

PUBLICATION OF HENRY W. NEWSON

Disintegration of Light Atomic Nuclei by the Capture of Fast Neutrons, W. D. Harkins, D. M. Gans and H. W. Newson, Nature, No. 3331, Vol. **132**, 358 (1933).

The Disintegration of the Nuclei of Nitrogen and Other Light Atoms by Neutrons I, W. D. Harkins, D. M. Gans and H. W. Newson, Phys. Rev. **44**, 529 (1933).

Atomic Disintegration by a Relatively Slow Neutron, W. D. Harkins, D. M. Gans, and H. W. Newson, Phys. Rev. **43**, 208 (1933).

Disintegrations of Neon Nuclei by Fast Neutrons, W. D. Harkins, D. M. Gans, and H. W. Newson, Phys. Rev. **44**, 236 (1933).

Failure to Detect the Radioactivity of Beryllium with the Wilson Cloud Chamber, D. M. Gans, W. D. Harkins and H. W. Newson, Phys. Rev. **44**, 310 (1933).

A Neutron of High Velocity, and Energy Relations for Nuclear Disintegration by Non-Capture, W. D. Harkins, D. M. Gans and H. W. Newson, Phys. Rev. **43**, 584, (1933).

Disintegration of Fluorine Nuclei by Neutrons and the Probable Formation of a New Isotope of Nitrogen (N^{16}), W. D. Harkins, D. M. Gans and H. W. Newson, Phys. Rev. **44**, 11, 945 (1933).

The Radioactivity Induced in Oxygen by Deuteron Bombardment, H. W. Newson, Phys. Rev. **48**, 790 (1935).

The Disintegration of the Nuclei of Light Atoms by Neutrons II, Neon, Fluorine and Carbon, W. D. Harkins, D. M. Gans and H. W. Newson, Phys. Rev. **47**, 52 (1935).

Neutron-Proton Interaction: The Scattering of Neutrons by Protons, W. D. Harkins, M. D. Kamen, H. W. Newson and D. M. Gans, Phys. Rev. **50**, 11 (1936).

The Radioactivity Induced in Silicon and Phosphorus by Deuteron Bombardment, H. W. Newson, Phys. Rev. **51**, 624 (1937).

Transmutation Function at High Bombarding Energies, H. W. Newson, Phys. Rev. **51**, 620 (1937).

PUBLICATION OF HENRY W. NEWSON

The Determination of Nuclear Reaction Energies for a Mixture of Copper Isotopes, H. W. Newson and L. B. Borst, Bulletin of the American Physical Society, Vol. **16**, 142 (1941).

The Analysis of Neutron Resonances in the Kev Region, E. Merzbacher, P. W. Crutchfield, Jr. and H. W. Newson.

Shell Effects in Highly Excited Nuclei, H. W. Newson and R. H. Rohrer, Phys. Rev. **94**, 654 (1954).

Neutron Resonances in the Kev Region: Heavy Even Elements, H. W. Newson, J. H. Gibbons, H. Marshak, R. M. Williamson, R. A. Mobley, A. L. Toller and R. Block, Phys. Rev. **102**, 1580 (1956).

Li^7 (p,n), (p,p' , γ), and (p, γ) Reactions near Neutron Threshold, H. W. Newson, R. M. Williamson, K. W. Jones, J.H. Gibbons and H. Marshak, Phys. Rev. **108**, 1294 (1957).

Neutron Resonances in the Kilovolt Region: Potassium, Aluminum, and Sodium, L. Toller and H. W. Newson.

Neutron Resonances in the Kev Region: Heavier Odd Elements, H. W. Newson, J. H. Gibbons, H. Marshak, R. M. Williamson, R. C. Mobley, J. R. Patterson and P.F. Nichols, Phys. Rev. **105**, 198 (1957).

Neutron Resonances in the Kev Region: Odd-Intermediate Nuclei, H. Marshak and H. W. Newson, Phys. Rev. **106**, 110 (1957).

Method of Cancelling Energy Fluctuations of a Van de Graaff Ion Beam, P. B. Parks, H. W. Newson and R. M. Williamson, The Rev. of Scientific Instruments, **29**, 10, 834 (1958).

Neutrons Resonances in the Kev Region: Differential Scattering Cross Sections, R. C. Block, W. Haeberli and H. W. Newson, Phys. Rev. **109**, 1620 (1958).

High Resolution Neutron Spectroscopy, H. W. Newson and R.M. Williamson, Nuclear Instruments and Methods **7**, 67 (1960).

s- and p-Wave Neutron Spectroscopy, Part 1. Peak Height Analysis and Level Assignments, E. Merzbacher, H.W. Newson and P.W. Crutchfield, Jr., Ann. Phys. **8**, 195 (1959).

s- and p-Wave Neutron Spectroscopy, Part II. Even-Even Nuclei, H. W. Newson, R. C. Block, P. F. Nichols, A. Taylor and A. K. Furr, and E. Merzbacher Ann. Phys. **8**, 211 (1959).

PUBLICATION OF HENRY W. NEWSON

s- and p-Wave Neutron Spectroscopy, Part IV. Experimental Methods in the Kev Region, H. W. Newson, P. F. Nichols and E. G. Bilpuch, *Ann. Phys.* **8**, 250 (1959).

Shell Effects at High Excitation Energies, H. W. Newson and M. M. Duncan, *Phys. Rev. Letters* **3**, 45 (1959).

The $Li^7(p,n)Be^7$ Reaction, H. W. Newson and J. H. Gibbons, *Fast Neutron Physics Part 1*, ed. Marion and Fowler, (1960).

Correlations in Nucleon Motions, H. W. Newson, *Proceedings of the International Conference on Nuclear Structure*, ed. Bromley and Vogt, 301(1960).

Neutron Capture Cross Section in the Kev Region, Part 1. Methods of Measurement and Analysis, H. W. Newson, E. G. Bilpuch and L. W. Weston, *Ann. Phys.* **10**, 455 (1960).

Neutron Capture Cross Section in the Kev Region, Part II. Spin-Orbit Coupling and the Optical Model, H. W. Newson, L. W. Weston, K. K. Seth, and E. G. Bilpuch, *Ann. Phys.* **10**, 477 (1960).

Symmetric and Asymmetric Fission, H. W. Newson, *Phys. Rev.* **122**, 1224 (1961).

s- and p-Wave Neutron Spectroscopy, Part V. Level Spacing in Heavy Nuclei, H. W. Newson, J. H. Gibbons, H. Marshak, E. G. Bilpuch, R. H. Rohrer and P. Capp, *Ann. Phys.* **14**, 1224 (1961).

s- and p-Wave Neutron Spectroscopy, Part VI. Level Density and Neutron Excess, H. W. Newson, E. G. Bilpuch, F. P. Karriker, L. W. Weston, J. R. Patterson and C. D. Bowman, *Ann. Phys.* **14**, 365 (1961).

s- and p-Wave Neutron Spectroscopy, Part VII. Widths of Neutron Resonances, H. W. Newson, E. G. Bilpuch, K. K. Seth, C. D. Bowman, R. H. Tabony and R. C. Smith, *Ann. Phys.* **14**, 387 (1961).

Collective Motion in Highly Excited Nuclei, H. W. Newson, *Proceedings of the Rutherford Jubilee Conference*, ed., J. B. Birks (1961).

s- and p-Wave Neutron Spectroscopy, Part VIII. Subshell Effect on Nuclear Level Spacing Near $A=50$, H. W. Newson, C. D. Bowman and E. G. Bilpuch, *Ann. Phys.* **17**, 319 (1962).

PUBLICATION OF HENRY W. NEWSON

Neutron Cross Sections in the Kev Region, H. W. Newson and J. H. Gibbons, Fast Neutron Physics, Chapter V, ed. Marion and Fowler, Interscience Publishers, Inc., New York, (1963) Chap. V (1963).

Total Neutron Cross Sections of Carbon, H. W. Newson, E. G. Bilpuch and K. K. Seth, Nuclear Physics Nucl. Phys. 47 (1963).

A Cryogenic System for the Production of Very Thin Targets, H. W. Newson, P. B. Parks, P. M. Beard, and E. G. Bilpuch, RSI, to be published (1963).

Inelastic Scattering of Protons by Cr^{50} , H. W. Newson, G. C. Kyker, Jr., and E. G. Bilpuch, Bull. Am. Phys. Soc. **8**, 367 (1963).

Average Total Neutron Cross Section I. H. W. Newson, K. K. Seth, R. H. Tabony and E. G. Bilpuch, Bull. Am. Phys. Soc. **8**, 120 (1963).

Average Total Neutron Cross Section II. H. W. Newson, R. H. Tabony, K. K. Seth and E. G. Bilpuch, Bull. Am. Phys. Soc. **8**, 120 (1963).

Neutron Resonance Phenomena, H. W. Newson, Progress in Fast Neutron Physics, Phillips, Marion and Risser ed. (1963).

s-, p- and d-Wave Neutron Strength Functions, H. W. Newson, K. K. Seth, R. H. Tabony and E. G. Bilpuch. Phys. Lett. **13**, 70 (1964).

s-, p- and d--Wave Neutron Strength Functions and The Optical Model, H. W. Newson, K. K. Seth, R. H. Tabony, and E. G. Bilpuch, Comptes Rendus du Congres International de Physique Nucleaire II, 1916 (1964).

A Possible Doorway State in Pb^{207} and Pb^{208} , H. W. Newson, J. A. Farrell, G. C. Kyker, Jr. and E. G. Bilpuch, Phys. Lett. **15**, 286 (1965).

A Precision Measurement of Reaction Thresholds, H. W. Newson, P. B. Parks, P. M. Beard, and E. G. Bilpuch, Nuclear Phys. **85**, 504 (1966).

s- and p-Wave Neutron Spectroscopy; Part XI-a. Level Spacing in Even Intermediates Elements, H. W. Newson, J. A. Farrell and E. G. Bilpuch, Ann. Phys. **37**, 367 (1966).

Fine Structure of Isobaric Analogue Resonances in ^{41}K , H. W. Newson, G. A. Keyworth, G. C. Kyker, Jr. and E. G. Bilpuch, Phys. Lett. **20**, 281 (1966).

High Resolution Neutron Spectroscopy, H. W. Newson and E. G. Bilpuch, Accelerator Targets Designed for the Production of Neutrons, Euratom **2641** dfe 297-324 (Brussels, 1966).

PUBLICATION OF HENRY W. NEWSON

Strength Functions and Nuclear Size, H. W. Newson, Nuclear Structure Study With Neutrons, Proceeding of the International Conference on the Study of Nuclear Structure with Neutrons, Antwerp, (1965). (Editors: M. Veve de Mevergnies, P. Van Assche and J. Vervier).

Resonance Structure Above 100 KeV, H. W. Newson, Conference on Neutron Cross Section Technology, Vol. 2, 562-576 (1966).

Fission Product and Neutron Yields, H. W. Newson, Contributions, International Conference on Nuclear Structure, 219 (1967).

A High-Resolution Study of Isobaric Resonances in ^{41}K , H. W. Newson, G. A. Keyworth, G. C. Kyker, Jr. and E. G. Bilpuch, Nuclear Phys. **89**, 590-608 (1966).

A Method of High-Resolution Data Acquisition, H. W. Newson, N. R. Roberson, F. T. Seibel and E. G. Bilpuch, Nuclear Instruments and Methods, **47**, 244-248 (1967).

The Fine Structure of Isobaric Analogue Resonances in ^{43}Sc and ^{45}Sc , J. C. Browne, G. A. Keyworth, D. P. Lindstrom, J. D. Moses, H. W. Newson, E. G. Bilpuch, and P. Wilhjelm, Phys. Lett. **28B** (1968).

High Resolution Inelastic Proton Scattering Near $A = 50$, G. C. Kyker, Jr., E. G. Bilpuch and H. W. Newson, Ann. Phys. **51** (1969).

High Resolution Study of Isobaric Analog Resonances in ^{23}Na , G. A. Keyworth, P. Wilhjelm, G. C. Kyker, Jr., H. W. Newson and E. G. Bilpuch, Phys. Rev. **176**, 1302 (1968).

Fine Structure of the Isobaric Analogs of the Ground and Second Excited States of ^{63}Ni , J. C. Browne, D. P. Lindstrom, J. D. Moses, H. W. Newson, E. G. Bilpuch and G. E. Mitchell, 2nd Conference on Nuclear Isospin, Academic Press Inc., NY (1969).

s- and p-Wave Neutron Spectroscopy. XII, Higher Resolution Techniques in KeV Region with Windowless Targets, H. W. Newson, E. G. Bilpuch, P. M. Beard and P. B. Parks, Ann. Phys. **54**, 555 (1969).

High Resolution Investigation of Resonances in ^{19}F , H. W. Newson, E. G. Bilpuch and D. L. Sellin, Ann. Phys. **51**, 46 (1969).

Experimental High-Resolution Investigation and Shell-Model Interpretation of the ^{49}Ca Ground-State Analog, H. W. Newson, E. G. Bilpuch, P. Wilhjelm, G. A. Keyworth, J. C. Browne, W. P. Beres, and M. Divadeenam, Phys. Rev. **177**, 1553 (1969).

PUBLICATION OF HENRY W. NEWSON

The Cyclo-Graaff, Concept and Practice, H. W. Newson, E. G. Bilpuch, F. O. Purser, N. R. Roberson and R. L. Walter, Proc. of the International Conference of Cyclotrons, Oxford, Butterworth and Company, Ltd. (1969).

Fine Structure of Analogue States in ^{59}Cu , ^{61}Cu , ^{63}Cu , and ^{65}Cu , H. W. Newson, E. G. Bilpuch, J. C. Browne and G. E. Mitchell, Nucl. Phys. **A153**, 481 (1970).

A High Resolution Investigation of the (p, n) Reaction through Isobaric Analogue Resonance, H. W. Newson, E. G. Bilpuch, J. D. Moses, J. C. Browne, and G. E. Mitchell, Nucl. Phys. **A168**, 406 (1971).

s- and p-Wave Neutron Spectroscopy, Part Xa: Intermediate Structure, 2p-1h States, H. W. Newson, M. Divadeenam and W. P. Beres, Ann. Phys. **69**, 428 (1972).

s- and p-Wave Neutron Spectroscopy, Part Xb: Intermediate Structure of Ca^{78} and Pb^{207} , H. W. Newson, F. T. Seibel and E. G. Bilpuch, Ann. Phys. **69**, 451 (1972).

Improved Beam Energy Resolution for a Tandem Accelerator, H. W. Newson, T. G. Dzubay, E. G. Bilpuch, F. O. Purser, J. D. Moses and G. E. Mitchell, Nuclear Inst. And Methods **101**, 407 (1972).

Fine Structure of an Analogue State in ^{59}Co , H. W. Newson, D. P. Lindstrom, E. G. Bilpuch and G. E. Mitchell, Nucl. Phys. **A189**, 481 (1972).

High Resolution Proton Scattering from ^{48}Ti , H. W. Newson, N. H. Prochnow, E. G. Bilpuch and G. E. Mitchell, Nucl. Phys. **A194**, 353(1972).

Papers Delivered at Professional Meetings – Invited Papers

A Two Phase Model for Thermal Neutron Fission, H. W. Newson, Washington Meeting of the American Physical Society, 24-27 April 1972

High-Resolution Proton Scattering on ^{46}Ti , H. W. Newson, N. H. Prochnow, E. G. Bilpuch and G. E. Mitchell, Nucl. Phys. **A199**, 571 (1973).

High Resolution Proton Scattering on ^{50}Ti , H. W. Newson, N. H. Prochnow, E. G. Bilpuch and G. E. Mitchell, Nucl. Phys. **A213**, 134 (1973).

Intermediate Structure: Particle-Vibration States, H. W. Newson, W. P. Beres and M. Divadeenam, Ann. Phys. **80**, 231 (1972).

PUBLICATION OF HENRY W. NEWSON

Possible Identification of $5/2^-$ Si^{29} Doorway States of $1f_{5/2}$ Single-Particle Fragments, H. W. Newson, B. H. Choi, W. F. E. Pineo, and M. Divadeenam, International Conference of Nuclear Structure with Neutrons, Budapest, July 31 – August 5, 1972.

s- and p-Wave Neutron Spectroscopy Part Xd: Intermediate Structure, Particle Vibration States, H. W. Newson, M. Divadeenam, W. P. Beres, Ann. Phys. **80**, 231 (1973).

A High Resolution Study of the $1/2^+$ Analog State in ^{93}Tc , H. W. Newson, J. D. Moses, F. O. Purser, E. G. Bilpuch, G. E. Mitchell, R. O. Nelson and D. Outlaw, Phys. Rev. **C9**, 1589 (1974).

Note on High Resolution Measurements with a Tandem Accelerator, H. W. Newson, F. O. Purser, J. D. Moses, T. D. Haywood, E. G. Bilpuch, G. E. Mitchell, D. Outlaw and R. O. Nelson, Nucl. Instrum. Methods **113**, 603 (1973).

Absolute Cross Sections for Proton-Induced Fission of the Uranium Isotope, H. W. Newson, J. R. Boyce, T. D. Hayward, R. Bass, E. G. Bilpuch, F. O. Purse and H. W. Schmitt, Phys. Rev. **C10**, 231 (1974).

Neutron Strength Functions and Average Total Cross Sections. II. The Behavior of the Average Cross Sections and the s-Wave Scattering Lengths, H. W. Newson, W. F. E. Pineo, M. Divadeenam, K. K. Seth and E. G. Bilpuch, Ann. Phys. **84**, 165 (1974).

An Operational Review of the TUNL Cyclo-Graaff, H. W. Newson, E. G. Bilpuch, F. O. Purser, J. R. Boyce and T. B. Clegg, Nucl. Instrum. Methods **122**, 99 (1974).

s- and p-Wave Neutron Spectroscopy. Xc. Intermediate Structure: ^{88}Sr , H. W. Newson, J. G. Malan, W. F. E. Pineo, M. Divadeenam, B. H. Choi and E. G. Bilpuch, Ann. Phys. **89**, 284 (1975).

TUNL Fast Neutron Cross Section Facility, H. W. Newson, D. W. Glasgow, F. O. Purser, J. C. Clement, G. Mack, K. Stelzer, J. R. Boyce, D. H. Epperson, H. H. Hogue, E. G. Bilpuch and C. R. Gould, reprinted from NBS SP 425 Vols. I and II Nuclear Nucl. Cross Sect. and Tech. (1975).

Differential Elastic and Inelastic Scattering of 9-15 MeV Neutrons from Carbon, H. W. Newson, F. O. Purser, D. W. Glasgow, H. H. Hogue, J. C. Clement, G. Mack, K. Stelzer, J. R. Boyce, D. H. Epperson, S. G. Buccino, P. W. Lisowski, S. G. Glendinning, E. G. Bilpuch and C. R. Gould, reprinted from NBS SP 425 Nucl. Cross Sect. and Tech., (1975).

PUBLICATION OF HENRY W. NEWSON

s- and p-Wave Neutron Spectroscopy. Xe. Intermediate Structure in ^{90}Y and the Generalized R-Matrix Theory, H. W. Newson, S. Ramavataram, J. Bergeron, M. Divadeenam, Ann. Phys. **97**, 245 (1976).

s- and p-Wave Neutron Spectroscopy Sf(i). Intermediate Structure in the $^{28}\text{Si} + n$ Reaction: R-Matrix Interpretation of Experimental Data, H. W. Newson, W. F. E. Pineo, B. H. Choi, J. M. Clement and M. Divadeenam, Ann. Phys. Vol. **103**, 121 (1977).

s- and p-Wave Neutron Spectroscopy Sf(ii). Intermediate Structure in the $^{28}\text{Si} + n$ Reaction: Doorway State Calculation, H. W. Newson, D. Halderson, B. Castel, and M. Divadeenam, Ann. Phys. Vol. **103** (1977).

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