis of Results on Elastic Scattering of Intermediate-Energy Protons by Light and Intermediate Nuclei	Sov J Nucl Phys <u>38</u> ,706(1983) N.I.Zaika, V.A. Shityuk	elastic scattering
	Case Study and Progress Report on Microscopic Analyses of Nucleon-Nucleus Scattering up to 400 MeV	Verhandlungen der Deut Phys Gesellschaft(E.Ger.) <u>19</u> ,1047(1984) H.V.Geramb, L.Rikus	nucleon reaction inelastic scattering
	Rapidity Dependence of Entropy Production in Proton- and Nucleus-Induced Reactions on Heavy Nuclei	Phys Rev <u>C29</u> ,1744 (1984) B.V.Jacak et al	heavy ion reaction, heavy nuclei, proton reactions, spallation, statistical models
209Bi 238U	Medium Energy Proton Induced Fission in Uranium-238 and Bismuth-209	U of Ill, Thesis (1983) M.Ali	spallation

Table I (Cont.)

Ag	Inclusive Production of Isotopically Resolved Li through Mg Fragments by 480 MeV p+Ag	Phys Rev <u>C29</u> , 1806 (1984) R.E.L.Green et al	proton reactions, fragmentation, energy spectra, evaporation
40,48Ca	Neutron Knockout Reactions from 40Ca and 48Ca	Thesis, Kent State Univ(1982) M.Ahmad	proton reactions, knock-out reactions
59Co 175Lu 55Mn 51V	Measurement and Hybrid Model Analysis of Integral Excitation Functions of Proton Induced Reactions up to 200 MeV for V, Mn, Co and 45 MeV for Lu	Verhandlungen der Deut Phys Gesellschaft(E.Ger.) <u>19</u> , 1022(1984) F.Peiffer et al	proton reactions, quasi-elastic scattering
Fe, Ni, Ti	Production of Cosmogenic Nuclides in Meteorites by Primary Galactic Particles: Cross Sections and Model Calculations	J.Geophys Res <u>89</u> , B673(1984) R. Michel, R.Stueck	proton reactions
58Ni	Three-Body Approach to the Multiple Scattering Direct Reactions: Pragmatic Application to the 58Ni(p,2p)57Co Continuum	Phys Rev <u>C29</u> , 1289 (1984) G.Cianguaru et al	inclusive reactions
	Neutron Induced Inclusive Light Fragment Production at Intermediate Energies	Proc Int Conf on High Energy Nuc Phys, Balatonfuered, Hungary (June 6-11, 1983) p.133, J.Franz et al	inclusive interactions, proton reactions
16O	Microscopic and Macroscopic Aspects of 135 MeV Proton Scattering from 16O	Nucl Phys <u>A413</u> , 255(1984) K.Amos et al	proton reactions
40Ca 208Pb	Energy Dependence of Nucleon-Nucleus Scattering	Phys Rev <u>C29</u> , 944 (1984) D.A.Sparrow	Dirac equation, impulse approximation

Table I (Cont.)

${}^7\text{Li}, {}^{12}\text{C}$	Comparison of Methods for Determining Neutron Detector Efficiencies at Medium Energies	Nucl Instr & Meth <u>215</u> ,413(1983) J.W.Watson et al	neutron detectors, proton reactions
	Estimation of Secondary Neutron Yield from Heavy Ion Beams	Meeting on Heavy Ion & Light Ion Irradiations, Tokoyo, INS-NUMA-29,p.56(1981) H.Nakamura	proton reactions secondary emission neutron spectra, nuclear cascades
${}^{197}\text{Au}$	Light Particle Correlations in the Framework of the Exciton Coalescence Model	Phys Rev <u>C29</u> ,109 (1984) H.Machner	proton reactions, precompound-nucleus emission
${}^{137}\text{Cs}$ ${}^{90}\text{Sr}$	High Energy Proton Interactions with Sr and Cs: Contribution to the Waste Transmutation Study	Nucl Inst & Meth <u>212</u> ,359(1983) P.Felice et al	computerized simulation,knock-out and proton reactions
${}^{12}\text{C}$	Inclusive (p,p') Reactions at Medium Energies	Phys Lett <u>B129</u> , 379(1983) Y.Tzeng,T.Tamura	proton reactions, inelastic scattering, inclusive interactions
${}^9\text{Be}$	Large-Angle Proton Emission in the ${}^9\text{Be}(p,2p)$ Reaction at 300 MeV	Nucl Phys <u>A405</u> , 463(1983) R.E.L.Green et al	inclusive interactions, proton spectra
${}^{27}\text{Al}$ ${}^{40}\text{Ca}$ ${}^{208}\text{Pb}$ ${}^{90}\text{Zr}$	Imaginary Part of the Nucleon-Nucleus Optical Potential	Zeit fur Physik <u>A313</u> ,99(1983) S.Bhattacharya, S.Kailas	optical models, proton reactions
	Global Features of the Proton-Nucleus Interactions	Proc.Int Symp Nuc Phys,Calcutta Sept 14-16,1977 p. 222, P.P.Singh	proton reactions, energy and gamma spectra
${}^{40}\text{Ca}$	Energy Dependence of the Relativistic Impulse Approximation for Proton-Nucleus Elastic Scattering	Phys Rev <u>C28</u> ,1421 (1983) B.C.Clark et al	impulse approximation
	Simulation Study of Proton Inelastic Interaction with Nuclei in the 50 to 350 MeV Range by Monte Carlo Method	FRNC-TH--1128,p. 107(1982) Toulouse Univ Thesis J.C.Peres	proton reactions, inelastic scattering, nuclear cascades

Table I (Cont.)

232Th 235U 238U	Comparison of the (p,xn) Cross Sections from 238U, 235U, and 232Th Targets Irradiated with 200 MeV Protons	IEEE Trans. Nuc Sci <u>30</u> , 1153(1983) Y.Y.Chu, M.L.Zhou	proton reactions
208Pb	Measurement of the Average Neutron Yield from 250 MeV Protons Absorbed in a Lead Target	Zeit Physik <u>A311</u> , 363(1983) Yu. Ryabov et al	spallation, evaporation model
Ce, Eu 165Ho 159Tb 197Au	190 MeV Proton-Induced Symmetric and Asymmetric Fission	Phys Rev <u>C28</u> , 276 (1983) F.D. Becchetti et al	precompound nucleus emission
Bi, 197Au Ir, 165Ho 169Tm	Yield of Deep Spallation Products of Medium to Heavy Mass Targets Bombarded with 480-MeV Protons	CTOM--44886, p.171 (1979) Simon Fraser Univ, British Columbia, Thesis, H.P.E.Dautet	
27Al, 209Bi 58Ni, 90Zr	Energy and Angular Distribution of Neutrons from 90 MeV Proton and 140 MeV-Alpha Particle Bombardment of Nuclei	Phys Rev <u>C28</u> , 105 (1983) A.M.Kalend et al	proton reactions neutron spectra
28Si	Estimation of the Secondary Particle Production Time in Inelastic Light Nuclei Interactions	Yad Fiz <u>36</u> , 8, 390 (1982) V.M.Dmitriev et al	particle production
40Ca	Nonlocal and Local Equivalent Microscopic Optical Potentials	Phys Rev <u>C27</u> , 2466 (1983) W.Bauhoff	proton reactions, optical models
90Zr	Giant Spin-Isospin Vibrations and the Continuum Spectra from the (p,n) Reaction at Forward Angles	Nuc Phys <u>A395</u> , 189 (1983) T.Izumoto	neutron spectra
40Ca 209Pb	Dirac-Equation Impulse Approximation for Intermediate Energy Nucleon-Nucleus Scattering	Phys Rev Lett <u>50</u> , 1644(1983) B.C.Clark et al	impulse approximation
27Al	Energy Deposition in Intermediate Energy Nucleon-Nucleus Collisions	Phys Rev Lett <u>50</u> , 1648(1983) K.Kwiatkowski	nuclear cascades, precompound nucleus emission
	Inclusive Proton Spectra and Total Reaction Cross Sections for Proton-Nucleus Scattering at 800 MeV	Thesis (1981) U.of Texas, Austin J.A.McGill	impulse approximation, inelastic scattering, proton spectra

Table I (Cont.)

^{58}Ni	Continuum Spectrum in the Quasifree (p,2p) Scattering	Phys Rev <u>C27</u> ,1360 (1983) G.Ciangu et al	quasi-free reactions, pre-compound-nucleus emission
$^{27}\text{Al}, ^{24}\text{Mg}$ $^{60}\text{Ni}, ^{28}\text{Si}$	Proton-Gamma Coincidence Experiment on Medium Mass Nuclei at 400 MeV and Study of Reaction Mechanisms	PCCF-T-81-02 (1981) Clermont-Ferrand Univ. France, Thesis A.Baldir	quasi-elastic scattering, nuclear cascades
$^{27}\text{Al}, \text{C}$ $\text{Cu}, \text{Sn}, \text{Ta}$	Neutron Production from Protons and Deuterons	DL/NUC/TM-60A (1982) Daresbury Lab(UK) report (1982) R.Ryder	spallation, neutron spectra
^{16}O	Simulation of Inelastic Collisions of Light Nuclei	Sov Phys Usp. <u>31</u> , 119(1982) V.M.Dmitriev	inelastic scattering
	Proton-Nucleus Total Inelastic Cross Sections: An Empirical Formula for $E > 10$ MeV	Astrophys J. <u>51</u> , 271(1983) J.R.Letaw et al	inelastic scattering
	Inclusive Charged Particle Spectrum from the Interaction of Nuclei with Intermediate Energy Protons	Thesis(1981) Northwestern U Evanston, IL. T.Chen	heavy nuclei, intermediate, light nuclei, inclusive interactions
$^{40}\text{Ca}, ^{12}\text{C}$ ^{24}Mg	Studies of (p,n) Reactions at Intermediate Energies	Thesis(1980) Kent State Univ Ohio, J.N.Knudson	charge-exchange reactions
	Shell Effect Role in Nucleus Fission by Fast Protons	Sov J Nucl Phys <u>35</u> ,5,1131(1982) M.M.Nesterov et al	fission, energy dependence
$\text{Al}, \text{As}, \text{Br},$ Rb, Y	Cross Sections for Reactions with 593 and 540 MeV Protons in Aluminium, Arsenic, Bromine, Rubidium and Yttrium	Int J Applied Rad and Isotopes(England) <u>33</u> ,9,725 (1982) A.Gruetter	
$^{27}\text{Al}, ^{40}\text{Ca}$ $^{12}\text{C}, ^{208}\text{Pb}$	Real Part of the Nucleon-Nucleus Optical Potential	Zeit fur Physik <u>A309</u> ,325(1983) S.Bhattacharya, S.Kailas	optical models

Table I (Cont.)

$^{27}\text{Al}, ^{208}\text{Pb}$ $^{58}, ^{62}\text{Ni}$	Inclusive Proton Reactions at 164 MeV	Phys Rev <u>C26</u> , 2424 (1982) R.E. Segel et al	inclusive interactions, evaporation model
$^{235}, ^{238}\text{U}$ ^{232}Th	Comparison of the (p,xn) Cross Sections from $^{238}\text{U}, ^{235}\text{U}$, and ^{232}Th Targets Irradiated with 200-MeV Protons	Brookhaven report BNL-32166 (1982) Y.Y.Chu, M.L.Zhou	knock-out reactions
Au	Study of the Pre-Equilibrium Emission Following the Bom- bardment of Nuclei with 200 MeV Protons	Julich report JUEL-SPEZ-146 p.33 (1982) J.P.Didelez	energy spectra
$^{235}, ^{238}\text{U}$	Comparison of High-Energy Fission Models for the HETC Transport Code	Julich report JUEL- CONF-45 Pt 1, p.281, Pt 2, p.299 (1981) Proc 5th Mtg of the Int. Collab on Advan- ced Neutron Sources, T.W.Armstrong et al	fission
$^{233}, ^{238}\text{U}$	Neutron Production Yields and Spectra from 590 MeV Proton Bombardment of Thick Uranium	Julich report JUEL-CONF-45, p.333 (1981) F.Raupp et al	spallation, neutron spectra
	High Energy Particle Spectra from Spallation Targets	Julich report JUEL-CONF-45, p.215 (1981) G.S.Bauer, D.Filges	spallation
Pb	Single Particle Intranuclear "Cascade" and Pion Production	Phys Rev <u>C26</u> , 1558 (1982) D.G.Long, M.M.Sternheim	particle production, nuclear cascades
$^{40}, ^{48}\text{Ca}$	$^{40}\text{Ca}(\text{p,pn}), ^{39}\text{Ca}$ and $^{48}\text{Ca}(\text{p,pn})$ Neutron Knockout Reactions at 149.5 MeV	Phys Rev <u>C26</u> , 961 (1982) J.W.Watson et al	knock-out reactions
$^{27}\text{Al}, ^{24}\text{Mg}$ $^{60}\text{Ni}, ^{28}\text{Si}$	Study of the Reactions of 400 MeV Protons on Intermediate Mass Nuclei by a Proton-Gamma Coincidence Experiment	Nuc Phys <u>A384</u> , 323 (1982) G.Landaud et al	inclusive interactions
C	Quasifree Knockout of Proton Pairs from Carbon	Int Conf High Energy Physics & Nucl Structure Versailles, France (7-6-81) p.560 V.I.Ko- marov, G.E.Kosarev	quasi-free reactions

Table I (Cont.)

${}^6\text{Li}$	Development of Intranuclear Correlations in the Diffractive Scattering Cross Sections of Fast Hadrons by Nuclei	32nd Conf on Nucl Spect and Nucl Structure, Kiev (1982)p.226 V.V.Goryachij et al	inelastic scattering, cluster model
${}^{154}\text{Sm}$ ${}^{176}\text{Yb}$	Microscopic Analysis of Proton Scattering on Deformed Nuclei at Intermediate Energies	9th Int Conf High Energy Physics & Nucl. Structure(1981) p.152 Versailles, France, J.Labarsouque	Glauber Theory
In,Sm Ag,Sn	Anisotropy and Cross Section of Fission of Light Nuclei ($100 < A \leq 150$) by Protons with Energies 155 and 200 MeV	Sov J Nucl Phys <u>35</u> ,328(1982) O.E.Shivaev et al	
Rb,Br	Medium-Energy Spallation Cross Sections. 1. RbBr Irradiation with 800-MeV Protons	Int J Applied Rad & Isotopes <u>33</u> ,41 (1982) P.M. Grant et al	
${}^{58}\text{Ni}$	Effects of Nucleon Correlations and Multi-Step Transitions in Cross Sections of Fast Proton-Nucleus Inelastic Scattering	Yad Fiz <u>34</u> ,9,691 (1981) G.D.Alkhazov	heavy nuclei, intermediate nuclei
Al,Be C,Cu	General Features of Total Hadron-Nucleus Reaction Cross Sections	Rev Phys Acta <u>54</u> ,3,432(1982) H.O.Meyer	proton reactions
${}^{238}\text{U}$	Measurement of Energy Deposited by Charged-Particle Beams in Composite Targets	Lawrence Livermore Lab. report UCRL-52878(1980) E.Farley et al	lucite, polyethylenes, cascade showers
	Elastic Scattering in Intra-nuclear Cascade Model	Dubna report JINR-R-2-81-366 (1981) N.S.Amelin	nuclear cascades
${}^{208}\text{Pb}$ ${}^{90}\text{Zr}$, ${}^{116}\text{Sn}$	Excitation of the Giant-Resonance Continuum with Intermediate-Energy Protons	Phys Rev Lett <u>48</u> , 789(1982) J.M.Moss et al	quasi-free reactions
${}^{62}\text{Ni}$	Particle-Gamma Ray Coincidence Studies on ${}^{62}\text{Ni}$	Indiana U Thesis(1981) J.D.Wiggins,Jr.	gamma spectra

Table I (Cont.)

$^{27}\text{Al}, \text{Cu}$ $\text{In}, \text{Pb}, \text{U}$	Determination of the Differential Cross Section for the Reaction $X(p,n)Y$ Using 800 MeV Proton Bombardment of Al, Cu, In, Pb, and U	Kansas State U Thesis(1980) S.D.Howe	neutron spectra
$^{12}\text{C}, ^{64}\text{Cu}$	Energetic Particles Emitted from Energetic Nuclear Reactions	Zeit fur Physik <u>A306</u> ,177(1982) A.H.Blin et al	inclusive interactions, energy spectra
$^{12}\text{C}, ^{64}\text{Cu}$	Model of Intranuclear Cascade with Account for Resonances	Dubna report JINR-2-80-661 (1980)N.S.Amelin	proton reactions, nuclear cascades
^6Li	Scattering of 136 MeV Protons from ^6Li	Nucl Phys <u>A372</u> , 117(1981) R.S.Henderson et al	inelastic scattering
Pb	Neutron and Charged Particle Production Yields and Spectra from Thick Metal Targets by 590 MeV Protons	Karlsruhe report KFK-3097-B(1980) S.Cierjacks et al	neutron spectra
$^{27}\text{Al}, ^{12}\text{C}$ ^{64}Cu ^{207}Pb	Isobaric Model in Intranuclear Cascade Method	Bull Acad Sci (USSR) <u>45</u> ,1,165 (1981) V.E.Bunakov et al	proton reactions, inclusive interactions
$^{27}\text{Al}, ^9\text{Be}$ $\text{C}, \text{Cu}, \text{Fe}$	Study on the Neutron Yield from Thick Targets under the Action of 645 MeV Protons	Dubna report JINR-18-80-540 (1980) A.Y. Serov et al	neutron emission
Ge	Proton Loss by Nuclear Inelastic Interactions in Germanium	Nucl Instr & Meth <u>188</u> ,465(1981) R.F.Carlson et al	inelastic scattering
^{107}Au	Self-Consistent Method for Calculating the Evaporation of Heavy Fragments Following Energetic Initial Reactions	Nucl Instr & Meth <u>185</u> ,195(1981) E.L.Green. R.G.Korteling	evaporation model, compound-nucleus reactions
^{40}Ca	Model Independent Optical Potential for Protons at 155 MeV	Zeit fur Physik <u>A300</u> ,247(1981) I.Brissaud	optical models
^{238}U	Analysis of the Yield of Neutrons Produced by High-Energy Protons	Sov At Energy <u>50</u> , 150(1981) V.S.Barashenkov, S.Y.Shmakov	nuclear reaction yield, gamma radiation

Table I (Cont.)

Pb	Angular and Depth Dependent Neutron Yields and Spectra from 590 MeV (p,n) Reactions in Thick Lead Targets	Proc 5th All-Union Conf Neutron Physics, p.269(1980) S.Cierjacks	charge-exchange reactions
${}^6\text{Li}$	Quasifree A(p,p,d)B Large-Angle Scattering at Intermediate Energies	J of Physics <u>G7</u> , 1045(1981) L.Vegh	quasi-free reactions, knock-out reactions
	Probability of Nuclear Fission by Intermediate Energy Particles	Yad Fiz <u>32</u> ,322 (1980) A.S.II'Inov et al	fission,cascade theory
Al,Be,C Cu	Two-Particle Differential Cross Sections of Proton Emission in Proton-Nucleus Interactions at 640 MeV	Yad Fiz <u>32</u> ,313 (1980) V.I.Komarov	cascade theory
${}^{12}\text{C}$	Proton-Proton Correlations in High Energy Nuclear Collisions	Phys Lett <u>B103</u> ,264 (1981) J.Knoll, J.Randrup	inclusive interactions, cascade theory
${}^{58,60}\text{Ni}$	Elastic and Inelastic Scattering of 178 MeV Protons from ${}^{58}\text{Ni}$ and ${}^{60}\text{Ni}$	Nucl Phys <u>A365</u> ,426 (1981) A.Ingemarsson et al	elastic and inelastic scattering
${}^{27}\text{Al}, {}^{58}\text{Ni}$ ${}^{208}\text{Pb}$	Quasi-Free Proton-Scattering at 164 MeV	Phys Lett <u>B103</u> ,192 (1981) T.Chen et al	quasi-free reactions
${}^{232}\text{Th}$ ${}^{235,238}\text{U}$	Main Aspects of Proton Linear Accelerators for Nuclear Fuel Production	Proc 6th All-Union Conf Charged Particles Accelerators V.1, p.241(1979) B.P.Murin, A.P.Fedotov	linear accelerators
${}^{181}\text{Ta}$	Neutron Production by Protons (190 to 268 MeV) in a Water-Cooled Tantalum Target	Oak Ridge report ORNL/TM-7949(1981) R.G.Alsmiller et al	neutron spectra
${}^{209}\text{Bi}$ ${}^{197}\text{Au}$	Studies of Intermediate Energy Fission	Thesis(1980) S.Fraser Univ. (BC) D.M.G. Dzuetet	
${}^{12}\text{C}, {}^{35}\text{Cl}$ ${}^{63}\text{Cu}, {}^{19}\text{F}$ ${}^{208}\text{Pb}$	One- and Two-Proton Inclusive Spectra in 800 MeV Proton-Nucleus Collisions and the Mean Free Path of Protons in Nuclei	Phys Lett <u>B100</u> ,121 (1981) I.Tanihata et al	inclusive interactions

Table I (Cont.)

C,Pb	Hadron Cascades in Thick Materials Pt.1 Monte-Carlo Method for Simulation of Cascades	Nucl Inst & Meth <u>179</u> ,77(1981) M.Nieminen, J.J. Torsti	knock-out reactions, neutron spectra
^{27}Al ^{181}Ta	Proton-Inclusive Cross Sections from 500 MeV Proton-Nucleus Reactions	Nucl Phys <u>A352</u> , 485(1981) K.R.Cordell	inclusive interactions
	Study on the Secondary Radiation Field behind the Lead Absorber Exposed to the 640 MeV Proton Beam	Dubna report JINR-R-16-12765(1979) A.Y.Serov et al	nuclear cascades, proton spectra
Au,Ho,Re Ta,Tl	Yield of Deep Spallation Products of Medium to Heavy Mass Targets Bombarded with 480 MeV Protons	Can J Phys <u>58</u> ,891 (1980) H.Dautet et al	spallation
Ce,Yb	Mass Distributions in the Fission of Medium-Heavy and Light Nuclei	Phys Rev <u>C24</u> ,769 (1981) H.Gustafsson et al	fission
C,N,O	Specific Features of Quasi-Elastic Knock-Out of Slow($E <$ or approximately 10 MeV) Protons from C, N, O Nuclei by High Energy Protons	Yad Fiz <u>31</u> ,569 (1980) A.A.Levkovskii, E.F. Dreiman	proton spectra, quasi-elastic scattering
^{12}C	$^{12}\text{C}(p,n)^{12}\text{N}$ Reaction at 120, 160, and 200 MeV	Phys Rev <u>C24</u> ,335 (1981) J.Rapaport et al	impulse approximation
^{238}U	Delayed-Neutron Fraction in a Pulsed Spallation Neutron Source	Nucl Instr & Meth <u>175</u> ,287(1980) J.M.Carpenter	spallation
	Two-Particle Differential Cross Sections for Proton Emission in Proton-Nucleus Interactions at 640 MeV	Sov J Nucl Phys <u>32</u> ,161(1980) V.I.Komarov et al	inelastic scattering, quasi-free reactions, cascade theory
	Test of Models for Inclusive Production of Energetic Light Fragments at Intermediate Energies	Phys Rev <u>C23</u> ,2788 (1981) D.H.Boal et al	evaporation model,inclusive interactions
	Mechanisms for (p,p') Reactions in the Continuum	Phys Lett <u>B91</u> ,169 (1980) J.R.Wu	inelastic scattering, proton spectra

Table I (Cont.)

La	Calculation of Spallation Yields: Application to the Spallation of Lanthanum Induced by 600 MeV Protons	Phys Rev <u>C23</u> ,2129 (1981) G.Rudstam, E.Hagebo	evaporation model, nuclear cascades
⁴⁰ Ca	Dirac Optical Model Analysis of ⁴⁰ Ca Elastic Scattering at 180 MeV and the Wine-Bottle-Bottom Shape	Phys Rev <u>C23</u> ,1949 (1981) L.G.Arnold et al	elastic scattering, Dirac equation
²⁰⁹ Bi ²⁰⁷ Pb ²³⁹ Pu	Nuclear Fission Induced by High Energy Protons	Dubna report JINR-E-1-12902 (1979) V.S.Barashenkov et al	neutron spectra, nuclear cascades
²⁷ Al ¹⁸¹ Ta	High Energy Proton Production in Medium Energy Nuclear Reactions	U of Virginia Thesis(1979) K.R.Cordell	
Ni,Ta	Inclusive Scattering of Protons on Helium,Nickel, and Tantalum at 500 MeV	Phys Rev <u>C23</u> ,1670 (1981) G. Roy et al	inclusive interactions
U,Pb ²³² Th	Neutron Production in Thick Targets of Lead,Thorium and Uranium Bombarded by 480 MeV Protons	Brookhaven report BNL-NCS-51245(Vol.1) p.155(1980) J.S.Fraser et al	spallation
²³⁸ U	Fission Reaction in High Energy Proton Cascade	Brookhaven report BNL-NCS-51245 p.133(1980) H.Takahashi	nuclear cascades
Pb	Neutron Yields and Spectra from 590 MeV (p,n) Reactions on Lead Targets	Brookhaven report BNL-NCS-51245 p.201(1980) S.Cierjacks et al	neutron spectra, nuclear cascades
²³⁵ , ²³⁸ U	Phenomenological Model for Particle Production from the Collisions of Nucleons and Pions with Fissile Elements at Medium Energies	Oak Ridge report ORNL/TM-7528(1981) F.S.Alsmiller	spallation
²³⁸ U	Spallation and Fission in Heavy Metal Nuclei under Medium Energy Proton Bombardment	Julich Mtg. on Targets for Neutron Beam Spallation Sources JUEL-CONF-34,p.17 (1980) F.Archison	spallation, neutron spectra

Table I (Cont.)

40Ca 208Pb 90Zr	Elastic Scattering of 80-180 MeV Protons and the Proton-Nucleus Optical Potential	Phys Rev <u>C23</u> ,1023 (1981) A.Nadasen	optical models
Pb	Neutron Production by Spallation in Heavy Metal Targets: Experiments and Calculation	Julich Mtg. on Targets for Neutron Beam Spallation Sources JUEL-CONF-34,p.(1980) P.Garvey	neutron spectra, spallation
27Al,Ni	Differential Production Cross-Sections of Multiply Charged Fragments in 800 MeV Proton-Induced Spallation of Carbon, Aluminum, and Nickel	Wash. State U Thesis (1978) S.C.Luckstead	spallation
Ag	Fragment Production from p+Ag Interactions at Intermediate Energies	Phys Rev <u>C22</u> ,1594 (1980) R.E.Green, R.G.Korteling	energy spectra, evaporation model
58,62Ni	Recoil Ranges of Nuclei Produced in the Interaction of 80-164 MeV Protons with Ni	Phys Rev <u>C22</u> ,1443 (1980) J.Jastrzebski et al	compound-nucleus reaction, gamma spectra, nuclear cascades
27Al 40Ca,12C 208Pb	Microscopic Description of Nucleon-Nucleus Total Reaction Cross Sections	Phys Rev Lett <u>45</u> , 527(1980) N.J.Digiacomo et al	compound-nucleus reactions
175Lu	Pre-Equilibrium Process for 175Lu(p,xn gamma), 176Yb(3He, xn,yp gamma)and 174,176Yb (alpha,xn gamma) Reactions	Phys Rev <u>C22</u> ,1002 (1980) H.Sakai et al	precompound-nucleus emission
139La 159Tb	Medium Energy Proton Induced Fission in Tb,La and Ag	Zeit fur Physik <u>A293</u> ,241(1979) G.Andersson et al	evaporation model
12C	Do Quasifree Reaction Mechanisms Explain Reaction Cross Sections in Intermediate-Energy Proton-Nucleus Scattering	Phys Rev Lett <u>24</u> , 1579(1980) Y.Alexander et al	quasi-free reactions

Table I (Cont.)

^{28}Si	Germanium Charged Particle Telescopes with Ultra-Thin Detector Contacts	Nucl Instr Meth <u>164</u> ,121(1979) G.S.Hubbard, E.E.Haller	high-purity GE detectors
	Use of A Ge(Li) Gamma Detector Near A 400 MeV Intense Proton Beam in a p-Gamma Coincidence Experiment	Nucl Instr Meth <u>165</u> ,409(1979) C.Lebrun et al	Li-drifted Ge detectors, prompt gamma radiation
^{197}Au	Cross-Section Measurements of Nuclides Formed by the Reaction of 0.20 - 6.0 GeV Protons with ^{197}Au	Phys Rev <u>C22</u> , 167 (1980) S.B.Kaufman, E.P.Steinberg	spallation
^{40}Ca ^{12}C	Scattering and Reaction Cross Sections Measured at SPESI	J de Physique <u>40</u> ,635(1979) G.Bruege	data compilation deuteron, alpha reactions
$^{27}\text{Al}, ^9\text{Be}$ C, Pb	Proton-Nucleus Interactions at 640 MeV Accompanied by Backward Emission of Energetic Protons	Nucl Phys <u>A326</u> ,297 (1979) V.I.Komarov et al	quasi-elastic scattering
^{209}Bi ^{238}U	Solid State Detectors of Fission Fragments for the Rem-Dose Measurement of Mixed and Proton and Neutron Radiation	Health Physics <u>37</u> , 677(1979) M.F.Lomanov et al	
$^{58,60}\text{Ni}$ ^{62}Ni	Interaction of 80 - 164 MeV Protons with Nickel Isotopes	Phys Rev <u>C21</u> ,2303 (1980) R.E.Segel	compound-nucleus reactions, gamma spectra
$^{58,60}\text{Ni}$	Mechanism of Nucleon Removal from Medium Mass Nuclei Induced by 80 to 164 MeV Protons	Thesis(1977) Indiana U M.E.Sadler	precompound-nucleus emission, nuclear cascades
	Particles and Gamma Rays Following Preequilibrium and Equilibrium Reaction Processes	Osaka Univ (Japan report) RCNP-P-21 p.83 (1978) H.Ejiri et al	precompound-nucleus emission

Table I (Cont.)

^{12}C	Inclusive Differential Cross Sections for Proton Production in Proton-Nucleus Interactions in the Model of Coherent Fluctons	Dubna report JINR-R-4-12207 (1979)(Russian) A.N.Antonov et al	particle production, inclusive interactions
	Neutron Formation from ^7Li , ^{10}B , ^{11}B , ^{12}C , ^{16}O , ^{19}F , $^{24,25,26}\text{Mg}$, ^{27}Al , $^{40,44}\text{Ca}$, $^{116,124}\text{Sn}$, ^{181}Ta , ^{208}Pb Nuclei with 1 GeV Protons	JETP Lett <u>30</u> ,86 (1979) V.N.Baturin et al	light nuclei, knock-out reactions, quasi-elastic scattering, neutron spectra
^{27}Al , ^{40}C ^{12}C , ^6Li	Proton Spectra from 800 MeV Protons on Selected Nuclides	Phys Rev <u>C21</u> ,1014 (1980) R.E.Chrien et al	inclusive interactions
^{12}C	Elastic and Inelastic Scattering of 185 MeV Protons from ^{12}C	Nucl Phys <u>A319</u> , 377(1979) A.Ingemarsson et al	inelastic, elastic scattering, optical models
^{12}C , ^6Li ^{14}N	Determination of the Optical Potential for Elastic Proton Scattering on ^6Li , ^{12}C , and ^{14}N at 144 MeV	Phys Rev <u>C21</u> ,25 (1980) G.L.Moake, P.T.Debevec	optical models
^{238}U	Neutron Multiplication in Uranium Bombarded by 300-600 MeV Protons	Sov At Energy <u>44</u> , 329(1978) R.G.Vasil'kov et al	fission
Br,C,N O,Ag	Scaling in Multiplicity Distributions of Heavy, Black and Grey Prongs in Nuclear Emulsions	Physica Scripta <u>19</u> ,307(1979) M.Nieminen et al	multiplicity
^9Be , ^{12}C	Proton Total Cross Sections on ^1H , ^2H , ^4He , ^9Be , C and O in the Energy Range 180 to 560 MeV	Nucl Phys <u>A316</u> ,317 (1979) P.Schwaller et al	total cross sections
^{181}Ta	Neutron Spectrum at 900 from 800 MeV (p,n) Reactions on a Ta Target	Los Alamos report LA-UR-79-3201(1979) S.D. Howe et al	neutron spectra
^{238}U	Calculated Particle Production Spectra and Multiplicities from Nucleon-Fissile Element Collisions at Medium Energies	Int Conf Nuclear Cross Sections for Technology, Knoxville, CONF-791058(1979) F.S.Alsmiller et al	nuclear cascades, statistical models

Table I (Cont.)

^{12}C	Inclusive Double Differential Cross Sections for Backward Emitted Protons in Proton-Nuclei Interactions at 640 MeV	Dubna report JINR-E-1-11513 (1978) V.I.Komarov et al	energy spectra
$^9\text{Be}, ^6\text{Li}$ ^{181}Ta	Cluster Recoil Mechanism for Inclusive Nuclear Reactions	Nucl Phys <u>A306</u> , 333 (1978) R.M.Woloshyn	inelastic scattering
^{238}U	Analysis of Neutron Yield Produced by High Energy Protons	Brookhaven report BNL-26805(1979) H.Takahashi, Y.Nakanara	evaporation model, spallation
^{209}Bi ^{197}Au $^{206}, ^{207}\text{Pb}$ $^{208}\text{Pb}, \text{Sm}$ ^{232}Th ^{235}U	Determination of Fission Cross Sections of ^{238}U , ^{235}U , ^{232}Th , ^{209}Bi , ^{208}Pb , ^{197}Au , ^{181}Ta , Yb and Sm Nuclei by 1 GeV Protons	Yad Fiz <u>28</u> , 572 (1978) B.A.Bochagov et al	
$^{27}\text{Al}, ^{12}\text{C}$ $^{63}\text{Cu}, \text{Ge}$ ^{56}Fe ^{208}Pb ^{16}O	Proton-Nucleus Total Cross Sections in the Intermediate Energy Range	Phys Rev <u>C20</u> , 1857 (1979) L.Ray	total cross sections
^{40}Ca $^{56}\text{Fe}, ^{58}\text{Ni}$ ^{16}O	Phenomenology of Proton Elastic Scattering and Evidence for Angular-Momentum-Dependent Optical-Model Potentials	J of Phys <u>G5</u> , 97 (1979) A.M.Kobos, R.S.MacKintosh	optical models
Ag	Study of Highly Excited Nuclei from 300 MeV p on Ag by Use of Heavy Fragment Evaporation Yields	AIP Conf Proc. <u>47</u> , 672(1978) R.E.L.Green, R.G.Korteling	spallation, evaporation model
^{27}Al	Analysis of the Nucleons Ejected in a Quasi-Elastic Scattering (p,p,gamma) at 400 MeV	J de Physique <u>3</u> , 138(1978) C. Lebrun et al	quasi-elastic scattering, gamma radiation
	Phenomenology of Nuclear Inclusive Reactions	AIP Conf Proc <u>47</u> , 457(1978) R.M.Woloshyn	knock-out reactions, inelastic scattering

Table I (Cont.)

$^{27}\text{Al}, ^{58}\text{Ni}$ ^{90}Zr	Medium Energy Nuclear Reactions: "Quasi-Two-Body Scaling" and "Hot Spots"	Phys Rev <u>C2</u> , 1079 (1979) N.S.Wall et al	compound-nucleus reactions, energy spectra
^{238}U	Spallation Neutron Sources for Neutron Beam Research	Contemporary Phys <u>19</u> , 505 (1978) G.Manning	spallation
	Measurements and Calculations of Reaction Losses of Medium-Energy Protons in NAI Detectors	Nucl Instr Meth <u>153</u> , 511 (1978) C.A.Goulding, J.G.Rogers	NAI detectors, energy losses
Al, Fe ^{238}U Lucite	Thick-Target Neutron and Gamma Ray Yields Induced by Medium-Energy Proton and Deuteron Bombardments	Lawrence Livermore Nat Lab report UCID-18086 (1979) J.A.Becker et al	gamma radiation
^{232}Th ^{238}U	Breeding Nuclear Fuel With Accelerators: The Electro-nuclear Method. Nuclear Physics Aspects	Sov J Particles & Nuclei (U.S.) <u>9</u> , 452 V.S.Barashenkov (1978)	
	Analysis of Nuclear Fissility for Intermediate-Energy Proton Induced Reactions	Zeit fur Physik <u>A287</u> , 37 (1978) A.S.Ilinov et al	fission, evaporation, precompound-nucleus emission
Yb	Observation of the Effect of Central Collisions Leading to Formation of a Compound Nucleus in Interaction of 200-MeV Protons with Nuclei	Sov J Nucl Phys <u>27</u> , 751 (1978) O.E.Shigaev et al	heavy nuclei, compound nuclei
^{208}Pb ^{58}Ni ^{120}Sn ^{90}Zr	Elastic Scattering of 100 MeV Protons and Systematic Optical Model Analysis	Nucl Phys <u>A301</u> , 349 (1978) K.Kwiatkowski, N.S.Wall	optical models
$^{40,42}\text{Ca}$ $^{12}\text{C}, ^{208}\text{Pb}$ ^{58}Ni	Microscopic Approaches to the Intermediate Energy Nucleon-Nucleus Optical Potential	U of Texas Thesis (1977) R.L.Ray	optical models
Sm, Yb	L-Shell X-Ray Production Cross Sections Due to ^1H , ^4He , and ^7Li Ion Bombardment of Selected Thin Rare Earth and Pb Targets	North Texas State U, Thesis (1978) G.M.Light	x-radiation

Table I (Cont.)

U	Analysis of Neutron Yield Produced by High-Energy Protons	Trans Am Nucl Soc <u>30</u> ,739(1978) Y.Nakahara, H.Takahashi	evaporation models, spallation
^{27}Al , ^{12}C Ni	Differential Production Cross Sections of Multiply Charged Fragments in 800 MeV Proton-Induced Spallation of Carbon, Aluminum, and Nickel	Los Alamos report LA-7464-T(1978) Thesis S.C.Luckstead	spallation, evaporation model
	Low-Energy Particles in Nuclear Reactions Produced by Nuclei with Energies of 0.1-1 GeV/Nucleon	Sov J Nucl Phys <u>27</u> ,69(1978) S.D.Bogdanov V.I.Ostroumov	nuclear emulsions
^{27}Al , ^{40}Ca ^{12}C , ^6Li ^7Li , ^{24}Mg	Quasielastic Knockout of Alpha Clusters from Light and Medium Nuclei by 600 MeV Protons	Phys Rev <u>C18</u> , 1776 (1978) G.Laudaud et al	knock-out reactions
^{209}Bi ^{238}U	Nucleon Losses by Uranium and Bismuth Nuclei at High-Energy Fission	JETP Lett <u>27</u> ,309 (1978) V.E.Shashmin	fission
^{27}Al , Cu Pb, Ti, W U	Systematics of ^{90}Zr Neutron Production by 800 MeV Protons on Targets with $27 < A < 238$	Phys Rev <u>C18</u> ,1418 (1978) B.E.Bonner et al	charge-exchange reactions, neutron spectra
Ca, ^{208}Pb Si, ^{90}Zr	Elastic Scattering of 80-160 MeV Protons from ^{208}Pb , ^{90}Zr , Ca and Si Targets	Indiana U Thesis(1977) A.Nadasen	optical models
	Backward-Pick-Up Reactions for Inclusive Spectra of Energetic Deuterons at 1800 in Proton-Nucleus Collisions	Phys Lett <u>B72</u> ,16 (1977) T.Fujita	backscattering, pickup reaction
^{27}Al , ^9Be $^{10,11}\text{B}$, ^{12}C	Inelastic Scattering of High-Energy Particles from Light Nuclei and Cluster Structure of Nuclei	Yad Fiz <u>25</u> ,3(1977) V.V.Avdeichikov et al	spallation
C, ^6Li ^{181}Ta	1800 Production of Protons in High-Energy p, d, and Alpha Reactions in Nuclei	Phys Lett <u>B71</u> ,79 (1977) H.Brody et al	

Table I (Cont.)

$^{40}\text{Ca}, ^{12}\text{C}$	Determination of the Penetration Range with the Aid of Total Cross Sections of Protons, Pions, and Alpha Particles Between 200 MeV and 2 GeV	J Plasma Phys <u>3</u> , 1497(1977) I.Brissaud	total cross sections
$^{27}\text{Al}, ^9\text{Be}$ $^{12}\text{C}, \text{Pb}$	Inclusive Spectra and the Angular Distribution of Protons Emitted Backwards in the Interaction of 640 MeV Protons with Nuclei	Phys Lett <u>B69</u> ,37 (1977) V.I.Komarov et al	inclusive interactions
^{27}Al	High Energy (E less than or equal to 1000 GeV) Intranuclear Cascade Model for Nucleons and Pions Incident on Nuclei and Comparisons with Experimental Data	Oak Ridge report ORNL/TM-5710(1977) H.W.Bertini et al	nuclear cascades
$^{197}\text{Au}, \text{Ag}$ ^{181}Ta	Cross Section Measurements of High Energy Proton Induced Reactions in Gold, Tantalum and Silver Targets	Inorg & Nucl Chem Lett <u>13</u> ,205(1977) S.Kraemer et al	
	"Correlated Clusters" and Inclusive Spectra of Energetic Protons at 1800 in Proton-Nucleus Collisions	Phys Rev Lett <u>39</u> , 174(1977) T.Fujita	inclusive interactions, backscattering
^9Be	Neutron Spectra at 00 Degrees from 83.7-MeV Deuterons and 100.2-MeV Protons on Beryllium	Medical Physics <u>4</u> , 322(1977) R.Madey et al	neutron spectra
	Maxwell Distribution and Mass Motion in p-Nucleus Reactions	Phys Rev <u>D15</u> ,2533 (1977) T.F.Hoang	inelastic scattering, Boltzmann statistics
^{16}O	Gamma Spectrometry with High Energy Protons	Saclay report CEA-N-1861(nd) J.P.Alard et al	prompt gamma radiation
$^{59}\text{Co}, ^{56}\text{Fe}$ ^{58}Ni	Systematics in the Interaction of Intermediate-Energy Protons with Medium-Mass Nuclei	Phys Rev Lett <u>17</u> , 950(1977) M.Sadler et al	precompound-nucleus, gamma spectra
	Calculation of the Nuclear Reaction Cross Sections with an Intranuclear-Cascade Model	Japan Atomic Research Institute report JAERI-M-6306 (1975) S.Baba	heavy nuclei, Monte Carlo method, nuclear cascades

Table I (Cont.)

$^{27}\text{Al}, ^9\text{Be}$ C,Pb	Proton and Deuteron Double Differential Cross Sections at Angles from 10 Deg to 60 Deg from Be, C, Al, Fe, Cu, Ge, W, and Pb Under 558-MeV- Proton Irradiation	NASA report NASA- TN-D-8119(1976) S.M.Beck, C.A.Powell	proton reactions, quasi-elastic scattering
$^9\text{Be}, ^{12}\text{C}$ ^{27}Al	Neutron Spectra at Zero Degrees from Proton Bombard- ment of Light Nuclei at Medium Energies	Univ of New Mexico Thesis(1975) C.G.Cassapakis	charge-exchange reactions
$^9\text{Be}, \text{C}, \text{Li}$	Production of Fast Fragments by Bombarding Light Nuclei with Intermediate-Energy Protons	Nucl Phys <u>A256</u> ,362 (1976) V.I.Komarov et al	quasi-elastic scattering
$^9\text{Be}, ^{12}\text{C}$ ^{27}Al	Neutron Spectra at 0° from (p,n) Reactions on ^9Be , ^{12}C , and ^{27}Al at 647 and 800 MeV A Two-Parameter Scintill- ation Spectrometer System for Measurement of Secondary p, d, t Distributions from Materials under 558 MeV Proton Irradiation	Phys Lett <u>B63</u> ,35 (1976) C.G.Cassapakis et al NASA report NASA- TN-D-7925(1975) S.M.Beck	charge-exchange reactions, neutron spectra time of flight spectrometer
$^{27}\text{Al}, ^{45}\text{Sc}$ Ti, ^{51}V , Fe	Recoil Properties of Spallation Products from Bombardment of Z=13-29 Targets with 150, 300, and 600 MeV Protons	Nucl Phys <u>A260</u> , 369(1976) M.Lagarde- Simonoff et al	spallation
^6Li	Elastic and Inelastic Scattering of 185 MeV Protons from ^6Li Monte-Carlo Evaporation Calculations for the Inter- pretation of Isotope Yield Distribution in High Energy Nuclear Reactions	Zeit fur Physik <u>A275</u> ,169(1975) M.Y.M.Hassan et al Marburg U,Germany Thesis(1974) G.Stark	impulse approximation heavy nuclei, intermediate mass nuclei, evaporation model, Monte- Carlo method, Weisskopf Model
^{90}Zr	Systematic Study of Proton- and Alpha-Induced Simple Reactions	Carnegie-Mellon U Thesis(1976) M.A.Yates	knock-out reactions

Table I (Cont.)

27Al,C Cu,Fe	Interlaboratory Comparison of Spallation-Reaction Cross Sections for Iron and Copper with 590-MeV Protons	J Inorg & Nucl Chem <u>38</u> ,13(1976) C.J. Orth et al	spallation
U gypsum	Spectrum and Shielding Measurements and Calculations of Neutrons Produced by 800 MeV Protons	Proc on Nucl Cross Sections & Tech, Washington,DC,NBS- Spec Pub <u>425</u> ,476 (1975) L.R.Veeser et al	neutron emission
27Al,Mo La,V	Spallation Cross Sections and the LAMPF Medical Radioisotope Program	NBS Spec Pub <u>425</u> , 492(1975) B.R.Erdal et al	spallation
40Ca,208Tl 20Ne,58Ni 154Sm	Effective Nucleon-Nucleon Forces and Description of Continuous and Discrete Spectra in Semimicroscopic Approach	34th Conf on Nucl Spect & Nucl Struct.,Alma-Ata, USSR,INIS-SU-282 p.424(1984) O.M.Knyaz'kov et al	proton reaction
120Sn	Analysis of a Multistage Mechanism of the (p,p') Reaction in the Quasi Particle-Phonon Model of a Preequilibrium Decay	34th Conf on Nucl Spect & Nucl Struct.Alma-Ata, USSR,INIS-SU-282, p.302(1984)A.K.Deb et al	precompound- nucleus emission
56Fe,60Ni	Energy Spectra of Particles with $Z < 2$ From The ^{60}Ni , ^{62}Cu and ^{64}Zn Intermediate System Decay	Bull Acad of Sciences,Phys. Series <u>48</u> ,1006 (1984)N.T.Burtebaev et al	precompound- nucleus emission, energy spectra
54Fe,58Ni	Effect of the First Stage of Multistep Direct Pro- cesses at the Energy of the Order of 100 MeV	Bull Acad of Sciences,Phys. Series <u>47</u> ,2224 (1983)F.A.Zhivo- pistsev et al	direct reactions, precompound- nucleus emission
6,7Li	Energy Spectra and Angular Correlation Functions of Charged Particles from the $^6\text{Li}(p,pd)$ and $^7\text{Li}(p,pt)$ at the Incident Proton Energy of 70 MeV	34th Conf on Nucl Spect & Nucl Struct,Alma-Ata, USSR,INIS-SU-282 p.290(1984) M.V.Pasechnik et al	quasi-elastic scattering, proton spectra
59Co 56,57Fe	Proton Pre-Equilibrium Spectra from Decay of the Composite System ^{60}Ni	3rd Int Symp on Neutron Induced Reactions,p.335 (1982) Smolenice, Czech. A.D.Duisebaev et al	precompound- nucleus emission

Table I (Cont.)

^{59}Co	Pairing and Shell Effects in (p,xn) Pre-equilibrium Emission	Workshop on Coincident Particle Emission from Continuum States, Bad Honnef(W.Germany)INIS-MF-9280 (1984)M.Blann et al	intermediate mass nuclei, precompound-nucleus emission, inclusive interactions, neutron spectra
^9Be	One- and Two- Neutron Pick-Up Reactions Induced by Protons Interacting with ^9Be	Yad Fiz <u>39</u> ,1081 (1984) N.I.Zaika et al	pickup reactions
$^{12}\text{C}, ^{24}\text{Mg}$ ^{28}Si	Inelastic Scattering of 65 MeV Protons from ^{12}C , ^{24}Mg , and ^{28}Si , and ^{32}S	Phys Rev <u>C31</u> ,1616 (1985) S.Katoic et al	elastic and inelastic scattering
^{152}Sm	Levels in ^{149}Eu from the (p,4n gamma) Reaction	Nuovo Cimento <u>A82</u> ,253(1984) G. Lo Bianco et al	electron spectra, gamma spectra, k conversion
^6Li	Evidence for Multistep Processes in Proton Capture Reactions	Phys Rev <u>C31</u> ,660 (1985) H.J.Hausman	capture
	Reaction of (p,pn) on Lithium Isotopes at the Proton Energy of 70 MeV	34th Conf on Nucl Spect & Nucl Struct,Alma-Ata, USSR,INIS-SU-282, p.282(1984) O.K.Gorpinich et al	energy spectra
^9Be	One-Neutron and Two-Neutron Pickup in Interaction of Protons with ^9Be	Yad Fiz <u>39</u> ,682 (1984)N.I.Zaika et al	one-nucleon transfer reactions, pickup reactions
$\text{Th}, ^{233}\text{U}$	Linear Momentum Transfer in Intermediate-Energy Projectile-Nucleus Collisions	3rd Winter Workshop on Nuclear Dynamics, Copper Mtn.,Co. CONF-8403101 pp.126-130(1984)K.Kwiatkowski et al	nuclear cascades
^{209}Bi $^{54}\text{Fe}, ^{120}\text{Sn}$	Contribution of One- and Two- Step Processes to Inclusive (p,d) Reactions	Nucl Phys <u>A424</u> ,1 (1984) A.O.Gattone et al	deuteron spectra, inclusive interactions
$^{118}\text{Sn}, ^{90}\text{Zr}$	Mechanism of the (p,alpha) Reaction: Pick-Up or Knock-Out	Zeit fur Physik <u>A318</u> ,145(1984) E.Gadioli et al	knock-out reactions

Table I (Cont.)

27Al, 58Ni	"One, Two, Infinity" Model for Precompound Reaction and Nuclear Size Effect	Chinese Physics 4, 636(1984) Ji-Zhi Pan, Huan-Cheng Chiang	precompound-nucleus, neutron spectra
93Nb	Analysing Power of Neutron Continuum Spectra for the 93Nb(p,nx) Reaction at 65 MeV	J De Physique (Paris) 45, 31(1983) H.Sakai et al	inelastic scattering, neutron spectra
209Bi 197Au	Extension of the Generalized Exciton Model and Calculations of (p,p') and (p,alpha) Angular Distributions	Nucl Phys A419, 472 (1984) A.Iwamoto, K.Harada	inelastic scattering, pickup reactions, precompound-nucleus emission
90Zr	DWBA Description of the 90Zr(p,d)89Zr Reaction at Energies from 20 MeV to 185 MeV	Phys Lett B137, 334 (1984) P.W.F.Alons et al	proton-neutron interactions, one-nucleon transfer reactions
116,118Sn 122Sn	Analysis of (p,p), (p,n), and (n,n) Scattering on the Even Tin Isotopes Using the Lane Coupled Equations	Phys Rev C29, 1710 (1984) C.Wong et al	charge-exchange reactions
12C 16O	Intranuclear Cascade and Fermi Breakup Calculations of 1H- and 4He-Induced Reactions On Light Target Nuclei	Phys Rev C29, 1606 (1984) A.Goekmen et al	breakup reactions, nuclear cascades
9Be	Comparison of the Neutron Fields Produced by 50 MeV Deuterons and 65 MeV Protons on 9Be at the Louvain-La-Neuve Cyclotron	Int Conf Nuclear Data for Sci & Tech Antwerp,Belgium Sept 6-10(1982) J.P.Meulders et al	neutron sources
48,50Ti	48Ti and 50Ti (p,xpyn) Excitation Functions Induced by Protons from 5-85 MeV. Comparison with Pre-Equilibrium Calculations	McGill Univ, Montreal, Canada Thesis(1979) K.I.W.Burns	quasi-elastic scattering
C,Cu,Pb	Neutron and Photon Production from Thick Targets Bombarded by 30-MeV p, 33-MeV d, 65-MeV 3He, and 65-MeV Alpha Ions: Phenomenological Analysis of Experimental Neutron Energy Spectra	Phys Rev C29, 1317 (1984) T.Nakamura, Y.Uwamino	stripping, breakup reaction, evaporation model, nuclear cascades, precompound-nucleus emission, Serber Theory

Table I (Cont.)

C,Cu,Fe Pb	Neutron and Photon Production from Thick Targets Bombarded by 30-MeV p, 33-MeV d, 65-MeV ^3He , and 65-MeV Alpha Ions: Experiment and Comparison with Cascade Monte Carlo Calculations	Phys Rev <u>C29</u> ,1307 (1984) K.Shin et al	nuclear cascades, neutron spectra
$^{46,48}\text{Ti}$ ^{50}Ti	Elastic and Inelastic Scattering of 100 MeV Protons from the Even-Even Titanium Isotopes	Phys Rev <u>C29</u> ,794 (1984) L.W.Woo et al	elastic scattering, optical models
^{14}N	(p,n) Reactions on ^{14}C and ^{14}N and the Effective Nucleon-Nucleon Interaction	Phys Rev <u>C29</u> ,764 (1984) T.N.Taddeucci et al	charge-exchange nucleon-nucleon interaction, optical models
Ge	Excitation Functions of Ge(p,xnyp) Reactions and Production of ^{68}Ge	Int J of Appl Rad & Isotopes <u>34</u> ,1531 (1983) T.Horiguchi et al	knock-out reactions, quasi-elastic scattering, nuclear reaction yield
^{58}Ni	Two-Step Description of a (p, ^3He x)-Reaction to the Continuum	Hel Phys Acta <u>56</u> , 975(1983) H.Jasicek et al	two-nucleon transfer
$^6,^7\text{Li}$	(p,px) Reaction on ^6Li and ^7Li Nuclei at Incident Proton Energy of 70 MeV	Bull Acad Sciences Phys Series <u>47</u> , 185(1983) O.K.Gorpinich	quasi-free reactions
^9Be	Neutrons Produced by the p + Be and the d + Be Reactions, and the Cross Section Measurement with these Neutrons	Meet on Heavy and Light Ion Irrad. & Rad. Measurement Tokyo, Japan p.33 (1981) K.Sugiyama	neutron spectra
$^{208}\text{Pb}, ^7\text{Li}$	Total Neutron Yields from 100 MeV Protons on Pb and ^7Li Targets	Nucl Instr & Meth <u>214</u> ,333(1983) M.A.Lone et al	knock-out reactions
$^{209}\text{Bi}, ^{12}\text{C}$	Edge and Cluster Effects in Precompound Nuclear Reactions	Zhonghua Heyixue Zazhi(China) <u>4</u> ,216 (1982) W.Ye et al	precompound nucleus emission, nuclear cascades

Table I (Cont.)

27Al	Emission of Alpha Particles in Statistical Multistep Compound Reactions	Phys Rev <u>C28</u> ,1892 (1983) R.Bonetti et al	statistical models
	Pre-Equilibrium Emission of Light Composite Particles in the Framework of the Exciton Model	Phys Rev <u>C28</u> ,1527 (1983) K.Sato et al	precompound-nucleus emission
233,235U	Isotopic and Neutron Yields of Products from the Asymmetric and Near-Symmetric Proton-Induced Fission of 233U and 235U	Phys Rev <u>C28</u> ,1188 (1983) P.A.Beeley et al	fission yield
27Al, 209Bi 79Br, 197Au	Cascade-Exciton Model of Nuclear Reactions	Nucl Phys <u>A401</u> ,329 (1983) K.K.Gudima et al	inclusive interactions, charge-exchange reactions
65Cu, 89Y 64Zn	Double Differential Cross Sections for (p,xn) Reactions of 64Zn, 65Cu and 89Y with 26 MeV Protons	Zeit fur Physik <u>A311</u> ,323(1983) W.Scobel et al	neutron spectra
197Au 202Hg	Pre-Equilibrium Decay of Nuclei with A Approximately Equal 200 at Excitation Energies to 90 MeV	Nuovo Cimento <u>A40</u> ,383(1977) E.Gadioli et al	precompound-nucleus emission
40Ca, 208Pb	"Wine-Bottle" Optical Potentials and the Inelastic Scattering of Protons Near 200 MeV	Nucl Phys <u>A394</u> ,349 (1983) G.R.Satchler	inelastic scattering, optical models
9Be	Fragmentation Spectra Induced by Light Ions Colliding With Light Nuclei	Phys Rev <u>C27</u> ,1876 (1983) T.Delbar et al	fragmentation, inclusive interactions, quasi-free reactions
27Al, 59Co	Interpretation of Some (p,n), (n,p), and (3He,p) Reactions by Means of the Statistical Multistep Compound Emission Theory	Phys Rev <u>C27</u> ,1003 (1983) R.Bonetti et al	charge-exchange reactions, statistical models
27Al, 59Co 197Au, 232Th	Proton-Induced Alpha -and Tau-Emission at 72 MeV	Nuovo Cimento Lett <u>28</u> ,15(1980) Z.Lewandoski et al	emission spectra

Table I (Cont.)

$^{27}\text{Al}, ^{59}\text{Co}$	Semiempirical Calculation of Excitation Functions	Int Conf on Nucl Cross Sections for Tech.Knoxville, NBS Spec Pub 594,778(1979) E.L.Petersen	excitation functions
^{32}S	Energy Dependence of Optical-Model Parameters for the $p + ^{32}\text{S}$ System between 15 and 135 MeV	Nuovo Cimento <u>A59</u> ,101(1980) R.De Leo et al	optical models
Be	Comparison of Neutron Therapy Beams Produced by 50 MeV Deuterons and 65 MeV Protons on Beryllium	Acta Radiol Oncology, Rad. Therapy, Physics & Biology <u>21</u> ,281(1982) S.Vynckier et al	neutron beams
Pb,Li	Measured and Calculated Neutron Yields for 100 MeV Protons on Thick Targets of Pb and Li	Proc 6th Meeting Int Collaboration of Adv.Neutron Sources June 28, 1982 Argonne report ANL-82-80 p.583, R.T.Jones et al	spallation, neutron emission
^{209}Bi ^{208}Pb	Analysis of (p,p') Reactions into the Continuum in the Microscopic Model	INIS-MF-7523(1981) Annual Report Texas U, Austin T.Tamura, H.Lenske	inelastic scattering, particle-hole model
$^{27}\text{Al}, ^{209}\text{Bi}$	Continuum Spectra in Light-Ion Reactions	Int Symp on Highly Excited States in Nuclear Reactions Osaka, Japan, May 1980 H.Ikegami, M.Muraoka	direct reactions
^{24}Mg	Elastic and Inelastic Scattering of Protons from ^{24}Mg	Phys Rev <u>C27</u> ,482 (1983)D.K.Hasell et al	optical models
^{120}Sn	Statistical Multistep Direct Emission Theory Revisited	Phys Lett <u>B112</u> ,189 (1982) M.S.Hussein, R.Bonneti	direct reactions, cascade theory, statistical models
$^3\text{He}, ^{238}\text{U}$	Pion Production and Charged-Particle Multiplicity Selection in Relativistic Nuclear Collision	Phys Rev <u>C26</u> ,2572 (1982)K.L.Wolf et al	proton reactions, inclusive interactions

Table I (Cont.)

$^{54}\text{Fe}, ^{120}\text{Sn}$	Mechanism of Cluster Emission in Nucleon-Induced Preequilibrium Reactions	Phys Rev <u>C26</u> ,1821 (1982) A.Iwamoto, K.Harada	compound-nucleus emission
	Study of the Hard Part of the Neutron Spectra in (p,n) Reactions	Sov J of Nucl Phys <u>35</u> ,474(1982) N.S.Biryukov et al	precompound-nucleus emission
^{208}Pb	Quasiparticle-Phonon Model of the Preequilibrium Decay	INIS-SU-125 p.440 32. Conf Nucl Spectroscopy & Nucl Structure, Kiev (1982)F.A.Zhivopistsev et al	precompound-nucleus emission, inelastic scattering
	Study on the High Energy Range of the Spectra in the (p,n) Reaction	INIS-SU-125 p.300 32. Conf Nucl Spectroscopy & Nucl Structure, Kiev(1982) N.S.Biryukov et al	light nuclei, charge-exchange reactions, neutron spectra
^{58}Ni	De-Excitation of Continuum States Induced by Medium Energy Protons	Int Sym on Highly Excited States in Nuclear Reactions, Osaka,Japan(May 12, 1980) D.L.Hendrie	inelastic scattering
$^6,^7\text{Li}$	(p,px) Reaction on the ^6Li and ^7Li Nuclei at the 70 MeV Incident Protons	INIS-SU-125 p.297 32. Conf Nucl Spectroscopy & Nucl Structure, Kiev (1982) O.K.Gorpinich et al	knock-out reactions
$^9\text{Be}, ^7\text{Li}$	Characteristics of Neutrons from Be Targets Bombarded with Protons, Deuterons, and Alpha Particles	Nucl Instr & Meth <u>189</u> ,515(1981) M.A.Lone et al	charge-exchange reactions, neutron spectra
$^{27}\text{Al}, ^{63}\text{Cu}$	Excitation Functions for Radioactive Isotopes Produced by Proton Bombardment of Cu and Al in the Energy Range of 16 to 70 MeV	Nucl Phys <u>A383</u> ,98 (1982) A.Gruetter	inclusive interactions
$^{27}\text{Al}, ^{209}\text{Bi}$ $^{12}\text{C}, ^{64}\text{Cu}$ ^{208}Pb	How Important Is The First Inelastic Collision in Nuclear Precompound Reactions	Nucl Phys <u>A384</u> ,24 (1982) W.Q.Chao et al	quasi-elastic scattering, inclusive interactions

Table I (Cont.)

6,7Li	Nucleon Scattering from Light Nuclei. Pt. 1. The Target ${}^6\text{Li}$ and ${}^7\text{Li}$	Nucl Phys <u>A383</u> ,355 (1982) F.Petrovich et al	charge-exchange, elastic and inelastic scattering
	Calculation of Neutron, Proton and Alpha- Particles Absorption Cross Sections by Nuclei in the Framework of Optical Model and Analytical Formulae	5. Nat Sov Conf on Neutron Physics Kiev, Sep 15, 1980 INIS-SU-109,p.286 V.M.Bychkov et al	optical models, absorption
${}^{120}\text{Sn}$	Theory of Statistical Multi-Step Direct and Compound Reactions	Int Symp on Highly Excited States in Nuclear Reactions Osaka, Japan May 12, 1980, p.5, H.Feshbach	charge-exchange reactions, direct reactions, statistical models
${}^{208}\text{Pb}$	Semi-Microscopic Optical Potential Calculation by Nuclear Matter Approach	Zeit fur Physik <u>A303</u> ,69(1981) S.Qingbiao et al	optical models
Co,Fe Cu,Ni	Integral Excitation Func- tions for Proton and Alpha Induced Reactions on Target Elements $22 \leq Z \leq 28$	Koeln Univ(W.Ger- many)Thesis, INIS- MF-7112(1979) G.Brinkmann	excitation functions, knock-out reactions, quasi-elastic scattering
${}^{48,50}\text{Ti}$	${}^{48}\text{Ti}$ and ${}^{50}\text{Ti}(p, xpyn)$ Excitation Functions Induced by Protons from 5 to 85 MeV: Comparison with Pre-Equilibrium Calculations	McGill Univ., Montreal, Can. Thesis (1980) K.I.Burns	quasi-elastic scattering, precompound- nucleus emission
${}^{54}\text{Fe}$	Preequilibrium Multi- particle Calculations of Nuclear Reactions	2. Int Sym on Neut. Induced Reactions, Smolenice, Czech. June 25, 1979, p.201 E.Betak, J.Dobes	precompound- nucleus emission, photon emission
	Physical Foundation of Preequilibrium Models and Open Questions	2. Int Sym on Neut. Induced Reactions, Smolenice, Czech. June 25, 1979, p.165 E.Gadioli et al	precompound- nucleus emission, data compilation, spallation
${}^{208}\text{Pb}$	Relaxation Phenomena in Nucleon-Induced Reac- tions and Preequilibrium Angular Distributions	Nucl Phys <u>A373</u> ,27 (1982) P.Maedler, R.Reif	thermodynamic properties, time dependence, transport theory

Table I (Cont.)

$^{11}\text{B}, ^{12}\text{C}$	Single-Particle Model of Capture to Continuum States	Nucl Phys <u>A375</u> , 169 (1982) R.J.Philpott, D.Halderson	capture, inelastic scattering
^{238}U	^{238}U Fission at Energies Up to 100 MeV	Phys Rev <u>C25</u> , 899 (1982) C.Chung, J.J.Hogan	spallation, fission
^{208}Pb	To The Problem on the Ratio of Contributions of Multistep Direct and Pre-Equilibrium Processes in Inelastic Nucleon Scattering	INIS-MF-6819 p.490 31. Conf Nucl Spectroscopy & Nucl Structure, Samarkand, USSR April 14, 1981, F.A.Zhivopistsev, N.P.Yudin	inelastic scattering, direct reactions, precompound-nucleus emission
Fe, Ni, Ti	Isospin Dependence of the 65 MeV Proton Optical Potential in f-p Shell Nuclei	Nucl Phys <u>A366</u> , 189 (1981) T.Moro et al	elastic scattering
^{50}Ti	Emission of Alpha Particles in the interaction of 10-85 MeV Protons with $^{48}, ^{50}\text{Ti}$	Zeit fur Physik <u>A301</u> , 289(1981) E.Gadioli et al	knock-out reactions
Ge, Ga	Proton Scattering by Nuclei of Atoms of Semiconductors and Energy Spectra of Primarily Knocked Out Atoms	INIS-MF-6819 p.557 31. Conf Nucl Spectroscopy & Nucl Structure, Samarkand, USSR April 14, 1981 I.D.Fedorets et al	recoils, energy spectra
^{27}Al $^{208}\text{Bi}, ^{12}\text{C}$ ^{208}Pb	Spectral Measurements of Neutrons Produced by 52 MeV Protons with Activation Detectors	Nucl Instr & Meth <u>187</u> , 587(1981) K.Shin et al	spectra unfolding
$^{12}\text{C}, ^{63}\text{Cu}$ $^6, ^7\text{Li}$	Backward Inclusive Spectra in Proton-Nucleus Collisions at 640 MeV	Nucl Phys <u>A367</u> , 419 (1981) J.Eroe et al	inclusive interactions
$^{235}, ^{236}\text{U}$ ^{238}U	Postfission Neutrons from Proton Induced Fission of $^{235}, ^{236}, ^{238}\text{U}$	Nuclear Energy Agency report NEANDC(E)-212U V5, p.37 (1980) P.Plischke et al	neutron spectra
^9Be	Neutron Yields from Proton, Deuteron and Alpha Bombardment of Beryllium	Consultants Mtg on Neutron Source Properties, Debrecen, Hungary, INDC (NDS)-114/GT, p.308 (1980) M.A.Lone, B.C.Robertson	charge-exchange reactions

Table I (Cont.)

^{232}Th	K-Shell Ionisation of ^{232}Th by Protons and Alpha Particles	J of Physics <u>B14</u> , 2391(1981) P.Hornshøj et al	k-shell, ionization
Co,Ni	Pre-Equilibrium Emission in Proton-Induced Reactions on Cobalt and Nickel in the Energy Range 18-84 MeV	FRNC-CONF-201, Int Conf on Nucl Behav-ior at High Angular Momentum,Strass-bourg,Fr. April 22, 1980 S.J.Mills, F.J.Haasbroek	precompound-nucleus emission
^{27}Al , ^{12}C ^{56}Fe ^{181}Ta	One, Two, Infinity: A Pragmatic Approach to Nuclear Precompound Reactions	Nucl Phys <u>A349</u> ,466 (1980) H.C.Chiang, J.Huefner	inclusive interactions, precompound-nucleus emission
^{12}C , ^{14}N ^{16}O	Properties of Quasielastic Knockout of Slow Protons ($E < \text{or Approx. } = 10 \text{ MeV}$) From C, N, and O Nuclei by High-Energy Protons	Sov J Nucl Physics <u>31</u> ,295(1980) A.A.Levkovskii, E.F.Dreiman	knock-out reactions, quasi-elastic scattering
^{92}Mo	Energy Dependence in Proton Inelastic Scattering	Nucl Phys <u>A352</u> ,221 (1981) R.A.Moyer et al	elastic and inelastic scattering, optical models
^{27}Al	What Happens When A Fast Nucleon Goes Through A Nucleus	Phys Lett <u>B100</u> ,101 (1981) E.F.Redish, D.M.Schneider	mean free path
^{232}Th	Fission Probability of the Reaction $^{232}\text{Th}(p,p'f)$ at $E_p = 52.5 \text{ MeV}$	Acta Physica Aus-triaca <u>52</u> ,125(1980) G.Elder et al	inelastic scattering
^{27}Al , ^{59}Co ^{58}Ni	Symmetric and Asymmetric Components of Energy Spectra in a Preequilibrium Decay	INIS-MF-6160 p.500 30. Conf on Nuclear Spectroscopy & Nucl. Structure Leningrad, March 18, 1980, F.A.Zhivopistsev et al	precompound-nucleus emission
^{120}Sn	Statistical Multistep Direct Emission in the $^{120}\text{Sn}(p,n)$ Reaction	Phys Lett <u>B94</u> ,463 (1980) L.Avaldi et al	charge-exchange reactions

Table I (Cont.)

$^{12}\text{C}, ^{197}\text{Au}$ ^{58}Ni	Pickup in the Surface - The Origin of Deuterons in Nuclear Precompound Reactions	Phys Lett <u>B97</u> ,183 (1980) F.Hachenberg et al	precompound- nucleus emission, pickup reactions
Al	Excitation Functions of (p,t...), (d,t...), (tau,t...) and (alpha,t...) -Reactions and Comparison with Results of Exciton Model Calculations	Verhandlungen Der Deutschen Physik- alischen Gesell- schaft (E.Ger.) <u>16</u> ,790(1981) M.Merkel,H.Muenzel	pickup reactions, exciton model
$^{63}\text{Cu}, ^{62}\text{Ni}$	Preequilibrium Emission of Nucleons and Alpha Particles from ^{63}Cu and ^{64}Zn	Verhandlungen Der Deutschen Physik- alischen Gesell- schaft(E.Ger.) <u>16</u> ,791(1981) A.Alevra et al	precompound- nucleus emission
^{54}Fe ^{208}Pb	Semimicroscopic Analysis of Direct Process Contri- bution to Proton Inelastic Scattering Spectra	Yad Fiz <u>30</u> ,1258 (1979) A.I.Blokhin, V.G.Pronyaev	inelastic scattering
	Calculation of Proton- Induced Radioisotope Pro- duction Yields with a Statistical-Model Based Code	Int J of Applied Radiation & Iso- topes <u>32</u> ,73(1981) R.Nowotny	statistical models
^{232}Th	Fission of ^{232}Th at Energies Up to 90 MeV	Phys Rev <u>C24</u> ,180 (1981) C.Chung, J.J.Hogan	evaporation model, spallation
^{93}Nb	Multistep Direct Reaction Analysis of Analyzing Powers of Continuum Spectra in (p,alpha) Reactions	Phys Rev <u>C23</u> ,2769 (1981)T.Tamura et al	three-nucleon transfer
^{48}Ca ^{208}Pb	Analysis of Precompound Processes in (p,n) Reactions with the Statis- tical Multistep Direct Emission Theory	Phys Rev <u>C24</u> ,71 (1981) R.Bonetti et al	charge-exchange reactions, precompound- nucleus emission
^{59}Co ^{197}Au	Proton-Induced Pre-Equili- brium Alpha/Tau-Emission for $E(p) = 72$ MeV	Helv Phys Acta <u>52</u> , 421,(1980) Z.Lewan- dowski et al	pickup reaction.

Table I (Cont.)

Be	Improved Measurement of Neutron Spectrum from 35 MeV Protons on Thick Beryllium	Medical Physics <u>8</u> , 396(1981) J.L.Ullmann et al	charge-exchange reactions, neutron spectra
Ni	Damage Analysis and Fundamental Studies Quarterly Report	Battelle Pacific Northwest Lab report BNL-SA-9039 (1980) R.H.Jones	physical radiation effects
⁵⁸ Ni	Energy Dissipation Process for 100-MeV Protons and the Nucleon-Nucleon Interactions in Nuclei	Phys Rev Lett <u>45</u> , 1930 (1980) A.A.Cowley et al	quasi-elastic scattering, impulse approximation
²⁷ Al ²⁰⁹ Bi ⁵⁸ Ni	Proton and Neutron Inclusive Spectra and the Importance of the Single Nucleon-Nucleon Scattering Process	Phys Rev Lett <u>46</u> , 226 (1981) B.D.Anderson et al	inclusive interactions
¹¹⁹ Sn ²⁰⁸ Pb ²⁰⁹ Bi	Angular Distributions of Pre-equilibrium Reactions Within a Generalized Exciton Model	Nucl Phys <u>A337</u> ,445 (1980) P.Maedler, R.Reif	precompound-nucleus emission
²³² Th	Fissionability and Charge Dispersion Studies of Thorium by Protons of Energy to 90 MeV	McGill Univ. Montreal, Quebec Thesis(1980) C.Chung	precompound-nucleus emission, exciton model
²³⁸ U	Estimation of Neutron Yield from Individual Fragments in Medium-Excitation Fission	J Nucl Sci & Tech <u>16</u> ,466(1979) H.Yamamoto et al	fission fragments, neutron emission
¹⁰⁶ Cd	Measurement of Compound-Nucleus Lifetime by X-Ray Spectroscopy in the ¹⁰⁶ Cd Reaction	Nucl Phys <u>A331</u> ,407 (1979) J.F.Chemin et al	inelastic scattering, x radiation
⁶¹ Ni	Preequilibrium Angular Distributions in the Quasi-Free Scattering Model	INIS-MF-5692 p. 40, Annual Report 1977-1978 J.Bisplinghoff et al	precompound-nucleus emission, inclusive interactions
	Systematics of Particle-Nucleus Reactions 1. Parameters	Phys Rev <u>C22</u> ,2116 (1980) L.Winsberg	fission, fragmentation, spallation, energy spectra

Table I (Cont.)

^{12}C	$^{12}\text{C}(\text{p,n})^{12}\text{N}$ Reaction at 99 MeV	Phys Rev <u>C22</u> , 1826 (1980) J.N.Knudson et al	charge-exchange reactions, neutron spectra
^{12}C	Atomic-Excitation Effects on Nuclear Reactions	Phys Rev Lett <u>45</u> , 703 (1980) E.J.Ludwig, E.Merzbacher	recoils
^{197}Au $^{208}\text{Pb}, \text{Lu}$ ^{181}Ta	Study of K X-Ray Nuclear Satellites from (p,xn) Reactions on Heavy Elements	J of Physics <u>G6</u> , 117 (1980) V.Zoran et al	gamma cascades, k-shell, x-ray spectra
^{165}Ho ^{107}Ag ^{169}Tm	Alpha Emission in Proton Induced Reactions	Zeit fur Physik <u>A293</u> , (1979) A.Ferrero et al	particle-hole model, knock-out reactions
$^{54,56}\text{Fe}$	Solution of Nuclear Kinetic Equations for Quasiequilibrium System and Description of Energy Spectra of Secondary Nucleons	Bull Acad Sci Phys Series <u>42</u> , 1893 (1978) V.E.Bunakov et al	evaporation model, neutron spectra, time dependence
$^{12}\text{C}, ^{14}\text{N}$ ^{16}O	Cross Sections of the 50 MeV Proton Reactions on the ^{12}C , ^{14}N , ^{16}O Nuclei	Bull Acad Sci Phys Series <u>43</u> , 148 (1979) A.I.Vdovin et al	direct reactions
^{181}Ta	Statistical Theory of Multi-Step Compound and Direct Reactions	Annals of Physics <u>125</u> , 429 (1980) H.Feshbach et al	statistical models, preequilibrium theory
^{197}Au ^{181}Ta	Measurement of the Proton Total Reaction Cross Section for ^{159}Tb , ^{181}Ta , and ^{197}Au Between 20 and 48 MeV	Nucl Phys <u>A324</u> , 109 (1979) R.Abegg et al	optical models
^{209}Bi $^{54,56}\text{Fe}$	Quasiclassical Method of Nuclear Kinetic Equation Solution and Description of Nucleon Angular Distributions	Bull Acad Sci Phys Series <u>42</u> , 2351 (1978) V.E.Bunakov	precompound-nucleus emission
^{27}Al	Proton-Induced Pre-Equilibrium Alpha-Emission at $E_p = 72$ MeV	Helv Phys Acta <u>52</u> , 88 (1979) Z.Lewandowski et al	precompound-nucleus emission

Table I (Cont.)

C,Cu,Fe	Production of Neutrons and Photons from Thick Targets Bombarded by 52 MeV Protons	2. Symp Accelerator Sci & Tech., Tokyo, Japan, p.197 (1978) K.Shin et al	secondary emission
^{27}Al	Momentum-Dependent State Densities in the Exciton Model	Dresden Univ (E. Germany) report ZFK-376, p.,11(1978) P.Maedler, R.Reif	precompound-nucleus emission
$^{27}\text{Al}, ^9\text{Be}$ $^{59}\text{Co}, ^{55}\text{Mn}$	Proton Elastic Scattering on Light Nuclei II. Nuclear Structure Effects	Phys Rev <u>C21</u> ,844 (1980) E.Fabrizi et al	optical models
^{24}Mg	Proton Elastic Scattering on Light Nuclei I. Energy Dependence	Phys Rev <u>C21</u> ,830 (1980) E.Fabrizi et al	optical models
^{24}C	Calculation of Z Greater Than or Equal to 3 Mass, Energy and Angular Distributions in the p + ^{12}C Reaction	Univ. Maryland report ORO-5172-14, p.46(1979) A.Goekmen et al	evaporation model, nuclear cascades
$^{59}\text{Co}, \text{Fe}$	Measurement and Hybrid-Model Analysis of Proton-Induced Reactions with V, Fe and Co	Nucl Phys <u>A322</u> ,40 (1979) R.Michel et al	precompound-nucleus emission
	Penetration of Secondary Neutrons and Photons from a Graphite Assembly Exposed to 52-MeV Protons	Nucl Sci & Eng <u>71</u> , 294 (1979) K.Shin et al	fast neutrons, gamma radiation
^{40}Ca	Nucleon Optical Potential from a Realistic Inter-nucleon Potential	J Phys Soc Japan <u>44</u> ,539(1978) F.Brieva, J R.Rook	nucleon-nucleon potential
^{209}Bi	(p,n) Reaction on ^{209}Bi and Pre Compound Processes	J Phys Soc Japan <u>45</u> ,1071(1978) K.Miyano et al	precompound-nucleus emission
^{165}Ho	Preequilibrium and Equilibrium Deexcitation Processes for Dy(alpha,xn gamma)Er Reactions at $E_\alpha = 90$ MeV and $^{165}\text{Ho}(p,xnyp \text{ gamma})$ Reactions at $E_p = 60$ MeV	J Phys Soc Japan <u>44</u> ,655(1978) H.Ejiri et al	neutron spectra precompound-nucleus emission

Table I (Cont.)

28,30Si	Asymmetry in the Elastic and Inelastic Scattering of 65 MeV Protons from ²⁸ Si, ²⁹ Si, ³⁰ Si, ³¹ P, ⁸⁹ Y and ⁹⁰ Zr	J Phys Soc Japan <u>44</u> ,557(1978) M.Nakamura et al	elastic, inelastic scattering
	Fissionability of Nuclides in the Thorium Region at Excitation Energies to 100 MeV	Phys Rev <u>C20</u> ,1831 (1979) J.J.Hogan et al	spallation, neutron spectra
¹⁹⁷ Au	Preequilibrium Alpha-Emission in the ¹⁹⁷ Au (p,α x)-Reaction at Ep = 72 MeV	Phys Lett <u>B80</u> , 350 (1979) Z.Lewandowski et al	precompound-nucleus emission
⁹ Be	Neutron Spectra from 35 and 46 MeV Protons, 16 and 28 MeV Deuterons, and 44 MeV ³ He Ions on Thick Beryllium	Medical Physics <u>6</u> , 432 (1979) F.M.Waterman et al	neutron spectra
Sn,Ti W,Y	Contribution to the Study of Ionization of Elements by Protons and Alpha Particles of 4 to 30 MeV	Nucl Instr & Meth <u>159</u> ,455(1979) M.Poncet, Ch.Engelmann	ionization, K, L, M Shell
²⁷ Al ¹⁶⁵ Ho	Measurement and Analysis of Continuous Alpha Spectra in Proton Induced Reactions	Conf on Clustering Aspects of Nuclear Structure & Nuclear Reactions, Winnipeg Canada (1978) A.Ferrero et al	precompound-nucleus emission
Gd,Th	Relativistic Effects in K-Shell Ionisation by 7-15 MeV Proton Bombardment on Heavy Elements	J of Phys <u>B11</u> ,2875 (1978) A.Berinde et al	inner-shell ionization
Cu,Eu Ag	Atomic K-Shell Ionization Induced by 20-50 MeV Protons	Phys Lett <u>A69</u> ,258 (1978) W.D.Ramsay et al	inner-shell ionization
⁷⁹ , ⁸¹ Br	⁷⁹ Br and ⁸¹ Br(p,xn) and (p,pxn) Excitation Functions in the Energy Range 10-85 MeV	Nucl Phys <u>A304</u> ,40 (1979) M.Diksic et al	precompound-nucleus emission
⁵⁶ Fe	Gamma-Ray Production Cross Sections	Washington Univ Annual report DOE/ER-01388-345 n.51(1976) D.Bodansky et al	charge-exchange reactions, inelastic scattering

Table I (Cont.)

$^{11}\text{B}, ^{12}\text{C}$ ^{28}Si	Radiative-Emission Spectrum of 50-MeV Nuclear Excitations Populated by Proton Capture	Phys Rev Lett <u>42</u> , 1253 (1979) L.G.Arnold	gamma spectra
^{165}Ho	Gamma Rays and Neutrons Following Preequilibrium $^{165}\text{Ho}(\text{p}, \text{xnp } \gamma)$ Reactions at $E_p \approx 60$ MeV	Nucl Phys <u>A305</u> , 167 (1978) H.Ehiri et al	precompound-nucleus emission, gamma spectra
^{208}Pb	Simple Unitary Estimate for Multistep Processes	Phys Rev <u>C19</u> , 693 (1979) S.R.Cotanch	pickup reactions
^{27}Al ^{58}Ni ^{90}Zr	Charged-Particle Spectra: 90 MeV Protons on ^{27}Al , ^{58}Ni , ^{90}Zr , and ^{209}Bi	Phys Rev <u>C19</u> , 698 (1979) J.R.Wu et al	precompound-nucleus emission
^{12}C ^{14}N	Cross Section of 50 MeV Proton Reactions on ^{12}C , ^{14}N , ^{16}O Nuclei with Escape of Four Charged Particles	INIS-MF-4388 p.139 (1978) 28. Conf Nucl Spec & Structure Atomic Nucleus Alma-Ata, USSR A.I.Vdovin et al	
^{208}Pb	Integral Contribution of Direct Processes Inelastic Scattering Spectra and the Preequilibrium Decay Model	INIS-MF-4468 pp. 130-134 (1977) 4th All-Union Conf Neutron Physics A.I.Blukhin et al	precompound nucleus emission
Ni	Proton-Induced Reactions on Nickel with Energies Between 12 and 45 MeV	Zeit fur Physik <u>A286</u> , 393 (1978) R.Michel et al	precompound-nucleus emission
$^{12}\text{C}, ^{14}\text{N}$ ^{16}O	Cross Sections of 50 MeV Proton Induced Reactions on ^{12}C , ^{14}N , and ^{16}O Nuclei with Three Charged Particles in the Final State	Sov J Nucl Phys <u>27</u> , 3 (1978) I.G.Golikov et al	breakup reactions
^{54}Fe ^{65}Cu	Study of Two-Particle Nuclear Reactions in Framework of the Exciton Model	Ukr Phys J <u>22</u> , 2021 (1977) S.N. Ezhov, V.A.Plyuyko	compound-nucleus reactions, inelastic scattering
C, Cu, Pb, Fe	Spectral Measurements of Neutrons and Photons from Thick Targets of C, Fe, Cu and Pb by 52 MeV Protons	Nucl Instr & Meth <u>151</u> , 493 (1978) T.Nakamura et al	neutron spectra

Table I (Cont.)

^{54}Fe	Cascade-Exciton Model for Nuclear Reactions	Dresden Univ (E. Germany) report ZFK-324,p.79(1976) K.K.Gudima, V.D.Toneev	direct reactions, precompound-nucleus emission, nuclear cascades
^{181}Ta	Neutron Spectra and Angular Distributions from the Reactions $^{181}\text{Ta}(p,n)$ ^{181}W and $^{181}\text{Ta}(n,n')^{181}\text{Ta}$	Sov J Nucl Phys <u>26</u> ,606(1977) N.S.Biryukov et al	neutron spectra, precompound-nucleus emission
Li	Neutron Spectra from Deuteron and Proton Bombardment of Thick Lithium Targets	Brookhaven report BNL-NCS-125 (1977) C.E. Nelson et al	energy spectra
^{40}Ca	Two-Step Processes in Inelastic Proton Scattering	Zeit fur Physik <u>A284</u> ,413(1978) E.F.Hefter	multiple scattering
^{56}Fe ^{209}Bi	Use of the Intranuclear Cascade Model for Incident Nucleons of Intermediate and Low Energy	Phys Lett <u>73</u> ,267 (1978) V.E.Bunakov et al	nuclear cascades
Ni,Nb	Calculation of Energy Spectra of Primary Knock-On Atoms in the Proton Elastic Scattering by the Nuclei of Different Elements	Kharkov Physics-Tech. Instit. (Ukraine) report FTI-76-45,p.29 (1976) B.A.Shilyaev et al	optical models
^7Li	Neutron Spectra from Deuteron and Proton Bombardment of Thick Lithium Targets: Potential for Neutron Therapy	Phys in Medicine & Biology <u>23</u> ,39(1978) C.E.Nelson et al	fast neutrons
^{27}Al ^{209}Bi ^{197}Au	Complex-Particle Emission in the Pre-Equilibrium Exciton Model	Phys Rev <u>C17</u> ,1540 (1978) J.R.Wu, C.C.Chang	precompound-nucleus emission
^{54}Fe	Multi-Step-Direct-Reaction Analysis of Continuum Spectra of (p,α) Reaction	Phys Lett <u>B71</u> ,273 (1977) T.Tamura, T.Udagawa	pickup reactions
	Pre-Equilibrium Emission	Nucl Instr & Meth <u>146</u> ,265(1977)E. Gadioli, E.E.Gadioli	precompound-nucleus emission, excitons

Table I (Cont.)

140Ce 24Mg 64Zn 66,68Zn	Measurements of the Proton Total Reaction Cross Section for 24Mg, 64,66, 68Zn and 140Ce Between 17.5 and 48 MeV	Nucl Phys <u>A290</u> ,45 (1977) N.E.Davison et al	total cross sections
88Sr 89Y,90Zr	Pre-equilibrium Decay of Nuclei with A Approx. = 90 at Excitation Energies to 100 MeV	Phys Rev <u>C16</u> ,1404 (1977) E.Gadioli et al	precompound- nucleus emission
209Bi 54Fe	A-Priori Pre-Equilibrium Decay Models	Nukleonika <u>19</u> ,183 (1974) M.Blann	precompound- nucleus emission, nucleon-nucleon interactions
27Al 56Fe Si,S	Empirical Observations About the Nucleon Optical Model Potential	Phys Lett <u>B70</u> ,141 (1977) J.Rapaport	elastic scattering, optical models
14N,16O	Optical Model and Proton Elastic Scattering from 14N and 16O	Aust J Physics <u>30</u> , 287(1977) A.Gabric, K.Amos	elastic scattering, optical models
Cs	Proton Loss by Nuclear Inelastic Interactions in CsI, Ne102, Ne213 and Stilbene	Nucl Instr & Meth <u>143</u> ,589(1977) A.M.Sourkes et al	plastic scintillators inelastic scattering
89Y	Influence of Nucleon Mean- Free Paths on Intranuclear Cascade Results	Phys Lett <u>B68</u> ,405 (1977) J.Ginocchio, M.Blann	inelastic scattering, nuclear cascades, nuclear matter
15N 40Ca	Influence of Recoil Effects in the Micro- scopic Description in Inelastic Scattering	Phys Lett <u>B69</u> ,261 (1977) H.P.Blok, P.D.Kunz	inelastic scattering, recoils
6,7Li 9Be	Study of the (p,pn) Reaction in Light Nuclei	Nucl Phys <u>A281</u> ,418 (1977) C.N.Waddell et al	impulse approximations, knock-out reactions,breakup reactions
197Au	Compact Modified Exciton Model for the Pre-Equili- brium Decay of Highly Excited Nuclei	Kernenergie <u>20</u> ,180 (1977) P.Maedler	precompound- nucleus emission

Table I (Cont.)

$^9\text{Be}, ^7\text{Li}$	Thick Target Neutron Yields and Spectral Distributions from the $^7\text{Li}(d(p),n)$ and $^9\text{Be}(d(p),n)$ Reactions	Nucl Instr & Meth <u>143</u> ,331(1977) M.A.Lone et al	direct reactions, neutron spectra
$^{64,66}\text{Zn}$ $^{68,70}\text{Zn}$	Compound and Precompound Processes in (p,p') and (alpha,p) Reactions of Even Zn Isotopes	Nucl Phys <u>A277</u> ,413 (1977) C.R.Lux, N.T.Porile	precompound- nucleus emission
^{27}Al ^{209}Bi	Deep Inelastic Reactions Treated as Multi-Step Direct Reaction Processes. Application to (p,p') Reaction	Phys Lett <u>B66</u> ,109 (1977) T.Tamura et al	inelastic scattering, direct reactions
	Study of the Pure Continuum in Inelastic Proton Scattering	Verhandlungen der Deutschen Physikalischen Gesellschaft <u>6</u> ,1016(1977) C. Alderliesten et al	inelastic scattering, quasi-free reactions
Al,Be Cd,C,Cu Au,Fe	Energy Spectra of Recoil Atoms While Irradiating Different Elements by Fast Protons and Neutrons	INIS-MF-3329 p.393 (1976) 26. Conf Nucl Spect & Nucl Structure, Baku, USSR, Feb 3 1976 B.A.Shilyaev et al	elastic scattering, recoils
$^{12}\text{C}, ^{14}\text{N}$	Deuteron Break-Up Effects in (p,d) Reactions at 65 MeV	Nucl Phys <u>A274</u> ,168 (1976) G.L.Wales, R.C.Johnson	pickup reactions
	Description of Secondary Nuclear Energy Spectra Produced in Low and Intermediate Energy Proton Interaction with Nuclei	28th Conf on Nucl Spect & Struct of the Atomic Nucleus, Alma-Ata,USSR,1978, INIS-MF-4388,p.277 V.E.Bunakov et al	nuclear cascades
$^7\text{Li}, ^9\text{Be}$	Physical Characterization of Neutron Beams Produced by Protons and Deuterons of Various Energies Bombarding Beryllium and Lithium Targets of Various Thickness	Medical Physics <u>4</u> , 486(1977) H.I.Amols et al	energy spectra

Table I (Cont.)

^9Be	Neutron Beams Generated by Protons on Beryllium	Brit J of Radiology (Eng) <u>49</u> ,587 (1976) S.W.Johnsen et al	neutron beams
Cd	Excitation Functions of the (pn) and (p,2n) Reactions on Cd Isotopes	Bull Acad Sci Phys Series (USSR) <u>39</u> ,24(1975) E.A.Skakun et al	charge-exchange reactions, knock-out reactions
	Measurement of Lithium, Beryllium and Boron Stable Isotope Production Cross Sections in Carbon-Spallation by Protons and Alpha Particles. Application to the Study of the Propagation of the Light Elements in Cosmic Rays	Paris Univ. Orsay, Thesis, CSNSM-T-75-02(1975)P.Fontes	spallation
^{208}Pb	Cross Sections and Reaction Mechanisms of (p,pxn) Reactions on ^{208}Pb in the 24-52 MeV Range	Nucl Phys <u>A262</u> ,52 (1976) H.Kawakami et al	knock-out reactions
U	Relative Mass Yields in Proton Induced Fission on Natural Uranium from Delayed Gamma Rays Analysis	Revue Roumaine de Physique <u>21</u> ,69 (1976) A.Calboreanu et al	delayed gamma radiation
^{181}Ta	Nature of a K X-Ray Satellite Peak as Determined from the Analysis of Fluorescence Spectra Induced by 20-50 MeV Protons	J of Phys <u>G2</u> ,L69 (1976) C.P.Randell et al	knock-out reactions, x-radiation
^{75}As	Pre-Equilibrium Statistical Model: Comparison of Calculations with Two (p,xn) Reactions	J Inorg Nucl Chem <u>38</u> ,1581(1976) J.C.Brodovitch et al	precompound-nucleus emission
^{90}Zr ^{120}Sn ^{208}Pb ^{48}Ca	Preequilibrium Analysis of (p,n) Spectra on Various Targets at Proton Energies of 25 to 45 MeV	Nucl Phys <u>A257</u> ,15 (1976) M.Blann et al	precompound-nucleus emission, gamma spectra

Table I (Cont.)

⁵⁶ Fe ¹⁰³ Rh	Generalized Exciton Model for the Description of Preequilibrium Angular Distributions	Zeit fur Physik <u>A276</u> ,145(1976) G.Mantzouranis et al	precompound-nucleus emission, neutron spectra
¹² C, ⁶ Li ⁹ Be	Study of the (p,pn) Reaction on 1p Shell Nuclei at 46 MeV	Manitoba Univ, Thesis, CTOM-20405 (1974) C.A.Miller	knock-out reactions
⁴⁸ Ca, ⁹⁰ Zr ¹²⁰ Sn ²⁰⁸ Pb	Analysis of the Preequilibrium Angular Distributions in the 45-MeV (p,n) Reaction	Phys Rev <u>C14</u> ,2018 (1976) G.Mantzouranis	precompound-nucleus emission
^{6,7} Li ⁹ Be, ¹² C ²⁷ Al	Production of Medium-Energy Neutrons from Proton Bombardment of Light Elements using Revised Neutron-Proton Differential Cross Sections	Nucl Instr Meth <u>134</u> ,537(1976) J.L.Romero et al	neutron sources
¹⁰³ Rh ¹⁵⁹ Tb ¹⁶⁹ Tm	Comparison of Proton and Neutron Spectra. The Extended Griffin Model, Pairing and Isospin	Zeit fur Physik <u>A275</u> ,175(1975) C.Kalbach et al	precompound-nucleus emission
²⁷ Al,C Cu	Distributions of Secondary Particles Around Various Targets Exposed to 50 MeV Protons	Nucl Instr Meth <u>133</u> ,213(1976) A.Fasso, M.Hoefert	spallation
	Pre-Equilibrium Model Evaluation of Neutron Spectra from Proton-Induced Reactions	Phys Rev <u>C14</u> ,573 (1976) E.Gadioli et al	charge-exchange reactions, precompound-nucleus emission, neutron spectra
⁴⁸ Ca ²⁰⁸ Pb	Comparison of Measured Neutron Spectra with Predictions of an Intranuclear-Cascade Model	Phys Rev <u>C14</u> ,748 (1976) A.Galonsky et al	Monte Carlo method, neutron spectra, nuclear cascades
Be,B ¹² C	Li, Be, and B Production in Reactions of 45-100 MeV Protons with ¹² C: Astrophysical Implications	Phys Rev <u>C14</u> ,410 (1976) C.T.Roche et al	spallation
⁹⁰ Zr	Charged-Particle Emission in Reactions of ⁹⁰ Zr with 10-86 MeV Protons	Phys Rev <u>C14</u> ,64 (1976) M.V.Kantelo, J.J.Hogan	precompound-nucleus emission
⁷⁵ As ¹¹⁵ In	Excitation Functions and Isomeric Yield Ratios of (p,xn) Reactions Induced in ⁷⁵ As and ¹¹⁵ In by 20-85 MeV Protons	McGill Univ (Canada) Thesis CTOM-18162(1973) J.C.Brodovitch	Monte Carlo method

Table I (Cont.)

^{12}C	Optical Model Analysis of Proton-Carbon Elastic Scattering in the Range 20 to 50 MeV	Zeit fur Phys <u>A274</u> ,339(1975) R.Sprickmann et al	elastic scattering
^{58}Ni	Charged Particle Spectra from 100 MeV Protons on ^{58}Ni	Univ of Maryland report ORO-4856- 26 p.360(1975) J.R.Wu et al	energy spectra, precompound- nucleus emission
	Alpha-Emission by Precompound Mechanism in Heavy Nuclei	Julich report JUL-CONF-16,V1,p. 85(1975) Conf on Highly Excited States of Nuclei L.Milazzo-Colli et al	heavy nuclei, precompound- nucleus emission
	Quasi-Free Scattering Model for Nuclear Reactions in the Continuum	U of Rochester, N.Y.Thesis(1975) A.L.C.Mignerey	heavy nuclei, intermediate mass, quasi- free reactions
^{208}Pb	Cross Sections of (p,pxn) Reactions on ^{208}Pb	Tokoyo Univ report NP-20526 p.54(1974) J.O.Rasmussen et al	compound- nucleus reactions
^{40}Ca ^{208}Pb ^{16}O	Proton Total Reaction Cross Sections for the Doubly Magic Nuclei ^{16}O , ^{40}Ca , and ^{208}Pb in the Energy Range 20-50 MeV	Phys Rev <u>C12</u> ,1167 (1975) R.F.Carlson et al	optical models
^{181}Ta ^{115}Sn ^{181}W	Angular Distribution of Nucleons in Nucleon-Induced Preequilibrium Reactions	Phys Lett <u>B57</u> ,220 (1975) G.Mantzouranis et al	angular distribution, heavy nuclei, intermediate mass nuclei,precom- pound nucleus emission
^{238}U	Proton and Deuteron Fission of ^{238}U	Egypt J Chem, Spec Issue pp.1-7(1974) A.T.Kandil, G.R.Choppin	fission
	Radiation Heating of Materials During Irradiation with Charged Particles	Izv Akad Nauk Kaz SSR <u>6</u> ,84(1974) S.S.Ibragimov et al	radiation heating

Table I (Cont.)

^{28}Si	Energy Dependence of Proton Damage in Silicon	Izv Akad Nauk Kaz SSR <u>6</u> ,50(1974) A.F.Akkerman et al	elastic scattering, physical radiation effects
	COMPd: A Computer Program for the Calculation of the Excitation Functions by Means of Monte Carlo Method	Tokoyo Univ report INS-TCH-10(1974) K.Komura, S.Tanaka	compound-reactions, evaporation model, Monte Carlo method
	A Technique for Measuring Proton Total Reaction Cross Sections at Medium Energies	Nucl Instr Meth <u>123</u> ,509(1975) R.F.Carson et al	elastic scattering
	Energy Distributions of Charged and Neutral Hydrogen Atoms Backscattered from Metal Surfaces Bombarded with 5 to 18 MeV Protons	Max Planck Instit. report IPP-9/18 (1975) P.Meischner, H.Verbeek	radiation effects
$^{27}\text{Al}, ^{12}\text{C}$	Optical Model Analysis of Proton and Deuteron Scattering and DWBA Calculations on (p,d)-Reactions at 185 MeV	Phys Scripta <u>10</u> ,159 (1974) A.Ingemarsson, G.Tibell	optical models, pickup reactions
^{209}Bi $^{12}\text{C}, ^{54}\text{Fe}$	Comparisons of Predictions from Two Intranuclear-Cascade Models with Measured Secondary Proton Spectra at Several Angles from 62- and 39-MeV Protons on Various Elements	Phys Rev <u>C10</u> ,2472 (1974) H.W.Bertini et al	energy spectra, inelastic scattering, nuclear cascades, precompound-nucleus emission
$^{27}\text{Al}, ^9\text{Be}$ C	Measurements of the Proton Total Reaction Cross Section for Light Nuclei Between 20 and 48 MeV	Phys Rev <u>C10</u> ,2237 (1974) W.F.McGill	total cross sections
Al	Effect of High-Energy Protons on Mechanical Properties of Aluminum	Fiz Khim Obrab Mater <u>5</u> ,151(1974) G.G.Bondarenko, L.I.Ivanov	dislocations, physical radiation
$^{56}\text{Fe}, ^{58}\text{Ni}$	Gamma Rays Observed from 100-MeV Protons Interacting with ^{56}Fe and ^{58}Ni	Phys Rev Lett <u>33</u> , 1493(1974) C.C.Chang et al	precompound-nucleus emission

Table I (Cont.)

209Bi	Reactions on 209Bi Induced by Intermediate Energy Protons and the Effect of Direct Reactions	Nucl Phys <u>A230</u> , 98 (1974) K.Miyano et al	direct reactions, precompound-nucleus emission
	Monte Carlo Programs for Calculating Three-Dimensional High-Energy (50MeV-500GeV) Hadron Cascades in Matter	Comput Phys Commun <u>7</u> , 327 (1974) J.Ranft, J.T.Routti	charged-particle transport, Monte Carlo method, neutron transport
181Ta	Analysis of (particle,xn) Reactions on Tantalum and Gold. I. 181Ta(alpha,xn) Excitation Functions Up to 104 MeV and Equilibrium Statistical Model Analysis	Nucl Phys <u>A228</u> , 165 (1974) F.Hermes et al	gamma spectra, Monte Carlo method
	Periodic Dependence of Gaussian Electronic Stopping Cross Section with Energetic Ions in Solid Targets	Jap J Appl Phys <u>13</u> , 393 (1974) K.Kanaya, K.Hojou	charged-particle transport, electron-ion collisions, stopping power
W	Effects of Irradiation-Induced Defects on the Mechanical Properties of Tungsten	U of Pittsburgh Thesis (1973) C.S.Reft	dislocations, radiation effects
208Pb	Optical-Model Analysis of p + 208Pb Elastic Scattering from 15-1000 MeV	Phys Rev <u>C10</u> , 307 (1974) W.T.H.Van Oers et al	optical models
209Bi 12C	Comparisons of Predictions from Two Intranuclear-Cascade Models with Measured Secondary Proton Spectra at Several Angles from 62- and 39-MeV Protons on Various Elements	Oak Ridge report ORNL-TM-4638 (1974) H.W.Bertini et al	nuclear cascades, quasi-elastic scattering
59Co, 63Cu 56Fe 181Ta	De-Excitation by Statistical Pre-Equilibrium Alpha Emission	Univ Lyon report LYCEN-7347 (1973) Thesis, N.Chevarier	nuclear cascades, precompound-nucleus emission
209Bi 54Fe	A-Priori Pre-Equilibrium Decay Models	Nukleonika <u>19</u> , 183 (1974) M.Blann	nucleon-nucleon interactions, precompound-nucleus emission
6Li, 12C 9Be	(p,pn) Reactions on Light Nuclei at 46 MeV	Phys Rev Lett <u>32</u> , 684 (1974) C.A. Miller et al	knock-out reactions, quasi-elastic scattering

Table I (Cont.)

Cu	Shielding from Neutrons Generated in Targets by a Beam of 1 GeV Protons	Tr Radiotekh Inst <u>9</u> ,117(1972) B.V.Man'ko, B.S.Sychev	shielding
⁴⁵ Sc	Charged Particles Produced in the Bombardment of ⁴⁵ Sc by 45 MeV Protons	U of S Calif Thesis(1973) H.Spitzer	reaction mechanisms, DWBA, compound-nucleus reactions,pickup reactions
⁷ Li	Fast Forward Neutron Production in the ⁷ Li(p,n) ⁷ Be Reaction for 41- and 64-MeV Protons	Nucl Instr Meth <u>113</u> ,185(1973) J.W.Wachter et al	charge-exchange reactions, neutron spectra
²⁰⁹ Bi ⁵⁴ Fe	A Priori Pre-Equilibrium Decay Models	Nucl Phys <u>A213</u> ,570 (1973) M.Blann	nucleon-nucleon potential, optical models
	Complete Hydrogen and Helium Particle Spectra from 30- to 60-MeV Proton Bombardment of Nuclei with A = 12 to 209 and Comparison with the Intra-nuclear Cascade Model	Phys Rev <u>C8</u> ,1045 (1973) F.E.Bertrand, R.W.Peele	heavy nuclei, light nuclei, nuclear cascades
Cu	Spallation of Copper by 65-MeV Pi ⁺ and Pi ⁻ and by 205-MeV Protons	Phys Rev <u>C8</u> ,594 (1973) C.K.Garrett, A.L.Turkevich	nuclear cascades
H	Gold L X-Ray Production by 0.5 to 30-MeV Protons	Phys Rev <u>A7</u> ,566 (1973) S.M.Shafrroth et al	emission spectra, hydrogen ions, x-ray spectra
Bi ¹⁹⁷ Au	X-Ray Emission Following Nuclear Reactions	Phys Rev Lett <u>30</u> , 863(1973) G.Deconninck, N.Longequeue	x-ray spectra
¹⁷⁰ Hf ¹⁸¹ Ta ¹⁶⁸ Yb	De-Excitation of Even-Even Isotopes of Yb, Hf, and W Produced in (p,xn gamma) Reactions	J Phys (Paris) <u>34</u> , 345(1973) C.Birattari et al	compound nucleus reactions, gamma radiation

Table I (Cont.)

U	High-Energy Neutrons Produced by 740-MeV Protons on Uranium	Kent State Univ report APS Meeting COO-2231-4(1972) Wash DC, R.Madey, F.M.Waterman	knock-out reactions, neutron spectra
	Characteristic L X-Ray Spectra from Proton, Alpha-Particle, and Oxygen Bombardment of Sn	Phys Rev <u>A7</u> , 1244 (1973) D.K.Olsen et al	ion collisions, x-ray spectra
⁷ Li	Fast Forward Neutron Production in the ⁷ Li(p,n) ⁷ Be Reaction for 41- and 64-MeV Protons	Oak Ridge report ORNL-TM-3853(1973) J.W.Wachter et al	neutron spectra
	Reaction Mechanisms in (p,p') Reactions Exciting the High-Energy Continuum	Phys Rev <u>C7</u> , 331 (1973) B.L.Cohen et al	DWBA analysis
¹⁶⁰ Gd ¹⁶⁹ Tm	Pre-Equilibrium Process in (p,n) Reactions	Nucl Phys <u>A201</u> , 579 (1973) C.Birattari et al	pre-equilibrium mechanisms
¹² C ^{58,60} Ni	Elastic Scattering of 46-MeV Protons by ¹² C, ⁵⁸ Ni, and ⁶⁰ Ni	Particles & Nuclei <u>4</u> , 192(1972) H.Willmes et al	elastic scattering
^{C,27} Al ⁵⁹ Co	Energy and Angle Distributions of Neutrons Emitted in the Interactions of 3 GeV Protons with Carbon, Aluminum, and Cobalt	Thesis(1972) Univ. Microfilms #72-25,638 W.J.Nalesnik	10-900 MeV neutron energy, angular distributions
Cu	Thin-Target Cross Sections for Some Cr, Mn, Fe, Co, Ni, and Zn Nuclides Produced in Copper by 82- 116-MeV Protons	Phys Rev <u>C6</u> , 1235 (1972) H.R.Heydegger et al	thin-target cross sections
¹⁹⁷ Au ⁵⁴ Fe	Extensions to the Pre-Equilibrium Statistical Model and a Study of Complex Particle Emission	Nucl Phys <u>A193</u> , 417 (1972) C.K.Cline	pre-equilibrium statistical model
²⁴ Mg ²⁸ Si	Optical-Model Analysis of the Elastic Scattering of 100 MeV Protons from ²⁴ Mg and ²⁸ Si	Nucl Phys <u>A193</u> , 438 (1972) Y.S.Horowitz	elastic scattering
	Properties of Proton-Irradiated Diamond	Radiation Effects <u>14</u> , 245(1972) K.P.Ananthanarayanan et al	diamonds, infrared spectra

Table I (Cont.)

58,60Ni 61,62Ni	Nuclear Reactions of Nickel with Protons up to 56 MeV	J Inorg Nucl Chem <u>34,2419</u> (1972) S.Tanaka et al	excitation functions
	Excitation Function of (p,pn) Reactions at High Energy	Nucl Phys <u>A190</u> ,501 (1972) S.Das et al	excitation functions, knock- out reactions
96Mo	96Mo(p,xn) Reaction from 10 to 80 MeV	Phys Rev <u>C6</u> ,810 (1972) J.J.Hogan	nuclear cascades, intranuclear cascade models
6Li	Elastic and Inelastic Scat- tering of Protons from 6Li Between 25 and 45 MeV	Nucl Phys <u>A189</u> ,35 (1972) K.H.Bray et al	elastic, inelastic scattering
Xe methane	Fluctuations in the Energy Loss of 66- and 100-MeV Protons in a Thin Proportional Counter	Phys Rev <u>A6</u> ,250 (1972) G.T.Huetter et al	proton energy losses
89Y	Calculations of Isomer Ratios Based on the Statistical and Cascade-Evaporation Theories	Nucl Phys <u>A188</u> ,409 (1972) G.B.Saha, L.Yaffe	nuclear cascades
	Reaction Cross Sections for 30- to 60-MeV Protons on Various Elements: Comparison of Theore- tical Results with Experiment	Phys Rev <u>C5</u> ,2118 (1972) H.W.Bertini	intranuclear cascade model
16O,12C 14N	Investigation of (p,pd) Reac- tion on Light Nuclei at Energy 50 MeV	Yadern Fiz <u>15</u> ,425 (1972) V.V.Boikov et al	recoil angular distributions and momenta for
27Al,O Mg,Si Cl	Spallation Reactions Produced by 50, 100, and 153 MeV Protons with Light Nuclei	Compt Rend <u>B273</u> , 1054(1971) R.Bimbot, H.Gauvin	residual nuclei production
C,N,O	Reaction (p,2p) on Light Nuclei at 50 MeV	Yadern Fiz <u>14</u> ,676 (1971) I.I.Losh- chakov et al	impulse approximation
141Pr	Study of the 141Pr(p,xn) Reac- tion from 10 to 85 MeV	J Inorg Nucl Chem <u>33</u> ,3627(1971) J.J.Hogan	intranuclear cascade
6Li	6Li(p,pd)4He Reaction at 100 MeV	Nucl Phys <u>A178</u> ,225 (1971) I.A.Mackenzie et al	impulse approximation, quasi-elastic scattering
9Be 6,7Li	Inelastic Scattering of 50 MeV Protons by 6Li, 7Li, and 9Be	Nucl Phys <u>A172</u> ,166 (1971) G.S.Mani et al	inelastic scattering

Table I (Cont.)

⁹ Be, B N	Production of ⁷ Be from Light Targets by 30 MeV to 24 GeV Protons	J Inorg Nucl Chem <u>33</u> ,2720(1971) M.Barbier, S.Regnier	
Fe	High-Energy Proton Spallation of Iron	Phys Rev <u>C4</u> ,1257 (1971) R.L.Brodzinski et al	spallation
Ti	High-Energy Proton Spallation of Titanium	Phys Rev <u>C4</u> ,1250 (1971) R.L.Brodzinski et al	spallation
	Total-Reaction-Cross-Section Measurements for 30- 60-MeV Protons and the Imaginary Optical Potential	Phys Rev <u>C4</u> ,1114 (1971) J.J.Menet et al	optical model, total cross sections
¹⁸¹ Ta	Precompound Decay from a Time-Dependent Point of View	Phys Rev <u>C3</u> ,1847 (1971) G.D.Harp, J.M.Miller	time-dependent model
²⁷ Al, Si	Energy Dependence of Proton Elastic Scattering Cross Sections from Al and Si	Nucl Phys <u>A169</u> ,600 (1971) H.S.Sandhu et al	optical model parameters
²⁷ Al ⁹ Be, ¹² C	Production of Medium-Energy Neutrons from Proton Bombardment of Light Elements	Nucl Instr Meth <u>94</u> ,421(1971) J.A.Jungerman	spectra
	Electron Capture and Loss by Atoms, Protons, and Negative Hydrogen Ions in Collisions with Atoms and Molecules	Sov Phys <u>15</u> ,1947 (1971) N.V.Fedorenko	hydrogen ions, reactions with gases
²⁰⁹ Bi ¹⁸¹ Ta ²⁰⁹ Bi	(p,xn) Reactions Induced in ¹⁶⁹ Tm, ¹⁸¹ Ta, and ²⁰⁹ Bi with 20 to 45 MeV Protons	Nucl Phys <u>A166</u> ,605 (1971) C.Birattari et al	precompound and statistical contributions
⁴⁰ Ca	Optical-Model Analysis of p + ⁴⁰ Ca Elastic Scattering from 10 to 180 MeV	Phys Rev <u>C3</u> ,1550 (1971) W.T.H. Van Oers	optical model
²³² Th ²³⁵ U ²³⁷ Np	Phenomena of Fission of Heavy Nuclei by High-Energy Protons	Acta Phys Austr <u>29</u> , 174(1969) H.Axmann, M.Barbier	fission
²⁰⁸ Pb	Elastic Scattering of 50 MeV Protons by Nuclei in the Range from ⁴² Ca to ²⁰⁸ Pb	Nucl Phys <u>A165</u> ,384 (1971) G.S.Mani et al	scattering by nineteen nuclei, optical model parameters

Table I (Cont.)

6,7Li 9Be	Elastic Scattering of 50 MeV Protons by Light Nuclei	Nucl Phys <u>A165</u> ,145 1971) G.S.Mani et al	optical model
	Estimation of Unknown Excitation Functions for (alpha,xn)-, (d,xn)- and (d,pxn)-, and (p,xn)-Reactions	Oak Ridge report ORNL-TR-3020(ND) J.Lange, H.Muenzel	excitation functions, thick-target irradiation
69,71Ga 89Y,55Mn 59Co	Cross Sections for the Pro- duction of Nuclides from Med- ium Weight Elements by High- Energy Proton Bombardment	Nucl Phys <u>A155</u> ,49 (1970) B.K.Gupta et al	spallation products
68Zn 45Sc	Nuclear Interactions of 45Sc and 68Zn with Protons of Medium Energy	Nucl Phys <u>A150</u> ,11 (1970) T.McGee et al	
N,C,O	Backward Angle Scattering of 50-MeV Protons from C, O, N, and Be	Nucl Phys <u>A157</u> ,145 (1970) N.M.Clark et al	elastic and inelastic cross sections
Si,9Be 27Al	Proton Total Reaction Cross Sections for Light Nuclei Between 24 and 46 MeV	Thesis(1969) (Univ unknown) Univ Microfilm order 70-8247 W.F.McGill	total cross sections
Ca,V	X-Ray Spectra from Oxygen-Ion Bombardments on Ca and V at 15 MeV	Phys Rev Lett <u>25</u> , 983(1970) D.Burch, P.Richard	atomic models, x-ray spectra
27Al 12C 56Fe	Calculation of the Photon- Production Spectrum from Proton-Nucleus Collisions in the Energy Range 15 to 150 MeV and Comparison with Experiment	Nucl Sci Eng <u>41</u> ,47 (1970) Y.Shima, R.G.Alsmiller Jr	gamma radiation, intranuclear cascade
120Sn	Tabulated Cross Sections For Hydrogen and Helium Particles Produced by 62- and 29-MeV Protons on 120Sn	Oak Ridge report ORNL-4471(1970) F.E.Bertrand, R.W.Peelle	charged-particle production data
56Fe	Excitation Functions for the Bombardment of 56Fe with Protons	J Inorg Nucl Chem <u>32</u> ,1419(1970) I.L.Jenkins, A.G.Wain	excitation functions
208Pb 56Fe 27Al,14N	Calculation of the Neutron Spectra from Proton-Nucleus Nonelastic Collisions in the Energy Range 15 to 18 MeV and Comparison with Experiment	Nucl Sci Eng <u>40</u> , 254(1970) R.G.Alsmiller, O.W.Hermann	intranuclear cascade

Table I (Cont.)

^{12}C	Inelastic Scattering of 100 MeV Protons from ^{12}C Using a Ge(Li) Total-Absorption Proton Counter	Can J Phys <u>48</u> ,201 (1970) Y.S.Horowitz, R.E.Bell	inelastic scattering
^{54}Fe	Tabulated Cross Sections for Hydrogen and Helium Particles Produced by 62-, 39-, and 29-MeV Protons on ^{54}Fe	Oak Ridge report ORNL-4469(1970) F.E.Bertrand, R.W.Peelle	charged-particle spectra
Ar,N O	Electro-Capture Cross-Sections in Various Gases by Protons with Energies from 25 to 38 MeV	Nuovo Cim <u>A64</u> ,1068 (1969) E.Acerbi et al	electron-capture
^{197}Au	Tabulated Cross Sections for Hydrogen and Helium Particles Produced by 62- and 29-MeV Protons on ^{197}Au	Oak Ridge report ORNL-4460(1969) F.E.Bertrand, R.W.Peelle	differential cross sections, hydrogen and helium isotope production
^{27}Al	Tabulated Cross Sections for Hydrogen and Helium Particles Produced by 62-MeV and 29-MeV Protons on ^{27}Al	Oak Ridge report ORNL-4455(1969) F.E.Bertrand, R.W.Peelle	differential cross sections for hydrogen and helium isotope production
	Proton Optical Potentials from 30 to 180 MeV	Nucl Phys <u>A138</u> ,61 (1969) K.Seth	optical model
^{89}Y	Tabulated Cross Sections for Hydrogen and Helium Particles Produced by 62-MeV Protons on ^{89}Y	Oak Ridge report ORNL-4450(1969) F.E.Bertrand, R.W.Peelle	differential cross sections
^9Be $^{10,11}\text{B}$ $^{12,13}\text{C}$	Optical-Model Analysis of Nucleon Scattering from 1p-Shell Nuclei Between 10 and 50 MeV	Phys Rev <u>182</u> ,977 (1969) B.A.Watson et al	optical model
^{56}Fe	Tabulated Cross Sections for Hydrogen and Helium Particles Produced by 61-MeV Protons on ^{56}Fe	Oak Ridge report ORNL-4456(1969) F.E.Bertrand, R.W.Peelle	production cross sections for hydrogen and helium
$^{27}\text{Al},\text{Fe},\text{C}$ $\text{Pb},\text{Cu},\text{U}$ $\text{Ti},^9\text{Be}$ Cd	Energy Dependence of Interaction Cross Sections of Nucleons with Atomic Nuclei at Energies Higher than 50 MeV	Oak Ridge report ORNL-TR-2148(ND) V.S.Barashenkov et al	energy dependence of cross sections
	Total Reaction Cross Section Measurements with 60-MeV Protons	Phys Rev Lett <u>22</u> , 1128(1969) J.J.H.Menet et al	ten nuclei, carbon - lead

Table I (Cont.)

^{59}Co ^{63}Cu	Simulation of the Interaction of Cosmic Rays with the Lunar Surface by Proton Bombardment of a 'Thick Target'. Pt.1. Reactions of Low Energy Neutrons	Radiochim Acta <u>21</u> , 169(1974) R.Michel et al	epithermal neutrons
^{12}C	Microscopic Effective Interaction for 155-MeV Protons	Phys Rev <u>C13</u> ,444 (1976) M.Buenerd	inelastic scattering
	Gamma Rays from Proton Bombardment of Nuclei	Univ of Maryland report ORC-4856-26 p.348, O.Artun et al	direct reactions, gamma radiation, light nuclei
^{27}Al , ^{40}Ca ^{209}Bi , ^{12}C	Elastic and Inelastic Proton-Nucleus Scattering at 156 MeV: Experimental Study and Analysis in Impulse Approximation	IPNO-T-75-01(1975) Univ of Paris Thesis, V.Comparat	impulse approximation, inelastic scattering
^{27}Al , ^{56}Fe ^{16}O	Multinucleon Removal Induced by High-Energy Protons	Phys Rev Lett <u>35</u> , 773(1975) O.Artun et al	gamma radiation
Cu	Calculated Neutron Spectrum from 800-MeV Protons Incident on a Copper Beam Stop	Los Alamos report LA-6043-MS(1975) D.G.Perry	neutron spectra
Ge, Si	Comparison of Radiation Damage in Si and Ge Irradiated with 660 MeV Protons and Fast Reactor Neutrons	Sov Phys Semicond <u>9</u> ,352(1975) S.R.Novikov, E.E.Rubnova	physical radiation recoils
	Specialized Reactions: Reactions at Intermediate Energies: Baryon-Nucleus Collisions. 150 MeV-1GeV	Nucl Spect and Reactions, Pt. B Academie Press (1974) G.Igo	light nuclei, quasi-elastic scattering
	Spectrum and Shielding Measurements and Calculations of Neutrons Produced by 800 MeV Protons	Los Alamos report LA-UR-75-341(1975) L.R.Veaser et al	gypsum, neutron spectra, spallation
^{12}C	Multi-Step Processes in High-Energy Elastic and Inelastic Nuclear Scattering	Nucl Phys <u>A236</u> ,423 (1974) E.Kujawski	inelastic scattering
^{238}U	Electronuclear Method of Neutron Production	At Energ(USSR) <u>37</u> , 475(1974) V.S.Barashenkov et al	neutron spectra, nuclear cascades
	Extension of the Isobar Model for Intranuclear Cascades to 1 GeV	Phys Rev <u>C10</u> ,2387 (1974) G.D.Harp	energy spectra, nuclear cascades, spallation

Table I (Cont.)

U	Neutrons Produced by 740-MeV Protons on Uranium	Nucl Instr Meth <u>117</u> ,509(1974) L.R.Veaser et al	neutron spectra
Ni	Properties of Light Transition Radiation of 660 MeV Proton ($\gamma = 1.7$) Inclined Incidence on a Thick Nickel Plate	Dubna report JINR-P1-7956(1974) V.P.Zrelov et al	energy spectra
⁹ Be,Cu	Neutron Spectra at 0° from 724-MeV Protons on Be and Cu	Kent State Univ report COO-2231-1 (1973) R.Madey, F.M.Waterman	nuclear cascades
U	Mass Distribution in Fission of Uranium Induced by 170-MeV Protons	J Inorg Nucl Chem <u>36</u> ,245(1974) I.Haldorsen et al	fission yield
U	Calculation of Electronuclear Method for Neutron Production	Dubna report JINR-P2-7694(1974) V.S.Barashenkov et al	neutron spectra
	Optical Model Partial Wave Analysis of Intermediate Energy (0.6 to 1.0 GeV) Proton-Nucleus Elastic Scattering	Wayne State Univ Thesis(1973) B.C.Clark	
	Inelastic Interactions of High Energy Nucleons with Heavy Nuclei	Nucl Phys <u>A222</u> ,204 (1974) V.S.Barashenkov et al	nuclear cascades, spallation
⁴⁰ Ca, ²⁷ Al ²⁰⁹ Bi, ⁵⁶ Fe ⁶² Ni	Proton-Nucleus Elastic Scattering at 156 MeV	Nucl Phys <u>A221</u> ,403 (1974) V.Comparat et al	optical-model analysis
	Direct Interaction of High-Energy Particles with Nuclei	Atomizdat(1972) F.B.Denisov, V.N.Makhedov	Goldberger model, impulse approximation
	Invariant Effects in Backward Emission of p,d, t by Nuclei Bombarded by 0.7 to 6 GeV Elementary Particles	Yadern Fiz <u>19</u> ,1266 (1974) Y.Bayukov et al	particle production, spectra
Li, ⁵⁸ Ni	Investigation of Isotopic Effects in Nuclear Reactions Induced by 660-MeV Protons	Yadern Fiz <u>19</u> ,32 (1974) V.I.Bogatin et al	spallation

Table I (Cont.)

U	High-Energy Neutrons Produced by 740-MeV Protons on Uranium	Phys Rev <u>C8</u> ,2412 (1973) R.Madey, F.M.Waterman	intranuclear cascade, neutron spectra
⁹ Be Cu	Neutron Spectra at 00 from 724-MeV Protons on Be and Cu	Phys Rev <u>C8</u> ,2419 (1973) F.M.Waterman, R.Madey	intranuclear cascade, neutron spectra
Cs	Spectra of Radioactivity Induced in Cesium Iodide Scintillator Crystals by 155 MeV Protons	Astrophys Space Sci <u>24</u> ,95(1973) G.Carpenter, C.S.Dyer	radiation effects
Ta	Calculations of Spallation Yields of Products Induced by the interaction of High-Energy Protons with Complex Nuclei	Symp Applications of Nucl Data in Sci & Tech Paris,France Mar 12 1973 E.Ross, K.Baechmann	spallation
	Systematics in the (p,xn) and (p,pxn) Reaction Cross Sections	Studsvik report (Sweden) AE-479 (1973) L.Jeki	charge-exchange reactions
Be,C,Li	Energy Dependence of the Cross Section of Fast Deuteron Knock-Out from Li, Be, and C by 380 to 665 MeV Protons	Dubna report JINR-P1-7352(1973) V.I.Komarov et al	knock-out reactions
²³⁸ U	Fluxes of Neutrons Generated by High Energy Protons in Thick Blocks of Uranium	At Energ(USSR) <u>35</u> , 163(1973) V.S.Barashenkov V.D.Toneev	Monte Carlo method
	Cluster Structure and Inelastic Interactions of Fast Protons with Light Nuclei	Izv Akad Nauk Azerb Ser Fiz Tekh <u>2</u> ,11 (1972)O.B.Abdinov	cascade evaporation model, nuclear cascades
²⁰⁹ Bi ¹⁹⁷ Au ²³⁸ U	Inelastic Interactions of High Energy Nucleons with Heavy Nuclei	Dubna report JINR-E2-7278(1973) V.S.Barashenkov et al	nuclear cascades
	Mechanisms of High-Energy Nuclear Reactions	Radiochim Acta <u>18</u> , 133(1972) K.Baechmann et al	compound nucleus, knock-out reactions

Table I (Cont.)

Cs	Differential Recoil and Angular Distribution Study of Several (p,pxn) and (p,xn) Reactions of ^{133}Cs with 550-MeV Protons	Carnegie-Mellon U Thesis(1973) M.A.Molecke	direct reactions, Monte Carlo method
	Comparison of the Results of Calculations Done at Different Laboratories with Each Other and with Experiments on the Secondary Proton and Neutron Spectra from Protons at 140 and 160 MeV on Nuclei	NASA report NASA-CR-130347 (1966) H.W.Bertini	knock-out reactions, neutron spectra
^{27}Al ^{12}C Si	Gamma Radiation Produced by the Inelastic Interaction of 600-MeV Protons with Carbon, Oxygen, Aluminum, and Silicon Nuclei	Atomizdat(1972) R.Ya.Zul'karneev et al	gamma spectra
Si	Recombination Centres in N- and P-Type Silicon Irradiated by Very-High-Energy Protons	Int Conf on Defects in Semiconductors (1972) Reading,UK D.Bielle-Daspet	physical radiation
Au,Pb Bi,U	Study of Nuclear Fission Induced by High-Energy Protons	Rev Phys Appl <u>7</u> ,243 (1972) R.Brandt et al	fission
Al,C,Cu	Low Energy Protons from C, Al, Ni, Cu, and Au Under 600 MeV Proton Bombardment	Thesis(1972) Univ Microfilms Order #73-610 H.D.Orr III	energy spectra, spallation
^{238}U	Transport of Neutrons Induced by 800-MeV Protons	Los Alamos report LA-UR-73-200(1972) R.G.Fluhart et al	neutron-beam production
^{209}Bi	Cascade Theory of Particle and Nuclei Interactions with Nuclei	Dubna report JINR-D1-6349 p.153(1971) V.S.Barashenkov et al	nuclear cascades
$^{12}\text{C}, ^{27}\text{Al}$ ^{197}Au	Theoretical and Experimental Study of the Production of Light Fast Nuclei in High Energy Proton-Nucleus Interactions	J Phys (Paris) <u>33</u> , 477(1972) J.P.Alard et al	spallation
$^{27}\text{Al}, ^9\text{Be}$ $^{209}\text{Bi}, ^{12}\text{C}$	Neutron and Proton Spectra from Targets Bombarded by 450-MeV Protons	Phys Rev <u>C6</u> ,1496 (1972) J.W.Wachter et al	neutron spectra

Table I (Cont.)

Al,C,Cu Au,Pb	Low-Energy Proton Production Under 600-MeV Proton Bombard- ment	Trans Amer Nucl Soc <u>15</u> ,972(1972) H.D.Orr et al	low energy proton emission
²³⁸ U	Fluxes of Neutrons Generated By High-Energy Protons in the Thick Blocks of Uranium	Dubna report JINR- P16-6623(1972) V.S.Barashenkov, V.D.Toneev	Monte Carlo calculations
²⁷ Al, ⁶⁴ Cu ²⁰⁸ Pb, ⁷ Li	Study of the Spectra of Fast Deuterons Produced in the Interaction of 670 MeV Protons with Nuclei	Nucl Phys A <u>195</u> ,581 (1972) L.S.Azhgirei et al	deuteron spectra
¹² C	Total p- ¹² C Cross Section Between 190 and 560 MeV	FRNC-TH-238(1971) Grenoble Univ Thesis, B.Favier	total cross sections
²³² Th ²³⁵ , ²³⁸ U	Calculations of Spallation- Fission Competition in the Reactions of Protons with Heavy Elements at Energies Less Than or Equal to 3 GeV	Phys Rev <u>C6</u> ,66 (1972) R.L.Hahn, H.W.Bertini	nuclear cascades
²⁷ Al, ⁴⁰ Ca ¹² C	Optical Model Analysis of Elastic Proton Scattering at 180 MeV	Phys Scr <u>4</u> ,235 (1971) A.Ingemarsson, G.Tibell	optical model
U	Spectrum of Neutrons Produced by 800-MeV Protons on Uranium	Trans Amer Nucl Soc <u>15</u> ,555(1972) L.R.Veesser et al	Monte Carlo method, neutron spectrum
	To the Process of Deuteron Knocking-Out from Nuclei by High-Energy Protons	Dubna report JINR-P4-6299(1972) B.N.Kalinkin, V.L.Shmonin	quasielastic scattering, deuteron knockout
	Mechanism of Deuteron Produc- tion in Interaction of 670-MeV Protons with Nuclei	Dubna report JINR-P2-6325(1972) O.D.Dal'Karov,Q.Z.Ngo	particle production
²⁷ Al ¹⁸¹ Ta	Medium Energy Intranuclear Cascade Calculations: A Comp- arative Study	Nucl Phys A <u>187</u> ,531 (1972) V.S.Barashenkov et al	Monte Carlo method, nuclear cascades
	Synchrocyclotron Shield-Leakage Neutron Spectra	CERN-71-16 V1 & 2 (1971) CERN report V.E.Aleinikov et al	flux leakage, radiation escape

Table I (Cont.)

181Ta	Interaction of High-Energy Protons with Tantalum Nuclei. Kinetic Energies and Excitation Energies	Radiochim Acta <u>16</u> , 129(1971) U.Trabitzsch, K.Baechmann	recoils, spallation
27Al 9Be,B C,Cu	Reaction Cross Sections for Protons in the Energy Range 220 to 570 MeV	Nucl Phys <u>A183</u> ,81 (1972) P.U.Renberg et al	
181Ta 238U	Neutron Production by Medium-Energy Protons on Heavy Metal Targets	Los Alamos report LA-4789(1972) R.R.Fullwood et al	particle production,
Pb	Neutron Yield from Protons and Deuterons of Momenta Between 0.85 and 1.7 GeV/C Totally Absorbed in Lead	Can J Phys <u>49</u> ,2061 (1971) D.West, E.Wood	neutron yield
	Cross Sections for Summed Quasi-Elastic and Inelastic Scattering	Nucl Phys <u>A173</u> ,225 (1971) D.F.Jackson	direct reactions, quasi-elastic scattering
27Al Cu,Fe	Measurements of Spallation Cross Sections for 590 MeV Protons on Thin Targets of Copper, Nickel, Iron, and Aluminum	Nucl Phys <u>A169</u> ,437 (1971) J.E.Cline, E.B.Nieschmidt	spallation
27Al 65Cu	Results from Medium-Energy Intranuclear-Cascade Calculations	Nucl Phys <u>A169</u> ,670 (1971) H.W.Bertini, M.P.Guthrie	intranuclear cascade
27Al,Co C,Na	Interaction of High-Energy Radiation with Matter	Dubna report JINR-P2-5719(1971) V.S.Barashenkov et al	Monte Carlo method
C	Production of Fast Deuterons from the Interaction of High-Energy Protons with Nuclei	Nucl Phys <u>A163</u> ,465 (1971) V.V.Balashov, V.I.Markov	impulse approximation
12C	Spectrum of Fast Deuterons Emitted in 670-MeV Proton Interaction with Carbon Nuclei	Yadern Fiz <u>13</u> ,6 (1971) L.S.Azhgirei et al	spectra
	Attenuation of a High-Energy Neutron Flux in a Cylindrical Duct	At Energ(USSR) <u>29</u> , 378(1970) N.I.Bushuev et al	neutron flux, shielding
238U	Precompound Decay from a Time-Dependent Point of View	Columbia Univ report CU-1019-79(1970) G.D.Harp, J.M.Miller	neutron spectra

Table I (Cont.)

²⁰⁹ Bi ²³⁸ U	Measurement of the Prompt Neutrons Emitted in the Fission of ²⁰⁹ Bi and ²³⁸ U Induced by 155-MeV Protons	Phys Rev <u>C2</u> ,256 (1970) E.Cheifetz et al	prompt neutron spectra
²⁷ Al	Angular Dependences of Many-Charged Particles Produced by 660-MeV Protons on ²⁷ Al Nuclei	Yadern Fiz <u>12</u> ,234 (1970) Y.P.Milovanov et al	angular distribution
⁵⁸ Ni ¹⁹⁷ Au	Angular Distribution of Recoil Products from Some Simple Reactions of 400 MeV Protons with ⁵⁸ Ni and ¹⁹⁷ Au	Nucl Phys <u>A152</u> ,295 (1970) Y. Yu et al	angular distribution of recoils
Ge	Oscillations of the Photo-current in Ge with Radiation Defects	Sov Phys Semicond <u>3</u> ,1294(1970) E.E.Rubinova et al	radiation effects
Si,Ge	Effects of Very-High-Energy Protons on Electric Properties of Silicon and Germanium	NP-18474(1970) Toulouse Univ (France) Thesis D.Bielle-Daspet	electric properties, radiation effects
⁹ Be, ²⁰⁹ Bi Ca,C,Cu U	Intranuclear-Cascade Calculation of the Secondary Nucleon Spectra from Nucleon-Nucleus Interactions in the Energy Range 340 to 2900 MeV and Comparisons with Experiment	Phys Rev <u>188</u> ,1711 (1969) H.W.Bertini	intranuclear- cascade calculations
⁶³ Cu ⁵⁶ Fe	A Recoil Study of (p,n) and (p,2n) Reactions for Proton Bombarding Energies of 100 to 400 MeV	No Information Thesis(1969) A.C.Stalker	evaporation model
⁹ Be, ¹² C	Neutron Pickup Reactions in ⁹ Be, ¹² C, and ²⁸ Si Induced by 185 MeV Protons	Ark Fys <u>39</u> ,323 (1969) O.Sundberg, J.Kaellne	pick-up reactions
	Interaction Cross Sections of High Energy Particles with Atomic Nuclei	Oak Ridge report ORNL-TR-2235(ND) S.M.Eliseev	Glauber theory
Fe	Calculation of the Residual-Photon Dose Rate Induced in Iron by 200-MeV Protons	Nucl Sci Eng <u>38</u> , 271(1969) T.W.Armstrong, J.Barish	gamma radiation
²⁰⁹ Bi ²³⁸ U	Comparative Study of the Fission of Bismuth and Uranium Induced by High-Energy Protons (156 MeV)	Nucl Phys <u>A134</u> ,513 (1969) J.Galin et al	liquid drop model fission

Table I (Cont.)

Pb,Sn Cu,Al	Ranges and Ionization Energy Losses of Protons in Various Substances	Yadern Fiz <u>9</u> ,997 (1969) I.M.Vasilevskii et al	ionization
²⁷ Al,C ⁵⁹ Co,Cu	Calculation of the Neutron and Proton Spectra from Thick Targets Bombarded by 450-MeV Protons and Comparison with Experiment	Nucl Sci Eng <u>36</u> ,291 (1969) R.G.Alsmiller et al	neutron and proton yields
	Experimental Study of the Knockout of Fast Light Nuclei in 600 MeV Proton Interactions with Nuclei	Study Session on Recent Developments in Theoretical Nuclear Physics, LaToussuire,France Lycen-7302,p.54.1 (1973) J.P.Alard et al	knockout reaction thermodynamic model
²⁷ Al, ⁶ Li ⁷ Li,Cu,Pb	Study of the Spectra of Fast Deuterons Produced in the Interaction of 670 MeV Protons with Nuclei	Dubna report JINR-P1-6308(1972) L.S.Azhgirei et al	spectra
A>40	Nucleon-Nucleus Optical Model Parameters, A > 40, E < 50 MeV	Univ of Minnesota report COO-1265-59 (19ND) F.D.Becchetti Jr.,G.W.Greenlees	elastic scattering, optical model,
Sb,U	Recoil Properties of Antimony Isotopes Produced by the Reac- tion of 570 MeV and 18.2 GeV Protons with Uranium	J Inorg Nucl Chem <u>31</u> ,2649(1969) E.Hageboe, H.Ravn	recoils
¹² C	Yield of Deuterons Knocked Out from the ¹² C Nucleus by 730 and 1260 MeV Protons	JETP Lett (USSR) <u>9</u> , 413(1969) V.S.Borisov et al	deuteron yields
Ge	Studies of Radiation Defects in Germanium Irradiated by High-Energy Protons	Fiz Tekh Poluprov <u>3</u> ,1119(1969) R.F.Konopleva et al	electric properties, radiation effects, semiconductors
²⁴ Mg ²⁸ Si	Inelastic Scattering of 100 MeV Protons from Mg and Si Using a Ge(Li) Total Absorp- tion Proton Counter	Nucl Phys A <u>134</u> ,577 (1969) Y.S.Horowitz et al	inelastic scattering
¹² C, ⁹ Be ⁶ Li	Quasielastic Scattering of 665-MeV Protons by Alpha- Particle Clusters in Light Nuclei	Brookhaven Lab report BNL-TR-282 (19ND) V.I.Komarov et al	quasielastic scattering

Table I (Cont.)

⁹ Be ¹² C ⁶ Li	Knock-Out of Fast ³ He Fragments from Light Nuclei by 665-MeV Protons	Brookhaven Lab report BNL-TR-281 (19ND) V.I.Komarov	elastic scattering
	Inelastic Interactions of High-Energy Protons with Atomic Nuclei	Oak Ridge report ORNL-TR-2200(19ND) V.S.Barashenkov et al	inelastic scattering, Monte Carlo method, intra-nuclear cascades
Re	Thermal Annealing of Crystalline Rhenium Compounds Irradiated with 660 MeV Protons	J Inorg Nucl Chem <u>31</u> ,2669(1969) E.Ianovici, N.Zaitseva	radiation effects, recoils
	Nuclear Charge Dispersion in the Fission of ²³⁵ U and ²³⁸ U with 20 to 85 MeV Protons	Thesis(1968) no university information given, A.H.Khan	fission, fission products
Pb	The Transport of Neutrons Produced by 3-GeV Proton-Lead Nucleus Collisions Through a Labyrinth and Comparison with Experiment	Nucl Instr Meth <u>73</u> , 280(1969) R.G.Alsmiller, E.Solomito	neutrons/transport
²⁷ Al, ⁴⁰ Ca ¹² C, ²⁰⁸ Pb ⁵⁸ Ni	Elastic Scattering of 61.4 MeV Protons	Phys Rev <u>181</u> ,1565 (1969) O.Karban	elastic scattering, optical model
²⁷ Al,Pb C,Fe,Cu U,Ti	Energy Dependence of Interaction Cross Sections of Nucleons with Atomic Nuclei at Energies Higher Than 50 MeV	Oak Ridge report ORNL-TR-2148(19ND) V.S.Barashenkov et al	
Al,Cd C,Cu	Gamma Radiation from Li, C, Al, Ni, Cu, Nb, Cd, Ta, and Pb Targets Bombarded by 21-MeV Protons	At Energ (USSR) <u>26</u> , 388(1969) S.S.Omarov et al	gamma dose rates
Al,C,Au Li,Mg	Gamma Radiation from Li, C, Mg, Al, Ni, Zn, Ag, Ta, Au, and Pb Targets Bombarded by 42-MeV Alpha Particles	At Energ (USSR) <u>26</u> , 390(1969) S.S.Omarov et al	gamma radiation
U	Yields and Recoil Properties of Scandium Isotopes Produced in the Interaction of 590 MeV and 18 GeV Protons with Uranium	J Inorg Nucl Chem <u>31</u> ,1883(1966) H.Ravn	recoil properties

Table I (Cont.)

Te	Simple Nuclear Reactions on the Separated Isotopes of Tellurium at 300 MeV	Thesis(1968) no university information given R.F.Schall Jr	(p,2p), (p,pn), and (p,2n)
^{27}Al	Angular Distribution of ^{24}Na Recoil Nuclei Produced in the Reaction $^{27}\text{Al}(p,3pn)$	Yadern Fiz <u>9</u> ,930 (1969) F.P.Denisov et al	(p,3pn), angular distribution of recoils
Al,Si	Investigation of Spallation of the Nuclei F, Mg, Al, Si with Fragments, Induced by High-Energy Protons	Yadern Fiz <u>9</u> ,1155 (1969) G.A.Fedoseev et al	spallation
O	Study of 660 MeV Proton Interaction with Oxygen Nuclei	Yadern Fiz <u>9</u> ,925 (1969) V.E.Dudkin et al	charged-particle spectra
Pb,Al C,Cu	Ranges and Ionization Energy Losses of Protons in Various Substances	Yadern Fiz <u>9</u> ,997 (1969) I.M.Vasilevskii et al	proton range
^{40}Ca , ^{12}C ^{58}Ni , ^{120}Sn	Optical Potential in Proton-Nucleus Scattering	Michigan State Univ report COO-1051-33(1969) D.A.Slanina	optical model
^{208}Pb	Elastic and Inelastic Scattering of 155-MeV Protons on ^{208}Pb	J Phys (Paris) <u>30</u> , 13(1969) A.Willis et al	elastic and inelastic scattering yields
^{52}Cr , ^{63}Cu ^{77}Se , ^{124}Te	The Measurement of Some (p,n) and (p,2n) Reaction Cross Sections at 400 MeV	J Inorg Nucl Chem <u>31</u> ,1915(1969) D.J.Reuland, A.A.Caretto Jr	(p,n) and (p,2n)
^{27}Al , C Cu	Calculation of the Neutron and Proton Spectra from Thick Targets Bombarded by 450-MeV Protons and Comparison with Experiment	Nucl Sci Eng <u>36</u> ,291 (1969) R.G.Alsmiller Jr., et al	reactions in thick targets
Cs	The Behaviour of Radio-Iodine Recoils Formed by Neutron and Proton Irradiation of Some Solid Cesium Compounds	J Inorg Nucl Chem <u>31</u> ,2311(1969) I.Dema, N.G.Zaitseva	heating, recoils
^{12}C	Recoil Study of the $^{12}\text{C}(p,pn)$ Reaction from Threshold to 150 MeV	Nucl Phys <u>A130</u> ,88 (1969) N.T.Porile	recoil ranges, cascade calculation

Table I (Cont.)

^9Be	Quasi-Free Scattering in the Reaction $^9\text{Be}(p,p\alpha)^5\text{He}$ at 55 MeV	J Phys Soc Japan <u>26</u> , 1078(1969) S.Yamashita et al	quasi-free scattering
$^{27}\text{Al}, ^{12}\text{C}$ ^{59}Co	Total Reaction Cross Section Measurements with 60-MeV Protons	Phys Rev Lett <u>22</u> , 1128(1969) J.J.Menet et al	total cross sections
Dy	Note on the L- and M-Shell Ionization by Heavy Charged Particles	Phys Lett <u>A29</u> , 281 (1969) J.M.Hansen, O.P.Mosbakk	perturbation theory, L- and M-shell ionization
Zr, Te Hg, Ge	Study of (p,xn) Reactions at 400 MeV	Phys Rev <u>178</u> , 1732 (1969) L.B.Church, A.A.Caretto Jr	excitation functions
	Synchrocyclotron Proton Beam with an Energy of 100 to 200 MeV for Medico-Biological Investigations	Med Radiol <u>14</u> , 54 (1969) V.P.Dzhelepov et al	radiation sources
O	Formation Cross Sections of Lithium, Beryllium, and Boron Isotopes Produced by the Spallation of Oxygen by High-Energy Protons	J Geophys Res <u>74</u> , 2447(1969) F.Yiou et al	spallation
Pb	Neutron Yields and Thermal Neutron Fluxes in System Lead-Water, Bombarded by High Energy Protons	At Energ (USSR) <u>25</u> , 479(1968) R.G.Vasil'kov et al	neutron yields
C, Cu Al	Range and Ionization Losses of Proton Energy in Different Materials	Argonne Lab report ANL-TRANS-724(19ND) I.M.Vasilevskii et al	ionization energy losses
^{59}Co $^{63}, ^{65}\text{Cu}$	Evaporation Step in Spallation Reactions	Nucl Phys <u>A125</u> , 401 (1969) G.Rudstam	evaporation theory, spallation
U, Al, ^9Be Cd, C, Cu Fe, Pb, Ti	Energy Dependence of the Nuclear Cross Sections for Nucleons at Energy Above 50 MeV	Dubna report JINR-P2-4183(1968) V.S.Bazashenkov et al	cross sections, energy dependence
^{12}C	Scattering of 100 MeV Protons by ^{12}C	Nucl Phys <u>A124</u> , 662 (1969) R.M.Haybron	impulse approximation, elastic scattering

Table I (Cont.)

C,Cu	Measurement and Characteristics of Depth-Dose Patterns Due to Proton Beams	Health Phys <u>16</u> ,349 (1969) N.A.Baily, H.S.Frey	energy losses
	Study of the Correlation of the Characteristics of Nuclear Spallation Products with Their Fragments	Izv Akad Nauk Uzb SSR Ser Fiz-Mat <u>3</u> , 36(1968) S.A.Azimov et al	recoils, spallation products
²³² Th	Nuclear Charge Dispersion in the Fission of ²³² Th by Protons of Energy 20 to 85 MeV	Can J Chem <u>47</u> ,301 (1969) P.P.Benjamin et al	fission products
²⁰⁹ Bi ⁵⁴ Fe, ¹² C	Differential Cross Sections for the Charged Particles Produced by 60-MeV Protons on Carbon, Iron, and Bismuth	Thesis(1968) no university information given F.E.Bertrand Jr	inelastic scattering
	Shielding Calculations for a 200-MeV Proton Accelerator	Oak Ridge report ORNL-4336(1968) R.G.Alsmiller Jr et al	neutron transport calculations
	Cross Sections for Fast Particles and the Atomic Nuclei	Dubna report JINR-P2-4068(1968) V.S.Barashenkov et al	data compilation
²³⁸ U	Yields of Some Light-Mass Nuclides Produced in the Proton-Induced Fission of ²³⁸ U	Can J Chem <u>46</u> ,3565 (1968) A.H.Khan et al	fission at 20 to 85 MeV
⁶⁵ Cu ¹⁹⁷ Au	Angular Distributions of Recoil Products from Some Reactions Induced in ⁶⁵ Cu and ¹⁹⁷ Au by Protons of Energy 30 to 85 MeV	Can J Chem <u>46</u> ,3551 (1968) M.K.Dewanjee et al	recoils, (p,pn) and (p,p3n)
Pb,U Be	Thermal-Neutron Flux Generation by High-Energy Protons	Nucl Sci Eng <u>34</u> ,104 (1968) W.A.Coleman, R.G.Alsmiller Jr	thermal neutrons
¹²⁷ I	(p,n) and (p,pxn) Reactions in ¹²⁷ I	Can J Chem <u>46</u> ,3171 (1968) V.P.Narang, L. Yaffe	(p,n) and (p,pxn) up to 80 MeV
⁶⁵ Cu ¹⁹⁷ Au	Average Recoil Ranges of ⁶⁴ Cu and ¹⁹⁶ Au Produced by Protons of 20 to 85-MeV Energy in ⁶⁵ Cu and ¹⁹⁷ Au	Can J Chem <u>46</u> ,3157 (1968) M.K.Dewanjee et al	(p,pn), average recoil ranges

Table I (Cont.)

Si	Excitation Functions for Radioactive Isotopes Produced by Proton-Induced Reactions in Silicon	Phys Rev <u>172</u> ,1094 (1968) D.W.Sheffey et al	reactions below 60 MeV
O,Ar He,N	Calculations on Electron Capture from D, He, N, O, and Ar by Protons	J Phys <u>B1</u> ,529(1968) R.A.Mapleton	reactions at 20 to 100 MeV, cross sections for electron capture
Sr,Y	Gamma Emission for ⁸¹ Rb, ⁸² Rb, ⁸³ Rb, ⁸⁴ Rb and ⁸⁶ Rb	Izv Akad Nauk SSSR Ser Fiz <u>31</u> ,1661 (1967) Ya.Vrzal et al	gamma spectra from proton reactions at 660 MeV
concrete	Back Yield of Neutrons from Shielding Bombarded with 660-MeV Protons	At Energ (USSR) <u>24</u> , 395(1968) L.R.Kimel et al	neutron yield
⁷ Li, ⁹ Be ¹¹ B,C,O Mg, ²⁷ Al Fe	Gamma Rays from Bombardment of Light and Intermediate Weight Nuclei by 16- to 160-MeV Protons and 59-MeV Alpha Particles	Nucl Sci Eng <u>32</u> ,392 (1968) W.Zobel et al	gamma spectra
Ti	Flux and Dose of Secondary Nucleons on Irradiating a Plane Titanium Shield with 660-MeV Protons	At Energ (USSR) <u>24</u> , 73(1968) V.A.Kon'shin et al	secondary nucleons
²⁷ Al ¹² C ⁶⁵ Cu ²³⁸ U	Comparison of Calculated Radiochemical Cross Sections with Experimental Results for Incident Protons and Pi-Mesons in the 50- to 400-MeV Region:Effect of Varying a Few Nuclear Parameters in the Calculations	Oak Ridge report ORNL-4105(1968) H.W.Bertini	(p,xpyn), cascade-evaporation model
CO ₂	Statistical Fluctuations of Energy Deposited in Low-Atomic Number Materials by 43.7-MeV Protons	Phys Rev <u>168</u> ,290 (1968) J.W.Hilbert et al	energy losses
¹¹ B,S	Measurement and Analysis of High-Energy Radiation through Activation Detectors Applications in Dosimetry	Saclay report CEA-R-3376(1968) L.Sklavenitis	radiation doses

Table I (Cont.)

12C	Recoil Studies of the Reaction 12C(p,pn)11C from Threshold to 85 MeV	Can J Chem <u>46</u> ,267 (1968) S.Hontzeas	(p,pn)
Ag,In	Recoil Properties of Products from the Spallation of Silver and Indium	Phys Rev <u>165</u> ,1281 (1968) J.A.Panontin et al	spallation, recoil ranges
In,Ag	Nuclear Reactions of Silver and Indium with 200- and 400- MeV Protons	Phys Rev <u>165</u> ,1283 (1968) J.A.Panontin et al	cross sections
Li,O Be,C	Formation of Helium Isotopes in Cosmic Rays	Izv Akad Nauk SSSR Ser Fiz <u>30</u> ,1778 (1966) A.P.Zhadanov et al	reactions with 660 MeV protons
Si	Excitation Functions of Radio- nuclides Produced by 0 to 60- MeV Proton Reactions in Silicon	Oak Ridge report ORNL-TM-2060(1968) D.W.Sheffey	excitation functions
16O 12C	Calculation of Spallation of 12C and 16O by 70- to 200-MeV Protons	J Phys (Paris) <u>28</u> , 745(1967) M.Epherre, E.Gradsztajn	spallation
	Neutron Shielding of the Los Alamos Meson Physics Facility	New York Operations Office(AEC) report HASL-188(1967) K.O'Brien	neutron shielding
Al,Cu Fe	Excitation Functions for Radioactive Isotopes Produced by Protons Below 60 MeV on Al, Fe, and Cu	Phys Rev <u>162</u> ,1055 (1967) I.R.Williams, C.B.Fulmer	excitation functions
U	Yields and Isomeric Yield Ratios of Antimony Isotopes from the Interaction of 159- MeV to 18.2-GeV Protons with Uranium	J Inorg Nucl Chem <u>29</u> ,2515(1967) E.Hagebo	excitation functions
Al,Be,Bi C,Co,Cu	Neutron and Proton Spectra from Targets Bombarded by 160-MeV Protons	Phys Rev <u>161</u> ,971 (1967) J.W.Wachter et al	spectra
Cu,Li	A Study by Means of Secondary Reactions of Fragments Produ- ced in Copper by High-Energy Protons and Alpha Particles	No university infor- mation given,Thesis (1966) K.E.Dierenfeldt	

Table I (Cont.)

^9Be ^{12}C	Analysis of the Scattering of 46 MeV Protons from ^9Be and ^{12}C	Nucl Phys <u>A100</u> ,497 (1967) G.R.Satchler	inelastic scattering
	Effects of Various Doping Treatments Upon the Damage Production and Recovery of Deuteron-irradiated Aluminum	Phys Rev <u>158</u> ,661 (1967) K.Herschbach, J.J.Jackson	annealing, irradiation, radiation effects
	Deuterons, Tritons, and Helium Ions from Direct Interaction Events of 156-MeV Protons with Medium and Heavy Nuclei	J Phys (Paris) <u>28</u> , 257(1967) H.Dubost et al	emission, knock-out reactions
	Secondary Particle Spectra from the Interaction of 30 to 340 MeV Protons on Complex Nuclei: Experimental Data and Comparison with Theory	Oak Ridge report ORNL-P-2894(1974) H.W.Bertini	emission spectra
Ag,Ta,Au Pt,Pb	Neutron Production in Ag, Ta, Au, Pt, and Pb by the Interaction of 7.5 to 40 MeV Protons	Phys Rev <u>159</u> ,1022 (1967) P.G.Thomas, W.Bartolini	
Al, ^{65}Cu ^{209}Bi	Energy Spectra from Inelastic Nuclear Reactions at Energies Below 450 MeV	American Nuclear Society, ANS-SD-3 Session 1, Paper 3 (19ND) H.W.Bertini	inelastic scattering
W	Energy Spectra of Charged Particles Accompanying Fission of W by Protons with $E_p = 660$ MeV	Yadern Fiz <u>5</u> ,727 (1967) V.S.Bychenkov, N.A.Perfilov	fission
KCl	Relation of Radio- and Radiative-Chemical Effects in KCl Crystals Irradiated by High-Energy Protons	Radiatsionnaya Fizika IV. Ionnye Kristally p.13 (1966) R.V.Bogdanov, A.N.Murin	irradiation, light
	Proton-Nucleus Reaction Cross Sections Computed from Elastic Scattering Data	Can J Phys <u>45</u> ,1497 (1967) F.Sannes, D.G.Stairs	elastic scattering
Ni,C	Energy and Spatial Distribution of a Stream of Secondary Neutrons Produced by 660-MeV Protons in Blocks of Graphite and Nickel	Atomizdat <u>2</u> ,226 (1966) V.A.Kon'shin et al	angular distributions

Table I (Cont.)

Al,C Fe	Production of Tritium on C, Al, and Fe by 130 to 660 MeV Protons	Yadern Fiz 5,34 (1967) V.N.Mekhedov	
11B	Cross Sections for the (p,n) Reaction on 11B Between 150 MeV and 3 GeV	Compt Rend B263,833 (1966) L.Sklavenitis	neutrons
	High-Energy Accelerator Shield Leakage Neutron Spectra	Trans Amer Nucl Soc 9,354(1966) K.O'Brien et al	neutrons, spectra
	Literature Survey of Radio- chemical Cross-Sections Data Below 425 MeV	Oak Ridge report ORNL-3884(1966) H.W.Bertini et al	data compilation
238U	Interaction of Fast Protons with Heavy Nuclei	Izv Akad Nauk SSSR Ser Fiz 30,322 (1966)V.S.Barashenkov et al	fission products
Er 181Ta	Nuclear Reactions on Ir, Ta, and Er, Induced by Protons with Energies up to 85 MeV	Izv Akad Nauk SSSR Ser Fiz 30,232(1966) V.S.Barashenkov et al	Monte Carlo method
Bi,U	Fission of Heavy Elements Induced by Medium High-Energy Protons	Z Naturforsch A21, 995(1966) A.C.Pappas	fission
Np 239Pu	Fissionability of Nuclei in the Region $Z^2/A > 35$ by High- Energy Protons	Yadern Fiz 4,97(1966) V.A.Konshin et al	
197Au	Angular Distributions of Gamma Rays Emitted in 197Au(p,2n)196Hg and 197Au(p,4n)194Hg Reactions	Lawrence Livermore report UCRL-16987 (1966) T.Yamazaki et al	gamma radiation
	A Literature Survey of Non- elastic Reactions for Nucleons and Pions Incident on Complex Nuclei between 20 MeV and 33 GeV	Oak Ridge report ORNL-3455(1963) H.W.Bertini	data compilation 1955-1962

Table I (Cont.)

C, ¹⁶ O	Quasi-Free Proton Scattering at 160 MeV	Proc. Williamsburg Conf on Intermediate Energy Physics V.II pp. 700-718(1966) B.Gottschalk et al	
Be,Sn,U	Neutron Production in Thick Targets Bombarded by High Energy Protons	Canadian Assoc of Physicists Congress, Vancouver,(ND) AED-CONF-65-288-9 J.S.Fraser et al	
¹² C	Nuclear Recoil in the ¹² C (p,pn) ¹¹ C Reaction I. Angular Distribution	Phys Rev B145,754 (1966) J.A.Panontin et al	
¹² C,Li	Formation of the Isotopes of Lithium, Beryllium, and Boron by the Interaction of Medium-Energy Protons with ¹² C and ¹⁶ O. Application to the Nucleogenesis of Light Elements	Annales de Physique (Paris)13,791 (1965) E.Gradsztajn	
⁵⁶ Fe, ⁵⁴ Mn	Monte Carlo Calculations of Radionuclide Production in Iron Targets Bombarded with 400-MeV Protons	J Geophysical Res 71,1445(1966) D.B.Ebeoglu et al	Monte Carlo method
⁹ Be, ¹² C ⁵⁸ , ⁶⁰ Ni	Elastic Scattering of 45-MeV Protons	UCLA Dept of Phys Report AD-626656 (1965) H.Willmes	optical model
¹² C	On High Energy Particle Scattering on Nuclei	Dubna report JINR-P-2431(1965) B.N.Kalinkin	optical model
Si	Radiation Damage in Silicon. Semiannual Report No. 1, Oct. 15, 1963-April 15, 1964	NASA report N-65-19886,NASA-CR-57505 (1964) N.Almeleh et al	
Si	Low-Energy Proton Damage Effects in Silicon and Gallium Arsenide Solar Cells	NASA report N-65-16347, NASA-TX-X-54990(1965) D.M.Brown	radiation effects
	Fission Cross-Sections of ¹⁸¹ Ta, Re, Pt, ¹⁹⁷ Au, Pb, Bi, Th, ²³⁵ U, and ²³⁸ U for Protons with Energy of 150-660 MeV	no affiliation information STI/PUB/101 (V.2)(ND) V.A.Kon'shin	

Table I (Cont.)

Li, Be, B, C	Quasi-Free Proton-Proton Scattering in Light Nuclei at 460 MeV	Nucl Phys <u>79</u> , 321 (1966) T. Berggren et al	spectra
C	Measurement of the Absolute Differential Cross Section in Proton-Carbon Elastic Scattering at 145 MeV	Nucl Phys <u>79</u> , 297 (1966) O.N. Jarvis, G.F. Cox	scattering
^{12}C , ^{27}Al ^{197}Au ^{209}Bi	An Experimental Survey of Nuclear Reactions Induced by 57 MeV Protons. Part II. (p,d) Reactions	J Phys Soc Japan <u>20</u> , 2118 (1965) Y. Ishizaki et al	spectra
	Proposed Method for Microgram Surface Density Measurements by Observation of Proton-Produced X Rays	J Applied Physics <u>37</u> , 564 (1966) J.M. Khan et al	x-radiation
Ge	Modifications of the Density and Mobility of Majority Carriers in N-Type Germanium Bombarded by Protons at 600 MeV	Compt Rend <u>261</u> , 5416 (1965) D. Daspet et al	Hall effect, radiation effects
^{12}C	The $^{12}\text{C}(p, pn)^{11}\text{C}$ Reaction from 50 to 160 MeV	Nucl Phys <u>78</u> , 476 (1966) D.F. Measday	
	Passage of High-Energy Particles in Matter-Nuclear Cascades Induced in Dense Media by 1- and 3-GeV Protons	Brookhaven Lab report BNL-8721 (1964) S.P. Shen	cascade showers, fast neutrons
^{12}C	Optical Potentials and High-Energy Inelastic Proton Scattering	Oak Ridge report ORNL-P-960 (1964) R.M. Haybron	inelastic scattering, optical model
^{27}Al , ^{40}Ca ^{12}C , ^{59}Co	Quasi-Free Proton-Proton Scattering in Light Nuclei at 460 MeV	Univ of Chicago report AD-624318 (1964) H. Tyren et al	spectra
Be	Electron Bremsstrahlung from Proton-Excited Targets	Phys Rev <u>142</u> , 50 (1966) W.T. Ogier et al	x-radiation
Si	Calculation of the Density of Elastic Atomic Displacements Produced in Silicon and Germanium by Protons at 30 MeV to 1 BeV	Compt Rend <u>261</u> , 4709 (1965) Y.G. De Lafond et al	radiation effects

Table I (Cont.)

Fe	Calculation of the Nucleon-Meson Cascade in Iron Initiated by 1- and 3-GeV Protons and Comparison with Experiment	Oak Ridge report ORNL-3852(1965) R.G.Alsmiller Jr., J.Barish	cascade showers
^{181}Ta $^{235,238}\text{U}$	Cross Sections for the Fission of ^{181}Ta , Re, Pt, ^{197}Au , Pb, ^{209}Bi , ^{232}Th , ^{235}U , and ^{238}U by Protons with Energies 150 to 660 MeV	Yadern Fiz 2,682 (1965) V.A.Konshin et al	fission data
^{12}C	Numerical Differential Cross Sections of Some Reactions on ^{12}C Induced by 54.9 MeV Protons	Tokoyo report INSJ-88(1965) K.Baba et al	inelastic scattering
	The Effect of High-Energy Protons on Semiconductor Detectors of Nuclear Radiation. II. Diffusion-Drift Detectors	Cosmic Res. 3,499 (1965)English vers of Kosmicheskie Issledovaniya L.S.Brykina et al	radiation effects
Si	Fluctuations of Energy Loss by Heavy Charged Particles in Silicon Detectors: Preliminary Measurements	Nucl Instr & Meth 37,176(1965) H.D.Maccabee, M.R.Raju	slowdown
^{197}Au ^{209}Bi	Evaporation of Charged Particles from Heavy Nuclei	Nucl Phys 75,641 (1966) M.Lefort, R.Da Silveira	spectra
Fe	Calculation of the Nucleon-Meson Cascade in Iron Initiated by 1- and 3-GeV Protons and Comparison with Experiment	Oak Ridge report ORNL-P-1733(1965) R.G.Alsmiller, J.Barish	nuclear cascade, spectra
	Some Experimental Data on the Nuclear Cascade in Thick Absorbers	NASA report NASA-SP-71(19ND) B.S.P.Shen	cascade showers
Ge	Studies of High-Energy Electron (10-60 MeV) and Proton (20-130 MeV) Radiation Damage in Silicon and Germanium.	Radiation Damage in Semiconductors (Pub. Dunod) Paris (1965)p.407 J.C.Corelli et al	radiation effects
Si	Effects of Proton Irradiation on Silicon. Radiation Damage in Semiconductors	Radiation Damage in Semiconductors (Pub.Dunod) Paris (1965)p.79 A.Authier, Montenay-Garestier	x radiation

Table I (Cont.)

Al	A Precise Measurement of the Range of 100-MeV Protons in Aluminum	Can J Phys <u>43</u> ,1904 (1965) P.M.Portner, R.B.Moore	slowdown
⁹ Be, ¹² C ⁶ Li	Study of the Inelastic Scattering of Protons at 155 MeV on Light Nuclei	Cahiers Phys <u>173</u> ,1 (1965) J.Jacmart	scattering
Ge,Si	A Calculation of Proton Induced Damage in Germanium and Silicon	Rensselaer Polytech.Institut report NP-15463(1964) E.A.Saunders, Thesis	radiation effects
Al	Yield and Angular Distribution of Secondary Nucleons from Flat Shielding under the Action of 660-MeV Protons	Obnisk Fiziko-Energeticheskii Institut report NP-15385(1965) V.A.Kon'shin et al	shielding
²⁸ Si ¹⁹⁷ Au	Cascade Mechanism of the High Energy Nuclear Reactions I. Total Inelastic Cross Sections, Angular and Energy Distribution of the Fast Particles	Sov J Nucl Phys <u>1</u> , 234(1965) F.P.Denisov et al	cascade theory, spectra
U Bi	Study of Nuclear Fission Asymmetry and Anisotropy During Irradiation of Uranium and Bismuth by High-Energy Protons	Radievyi Institut Leningrad,Thesis (1965) A.I.Obukhov	evaporation
Al,Si	Charged Particle Radiation Damage in Semiconductors. XI. Effects of Low-Energy Protons and High-Energy Electrons on Silicon. Interim Technical Final Report	TRW Space Tech Labs report NP-15090 (1965) J.R.Carter, R.G.Downing	Hall effect
Bi,Au Ta,Sn	Measurement of Absolute Cross Sections of Fission Induced by 156 MeV Protons, using Mica as a Fission Fragment Detector	Symp Phys & Chem of Fission, Salzburg, Austria(1965) M.Maurette, C.Stephan	fission
²³⁸ U	Recoil Properties of Fragments in 150-MeV Proton Fission of Uranium-238. II. Momentum Transfer and Excitation Energy	J Inorg & Nucl Chem <u>27</u> ,959(1965) V.E.Noshkin, Jr., T.T.Sugihara	Monte Carlo method

Table I (Cont.)

238U	Recoil Properties of Fragments in 150-MeV Proton Fission of Uranium-238. I. Ranges and Kinetic Energies	J Inorg & Nucl Chem <u>27</u> ,943(1965) V.E.Noshkin,Jr., T.T.Sugihara	fission products
12C,O N	Knock-Out of Alpha Particles from Lithium, Oxygen and Nitrogen Nuclei by 660 MeV Protons	Bull Acad Sci USSR Phys Ser <u>29</u> ,239 A.P.Zhdanov et al	spectra
Ta,Ir	Nuclear Reactions on Ir, Ta, and Er Induced by Protons of Energy up to 85 MeV	Dubna report JINR-1978(1965) V.S.Barashenkov et al	evaporation
238U	Interactions of Fast Protons with Heavy Nuclei	Dubna report JINR-P-1969(1965) V.S.Barashenkov et al	
Al,C	A Monte Carlo Study of Neutron Transport Through Aluminum, Polyethylene, and Carbon Slabs	Radiation Research Associates report RRA-T47(1964) M.B.Wells	fast neutrons, Monte Carlo method
27Al,12C 16O	Calculation of Proton Induced Gamma Ray Spectrum and Comparison with Experiment	2nd Symp on Protec- tion against Radia- tion Hazards in Space Gatlinburg, Tenn.,CONF- 720-13(1964)C.W.Hill, K.M.Simpson Jr	recoils
Al,Bi,C Co	Spectra of Gamma Rays Produced by the Interaction of Approximately 160-MeV Protons with Be, C, O, Al, Co, and Bi	Oak Ridge report ORNL-3506(1965) W.Zobel et al	
Ge	Damage to Germanium Due to 22- and 40-MeV Proton Bombardments	NASA report NASA-TN-D-2727 (1965)R.A.Brecken- ridge, C.Gross	radiation effects

Table I (Cont.)

Al,Be,Bi C,Co	Experimental Studies for High-Energy Radiation Shielding	Oak Ridge report ORNL-3714 (V.1) p.119-33(19ND) no author	spectra
	Theoretical Studies of High-Energy Radiation Shielding	ORNL-3714(V.1) p.97-118(19ND) no author	
²³⁸ U	Studies on the Range of ¹⁴⁰ Ba in Proton-Induced Fission of ²³⁸ U and a Semi-Empirical Derivation of a General Range-Energy Relation	Can J Chem <u>43</u> ,232 (1965) S.Mukherji, L.Yaffe	fission products
Al,Be,Bi C,Co	Differential Cross Sections by Flight-Time Spectroscopy for Proton Production in Reactions of 160-MeV Protons on Nuclei	Oak Ridge report ORNL-P-848(1964) R.W.Peelle et al	charged-particle spectra
Al,Be,Bi C,Co,O	Spectra of Gamma Rays Produced by Interaction of Approximately to 160 MeV Protons with Be, C, O, Al, Co, and Bi	Oak Ridge report ORNL-P-813(1963) W.Zobel et al	gamma radiation
Au	Application of Two-Body Kinematics to Recoil Studies of High-Energy Nuclear Reactions	Phys Rev <u>137</u> ,B848 (1965) J.B.Cumming	recoils
Si	Low-Rate Proton Bombardment of Diffused Silicon Counters	Nucl Instr Meth <u>32</u> , 171(1965) R.E.Scott	radiation effects
Si	Proton Bombardment Damage in Silicon	Physica Status Solidi (E.Ger.) <u>8</u> ,105(1965) R.Bubakova, Z.Szmíd	radiation effects
As,Ga Si	Results of Low-Energy Proton Irradiations of Solar Cells	CONF-657-6(1964) 4th Annual Photo-voltaic Spec. Conf. Cleveland June 1964 E.A.Lodi et al	radiation effects

Table I (Cont.)

Si	Proton and Electron Irradiations of Contoured Semiconductor Radiation Detectors	General Elec.Co. report NYO-3246-3 (1964) J.B.Trice et al	electric properties
C,Au,Pb Mg,Si	Neutron Yields from Proton Bombardment of Thick Targets	Nucl Instr Meth <u>30</u> ,73(1964) R.R.Borchers et al	spectra
^{12}C	Excitation Functions of (p,pn) and (p,2p2n) Reactions in Light Nuclei between 15 and 155 MeV	J de Physique (Paris) <u>25</u> ,704 (1964) L.Valentin et al	
	Radiochemical Studies of Charge and Mass Distribution in the Light Fragment Region in Fission of Uranium Induced by 170 MeV Protons	J Inorg & Nucl Chem <u>26</u> ,1639(1964) E.Hageboe et al	fission products
C	Proton Energy-Loss Distributions from Thin Carbon Films	Phys Rev <u>135</u> ,A1436 (1964) A.L.Morsell	losses
^{12}C	Distorted Wave Effects and the Impulse Approximation in the Inelastic Scattering of 147 MeV Protons from ^{12}C	Nucl Phys <u>54</u> ,193 (1964) D.J.Rowe et al	impulse approximation
^{232}Th	Spallation Nuclear Reactions Induced by 150 MeV Protons on Thorium	Univ of Paris, Thesis NP-13838(1961) G.Simonoff	evaporation
Ge	Separation and Identification of the Products of Germanium Spallation by High Energy Protons	Vestn.Leningr. Univ No.4, Ser Fiz I Khim <u>1</u> ,105(1964) A.N.Murin et al	spallation
Si	Spectrometry of Heavy, Intermediate-Energy Charged Particles, Using N-I-P Type Silicon Detectors	At Energ <u>16</u> ,360 (1964) O.A.Matveev et al	spectra
^{12}C , ^{14}N	Determination of the Cross Sections of Some Nuclear Reactions Occurring as a Result of Cosmic Radiation	Saclay report CEA-2298(1963) M.A.Tamers	

Table I (Cont.)

$^9\text{Be}, ^7\text{Li}$	Neutrons from the Proton Bombardment of ^6Li , ^7Li , ^9Be , ^{11}B , and ^{18}O	Nucl Phys <u>53</u> ,209 (1964) J.K.Bair et al	
Fe	Radionuclide Productions in Thick Iron Targets Bombarded with 1- and 3-GeV Protons	J Geophysical Res <u>69</u> ,2231(1964) J.P.Shedlovsky, G.V.S. Rayudu	radioisotopes
Gd,Ta,Tm W,Yb	Elastic Scattering of 55 MeV Protons by Heavy Nuclei	Phys Lett <u>9</u> ,332 (1964) H.Kamitsubo et al	elastic scattering
Al	Perturbation Theory for the Creation of Deuterons from High Energy Proton Bombardment of Matter	Phys Lett <u>9</u> ,330 (1964) S.T.Butler, C.A.Pearson	
Be,Li	Formation of Multiply Charged Particles by the Interaction of 75- to 350-MeV Protons with Nuclei	Zh Eksperim I Teor <u>46</u> ,809(1964) M.M.Makarov	
Bi,Au	Emission of ^3He and ^4He from Heavy Nuclides Bombarded by 155 MeV Protons	Phys Lett <u>9</u> ,146 (1964) H.Dubost et al	
	Formation Cross Sections of Various Radionuclides from Ni, Fe, Si, Mg, O, and C for Protons of Energies Between 130 and 400 MeV	Can J Chem <u>42</u> ,1149 (1964) G.V.S.Rayudu	evaporation
C,Cu	Characteristics and Intensity Profile of a High-Energy-Proton Beam after Scattering in a Thick Target	Lawrence Berkeley report UCRL-11184 (19ND) R.Wallace et al	radiation effects
Al,C	The Energy Spectra and Angular Distribution of ^8Li Fragments Produced in the Interaction between 660 MeV Protons and Aluminum Nuclei	Zh Eksperim I Teor Fiz <u>46</u> ,431(1964) V.I.Bogatin et al	

Table I (Cont.)

C	The Measurement of the Total Proton Reaction Cross-Section of Carbon in the Energy Region up to 50 MeV	Nucl Phys <u>50</u> ,327 (1964) R.A.Giles, E.J.Burge	spectra
Al,Pb,U	Neutron Production by 450-MeV Protons	Nucl Instr Meth <u>25</u> ,349(1964) J.W.Meadows et al	
²⁷ Al, ⁵² Cr, ⁵⁹ Co	Inelastic Scattering of 155 MeV Protons on ²³ Na, ²⁷ Al, ³¹ P, ³⁹ K, ⁴⁸ Ti, ⁵² Cr, ⁵⁶ Fe, and ⁵⁹ Co	Phys Lett <u>8</u> ,273 (1964) J.C.Jacmart et al	inelastic scattering, neutron sources
⁹ Be, ⁴⁰ Ca, ¹² C, ¹⁰ , ¹¹ B	Inelastic Scattering of 155 MeV Protons on Light Nuclei	Phys Lett <u>8</u> ,269 (1964) J.C.Jacmart et al	inelastic scattering
C,Fe	Spallation Cross Sections for Long-Lived Radionuclides in Iron and Light Nuclei	Nucl Phys <u>51</u> ,363 (1964) M.Honda, D.Lal	spallation
²⁸ Si, ³² S	Inelastic Scattering of 155-MeV Protons on ²⁸ Si, ³² S, and ⁴⁰ Ca	J de Physique (Paris) <u>24</u> ,1052 (1963) W.J.Hornyak	scattering
Bi, Au,U	Angular Distributions and Cross Sections for the Fission of Uranium, Bismuth, and Gold, Induced by 156-MeV Protons	J de Physique (Paris) <u>24</u> ,901 (1963) L.Kowalski, C.Stephan	fission
N,Pt, Ta,V	Production of ⁶ Li and ⁷ Li Fragments in Several Elements at 156 MeV	J Phys (Paris) <u>24</u> ,839(1963) R.Klapisch et al	
²⁰⁹ Bi, ²³⁸ U	Calculation of Intranuclear Cascades by the Monte Carlo Method. Protons of 82, 110, and 156 MeV on ²³⁸ U, ²⁰⁹ Bi, ¹⁹⁷ Au, ¹⁴⁰ Ce, and ¹⁰⁹ Ag	J de Physique (Paris) <u>24</u> ,829 (1963) E.Grad-sztajn	Monte Carlo method

Table I (Cont.)

${}^6\text{Li}, {}^7\text{Li}$	Elastic Scattering of Protons at 155 MeV on ${}^6\text{Li}$ and ${}^7\text{Li}$	Phys Lett <u>8</u> ,54 (1964) B.Tatischeff et al	impulse approximation
${}^{27}\text{Al}, {}^{12}\text{C}$	Monitor Reactions for High Energy Proton Beams	Ann Rev Nucl Sci <u>13</u> ,261(1963) J.B.Cumming	
${}^{235}, {}^{238}\text{U}$	Fragment Kinetic Energy and Mass Distribution for Fission of Uranium Bombarded by 55.3 MeV Protons	Genshikaku Kenkyu (Japan) <u>8</u> ,356 (1963) S.Shirato, M.Seki	fission products
Al, Be, C W, V	Sputtering of Metals by Hydrogen Ions	J Applied Phys <u>35</u> ,322(1964) C.E.KenKnight, G.K.Wehter	
Al	The Angular and Energy Distributions of ${}^{24}\text{Na}$ Nuclei on Irradiating Aluminum with 660 MeV Protons	Bull Acad Sci USSR Phys Series <u>27</u> , 1270(1963) L.P.Moskaleva, A.K.Lavrukina	absorption, particle tracks
Al, Be, Bi C, Co	Neutron and Proton Spectra from Targets Bombarded by 160-MeV Protons	Oak Ridge report ORNL-3499(19ND) J.W.Wachter et al	neutrons, recoils
Al, Bi, C Co, Cu	Differential Secondary-Nucleon Cross Sections by Flight-Time Spectroscopy for Reactions of 160-MeV Protons with Nuclei	Oak Ridge report ORNL-3499(V.II) p.73 (19ND) R.W.Peelle et al	
${}^{27}\text{Al}, {}^{12}\text{C}$ ${}^{65}\text{Cu}$	Parametric Study of Calculated Cascade and Evaporation Reactions for 25- to 400-MeV Nucleons Incident on Complex Nuclei	Oak Ridge report ORNL-3499(V.II) p.31(19ND) H.W.Bertini	evaporation model
Fe	Attenuation of a High-Energy Neutron Flux in the Shield	At Energ (USSR) <u>15</u> , 325(1963) M.M.Komochkov, B.S.Sychev	cascades, spectra

Table I (Cont.)

^{12}C	Decay of Residual Nuclei Produced in the Interaction of 660-MeV Protons with Carbon Nuclei	Zh Eksperim I Teor Fix <u>45</u> ,455(1963) Z.P.Zhdanov, P.I.Fedotov	
Al,Be,Cu	Activation of Various Materials by Irradiation with 660-MeV Protons	At Energ <u>15</u> ,126 (1963) M.M.Komochkov	
Si	Charged Particle Radiation Damage in Semi-Conductors. IV. High Energy Proton Radiation Damage in Solar Cells	Space Tech.Labs. Inc. report NP-13031 (1963)J.M.Denney et al	radiation effects
Au,U	Kinematic Effect in Fission Induced by 156 MeV Protons in the Nuclei of U, Bi, and Au	Phys Lett <u>2</u> ,356 (1962) L.Kowalski et al	fission products
^{27}Al , ^{12}C	Determination of the Intensities of Proton Beams from 40 to 150 MeV	J de Physique <u>23</u> ,371(1962) C.Brun et al	
Al,Cu,W	The Evaporation of Neutrons from Nuclei Bombarded with High Energy Protons	Nucl Phys <u>35</u> ,177 (1962) D.M.Skyrme	neutron flux
Al,C,Fe	Contribution to the Study of Double Indirect Pickup: Measurement of Tritium Production by 82- and 105-MeV Protons on Several Targets	J de Physique <u>23</u> ,167(1962) C.Brun et al	spectra
Si	Charged Particle Radiation Damage in Semiconductors. I. Experimental Proton Irradiation of Solar Cells. Final Report	Space Tech.Labs Inc. report NP-11655 (1961) J.M.Denney, R.G.Downing	radiation effects
^{27}Al	High-Energy Nuclear Reaction Cross-Sections. Part II	CERN report CERN-62-9(1962) E.Bruninx	

Table 1 (Cont.)

Si	Proton Damage to Solar Cells	Lockheed Co.report LMSD-703735-1 (1961) K.T.Chow, E.A.Lodi	radiation effects
Pb,Li,U	Neutrons Emitted at 00 from Nuclei Bombarded by 143 MeV Protons	Nucl Phys <u>30</u> ,475 (1962) P.H.Bowen et al	spectra
Bi	The Question of the Product Yield of the Deep Spallation Reaction $^{209}\text{Bi}(p,xn, yp)$	Izvest Akad Nauk USSR Ser Fiz <u>26</u> ,245 (1962) A.V.Kalyamin et al	
Al,C Cu,Pb	Measurement of Proton Inelas- tic Cross Sections Between 77 MeV and 133 MeV	Nucl Phys <u>29</u> ,474 (1962) R.Goloskie, K.Strauch	optical model
C,Cu,Ni	Secondary Electron Emission from Clean Metal Surfaces Bombarded by Fast Hydrogen Ions	Proc Phys Soc (London) <u>79</u> ,148 (1962) L.N.Large, W.S.Whidlock	emission, secondary emission
C	Optical-Model Analysis of Elastic Scattering of Protons of Carbon at Intermediate Energies	Phys Rev <u>A125</u> ,975 (1962) J.S.Nodvik et al	optical model
Na,Mg,Al Si,P,S	Gamma Radiation from Medium Energy Bombardment of Sodium, Magnesium, Alum- inum, Silicon, Phosphorus, and Sulphur	Nucl Phys <u>37</u> ,23(1962) K.T.Foley et al	gamma radiation, direct reactions
Au,Mn	Reactions (p,pn) at Medium Energies	J de Physique <u>22</u> , 636(1961) M.Gusakow et al	
^{197}Au	Proton, Deuteron, Triton, and Helium Nuclei Emission by ^{197}Au Bombarded with 154-MeV Protons	J de Physique <u>22</u> , 615(1961) J.Genin et al	spectra
Al,Be Ca,C	The Elastic Scattering of 180 MeV Protons from Nuclei	Arkiv Fysik <u>19</u> ,541 (1961) A.Hohansson et al	optical model

Table I (Cont.)

Al,Be Ca,C	Total Nuclear Reaction Cross Sections for 180 MeV Protons	Arkiv Fysik <u>19</u> ,527 (1961) A.Johansson et al	nuclear models
6,7Li	Quasi-Elastic Interaction of 155-MeV Protons with Protons in ⁶ Li and ⁷ Li	Phys Rev Lett <u>7</u> , 261(1961) J.P.Garron et al	spectra
Pb Zn	Production of Tritium in Lead and Aluminum by High Energy Protons, Deuterons and Alpha Particles	Zhur Eksptl I Teor Fiz <u>40</u> ,1263(1961) V.V.Kuznetsov	
Bi,U	Anisotropy in the Fission of Bismuth and Uranium Irradi- ated by 660 MeV Protons	Zhur Eksptl I Teor <u>40</u> ,1250(1961) A.I.Obukhov, N.A.Perfilov	fission products
Al,Cu U	High-Velocity Range and Energy-Loss Measurements in Al, Cu, Pb, U and Emulsion	Nuovo Cimento <u>19</u> , 41(1961) W.H.Barkas, S.Von Friesen	slowdown
Al,Be C,O	Proton Scattering from Light Elements at 142 MeV	Nucl Phys <u>25</u> ,642 (1961) A.E.Taylor, E.Wood	
Th	Spallation Reactions of Thorium by 150 and 82 MeV Protons	Nucl Phys <u>25</u> ,216 (1961) M.Lefort et al	evaporation
Ni	Emission of Soft Electro- magnetic Radiation from Metals by the Impact of High-Energy Protons and Positive Ions	Nature <u>189</u> ,996 (1961) R.M.Chaudhri, M.Y.Khan	light, ultra- violet radiation
Al,Au In,Li	The Elastic Scattering of 160 MeV Protons from Lithium, Aluminum, Indium and Gold	Nucl Phys <u>21</u> ,383 (1960) A.Johansson et al	optical model
6,7Li	Elastic Scattering Angular Distributions of Protons from ⁶ Li and ⁷ Li at 40 MeV	Nuclear Forces and the Few Nucleon Problem V II, p. 683-4 (19ND) S.Chen, N.M.Hintz	
¹² C	Quasi-Elastic Scattering of 153 MeV Protons by P-State Protons in ¹² C. I. Experi- mental	Nucl Phys <u>18</u> ,46 (1960) T.J.Gooding, H.G.Pugh	elastic scattering, spectra

Table I (Cont.)

Au	Reactions (p,xn) Induced in Gold by Protons at 155 MeV	J de Physique <u>21</u> , 343(1960) N.Poffe et al	
^{12}C	Quasi-Elastic Scattering of 153-MeV Protons by Protons in the P State of ^{12}C	J de Physique <u>21</u> , 326(1960) T.J.Gooding, H.G.Pugh	
C	Study of Deuterons and Tritons Emitted During Bombardment of Carbon Nuclei by 155-MeV Protons	J de Physique <u>21</u> , 322(1960) P.Radanyi, J.Genin	spectra
^{12}C	Study of (p,p gamma) Reactions Initiated by 155-MeV Protons. The Case of the Giant Resonance	J de Physique <u>21</u> , 320(1960) H.Langevin-Joliot et al	inelastic scattering
C	Elastic and Inelastic Scattering of 155-MeV Protons on Carbon	J de Physique <u>21</u> , 317(1960) J.P.Garron et al	elastic and inelastic scattering
	Some Cross Sections for the Production of Radio-Nuclides in the Bombardment of C, N, O, and Fe by Medium Energy Protons	Phys Rev <u>118</u> , 1618 (1960) M.Honda, D.Lal	
^{27}Al , ^{12}C ^{65}Cu	Radiochemical Studies of the (p,pn) Reaction in Complex Nuclei in the 80-450-MeV Range	Phys Rev <u>118</u> , 1591 (1960) H.P.Yule, A.Turkevich	Monte Carlo method
Cu	Copper Spallation by Protons with an Energy of 680 MeV	Kernenergie <u>1</u> , 119 (1958) A.K.Lavrukhina et al	fission products
Bi,Cu,Au $^{6,7}\text{Li}$	Monte Carlo Calculations of Nuclear Evaporation Processes V. Emission of Particles Heavier than ^4He	Phys Rev <u>118</u> , 791 (1960) I.Dostrovsky et al	Monte Carlo method, nuclear evaporation
	Total Reaction Cross Sections of Several Nuclei for 61-MeV Protons	Phys Rev <u>117</u> , 1334 (196) V.Meyer et al	
	Production of Tritium in Thorium by Protons at 135 MeV	J de Physique <u>20</u> , 959(1959) M.LeFort et al	

Table I (Cont.)

Si	Radiation Damage of Semi-conductors by Protons	CERN report CERN-62-5(1962) G.Backenstoss et al	radiation effects
C	The Total Proton Reaction Cross Section of Carbon from 10-68 MeV by a New Method	Nucl Phys <u>13</u> ,511 (1959) E.J.Burge	spectra
C	Proton Total Reaction Cross Sections at 34 MeV	Nucl Phys <u>12</u> ,241 (1959) T.J.Gooding	optical model
Be,C,U	Interaction Between 660 MeV Protons and Atomic Nuclei and the Nuclear Internal Momentum Distribution of Nucleons	Zhur Eksptl. I Teoret Fiz <u>36</u> ,1631 (1959) L.S.Azhgirei et al	spectra
	Range-Energy Measurements for 742-MeV Protons	Lawrence Berkeley Lab. report UCRL-8762 (1959) Thesis J.E.Ward	losses
⁹ Be 10,11B	Total Neutron Yields from Light Elements Under Proton and Alpha Bombardment	Phys Rev <u>114</u> ,571 (1959) J.H.Gibbons, R.L.Macklin	
As	Reactions of 378 MeV Protons with Arsenic	Columbia Univ Thesis NYO-6141 (1954) J.B.Cumming	x-radiation
Be,C,W	Energy-Range Relation of 660 MeV Protons	Zhur Eksptl I Teoret Fiz <u>36</u> ,658 (1959) V.P.Zrelov, G.D.Stoletov	energy range
Au	Study of Thallium, Lead, and Bismuth Nuclei Produced in the Bombardment of Gold with 380-MeV Protons	Phys Rev <u>113</u> ,1125 (1959) A.E.Metzger, J.M.Miller	fission products, spectra
C,O	Total Cross Sections for 910 MeV Protons	Nucl Phys <u>9</u> ,600(1959) M.E.Law et al	
U	The Fission Cross-Section of Uranium for 147 MeV Protons	Harwell Lab report AERE-N/R-1438(1954) G.N.Harding	
C	Optical Model Analysis of the Scattering of 310 MeV Protons by Carbon	Proc Phys Soc (London) <u>73</u> ,185(1959) C.J.Batty	optical model

Table I (Cont.)

232Th 239Pu 238U	Fission Processes in the Proton Bombardment of 232Th, 238U, and 239Pu	Chalk River (Canada) report A/Conf. 15/P/6(ND) J.P.Butler et al	fission products
C	Multi-Charged Particles Emitted in Spallation of Carbon Nuclei by 660 MeV Protons	Zhur Eksptl I Teoret Fiz <u>35</u> ,1358 (1958) V.I.Ostroumov, Yu.P.Yakovlev	particle tracks
27Al,28Si	Nuclear Recoil Tracks of 24Na and Mechanism of Nuclear Reactions 27Al(p,3pn), 28Si(p,4pn), and 31P(p,5p3n) with 660 MeV Protons	Zhur Eksptl I Teoret Fiz <u>35</u> ,538 (1958) L.V.Volkova, E.P.Denisov	recoils
U	On Triple Spallation of Uranium Nuclei	Zhur Eksptl I <u>35</u> ,631(1958) N.A.Perfilov, G.F.Denisenko	fission products, spectra
Al,Pb	Production of Tritium in Metals under the Action of 120 to 660 MeV Protons	Zhur Eksptl I Teoret Fiz <u>35</u> ,587 (1958) V.V.Kuznetsov, V.N.Mekhedov	
Bi,Pb	Secondary Nuclear Reactions in Bismuth and Lead Induced by High Energy Proton Bombardment	Zhur Eksptl I Teoret Fiz <u>35</u> ,56 (1958) B.V.Kurchatov et al	
Be,Th U	Neutron Production at High Energies	J Applied Physics <u>29</u> ,698(1958) W.E.Crandall, G.P.Millburn	Monte Carlo method neutrons
27Al,Cu	Monte Carlo Calculations on Intranuclear Cascades II. High-Energy Studies and Pion Processes	Phys Rev <u>110</u> ,204 (1958) N.Metropolis et al	Monte Carlo method,nuclear cascades,spectra
27Al 209Bi 65Cu	Monte Carlo Calculations on Intranuclear Cascades I. Low-Energy Studies	Phys Rev <u>110</u> ,185 (1958) N.Metropolis et al	nuclear cascade
Mn,Ni	Neutron Yields from Thick Targets Bombarded by 18- and 32-MeV Protons	Phys Rev <u>109</u> ,2086 (1958) Y.Tai et al	
	Knock Out of Deuterons from Li, Be, C and O Nuclei by Protons of Energy 675 MeV	Zhur Eksp Teoret Fiz <u>33</u> ,1185(1957) L.S.Azhgirei et al	emission, knock-out reactions

Table I (Cont.)

¹² C,O	Excitation Functions up to 980 MeV for Proton-Induced Reactions in Some Light Elements	Proc Phys Soc (London) <u>A70</u> ,824 (1957) J.L.Symonds et al	
U,Th	MTA Project Target and Process Section Quarterly Progress for September through November 1952	Livermore Research LRL report MTA-30 (1953)	neutron flux
Th,U	Fission of Heavy Nuclei by High-Energy Particles	J Nuclear Energy <u>5</u> ,236(1957) A.K.Lavrukhina, L.D.Krasavina	fission products
Th,U	Total Neutron Yield from Targets Bombarded by Deuterons and Protons	Berkeley Radiation Lab report UCRL-2063(1957) W.E.Crandall, G.P.Millburn	neutron detection
U	Neutron Production from High-Energy Charged Particle Bombardment of Infinite Uranium Targets	Livermore Research Lab report LRL-69 (1957)C.C.Old	neutron flux
Th,U	Fission and Capture Events in 12 Inch X 12 Inch Cross Section Uranium and Thorium Targets Bombarded with 190 MeV Deuterons and 340 MeV Protons	Livermore Research Lab report MTA-6 (1957)H.G.Hicks	
C,Pb	Nuclear Cross Sections for 900 MeV Protons	Proc Phys Soc (London) <u>A70</u> ,209 (1957) N.E.Booth et al	inelastic scattering
Pb,U	Measurements of the Numbers of Neutrons Emitted From Thick Targets of Lead and Uranium When Bombarded with 147 MeV Protons from the 110 Harwell Cyclotron	Harwell report AERE-N/M-59(1956) no author	

Table I (Cont.)

O,Sn U	Total Cross Sections for the Interaction of 650 MeV Protons with Nuclei	Doklady Akad. Nauk SSSR <u>110</u> ,972(1956) V.I.Moskalev, B.V.Gavrilovskii	
Al,Be,Bi B,C,Cu,Si	Inelastic Scattering of 96-MeV Protons	Phys Rev <u>104</u> ,191 (1956) K.Strauch, F.Titus	
Pb	Radiochemical Studies of the Interaction of Lead with Protons in the Energy Range 0.6 to 3.0 BeV	Phys Rev <u>103</u> ,394 (1956) R.Wolfgang et al	evaporation, spallation
U	Fission of Uranium with 170 MeV Protons	Nucl Phys <u>1</u> ,322 (1956) A.Kjelberg, A.C.Pappas	fission products, spallation
	Nuclear Reactions of Cobalt with Protons from 0- to 100- MeV Energy	Phys Rev <u>101</u> ,1493 (1956) R.A.Sharp et al	scattering
U	Absolute Neutron Spectra from 190-MeV Proton Bombardment of Uranium	Berkeley Radiation Lab report UCRL-3337 (1956) E.E.Gross	spectra
U	Fission of Uranium Nuclei by Protons with an Energy of 460 MeV	AEC-TR-2307 Trans. from Doklady Akad Nauk SSSR <u>103</u> , 573(1955) N.S.Ivanov et al	fission products
C	Cross Sections for Producing High-Energy Neutrons from Carbon Targets Bombarded by Protons, Deuterons, and ^3He Particles	Phys Rev <u>97</u> ,184 (1955) L.Schecter et al	fast neutrons
Al,Be,B	Total Cross Sections of 208- MeV and 315-MeV Protons for Light Elements	Phys Rev <u>96</u> ,398 (1954) H.G.De Carvalho	optical model
	Reactions of Cesium with Protons at 60, 80, 100, 150, and 240 MeV	Phys Rev <u>96</u> ,185 (1954) R.W.Fink, E.O.Wiig	evaporation, neutrons, pick-up

Table I (Cont.)

Pb	The Production of Deuterons in High Energy Nucleon Bombardment of Nuclei, and Its Bearing on Nuclear Charge Distribution	Berkeley Radiation Lab report UCRL-2670 (1954) Thesis W.N.Hess	pick-up
Ta,U	Tantalum Spallation and Fission Induced by 340 MeV Protons	Berkeley Radiation Lab report UCRL-2542 (1954) Thesis, W.E.Nervik	fission products
V,Mg,Co	Spallation of Vanadium, Manganese, and Cobalt with 187 MeV Protons	Phil Mag (7)44,1131 (1953) S.G.Rudstam	fission products
Li,O	Total Cross Sections of 408-MeV Protons for Hydrogen and Light Elements	Phys Rev 91,767 (1953) J.Marshall et al	
U	Analysis of Secondary Particles Resulting from High-Energy Nuclear Bombardment	Berkeley Radiation Lab report UCRL-2258(1953) Thesis, R.W.Deutsch	evaporation model, particle tracks
Al,Be C,U	Neutrons Produced by High Energy Protons	Phil Mag (7)44,425 (1953) T.C.Randle et al	
Be,C Cu,Li,Pb	On The Interaction of 95-MeV Protons with D, Li, Be, C, Al, Cu, and Pb Nuclei	Phys Rev 90,449 (1953) J.A.Hofmann, K.Strauch	emission
Be,Bi C	Neutron Energy Distribution from the Proton Bombardment of Li, Be, and C at 375 MeV	Phys Rev 89,724 (1953) W.F.Goodell et al	fast neutrons
Al,Be,C Cu,U	Nuclear Absorption Cross Sections for High Energy Protons	Berkeley Radiation Lab report UCRL-1967 (1952) Thesis A.J.Kirschbaum	
Be,C	Physical Analysis of Be and C Disintegration Induced by 330 MeV Protons	Berkeley Radiation Lab report UCRL-1914(1952) W.H.Barkas, H.Tyren	spectra
Co	Reactions of 370 MeV Protons with Cobalt	Columbia Univ report NYO-3198 (1952) E.Belmont	spectra

Table I (Cont.)

Be	The Angular Distribution of Neutrons Produced in Beryllium by 170 MeV Protons	Phil Mag (7) <u>43</u> ,285 (1952) M.Snowden	fast neutrons
Be,C Pb	Neutron Energy Distribution from Be, C, and Pb Bombarded by 245 MeV Protons	Rochester Univ report NYO-3043 (1952) B.K.Nelson et al	neutron detection
	Nuclear Reactions of Iron with 340 MeV Protons	Berkeley Radiation Lab report UCRL-1586 (1951) G.Rudstam et al	
C,W	Neutron Emission from Nuclei Excited by High Energy Protons	Phil Mag (7) <u>42</u> ,1187 (1951) D.M.Skyrme, W.S.C.Williams	evaporation
Al,Cu Pb	The Range and Straggling of Protons Between 35 and 120 MeV	Phys Rev <u>83</u> ,561 (1951) N.Bloembergen, P.J.Van Heerden	slowdown
¹² C,Cu Ag,U	High Energy Neutron Yields and Multiple Traversals of a Cyclotron Beam Through Thin Targets	Berkeley Radiation Lab report UCRL-1398(1951) Thesis, W.J.Knox	fast neutrons
Al,C	Elastic Scattering of 340 MeV Protons	Berkeley Radiation Lab report UCRL-1284(1951) R.E.Richardson et al	
Be,C	Neutron Energy Distribution in Proton Bombardment of Be and C at 100 MeV	Phys Rev <u>82</u> ,831 (1951) D.Bodansky, N.F.Ramsey	neutron detection proton beams, recoils
Al,Be,Cr	Nuclear Shielding Studies: XI. Fast Neutron Spectra Measured by the Photographic Plate Method(Technical Report No.47)	Mass. Inst. Tech. report NP-1999(1950) P.H.Stelson	spectra
²⁷ Al	Nuclear Reactions Resulting from the Proton Bombardment of Aluminum	Wisconsin Univ report AECU-1362(19ND) F.C.Shoemaker et al	gamma radiation
C,W	Precision Analysis of Gamma Ray Spectra from High Energy Proton Collisions with Nuclei	Berkeley Radiation Lab report UCRL-1270 (1951) K.M.Crowe et al(Abstract)	gamma radiation

Table I (Cont.)

C, Pb	Range Energy Relation for 340-MeV Protons	Berkeley Radiation Lab report UCRL-1089 (1951) R.Mather, E.Segre	slowdown
Al, Be C, U	The Production of Neutrons by High Energy Protons	Phil Mag (7) 42,215 (1951) J.M.Cassels et al	neutron flux, spectra
Be, Bi, U	Relative High Energy Neutron Yields from Targets Bombarded with Protons and Deuterons	Berkeley Radiation Lab report UCRL-440 (Rev)(1950) W.J.Knox	fast neutrons
Be, Bi	Angular Distribution of Neutrons from the Bombardment of Be by 340-MeV Protons	no affiliation given, AECD-2900 (1950) J.DeJuren	fast neutrons
Al, Be C, Cu W, U	Stopping Power and Energy for Ion Pair Production for 340- MeV Protons	Berkeley Radiation Lab report UCRL-850 (1950) C.J.Bakker, E.Segre	slowdown
Be, Bi C, U	Relative High Energy Neutron Yields from Targets Bombarded with Protons and Deuterons	no affiliation given(Berkeley?) AECD-2837(1949) W.J.Knox	stripping
Be	Production of Very High Energy Protons by 350 MeV Protons	no affiliation given AECU-280(19ND) H.F.York et al	gamma radiation

7. H. J. Kim, et al., Nuclear Cross Sections for Charged-Particle-Induced Reactions. Nucl. Data A1, 203 (Academic Press, New York, 1965). See also Nucl. Data A2, 1 (Academic Press, New York, 1966) and Nucl. Data A3, 123 (Academic Press, New York, 1967).
8. H. Münzel, H. Klewe-Nebenius, J. Lange, G. Pfennig, K. Hemberle, "Karlsruhe Charged Particle Reaction Data Compilation," Karlsruhe reports Physik Daten 15-Index (1979), Physik Daten 15-1 (1979), Physik Daten 15-2 (1979), Physik Daten 15-3 (1982), Physik Daten 15-4 (1982), and Physik Daten 15-5 (1982).
9. F. K. McGowan, W. T. Milner, H. J. Kim, "Nuclear Cross Sections for Charged-Particle Induced Reactions - Mn, Fe, Co," Oak Ridge National Laboratory report ORNL-CPX-1 (1964); and "Nuclear Cross Sections for Charged-Particle Induced Reactions Ni, Cu," Oak Ridge National Laboratory report ORNL-CPX-2 (1964).

ACKNOWLEDGMENTS

Special thanks are given to M. Treiman and C. Nielsen of the Los Alamos National Laboratory Main Library for their invaluable assistance and patience in performing the RECON search upon which this report is based.

TABLE II

DEUTERON INDUCED REACTIONS

<u>TARGET</u>	<u>TITLE</u>	<u>REFERENCE</u>	<u>DESCRIPTORS</u>
$^{12}\text{C}, ^{197}\text{Au}$ ^{208}Pb	Fragmentation Processes In Nuclear Reactions	Darmstadt report GSI-83-82 p.79, (1983) (Preprint) G.Baur et al	quasi-free reactions
	Nucleon and Deuteron Scattering Cross Sections from 25 MeV/Nucleon to 22.5 GeV/Nucleon	NASA report, NASA- TM-84636(1983) L.W.Townsend, J.W.Wilson	particle interactions
^{232}Th	Coulomb-Dissociation at Relativistic and Non- Relativistic Energies	Julich report JUEL-SPEZ-146, p.95 (1982) G.Baur, B.Hoffmann	inelastic scattering
	Medium-Energy Reaction Cross Sections for Light Composite Projectiles	J of Physics <u>18</u> , 39(1982) H.Nishicka, R.C.Johnson	total cross sections
^{55}Mn	(d,nn) Reaction on Nuclei in the Medium Energy Range	J Ukr Phys <u>26</u> ,86 (1981) V.V.Pilipenko	diffraction models
$^{27}\text{Al}, ^{197}\text{Au}$ ^{181}Ta	Projectile Fragmentation and Stripping to Unbound States: An Important Reaction Mechanism for Peripheral Nucleus- Nucleus Collisions	Helv Phy Acta <u>53</u> ,506(1981) G.Baur et al	optical models, stripping
^{16}O	Comment on (d,p) Stripping Model at 700 MeV	Phys Rev Lett <u>46</u> , 1544(1981) J.R.Shepard, E.Rost	stripping
^{93}Nb	Continuum of the Spectra of Emitted Charged Particles	Gross Properties of Nuclei and Nuclear Excitations. Proc. Julich Pt. A: Nuclear Collisions, INKA-CONF- 79-001-000 p.82 (1979) H.Machner	one-nucleon transfer reactions
$^9\text{Be}, ^6\text{Li}$ ^{16}O	Investigation of the (d,p) Stripping Reaction Around 700 MeV	Phys Rev Lett <u>46</u> , 218(1981) A.Boudard et al	one-nucleon transfer reactions
^{93}Nb	Importance of the Break- up Mechanism for Composite Particle Scattering	Phys Rev <u>C21</u> ,2658 (1980) G.Baur et al	optical models

Table II (Cont.)

$^9\text{Be}, ^{93}\text{Nb}$	Continuous Particle Spectra from Direct Break-up Reactions	8. Int Symp on the Interaction of Fast Neutrons with Nuclei, Gaussig, German Democratic Republic ZFK-382 p.99(1978) G.Baur et al	breakup reactions, direct reactions
$^{120}\text{Sn}, ^{27}\text{Al}$	Deuteron and ^3He Scattering: Discussion on the Uniqueness of Their Optical Potentials	Workshop on Microscopic Optical Potentials Hamburg, F.R.Germany, CONF-780971(1978) A.Djaloeis	optical models
	Intermediate Energy Deuteron-Nucleus Diffraction Interaction	Nucl Phys <u>A308</u> , 330(1978) A.Yu.Berezhnoy, A.P.Soznik	breakup reactions, stripping
$\text{Li}, ^{232}\text{Th}$	Electronuclear Conversion of Fertile to Fissile Material	Lawrence Livermore Nat Lab report UCRL-52144(1976) C.M.Van Atta et al	neutrons sources, nuclear cascades
	Global Viewpoint on Nuclear-Particle-Emission Cross Sections at Intermediate Energies	Phys Rev Lett <u>36</u> , 1464(1976) Y.Iwasaki	pickup reactions
V	Excitation Functions of Deuteron Induced Nuclear Reactions on Vanadium with Special Reference to the Production of ^{43}K : Systematics of (d,xn) Reaction Cross Sections Relevant to the Formation of Highly Neutron Deficient Radioisotopes	Radiochim Acta <u>35</u> , 11(1984) S.M.Qaim, J.J.Probst	excitation functions
	Mechanism of Break-Up Reactions of Light Ions at Non-Relativistic Energies	INIS-MF-9280(1984) Workshop on Coincident Particle Emission from Continuum States, Bad Honnef, F.R.Ger, Jun 4 1984, G.Baur et al	breakup reactions
^{59}Co	Measurement and Hybrid Model Analysis of Integral Excitation Functions for Light Particle Induced Reactions	Julich report JUEL-SPEZ-255,p.32 (1984) R.Michel et al	knock-out reactions

Table II (Cont.)

$^{12}\text{C}, ^{118}\text{Sn}$ 51V	Coupled-Channel Approach to Deuteron Projectile Breakup	Phys Lett <u>B141</u> ,19 (1984) M.Yahiro et al	quasi-elastic scattering
^{208}Pb	Deuteron Breakup in the Field of a Heavy Target	Phys Rev <u>C29</u> ,1095 (1984) S.N.Mukherjee et al	breakup reactions
Co	Deuteron Induced Reactions on Cobalt	Int J Appl Rad & Iso <u>34</u> ,1325(1983) R.Michel, M.Galas	stripping, transfer reactions
	Investigation of Inclusive Spectra of Nuclear Reaction Products with Participation of Deuterons and ^3He Nuclei at Intermediate Energies	INIS-SU-198 p.441 23. Conf Nucl Spect & Nucl Structure Apr 19,1983,Moscow, M.V.Evlanov et al	breakup reactions, stripping, inclusive interactions
^{12}C ^{118}Sn	Calculation of Proton-Neutron Coincidence Cross Sections in 56 MeV Deuteron-Induced Break-up Reactions by Post Form Distorted-Wave Born Approximation	Phys Rev <u>C28</u> ,946 (1983) G.Baur et al	breakup reactions
^{27}Al ^{209}Bi	Proton Continuum Spectra from Deuteron Break-Up at 56 MeV	Int Symp on Highly Excited States in Nuclear Reactions Osaka,Japan May 12, 1980, p.88, N.Matsuoka et al	breakup reactions
^{62}Ni ^{93}Nb	New Formalism of Inclusive Breakup Reactions and Validity of the Surface Approximation	Phys Lett <u>115</u> ,81 (1982) A.Kasano et al	inclusive interactions
^{58}Ni	Study of Various Discretization Methods of the Neutron-Proton Breakup Continuum in Deuteron Nucleus Collisions	U. of Conn.,Thesis (1982)R.Y.Rasoanaivo	breakup reactions
^{197}Au ^{208}Pb ^{181}Ta	Total Cross Sections of Inelastic Processes of Deuteron Interactions with Heavy Nuclei	Izv Akad Nauk Kaz <u>4</u> ,20(1981) M.G.Itkis et al	inelastic scattering
^{58}Ni	Inelastic Scattering and Inelastic Breakup of Deuterons by Nuclei	Phys Rev <u>C26</u> ,904 (1982) H.Amakawa, T.Tamura	breakup reactions

Table II (Cont.)

$^{52}\text{Cr}, ^{56}\text{Li}, ^{56}\text{Sc}$	Total Cross Sections for Interaction of Deuterons and Alpha Particles with Nuclei (Approx.50)	Sov J Nucl Phys <u>35</u> ,317(1982) O.P.Bilanyuk et al	total cross sections, optical model
^{59}Co	Measurement and Hybrid Model Analysis of Integral Excitation Functions of ^2H -Induced Reactions on Cobalt	Verhandlungen der Deutschen Physikalischen Gesellschaft <u>17</u> ,1270(1982) (E.Ger) M.Galas et al	integral cross sections
$^{52,53,54}\text{Cr}$	Deuteron and Alpha-Particle Total Reaction Cross Sections for Nuclei with A Approximately 50	J of Physics <u>G7</u> , 1699(1981) O.M.P.Bilaniuk et al	optical models
^{233}U	Deuteron-Induced Fission in ^{233}U	Can J Physics <u>59</u> , 255(1981) N.Mobed et al	fission
^{235}U	Lifetimes of the Nuclei Formed by Deuteron Bombardment of ^{235}U	Nucl Instr Meth <u>170</u> ,145(1980) N.G.Chechenin et al	fission products
^{207}Pb	Preliminary Computer Processing of Neutron Spectra Obtained in the Deuteron Spallation Reaction	27.All-Union Conf on Nucl Spect. and Nucl Struct. Mar 22, 1977 Tashkent, USSR, p.321, V.T.Grantsev et al	neutron spectra, spallation
Pb	Cross Sections and Thick Target Yields of (d,xn) Reactions on Natural Lead	Radiochimica Acta <u>27</u> ,125(W.Ger)(1980) C.Wasilevsky et al	transfer reactions
^{27}Al ^{209}Bi ^{12}C	Deuteron Break-Up in the Fields of Nuclei at 56 MeV	Nucl Phys <u>A345</u> ,1 (1980) N.Matsuoka et al	breakup reactions, stripping
^{232}Th	Inelastic Break-Up Phenomena in d- and ^6Li -Induced Reactions on ^{232}Th	Verhandlungen der Deutschen Physikalischen Gesellschaft <u>16</u> ,792(1981) J.Kleinfeller et al	breakup reactions
^{197}Au	Particle Emission from Unbound States	Selected Topics in Nucl Struct, 18th Winter School, Bielsko-Biala, Poland 1980, INP-1134/PL, p.107, H.Machner	breakup reactions, precompound nucleus emission

Table II (Cont.)

^{27}Al ^{197}Au	Experimental and Theoretical Study of Continuous Proton Spectra from High-Energy Deuteron Induced Reactions	Nucl Phys <u>A34</u> , 221 (1980) U.Bechstedt et al	breakup reactions
^{16}O	New Method to Describe the Stripping to Unbound States and Other Reactions with Unstable Particles	Phys Lett <u>B96</u> , 4 (1980) V.M.Krasnopol'skii, V.I.Kukulin	stripping
	Global Optical Model Analysis of the Elastic Deuteron Scattering from Medium Heavy Target Nuclei	Aust Nat Univ (Canberra) report ANU-P-753(1979) H.R.Burgi et al	optical models
^{238}U	$^{238}\text{U}(\text{d}, 2\text{n})^{238}\text{Np}$ and $^{238}\text{U}(\text{d}, \text{p}, \text{d}, \text{n})^{239}\text{Np}$ Reactions at Moderate Excitation Energies	Arab J of Nucl Sci and Appl.(Egypt) <u>12</u> , 83(1979) A.T.Kandil	excitation functions
Li	Measurement and Calculations of Neutron Spectra from 35 MeV Deuterons on Thick Lithium for the FMIT Facility	J Nucl Materials <u>85</u> , 467(1979) D.L.Johnson et al	neutron spectra
^{52}Cr ^{56}Fe ^{58}Ni	Global Optical-Model Analysis of the Elastic Deuteron Scattering from Medium Heavy Target Nuclei	Nucl Phys <u>A334</u> , 413 (1980) H.R.Buerger et al	elastic scattering
^{27}Al ^{58}Ni	Multiparticle Removal Reactions Induced by Deuterons and the Study of Pre-Equilibrium Reactions	U of Maryland Thesis(1977) J.R.Wu	precompound-nucleus emission
Li	High-Flux Neutron Generator with a Linear Accelerator	All Union Conf on Charged-Particle Accelerators, Dubna, <u>ЖИВР-Д 9-11</u> 1974, p.33 (1978) A.A.Vasil'ev et al	stripping
^{63}Cu	Composite Particle Emission from ^{65}Zn	Phys Rev <u>C21</u> , 2695 (1980) H.Machner	precompound-nucleus emission
^{27}Al	Global Optical Model Potential for Elastic Deuteron Scattering	Phys Rev <u>C21</u> , 2253 (1980) W.W.Daehnick et al	elastic scattering, optical models

Table II (Cont.)

Be	Monte Carlo Calculation of d-Be Neutron Yields	Nucl Instr Meth <u>160</u> ,499(1979) D.Christenson et al	stripping
¹⁹⁷ Au ²⁰⁷ Pb ²⁰⁸ Pb	Neutron-Nucleus Interaction and Some Features of Deuteron Disintegration by Heavy Nuclei	Bull Acad Sci USSR Phys Series <u>41</u> ,1683(1977) V.I.,Grantsev et al	spallation
²⁷ Al ¹⁹⁷ Au	Continuous Charged Particle Spectra from Deuteron Induced Reactions	Julich report JUEL- SPEZ-15 p. 21(1978) U.Bechstedt et al	proton spectra
Be	Intense Neutron Source Based on 79 MeV Deuterons Bombarding Beryllium	Nucl Instr Meth <u>154</u> ,399(1978) G.H.Harrison, E.B.Kubiczek	fast neutrons
²⁷ Al, ²⁰⁸ Pb ⁵⁸ Ni, ²³² Th	Charged-Particle Spectra: 80 MeV Deuterons on ²⁷ Al and ⁵⁸ Ni and 70 MeV Deuterons on ⁹⁰ Zr, ²⁰⁸ Pb, and ²³² Th	Phys Rev <u>C19</u> ,370 (1979) J.R.Wu et al	precompound- nucleus emission
¹⁹⁷ Au	Diffraction Spallation of Deuterons by Nuclei	Bull Acad Sci USSR Phys Series <u>41</u> ,1274(1977) M.V.Evlanov et al	breakup reactions, spallation
⁵⁸ Ni	Disintegration of Medium- Energy Deuterons by Atomic Nuclei	Ukr Phys J <u>21</u> ,1174 (1976) Yu.A.Berezhnoi et al	breakup reactions, spallation
Be,C,Al Ni,Cu,Mo Ta,Pb	Energy Spectra of Neutrons from Thick Targets Bombarded by Deuterons	Sov At Energy <u>43</u> , 209(1977) V.P.Badovskii et al	neutron spectra
¹⁹⁷ Au ²⁰⁸ Pb	Deuteron Disintegration on Heavy Nuclei and Allowance for Neutron Interaction in a Final State	Ukr Phys J <u>22</u> ,238 (1977) V.I.Grantsev et al	breakup reactions
Li	Intense Neutron Source Based upon the Deuteron-Stripping Reaction	Nucl Instr Meth <u>145</u> ,49(1977) P.Grand, A.N.Goland	neutron spectra
⁹ Be	Generation of Fast Neutrons in a Cyclotron Using Helium-3 Ions	Int J Appl Rad & Isotopes <u>28</u> ,459(1977) B.V.Zatolokin et al	neutron spectra, fast neutrons

Table II (Cont.)

^{232}Th	Mechanism of the Reaction $^{232}\text{Th}(d,2n)^{232}\text{Pa}$	Phys Rev <u>C15</u> ,2255 (1977) J.Rama Rao et al	precompound- nucleus emission
^9Be	Stripping-Theory Analysis of Thick-Target Neutron Produc- tion for d + Be	Phys in Med & Bio <u>21</u> ,931(1976) L.S.August et al	neutron spectra
$^{92,94}\text{Mo}$ $^{98,100}\text{Mo}$	Excitation Functions and Yields of (d,n) and (d,2n) Reactions on Natural Molybdenum	J Inorg & Nucl Chem <u>38</u> ,2289(1976) Z.Randa, K.Svoboda	stripping, gamma spectra
^{238}U	Deuteron Induced Fission of ^{238}U	J Inorg & Nucl Chem <u>38</u> ,975(1976) A.T.Kandil	stripping
^9Be	Neutron Spectrum at 0 ⁰ from 33.7 MeV Deuterons on Beryllium	Phys Rev <u>C14</u> ,801 (1976) R.Madey et al	neutron spectra
^{27}Al	Study of Proposed ^{27}Al Models by an Analysis of Inelastic Scattering Data of 60 to 90 MeV Deuterons	Phys Rev <u>C13</u> ,1400 (1976) K.T.Knopfle et al	elastic scattering
Be	Fast-Neutron Dose Rate vs Energy for the d+Be Reaction: A Reanalysis	Med Phys <u>3</u> ,45(1976); J.B.Smathers et al	fast neutrons
^{12}C	Elastic and Inelastic Deuteron Scattering on ^{12}C in the Ener- gy Range from 60 to 90 MeV	Nucl Phys A <u>253</u> , 263(1975) O.Aspelund et al	optical models
$^{27}\text{Al}, ^{63}\text{Cu}$ ^{197}Au	Highly Inelastic Scattering of Medium Energy Deuterons	U of Wash. Seattle Wa., Thesis(1975) H.H.Wieman	inelastic scattering
^{76}Ge ^{64}Zn	Excitation Functions for the Deuteron Induced Reactions on ^{64}Zn and ^{76}Ge	Bull Inst Chem Res, Kyoto Univ, <u>52</u> ,233 (1974) T.Nishi et al	pickup reactions
Pt	Low-Temperature Energy Release in Platinum after Ion Radiation	Phys Rev <u>B12</u> ,1217 (1975) J.J.Jackson	physical radiation effects
	Intensity Measurements and Shielding of a Fast-Neutron Beam for Biological and Medical Application	Nucl Instr Meth <u>126</u> ,81(1975) J.P.Meulders et al	neutron spectra
^9Be	OER of Neutrons from 80 MeV Deuterons on Beryllium	Br J Radiol <u>48</u> ,569 (1974) J.L.Fowler et al	neutron beams

Table II (Cont.)

^9Be	Neutron Spectra at 0° from 83.7-MeV Deuteron Bombardment of a Thick Beryllium Target	Kent State Univ report COO-2231-27 (1975) R.Madey et al	neutron spectra, stripping
^{12}C	Neutron Spectra at 0° from 74-MeV Deuteron Bombardment of a Thick Carbon Target	Kent State Univ report COO-2231-24 (1974) R.Madey et al	neutron spectra
^9Be ^{12}C	Fast Neutron Yields and Spectra from Targets of Varying Atomic Number Bombarded with Deuterons from 16 to 50 MeV	Phys Med Biol <u>20</u> , 235(1975) J.P.Meulders	gamma spectra, neutron spectra
^{40}Ca	Johnson and Soper's Method of Including Deuteron Break-Up for the Calculation of Stripping Cross Sections	Nucl Phys <u>A241</u> ,365 (1975) G.H.Rawitscher	stripping
^{27}Al , ^{63}Cu ^{208}Pb ^{181}Ta	Highly Inelastic Deuteron Scattering at 45 MeV	Univ Washington report RLO-1388-258 p.65(1974) I.Halpern et al	inelastic scattering
Ca , Cl Cu	Binding Effects in High-Energy Scattering Applied to K-Shell Ionization	Phys Rev <u>A11</u> , 1205 (1975) J.Binstock, J.F.Reading	ionization
	Continuous Proton Spectra Emitted in ^3He and Deuteron Induced Reactions	Nucl Phys <u>A237</u> , 354 (1975) A.Chevarier et al	breakup reactions, stripping
^{181}Ta	Analysis of (particle, xn) Reactions on Tantalum and Gold. III. Excitation Functions of d-Induced Reactions on ^{181}Ta from 10 to 80 MeV and Equilibrium Statistical Analysis	Nucl Phys <u>A228</u> , 180 (1974) J.Bisplinghoff et al	Monte Carlo method
	Color Centers Due to Cationic Defects Created by High Energy Ions in LiF and KCL	J Phys (Paris) Colloq No. 9, 289 (1973) P.Thevenard et al	physical radiation effects, recombination
	Production of 14-MeV Neutrons by Heavy Ions	Aeroproject Nucl Co. report ANCR-1154 (1974) R.M.Brugger et al	heavy reactions, neutron sources, recoils
	Transfer Reactions Induced by Lithium Ions	Sov J Particles Nucl <u>3</u> , 467(1973) A.A.Ogloblin	dispersion relations, excitation functions

Table II (Cont.)

${}^6\text{Li}$	Medium Energy Cluster Knock-Out Reactions on ${}^6\text{Li}$ and Their Interpretation in Terms of Distorted Waves	Nucl Phys <u>A216</u> ,519 (1973) A.K.Jain et al	impulse approximation, knock-out reactions
${}^9\text{Be}$	Fast Neutron Dose Rate as a Function of Incident Deuteron Energy for $d + {}^9\text{Be}$	Phys Med Biol <u>18</u> , 641(1973) L.S.August et al	fast neutrons
Be,C Li	Neutron Spectra from Deuteron Bombardment of D, Li, Be, and C	Nucl Sci Eng <u>52</u> ,35 (1973) K.A.Weaver et al	neutron spectra
${}^{24}\text{Mg}$ ${}^{89}\text{Y}$	Optical Model and Coupled-Channel Analysis of 60-90 MeV Deuteron Scattering from ${}^{24}\text{Mg}$ and ${}^{89}\text{Y}$	Zeit fur Phys <u>260</u> ,179(1973) G.Hrehuss et al	elastic scattering, optical models
Au	Measurement and Interpretation of ${}^{197}\text{Au}(d,xnyp)$ Excitation Functions in the Energy Range from 25 to 86 MeV	Nucl Phys <u>A209</u> ,333 (1973) P.Jahn et al	hybrid models, excitation functions
${}^{40}\text{Ca}$ ${}^{12}\text{C}$	Deuteron-Nucleus Reactions at 69.1 MeV and a Determination of Neutron Detector Efficiencies	U of Maryland Thesis(1972) G.H.Harrison	inelastic scattering, pickup reactions, stripping
${}^6\text{Li}$	Quasi-Free Scattering in the ${}^6\text{Li}(d,d\alpha){}^2\text{H}$ Reaction at 52 MeV	Nucl Phys <u>A207</u> ,366 (1973) R.Hagelberg et al	cluster model
Cs	Polarization of Fluorescent Light Emitted by Plastic Ne102A, Ki(Tl), and Anthracene	Zeit fur Phys <u>258</u> , 251(1973) A.E.Wohanka	fluorescence
${}^{197}\text{Au}$	Deuteron Break-Up in the Field of the Nucleus	Nucl Phys <u>A204</u> ,97 (1973) J.Lang et al	stripping
${}^{12}\text{C}, {}^9\text{Be}$ ${}^{10}\text{B}, {}^7\text{Li}$	Spectra of Neutrons from Deuteron Bombardment of Light Nuclei	Lawrence Livermore Nat Lab report UCRL-51310(Add.)(1973) K.A.Weaver	neutron spectra
${}^{27}\text{Al}$ ${}^9\text{Be}$ ${}^{181}\text{Ta}$	Spectra and Absolute Yields of Neutrons from Thick Targets Bombarded by 23.2 MeV Deuteron	At Energ (USSR) <u>33</u> ,934(1972) V.K.Daruga et al	neutron spectra
${}^{28}\text{Si}, \text{C}$ O, Mg	Multistep Processes in the $(d, {}^6\text{Li})$ Reaction	Phys Lett <u>B40</u> ,456 (1972) J.R.Comfort	pickup reactions

Table II (Cont.)

Li,Be C,Al	(d,n) Thick-Target Yields and Total Cross Sections Between 1 and 40 MeV	J Appl Phys <u>43</u> , 3886-8(1972) L.L.Lucas, J.W.Root	thick-target neutron yield
As	Excitation Functions for Deuteron Reactions with ^{75}As	J Inorg Nucl Chem <u>34</u> ,1773(1972) H.F.Roehm, H.Muenzel	(d,p), (d,pxn), and (d,xn)
Cl,Cu Au,Ni Sn,Te	Projectile Z Dependence of K X-Ray Emission Induced by Alpha Particles and Deuterons	Phys Rev <u>A5</u> ,1773 (1972) C.W.Lewis et al	x-radiation
Au	Reactions Induced in Au by 10 to 70 MeV Deuterons	J Phys (Paris) <u>32</u> , 483(1971) N.Chevarier et al	transfer reactions
^{27}Al , ^{12}C ^{208}Pb , ^{68}Zn ^{120}Sn , ^{89}Y	Elastic and Inelastic Scat- tering of 80-MeV Deuterons	Nucl Phys <u>A174</u> ,485 (1971) G.Duhamel et al	elastic scattering, optical model
^{197}Au	Reactions Induced in Gold by Deuterons with Energies between 10 and 70 MeV	Lyon Univ (France) report LYCEN-7092 (1970) N.Chevarier et al	excitation functions
^9Be	Production of Neutrons Through Irradiation of Thick Beryllium Targets with Deuterons in the Energy Range from 15 to 55 MeV	Karlsruhe report KFK-1288(1970) K.Schmidt, H.Muenzel	neutron spectra
^{59}Co	Measurement of the Excitation Functions of (d,x) Reactions on ^{59}Co	Radiochim Acta <u>15</u> , 13(1971) R.Bilabel	excitation functions
Cu,Au Ti	Precise Test of the Z^2 Dependence of X-Ray Emission Induced by Alpha Particles and Deuterons	Phys Rev Lett <u>26</u> , 481(1971) C.W.Lewis et al	x-radiation
Cu	Excitation Functions for Radioactive Nuclides Produced by Deuteron-Induced Reactions in Copper	Nucl Phys <u>A155</u> ,40 (1970) C.B.Fulmer, I.R.Williams	excitation functions
^{197}Au	Inelastic Scattering of Deuterons from ^{197}Au	Nucl Phys <u>A154</u> ,312 (1970) R.P.Sharma	inelastic scattering
Si	Energy Spectra of Radiation Defects Generated in Si by Deuteron Irradiation	Sov Phys Semicond <u>3</u> ,132(1969) I.P.Akimchenko et al	photoconductivity

Table II (Cont.)

209Bi 197Au 235,238U	Fragment Angular Distributions in the Fission of Heavy Nuclei by 103 MeV Helium Ions and 51.5 MeV Deuterons	Nucl Phys <u>A145</u> ,337 (1970) J.Gindler et al	fission
Ni	Scattering of Fast Deuterons at Large Angles	Ukr Fiz Zh <u>14</u> ,1919 (1969) Yu.A.Berezhnoi, M.V.Evlanov	elastic scattering, spallation
197Au	Reactions Induced in Gold by Deuterons of Energies up to 60 MeV	Lyon Univ (France) Thesis, LYCEN-7014 (1970) N.Chevarier	excitation function
U	Interaction of High-Energy Deuteron Beams with Matter	At Energ (USSR) <u>37</u> ,480(1974) V.S.Barashenkov et al	excitation functions, nuclear cascades, multiplicity
U	Interaction of High-Energy Deuteron Beam with Matter	Dubna report JINR · P2-7848(1974) V.S.Barashenkov et al	cascade showers, inelastic scattering
Be	Time-of-Flight Spectrometer for Neutrons from 1 to 500 MeV	Nucl Instr Meth <u>106</u> ,89(1973) R.Madey, F.M.Waterman	neutron spectra
Cu,Pb,C Cd,Al	Deuteron Stripping at 1.69 GeV/c. II. Neutron Distribu- tions	Nucl Phys <u>A178</u> , 488 (1972) L.M.C.Dutton	neutron angular distribution
	Certain Characteristics of Fast Deuteron Interactions with Nuclei	Dubna report JINR- P2-5261(1970) K.K.Gudima et al	nuclear emulsions
Cd,C Cu,Pb Al	Deuteron Stripping at 1.69 GeV/c. I. Proton Distri- butions	Nucl Phys <u>A161</u> ,105 (1971) R.K.Tandon	proton angular distributions

Table II (Cont.)

^{27}Al ^{12}C	Deuteron Spallation in Pulsed Approximation	Ukr Fiz Zh <u>14</u> ,699 (1969) Yu.A.Berezhnoi, L.I.Vinokurov	impulse approximation
	Excitation Functions for Radioactive Nuclides Produced by Deuteron-Induced Reactions in Iron	Phys Rev <u>179</u> ,1104 (1969) J.W.Clark et al	excitation function
	Mechanism of Interaction of Fast Deuterons with Nuclei	Yadern Fiz <u>9</u> ,528 (1969) V.S.Bara-shenkov et al	inelastic scattering, Monte Carlo method, Coulomb and diffractive disintegration
Be	Quality of Cyclotron Produced Neutrons	Health Phys <u>13</u> ,1237 (1967) J.N.Schultz, W.A.Glass	neutron radiation
Al,C,Co Cu,Pd,Pt Ag,Ta	Fast Neutron Production with 54 MeV Deuterons	Nucl Phys <u>A100</u> ,537 (1967) G.W.Schweimer	angular distributions
Al,Be,C Co,Cu,Ta	Investigation of Deuteron-Break-Up Neutrons by a Time-of-Flight Method at 50 MeV	Karlsruhe report KFK-504(1966) G.W.Schweimer	stripping
Al,Cd,C Cu,Pb	Attenuation Cross-Sections for 650 MeV Deuterons	Nuovo Cimento (<u>17</u>) <u>A48</u> ,165(1967) K.Ruddick, D.G.Ryan	optical model
B,C	Absolute Photon Yields of Light Elements by Deuteron Bombardment	NASA report NASA-TN-D-3648(1966) A.J.Caruso, R.A.Walter	x-radiation
Cu,Au	Disintegration in Flight of Deuterons under the Influence of Nuclear Fields	Rev of Mod Phys <u>37</u> ,365(1965) F.Udo	neutrons, spectra
C	Deuteron-Carbon Elastic Scattering at 650 MeV	Phys Lett <u>16</u> ,331 (1965) L.M.C.Dutton et al	elastic scattering
Bi,Pt Ta,W	Neutrons from the Deuteron Bombardment of Thick Targets	Nucl Instr Methods <u>35</u> ,138(1965) R.R.Borchers, R.M.Wood	spectra

Table II (Cont.)

Al,C O	Proton Groups from the Deuteron Bombardment of Aluminum, Sodium, and Manganese	Phys Rev <u>79</u> ,99 (1950)W.E.Whitehead, N.P.Heydenburg	
Cu,Au	The Deuteron Disintegration in Flight Occurring During the Scattering of 26 and 23 MeV Deuterons on Gold and Copper	Nucl Phys <u>70</u> ,145 (1965) F.Udo, L.A.Ch.Koerts	neutrons, spectra
¹² C	Velocity Dependent Potential and Deuteron Stripping Reactions	Phys Lett <u>14</u> ,204 (1965) A.Y.Abul-Magd, M.El-Nadi	DWBA approximation, stripping
Au	The Proton Yield Due to the Disintegration of 26 and 23 MeV Deuterons in the Coulomb Field of Nuclei	Nucl Phys <u>63</u> ,657 (1965) F.Udo et al	
Th,U	Interim Feasibility Report on MTA Mark III	North American Aviation report NAA-SR-130(Del) (1951)no author	neutrons
Cr	Elastic Scattering of Deuterons from the Chromium Isotopes	Nucl Phys <u>56</u> ,422 (1964) P.T.Andrews et al	optical model
	The Energy Correlation in Proton and Neutron Pairs Formed by the Disintegration of 26-MeV Deuterons by Gold Nuclei	Phys Lett <u>6</u> ,343 (1963) F.Udo, L.A.Ch.Koerts	neutrons
Al,Bi ¹² C,Au Fe,Pb	Total-Reaction Cross-Section Measurements for Charged Particles	Lawrence Berkeley Lab report UCRL-10783(1963) Thesis B.D.Wilkins	
Co,Cu Fe,Ni	Gross Structure of the Neutron Energy Spectrum and Polarization in (d,n) Reactions on Intermediate Mass Nuclei	Zh Eksperim I Teor <u>44</u> ,1437(1963) I.I.Levintov et al	spectra
²⁸ Si	The Nuclear Stripping Process under Conditions of Strong Absorption	Phys Lett <u>4</u> ,148 (1963) L.J.B.Goldfard, M.B.Hooper	neutrons, stripping
^{235,238} U	Yields of Krypton Isotopes from the Deuteron and Alpha Bombardment of Heavy Nuclei	Phys Rev <u>124</u> ,1949 (1961) M.Kaplan, C.D.Coryell	

Table II (Cont.)

Al,Pb Zn	Production of Tritium in Lead and Aluminum by High Energy Protons, Deuterons and Alpha-Particles	Zhur Eksptl I Teoret Fiz <u>40</u> ,1263 (1961) V.V.Kuznetsov	
C, ¹⁶ O	Study of the Differential Cross Sections of Deuteron Stripping Reactions as a Function of the Incident Energy	Phys Rev <u>123</u> ,619 (1961) E.W.Hamburger	Born Approximation,stripping
Pt,Ag Ta,Sn,Zr	Survey of Inelastic Scattering of Deuterons by Heavy Elements	Phys Rev <u>123</u> ,283 (1961) B.L.Cohen, R.E.Price	inelastic scattering
⁹ Be	Measurement of Neutron Spectra from (d,n) Reactions on Light Nuclei	Czechoslov J Phys <u>B10</u> ,715(1960) J.Juna et al	fast neutrons
Al,Co,Cu Ti,V	Elastic Scattering of Deuterons from Mg, Al, Ti, V, Cr, Co, Ni, and Cu	Phys Rev <u>114</u> ,1054 (1959) I.Slaus, W.P.Alford	optical model
²³⁵ U, ²³⁸ U	Excitation Functions of ²³⁵ U and ²³⁸ U Bombarded with Helium and Deuterium Ions	Phys Rev <u>114</u> ,163 (1959) J.Wing et al	
Al,Cu Au	Range-Energy Relation of ¹² C, ¹⁴ N, and ¹⁶ O in Aluminum, Copper, and Gold at 50 to 110 MeV	Zhur Eksptl I Teoret Fiz <u>36</u> ,936(1959) Yu.Ts.Oganessian	
Ge	Lattice Parameter Changes in Deuteron Irradiated Germanium	Phys Rev <u>113</u> ,70 (1959) R.O.Simmons	radiation effects
⁹ Be ¹⁰ B, ¹¹ B	Angular Distributions from Deuteron Bombardment of Beryllium and Boron	Phys Rev <u>112</u> ,2020 (1958) B.Zeidman, J.M.Fowler	neutrons, stripping
	Recent Total Neutron Yield Measurements	Berkeley Radiation report UCRL-1648, (1951) W.Crandall, G.Millburn	
Be,Th U	Neutron Production at High Energies	J Applied Physics <u>29</u> ,698(1958) W.E.Crandall, G.P.Millburn	neutron detection
Ta,U	Elastic Scattering of Alpha Particles and Deuterons from Heavy Nuclei	Phys Rev <u>108</u> ,1289 (1957) J.R.Rees, M.B.Sampson	Rutherford scattering

Table II (Cont.)

Al,U	MTA Project. Target and Process Section Quarterly Progress Report for April Through June 1953	Livermore Research Lab report LRL-82 (1954) no author	neutron beams
U,Th	MTA Project Target and Process Section Quarterly Progress for September through November 1952	Livermore Research Lab report MTA-30(1953) no author	stripping, neutron flux
^{235}U	Fission and Capture Events in 24 Inch x 24 Inch x 10 $\frac{1}{8}$ Inch Deep Uranium Secondary Targets Bombarded with 190-MeV Deuterons	Livermore Research Lab report LRL-106(1954) H.G.Hicks	fission
^{232}Th ^{238}U	Excitation Functions for the (d,2n) and (d,4n) Reactions on ^{238}U and ^{232}Th from Threshold to 190 MeV	Livermore Research Lab report MTA-48 (1953) W.W.T.Crane, G.M.Iddings	optical model
$^{10,11}\text{B}$	Neutrons from Deuteron Bombardment of Boron	Aust J Phys <u>10</u> ,268 (1957) J.R.Bird, R.H.Spear	
Th,U	Total Neutron Yield from Targets Bombarded by Deuterons and Protons	Berkeley Radiation Lab report UCRL-2063(1957) W.E.Crandall, G.P.Millburn	
Be,Th U	Fission and Capture Events in 12 Inch x 12 Inch Cross Section Uranium and Thorium Targets Bombarded with 190-MeV Deuterons and 340 MeV Protons	Livermore Research Lab report MTA-6 (1953) H.G.Hicks	
U	Neutron Spectra from a Uranium Target Bombarded with 190 MeV Deuterons	Livermore Research Lab report LWS-24730 (1953) A.V.Shelton	neutrons
Cr	Nuclear Excitation Functions and Thick Target Yields: (Cr + d)	Phys Rev <u>104</u> ,703 (1956) P.Kafalas, J.W.Irvine,Jr.	neutrons
^9Be , ^{12}C $^6,^7\text{Li}$	Angular Distribution of Inelastically Scattered Deuterons	Phys Rev <u>103</u> ,1398 (1956) J.W.Haffner	optical model

Table II (Cont.)

238U	The Ranges of Fragments from High Energy Fission of Uranium	Berkeley Radiation Lab report UCRL-1244 (Rev)(1951) E.M.Douthett, D.H.Templeton	slowdown
	$^{12}\text{C}(\text{HI},\text{HI},\text{n})^{11}\text{C}$ and $^{27}\text{Al}(\text{HI},\text{HI},2\text{p}\alpha)^{24}\text{Mg}$ Cross Sections at High Energies	Phys Rev <u>101</u> ,329 (1956) W.E.Crandall et al	excitation functions
U	Fission Product Yields of Uranium Bombarded with Deuterons of Various Energies (20-190-MeV)	Phys Rev <u>100</u> ,1284 (1955) H.G.Hicks et al	fission products
Al	The Fate of Deuterons in Solid Aluminum Targets	Livermore Research Lab report LRL-83(1954) R.A.Heckman, C.J.Egan	irradiations
235U	High-Energy Induced Fission Theory and Application	Berkeley Radiation Lab report UCRL-2996(1955) Thesis R.R.Hart	thermal neutrons
C	Cross Sections for Producing High-Energy Neutrons from Carbon Targets Bombarded by Protons, Deuterons, and ^3He Particles	Phys Rev <u>97</u> ,184 (1955) L.Schecter et al	fast neutrons
U	Calorimetric Measurement of the Energy Released in a One Range Uranium Cyclotron Target by 189-MeV Deuterons	Livermore Research Lab report LRL-70(1953) R.M.Horning et al	losses
Al,Au U	Analysis of Secondary Particles Resulting from High-Energy Nuclear Bombardment	Berkeley Radiation Lab report UCRL-2258(1953) Thesis,R.W.Deutsch	particle tracks
U	The High-Energy Charged Particles from Targets Bombarded by 190 MeV Deuterons	Berkeley Radiation Lab report UCRL-1996(1952) Thesis, L.Schecter	stripping
^{12}C	Stripping and Pick-Up Differential Cross Sections	Phys Rev <u>88</u> ,133 (1952) S.T.Butler, E.E.Salpeter	stripping

TABLE III
TRITON- AND ^3He -INDUCED REACTIONS

<u>TARGET</u>	<u>TITLE</u>	<u>REFERENCE</u>	<u>DESCRIPTORS</u>
^6Li $^{60}\text{Ni}, ^{92}\text{Zr}$	Possibility of Using the Reaction of Disintegration of Light Ions by Nuclei for Studying the Nuclear Surface Properties in the Intermediate Energy Range	34th Conf on Nucl. Spect & Nucl Structure, Alma-Ata, USSR (1984) M.V.Evlanov et al	spallation
	Breakup Phenomena in Nuclear Collision Processes with He Projectiles	Rev Mod Phys <u>57</u> , 147 (1985) R.J.De Meijer, R.Kamermans	breakup reactions
$^3\text{He}, ^7\text{Li}$	Investigation of Light Nuclei at High Excitation Energies with Three-Body Break-Up Reactions	Julich report JUEL-SPEZ-255, p.22 (1984) R.Franke et al	quasi-elastic scattering
	Theoretical Study of Inclusive Processes induced by Intermediate Energy Light Ions	Theoretical Physics report ITF-83-30-R, p.25(1983) Kiev Instit., M.V.Evlanov et al	breakup reactions inclusive interactions
^{51}V	Spallation of V Induced by 1 GeV ^{12}C -Ions and by 258, 350 and 910 MeV ^3He Ions	Zeit fur Physik <u>A315</u> , 355(1984) I.R.Haldorsen et al	inclusive interactions
^{40}Ca	Anomalous Behaviour of Tritons from 156 MeV ^6Li Break-Up Reaction	Lett Nuovo Cimento <u>38</u> , 237(1983) R.Fonte Catania	quasi-elastic scattering
^{59}Co	^3He -Induced Reactions on Cobalt	Nucl Phys <u>A404</u> , 77 (1983) R.Michel, M.Galas	knock-out reactions
$^{27}\text{Al}, ^{59}\text{Co}$ $^{197}\text{Au}, ^{93}\text{Nb}$	Breakup of ^3He Projectiles at an Incident Energy of 43.3 MeV/Nucleon	Phys Rev <u>C27</u> , 2389 (1983) A.Djaloeis et al	breakup reactions stripping
$^{40}\text{Ca}, ^{24}\text{Mg}$ $^{58}\text{Ni}, ^{32}\text{S}$	Peculiarities of Light Ion-Nucleus Scattering in Medium-Energy Region	Ukr Phys J <u>27</u> , 177 (1982) Y.A.Berezhnoj, V.V.Pilipenko	diffraction models, S-matrix
^{58}Ni	Scattering of 130 MeV Helions on ^{58}Ni	Phys Scripta <u>26</u> , 46 (1982) A.Djaloeis et al	DWBA

Table III (Cont.)

^{197}Au	Measurement of $^{197}\text{Au}(t,xnyp)$ Excitation Functions for 15 $\text{MeV} < E_t < 135 \text{ MeV}$ and Analysis in the Framework of the Hybrid Model	Julich report JUEL-SPEZ-98(1981) O.Bousshid	knock-out reactions
$^{24}\text{Mg}, ^{58}\text{Ni}$ $^{120}\text{Sn}, ^{90}\text{Zr}$	High Energy Helion Scattering. A Model-Independent Analysis	Nucl Phys <u>A356</u> ,97 (1981) A.Djaloeis, S.Gopal	optical models
$^{40}\text{Ca}, ^{119}\text{Sn}$ ^{58}Ni	Elastic Scattering of 90-120 MeV ^3He Particles and an Unambiguous Optical Potential	Nucl Phys <u>A311</u> ,161 (1978) M.Hyaktak et al	optical models
$^{24}\text{Mg}, ^{90}\text{Zr}$ $^{120}\text{Sn}, ^{208}\text{Pb}$	Elastic Scattering of 130 MeV ^3He	Nucl Phys <u>A306</u> ,221 (1978) A.Djaloeis et al	optical models
$^{27}\text{Al}, ^{209}\text{Bi}$ $^{23}\text{Ca}, ^{197}\text{Au}$ $^{54}\text{Fe}, ^{181}\text{Ta}$	Projectile Break-Up and the Continuum Spectra of the ($^3\text{He}, d$) Reaction	Nucl Phys <u>A311</u> ,173 (1978) M.Matsuoka et al	break-up reactions
	Consistent Microscopic and Macroscopic Analyses of the Composite Particle Optical Potential	Nucl Phys <u>A257</u> ,264 (1976) S.Mukhopadhyay et al	elastic scattering
^{27}Al	Particle-Hole State Densities for Calculation of the Multi- Step Compound Emission	Nucl Phys <u>A435</u> ,67 (1985) K.Stankiewicz et al	particle-hole model
^{197}Au	Inclusive and Exclusive Cross Sections for the ^3He Breakup on ^{197}Au . A Test Case for the DWBA Approach in the Post- Formulation	Bonn Univ. Thesis INIS-MF-9238 p.98(1983) J.Kleinfeller	breakup reactions, inclusive interactions
^{197}Au ^{208}Pb	33 and 43 MeV ($^3\text{He}, H$ in gamma) Exclusive Reactions on Targets from Zr to Pb	Nucl Phys <u>A429</u> ,259 (1984) C.A.Fields et al	breakup reactions, neutron spectra, knock-out reactions
^{165}Ho	Breakup-Fusion Calculations of Continuum Spectra of (h,p) and (h,d) Reactions at $E_h =$ 100 MeV	Phys Rev <u>C30</u> ,1349 (1984) X.Li et al	stripping, breakup reactions

Table III (Cont.)

108Pd 118,124Sn	Inclusive 24 to 43 MeV (^3He , xn gamma) Reaction on Pd and Sn Targets	Nucl Phys <u>A422</u> ,296 (1984) C.A.Fields et al	knock-out reactions, inclusive interactions, neutron spectra
	Study on the Energy Dependence of Gamma-Quantum Yield in the Interaction of ^3He and ^4He Ions with $^{96,98}\text{Ru}$	23rd Conf on Nucl Spect & Nucl Struct, Moscow, INIS-SU-198 p.336 (1983) R.A.Zarifov et al	gamma radiation
166,167Er 165Ho	Breakup Process for 100 MeV ^3He Interacting with ^{165}Ho and 166,167Er Nuclei	Nucl Phys <u>A413</u> ,290 (1984) K.Maeda et al	gamma spectra, inclusive interactions
^{40}Ca	Effect of Nuclear Structure on Bremsstrahlung Spectra of Multiply Charged Particles	23rd Conf on Nucl Spect & Nucl Struct, Moscow, INIS-SU-198 p.277(1983) M.Ya.Amus'ya et al	Bremsstrahlung
Ag	Compound-Nucleus Decay Via the Emission of Heavy Nuclei	Phys Rev Lett <u>51</u> , 2187(1983) L.G.Sobotka et al	compound-nucleus reactions
^{209}Bi ^{197}Au	^3He -Induced Fission of Nuclei $159 < A < 232$	Phys Rev <u>C28</u> ,1217 (1983) F.D.Becchetti et al	fission
^{27}Al ^{59}Co	Study of the Reactions on ^{27}Al , ^{59}Co and ^{112}Sn Nuclei by Action of Accelerated ^3He Ions with 34.8 MeV Energy with Proton, Deuteron, Triton, and Alpha Particle Emission	Sov J Nucl Phys <u>36</u> ,19(1982) N.T.Burtebaev et al	knock-out reactions, breakup reactions, exciton model
^{150}Nd ^{124}Sn	Breakdown of the Thermal Moving-Source Description of of Fast Neutron Production in (α ,xn) and (^3He ,xn) Reactions	Phys Lett <u>B114</u> ,81 (1982) C.A.Fields et al	inclusive interactions
^{62}Ni	Study on the Neutron Produc- tion from the $^3\text{He} + ^{62}\text{Ni}$ Reaction at an Ion Energy of 59 MeV	31st Conf on Nucl Spect & Nucl Struct Samarkland,USSR, INIS-MF-6819 p.391 O.V.Bochkarev et al	precompound- nucleus emission, neutron spectra
^{150}Nd	Decay Pathways and Entry-State Population in (α ,xn gamma) and (^3He ,xn gamma) Reactions on ^{150}Nd	Nucl Phys <u>A366</u> ,38 (1981) C.A.Fields et al	neutron spectra

Table III (Cont.)

Al,Si	Reactions Induced by ^3He and ^4He Ions on Natural Mg, Al, and Si	Phys Rev <u>C25</u> ,770 (1982) D.J.Frantsvog et al	gamma radiation
^{27}Al ^{208}Pb	Analysis of Pre-Equilibrium Nuclear Reactions with Compound Particles	31st Conf on Nucl Spect & Nucl Struct Samarkland,USSR INIS-MF-6819 p.488 (1981) A.N.Boyarkina et al	precompound-nucleus emission
^{62}Ni	Preequilibrium Processes of Neutron Production in the Helium and Carbon Ion Reactions	Bull Acad Sci USSR <u>10</u> ,2192(1979) O.V.Bochkarev et al	precompound-nucleus emission, neutron spectra
^{27}Al ^{40}Ca ^{12}C	Mass Dependence of ^3He Optical Potential and Volume Integrals in the Range from Light to Medium Weight Nuclei. Selection of a 'Physical' Potential Family	Nucl Phys <u>A337</u> ,377 (1980) H.J.Trost et al	elastic scattering, light nuclei
^{164}Dy ^{174}Yb	Gamma Deexcitation Mechanism of Rare-Earth Compound Nuclei Produced by ($^3\text{He},\text{xn}$) and (α,xn) Reactions	J Phys Soc Japan <u>46</u> ,6(1979) T.Kishimoto et al	gamma radiation
^{27}Al	Statistical Multistep Compound Emission in the $^{27}\text{Al}(^3\text{He},\text{p})^{29}\text{Si}$ Reaction	Phys Rev <u>C21</u> ,816 (1980) R.Bonetti et al	precompound-nucleus emission
^{27}Al ^{59}Co ^{112}Sn	Measurements and Analysis of Proton, Deuteron, Triton Spectra from Reactions on ^{27}Al , ^{59}Co , ^{112}Sn Induced by ^3He Ions at about 35 MeV	28th Conf on Nucl Spect & Struct of the Atomic Nucleus Alma-Ata,USSR,1978 INIS-MF-4388,p.179 N.T.Burtebaev et al	energy spectra
^{25}Mg	Statistical Multistep Compound Emission in the $^{25}\text{Mg}(^3\text{He},\text{p})^{27}\text{Al}$ Reaction	J of Physics <u>G4</u> ,L71(1978) A.De Rosa et al	compound-nucleus reactions
^{107}Ag	Analysis of the Excitation Functions for ^3He - and Alpha-Induced Reactions on ^{107}Ag and ^{109}Ag	Karlsruhe report KFK-2311(1976) P.Misaelides	excitation functions
^{26}Mg	Multinucleon Removal Induced by 80-MeV ^3He	Phys Rev <u>C14</u> ,1655 (1976) P.P.Singh et al	precompound-nucleus emission, gamma spectra

Table III (Cont.)

^{40}Ca	Monte Carlo Calculations of Two-Neutron Transfer Cross Sections	Nucl Phys <u>A205</u> ,513 (1973) B.F.Bayman, D.H.Feng	Monte Carlo method, pickup reactions
^{40}Ca ^{58}Ni	Scattering of 101-MeV Helions from ^{12}C , ^{40}Ca , and ^{58}Ni	Univ of Maryland report ORO-3491-21 pp.21-36(1973) D.A.Goldberg, S.M.Smith	inelastic and elastic scattering
^{40}Ca ^{12}C , ^{208}Pb ^6Li , ^{28}Si	Elastic Scattering of 217 MeV ^3He Particles	Nucl Phys <u>A204</u> ,454 (1973) N.W. ...lis	elastic scattering
^{208}Pb	High-Energy Alpha and Helium Inelastic Scattering	J Phys (Paris) <u>5</u> , 151(1972) B.Tatischeff et al	inelastic scattering
^{208}Pb	^3He Elastic Scattering from ^{208}Pb and ^{209}Bi at 71 MeV	Phys Rev <u>C12</u> ,87 (1975) C.B.Fulmer et al	optical models
$^{150,152}\text{Sm}$ ^{154}Sm	53 MeV ^3He Scattering from Samarium Isotopes	J Phys G (London) <u>1</u> ,358(1975) R.Eagle et al	optical model
^{56}Fe	Interaction of Helium Ions with ^{56}Fe near 83 MeV	J Phys G (London) <u>1</u> ,334(1975) S.A.Weisrose et al	elastic scattering, one-nucleon transfer reactions
^{56}Fe	Unambiguous Helion Optical Potential at 83 MeV	J Phys G Nucl Phys <u>1</u> ,L1(1975) S.A.Weisrose	elastic scattering
^9Be ^{27}Al	(^3He ,2n) Excitation Functions for Some Light Nuclei	Nucl Phys <u>A235</u> ,11 (1974) C.E.Moss, C.S.Zaidins	excitation functions, gamma spectra
Be	Fast Neutrons Produced by Bombarding a Beryllium Target with 40 MeV Helium-3 Ions	Phys Med Biol <u>20</u> , 125(1975) C.J.Parnell et al	neutron sources
^{63}Cu $^{61,62}\text{Ni}$	Neutron, Proton, and Alpha-Particle Emission from ^3He Induced Reactions	Nucl Phys <u>A231</u> ,64 (1974) A.Chevarier et al	emission spectra, spallation

Table III (Cont.)

197Au 181Ta	Analysis of (particle,xn) Reactions on Tantalum and Gold II. 181Ta, 197Au(3He,xn)Ex- citation Functions and Equi- librium Statistical Model Analysis	Nucl Phys <u>A228</u> ,175 (1974) F.Hermes et al	excitation functions
58Ni	Interference of Coulomb and Nuclear Excitations in the Inelastic Scattering of 3He, 6Li, and 12C Ions on the 58Ni Nucleus	Yadern Fiz <u>19</u> ,1207 (1974) Yu.A.Gluk- hov et al	inelastic scattering
209Bi 197Au	Comparison of 3He, 4He, and 12C-Induced Nuclear Reactions in Heavy-Mass Targets at Medium Excitation Energies I. Experimental Cross Sections	Phys Rev <u>C9</u> ,1064 (1974) J.D.Stickler, K.J.Hofstetter	excitation functions
209Bi 197Au	Comparison of 3He, 4He, and 12C-Induced Nuclear Reactions in Heavy-Mass Targets at Medium Excitation Energies II. Reaction Model Calcula- tions	Phys Rev <u>C9</u> ,1072 (1974) K.J.Hofstetter, J.D.Stickler	statistical, exciton, hybrid and optical models
197Au	Peripheral Break-Up of 3He on 197Au	Proc Int Conf on Few Particle Prob- lems in the Nuclear Interaction Aug 28,1972 Los Angeles, Ca W.Hermesen et al	peripheral collisions, recoils
Pb	Study of (3He,xn), (3He,pxn), (3He,fission) Nuclear Reac- tions on 206Pb Between 80 and 205 MeV	Paris Univ, Orsay, France, Thesis FRNC-TH-444(1973) C.Andre	excitation functions, total cross sections
Mg,Al,Si	Total Cross Sections and Exci- tation Functions for 1H, 2H, 3He, and 4He on Targets of Natural Mg, Al, and Si	Univ of Colorado report COO-535-693 pp.30-32(1973) C.S.Zaidins et al	one-nucleon transfer,stripping
27Al 9Be	(3He,2n) Reaction Cross Sec- tions on Several Light Nuclei	Univ of Colorado report COO-535-693 pp.22-23(1973) C.E.Moss, C.S.Zaidins	excitation functions

Table III (Cont.)

^{60}Ni	Numerical Accuracy of ^3He Optical-Model Calculations at 70 MeV	J Comput Phys <u>12</u> , 498(1973) R.R.Doering et al	differential cross sections, optical models
^{27}Al	Importance of Large-Angle Data in Optical-Model Analysis of Helion Elastic Scattering	Phys Rev <u>C5</u> , 1969 (1972) C.B.Fulmer, J.C.Hafele	elastic scattering, optical model
^{238}U	Mass Distribution in the Fission of ^{238}U with ^3He Ions	J Inorg Nucl Chem <u>33</u> , 2745(1971) E.F.Meyer et al	fission, fission yield
^{238}U ^{209}Bi ^{232}Th	Delayed Neutrons from the Tau- and Alpha-Induced Fission of ^{238}U , ^{232}Th , and ^{209}Bi	Nucl Phys <u>A173</u> , 497 (1971) E.T.Chulick, P.L.Reeder	delayed neutrons
^{181}Ta	Highly Inelastic Scattering of Medium-Energy ^3He and ^4He Particles by Heavy Nuclei	Univ unknown, U. microfilms order #70-14,742 Thesis (1970) G.M.Chenevert	inelastic scattering
$^{63,65}\text{Cu}$	Excitation Functions for ^3He Induced Nuclear Reactions in Cu	Nucl Phys <u>A152</u> , 419 (1970) N.W.Golchert et al	excitation functions
^{56}Fe	Collective-Model Analysis of the Inelastic Scattering of 53 and 33 MeV Helions by ^{56}Fe	Nucl Phys <u>A202</u> , 421 (19ND) C.J.Marchese et al	inelastic scattering
^{56}Fe	Excitation Functions for Helion-Induced Reactions in Iron	Phys Rev <u>C6</u> , 1720 (1972) C.B.Fulmer et al	nuclear reaction kinetics
	Energy Dependence of the ^3He Optical Potential	Phys Rev Lett <u>29</u> , 660(1972) C.J.Marchese et al	elastic scattering, optical model, intermediate mass nuclei
^{56}Fe	Optical-Model Analysis of Elastic Scattering of 53.4 MeV Helions from ^{56}Fe	Nucl Phys <u>A191</u> , 627 (1972) C.J.Marchese et al	elastic scattering, optical model

Table III (Cont.)

^{48}Ca	Recoil Studies of the Interaction of ^{48}Ca with 18 to 36-MeV ^4He Ions and 5 to 43-MeV ^3He Ions	Nucl Phys <u>A153</u> ,225 (1970) B.M.Gordon	recoils
	Dosimetric and Microdosimetric Investigations on High L.E.T. Particle Beams	Centre de Fonteray Aux-Roses (France) report CEA-R-4655(1975) A.Bridier, P.Fache	fast neutrons, microdosimetry
	COMPJ: A Computer Program for the Calculation of the Excitation Functions by Means of Monte Carlo Method	Tokoyo Univ report INS-TCH-10(1974) K.Komura, S.Tanaka	compound-nucleus reactions, Monte Carlo method
$^{27}\text{Al}, ^{28}\text{Si}$ $^{52}\text{Cr}, ^{58}\text{Ni}$ $^{60}, ^{62}\text{Ni}$	Elastic Scattering of ^3He Ions on Light and Intermediate Nuclei	Yadern Fiz <u>9</u> ,1173 (1969) K.P.Artemov et al	elastic scattering, optical model
^{181}Ta ^{186}W ^{208}Pb	Comparison of Reactions Induced by Medium-Energy ^3He and ^4He Particles on Heavy Nuclei	No university information given Thesis (1968) N.E.Scott	reactions ($^3\text{He}, \text{xp}$), ($^3\text{He}, \text{p2n}$), ($^3\text{He}, \text{xn}$), excitation functions

TABLE IV
ALPHA-PARTICLE INDUCED REACTIONS

<u>TARGET</u>	<u>TITLE</u>	<u>REFERENCE</u>	<u>DESCRIPTORS</u>
	Correlated Emission of Particles in Alpha Induced Reactions	Workshop on Coincident Particle Emission from Continuum States, Bad Honnef(W.Germany) INIS-MF-9280(1984) E.Gadioli et al	precompound-nucleus emission, inclusive interactions
^{238}U	Fast Nucleon Emission in High Energy Alpha Scattering from Heavy Nuclei	INIS-MF-9280(1984) (Absts) P.Decowski et al	precompound-nucleus emission, quasi-elastic scattering
$^{27}\text{Al}, ^{40}\text{Ca}$ $^{12}\text{C}, ^{208}\text{Pb}$	Mass and Energy Dependence of the Alpha-Particle Optical Model Potential in the Energy Range 90-172 MeV and in the Mass Number Range 12-208	Acta Phys Polonica <u>B12</u> ,703(1981) H.Dabrowski, L.Freindl	optical models, nuclear potential
^{209}Bi , ^{165}Ho , ^{59}Ni ^{181}Ta	Alpha Induced Reactions:	Zeit fur Physik <u>A321</u> ,107(1985) E.Gadioli et al	neutron spectra
^{119}Sn ^{92}Zr	Neutron Decay of States Excited in Alpha Inelastic Scattering	Phys Rev <u>C30</u> ,1352 (1984) E.Gadioli et al	neutron emission
^{238}U	Importance of Fast Nucleon Emission in 172 MeV Alpha Scattering from ^{238}U	Phys Lett <u>B141</u> ,49 (1984) P.Decowski et al	quasi-elastic scattering, pre-compound-nucleus emission
^{55}Mn , ^{51}V	Measurement and Hybrid Model Analysis of Integral Excitation Functions for Alpha-Induced Reactions on Vanadium and Manganese	Int Congr on Nucl Data for Sci & Tech Antwerp,Belgium (1982) p. 599 R.Michel et al	excitation function
^{93}Nb , ^{27}Al ^{197}Au	Pre-Equilibrium Light Particle Emission in Heavy Ion Induced Reactions	Zeit fur Physik <u>A316</u> ,309(1984) A.Niita	precompound-nucleus, inclusive interactions
^{59}Co	Analysis of ^{59}Co (alpha,xp ynz alpha) Reactions up to 170 MeV Incident Alpha Energy	Zeit fur Physik <u>A317</u> ,155(1984) E.Gadioli et al	precompound-nucleus emission, quasi-elastic scattering

Table IV (Cont.)

^{197}Au	Excitation Functions of the $^{197}\text{Au}(\alpha,2p)^{199}\text{Au}$ and $^{197}\text{Au}(\alpha,2n)^{199}\text{Tl}$ Reactions	Nucl Phys <u>A413</u> ,432 (1984) O.Hashimoto et al	breakup reactions gamma spectra
$^{165}\text{Ho}, ^{58}\text{Ni}$	Breakup-Fusion Description of Nonequilibrium Protons From (α, p) Reactions	Phys Lett <u>B135</u> ,333 (1984) T.Udagawa et al	inclusive interactions, breakup reactions
^{197}Au	Proton Emission in Alpha-Induced Reactions at 43 MeV/ Nucleon	Nucl Phys <u>A408</u> ,359 (1983) B.Ludewigt et al	knock-out reactions, inclusive interactions
^{93}Nb	Model for Alpha Particle Induced Nuclear Reactions: $^{93}\text{Nb}(\alpha, x \alpha \text{ pzn})$ from 40 - 140 MeV	Phys Rev <u>C29</u> ,76 (1984) E.Gadioli et al	compound-nucleus reactions
$^{27}\text{Al}, ^{58}\text{Ni}$ $^{62}\text{Ni}, ^{28}\text{Si}$	Study of Continuous Spectra of Scattered Alpha and ^6Li Particles at 26 MeV/A by Detection of Coincident Gamma Radiation	INIS-MF-8251(1981) Heidelberg Univ. Thesis, W.Nitsche	gamma spectra
$^{162}, ^{164}\text{Dy}$ ^{174}Yb	Neutron-Multiplicity Distributions for $(\alpha, xn \text{ gamma})$ Reactions with $E = 50\text{-}120$ MeV and the Pre-Equilibrium Processes	Phys Rev <u>C28</u> ,635 (1983) K.Maeda et al	multiplicity, neutrons, exciton model
^{208}Pb	One- and Non-Coplanar Two-Particle Inclusive Cross-Sections from the $^4\text{He} + \text{Pb}$ Reaction at 150/MeV Nucleon	Saclay report CEA-N-2296 p.149 (1982) K.Chamcham et al	deuterons, energy spectra
^{93}Nb	Reactions Induced on ^{93}Nb by Alpha Particles up to 140 MeV	Saclay report CEA-N-2296 p.146(1982) E.Gadioli et al	neutrons
^{197}Au ^{164}Dy	Is Neutron Evaporation From Highly Excited Nuclei a Poisson Random Process	Zeit fur Physik <u>A307</u> ,141(1982) M.H.Simbel	neutron emission, distribution functions
^{93}Nb ^{181}Ta	Investigation of Alpha-Induced Reactions on Niobium and Tantalum. Pt. 1	Zeit fur Physik <u>A308</u> ,301(1982) J.Ernst et al	breakup reaction

Table IV (Cont.)

54Fe	Mechanisms for Composite Particle Production in Nuclear Reactions Using (alpha,alpha' x) Reactions Up To 40 MeV/ Nucleon	Phys Rev <u>C26</u> ,411 (1982) H.Machner et al	composite models
Br	Total Reaction Cross-Sections Determined from Elastic Scattering of Alpha-Particles on Br	Lett Nuovo Cim Soc Ital <u>25</u> ,481(1979) G.Lanzano et al	total cross sections
12C	Dominance of Nucleon-Nucleon Interactions in Alpha + 12C Total Reaction Cross Sections	Phys Rev <u>C26</u> ,301 (1982) R.M.Devries et al	nucleon-nucleon interactions
166Er 192Os 122Te	Decay of Compound Nuclei Following Alpha-Particle and 12C Induced Reactions	Zeit fur Physik <u>301</u> ,35(1981) S.A.Hjorth	gamma spectra, multiplicity
197Au 93Nb 232Th	Interpretation of the Continuous Spectrum of Secondary Alpha Particles in Alpha Induced Reactions	Zeit fur Physik <u>A299</u> ,1(1981) E.Gadioli, E.G.Erba	exciton model
197Au 58Ni	Target Dependence of Isotope Yield in Alpha-Induced Reactions at E = 43 MeV/A	Phys Lett <u>B108</u> ,15 (1982) B.Ludewigt et al	inclusive interactions
27Al 181Ta	Proton Inclusive Cross Sections from 720 MeV Alpha-Nucleus Reactions	Nucl Phys <u>A362</u> ,431 (1981) K.R.Co.dell et al	inclusive interactions, proton spectra
28Si	Importance of Nucleon Knock-Out in Inelastic Alpha and 6Li Scattering	Zeit fur Physik <u>A300</u> ,109(1981) W.Nitsche et al	inelastic scattering, knock-out reactions
	In Beam Gamma Ray Spectroscopy with 100-160 MeV Alpha's In Medium Light Nuclei	Selected Topics in Nucl. Structure, Winter School Bielsko-Biala, Poland, INP-1014/PL, p.381(1978) C.Signorini	precompound-nucleus, intermediate mass nuclei
40Ca,12C	Role of the Attractive Nuclear Potential in Determining Reaction Cross Sections	J of Physics <u>G7</u> ,43 (1981) D.M.Brink, G.R.Satchler	optical models

Table IV (Cont.)

^{162}Dy ^{158}Gd	K-Shell Ionization of Dy Atoms Produced in ^{158}Gd (α xn) Reactions	Nukleonika <u>24</u> ,395 (1979) D.Chmielewska et al	x-ray spectra, ionization
^{160}Gd ^{150}Nd	Gamma-Ray Multiplicities, Energies and Entry Lines Observed in Equilibrium and Pre-Equilibrium Decay Following Alpha-Induced Reactions	Nukleonika <u>24</u> ,425 (1979) M.J.A.De Voigt et al	gamma cascades
$^{197}\text{Au}, ^{93}\text{Nb}$ ^{232}Th	Interpretation of the Continuous Spectrum of Secondary Alpha Particles in Alpha Induced Reactions	Zeit fur Physik <u>A299</u> ,1(1981) E.Gadioli, E.E.Gadioli	exciton model
^{54}Fe	Investigation of (α , α' x) Reactions on ^{54}Fe from 60 to 160 MeV Bombarding Energy	JUEL-SPEZ-72 p.29 (1979) Muenster Univ.(W.Germany) (Annual Report)	precompound-nucleus emission
$^{158}, ^{160}\text{Gd}$	K-Shell Internal Conversion Yields in Light Dy Nuclei Populated in Alpha and ^{12}C -Induced Reactions	Int Conf on Struct of Medium-Heavy Nuclei, Rhodos, Greece (1980) p.207 D.Chmielewska et al	K-conversion, cross sections
Zr	Effect of the Phase Space Factor in the Breakup of Composite Particles	Phys Rev <u>C23</u> ,1839 (1981) G.Paic, B.Antolokovic	phase space
Dy, Gd	Multipolarities of Quasi-continuum Gamma-Ray Cascades Following (α , xn) and (H.I., xn) Reactions	Int. Workshop on Gross Properties of Nuclei & Nuclear Excitations, Hirschegg, Austria, INKA-CONF-79-001-000, p.75(1979) Z.Sujkowski et al	gamma cascades
^{209}Bi ^{197}Au $^{232}\text{Th}, ^{238}\text{U}$	Study of Fission from Ag, Au, Pb, Bi, Th and U Targets Induced by 640 MeV Alpha-Particles	Nucl Instr & Meth <u>173</u> ,157(1980) M.Debeauvais, J.Tripier	fission fragments
^{59}Co	Alpha-Induced Reactions on Cobalt	Nucl Phys <u>A338</u> ,167 (1980) R.Michel, G.Brinkmann	precompound-nucleus, knock-out reactions
^{158}Gd ^{146}Nd	Promptly Emitted Particles in Nuclear Collisions	Nucl Phys <u>A333</u> ,285 (1980) J.P.Bondorf et al	prompt neutrons

Table IV (Cont.)

$^{27}\text{Al}, ^{28}\text{Si}$	Nuclear Gamma Rays From 720-MeV Alpha-Induced Reactions on ^{27}Al and ^{28}Si	Phys Rev <u>C22</u> , 1612 (1980) B.J.Lieb et al	prompt gamma radiation, total cross sections
Dy, Gd	K-Shell Ionization of Heavy Atoms Produced in (alpha, xn) Nuclear Reactions	Phys Rev <u>A21</u> , 1764 (1980) Z.Sujkowski, D.Chmielewska	ionization, K-shell
$^{154}, ^{160}\text{Gd}$	Cross Sections of the (alpha, xn) Reaction on ^{154}Gd and ^{160}Gd Nuclei in the $E = 47\text{--}130$ MeV Energy Range	Bull Acad Sci USSR <u>42</u> , 2369 (1978) D.Chmielewska et al	gamma radiation
^{160}Gd	Experimental Investigation of the Quasi-Continuum Gamma-Ray Cascades Following ^{160}Gd (alpha, xn) ^{164}X Dy Reactions	Nucl Phys <u>A323</u> , 317 (1979) M.J.A.DeVoigt et al	precompound-nucleus gamma cascades
^{90}Zr	Projectile Fragmentation Processes in 35-MeV/AMU (alpha, xy) Reactions	Phys Rev Lett <u>43</u> , 1862 (1979) R.W.Koontz et al	evaporation model
^{209}Bi ^{233}U	Reaction Mechanism Studies with 7-35 MeV/Nucleon ^4He Ions Incident on Heavy Target Nuclei	Phys Rev <u>C20</u> , 1716 (1979) W.G.Meyer et al	precompound-nucleus emission
^{27}Al ^{209}Bi ^{90}Zr	Alpha-Particle Breakup at Incident Energies of 20 and 40 MeV/Nucleon	Phys Rev <u>C20</u> , 1284 (1979) J.R.Wu et al	deuteron spectra, proton spectra
^{164}Dy	Pre-Equilibrium Neutron Emission for the $^{164}\text{Dy}(\text{alpha}, \text{xn gamma})^{168}\text{x Er}$ Reaction Studied by n-Gamma Coincidence Measurements	Phys Rev <u>C20</u> , 464 (1979) H.Sakai et al	precompound-nucleus emission
^{160}Gd	Compound and Precompound Gamma-Ray Entry Lines From Measured Multiplicities and Energies in Alpha-Induced Reactions	Phys Lett <u>B78</u> , 401 (1978) W.J.Ockels et al	gamma spectra, precompound-nucleus emission
$^{40}, ^{48}\text{Ca}$	104 MeV Alpha Particle and 156 MeV ^6Li Scattering and the Validity of Refined Folding Model Approaches for Light Complex Projectile Scattering	Zeit fur Physik <u>288</u> , 139 (1978) Z.Maika et al	elastic scattering, optical models

Table IV (Cont.)

$^{27}\text{Al}, ^{181}\text{Ta}$	Back-Angle Production of Light Ions From 720-MeV Alpha-Nucleus Collisions	Phys Rev <u>C19</u> ,913 (1979) S.T.Thornton et al	multiple scattering
$^{27}\text{Al}, ^{209}\text{Bi}$ ^{232}Th	Charged Particle Spectra: 140 MeV Alpha Particle Bombardment of ^{27}Al , ^{58}Ni , ^{90}Zr , ^{209}Bi , and ^{232}Th	Phys Rev <u>C19</u> ,659 (1979) J.R.Wu et al	breakup reactions charged particles, energy spectra
	Multi-Detector Arrangements for On-Line Measurements of Gamma-Ray and Neutron Multiplicities	Nucl Instr & Meth <u>150</u> ,483(1978) A.Kerek et al	gamma cascades multiplicity, neutron detection
^{52}Cr	Cross Sections and Excitation Functions of 40 to 110 MeV Alpha-Particle Induced Reactions in Natural Chromium	Radiochimica Acta <u>24</u> ,11(1977) A.Cavallero et al	excitation functions
^{150}Sm	Gamma-Ray Multiplicities in Alpha-Induced Compound and Precompound Reactions	Zeit fur Physik <u>A284</u> ,271(1978) M.Ogawa et al	multiplicity, neutrons
$^{40}\text{Ca}, ^{58}\text{Ni}$	Modified Optical Potential for Elastic Alpha Scattering: Folding Potentials and Energy Dependence	Phys Rev <u>C17</u> ,1322 (1978) A.A.Cowley	Woods-Saxon potential
$^{27}\text{Al}, ^{181}\text{Ta}$	Correlated Energy Spectra of Light Fragments from 720-MeV Alpha-Induced Reactions	Phys Rev Lett <u>40</u> ,1433(1978) R.Doering et al	deuteron spectra
$^{40}\text{Ca}, ^{59}\text{Co}$	Gamma Spectroscopy with High Energy Alpha Particles	Saclay report CEA-N-1861 p.51-53 (nd) O.Artun et al	gamma radiation
C,Ce,Hg	In Search of Heavy, Fast Fragments or Nuclear Recoils in Reactions of 21 GeV Neutrons and 700 MeV Alphas with Hg, Ta, Ce, Y, Cu, Mn and Ca	Helv Phys Acta <u>48</u> ,343(1975) H.W.Von Reist et al	energy transfer
^{59}Co ^{63}Cu	Even-Odd Effect of the Pre-Equilibrium Emission in ^{59}Co ^{60}Ni , ^{63}Cu , $^{64}\text{Zn}(\alpha, p)$ Reactions	Chinese Physics <u>4</u> ,113(1984) X.Lu et al	precompound- nucleus emission, exciton model
^{237}Np $^{233}, ^{235}\text{U}$	Pre compound Evaporation Analyses of Excitation Functions for (α, xn) Reactions	Phys Rev <u>C29</u> ,1678 (1984) M.Blann, T.T.Komoto	precompound- nucleus emission, neutron emission

Table IV (Cont.)

^{181}Ta	Gamma Spectra in ^{181}Ta Bombardment by Alpha Particles	Bull Acad Sciences Phys Series <u>47</u> , 849(1983) V.D.Avchukhov et al	gamma spectra
Gd	Determination of the Alpha-Induced K-Shell Ionization Cross Sections from the Measured Intensity Ratios of K X-Rays to ($2^+ \rightarrow 0^+$) Gamma-Rays in Even Deformed Nuclei	Nucl Instr Meth <u>219</u> ,111(1984) Z.Sujkowski et al	ion-atom collisions, x-ray spectra
^{28}Si	Analysis of Elastic and Inelastic Scattering of 50.5 MeV Alpha-Particles on ^{28}Si Nucleus	23rd Conf on Nucl Spect & Nucl Struct Moscow, INIS-SU-198 p.333(1983) N.T.Burtebaev et al	elastic and inelastic scattering
^{40}Ca ^{16}O	Microscopic Alpha-Nucleus Potentials	Nucl Phys <u>A408</u> ,239 (1983) D.Wintgen et al	elastic scattering
^{150}Nd ^{124}Sn	Exclusive (α ,2n γ) Neutron Spectra and the Pre-Equilibrium Exciton Model	Phys Lett <u>B130</u> ,350 (1983) E.Betak, J.Dobes	knock-out reactions, neutron spectra
^{28}Si	Mechanisms for Reactions of Alpha-Particles on ^{28}Si at $E_{\alpha}=65$ MeV Leading to Three-Body Final States	Nucl Phys <u>A402</u> ,15 (1983) R.J.De Meijer et al	knock-out reactions, inclusive interactions
^{12}C	Energy Dependence of Proton Emission in ^4He and ^{12}C Induced Reactions Between 25 and 84 MeV/AMU	Phys Lett <u>B120</u> ,71 (1983) R.Glasow et al	knock-out reactions
^{181}Ta	Gamma Spectra in Alpha Bombardment of ^{181}Ta	32nd Conf on Nucl Spect & Nucl Struct Kiev, INIS-SU-125 p.125(1982) V.D.Avchukhov	prompt gamma radiation
^{159}Tb	Study of Non Equilibrium Particle Emission from the $^{159}\text{Tb}(\alpha, \text{charged particle xn } \gamma)$ Reaction at $E_{\alpha}=75$ MeV	Julich report JUEL-SPEZ-146 (1981) J.P.Didelez et al	breakup reactions, charge-exchange reactions
^{121}Sb ^{197}Au	Effect of Gamma De-Excitation Competition on the (α ,n) and (α ,2n) Reactions on Gold and Antimony	Nucl Phys <u>A383</u> ,251 (1982) A.Calboreanu et al	stripping

Table IV (Cont.)

^{158}Gd	Energy and Angular Momentum Transfers in Equilibrium and Pre-Equilibrium $^{158}\text{Gd}(\alpha, \text{xn})$ Reactions	Nucl Phys <u>A379</u> ,160 (1982) M.J.A.De Voigt et al	neutron spectra
^{59}Co ^{63}Cu	Entrance Channel Effects in Nucleon and Alpha Particle Preequilibrium Decay of ^{63}Cu and ^{64}Zn	Phys Rev <u>C26</u> ,113 (1982) R.Scherwinski et al	precompound-nucleus emission
$^{204,206}\text{Pb}$ $^{207,208}\text{Pb}$	Cross Sections and Thick Target Yields of (α, xn) Reactions on Natural Lead	Radiochem & Radio-analytical Lett <u>50</u> , 211(1982) C.Wasilevsky et al	stripping
Al	Average Number of Protons Knocked-Out from the C, Ne, Al, Cu, Pb Nuclei by ^4He Nuclei with the Momentum of 4.5 GeV/C Nucleon	Yad Fiz <u>6</u> ,33,1568 (1981) M.K.H.Anikina et al	knock-out reactions
^{165}Ho	Improved Analysis of Gamma-Ray Angular Distributions in $(\text{particle}, \text{xn})$ Experiments	Nucl Instr Meth <u>190</u> ,19(1981) V.A.Ionescu et al	two-nucleon transfer reactions, breakup reactions
^{150}Nd	Fast Neutron Emission in $(\alpha, 2\text{n})$ Reactions: A Neutron Skin Effect	Phys Lett <u>B106</u> ,453 (1981) C.A.Fields et al	two-nucleon transfer reactions, fast neutrons
$^{154,155}\text{Gd}$	K-Shell Ionization of Dy Atoms Produced in (α, xn) Nuclear Reactions	Nucl Phys <u>A366</u> , 142(1981) I Chmielewska et al	inner-shell ionization, ion-atom collisions, x-ray spectra
^{28}Si	Importance of Nucleon Knock-Out In Inelastic Alpha and ^6Li Scattering	Lawrence Berkeley Lab report LBL-12652 p687(1981) 5th High Energy Heavy Ion Study, Berkeley, May 18, 1981 W.Nitsche et al	knock-out reactions
	Pre-Equilibrium Process of Neutron Emission for Light Ion Induced Reactions	2nd French-Japan Colloquium on Heavy Ion Nuclear Physics, Saclay, Fr Oct 10, 1979,p.327 H.Ejiri	precompound-nucleus emission, neutron emission

Table IV (Cont.)

^{27}Al ^{59}Co	Spectra of the Protons, Deuterons, and Tritons Produced by 50-MeV Alpha Particles from ^{27}Al and ^{59}Co	Bull Acad Sci USSR Phys Series <u>39</u> ,138(1975) A.D.Duisebaev et al	energy spectra
$^{162,164}\text{Dy}$	Angular Momentum Transfers in Equilibrium and Pre-Equilibrium Dy(alpha,xn gamma) Reactions	J Phys Soc Japan <u>46</u> ,1025(1979) Y.Nagai et al	precompound-nucleus emission, gamma radiation
$^{40,44}\text{Ca}$	Nuclear Fragmentation with 100 MeV Alpha Particles	Zeit fur Physik <u>A292</u> ,35(1979) H.Loehner et al	spallation
^{93}Nb	Spallation Cross Sections in the System $^{93}\text{Nb} + ^4\text{He}$	J Inorg & Nucl Chem <u>41</u> ,791(1979) C.L.Branquinho et al	spallation, precompound-nucleus emission
^{93}Nb	Excitation Functions and Isomer Ratios in the Reactions $^{93}\text{Nb}(\alpha, \text{xn})(\text{x} = 1-4)$	J Inorg & Nucl Chem <u>41</u> ,617(1979) C.L.Branquinho et al	precompound-nucleus emission
^{150}Nd $^{158,160}\text{Gd}$	Calculation of Gamma-Ray Spectra Following Alpha-Induced Fusion Reactions	Nucl Phys <u>A315</u> ,169(1979) T.Koeling	gamma spectra
	Pre-Compound Decay into Complex Particle Channels	AIP (Amer Inst of Physics) Conf Proc. <u>47</u> ,660(1978) H.Machner	inelastic scattering, precompound-nucleus emission
Pb	Influence of Radiation Damage on Perturbed Angular Distributions	Phys Rev <u>C23</u> ,90(1981) E.Dafni et al	radiation effects, neutron spectra
^{27}Al ^{197}Au	Mechanism of (alpha,p), (alpha,d), and (alpha,t) Reactions in ^{27}Al , ^{59}Co , and ^{197}Au	Sov J Nucl Phys <u>27</u> ,613(1978) A.D.Duisebaev et al	stripping, precompound-nucleus emission
^{58}Ni	Multiplicity of the Gamma Cascades in the ^{61}Cu Continuum; Dependence on Excitation Energy of the Entry States	Phys Rev <u>C18</u> ,119(1978) J.H.Barker et al	gamma cascades

Table IV (Cont.)

^{166}Er ^{150}Nd	Angular-Momentum Effects in Pre-Equilibrium Processes	Phys Rev <u>C17</u> ,601 (1978) D.G.Saran- tites et al	precompound- nucleus emission
	Exciton Model Approach to the Analysis of Alpha-Particle- Induced Nuclear Reactions	Roczniki Chemii (Poland) <u>6</u> ,1(1976) E.Gadioli et al	composite models, stripping
^{209}Bi ^{197}Au	Total Reaction Cross Section from the Difference of the Rutherford and Measured Elastic Cross Sections	Phys Rev <u>C16</u> ,1767 (1977) H.Wojciec- howski et al	Rutherford scattering, optical models
^{119}Sn	Unified Model of Preequi- librium Decay	Zeit fur Physik <u>A281</u> ,129(1977) J.Ernst, J.Rama Rao	precompound- nucleus emission, unified model
	Quasi-Free Scattering Model for Reactions Involving Clusters	Nucl Phys <u>A273</u> ,125 (1976) A.Mignerey et al	quasi-free reactions, cluster model
Ni	X-Ray Production by 5.2-27 MeV Alpha Particles	X-Ray Spectrometry (England) <u>6</u> ,90 (1977) T.Badica et al	x-ray emission, ionization
	Total Reaction Cross Sections from Heavy Ion Elastic Scattering	Phys Lett <u>B63</u> ,413 (1976) H.Wojciec- howski et al	total cross sections, optical models
^{59}Co ^{58}Ni	Continuous Spectra of Protons Emitted in Alpha-Particle Induced Reactions	Nucl Phys <u>A265</u> ,376 (1976) A.Alevra et al	precompound- nucleus emission, stripping
^{197}Au ^{56}Fe ^{58}Ni	Spectra of Singly Charged Particles Emitted in the Bombardment of Intermediate and Heavy Nuclei by 50.5 MeV Alpha Particles	Bull Acad Sci USSR Phys Series <u>40</u> ,152(1976) N.T.Burtebaev et al	energy spectra

Table IV (Cont.)

⁴¹ K	Analysis of the ⁴¹ K(alpha,n) Reaction in the Pre-Equilibrium Model of Nuclear Reactions	Acta Physica Slovaca <u>25</u> ,264(1975) E.Betak	stripping
¹¹⁶ Sn ^{94,96} Zr ⁸⁹ Y	Scattering of 65-MeV Alpha Particles from ⁸⁹ Y, ⁹² Zr, ⁹⁴ Zr, ⁹⁶ Zr and ¹¹⁶ Sn	Phys Rev <u>180</u> ,1197 (1969) C.R.Bingham et al	elastic and inelastic scattering
²⁷ Al ⁵¹ V	Reactions of ⁵¹ V and ²⁷ Al with 7 to 120 MeV Alpha-Particles (Equilibrium and Non-Equilibrium Statistical Analyses)	Nucl Phys <u>A131</u> ,513 (1969) W.W.Bowman, M.Blann	excitation functions, recoil ranges
¹⁰⁹ Ag	Theory of (a,xn) Reactions	Phys Rev <u>178</u> ,1688 (1969) D.Sperber	excitation functions, (alpha,n), (alpha,2n)
^{40,42} Ca ⁴⁴ Ca	Scattering of Medium-Energy Alpha Particles II. Microscopic Analysis of Elastic Scattering	Phys Rev <u>178</u> ,1626 (1969) D.F.Jackson, V.K.Kembhavi	microscopic analysis using optical potential
¹² C, ⁶ Li ¹⁴ N, ¹²⁴ Sn ²⁰⁹ Bi	Elastic Scattering of 104 MeV Alpha Particles	Karlsruhe report KFK-871(1968) G.Hauser et al	elastic scattering
²⁰⁹ Bi,Al Mg	Measurement of the K-Shell Ionization Cross Sections of Al and Mg for 1- to 5-MeV Alpha Particles	Phys Rev <u>182</u> ,9 (1969) B.Sellers et al	x-radiation, ionization
⁶ Li	Tests of the Peripheral Model for a Cluster Knockout Reaction	Phys Rev Lett <u>22</u> , 408(1969) H.B.Pugh et al	cluster knockout
Fe,Ta	Shielding of Neutrons from 80-MeV Alpha-Particle Bombardment of Tantalum	Nucl Sci Eng <u>35</u> ,220 (1969) W.W.Wadman III	fast neutrons
¹⁵⁸ Dy ¹⁶⁴ Er ¹⁷⁴ Hf ¹⁶⁸ Yb	Studies of Photon Cascades in (alpha,2n) and (alpha,3n) Reactions on Rare-Earth Nuclei	Nucl Phys <u>A124</u> ,401 (1969) C.D.Kavaloski et al	gamma radiation
^{63,65} Cu	Differential Range Study of (alpha,xn) Reactions of Copper	Phys Rev <u>176</u> ,1166 (1968) N.T.Porile, I.Fujiwara	(alpha,2n) and (alpha,3n), recoil ranges

Table IV (Cont.)

^{51}V ^{27}Al	Excitation Functions, Recoil Ion Ranges, Equilibrium, and Nonequilibrium Statistical Analysis of Reactions Induced in ^{27}Al and ^{51}V by 7 to 120 MeV ^4He Ions	No university information given Thesis (1968) W.W.Bowman	excitation functions and recoil ion ranges
Pb,Au	The Evaporation of Alpha-Particles from Heavy Nuclei	Nucl Phys <u>A122</u> ,481 (1968) G.Chenevert et al	inelastic scattering, evaporation model analysis
^{169}Tm ^{165}Ho	Experimental Study and Analysis of the Excitation Functions $^{165}\text{Ho}(\alpha, xn)$ and $^{169}\text{Tm}(\alpha, xn)$	Nucl Phys <u>A121</u> ,131 (1968) J.Sau et al	excitation functions, (α, xn)
$^{16}\text{O}, ^{12}\text{C}$ ^{14}N	Cross Sections of Reactions Induced by 90-MeV Alpha Particles on Carbon, Nitrogen and Oxygen Nuclei	Compt Rend Ser A & B <u>266</u> ,963(1968) C.Jacquot et al	82-98 MeV alpha particles
N,C	Formation Cross Sections of Fragments with Mass Greater Than or Equal to 6 Emitted in Reactions Induced by Alpha Particles of 90 MeV in C and N Targets	Compt Rend Ser A & B <u>266</u> ,815 (1968) M.Jung et al	production of light nuclei
Ta	Shielding Attenuation of Neutrons from 80-MeV Alpha-Particle Bombardment of Elemental Tantalum	Lawrence Berkeley report UCRL-16359 (ND) W.W.Wadman	energy losses
$^{12}\text{C}, ^{16}\text{O}$ $^{10}\text{B}, ^{27}\text{Al}$	Quasi-Elastic ($\alpha, 2\alpha$) Reaction at 700 MeV on Several Light and Medium Nuclei	College of Wm & Mary, Williamsburg, Va, Thesis(1975) W.E.Dollhopf	quasi-elastic scattering, recoils
^{238}U	Fragment Angular Distributions from Fission of ^{238}U , ^{209}Bi , and ^{197}Au by 140-MeV ^4He Ions	Zeit fur Phys <u>A274</u> , 131(1975) R.G.Clark et al	fission fragments
^{232}Th	Gamma-Ray Production Cross-Sections from the Interaction of 140 MeV Alpha-Particles with ^{232}Th	Univ of Maryland report ORO-4856-26 pp.358,359(1975) W.F.Hornyak et al	gamma radiation
^{27}Al	Gamma-Ray Production Cross-Sections from the Interaction of 140 MeV Alpha-Particles with ^{27}Al (II)	Univ of Maryland report ORO-4856-26 pp. 356-357(1975) W.F.Hornyak, N.S.Wall	gamma radiation

Table IV (Cont.)

^{27}Al	Gamma-Ray Production Cross-Sections from the Interaction of 140 MeV Alpha-Particles with ^{27}Al (I)	Univ of Maryland report ORO-4856-26 pp.354-355(1975) W.F.Hornyak et al	gamma radiation
Hg,Ta	Search for Heavy Fast Fragments or Recoil Nuclei in the Interaction of 21-GeV Neutrons and 700-MeV Alphas on Hg, Ta, Ce, Y, Cu, Mn, and Ca	Helv Phys Acta <u>48</u> , p. 343 (1975) H.W.Reist et al	recoils
^{209}Bi ^{197}Au	Linear Momentum Transfer in Reactions Between 140-MeV ^4He Ions and Heavy Nuclei	Phys Rev <u>C10</u> ,2416 (1974) V.E.Viola et al	fission, linear momentum transfer
$^{238}\text{U},^{209}\text{Bi}$ ^{197}Au	Fission of ^{238}U , ^{209}Bi , and ^{197}Au with Intermediate-Energy ^4He Ions	3. Symp on the Phys & Chem of Fission ,Aug 13, 1973 Rochester NY, V.E.Viola et al	nuclear reaction kinetics
Cu	Spallation of Copper by High-Energy Alpha Particles	Phys Rev <u>C10</u> ,150 (1974) P.J.Karol	spallation
Al,O C,Be	Alpha-Spallation Cross Sections at 920 MeV (230 MeV/N) in ^{27}Al , ^{16}O , ^{12}C , and ^9Be , and Application to Cosmic-Ray Transport	Phys Rev <u>C9</u> ,1718 (1974) J.R.Radin et al	spallation
^{12}C ^{27}Al	Calculated Secondary-Particle Spectra from Alpha-Particle- and Carbon-Induced Nuclear Reactions	Nucl Sci Eng <u>53</u> ,323 (1974) T.A.Gabriel et al	spallation
^{12}C ^{27}Al	Calculated Secondary-Particle Spectra from Alpha-Particle- and Carbon-Induced Nuclear Reactions	Oak Ridge report ORNL-TM-4334(1973) T.A.Gabriel et al	neutron spectra
^{208}Pb ^{58}Ni	Scattering of 139-MeV Alpha Particles by ^{58}Ni and ^{208}Pb	Phys Rev <u>C7</u> ,1938 (1973) D.A.Goldberg et al	optical model, elastic and inelastic scattering
$^9\text{Be},^7\text{Li}$ $^{12}\text{C},^{14}\text{N}$	Experimental and Semi-Empirical Study of the Spallation of Light Nuclei. Application to the Nucleosynthesis of Li, Be, and B in the Galaxy	Univ of Paris,Orsay Thesis, FRNC-TH-333 (1972) M.Rey Campagnolle-Epherre	spallation

Table IV (Cont.)

C	Scattering of 139 MeV Alpha Particles by ^{12}C	J Phys (Paris) Colloq <u>5</u> ,150(1972) G.Tibell et al	stripping, elastic and inelastic scattering, optical models
^9Be , ^{12}C ^{16}O , ^{27}Al	Alpha-Spallation Cross Sections at 920 MeV (230 MeV/N) in ^{27}Al , ^{16}O , ^{12}C , and ^9Be , and Application to Cosmic Ray Transport	No university information given Thesis(1972) J.R.Radin Univ. microfilm order #72-21,534	spallation
^{58}Ni , ^{65}Cu ^{197}Au	Study of (alpha,alpha n) Reaction with 90-MeV Helium Ions	Phys Rev <u>C6</u> ,1293 (1972) L.B.Church	knock-out reactions
Ag,In,La Pr,Ho	Fission of Medium Mass Nuclei Induced by 167 MeV Alpha Particles	Nucl Phys <u>A173</u> ,520 (1971) B.D.Pate, J.Peter	fission products, particle tracks
^{40}Ar , ^9Be ^{209}Bi ^{40}Ca , ^{208}Pb , ^6Li ^{14}N , ^{16}O ^{124}Sn , ^{90}Zr	Measured Differential Cross Sections for Elastic and Inelastic Scattering of 104-MeV Alpha Particles	Karlsruhe report NP-18920(1970) D.Habs et al	elastic, inelastic scattering
^{12}C , ^{27}Al ^{93}Nb	Approximate High-Energy Alpha-Particle Nucleus Collision Model	Nucl Sci Eng <u>44</u> ,104 (1971) T.A.Gabriel et al	neutron and proton spectra, excitation functions
C,Pb Si,Sn	Elastic Scattering of 166 MeV Alpha Particles	J Phys (Paris) Coll. 31 Suppl 5 & 6 C2.85(1970) I.Brissaud, B. Tatischeff	optical-model analysis, elastic scattering
^{12}C , Pb ^{28}Si	166-MeV Elastic and Inelastic Alpha-Particle Scattering: Macroscopic and Microscopic Analysis	Nucl Phys <u>A155</u> ,89 (1970) B.Tatischeff, I.Brissaud	optical potentials, elastic and inelastic scattering
C,Ne,Ni	Inelastic Scattering of 104-MeV Alpha-Particles on ^{12}C , ^{20}Ne , and ^{64}Ni	Nucl Phys <u>A143</u> ,373 (1970) J.Specht et al	inelastic scattering
^{27}Al ^{93}Nb	Interaction of High Energy Alpha Particles with Nuclei	Yadern Fiz <u>11</u> ,36 (1970) A.I.Vikhrov et al	nuclear cascades

Table IV (Cont.)

28Si,Pb Sn,12C	Elastic Scattering of 166 MeV Alpha Particles on D, C, Si, Sn, and Pb	Phys Lett <u>B30</u> ,324 (1969) I.Brissaud et al	elastic scattering
	Thermoluminescence of Fused Quartz Irradiated with Charged Particles	Opt Spectrosc <u>39</u> , 564(USSR)(1975) R.I.Shekhmametev, G.Por	physical radiation effects, thermoluminescence
27Al	Spectra of p, d, and t During Bombardment of 27Al and 59Co Nuclei with 50.5-MeV Alpha Particles	Izv Akad Nauk Kaz SSR Ser Fiz Mat <u>4</u> , 19(1974) A.D.Duisebaev et al	transfer reactions
197Au Tl,Hg	Investigation of Multinucleon Emission Induced by Alpha- Particles on 197Au in the Energy Range 20 to 170 MeV	Nucl Phys <u>A250</u> ,149 (1975) A.Djaloeis et al	multi-nucleon transfer reactions
40Ca	Microscopic Analysis of Alpha- Nucleus Scattering in the Energy Range from 20 to 140 MeV	Univ of Colorado report COO-535-733 p.55(1975) B.W.Ridley, H.H.Chang	optical models
	Fission of Pre-Actinide Nuclei Excitation Functions for the (alpha,f) Reaction	Yad Fiz <u>21</u> ,1185 (1975) A.V.Ignat- yuk et al	29 nuclei from Hf to Bi
168W	On the Careful Determination of Gamma-Ray Angular Distri- butions in (alpha,n gamma) Reactions: Example of the 186W (alpha,7n gamma)185Os Reaction	Nucl Instr Meth <u>125</u> ,53(1975) H.M.Jaeger et al	gamma spectra
238U	Linear Momentum Transfer in Reactions Between 140-MeV 4He Ions and Heavy Nuclei	Univ of Maryland report ORO-4028-0021 p.53(1974) V.E.Viola et al	fission
203,205Tl	Helium Ion-Induced Fission of 203Tl and 205Tl at 31, 42, and 65 MeV	J Inorg Nucl Chem <u>36</u> ,3643(1974) R.D.Kieburzt, E.F.Neuzil	total fission cross section
44Sc	Angular Momentum Effects in the Pre-Equilibrium Statis- tical Model	Acta Phys Slovaca <u>24</u> ,103(1974) P.Oblozinsky, I.Ribansky	excitation functions, neutron spectra
209Bi	Excitation Functions of Reac- tions of Alpha Particles with Energies Between 40 and 100 MeV on 209Bi	Ann Soc Sci Brux Ser I <u>88</u> ,341(1974) G.Deconninck, M.Longree	excitation functions

Table IV (Cont.)

58,60,62Ni	Elastic Scattering of 60-MeV Alpha Particles by the Even Nickel Isotopes	Phys Rev <u>C9</u> ,1002 (1974) D.G.Madland et al	optical-model analysis
232Th 238U	Range-Energy Relation for Low Velocity Heavy Ions in a Plastic Detector. Applications to the Study of the Fission of Uranium, Thorium, Bismuth, Lead, and Gold Induced by Alpha Particles having Energies Between 58 and 100 MeV	Univ of Strasbourg Thesis, FRNC-TH-466(1972) J.Ralarosy	dielectric track detectors, stopping power
197Au 232Th 238U	Fission Cross Sections of Uranium, Thorium, Bismuth, Lead, and Gold Induced by 58- to 100-MeV Alpha Particles	Phys Rev <u>C8</u> ,2372 (1973) J.Ralarosy et al	fission
Co,197Au 181Ta 184W	Proton Spectra from 54.8-MeV Alpha-Particle Reactions: Precompound Emission	Phys Rev <u>C8</u> ,2155 (1973) A.Chevarier et al	proton spectra
	Excitation Functions and Photon Emission in Compound-Nucleus Reactions with High Angular Momentum	Phys Rev <u>C7</u> ,1973 (1973) J.Gilat et al	gamma cascades, emission
57Fe,60Ni 118Sb	Precompound Processes in (alpha,n) Reactions	Univ of Lyon report LYCEN-7303(1973) A.Alevra et al	pre-equilibrium and hybrid models
56Fe,103Rh 116Sn	Precompound Processes in (alpha,n) Reactions	Nucl Phys <u>A209</u> ,557 (1973) A.Alevra et al	neutron spectra
197Au	Pre-Equilibrium Decay and the Exciton Model	Nucl Phys <u>A205</u> ,545 (1973) I.Ribansky et al	excitons
59Co,Cu Ag,W	Proton Emission Spectra in Alpha Induced Nuclear Reactions at 54.8 MeV. De-Excitation Before Statistical Equilibrium is Reached	Thesis, no university given, LYCEN-7241(1972) M.D.Tran	energy spectra
	Inelastic Interactions of High Energy Helium Ions with Atomic Nuclei	Yadern Fiz <u>17</u> ,434 (1973) V.S.Barashenkov et al	intranuclear cascade model, nuclear cascades

Table IV (Cont.)

Si	EPR in Single Crystals of Silicon Irradiated by Alpha-Particles	Izv Akad Nauk Kaz SSR Ser Fiz Mat 4, 39(1972) Yu.V.Gorelkinskii et al	crystal defects, fast neutrons
^{58}Ni	Optical Potential for Nuclei with Collective States	Lett Nuovo Cim 6, 277(1973) E.Kujawski	elastic scattering, optical models
^{59}Co , ^{63}Cu ^{197}Au ^{165}Ho	Inelastic Scattering in the Continuum. I. DWBA Analysis of Angular Distributions	Univ of Lyon report LYCEN-7263(1972) A.Demeyer et al	inelastic scattering, angular distributions and spectra
	Precompound Emission Induced by Protons and Alpha Particles of about 50-MeV Excitation	Univ of Lyon report LYCEN-7252(1972) A.Chevarier et al	heavy nuclei, intermediate mass nuclei, precompound emission
K	Calculations of the Excitation Functions and Isomer Ratios of the $^{41}\text{K}(\alpha, n)^{44}\text{Sc}$ Reaction in the Equilibrium and Pre-Equilibrium Statistical Models	Nucl Phys A195,269 (1972) P.Oblozinsky, I.Ribansky	excitation functions, pre-equilibrium statistical models
^{40}Ca	Energy Dependence of Elastic Alpha-Particle Scattering: Microscopic Model	Phys Rev C4,1254 (1972) G.M.Lerner et al	39.6 to 115.4 MeV, microscopic optical model
lithium fluoride	Coloration of LiF by 56-MeV Alpha Particles and 28-MeV Deuterons II. F_2^+ Centre Evolution	Phys Status Solidi (A) 10,67(1972) P.Thevenard et al	radioinduced color centers
	Z^2 Dependence of Stopping Cross Sections for Low-Energy Alpha Particles	Phys Lett A38,267 (1972) W.K.Chu, D.Powers	stopping cross sections
^{232}Th $^{235}, ^{238}\text{U}$	Energy Dependence of Average Kinetic Energy of Fragments from Alpha-Induced Fission of ^{232}Th , ^{235}U , and ^{238}U	Yadern Fiz 14,514 (1971) V.N.Okolovich, A.F.Pavlov	fission
^{233}U ^{181}Ta ^{209}Bi	Mass and Energy Distributions from 77.3-MeV- ^4He -Induced Fission of ^{181}Ta , ^{209}Bi , and ^{233}U : A Test of Liquid-Drop-Model Predictions	Phys Rev C5,528 (1972) F.Plasil, H.W.Schmitt	fission

Table IV (Cont.)

light nuclei	Identification of Medium-Energy Alpha-Particle-Induced Reactions	Phys Rev <u>C5</u> ,579 (1972) M.Jung et al	nuclear emulsions
	Calculation of Cross Section for Compound-Nucleus Formation by Means of Generalized S-Matrix Parameters	Izv Akad Nauk Kaz SSR Ser Fiz Mat <u>2</u> ,62(1971) V.Yu.Conchar, K.S.Zheltonog	s-matrix
$^{209}\text{Bi}, ^{238}\text{U}$	Josephson Current Flow in Pure Superconducting/Normal/Superconduction Junctions	Phys Rev <u>B5</u> ,72(1972) W.D.Loveland, Y.S.Shum	fission
$^{206}, ^{208}\text{Pb}$	Mechanism of Nuclear Reactions Induced by High Energy Alpha Particles	J Phys (Paris) <u>32</u> , 243(1971) R.Bimbot, Y.Beyec	knock-out reactions
	Study of Quasi-Elastic Scattering Experiments on Light Nuclei	Univ of Lyon Thesis LYCEN-7134(1971) M.Chevallier	impulse approximation, scattering, light nuclei
^{232}Th	Fission of ^{232}Th Induced by Intermediate-Energy ^4He Ions	Phys Rev <u>C4</u> ,1361 (1971) T.C.Roginski et al	fission at 20 to 41 MeV
^{238}U	Direct Interaction Effects in the Fission of ^{238}U with 63.5 MeV ^4He Ions	Nucl Phys <u>A174</u> ,321 (1971) V.E.Viola et al	angular correlation
^{24}Mg $^{28}\text{Si}, ^{12}\text{C}$	Heavy Ion Emission from Light Nuclei	Thesis(1967) no university given, Univ. microfilms order #71-16,994 C.R.Rudy Jr.	angular distribution
$^{63}, ^{65}\text{Cu}$	Excitation Functions of Reactions Induced by Alpha Particles with Maximum Energy of 38 MeV on Copper Isotopes	Izv Akad Nauk Kaz SSR Ser Fiz Mat <u>4</u> ,1(1970) O.A.Zhukova et al	excitation functions, gamma spectra
	X-Ray Production by Alpha-Particle Impact	Phys Rev <u>A4</u> ,955 (1971) J.D.Garcia	impulse approximation, ionization, x-radiation

Table IV (Cont.)

^{93}Nb	Hybrid Model for Pre-Equilibrium Decay in Nuclear Reactions	Phys Rev Lett <u>27</u> , 337(1971) M.Blann	pre-equilibrium emission
	Study of the Fission and Fragmentation of Heavy Nuclei by High Energy Projectiles	Proc Int Topical Conf Nucl Track Registration in Insulating Solids and Applications Clermont-Ferrand, France, 1969 R.Stein et al	heavy nuclei, fission fragments/ mass distributions
^{54}Fe $^{16}\text{O}, ^{12}\text{C}$	Hydrogen and Helium Particles Produced by 59-MeV Alpha Particle Bombardment of ^{12}C , ^{16}O , and ^{54}Fe	Oak Ridge report ORNL-4694(1971) F.E.Bertrand, R.W.Peele	spectra
^{197}Au	Measurement and Equilibrium Statistical-Model Calculation of Excitation Functions of the $^{197}\text{Au}(\alpha, \text{xn})$ Reactions in the Energy Range from 16 to 103 MeV	Nucl Phys <u>A168</u> , 129 (1971) H.E.Kurz et al	excitation functions
	Analysis of Inelastic Scattering of Alpha Particles in Region $Z = 12$ to 40	Izv Akad Nauk Kaz SSR Ser Fiz Mat <u>6</u> , 3(1969) V.Yu.Gonchar et al	inelastic scattering, $A = 24$ to 140 nuclei
^{169}Tm ^{165}Ho	Application of the Statistical Model to the Study of (α, xn) Excitation Functions of Ho and Tm	J Phys (Paris) Colloq <u>31</u> , 5(1970) A.Demeyer et al	(α, xn) up to 150 MeV
Ni, Pd, Ag Sn, Tm, Cu Zr, Nb, Fe Rh, Au	X-Ray Emission Induced by 30- to 80-MeV Alpha Particles	Nucl Phys <u>A154</u> , 561 (1970) R.L.Watson et al	x-radiation
C, N	Production Cross Section of Isotopes Emitted in 70-MeV Alpha-Particle Interactions on C and N Targets	Phys Rev <u>C2</u> , 1194 (1970) C.Baixeras-Aiguabella et al	
^{12}C ^{14}N	Total Experimental Cross Sections of Nuclear Reactions Produced by 90 MeV and 70 MeV Alpha Particles on ^{12}C and ^{14}N Target. Some Nucleosynthesis and Nuclear Spectroscopy Applications	Int Conf Nucl Reactions Induced by Heavy Ions, Heidelberg, Ger. p.701(1970), C.Jacquot et al	

Table IV (Cont.)

^{197}Au	Experimental Determination and Statistical-Model Analyses of Excitation Functions and Recoil Ion Ranges from Reactions Induced in ^{197}Au by 19- to 100 MeV ^4He Ions	no university information, Thesis(1969) F.M.Lanzafame	excitation function
^{204}Pb	Helium Ion-Induced Fission of ^{204}Pb at 65, 41, 37, and 25 MeV	J Inorg Nucl Chem <u>32</u> ,1761(1970) W.K.Hensley, E.F.Neuzil	fission products
^{197}Au	Reactions of ^{197}Au with 19- to 100-MeV ^4He Ions: Equilibrium Statistical Model Analyses	Nucl Phys <u>A142</u> ,545 (1970) F.M.Lanzafame, M.Blann	equilibrium statistical model
C,N	Cross Sections of Fragments Emitted in Spallation Reactions of Carbon and Nitrogen with 90-MeV Alpha Particles	Phys Rev <u>188</u> ,1517 (1969) M.Jung et al	spallation
^{206}Pb	Mechanism of Nuclear Reactions Induced by High-Energy Alpha Particles. I. Reactions $^{206}\text{Pb}(\alpha, xn)^{210-x}\text{Po}$	J Phys (Paris) <u>30</u> , 513(1969) R.Bimbot et al	excitation functions
$^{206,207}\text{Pb}$ ^{208}Pb	Alpha Particle Scattering on Pb Isotopes	Yadern Fiz <u>9</u> ,702 (1969) V.Yu.Gonchar et al	elastic scattering
$^{94,96}\text{Zr}$ $^{116}\text{Sn}, ^{89}\text{Y}$	Scattering of 65-MeV Alpha Particles from ^{89}Y , ^{92}Zr , ^{94}Zr , ^{96}Zr and ^{116}Sn	Phys Rev <u>180</u> ,1137 (1969) C.R.Bingham et al	elastic and inelastic scattering
^{27}Al ^{51}V	Reactions of ^{51}V and ^{27}Al with 7 to 120 MeV Alpha-Particles (Equilibrium and Non-Equilibrium Statistical Analyses)	Nucl Phys <u>A131</u> ,513 (1969) W.W.Bowman, M.Blann	excitation function, recoils
	Angular Distribution of Neutrons Produced by 40- and 80-MeV Alpha-Particles on a Thick Tantalum Target	Health Physics (England) <u>11</u> ,659 (1965) W.W.Wadman	spectra
^{56}Fe	Reactions Induced in ^{56}Fe with 20-68 MeV He^{2+} Ions	Nature <u>206</u> ,494 (1965) A.Ewart, M.Blann	excitation functions

Table IV (Cont.)

Ge	Effects of Alpha-Particle Irradiation on the X-Ray Intensities Diffracted by Germanium Crystals	Ispra report EUR-2188.E;CONF-64705-1(1965) R.Colella, A.Merlini	radiation effects, x-radiation
	The Effects of Linear Energy Transfer in the Radiation-Induced Polymerization of Several Vinyl Compounds	J Phys Chem <u>68</u> ,310 (1964) J.Fock et al	ionization, transport theory
Cu,Ni,Zn	Cross Sections for (alpha,n) Reactions for Medium-Weight Nuclei	Phys Rev <u>133</u> ,B911 (1964) P.H.Stelson, F.K.McGowan	
Al,Au	Angular and Energy Distributions of Neutrons Emitted in Bombardments with 42 MeV Alpha Particles	"Direct Interactions and Nuclear Reaction Mechanisms" (1963) p.282, Gordon and Breach Publishers D.M.Drake et al	neutrons, spectra
Al,Bi,C Au,Fe,Pb	Total-Reaction Cross-Section Measurements for Charged Particles	Lawrence Berkeley Lab report UCRL-10783(1963) Thesis, B.D.Wilkins	optical model
Al,Pb,Zn	Production of Tritium in Lead and Aluminum by High Energy Protons,Deuterons and Alpha-Particles	Zhur Eksptl I Teoret Fiz <u>40</u> ,1263 (1961) V.V.Kuznetsov	
	Range Straggling of Protons, Alpha Particles, ¹² Carbon and ¹⁶ Oxygen Ions	Aeronautical Research Lab report ARL-TN-60-134 (1960) D.R.Locker	ionization, slowdown
Ag,Ta V,Zn	Scattering of 43-MeV Alpha Particles by Nuclei	Phys Rev <u>117</u> ,801 (1960) J.L.Yntema et al	
¹² C, ¹⁴ N ¹⁶ O	Angular Distributions for Elastic and Inelastic Scattering of 40-MeV Alpha Particles by Carbon, Nitrogen, Oxygen, and Argon	Nucl Phys <u>12</u> ,1 (1959) A.I.Yavin, G.W.Farwell	direct reactions

Table IV (Cont.)

⁹ Be 10,11B ⁷ Li	Total Neutron Yields from Light Elements Under Proton and Alpha Bombardment	Phys Rev <u>114</u> ,571 (1959) J.H.Gibbons, R.L.Macklin	
²³⁸ U	Several Spallation Reactions of Uranium-238 Plus Helium-4	Berkeley Radiation Lab report UCRL-8186(1958) Thesis, J.A.Coleman	fission products
Al,Th V	Inelastic Scattering of 40.2- MeV Alpha Particles	Phys Rev <u>106</u> ,256 (1957) G.Igo	inelastic scattering
Au,Pb	Elastic Scattering of 48-MeV Alpha Particles	Phys Rev <u>101</u> ,636 (1956) R.E.Ellis, L.Schecter	
⁹ Be,10,11B ¹² C	Neutrons and Gamma Rays from the Alpha-Particle Bombardment of ⁹ Be, 10,11B, ¹³ C and ¹⁸ O	Phys Rev <u>102</u> ,1348 (1956) T.W.Bonner et al	spectra
Cu Ag	Protons from the Bombardment of Several Elements with 40- MeV Alpha Particles	Phys Rev <u>100</u> ,1309 (1955) R.M.Eisberg et al	Fermi Gas Model
Pb,Ta,Th	Elastic Scattering of Inter- mediate-Energy Alpha Particles by Heavy Nuclei	Phys Rev <u>95</u> ,1212 (1954) G.W.Farwell, H.E.Wegner	
Al,Ni,U	Analysis of Secondary Parti- cles Resulting from High- Energy Nuclear Bombardment	Berkeley Radiation Lab report UCRL-2258(1953) Thesis, R.W.Deutsch	evaporation model
Th,U	Some Studies of the Products of the High Energy Fission Process	Livermore Research Lab report AECD- 3525(1952) M.Lindner, R.N.Osborne	fission products

Table II (Cont.)

^{28}Si	Neutrons from the Disintegration of the Separated Isotopes of Silicon by Deuterons	Phys Rev <u>85</u> ,193 (1952) C.E.Mandeville et al	recoils
U	High Energy Neutron Yields and Multiple Traversals of a Cyclotron Beam Through Thin Targets	Berkeley Radiation Lab report UCRL-1398(1951) Thesis, W.J.Knox	fast neutrons, stripping
^{27}Al ^{181}Ta	Angular Distribution of Fast Neutrons from Deuteron Bombardment	Phys Rev <u>82</u> ,266 (1951) K.H.Sun et al	fast neutrons
^9Be , ^{63}Cu Sn,U	Angular Distribution of Neutrons from Targets Bombarded by 20-MeV Deuterons	Berkeley Radiation Lab report UCRL-1204(1951) L.Schechter	fast neutrons
Be,Bi C,U	Relative High Energy Neutron Yields from Targets Bombarded with Protons and Deuterons	Berkeley Radiation Lab report UCRL-440(Rev) (1950) W.J.Knox	fast neutrons stripping
Bi,Pb	High Energy Induced Fission of Bismuth and Lead	Phys Rev <u>76</u> ,628 (1949) R.H.Goeckermann, I.Perlman	evaporation, spectra

Table IV (Cont.)

Al, Ni Ag, U	Secondary Particles Resulting from 375 MeV Alpha Bombardment of Nuclei	Berkeley Radiation Lab report UCRL-2098(1953) R.W.Deutsch	
	Observations of Lithium and Beryllium Nuclei Ejected from Heavy Nuclei by High Energy Particles	Berkeley Radiation Lab report UCRL-667(Rev)(1950) L.Marquez, I.Perman	neutrons
U	High Energy Spallation and Fission Products of Uranium	Phys Rev <u>74</u> , 1189 (1948) P.R.O'Connor, G.T.Seaborg	
Th, U	Radioactivities Produced in the Platinum Group by Bomb- ardment of Uranium with 400 Million Electron Volt Helium Ions	Berkeley Radiation Lab report, UCRL- 123(1948) R.D.Wolfe, Thesis	thermal neutrons

TABLE V
 ${}^6,{}^7\text{Li}$ INDUCED REACTIONS

<u>TARGET</u>	<u>TITLE</u>	<u>REFERENCE</u>	<u>DESCRIPTORS</u>
${}^{28}\text{Si}$	Breakup Effect in Lithium Ion Scattering	Conf on Nucl Spect & Atomic Nucl Struct.,Alma-Ata USSR,INIS-SU-282 pp 460-461(1984) N.Tompson	elastic scattering, optical model
${}^{208}\text{Pb}$	Inclusive Gamma-Ray Spectra From the ${}^6\text{Li}$ + ${}^{208}\text{Pb}$ Interaction at 12-26 MeV/A	Verhandlung Der Deutschen Physikalischen Gesellschaft 19,907 (1984)(E.Ger.) M.Albinska et al	inclusive interactions, gamma cascades, gamma spectra
${}^{40}\text{Ca}, {}^{59}\text{Co}$ ${}^{208}\text{Pb}$	Heavy-Ion Total Reaction Cross Sections	Zeit fur Physik A317,75(1984) S.K.Gupta,S.Kailas	total cross sections
${}^{208}\text{Pb}$ ${}^6\text{Li}$	Inclusive Gamma-Ray Spectra from ${}^{208}\text{Pb}$ Bombarded by 73-156 MeV ${}^6\text{Li}$ Ions	Karlsruhe report KFK-3621,Annual Rept on Nucl Physics Activities 7-1-82 to 6-30-83 (1983)p.45 M.Albinska et al	inclusive interactions, gamma spectra
${}^{40}\text{Ca}$ ${}^{165}\text{Ho}$	Pre-Equilibrium Emission in Heavy Ion Reactions	Phys Rev C28,2173 (1983) H.Machner et al	precompound-nucleus emission
${}^{28}\text{Si}$	Decay of the Nuclear Continuum of ${}^{28}\text{Si}$ Excited Via Inelastic ${}^6\text{Li}$ Scattering	Max Planck Inst. Annual report INIS-MF-8299 pp.94-95(1983) R.Clausing et al	quasi-elastic scattering
${}^{40}\text{Ca}$	Inclusive Break-Up Reactions of ${}^6\text{Li}$ at an Incident Energy of 26 MeV/Nucleon	Karlsruhe report KFK-3277(1982) R.Shyam et al	inclusive interactions, precompound-nucleus

Table V (Cont.)

^{40}Ca , ^{12}C ^{208}Pb ^{90}Zr	Optical Model Studies of ^6Li Elastic Scattering at 156 MeV	Nucl Phys <u>A388</u> , 173 (1982) J.Cook et al	elastic scattering
heavy, inter- mediate mass nuclei	Global Optical-Model Potentials for the Elastic Scattering of $^6, ^7\text{Li}$ Projectiles	Nucl Phys <u>A388</u> , 153 (1982) J. Cook et al	inclusive interactions
^{40}Ca	Inclusive Break-Up Reactions of ^6Li at an Incident Energy of 26 MeV/Nucleon	Nucl Phys <u>A382</u> , 296 (1982) B.Neumann et al	breakup reactions
^{209}Bi ^{197}Au ^{180}Hf ^{198}Pt	Multiplicity of K X Rays and Collective Structure in the Transitional Nuclei with A Approx. = 200	Phys Rev <u>C25</u> , 1355 (1982) H.J.Karwowski et al	K conversion, x radiation
	Continuous Charged-Particle Spectra from $^{40}\text{Ca} + ^6\text{Li}$ at an Incident Energy of 26 MeV/Nucleon	Annual Report JUEL-SPEZ-146, p.31(1982) H.Rebel et al	inclusive interactions
^{40}Ca ^{208}Pb ^{58}Ni , ^{28}Si	Energy Dependence of ^6Li Optical Potentials	Nucl Phys <u>A375</u> , 238 (1982) J.Cook	elastic scattering
^{40}Ca	Continuous Particle Spectra from ($^6\text{Li} + ^{40}\text{Ca}$) Reactions at $E_{\text{Li}} = 156$ MeV and the Complex Structure of the Triton Component	Karlsruhe Annual report KFK-3068 pp.49-50(1980) B.Neumann et al	breakup reactions, inclusive interactions
^{12}C ^{208}Pb ^{60}Ni	Projectile Break-Up in Continuous Particle Spectra from Nuclear Reactions Induced by 156 MeV ^6Li	Karlsruhe report KFK-3068 pp.48-49 (1981) H.Klewe- Nebenius et al	breakup reactions
^{197}Au	Nucleon Spectra from Heavy Ion Collision Prior to Equilibrium	Phys Lett <u>B98</u> , 240 (1981) P.Mooney et al	precompound- nucleus
^{12}C ^{208}Pb ^{120}Sn	Projectile Break-Up in Continuous Particle from Spectra Nuclear Reactions Induced by 156 MeV ^6Li	Zeit fur Physik <u>A296</u> , 113(1980) B.Neumann et al	energy spectra
^{28}Si	Optical Potential for ^6Li + ^{28}Si Elastic Scattering at 154 MeV	Phys Rev <u>C21</u> , 1656 (1980) P.Schwandt et al	elastic scattering

Table V (Cont.)

$^{12}\text{C}, ^{197}\text{Au}$ ^{208}Pb	Nuclear Reactions Using 156 MeV- ^6Li Ions	Verhandlungen Der Deutschen Physi- kalischen Gesell- schaft (E.Ger.) <u>6</u> , 947(1977) J.Buschmann et al	neutrons, proton spectra
^{193}Ir	Excitation Functions of $^{191,193}\text{Ir}, ^{197}\text{Au}(^6\text{Li}, \text{xn-yp})$ Compound Nuclear Reactions at $E(\text{Li}) = 48\text{-}156\text{ MeV}$	Zeit fur Physik <u>A280</u> ,61(1977) J.Kropp et al	precompound- nucleus, x-radiation
^{59}Co	^6Li Fragmentation at 41 MeV on the ^{59}Co Target	Bull Acad Sci USSR Phys Series <u>47</u> ,2177(1983) O.V.Bochkarev et al	energy spectra
^{59}Co	Use of the Coalescence Model for Evaluation of Contribution of Pre-Equilibrium Processes to Deuteron Spectra from $^6\text{Li} +$ ^{59}Co Reaction at 50 MeV	INIS-SU-282 p.383 34. Conf on Nucl Spect & Nucl Struct 1984,Alma-Ata, USSR, Yu.A.Glukhov et al	precompound- nucleus emission
^{27}Al	Projectile Breakup and Total Reaction Strengths in Li- Induced Reactions	Nucl Phys <u>A391</u> ,458 (1982) S.L.Tabor et al	breakup reactions
	$^1\text{H}(^7\text{Li}, \text{n})^7\text{Be}$ Reaction as an Intense MeV Neutron Source	Nucl Instr Meth <u>200</u> ,285(1982) J.H.Dave, C.R.Gould	fast neutrons
^{59}Co	Preequilibrium Neutron Emis- sion in Reactions with Light and Heavy Ions	INIS-MF-6160 p.626 30th Conf Nucl Spect & Nucl Struct Leningrad, USSR Mar 18, 1980 O.V.Bovhkarev et al	precompound- nucleus emission
^{27}Al ^{48}Ca ^{197}Au	Elastic and Inelastic Scatter- ing of 88 MeV ^6Li Ions	Nucl Phys <u>A356</u> ,235 (1981) C.B.Fulmer et al	optical models
^{27}Al	Optical-Model Analysis of ^7Li + ^{25}Mg and $^7\text{Li} + ^{27}\text{Al}$ Elastic Scattering at 89 MeV	Nucl Phys <u>A357</u> ,246 (1981) J.Cook et al	elastic scattering

Table V (Cont.)

^{118}Sn	Continuum Break-Up of ^6Li	Phys Lett <u>B96</u> ,47 1980) H.Gemmeke et al	breakup reactions
^{40}Ca	Phenomenological and Microscopic Optical Potentials for 88 MeV ^7Li Scattering	J of Physics <u>G6</u> ,501 (1980) M.F.Steeden et al	elastic scattering
^{197}Au ^{208}Pb ^{181}Ta	Multiplicity of K X Rays Emitted in ($^6\text{Li},\text{xn}$) Reactions	Argonne Nat. Lab report ANL/PHY-79-4-519(1979) H.J.Karwowski et al	gamma spectra, x-ray spectra
^{197}Au ^{56}Fe	Mechanisms of Production of Fast Particles with Z=1,2 in ^6Li -Induced Reactions Far Above the Coulomb Barrier	Phys Rev <u>C21</u> ,179 (1980) C.M.Castaneda et al	gamma spectra
^{13}C	De-Excitation Processes in the Compound Nucleus Investigated by a Charged Particle-Gamma Correlation Method	Dubna report JINR-D-9682,p.143(1976) M.A.Deleplanque et al	stripping
^{197}Au ^{208}Pb	Multiplicity of K X Rays Emitted in ($^6\text{Li},\text{xn}$) Reactions	Phys Rev Lett <u>42</u> ,1732(1979) H.J.Karwowski et al	K-conversion
^{197}Au	Gamma-Rays from the Transfer of Alpha and D Fragments in in ^6Li Induced Reactions Far Above the Coulomb Barrier	Phys Lett <u>B77</u> ,371 (1978) C.M.Castaneda et al	breakup reactions, gamma spectra
$^{54,56}\text{Fe}$	Fusion and Nonfusion Processes in Reactions Induced by 10-100 MeV ^6Li Ions with Fe Targets	Phys Rev <u>C19</u> ,724 (1979) J.Jastrzebski et al	precompound-nucleus emission
$^{142,146}\text{Nd}$ ^{150}Nd	Investigation of 54- to 99-MeV ^6Li -Induced Reactions on Rare Earth Targets	Phys Rev <u>C17</u> ,1001 (1978) J.W.Mihelich et al	neutron spectra

Table V (Cont.)

104,106Pd	Investigation of ^6Li -Induced Reactions from 54 to 99 MeV on Pd Targets	Phys Rev <u>C16</u> ,1437 (1977) C.M.Castaneda et al	precompound-nucleus emission, gamma spectra
^{12}C , ^{16}O ^{40}Ca , ^{58}Ni ^{74}Ge , ^{166}Er	^6Li Elastic Scattering on ^{12}C , ^{16}O , ^{58}Ni , ^{74}Ge , ^{124}Sn , ^{166}Er and ^{208}Pb at $E(^6\text{Li}) = 50.6$ MeV	Nucl Phys <u>A273</u> ,243 (1976) L.T.Chua et al	elastic scattering
^{10}B , ^{12}C ^9Be , ^{28}Si ^{16}O	Elastic Scattering of Lithium by ^9Be , ^{10}B , ^{12}C , ^{16}O , and ^{28}Si from 4 to 63 MeV	Thesis(1975) U of Iowa J.E.Poling	elastic scattering
^{10}B , ^{12}C ^{28}Si	Elastic Scattering of Lithium by ^9Be , ^{10}B , ^{12}C , ^{13}C , ^{16}O , and ^{28}Si from 4 to 63 MeV	Phys Rev <u>C13</u> ,648 (1976) J.E.Poling et al	elastic scattering
^{238}U ^{232}Th	^6Li and ^7Li Induced Fission of ^{232}Th and ^{238}U	Phys Rev <u>C12</u> ,42 (1975) H.Freiesleben et al	fission, transfer reactions
^{197}Au	Study of Projectile-Target Interaction Processes Around the Coulomb Barrier: Breakup in Flight of the Projectile; Elastic and Inelastic Scattering	Bordeaux Univ Thesis, CEN-TS-74-1 (1974) G.Sousbie	breakup reactions
^7Li	$^7\text{Li} + ^7\text{Li}$ Reaction Studies Leading to Multi-Neutron Final States	Phys Lett <u>B53</u> ,247 (1974) J.Cerny et al	energy spectra
^{197}Au	Reactions Produced by ^7Li on ^{197}Au	Proc Int Conf on Reactions Between Complex Nuclei Vol I and Suppl Jun 10, 1974 Nashville, Tn, J.L.Quebert et al	one-nucleon transfer reactions
^{209}Bi	^6Li , ^7Li induced Reactions on ^{209}Bi	Phys Rev <u>C10</u> ,245 (1974) H.Freiesleben et al	excitation functions
	$^6,^7\text{Li}$ Induced Fission of ^{232}Th and ^{238}U	Univ of Rochester report COO-3496-44 pp.85-91(1974) H.Freiesleben, J.R.Huizenga	excitation functions

Table V (Cont.)

^{238}U	Spallation Reactions of ^6Li with ^{238}U	Purdue Univ report COO-1716-17 p.15 (1974) R.C.Rudy	excitation functions
$^{12}\text{C}, ^{26}\text{Mg}$ ^{28}Si	Lithium Elastic and Inelastic Scattering and Lithium-Induced Single Nucleon Transfer Reactions	Nucl Phys A212,573 (1973) P.Schumacher et al	elastic scattering, stripping
^{232}Th ^{238}U	Total Reaction Cross Section of ^6Li and ^7Li on ^{232}Th and ^{238}U	Univ of Rochester report COO-3496-29 p.20(1973) H.Freiesleben et al	excitation functions
^{238}U	Angular Distributions for ^6Li and ^7Li Induced Fission of ^{232}Th and ^{238}U	Univ of Rochester report COO-3496-29 p.14(1973) H.Freiesleben et al	energy dependence
^{238}U	Elastic Scattering of Lithium on ^{232}Th and ^{238}U	Univ of Rochester report COO-3496-29 p.2(1973) H.Freiesleben et al	optical models
$^{12}\text{C}, ^{16}\text{O}$	Elastic Scattering of ^6Li on ^{12}C and ^{16}O	J Phys (Paris) Colloq 6,161(1971) V.I.Chuev et al	optical model
$^{40}\text{Ca}, ^{12}\text{C}$ $^{16}\text{O}, ^{28}\text{Si}$	Elastic Scattering of ^6Li Ions	Izv Akad Nauk SSSR Ser Fiz 35,2399 (1971) V.V.Davydov et al	elastic scattering
^{197}Au	In Beam Studies of natIr , $^{197}\text{Au}(^6\text{Li}, \text{xn}+\text{yp})$ Reactions Induced by ^6Li -Ions of up to 156 MeV	Julich report JUL-CONF-16(V.1) p.88(1975) J.Buschmann et al	excitation functions

TABLE VI

EXPERIMENTAL DATA REFERENCE TABLE FOR PROTON
ELASTIC SCATTERING AT MEDIUM ENERGIES

Target	Energy	Angular Range		Reference+
	(MeV)	$\sigma(\theta)$	$A(\theta)$	
^{12}C	65	15-115°	15-115°	NIM 169, 589 (1980)
	100	5-90°	-----	CJP 44, 2961 (1966)
	122	7-143°	7-143°	PR C27, 459 (1983)
	152	-----	8-65°	NP 80, 625 (1966)
	156	4-65°	-----	NP A221, 403 (1974)
	160	8-143°	8-143°	PR C27, 459 (1983)
	185	7-85°	2-65°	NP A319, 377 (1979)
	200	7-157°	7-115°	PR C27, 459 (1983)
	613	4-31°	-----	Ref. (a)
	800	4-67°	-----	PR C23, 2599 (1981)
	800	2-41°	2-30°	PR C18, 1756 (1978)
	1000	-----	3-19°	PL 90B, 364 (1980)
^{13}C	1040	4-30°	-----	PL 45B, 119 (1973)
	135	9-82°	-----	IUCF Ann.Rep. 1980,21
	200	7-115°	7-115°	PR C23, 616 (1981)
	800	10-40°	-----	PR C18, 1436 (1978)
^{14}N	144	6-62°	-----	PR C21, 25 (1980)
	160	8-48°	8-48°	IUCF Ann.Rep. 1980,24
	800	6-32°	-----	PR C25, 2550 (1982)
^{16}O	65	18-82°	18-72°	PR C26, 944 (1982)
	100	6-84°	-----	CJP 48, 765 (1970)
	135	8-91°	8-91°	PRL 45, 2012 (1980)
	200	6-143°	6-143°	IUCF Ann.Rep. 1981,1
	613	4-34°	-----	Ref. (a)
	800	6-26°	6-26°	PRL 43, 421 (1979)
	1000	-----	5-20°	PL 90B, 364 (1980)
	1040	3-39°	-----	Ref. (a.)
^{24}Mg	65	14-87°	14-72°	PR C26, 944 (1982)
	100	10-60°	-----	NP A193, 438 (1972)
	135	8-57°	8-57°	PR C26, 55 (1982)
	155	-----	4-58°	NP A112, 417 (1968)
	800	5-31°	-----	PR C25, 422 (1982)
^{26}Mg	65	20-80°	15-80°	RCNP Ann.Rep. 1979,20
	800	5-31°	-----	PR C25, 422 (1982)
^{27}Al	65	20-80°	15-80°	RCNP Ann.Rep. 1979,20
	156	4-44°	-----	NP A221, 403 (1974)
	185	8-72°	4-40°	PS 4, 235 (1971)

Table VI (Cont.)

	(MeV)	$\sigma(\theta)$	$A(\theta)$	
^{28}Si	65	14-90°	14-74°	PR C26, 944 (1982)
	100	10-60°	-----	NP A193, 438 (1972)
	135	7-89°	8-62°	PR C26, 55 (1982)
	155	-----	4-58°	NP A112, 417 (1968)
	180	9-92°	9-92°	IUCF Ann.Rep. 1981, 1
^{30}Si	650	5-20°	5-20°	BAPS 27, 730 (1982)
	800	5-20°	5-20°	BAPS 27, 730 (1982)
^{32}S	155	-----	4-58°	A112, 417 (1968)
^{34}S	650	5-20°	5-20°	BAPS 27, 730 (1982)
	800	5-20°	5-20°	BAPS 27, 730 (1982)
^{40}Ca	65	16-80°	16-66°	PR C26, 944 (1982)
	80	5-95°	8-59°	PR C26, 55 (1982)
	135	9-95°	-----	PR C23, 1023 (1981)
	155	-----	4-61°	NP A112, 417 (1968)
	156	5-53°	-----	NP A221, 403 (1974)
	160	8-88°	-----	PR C23, 1023 (1981)
	182	8-69°	8-69°	PR C26, 55 (1982)
	185	5-62°	2-41°	PS 4, 235 (1971)
	200	3-55°	3-55°	Ref. (b)
	300	3-50°	3-50°	Ref. (b)
	400	3-52°	3-52°	Ref. (b)
	500	3-43°	3-43°	Ref. (b)
	500	6-30°	6-30°	PRL 47, 1437 (1981)
	613	3-30°	-----	Ref. (a)
	800	2-42°	2-31°	PR C25, 2563 (1982)
	1000	-----	2-14°	PL 90B, 364 (1980)
	1044	4-20°	-----	NP A274, 443 (1976)
^{42}Ca	650	5-20°	5-20°	BAPS 27, 730 (1982)
	800	5-20°	5-20°	BAPS 27, 730 (1982)
	800	3-23°	4-20°	PL 81B, 151 (1979)
	1044	4-18°	-----	NP A274, 443 (1976)
^{44}Ca	65	16-68°	16-70°	PR C26, 944 (1982)
	800	3-24°	3-24°	PL 81B, 151 (1979)
	1044	4-18°	-----	NP A274, 443 (1976)
^{48}Ca	65	24-68°	24-70°	PR C26, 944 (1982)
	500	6-28°	6-28°	PRL 47, 1437 (1981)
	800	3-23°	3-21°	PL 81B, 151 (1979)
	1044	4-20°	-----	NP A274, 443 (1976)
^{48}Ti	65	16-68°	16-70°	PR C26, 944 (1982)
	156	5-42°	--	NP A221, 403 (1974)
	1044	4-20°	--	NP A274, 443 (1976)

Table VI (Cont.)

	(MeV)	$\sigma(\theta)$	$A(\theta)$	
^{54}Fe	65	16-68°	16-70°	PR C26, 944 (1982)
	800	3-22°	3-20°	PL 79B, 376 (1978)
^{56}Fe	65	14-68°	14-70°	PR C26, 944 (1982)
	156	8-42°	-----	NP A221, 403 (1974)
	185	10-66°	4-32°	PS 4, 235 (1971)
	800	3-32°	3-24°	PL 79B, 376 (1978)
^{58}Ni	65	14-68°	14-70°	PR C26, 944 (1982)
	100	8-129°	-----	NP A301, 349 (1978)
	160	5-45°	-----	PR 140, B1237 (1965)
	178	6-60°	6-38°	NP A322, 285 (1979)
	800	2-32°	2-21°	PL 79B, 376 (1978)
	1044	4-24°	-----	PL 67B, 402 (1977)
^{60}Ni	65	14-68°	14-70°	PR C26, 944 (1982)
	1044	3-18°	-----	PL 67B, 402 (1977)
^{62}Ni	65	13-66°	13-68°	PR C26, 944 (1982)
	156	6-41°	-----	NP A221, 403 (1974)
^{64}Ni	65	13-68°	13-70°	PR C26, 944 (1982)
	800	3-25°	3-25°	PL 79B, 376 (1978)
	1044	4-16°	-----	PL 67B, 402 (1977)
^{89}Y	65	13-58°	13-60°	PR C26, 944 (1982)
	156	8-55°	-----	NP A221, 403 (1974)
	185	10-40°	5-36°	NP A305, 333 (1978)
^{90}Zr	65	13-58°	13-60°	PR C26, 944 (1982)
	80	6-91°	8-58°	PR C26, 55 (1982)
	99	-----	8-59°	PR C26, 55 (1982)
	100	15-77°	-----	NP A301, 349 (1978)
	135	6-126°	11-59°	PR C26, 55 (1982)
	156	8-41°	-----	NP A221, 403 (1974)
	160	5-82°	12-44°	PR C26, 55 (1982)
	180	6-86°	-----	PR C23, 1023 (1981)
	185	10-40°	5-33°	PS 4, 235 (1971)
	500	6-30°	6-30°	PRL 47, 1437 (1981)
	800	2-30°	2-21°	PR C18, 1756 (1978)
	1000	4-17°	3-11°	PL 90B, 364 (1980)
^{92}Zr	104	12-51°	12-51°	PR C26, 55 (1982)
^{116}Sn	800	2-22°	2-22°	PL 76B, 383 (1978)
^{120}Sn	100	23-55°	-----	NP A301, 349 (1978)
	104	8-51°	8-51°	PR C26, 55 (1982)

Table VI (Cont.)

120Sn	156	5-41°	-----	NP A221, 403 (1974)
	160	5-45°	-----	PR 140, B1237 (1965)
124Sn	800	2-22°	2-22°	PL 76B, 383 (1978)
144Sm	800	5-20°	-----	PR C22, 1168 (1980)
176Yb	800	5-20°	-----	PR C22, 1168 (1980)
208Pb	65	14-72°	14-70°	PR C26, 944 (1982)
	80	6-93°	8-58°	PR C26, 55 (1982)
	98	10-76°	10-76°	PR C26, 55 (1982)
	100	19-79°	-----	NP A301, 349 (1978)
	121	5-83°	-----	PR C23, 1023 (1981)
	155	-----	5-40°	JP 30, 13 (1969)
	156	6-40°	-----	NP A221, 403 (1974)
	160	6-77°	-----	PR C23, 1023 (1981)
	160	5-45°	-----	PR 140, B1237 (1965)
	182	6-80°	8-53°	PR C26, 55 (1982)
	185	4-38°	4-38°	PR C10, 307 (1974)
	200	3-59°	3-59°	Ref. (b)
	300	3-49°	3-49°	Ref. (b)
	400	3-51°	3-51°	Ref. (b)
	500	3-42°	3-42°	Ref. (b)
	500	5-32°	5-32°	PRL 47, 1437 (1981)
	613	4-22°	-----	Ref. (a)
	800	3-42°	2-32°	PR C24, 541 (1981)
	1000	2-15°	2-11°	PL 90B, 364 (1980)
209Bi	65	13-72°	13-72°	PR C26, 944 (1982)
	153	-----	5-56°	NF 80, 625 (1966)
	156	7-55°	-----	NP A221, 403 (1974)

+ Journal Abbreviation:

BAPS - Bulletin of the American Physical Society
 CJP - Canadian Journal of Physics
 JP - Journal de Physique
 NIM - Nuclear Instruments and Methods
 NP - Nuclear Physics
 PL - Physics Letters
 PR - Physical Review
 PRL - Physical Review Letters
 PS - Physica Scripta

+Laboratory Report Abbreviation:

IUCF - Indiana Univ. Cyclotron Facility
 RCNP - Research Center for Nuclear Physics,
 Osaka, Japan

References:

- (a) CEN Saclay Report DPh-N/ME/78-1
 (b) AIP Conf. Proc. No.69 (Polarization Phenomena in
 Nuclear Physics 1980), p.454

TABLE VII

EXPERIMENTAL DATA REFERENCE TABLE FOR
PROTON TOTAL REACTION CROSS SECTIONS AT MEDIUM ENERGIES

<u>Target</u>	<u>Energy</u> (MeV)	<u>Reference+</u>
Li	179.6	AF 19,527 (1961)
Be	99.3	CJP 44,1847 (1966)
	179.6	AF 19,527 (1961)
	232±20	NP A183,81 (1972)
	346±20	NP A183,81 (1972)
	464±20	NP A183,81 (1972)
	553±20	NP A183,81 (1972)
¹² C	60	PRL 22,1128 (1969)
C	77±5	NP 29,474 (1962)
	95±5	NP 29,474 (1962)
	99.1	CJP 44,1847 (1966)
	113±5	NP 29,474 (1962)
	133±5	NP 29,474 (1962)
	134±4	PPS(Lond.) 67,125 (1954)
	179.6	AF 19,527 (1961)
	231±20	NP A183,81 (1972)
	345±20	NP A183,81 (1972)
	464±20	NP A183,81 (1972)
	552±20	NP A183,81 (1972)
F	99.1	CJP 44,1847 (1966)
Mg	99.4	CJP 44,1847 (1966)
²⁷ Al	60	PRL 22,1128 (1969)
Al	77±5	NP 29,474 (1962)
	95±5	NP 29,474 (1962)
	99.7	CJP 44,1847 (1966)
	113±5	NP 29,474 (1962)
	133±5	NP 29,474 (1962)
	134±4	PPS(Lond.) 67,125 (1954)
	179.6	AF 19,527 (1961)
	234±20	NP A183,81 (1972)
	348±20	NP A183,81 (1972)
	466±20	NP A183,81 (1972)
	554±20	NP A183,81 (1972)
Ca	99.3	CJP 44,1847 (1966)
	179.6	AF 19,527 (1961)
Sc	99.2	CJP 44,1847 (1966)

Table VII (Cont.)

<u>Target</u>	<u>Energy</u> (MeV)	<u>Reference+</u>
Ti	99.9	CJP 44,1847 (1966)
V	99.1	CJP 44,1847 (1966)
⁵⁶ Fe	60	PRL 22,1128 (1969)
Fe	98.7	CJP 44,1847 (1966)
	179.6	AF 19,527 (1961)
	230±20	NP A183,81 (1972)
	345±20	NP A183,81 (1972)
	463±20	NP A183,81 (1972)
	552±20	NP A183,81 (1972)
⁵⁹ Co	60	PRL 22,1128 (1969)
Co	98.5	CJP 44,1847 (1966)
⁵⁸ Ni	60	PRL 22,1128 (1969)
⁶⁰ Ni	60	PRL 22,1128 (1969)
Ni	98.5	CJP 44,1847 (1966)
Cu	77±5	NP 29,474 (1962)
	95±5	NP 29,474 (1962)
	99.0	CJP 44,1847 (1966)
	113±5	NP 29,474 (1962)
	133±5	NP 29,474 (1962)
	134±4	PPS(Lond.) 67,125 (1954)
	225±20	NP A183,81 (1972)
	346±20	NP A183,81 (1972)
	459±20	NP A183,81 (1972)
	548±20	NP A183,81 (1972)
⁶⁸ Zn	60	PRL 22,1128 (1969)
Zn	99.1	CJP 44,1847 (1966)
Ge	237±20	NP A183,81 (1972)
	347±20	NP A183,81 (1972)
	412±20	NP A183,81 (1972)
	498±20	NP A183,81 (1972)
	568±20	NP A183,81 (1972)
⁹⁰ Zr	60	PRL 22,1128 (1969)
Zr	98.8	CJP 44,1847 (1966)
Nb	98.8	CJP 44,1847 (1966)
Mo	99.1	CJP 44,1847 (1966)
Pd	98.9	CJP 44,1847 (1966)

Table VII (Cont.)

<u>Target</u>	<u>Energy</u> (MeV)	<u>Reference+</u>
Ag	77±5 95±5 98.8 113±5 133±5	NP 29,474 (1962) NP 29,474 (1962) CJP 44,1847 (1966) NP 29,474 (1962) NP 29,474 (1962)
Cd	98.8 134±4	CJP 44,1847 (1966) PPS(Lond.) 67,125 (1954)
In	99.3 179.6	CJP 44,1847 (1966) AF 19,527 (1961)
¹²⁰ Sn Sn	60 99.1 221±20 337±20 456±20 546±20	PRL 22,1128 (1969) CJP 44,1847 (1966) NP A183,81 (1972) NP A183,81 (1972) NP A183,81 (1972) NP A183,81 (1972)
La	98.8	CJP 44,1847 (1966)
Pr	98.6	CJP 44,1847 (1966)
Nd	98.6	CJP 44,1847 (1966)
Eu	99.4	CJP 44,1847 (1966)
Gd	98.3	CJP 44,1847 (1966)
Tb	98.7	CJP 44,1847 (1966)
Dy	98.2	CJP 44,1847 (1966)
Ho	99.1	CJP 44,1847 (1966)
Tm	99.3	CJP 44,1847 (1966)
Hf	98.8	CJP 44,1847 (1966)
Ta	98.3	CJP 44,1847 (1966)
W	99.3	CJP 44,1847 (1966)
Re	99.0	CJP 44,1847 (1966)
Pt	99.3	CJP 44,1847 (1966)

Table VII (Cont.)

<u>Target</u>	<u>Energy</u> (MeV)	<u>Reference+</u>
Au	99.4	CJP 44,1847 (1966)
	179.6	AF 19,527 (1961)
Tl	99.6	CJP 44,1847 (1966)
²⁰⁸ Pb	60	PRL 22,1128 (1969)
Pb	77±5	NP 29,474 (1962)
	95±5	NP 29,474 (1962)
	99.2	CJP 44,1847 (1966)
	113±5	NP 29,474 (1962)
	133±5	NP 29,474 (1962)
	134±4	PPS(Lond.) 67,125 (1954)
	226±20	NP A183,81 (1972)
	341±20	NP A183,81 (1972)
	460±20	NP A183,81 (1972)
	549±20	NP A183,81 (1972)
Th	99.1	CJP 44,1847 (1966)
U	98.9	CJP 44,1847 (1966)

+Journal Abbreviation: PRL - Physical Review Letters
CJP - Canadian Journal of Physics
PPS(Lond.) - Proceedings of the Physical Society (London)
NP - Nuclear Physics
AF - Arkiv for Fysik