

70Da01 *Angular Distributions of Gamma Rays Following the $^{64}\text{Ni}(p,n\gamma)^{64}\text{Cu}$ Reaction*

W. F. Davidson, P. J. Dallimore, J. Hellstrom, Nucl. Phys. A142, 167 (1970).

Nuclear Reactions: $^{64}\text{Ni}(p,n\gamma)$, $E=2.75\text{-}3.50$ MeV; measured $\sigma(E;E_\gamma, \theta)$. ^{64}Cu deduced levels, J , π , γ -mixing. Enriched target.

70Da02 *Energy Levels of ^{133}Cs and ^{141}Pr from the $(n,n'\gamma)$ Reaction*

V. R. Dave, J. A. Nelson, R. M. Wilenzick, Nucl. Phys. A142, 619 (1970).

Nuclear Reactions: ^{133}Cs , $^{141}\text{Pr}(n,n'\gamma)$, $E=0.2\text{-}2.2$ MeV; measured E_γ , $\sigma(E;E_\gamma,\theta=95^\circ)$. ^{133}Cs , ^{141}Pr deduced levels, J, π , branching ratios. Natural targets.

70Da03 *Analysis of the Reaction $^{31}\text{P}(p,p_0)$ in the Energy Range 8.0-10.0 MeV*

P. J. Dallimore, J. Hellstrom, Nucl. Phys. A144, 103 (1970).

Nuclear Reactions: $^{31}\text{P}(p,p_0)$, $E=8-10$ MeV; measured $\sigma(E;\theta)$; deduced direct reaction fraction. Auto-, cross-correlation analysis.

70Da04 *Thomas-Fermi Calculations in Nuclei*

G. Dahll, C. Warke, Nucl. Phys. A147, 94 (1970).

Nuclear Structure: ^{90}Zr , ^{120}Sn , ^{140}Ce , ^{208}Pb ; calculated binding energy/particle, nucleon density distributions, single-particle potentials. Thomas-Fermi model.

70Da05 *Production of Spontaneously Fissioning Isomers ^{242}Am and ^{244}Am by Slow Neutron Capture*

B. Dalhsuren, G. N. Flerov, Y. P. Gangrsky, Y. A. Lazarev, B. N. Markov, Nguyen Cong Khanh, Nucl. Phys. A148, 492 (1970).

Nuclear Reactions: $^{241}, ^{243}\text{Am}(n,\gamma)$, (n,F) , $E=0.2\text{-}20\text{ eV}$; measured delayed, prompt fission σ ratios, $(n)(\text{fission fragment})\text{-delay}$.
 $^{242}, ^{244}\text{Am}$ [SF-isomers] deduced $T_{1/2}$.

70Da07 *Spin of the 426 keV Level in ^{62}Cu*

W. F. Davidson, P. J. Dallimore, J. Hellstrom, Aust. J. Phys. 23, 11 (1970).

Nuclear Reactions: $^{62}\text{Ni}(p,n\gamma)$, $E=5.34$ MeV; measured $\sigma(E_\gamma, \theta(\gamma))$. ^{62}Cu level deduced J, π .

70Da08 *The Decay of ^{223}Ra and its Daughter Products (I). The Decay of ^{223}Ra*

W. F. Davidson, R. D. Connor, Nucl. Phys. A149, 363 (1970).

Radioactivity: ^{223}Ra [from $^{226}\text{Ra}(\text{n},\gamma)^{227}\text{Ra}$; $^{227}\text{Ra}(\beta)^{227}\text{Ac}(\beta)^{227}\text{Th}(\alpha)^{223}\text{Ra}$]; measured $E\gamma$, $I\gamma$, $I(\text{ce})$, $E\alpha$, $I\alpha$, $\gamma\gamma$ -, $\alpha\gamma$ -coin, $\alpha\gamma(\theta)$.
 ^{219}Rn deduced levels, J , π , γ -multipolarities.

70Da09 *The Decay of ^{223}Ra and its Daughter Products (II). The Decay of ^{219}Rn and ^{215}Po*

W. F. Davidson, R. D. Connor, Nucl. Phys. A149, 385 (1970).

Radioactivity: ^{219}Rn ; measured E_γ , I_γ , $I(\text{ce})$, $\alpha\gamma(\theta)$. ^{215}Po levels deduced J, π , ICC, γ -mixing. ^{215}Po ; measured $I\alpha$, E_γ , I_γ .

70Da10 *Phenomenological Analysis of Quasirootational Spectra and Possible Evidence for Higher-Phonon States*

T. K. Das, R. M. Dreizler, A. Klein, Phys. Rev. C2, 632 (1970).

Nuclear Structure: A=96-244; calculated ground-state bands of even-even quasirootational nuclei.

70Da11

S. Darmodjo, S. A. A. Zaidi, D. G. Martin, R. Alders, P. Dyer, S. Ali, Priv. Comm. (August 1970).

70Da12 *Calculation of Coulomb Energy Differences*

J. Damgaard, C. K. Scott, E. Osnes, Nucl. Phys. A154, 12 (1970).

Nuclear Structure: ^{16}O , ^{28}Si , ^{32}S , ^{40}Ca , ^{48}Ca , ^{208}Pb ; calculated monopole polarization, self-energy contributions to Coulomb energy differences.

70Da13 *Quartet Structure in Light Nuclei*

M. Danos, B. M. Spicer, Z. Phys. 237, 320 (1970).

Nuclear Structure: ^{12}C , ^{16}O , ^{32}S , ^{40}Ca , ^{60}Ni ; analyzed low-lying even-parity, even-spin states. Quartet model.

70Da14 *Reaction Mechanism of the $^{16}\text{O} + d$ Reactions*

N. E. Davison, W. K. Dawson, G. Roy, W. J. McDonald, Can. J. Phys. 48, 2235 (1970).

Nuclear Reactions: $^{16}\text{O}(d,d)$, (d,n) , (d,p) , $E=4-6$ MeV; measured $\sigma(E;\theta)$; deduced optical model parameters. ^{17}O , ^{17}F levels deduced S. ^{18}F deduced resonances, level-width, $T_{1/2}$.

70Da15 *Experimental Study of Low-Lying Levels and Decay Structure in the Nucleus ^{62}Cu*

W. F. Davidson, M. R. Najam, P. J. Dallimore, J. Hellstrom, D. L. Powell, Nucl. Phys. A154, 539 (1970).

Nuclear Reactions: $^{62}\text{Ni}(p,n\gamma)$, $E_p=4.7\text{-}5.9$ MeV; measured E_γ , I_γ , $\sigma(E;E_\gamma,\theta(\gamma))$, $\gamma\gamma$ -coin. ^{62}Cu deduced levels, J , π , γ -mixing, γ -branching. Ge(Li) spectrometers. Enriched target.

70Da16 *Comparison of Asymmetric Shapes for Deformed Negative-Parity States in Heavy Even Nuclei*

M. G. Davidson, Phys. Rev. C2, 1814 (1970).

Nuclear Structure: ^{228}Th , ^{232}U , ^{234}U , calculated levels, branching ratios, moments of inertia.

70Da17 *Nuclear Bremsstrahlung from a Spin-Zero Target*

C. Dale, G. L. Strobel, Nucl. Phys. A156, 600 (1970).

Nuclear Reactions: $^{12}\text{C}(\text{p},\text{p})$, $(\text{p},\text{p}'\gamma)$, $E=140$ MeV; calculated $\sigma(\theta)$, bremsstrahlung spectrum.

70Da18 *Phenomenological Model for the Simultaneous Analysis of Several Rotational Bands*

T. K. Das, R. M. Dreizler, A. Klein, Phys. Rev. Lett. 25, 1626 (1970).

Nuclear Structure: ^{138}Nd , 152 , ^{154}Sm , 164 , ^{166}Er , ^{174}Hf , ^{186}Os ; calculated levels, ground-state rotational, vibrational bands.

70Da19 *Absolute Tensor-Polarization Calibration of a Polarized Deuteron Beam*

S. A. Darden, R. M. Prior, K. W. Corrigan, Phys. Rev. Lett. 25, 1673 (1970).

Nuclear Reactions: $^4\text{He}(\text{polarized } d, d)$, $E=7.07$ MeV; measured tensor analyzing power.

70Da20 *Scattering of High-Energy Electrons by Nitrogen-14 and -15*

E. B. Dally, M. G. Croissiaux, B. Schweitz, Phys. Rev. C2, 2057 (1970).

Nuclear Reactions: $^{14}\text{N}(\text{e},\text{e})$, $^{15}\text{N}(\text{e},\text{e})$, (e,e') , $E=250, 400 \text{ MeV}$; measured $\sigma(\theta)$, $\sigma(\text{Ee}',\theta)$; deduced form factors. $^{14}, ^{15}\text{N}$ deduced rms radii. ^{15}N deduced levels, J , π , $B(\text{ML})$.

70Da21 *A Group-Theoretical Analysis of β -Decays of Some $j = 3/2$ Light Nuclei*

A. D'Andrea, M. Scalia, Nuovo Cimento 69A, 702 (1970).

Radioactivity: ^{11}C , ^{39}Ca , ^{33}Cl , ^7Be , ^{35}Ar , ^{37}K , ^9Li , ^{35}S , ^{37}Ar , ^{59}Cu , ^{61}Zn , ^8Li , ^8B , ^{10}C , ^6He , ^{34}Ar , ^{58}Cu , ^{34}Cl , ^{38}K , ^{13}N , ^{15}O , ^{29}P , ^{31}S , ^{37}Ca ; calculated log ft. Generalized pairing-force model.

70Da22 *Hexadecapole Deformation and Rotation-Particle Coupling in the Rare Earth Nuclei*

A. D. Davis, Nucl. Phys. A159, 257 (1970).

Nuclear Structure: ^{153}Eu , ^{175}Lu , ^{183}W ; calculated levels. Rotational model, hexadecapole deformation.

70Da23 *Test of a DWBA-Type Model for Analysis of Heavy-Ion Transfer Reactions*

R. Da Silveira, J. Galin, C. Ngo, Nucl. Phys. A159, 481 (1970).

Nuclear Reactions: Ag($^{14}\text{N}, ^{14}\text{N}$), $E=78, 113$ MeV; Al($^{16}\text{O}, ^{16}\text{O}$), $E=150$ MeV; calculated $\sigma(\theta)$. DWBA-type model, Glauber approximation.

70Da24 *Data for the Calculation of Gamma Radiation Spectra from Fission Products*

B. S. J. Davies, RD/B/M1551 (1970).

70Da25 *Intensities of Partial Radiative Transitions to Rotational and Vibrational Bands of Gd¹⁵⁵ and Gd¹⁵⁷ Resonances*

L. S. Danelyan, B. V. Efimov, S. K. Sotnikov, Zh. Eksp. Teor. Fiz. 58, 456 (1970); Sov. Phys. JETP 31, 242 (1970).

Nuclear Reactions: ¹⁵⁵, ¹⁵⁷Gd(n,γ), E < 150 eV; measured I_γ. ¹⁵⁶, ¹⁵⁸Gd deduced resonances. ¹⁵⁶Gd resonances deduced J.

70Da26 *Neutron Yield from Thick Targets Bombarded with 11.5 and 23.5 MeV Protons*

V. K. Daruga, E. S. Matusevich, At. Energ. 29, 456 (1970); Soviet J. At. Energ. 29, 1233 (1970).

Nuclear Reactions: Li, Be, C, Mg, Al, Ti, Fe, Co, Ni, Cu, Zn, Nb, Cd, Ta, W, Pb, Bi, U(p,xn), E=11.5, 23.5 MeV; measured neutron yields.

70Da28 *Construction and Application of a π square root(13)/ 2 High-Resolution β -Ray Spectrometer Connected with a Tandem Accelerator*

H. Daniel, P. Jahn, M. Kuntze, B. Martin, Nucl. Instrum. Methods 82, 29 (1970).

Radioactivity: ^{192}Ir , ^{212}Pb , ^{212}Bi , ^{210}Tl , ^{208}Pb ; measured E(ce). ^{192}Pt deduced transitions.

Nuclear Reactions: ^{197}Au , $^{154}\text{Sm}(^{16}\text{O}, ^{16}\text{O})$, E=33 MeV; $^{197}\text{Au}(\alpha, \alpha')$, E=9 MeV; measured I(ce) ratios. ^{197}Au , ^{154}Sm transitions deduced I(ce) ratios.

70Da29 *L/K Capture Ratio from Ge(Li) Spectrum*

B. K. Dasmahapatra, Proc. Nucl. Phys. And Solid State Phys. Symp., Nucl. Phys., Madurai, p. 345 (1970).

Radioactivity: ^{133}Ba ; measured E_γ , I_γ . Deduced electron capture ratio.

70DaZL

Report: IAE-2039, 11/7/72

Nuclear Reactions: ^9Be , $^{12, 13}\text{C}(^6\text{Li}, \text{t})$, $^{12}\text{C}(^6\text{Li}, ^3\text{He})$, $E=24\text{-}31\text{ MeV}$; measured $\sigma(E; \theta)$; deduced direct mechanism.

70DaZM *Decay Studies of Neutron-Deficient Isotopes of Astatine, Polonium, and Bismuth*

J. M. Dairiki, Thesis, Univ. California (1970); UCRL-20412 (1970)

Radioactivity: $^{200}, ^{201}, ^{202}, ^{203}, ^{204}, ^{205}\text{At}$, $^{202\text{m}}\text{At}$, $^{199}, ^{201}\text{Bi}$, $^{200}, ^{201}, ^{202}, ^{203}, ^{204}\text{Po}$, $^{201\text{m}}\text{Po}$; measured $E\alpha$, $T_{1/2}$. ^{198}Bi deduced α -branching limit. ^{199}Bi , $^{202}, ^{203}\text{Po}$ deduced α -branching. $^{206}, ^{205}, ^{204}, ^{202}, ^{203}, ^{201}\text{At}$, $^{205}, ^{203}, ^{201}\text{Po}$, $^{199\text{m}}\text{Po}$, $^{204}, ^{202}, ^{200}\text{Po}$, $^{204}, ^{202}, ^{200}, ^{198}\text{Bi}$, ^{201}Bi , $^{201\text{m}}\text{Bi}$; measured $E\gamma$, $I\gamma$, $T_{1/2}$, $\gamma\gamma$ -coin; deduced log ft. $^{198}, ^{200}, ^{202}, ^{204}\text{Pb}$, ^{204}Bi , $^{203}, ^{205}\text{Bi}$, $^{203}, ^{205}, ^{202}, ^{204}, ^{206}\text{Po}$ deduced levels, J, π , γ -branching.

70DaZN

Conference proceedings: Madurai(Nucl, Solid State Phys),Vol2,P345,10/25/71

Radioactivity: ^{133}Ba ; measured I(X-ray), I_γ ratios; deduced L/K capture ratio.

70DaZO

Conference proceedings: 70-10-02, P42

Nuclear Reactions: $^1\text{H}(\text{n},\text{X})$, $E=1.5\text{-}27.5$ MeV; measured $\sigma(\text{nT})(E)$.

70DaZP

Report: ANU-P-508, W F Davidson, 7/13/71

Nuclear Reactions: $^{25}\text{Mg}(^3\text{He},\gamma)$, $E=4.44, 6.08, 6.15, 8.26$ MeV; measured $\sigma(\theta)$; deduced insignificant 3p-3h contribution to $^{28}\text{Si}(\gamma,n)$ intermediate structure.

70DaZQ

Report: INR-P-234/VII/PL 7/29/71

Nuclear Structure: ${}^3\text{H}$; calculated binding energy. Separable charge-independent N-N potentials.

70DaZR

Report: Louvain, Univ Catholique, 1970 Annual, P9, J M Das

Nuclear Reactions: $^{68}\text{Zn}(p, n\gamma)$, $(p, p'\gamma)$, $E=3.9\text{-}4.3\text{ MeV}$; measured $\sigma(E; E_\gamma, \theta(\gamma))$. ^{69}Zn deduced isobaric analog resonance, J, π .

70DaZT

Thesis: S D Danielopoulos, N C State Univ ,DABBB 31B 6185

Nuclear Reactions: $^{13}\text{C}(\text{p},\text{n})$, E not given; calculated amplitudes. S-matrix theory, knockout mechanism.

70DaZU

Report: PR-P-87 P19, AECL-3742

Nuclear Reactions: $^{56}\text{Fe}(\alpha, p\gamma)$, $E=11.75$ MeV; measured $\sigma(E_p, E_\gamma, \theta(\gamma))$, Doppler shifts. ^{59}Co levels deduced $T_{1/2}$.

70DaZV

Report: PR-P-87 P13, AECL-3742

Nuclear Reactions: $^{19}\text{F}(\alpha, p\gamma)$, $E=10$ MeV; measured Doppler shift attenuation. ^{22}Ne level deduced $T_{1/2}$.

70DaZW

Report: BARC-474 P60

Radioactivity: ^{125}Sb , ^{134}Cs ; measured $\beta\gamma(\theta)$.

70DaZX

Report: BARC-474 P30

Radioactivity: ^{152}Eu ; measured E_γ , I_γ . ^{152}Gd deduced levels, J, π .

70DaZY

Report: BARC-474 P29

Radioactivity: ^{91g}Mo , ^{91m}Mo ; measured $E\gamma$, $I\gamma$, $T_{1/2}$, $E\beta$; deduced Q . ^{91}Nb deduced levels, J , π .

70DaZZ *Study of Internal Bremsstrahlung in the Decay of ^{113}Sn*

N. Davudoglu, K. I. Roulston, Bull. Am. Phys. Soc. 15, No. 6, 770, BE12 (1970)

Radioactivity: ^{113}Sn ; measured (IB)(K X-ray)-coin; deduced Q.

70De01 *Lifetime Measurements on ^{26}Mg and ^{29}Si by Doppler Shift Attenuation*

P. R. de Kock, J. W. Koen, W. L. Mouton, Nucl. Phys. A140, 190 (1970).

Nuclear Reactions: ^{26}Mg , $^{29}\text{Si}(p,p'\gamma)$, $E=2.8\text{-}5.5\text{ MeV}$; measured $\sigma(E;E\gamma)$, Doppler shift attenuation. ^{26}Mg , ^{29}Si deduced levels $T_{1/2}$.

70De02 *Mossbauer Effect of the 93-keV Transition in Zn^{67}*

H. de Waard, G. J. Perlow, Phys. Rev. Lett. 24, 566 (1970).

Nuclear Reactions: $^{67}\text{Zn}(\gamma, \gamma)$, $E=93$ keV; measured Mossbauer effect.

70De03 Nb^{93} γ Rays from Inelastic Neutron Scattering

Y. G. Degtyarev, Yad. Fiz. 11, 241 (1970); Sov. J. Nucl. Phys. 11, 135 (1970).

Nuclear Reactions: $^{93}\text{Nb}(n,n'\gamma)$, $E=1.2$ MeV; measured $\sigma(E\gamma)$. ^{93}Nb deduced levels. Ge(Li) detectors.

70De04 *Quasielastic Scattering of High-Energy Electrons by the Nucleons of C^{12} and Si^{28}*

S. V. Dementii, N. G. Afanasev, I. M. Arkatov, V. G. Vlasenko, V. A. Goldshtein, E. L. Kuplennikov, *Yad. Fiz.* 11, 19 (1970); *Sov. J. Nucl. Phys.* 11, 10 (1970).

Nuclear Reactions: $^{12}\text{C}(\text{e},\text{e}')$, $E=0.69, 0.97, 1.115$ GeV; measured $\sigma(\text{Ee}',\theta)$.

70De05 *Hyperfine Structure in Tb II and Nuclear Moments of ^{159}Tb*

J. W. M. Dekker, H. F. Bloemhof, J. H. Brouwer, P. F. A. Klinkenberg, *Physica* 46, 119 (1970).

Nuclear Moments: ^{159}Tb ; measured a , B ; deduced μ , quadrupole moment.

70De06 *Octupole and Quadrupole Transition Rates in F^{19} from Scattering of 15-MeV Deuterons*

D. Dehnhard, N. M. Hintz, Phys. Rev. C1, 460 (1970).

Nuclear Reactions: $^{19}\text{F}(\text{d},\text{d})$, (d,d') , $E=15\text{ MeV}$; measured $\sigma(\text{Ed}', \theta)$. ^{19}F levels deduced $B(\text{EL})$, $\beta(\text{L})$.

70De07 *Neutron Yield of ^{252}Cf Based on Absolute Measurements of the Neutron Rate and Fission Rate*

A. De Volpi, K. G. Porges, Phys. Rev. C1, 683 (1970).

Radioactivity: Fission ^{252}Cf ; measured total neutron yield.

70De08 *Identification of ^{88}Se and Search for Delayed Neutron Emission from ^{87}Se and ^{88}Se*

P. del Marmol, D. C. Perricos, J. Inorg. Nucl. Chem. 32, 705 (1970).

Nuclear Reactions: $^{235}\text{U}(\text{n},\text{F})$, $E=\text{thermal}$; measured delayed neutron activity. ^{87}Se , ^{88}Se deduced $T_{1/2}$, delayed neutron yields, fission yields.

70De09 *Re-Examination of the ^{66}Ge Decay*

F. W. N. de Boer, E. W. A. Lingeman, R. van Lieshout, R. A. Ricci, Verh. Deut. Phys. Ges. 6, 598 (1970).

Radioactivity: ^{66}Ge ; measured $T_{1/2}$, $E\gamma$, $I\gamma$, $\beta\gamma$, $\gamma\gamma$ -coin, $I(\text{ce})$; deduced Q , $\log ft$. ^{66}Ga deduced levels, J , π , $T_{1/2}$. $\text{Ge}(\text{Li})$, $\text{Si}(\text{Li})$ detectors.

70De10 *Proton Induced Resonance Reactions on ^{41}K (I). A High-Resolution Investigation of the $^{41}\text{K}(p, \alpha_0)^{38}\text{Ar}$ Reaction*

R. J. de Meijer, J. M. M. van Gasteren, Nucl. Phys. A148, 62 (1970).

Nuclear Reactions: $^{41}\text{K}(p, \alpha_0)$, $E=1.17\text{-}2.10$ MeV; measured $\sigma(E_p, \theta)$. ^{42}Ca deduced resonances, resonance strengths, L , J , π , isobaric analogs. Enriched target.

70De11 *Proton Induced Resonance Reactions on ^{41}K (II). The $^{41}\text{K}(p,p)^{41}\text{K}$ and $^{41}\text{K}(p,n)^{41}\text{Ca}$ Reactions*

R. J. de Meijer, T. F. Risselada, H. G. Berendsen, Nucl. Phys. A148, 77 (1970).

Nuclear Reactions: $^{41}\text{K}(p,p)$, $^{41}\text{K}(p,n)$, $E=1.35\text{-}1.96$ MeV; measured $\sigma(E;\theta)$. ^{42}Ca deduced isobaric analog resonance strengths, L , J , π , level-width, T . Enriched target.

70De12 *The ($^3\text{He}, ^7\text{Be}$) Reaction on Light Nuclei*

C. Detraz, H. H. Duhm, H. Hafner, Nucl. Phys. A147, 488 (1970).

Nuclear Reactions: ^{10}B , ^{12}C , ^{16}O , ^{19}F , ^{20}Ne , ^{28}Si , ^{40}Ca , ^{58}Ni ($^3\text{He}, ^7\text{Be}$), $E=30$ MeV; measured $\sigma(E(^7\text{Be}), \theta)$. ^8Be , ^{12}C , ^{16}O , ^{24}Mg , ^{36}Ar deduced relative S.

70De13 *New Isotopes ^{158}Tm and ^{160}Tm*

F. W. N. de Boer, P. F. A. Goudsmit, P. Koldewijn, B. J. Meijer, *Radiochim. Acta* 13, 118 (1970).

Radioactivity: $^{158}, ^{160}\text{Tm}$; measured $T_{1/2}$, $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin. $^{158}, ^{160}\text{Er}$ deduced transition.

70De14 *Study of Resonant States in ^{13}C by Scattering of Fast Neutrons on ^{12}C*

G. Deconninck, J. -P. Meulders, Phys. Rev. C1, 1326 (1970).

Nuclear Reactions: $^{12}\text{C}(\text{n},\text{n})$, (n,n') , $E=17\text{-}20.5$ MeV; measured $\sigma(E;\text{En}', \theta)$; deduced optical model parameters. ^{13}C deduced resonances, J, π .

70De15 *Fission Yields of Several Iodine Isotopes and Half-Life and Fission Yield of ^{135}Te*

A. A. Delucchi, A. E. Greendale, Phys. Rev. C1, 1491 (1970).

Radioactivity: ^{135}Te [from $^{235}\text{U}(\text{n},\text{F})$]; measured $T_{1/2}$.

Nuclear Reactions: $^{235}\text{U}(\text{n},\text{F})$, E=thermal; measured 131 , 132 , 133 , ^{135}I , ^{135}Te yields.

70De16 *Excited Rotational Band in 'Spherical' ^{150}Sm*

P. Debenham, N. M. Hintz, Phys. Rev. Lett. 25, 44 (1970).

Nuclear Reactions: $^{152}\text{Sm}(p,t)$, $E=10, 19$ MeV; measured $\sigma(E_t, \theta)$. ^{150}Sm deduced levels, J , π , L , level spacings.

70De17 *A Study of the Reactions $(p, {}^6\text{Li})$ and $(p, {}^6\text{He})$ on ${}^9\text{Be}$ at 45 MeV*

R. M. Devries, G. Paic, J. L. Perrenoud, M. Singh, J. W. Sunier, Phys. Lett. 32B, 193 (1970).

Nuclear Reactions: ${}^9\text{Be}(p, {}^6\text{Li})$, $(p, {}^6\text{He})$, $E=45$ MeV; measured $\sigma(E({}^6\text{Li}), \theta)$, $\sigma(E({}^6\text{He}), \theta)$.

70De18 $T = 9/2$ Analogue State in ^{63}Ni

D. W. Devins, M. E. Rickey, S. Hayakawa, E. Rost, Nucl. Phys. A150, 187 (1970).

Nuclear Reactions: $^{64}\text{Ni}(p,d)$, $E=27.5$ MeV; measured $\sigma(E,d,\theta)$. ^{63}Ni deduced isobaric analog state, S. Enriched target.

70De19 *High-Resolution Gamma Spectroscopy in the Decay of ^{231}Pa*

A. G. de Pinho, E. F. da Silveira, N. L. da Costa, Phys. Rev. C2, 572 (1970).

Radioactivity: ^{231}Pa ; measured E_γ , I_γ , $I(\text{X-ray})$, $\gamma\gamma$ -coin. ^{227}Ac deduced levels, J, π , $\alpha(\text{K})$, $\alpha(\text{L})$, γ -multipolarity, K. Ge(Li) detector.

70De20 *A Fourfold Coincidence System to Measure Positron-Gamma Angular Correlations*

A. de Beer, H. P. Blok, J. Blok, Nucl. Instrum. Methods 78, 19 (1970).

Radioactivity: ^{22}Na , ^{86}Rb ; measured $\beta\gamma(\theta)$.

70De21 *Polarization Effects in Deuteron Stripping Reactions on ^{207}Pb and ^{208}Pb Near the Coulomb Barrier*

A. A. Debenham, J. A. R. Griffith, M. Irshad, S. Roman, Nucl. Phys. A151, 81 (1970).

Nuclear Reactions: $^{207}, ^{208}\text{Pb}(\text{polarized d,p})$, $E_d=12.3$ MeV; measured $\sigma(E_p;\theta)$, vector analyzing power(θ). $^{208}, ^{209}\text{Pb}$ levels deduced S. Enriched targets.

70De22 *Upper Limit for a K-Electron-Capture Branch in $\text{In}^{113\text{m}}$*

E. der Mateosian, M. Goldhaber, Phys. Rev. C2, 2026 (1970).

Radioactivity: $^{113\text{m}}\text{In}$; measured I(K X-ray); deduced K-capture branch, log ft.

70De24 *Many-Particle Many-Hole States in ^{16}O*

N. de Takacsy, S. Das Gupta, Nucl. Phys. A152, 657 (1970).

Nuclear Structure: ^{16}O ; calculated 1p-1h, 3p-3h, 4p-4h states.

70De26 *The $(p,p'\gamma)$ Reaction on ^{110}Pd*

J. A. Deye, R. L. Robinson, J. L. C. Ford, Jr., Nucl. Phys. To Be Published (1970); See Also 70De25

70De29 *The Decay of ^{143}Sm to Levels in ^{143}Pm*

D. De Frenne, E. Jacobs, J. Demuynck, Z. Phys. 237, 327 (1970).

Radioactivity: ^{143}Sm ; measured E_γ , I_γ , deduced $\log ft$. ^{143}Pm deduced levels, J, π .

70De30 *Investigation of Proton Induced Resonance Reactions on ^{39}K*

R. J. de Meijer, A. A. Sieders, H. A. A. Landman, G. de Roos, Nucl. Phys. A155, 109 (1970).

Nuclear Reactions: $^{39}\text{K}(\text{p}, \alpha_0)$, $E=1.75\text{-}3.23$ MeV; $^{39}\text{K}(\text{p}, \text{p})$, $E=1.03\text{-}3.23$ MeV; measured $\sigma(\text{Ep}; \theta)$. $^{39}\text{K}(\text{p}, \gamma)$, $E=1.03\text{-}1.75$ MeV; measured $\sigma(\text{Ep})$. ^{40}Ca deduced resonances, resonance strengths, L, J, π , T. Natural target.

70De31 *Study of Energy Levels of ^{29}Si*

D. Dehnhard, J. L. Yntema, Phys. Rev. C2, 1390 (1970).

Nuclear Reactions: $^{30}\text{Si}(^3\text{He},\alpha)$, $E=12\text{ MeV}$; measured $\sigma(E\alpha, \theta)$. ^{29}Si deduced levels, L(n), S.

70De32 *Double-Energy Single-Time-of-Flight Measurements of Fission Fragments in Thermal-Neutron-Induced Fission of U^{235}*

M. Derengowski, E. Melkonian, Phys. Rev. C2, 1554 (1970).

Nuclear Reactions: Fission $^{235}\text{U}(\text{n},\text{F})$, E=thermal; measured (fragment)(fragment)-coin; deduced primary fragment masses.

70De33 *DWBA Calculations for (d,p) Reactions Including the d-State of the Deuteron*

G. Delic, B. A. Robson, Nucl. Phys. A156, 97 (1970).

Nuclear Reactions: $^{52}\text{Cr}(d,p)$, $E=8$ MeV; calculated $\sigma(\theta)$; analyzing power(θ).

70De34 *Decay Schemes of Mo^{91} and Mo^{91m}*

S. de Barros, P. R. Maurenzig, G. Baptista, L. F. Canto, A. G. de Pinho, J. M. F. Jeronymo, Z. Naturforsch. 25a, 1250 (1970).

Radioactivity: 91 , 91m Mo; measured $E\gamma$, $I\gamma$; deduced log ft. 91 Nb deduced levels.

70De35 *DWBA Calculations of the Reaction $^{10}\text{B}(d,p,\gamma)^{11}\text{B}$ at Low Deuteron Energies*

R. Der, G. Otto, K. -D. Schmidt, K. Hehl, Acta Phys. 28, 17 (1970).

Nuclear Reactions: $^{10}\text{B}(d,p\gamma)$, $E=1.5\text{-}3\text{ MeV}$; measured nothing; analyzed $\sigma(E;\theta(p),\theta(p\gamma))$. ^{11}B levels deduced S. DWBA.

70De36 *Elastic Electron Scattering Through 180° from the Magnetization Distribution of the $1f_{7/2}$ -Shell Nuclei Sc, V and Co*

H. De Vries, G. J. C. Van Niftrik, L. Lapikas, Phys. Lett. 33B, 403 (1970).

Nuclear Reactions: ^{45}Sc , V, $^{59}\text{Co}(e,e')$, $E=40\text{-}90\text{ MeV}$; measured $\sigma(E;Ee')$. ^{45}Sc , ^{51}V , ^{59}Co deduced rms magnetization distributions.

70De37 *Mossbauer Spectra of MnSb(¹²⁹I) Yield Mixing Ratio of 27.7 keV Transition and Accurate Magnetic Moment Ratio of 27.7 keV and Ground State in ¹²⁹I*

H. de Waard, S. R. Reintsema, M. Pasternak, Phys. Lett. 33B, 413 (1970).

Nuclear Reactions: ¹²⁹I(γ, γ), E=27.7 keV; measured Mossbauer effect. ¹²⁹I levels deduced γ -mixing, μ ratios.

70De38 *Effect of the Deuteron D-State on DWBA Calculations for $^{16}\text{O}(p,d)^{15}\text{O}$ And $^{40}\text{Ca}(d,p)^{41}\text{Ca}$*

G. Delic, Nucl. Phys. A158, 117 (1970).

Nuclear Reactions: $^{40}\text{Ca}(d,p)$, $E=7, 9$ MeV; $^{16}\text{O}(p,d)$, $E=26, 30, 31$ MeV; measured nothing; analyzed. $\sigma(\theta)$, $P(p)$, $P(d)$. ^{15}O , ^{41}Ca levels deduced S.

70De39 *Re-Examination of the ^{66}Ge Decay*

F. W. N. de Boer, E. W. A. Lingeman, R. van Lieshout, R. A. Ricci, Nucl. Phys. A158, 166 (1970).

Radioactivity: ^{66}Ge [from $^{66}\text{Zn}(^3\text{He}, 3n)$, $^{64}\text{Zn}(^3\text{He}, n)$]; measured $E\gamma$, $I\gamma$, β , $T_{1/2}$, $\gamma\gamma$ -coin; deduced $\log ft$, $Q+$. ^{66}Ga deduced levels, $T_{1/2}$, J , π , ICC, γ -multipolarity. Natural target, enriched ^{64}Zn target, Ge(Li), Si(Li) detectors.

70De40 *Study of the $T = 3/2$ States of ^{25}Mg and ^{29}Si*

C. Detraz, R. Richter, Nucl. Phys. A158, 393 (1970).

Nuclear Reactions: ^{26}Mg , $^{30}\text{Si}(^3\text{He},\alpha)$, $E=15.4$ MeV; measured $\sigma(E,\theta)$. ^{25}Mg , ^{29}Si $T=3/2$ deduced levels, $L(n)$, J , π , S .
Enriched targets.

70De41 *Pick-up in the ${}^6\text{Li}({}^3\text{He}, p\alpha){}^4\text{He}$ Sequential Reaction*

P. A. Deutchman, Lett. Nuovo Cim. 4, 61 (1970).

Nuclear Reactions: ${}^6\text{Li}({}^3\text{He}, p\alpha)$, $E=1$ MeV; calculated $\sigma(\theta(\alpha))$. DWBA.

70De42 *Contribution a l'Etude des Reactions a Hautes Energies sur l'Holmium et le Thulium*

A. Demeyer, R. Chery, N. Chevarier, A. Chevarier, J. Tousset, Tran Minh Duc, J. Phys. (Paris) 31, 847 (1970).

Nuclear Reactions: ^{169}Tm , $^{165}\text{Ho}(\alpha, xn)$, (α, pxn) , $E < 150 \text{ MeV}$; measured $\sigma(E)$.

70De43 *Impuretes de Parite dans la Transition Gamma de 279 keV de ^{203}Tl*

P. De Saintignon, M. Chabre, Phys. Lett. 33B, 463 (1970).

Radioactivity: ^{203}Hg ; measured γ -circular polarization. ^{203}Tl transition deduced parity impurity.

70De44 *Energy Parameters in the Rare-Earth Nuclei*

R. A. Demirkhanov, V. V. Dorokhov, Yad. Fiz. 12, 875 (1970).

Nuclear Structure: A=126-181; calculated mass, binding energy.

70De45 *Can the 7.65 MeV 0^+ State in ^{12}C Belong to a Linear Chain of α -Clusters (Question)*

N. de Takacsy, S. Das Gupta, Phys. Lett. 33B, 556 (1970).

Nuclear Structure: ^{12}C ; calculated levels, low-lying bands. α -cluster model.

70De46 *Mesure du Temps de Vie du Niveau Isomérique ^{78m}Br*

J. Demuynck, L. Dorikens-Vanpraet, M. Dorikens, J. Uyttenhove, J. Phys. (Paris) 31, 915 (1970).

Radioactivity: ^{78m}Br ; measured E_γ , I_γ , $T_{1/2}$.

70De47 *Coincidencias γ - γ en ^{140}Ce*

E. Y. de Aisenberg, A. N. Proto, CNEA-275 (1970).

Radioactivity: ^{140}La ; measured E_γ , I_γ , $\gamma\gamma$ -coin. ^{140}Ce deduced levels, γ -branching.

70DeZF *The Decay of Some Nuclei Far from the Stability Line Studied with Standard Spectroscopic Techniques*

F. W. N. de Boer, M. H. Cardoso, P. F. A. Goudsmit, P. Koldewijn, J. Konijn, B. J. Meijer, Proc. Int. Conf. Prop, Nuclei Far from Region of Beta-Stability, Leysin, Switzerland, Vol. 2, p. 939 (1970); CERN-70-30 (1970).

Radioactivity: $^{158}, ^{160}\text{Tm}$; measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $T_{1/2}$. $^{164\text{m}}\text{Tm}$, ^{172}W ; measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $T_{1/2}$, $\gamma\gamma$ -delay, $I(\text{ce})$. ^{159}Tm , $^{158}, ^{160}, ^{163}\text{Yb}$, $^{170}, ^{171}\text{Ta}$, $^{171\text{m}}\text{Ta}$, ^{176}Os ; measured $T_{1/2}$, $E\gamma$, $I\gamma$.

70DeZG

Report: COO-1265-94, P92

Nuclear Reactions: ^{154}Sm , ^{150}Sm , $^{148}\text{Sm}(\text{p,t})$, $E=19\text{ MeV}$; measured $\sigma(\theta)$. 152 , 148 , ^{146}Sm deduced levels, J , π .

70DeZH

Report: COO-1265-94, P48,R Delong

Nuclear Reactions: $^{27}\text{Al}(\text{d}, ^3\text{He})$, $E=20\text{ MeV}$; measured $\sigma(\theta)$. ^{26}Mg levels deduced S.

70DeZI

Report: COO-535-620, P79

Radioactivity: ^{23}Mg , ^{27}Si , ^{31}S , ^{35}Ar ; measured $T_{1/2}$, γ -spectra; deduced log ft for weaker branches.

70DeZJ

Report: 1970 Ann Rept Max-Planck Inst(Heidelberg), P23

Nuclear Reactions: reaction not specified; measured E_γ , recoil distance. ^{46}Ti , ^{50}Cr deduced levels, $T_{1/2}$, $B(E2)$.

70DeZK

Conference proceedings: Madurai(Nucl, Solid State Phys),Vol2,P314,10/25/71

Nuclear Structure: ^{18}O ; calculated binding energy, rms radius.

70DeZL

Conference proceedings: Madurai(Nucl, Solid State Phys),Vol2,P115,10/20/71

Nuclear Reactions: ^{27}Al , ^{51}V , $^{60}\text{Ni}(\gamma, \pi^+)$, E not given; calculated σ .

70DeZM

Conference proceedings: 70-10-02, P465

Radioactivity: ^{234}U ; measured $T_{1/2}$.

70DeZN

Report: LYCEN-7091, 10/25/71

Nuclear Reactions: Rb(α ,X), E < 54 MeV; measured σ (E), isomeric σ ratios.

70DeZO

Report: LYCEN-7013, E Descroix

Nuclear Reactions: $^{28}\text{Si}(\text{d},\text{p})$, $E=1\text{-}3\text{ MeV}$; measured $\sigma(E,\theta)$; deduced reaction mechanism.

70DeZP

Report: Louvain, Univ Catholique, 1970 Annual, P13, J Deutsch

Radioactivity: $^{26\text{m}}\text{Al}$; measured E_γ , I_γ , $I(\text{ce})$.

70DeZQ *Reassessment of Some Neutron Yields from the Longer-Lived Delayed Neutron Emitters*

P. del Marmol, P. Fettweis, D. C. Perricos, Proc. Int. Conf. Prop. Nuclei Far from Region of Beta-Stability, Leysin, Switzerland, Vol. 1, p. 517 (1970); CERN-70-30 (1970).

Radioactivity: ^{87}Br , ^{137}I ; measured $T_{1/2}$, delayed-n yield; deduced delayed-n emission probability. 87 , ^{88}Br ; measured delayed-n yield ratio.

70DeZR

Report: Louvain, Univ Catholique, 1970 Annual, P8, G Deconninck

Nuclear Reactions: $^{91}\text{Zr}(p,n)$, $(p,n\gamma)$, $E=2.6-4.3$ MeV; measured $\sigma(E;E_\gamma, E_n, \theta(n), \theta(\gamma))$. ^{92}Nb deduced resonances, isobaric analogs. ^{91}Nb deduced levels, J , π , γ -branching.

70DeZS

Report: Louvain, Univ Catholique, 1970 Annual, P7, G Deconnonck

Nuclear Reactions: $^{49}\text{Ti}(p,n)$, $(p,n\gamma)$, $E=2-4.2$ MeV; measured $\sigma(E;E\gamma,\theta)$. ^{50}V deduced resonances, isobaric analogs. ^{50}V - ^{50}Ti deduced Coulomb energy difference.

70DeZT

Report: Louvain, Univ Catholique, 1970 Annual, P7, G Deconninck

Nuclear Reactions: $^{51}\text{V}(\text{p}, \text{n})$, $E=2334$ keV; measured $\sigma(E; \theta)$. ^{52}Cr deduced isobaric analog resonance, J.

70DeZU *Nuclear Structure of ^{110}Pd and ^{116}Cd via the (p,p') and $(p,p'\gamma)$ Direct Reactions*

J. A. Deye, Thesis, Vanderbilt Univ. (1970); TID-25477 (1970)

Nuclear Reactions: ^{110}Pd , $^{116}\text{Cd}(p,p'\gamma)$, $E=12, 13$ MeV; measured E_γ , I_γ , $\sigma(E_{p'}, E_\gamma, \theta(p'))$. ^{110}Pd , ^{116}Cd deduced levels, γ -branching, $B(EL)$, deformation parameters β , J , π .

70DeZV

Report: 1970 Ann Rept IPN(Paris) P10

Nuclear Reactions: $^{133}\text{Cs}(\alpha, 4n\gamma)$, $E=50\text{ MeV}$; measured $\gamma\gamma$ -coin, $\gamma\gamma$ -delay. ^{133}La deduced levels, $T_{1/2}$.

70DeZW

Report: 1970 Ann Rept INS(Grenoble) P109

Nuclear Reactions: $^{133}\text{Cs}(\alpha,4n\gamma)$, $E=50\text{ MeV}$; measured E_γ , I_γ , $\gamma\gamma$ -coin, delays. ^{133}La deduced levels, γ -branching.

70DeZX

Thesis: J A Deye, Vanderbilt Univ, DABBB 31B 6186

Nuclear Reactions: ^{110}Pd , $^{116}\text{Cd}(p,p')$, $(p,p'\gamma)$, $E=12, 13$ MeV; measured $\sigma(E_{p'}, E_{\gamma}, \theta)$. ^{110}Pd , ^{116}Cd deduced levels, γ -branching, deformation parameters β .

70DeZZ

Report: LPN-UM-57 P59

Nuclear Reactions: $^{50}\text{Ti}(\text{d},\alpha)$, $E=12\text{ MeV}$; measured $\sigma(E\alpha, \theta)$. ^{48}Sc deduced levels, J , π .

70Di01 *Observation of the 2159-keV Level in ^{60}Ni Following the Beta Decay of ^{60}Co*

W. R. Dixon, R. S. Storey, Can. J. Phys. 48, 483 (1970).

Radioactivity: ^{60}Co ; measured E_γ , I_γ ; deduced β -branching. ^{60}Ni deduced levels, γ -branching. ^{64}Cu , ^{226}Ra ; measured E_γ .

70Di02 *A Study of Medium-Energy Proton Radiative Capture by Deuterons*

J. P. Didelez, H. Langevin-Joliot, Z. Maric, V. Radojevic, Nucl. Phys. A143, 602 (1970).

Nuclear Reactions: ${}^2\text{H}(p,\gamma)$, $E=156\text{ MeV}$; measured $\sigma(\theta(\gamma), \theta({}^3\text{He}))$; deduced reaction mechanism.

70Di03 *Additional Measurements of the Radiative Capture Cross Sections for 3 MeV Neutrons*

M. Diksic, P. Strohal, G. Peto, P. Bornemisza-Pauspertl, I. Hunyadi, J. Karolyi, Acta Phys. 28, 257 (1970).

Nuclear Reactions: ^{63}Cu , ^{74}Ge , ^{75}As , ^{80}Se , ^{81}Br , ^{130}Te , ^{141}Pr , ^{186}W , $^{209}\text{Bi}(n, \gamma)$, $E=3$ MeV; measured σ . ^{75}Ge , ^{81}Se , ^{142}Pr deduced isomeric σ ratios, spin cut-off parameters.

70Di04 *Spectroscopic Study of Rh^{105} by Direct (He^3 , d) and (p,α) Reactions*

D. L. Dittmer, W. W. Daehnick, Phys. Rev. C2, 238 (1970).

Nuclear Reactions: $^{104}Ru(^3He,d)$, $E=18$ MeV; $^{108}Pd(p,\alpha)$, $E=15$ MeV; measured $\sigma(E,d,\theta)$, $\sigma(E,\alpha,\theta)$. ^{105}Rh deduced levels, L, J, π , S.

70Di05 *Nuclear-Structure Studies with (d,t) Reactions on Pd^{110} , Pd^{108} , and Ru^{104}*

R. C. Diehl, B. L. Cohen, R. A. Moyer, L. H. Goldman, Phys. Rev. C1, 2086 (1970).

Nuclear Reactions: ^{104}Ru , 108 , $^{110}Pd(d,t)$, $E=17$ MeV; measured $\sigma(E,t,\theta)$. ^{103}Ru , 107 , ^{109}Pd deduced levels, L(n), J, π , S.

70Di06 *Spectroscopic Studies of Molybdenum Isotopes with (d,t) Reactions*

R. C. Diehl, B. L. Cohen, R. A. Moyer, L. H. Goldman, Phys. Rev. C1, 2132 (1970).

Nuclear Reactions: $^{94, 96, 100}\text{Mo}(d,t)$, $E=17$ MeV; measured $\sigma(E, \theta)$. $^{93, 95, 99}\text{Mo}$ deduced levels, L(n), J, π , S.

70Di07 *The $^{29}\text{Si}(p,\gamma)^{30}\text{P}$ and $^{29}\text{Si}(p,p'\gamma)^{29}\text{Si}$ Reactions from 1300 to 1850 keV*

G. U. Din, Aust. J. Phys. 23, 261 (1970).

Nuclear Reactions: $^{29}\text{Si}(p,\gamma)$, $(p,p'\gamma)$, $E=1.30\text{-}1.85$ MeV; measured $\sigma(E;E\gamma)$, $I\gamma$. ^{30}P deduced resonances, level-width, γ -branching.

70Di08 *Proton Total Reaction Cross Sections in the 10-20-MeV Range: Calcium-40 and Carbon-12*

J. F. Dicello, G. Igo, Phys. Rev. C2, 488 (1970).

Nuclear Reactions: $^{40}\text{Ca}(\text{p},\text{X})$, $E=10.3\text{-}21.6$ MeV; $^{12}\text{C}(\text{p},\text{X})$, $E=9.88\text{-}19.48$ MeV; measured $\sigma(E)$. ^{13}N deduced resonances.

70Di09 *An Improved High-Energy Gamma Spectrometer*

E. M. Diener, J. F. Amann, S. L. Blatt, P. Paul, Nucl. Instrum. Methods 83, 115 (1970).

Nuclear Reactions: $^3\text{H}(\text{p},\gamma)$, $E=4$ MeV; $^{12}\text{C}(\text{p},\gamma)$, $E=14.2$ MeV; $^{88}\text{Sr}(\text{p},\gamma)$, $E=9.4$ MeV; measured $\sigma(E\gamma)$.

70Di10 $^{28-30}\text{Si}(n, X\gamma)$ Reactions for $5.3 < E < 9.0$ MeV

J. K. Dickens, Phys. Rev. C2, 990 (1970).

Nuclear Reactions: $^{28, 29, 30}\text{Si}(n, X\gamma)$, $E=5.3-9.0$ MeV; measured $\sigma(E; E_\gamma, \theta(\gamma))$. ^{25}Mg , ^{28}Al , $^{28, 29, 30}\text{Si}$ deduced levels.

70Di11 *Hole-Vibration Coupling in ^{115}In*

F. S. Dietrich, B. Herskind, R. A. Naumann, R. G. Stokstad, Nucl. Phys. A155, 209 (1970).

Nuclear Reactions: $^{115}\text{In}(\text{d},\text{d}')$, $E=12$ MeV; measured $\sigma(\text{Ed}',\theta)$. $^{115}\text{In}(^{16}\text{O},^{16}\text{O}'\gamma)$, $E=41\text{-}55$ MeV; measured $\sigma(E;E(^{16}\text{O}'),E\gamma)$. ^{115}In deduced levels, J , π , $B(E2)$, branching ratios. Natural targets.

70Di12 *The ${}^7\text{Li}({}^3\text{He},d){}^8\text{Be}$ and ${}^7\text{Li}({}^3\text{He},p){}^8\text{Be}$ Reactions*

R. L. Dixon, R. D. Edge, Nucl. Phys. A156, 33 (1970).

Nuclear Reactions: ${}^7\text{Li}({}^3\text{He},d)$, ${}^7\text{Li}({}^3\text{He},p)$, $E=10$ MeV; measured $\sigma(\text{Ed},\theta)$, $\sigma(\text{Ep},\theta)$. ${}^8\text{Be}$ levels deduced S.

70Di13 *The γ -Rays of ^{107}In , $^{108*}\text{In}$ and ^{108}In*

V. A. Didorenko, Y. A. Andreev, V. R. Burmistrov, Izv. Akad. Nauk SSSR, Ser. Fiz. 34, 1771 (1970); Bull. Acad. Sci. USSR, Phys. Ser. 34, 1575 (1971)

Radioactivity: $^{107}, ^{108}\text{In}$ [from $^{106}, ^{108}\text{Cd}(\text{d}, \text{xn})$, (p, n) , $^{107}\text{Ag}(\alpha, \text{xn})$]; measured $E\gamma$, $I\gamma$; deduced ICC. $^{107}, ^{108}\text{Cd}$ deduced transitions.

70Di14 *Die Polarisation der Protonen Aus der Reaktion $^2\text{H}(d, p)^3\text{H}$ bei Deuteronenergien von 1.35 - 2.00 MeV*

G. Dietze, K. Lorenzen, Nucl. Phys. A158, 577 (1970).

Nuclear Reactions: $^2\text{H}(d,p)$, $E=1.35\text{-}2.00$ MeV; measured $P(E;\theta)$.

70Di15 *Microscopic Description of the Charge Form Factor of ^4He*

A. E. L. Dieperink, L. E. Wright, Lett. Nuovo Cim. 4, 395 (1970).

Nuclear Reactions: $^4\text{He}(e,e)$, E not given; calculated form factors.

70Di17 *Radionuclide Decay Schemes and Nuclear Parameters for Use in Radiation-Dose Estimation, Part 2*

L. T. Dillman, J. Nucl. Med. 11, Suppl. No. 4, 7 (1970).

Radioactivity: ^{11}C , ^{13}N , ^{15}O , ^{22}Na , ^{35}S , ^{43}K , ^{45}Ca , ^{47}Sc , ^{52}Mn , ^{52}Fe , ^{55}Fe , ^{58}Co , ^{65}Zn , ^{67}Ga , ^{68}Ga , $^{85\text{m}}\text{Kr}$, ^{85}Kr , ^{84}Rb , ^{99}Mo , ^{113}Sn , ^{124}I , ^{126}I , ^{130}I , ^{132}I , ^{133}I , ^{133}Ba , $^{195\text{m}}\text{Au}$, ^{195}Au , ^{199}Au ; compiled $E\gamma$, $I\gamma$, $E\beta$, $I\beta$, $E(\text{X-ray})$, $I(\text{X-ray})$, $I(\text{ce})$, $I(\text{Auger})$ data, ICC.

70Di18 *A Monoenergetic 6130-keV Gamma-Ray Source for Detector Calibration*

J. K. Dickens, R. D. Baybarz, Nucl. Instrum. Methods 85, 143 (1970).

Nuclear Reactions: $^{13}\text{C}(\alpha, n\gamma)$, E=alphas from ^{244}Cm source; measured E_γ .

70DiZW *Heavy-Ion in-Beam Spectroscopy*

R. M. Diamond, Proc. Int. Conf. Prop. Nuclei Far from Region of Beta-Stability, Leysin, Switzerland, Vol. 1, p. 65 (1970); CERN 70-30 (1970).

Nuclear Reactions: $^{152}\text{Sm}(\alpha, \alpha')$, $(^{16}\text{O}, ^{16}\text{O}')$, $(^{40}\text{Ar}, ^{40}\text{Ar}')$, E not given; measured B(E2). $^{204}\text{Hg}(\alpha, 2n\gamma)$, E not given; measured $\alpha\gamma(\theta, H, t)$. ^{152}Sm deduced B(E2), $\beta(L)$. ^{206}Pb level deduced μ .

70DiZX

Thesis: R L Dixon, Univ S Carolina, DABBB 31B 6186

Nuclear Reactions: ${}^7\text{Li}({}^3\text{He},\text{p})$, $({}^3\text{He},\text{d})$, $E=3\text{-}11\text{ MeV}$; measured $\sigma(\theta)$; deduced reaction mechanisms. ${}^8\text{Be}$ levels deduced S.

70DiZZ

Thesis: R Diehl, Univ Pittsburg, DABBB 31B 4921

Nuclear Reactions: $^{94, 96, 100}\text{Mo}(\text{d,t})$, $E=17\text{ MeV}$; ^{104}Ru , $^{108, 110}\text{Pd}(\text{d,t})$, $E=17\text{ MeV}$; measured $\sigma(E_t, \theta)$. $^{93, 95, 99}\text{Mo}$, ^{103}Ru , $^{107, 109}\text{Pd}$ deduced levels, $L(n)$, J , π .

70Dm01 *Gamma-Neutrino Correlation in Muon Capture in ^{14}N*

T. A. Dmitrieva, Z. Oziewicz, A. Pikulski, Nucl. Phys. A155, 205 (1970).

Nuclear Reactions: $^{14}\text{N}(\mu^-, \gamma)$, E approx 0; calculated $\gamma v(\theta)$.

70Do01 *Coincidence Measurements of the First Excited State at ^{73}Ge*

D. G. Douglas, Can. J. Phys. 48, 930 (1970).

Radioactivity: ^{73}As ; measured $\gamma\gamma$ -coin, $\gamma\gamma$ -delay. ^{73}Ge level deduced ICC, $T_{1/2}$.

70Do02 *Decay of ^{78}Br*

M. Dorikens, L. Dorikens-Vanpraet, J. Demuynck, Z. Phys. 233, 422 (1970).

Radioactivity: ^{78}Br ; measured E_γ , I_γ , $T_{1/2}$, $\gamma\gamma$ -coin; deduced log ft. ^{78}Se deduced levels, J, π , branching ratio. ^{80}Br ; measured E_γ , I_γ .

70Do03 *Photoexcitation of Isobaric Analogue Resonances in ^{208}Pb*

C. B. Dover, J. Hufner, Phys. Lett. 32B, 253 (1970).

Nuclear Reactions: $^{208}\text{Pb}(\gamma, p)$, $E=24.9$ MeV; measured $\sigma(E_p)$. ^{208}Pb deduced isobaric analog resonance, level-width.

70Do04 *Observation of Structure in the Spectrum of Pions Produced by Fermi Motion*

J. J. Domingo, B. W. Allardyce, C. H. Q. Ingram, S. Rohlin, N. W. Tanner, J. Rohlin, E. M. Rimmer, G. Jones, J. P. Girardeau-Montaut, Phys. Lett. 32B, 309 (1970).

Nuclear Reactions: ^{12}C , ^{13}C , $^{14}\text{N}(p,\pi^+)$, $E=600\text{ MeV}$; measured $\sigma(E\pi)$.

70Do05 *A Measurement of the Analysing Power of Aluminum for 490 MeV Protons*

J. D. Dowell, G. H. Grayer, T. J. McMahon, K. Ruddick, G. H. Eaton, Lett. Nuovo Cimento 3, 614 (1970).

Nuclear Reactions: $^{27}\text{Al}(\text{polarized p,p})$, $E=409\text{ MeV}$; measured analyzing power(θ).

70Do06 *Excitation of Particle-Hole States in ^{28}Si by Inelastic Electron Scattering at High Momentum-Transfer*

T. W. Donnelly, Jr., J. D. Walecka, G. E. Walker, I. Sick, Phys. Lett. 32B, 545 (1970).

Nuclear Reactions: $^{28}\text{Si}(e,e')$, $E=100\text{-}300\text{ MeV}$; measured $\sigma(E;Ee')$; deduced inelastic form factors. ^{28}Si deduced particle-hole structure.

70Do07 *On the Theory of ($^6\text{Li},d$) and ($^7\text{Li},t$) Reactions*

E. I. Dolinsky, V. V. Turovtsev, R. Yarmukhamedov, Phys. Lett. 33B, 147 (1970).

Nuclear Reactions: $^{12}\text{C}(^6\text{Li},d)$, $(^7\text{Li},t)$, $E=25, 30$ MeV; measured nothing; analyzed $\sigma(\theta)$ data. Peripheral model.

70Do08 *Monopole Mixing Ratio of the 793 keV $2^+ \rightarrow 2^+$ Transition in ^{184}W*

H. A. Doubt, W. D. Hamilton, K. E. Davies, Z. W. Grabowski, Nucl. Phys. A156, 353 (1970).

Radioactivity: ^{184}Re [from $^{184}\text{W}(\text{p},\text{n})$, natural $\text{W}(\text{d},2\text{n})$]; measured $\gamma\gamma(\theta)$, $\text{ce}\gamma(\theta)$. ^{184}W transitions deduced γ -mixing ratio, penetration parameter. Enriched target.

70Do09 *Mixing of Hartree-Fock States in ^{28}Si*

G. Do Dang, Nucl. Phys. A157, 231 (1970).

Nuclear Structure: ^{28}Si ; calculated levels, B(E2), mixing of Hartree-Fock states.

70Do10 *An Absorption Model for Direct Transfer Reactions*

J. Dobes, Nucl. Phys. A157, 661 (1970).

Nuclear Reactions: ^{12}C , ^{16}O , ^{28}Si , $^{40}\text{Ca}(\text{d,p})$, $E=12, 15, 26$ MeV; $^{40}\text{Ca}(\text{p,d})$, $E=27.5$ MeV; measured nothing; analyzed $\sigma(\theta)$.
 ^{13}C , ^{17}O , ^{29}Si , ^{39}Ca , ^{41}Ca levels deduced S. Absorption model.

70Do11 *States in Odd-Odd Tl^{200} Populated by the Electron-Capture Decay of Pb^{200}*

R. E. Doebler, W. C. McHarris, W. H. Kelly, Phys. Rev. C2, 2422 (1970).

Radioactivity: ^{200}Pb ; measured E_γ , I_γ , $\gamma\gamma$ -coin; deduced log ft, no isomer. ^{200}Tl deduced levels, ICC, γ -multipolarity, J, π .

70Do12 *Probabilite d'Emission de Particules Alpha au Cours de la Fission*

T. P. Doan, M. Asghar, C. Carles, R. Chastel, J. Phys. (Paris) 31, 929 (1970).

Nuclear Structure: ^{236}U , ^{252}Cf ; calculated α -emission probability.

70Do13 *On the Theory of the (${}^6\text{Li},d$) and (${}^7\text{Li},t$) Reactions*

E. I. Dolinskii, V. V. Turovtsev, R. Yarmukhamedov, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 2188 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1952 (1971)

Nuclear Reactions: ${}^{12}\text{C}({}^6\text{Li},d)$, $E=25$ MeV; ${}^{12}\text{C}({}^7\text{Li},t)$, $E=30$ MeV; ${}^{16}\text{O}({}^6\text{Li},d)$, $E=25$ MeV; ${}^{16}\text{O}({}^7\text{Li},t)$, $E=30$ MeV; analyzed $\sigma(\theta)$. Peripheral model.

70DoZS

Conference proceedings: Delft(Ang Correlations), P162,H Doubt

Radioactivity: ^{152}Eu ; measured $\gamma\gamma(\theta)$, $\text{ce}\gamma(\theta)$. ^{152}Sm transitions deduced γ -mixing.

70DoZT *Gamma Ray Spectroscopic Studies of States in Neutron-Deficient Pb and Ti Isotopes*

R. E. Doebler, Thesis, Michigan State Univ. (1970).

Radioactivity: ^{204m}Pb , ^{203m}Pb , ^{202m}Pb , 200 , ^{201}Pb , ^{199}Pb ; measured E_γ , I_γ , $\gamma\gamma$ -coin, ICC. 199 , 200 , 201 , ^{202}Ti deduced levels, J, π .
 203 , ^{204}Pb deduced levels, ICC, J, π .

70DoZU

Report: LUSY-7004, P Dougan

Nuclear Reactions: Cu, Ag, Au(γ ,p), $E < 400$ MeV; measured $\sigma(E;E_p, \theta)$.

70DoZV

Report: LUSY-7003, P Dougan

Nuclear Reactions: C, Al(γ ,p), $E < 400$ MeV; measured $\sigma(E;E_p,\theta)$.

70DoZW

Report: LUSY-7002, P Dougan

Nuclear Reactions: Li, Be(γ ,p), $E < 400$ MeV; measured $\sigma(E;E_p,\theta)$.

70DoZX

Report: LUSY-7006, P Dougan

Nuclear Reactions: O, Ca(γ ,p), E < 400 MeV; measured $\sigma(E;E_p,\theta)$.

70DoZY

Thesis: T Doron, Univ Rochester, DABBB 31B 3906

Radioactivity: ^{104}Cd , $^{104\text{m}}\text{Ag}$, $^{104\text{m}}\text{Rh}$, $^{96\text{m}}\text{Rh}$; measured $E\gamma$, $I\gamma$. ^{96}Ru , ^{104}Pd , ^{104}Ag deduced levels, J, π .

70DoZZ

Conference proceedings: 70-10-02, P74

Nuclear Reactions: ${}^3\text{He}(n,p)$, $E < 10$ MeV; reviewed σ data.

70Dr01 *Spectra of High-Energy Photons Emitted from the Compound System ^{64}Zn in Various Nuclear Reactions*

D. Drake, S. L. Whetstone, I. Halpern, Phys. Lett. 32B, 349 (1970).

Nuclear Reactions: $^{63}\text{Cu}(p, X\gamma)$, $^{61}\text{Ni}(^3\text{He}, X\gamma)$, $^{60}\text{Ni}(\alpha, X\gamma)$, E approx 10-20 MeV; measured $\sigma(E; E\gamma)$.

70Dr02 *Alpha-Particle Scattering from the 3^+ Unnatural and the 4^+ Natural Parity States in ^{24}Mg*

A. G. Drentje, J. D. A. Roeders, Phys. Lett. 32B, 356 (1970).

Nuclear Reactions: $^{24}\text{Mg}(\alpha, \alpha')$, $E=19\text{-}22$ MeV; measured $\sigma(E; \theta)$; deduced reaction mechanism.

70Dr03 *Nuclear Structure Effect in Internal Conversion of the 57.54 keV E1 Transition in ^{180}Hf*

O. Dragoun, Z. Plajner, B. Martin, Nucl. Phys. A150, 291 (1970).

Radioactivity: $^{180\text{m}}\text{Hf}$ [from $^{179}\text{Hf}(n,\gamma)$]; measured I(ce). ^{180}Hf deduced structure parameters for hindered E1 transition. Enriched targets.

70Dr04 ^{135m}Ce and ^{137m}Nd : Isomeric States in $N = 77$ Isotones

C. Droste, W. Neubert, J. Lewitowicz, S. Chojnacki, T. Morek, Z. Wilhelmi, K. F. Alexander, Nucl. Phys. A152, 579 (1970).

Nuclear Reactions: $^{128}\text{Te}(^{12}\text{C}, 5n)$, $E=78$ MeV; $^{119}, ^{122}\text{Sn}(^{22}\text{Ne}, xn)$, $(^{20}\text{Ne}, xn)$, $E=60-160$ MeV; $^{126}\text{Te}(^{18}\text{O}, 7n)$, E not given; $^{124}, ^{126}\text{Te}(^{20}\text{Ne}, xn)$, $E=115, 135$ MeV; measured $\sigma(E)$, $E\gamma$, $I\gamma$, $I(\text{ce})$, $(\text{HI})\gamma$ -delay. ^{135}Ce deduced levels, J , π . ^{137}Nd deduced levels, $T_{1/2}$. ^{139}Sm deduced no isomeric with $5 \text{ ms} < T_{1/2} < 3 \text{ s}$. Enriched targets.

70Dr05 *Spontaneous Fission of Some Fm Isotopes*

V. A. Druin, N. K. Skobelev, V. I. Rud, Yad. Fiz. 12, 44 (1970); Sov. J. Nucl. Phys. 12, 24 (1971).

Radioactivity: Fission $^{246}, ^{248}, ^{250}\text{Fm}(\text{SF})$; measured $T_{1/2}$.

70Dr06 *A Test of the Collective Correlations Calculation of the Dipole States of ^{28}Si*

D. Drechsel, B. M. Spicer, Z. Phys. 238, 1 (1970).

Nuclear Reactions: $^{28}\text{Si}(\gamma, p)$, $E=17.6$ MeV; calculated population of ^{27}Al states. Collective correlations model.

70Dr07 *Application of the Hartree-Fock Variational Method to Center-of-Mass Motion*

R. M. Dreizler, F. R. Krejs, A. Klein, Nucl. Phys. A155, 33 (1970).

Nuclear Structure: ^{12}C , ^{16}O ; calculated charge radii. C-M corrections.

70Dr08 *Radioactive Properties of Isotopes of Element 103*

V. A. Druin, Yad. Fiz. 12, 268 (1970); Sov. J. Nucl. Phys. 12, 146 (1971).

Radioactivity: 255 , 256 , ^{257}Lr ; measured nothing; analyzed previous data.

70Dr09 *Lifetime of a New 194.9 keV Level in ^{77}As*

H. Drost, G. Weyer, Nucl. Phys. A159, 540 (1970).

Radioactivity: ^{77}Ge [from $^{76}\text{Ge}(n,\gamma)$]; measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $\gamma\gamma$ -delay. ^{77}As deduced levels, J, π , $T_{1/2}$. Natural, enriched targets.

70Dr10 Particle Gamma

J. Draper, E. Byrnes, D. McCauley, A. Sauter, W. Wyckoff, UCD-CNL-125, p. 30 (1970).

Nuclear Reactions: $\text{Se}(\alpha, 2n\gamma), (\alpha, 4n\gamma), {}^{198}, {}^{200}, {}^{202}, {}^{204}\text{Hg}(\alpha, 2n\gamma)$, E not given; measured $E_\gamma, I_\gamma, \sigma(E_\gamma, \theta(\gamma))$. ${}^{76}, {}^{78}, {}^{80}, {}^{82}, {}^{84}\text{Kr}$, ${}^{200}, {}^{202}, {}^{204}, {}^{206}\text{Pb}$ deduced levels, J, π , γ -branching.

70DrZW

Report: 1970 Ann Rept Max-Planck Inst(Heidelberg), P71

Radioactivity: ^{191}Os ; measured L-, M-, N-, O-subshell I(ce) ratios. ^{191}Ir transitions deduced ICC.

70DrZX

Conference proceedings: Delft(Ang Correlations), P549,H Drost

Radioactivity: ^{134m}Cs ; measured $\gamma\gamma(\theta, H, t)$, $\gamma\gamma$ -delay. ^{134}Cs level deduced μ , $T_{1/2}$.

70DrZY *Investigation of the α -Decay of the Element 105 Isotopes*

V. A. Druin, A. G. Demin, Y. P. Kharitonov, G. N. Akapiev, V. I. Rud, G. Y. Sun-Tzin-Yan, L. P. Chelnokov, K. A. Gavrilov, JINR-P7-5161 (1970).

Radioactivity: Element-105; measured $E\alpha$, $I\alpha$.

70DrZZ

Report: 1970 Ann Rept Max-Planck Inst(Heidelberg), P74

Radioactivity: ^{131}Ba , ^{180}Ta , ^{198}Au , ^{192}Ir , ^{166}Tm ; measured I(ce). ^{131}Cs , ^{180}Hf , ^{198}Hg , ^{166}Er , ^{192}Pt transitions deduced ICC.

70Du01 *Observation of $T = 4$ States in ^{46}Ca and Level Structure of ^{46}K*

Y. Dupont, P. Martin, M. Chabre, Phys. Lett. 31B, 68 (1970).

Nuclear Reactions: $^{48}\text{Ca}(p,t)$, $(p,^3\text{He})$, $E=40$ MeV; measured $\sigma(E,t,\theta)$, $\sigma(E(^3\text{He}),\theta)$. ^{46}K , ^{46}Ca deduced levels, J , π , isobaric analogs.

70Du02 *Capture Cross Section of ^{242}Pu*

R. W. Durham, F. Molson, Can. J. Phys. 48, 716 (1970).

Radioactivity: ^{242}Pu ; measured $T_{1/2}$. ^{243}Am ; deduced $T_{1/2}$.

70Du03 *The Structure of the 5280 and 5950 keV States of ^{30}Si*

J. L. Durell, R. D. Symes, Phys. Lett. 31B, 358 (1970).

Nuclear Reactions: $^{27}\text{Al}(\alpha, p\gamma)$, $E=6.3$ MeV; $^{30}\text{Si}(\alpha, \alpha'\gamma)$, $E=14.5$ MeV; measured Doppler shift attenuation, $\sigma(\theta(\alpha'\gamma))$. ^{30}Si levels deduced $T_{1/2}$, J , π .

70Du04 *Nonconservation of Isospin in the $^{14}\text{N}(d,d')^{14}\text{N}$ Reaction*

J. R. Duray, C. P. Browne, Phys. Rev. C1, 776 (1970).

Nuclear Reactions: $^{14}\text{N}(d,d')$, $E=5\text{-}10$ MeV; measured $\sigma(E;E_d', \theta)$; deduced isospin violation, reaction mechanism. ^{16}O deduced resonances, J, π .

70Du05 *Decay of ^{63}Ga*

G. H. Dulfer, H. E. Beertema, H. Verheul, Nucl. Phys. A149, 518 (1970).

Radioactivity: ^{63}Ga [from $^{64}\text{Zn}(p,2n)$]; measured E_γ , I_γ , $T_{1/2}$; deduced log ft. ^{63}Zn deduced levels J, π . Enriched target. Ge(Li) detectors.

70Du06 *Analytical Sensitivities and Energies of Thermal-Neutron-Capture Gamma Rays*

D. Duffey, A. El-Kady, F. E. Senftle, Nucl. Instrum. Methods 80, 149 (1970).

70Du07 ^3He Elastic Scattering from ^{10}B and ^{14}C in the Range 4 to 18 MeV

J. L. Duggan, J. Y. Park, S. D. Danielopoulos, P. D. Miller, J. Lin, M. M. Duncan, R. L. Dangle, Nucl. Phys. A151, 107 (1970).

Nuclear Reactions: $^{10}\text{B}(^3\text{He}, ^3\text{He})^{10}\text{B}$, $^{14}\text{C}(^3\text{He}, ^3\text{He})^{14}\text{C}$, $E = 4\text{-}18\text{ MeV}$; measured $\sigma(E;\theta)$; deduced optical potential parameters.

70Du08 ($^3\text{He}, t$) Reactions on the $T = 1$ Nuclei ^{18}O , ^{22}Ne , ^{26}Mg and ^{30}Si

H. H. Duhm, K. Peterseim, R. Seehars, R. Finlay, C. Detraz, Nucl. Phys. A151, 579 (1970).

Nuclear Reactions: $^{26}\text{Mg}(^3\text{He}, ^3\text{He})$, $(^3\text{He}, ^3\text{He}')$, $E=16, 30 \text{ MeV}$; ^{18}O , ^{22}Ne , ^{26}Mg , $^{30}\text{Si}(^3\text{He}, t)$, $E=16, 30 \text{ MeV}$; measured $\sigma(E(^3\text{He}'), \theta)$, $\sigma(Et, \theta)$. ^{18}F , ^{22}Na , ^{26}Al , ^{30}P levels deduced L.

70Du09 *Strength-Function Phenomena in Electron-Capture Beta Decay*

C. L. Duke, P. G. Hansen, O. B. Nielsen, G. Rudstam, Nucl. Phys. A151, 609 (1970).

Radioactivity: $^{182, 183, 184, 185}\text{Ir}$, $^{182, 183, 184, 185, 186, 187}\text{Pt}$, $^{183, 184, 185, 186, 187, 188, 189, 190, 191}\text{Au}$, $^{202, 204}\text{Bi}$, $^{200, 202, 203, 204, 205, 207}\text{Po}$, $^{204, 205, 206, 207, 208, 209, 210}\text{At}$, $^{205, 206, 207, 208, 209, 210}\text{Rn}$; measured total-absorption γ spectra; deduced beta strength functions $S\beta(E)$. Mass-separated samples.

70Du10 *Negative Parity States in ^{198}Hg*

G. H. Dulfer, H. Ton, M. E. J. Wigmans, H. Verheul, Nucl. Phys. A153, 121 (1970).

Radioactivity: $^{198\text{m}}\text{Tl}$ [from $^{197}\text{Au}(\alpha,3\text{n})$]; measured $E\gamma$, $I\gamma$, $\gamma\text{ce-delay}$, $\gamma\gamma$ -, $\gamma\text{ce-coin}$. ^{198}Hg deduced levels, $T_{1/2}$, ICC, γ -multipolarity, J, π . Ge(Li), Si(Li) detectors, double-focusing β -spectrometer, scintillators. Mass separated sources.

70Du12 *Regularities of Photonuclear Reactions as a Manifestation of Properties of Feynman Diagrams*

E. I. Dubovoi, Yad. Fiz. 12, 965 (1970); Sov. J. Nucl. Phys. 12, 526 (1971).

Nuclear Structure: ^{12}C , ^{16}O , ^{19}F , ^{208}Pb ; calculated giant resonance structure, triangular Feynman diagrams.

70Du13 *Reaction Cross Sections of $^{85}\text{Rb}(n,\gamma)^{86m}\text{Rb}$, $^{87}\text{Rb}(n,\gamma)^{88}\text{Rb}$, and $^{89}\text{Y}(n,\gamma)^{90m}\text{Y}$ between 0.16 MeV and 1.5 MeV*

N. D. Dudey, R. R. Heinrich, A. A. Madson, J. Nucl. Energy 24, 181 (1970).

Nuclear Reactions: $^{85}, ^{87}\text{Rb}$, $^{89}\text{Y}(n,\gamma)$, $E=0.16\text{-}1.5\text{ MeV}$; measured activation $\sigma(E)$.

70DuZT *Three-Quasiparticle States in ^{139}La*

J. L. Dubard, R. K. Sheline, J. B. Ball, Bull. Amer. Phys. Soc. 15, No. 12, 1670, CD9 (1970)

Nuclear Reactions: $^{138}\text{La}(\text{d},\text{p})$, $E=12\text{ MeV}$; measured $\sigma(E_p)$, Q . ^{139}La deduced levels, $L(n)$.

70DuZU

Conference proceedings: Predeal, Romania(Nucl Reactions) P353

Radioactivity: $^{175\text{m}}\text{Yb}$; measured E_γ , $I(\text{ce})$. Deduced ICC. ^{175}Yb deduced transition, γ -mixing.

70DuZW

Report: LYCEN-7051, 8/26/71

Radioactivity: ^{141}Pm ; measured $\gamma\gamma$ -delay, $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $E\beta$, $I\beta$, $I(\text{ce})$; deduced Q , $\log ft$. ^{141}Nd deduced levels, J , π , γ -branching, $T_{1/2}$.

70DuZX

Report: 1970 Ann Rept INS(Grenoble) P39

Nuclear Reactions: $^{44, 48}\text{Ca}(p, ^3\text{He})$, $E=56$ MeV; measured $\sigma(E(^3\text{He}), \theta)$. $^{42, 46}\text{K}$ deduced levels, isobaric analogs.

70DuZY

Report: SUNI 14 P18

Nuclear Reactions: $^{22}\text{Ne}(p,\gamma)$, $E=1\text{-}2\text{ MeV}$; measured $\sigma(E;E\gamma)$. ^{23}Na deduced resonances, levels, J , π , γ -branching.

70DuZZ

Conference proceedings: Leysin Vol2 P1075, CERN 70-30

Radioactivity: $^{63}, ^{65}\text{Ga}$; measured E_γ , I_γ ; deduced $\log ft$. $^{63}, ^{65}\text{Zn}$ deduced levels, J , π .

70Dy01 *The Kinetic Energy of Fragments in the Fission of ^{235}U by Neutrons with Energies from 0 to 0.6 MeV*

P. P. Dyachenko, B. D. Kuzminov, A. Lajtai, Phys. Lett. 31B, 122 (1970).

Nuclear Reactions: $^{235}\text{U}(\text{n},\text{F})$, $E = 0\text{-}0.6$ MeV; measured fission fragment mass, energy distributions.

70Dz01 *Isospin Mixing for Bound Analog States in ^{56}Co and ^{58}Co*

T. G. Dzubay, R. Sherr, F. D. Becchetti, Jr., D. Dehnhard, Nucl. Phys. A142, 488 (1970).

Nuclear Reactions: $^{54, 56, 58}\text{Fe}(^3\text{He}, t)$, $E=24.6$ MeV; measured $\sigma(E, \theta)$. $^{56, 58}\text{Co}$ deduced analog states, J , π , isospin mixing.

70Dz02 Decay of ^{66}Ge

B. S. Dzhelepov, A. V. Mozzhukhin, T. I. Popova, V. P. Prikhodtseva, Izv. Akad. Nauk SSSR, Ser. Fiz. 34, 29 (1970); Bull. Acad. Sci. USSR, Phys. Ser. 34, 29 (1971)

Radioactivity: ^{66}Ge [from $\text{Ge}(\text{fast p}, \text{X})$, $\text{Fe}(^{12}\text{C}, 2\text{n})$]; measured E_γ , I_γ ; deduced $\log ft$, β^+/EC branching. ^{66}Ga deduced levels, J , π . $\text{Ge}(\text{Li})$ detector.

70Dz03 *Effective Forces and the Three-Body Problem in Nuclear Physics*

R. I. Dzhibuti, N. B. Krupennikova, Yad. Fiz. 11, 355 (1970); Sov. J. Nucl. Phys. 11, 199 (1970).

Nuclear Structure: ^3He ; calculated binding, Coulomb energy.

Nuclear Reactions: $^3\text{He}(\gamma, n)$, $E=10\text{-}30$ MeV; calculated $\sigma(E)$.

70Dz04 *Energy Levels of ^{36}K*

T. G. Dzubay, A. A. Jaffe, E. J. Ludwig, T. A. White, F. Everling, D. W. Miller, D. A. Outlaw, Phys. Lett. 33B, 302 (1970).

Nuclear Reactions: $^{36}\text{Ar}(^3\text{He},t)$, $E=22.17$ MeV; measured $\sigma(Et)$, Q . ^{36}K deduced levels, mass excess.

70Dz05 *Internal Conversion Electron Spectra of ^{69}Ge*

B. S. Dzhelepov, V. V. Ilin, L. N. Moskvina, T. I. Popova, V. P. Prikhodtseva, I. A. Sokolov, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 1610 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1429 (1971)

Radioactivity: ^{69}Ge [from $\text{Co}(40\text{-MeV } ^{12}\text{C})$]; measured E_γ , $I(\text{ce})$. ^{69}Ga transitions deduced ICC, γ -mixing.

70Dz06 *The γ -Rays of ^{66}Ge*

B. S. Dzhelepov, V. V. Ilin, T. I. Popova, V. P. Prikhodtseva, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 1666 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1481 (1971)

Radioactivity: ^{66}Ge [from $^{56}\text{Fe}(^{12}\text{C}, 2n)$]; measured E_γ , I_γ . ^{66}Ga deduced levels. Ge(Li) detector.

70Dz08

B. S. Dzhelepov, S. F. Koksharova, A Table of the Energies of Gamma Rays Arising from the Decay of Radioactive Nuclei, Izdatel'stva Nauk, Leningrad (1970).

70Dz09 *Levels of ^{76}Se Excited in the Decay of ^{76}Br*

B. S. Dzhelepov, A. G. Dmitriev, Z. Zhelev, N. N. Zhukovskii, L. N. Moskvina, V. I. Fominykh, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 2062 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1838 (1971)

Radioactivity: ^{76}Br [from $\text{Yb}(660\text{-MeV } p, X)$]; measured E_γ , $I(\text{ce})$, $\gamma\gamma$ -coin. ^{76}Se deduced levels, J , π , ICC.

70Dz10 *γ -Ray Spectrum of ^{77}Br and $\gamma\gamma$ Coincidences Following Decay of ^{75}Br and ^{77}Br*

B. S. Dzhelepov, A. G. Dmitriev, N. N. Zhukovskii, A. V. Mozzhukhin, V. I. Fominykh, Izv. Akad. Nauk SSSR, Ser. Fiz. 34, 2070 (1970); Bull. Acad. Sci. USSR, Phys. Ser. 34, 1845 (1971)

Radioactivity: ^{75}Br [from $^{65}\text{Cu}(^{12}\text{C},2n)$]; measured $\gamma\gamma$ -coin, $I\gamma\gamma$. ^{77}Br ; measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $I\gamma\gamma$. 75 , ^{77}Se deduced levels.

70Dz11 *New Experimental Data on the Decay of ^{169}Lu and ^{170}Lu*

B. S. Dzhelepov, V. E. Ter-Nersesyants, I. F. Uchevatkin, S. A. Shestopalova, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 2083 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1858 (1971)

Radioactivity: ^{169}Lu , ^{170}Lu ; measured E_γ , $I(\text{ce})$.

70Dz12 *New Results on the Decay of ^{225}Ac*

B. S. Dzhelepov, A. V. Zolotavin, R. B. Ivanov, M. A. Mikhailova, V. O. Sergeev, M. I. Sovtsov, *Izv. Akad. Nauk SSSR, Ser. Fiz.* 34, 2127 (1970); *Bull. Acad. Sci. USSR, Phys. Ser.* 34, 1897 (1971)

Radioactivity: ^{225}Ac ; measured E_γ , $I(\text{ce})$. ^{221}Fr transitions deduced γ -multipolarity.

70DzZX *The Mass Coefficient in the Nucleus Collective Hamiltonian and Sum Rules for the Probabilities of E2-Transitions and of Quadrupole Moments*

R. V. Dzholos, JINR-P4-5346 (1970).

Nuclear Structure: $^{100}, ^{102}, ^{104}\text{Ru}$, $^{106}, ^{108}, ^{110}\text{Pd}$, $^{110}, ^{112}, ^{114}, ^{116}\text{Cd}$, ^{154}Sm , ^{156}Gd , ^{160}Dy , ^{190}Os , $^{194}, ^{196}\text{Pt}$; calculated quadrupole moment, $B(E2)$.

70DzZY

Report: IAE-2000, B M Dzyuba, 9/20/71

Nuclear Structure: ^3H , ^3He ; calculated binding energy, wave function.

70DzZZ

Report: IAE-2000, B M Dzyuba

Nuclear Structure: ^3H , ^3He ; calculated binding energy, wave function.