

Session A-21

BASIC PHYSICS IN NUCLEAR ENERGY, PART II

LIST OF PAPERS

| | <i>Page</i> |
|--|-------------|
| <i>Fast Neutron Cross Sections</i> | |
| P/2494 Fast neutron cross sections..... J. Benveniste | 3 |
| P/666 Some recent results on fast neutron cross sections..... J. H. Coon <i>et al.</i> | 11 |
| P/2030 Fast neutron scattering and capture by atomic nuclei..... M. V. Pasechnik <i>et al.</i> | 18 |
| P/1088 Total cross sections using fast neutrons..... M. Mazari and F. Alba | 28 |
| P/1699 Total cross sections for neutrons of energy near 2.5 and 14 Mev..... J. Vervier <i>et al.</i> | 30 |
| P/735 Nuclear cross sections for the scattering of neutrons and protons..... R. Jastrow and I. Harris | 34 |
| <i>Neutron Capture and Nuclear Levels</i> | |
| P/4 Direct radiative capture in nuclear reactions..... A. M. Lane and J. E. Lynn | 38 |
| P/2219 Measurements of radiative capture cross sections for fast neutrons..... A. I. Leipunsky <i>et al.</i> | 50 |
| P/667 Radiative capture of fast neutrons..... B. C. Diven | 60 |
| P/1813 Gamma-ray flux measurement in radiative capture reactions..... J. Veiga Simão | 66 |
| P/671 Neutron absorption at intermediate energies..... R. L. Macklin | 68 |
| P/2426 Distribution of angular momenta of resonance levels for neutron scattering..... C. T. Hibdon | 72 |
| P/154 On the scattering of slow neutrons by hydrogen molecules..... S. Brimberg | 79 |
| P/655 Low-energy neutron cross sections of uranium-235 and their interpretation..... W. W. Havens Jr. and E. Melkonian | 99 |
| P/645 The total and fission cross sections of uranium-233 below 1 kev..... R. G. Fluharty <i>et al.</i> | 111 |
| P/648 Fission and total cross sections of uranium-235 from 0.1 to 10 ev..... F. J. Shore and V. L. Sailor | 118 |
| P/687 The slow neutron cross sections of plutonium-239..... L. M. Bollinger <i>et al.</i> | 127 |
| P/2029 Thermal-neutron-capture gamma-ray spectra and nuclear-level distribution..... L. V. Groshev <i>et al.</i> | 138 |

LIST OF PAPERS

(Continued)

| | <i>Page</i> |
|--|-------------|
| <i>Nonneutronic Fission</i> | |
| P/197 Distribution of nuclear charge in the proton-induced fission of thorium-232..... B. D. Pate <i>et al.</i> | 149 |
| P/6 Fission processes in the proton bombardment of thorium-232, uranium-238 and plutonium-239..... J. P. Butler <i>et al.</i> | 156 |
| P/2039 Angular correlation of charged particles from uranium fission induced by high-energy protons and π^+ mesons N. S. Ivanova <i>et al.</i> | 164 |
| P/2222 High-energy proton-induced fission of silver nuclei..... V. P. Shamov | 171 |
| P/2227 On nuclear fission by mu mesons D. F. Zaretsky | 175 |
| P/659 A measurement of fission threshold structure and its collective model interpretation..... R. H. Stokes <i>et al.</i> | 179 |
| P/2037 The angular distribution of fission fragments in the photofission of uranium-238..... A. I. Baz <i>et al.</i> | 184 |
| P/200 Photofission in heavy elements L. Katz <i>et al.</i> | 188 |
| P/678 Mass-yield distributions in the photofission of radium and other heavy elements..... R. B. Duffield <i>et al.</i> | 202 |
| P/652 The prompt radiations in the spontaneous fission of californium-252..... H. R. Bowman and S. G. Thompson | 212 |
| P/199 Fission fragment velocity distribution and coincident gamma spectra for californium-252..... J. S. Fraser and J. C. D. Milton | 216 |

Session A-22

BASIC PHYSICS IN NUCLEAR ENERGY, PART III

LIST OF PAPERS

| | | <i>Page</i> |
|---------------------------------|--|-------------|
| <i>General Fission Process</i> | | |
| P/2467 | The fission process—mechanisms and data R. B. Leachman | 229 |
| P/660 | The dynamics of nuclear fission D. L. Hill | 244 |
| P/651 | Deformation energy of a charged drop III. Further developments W. J. Swiatecki | 248 |
| P/2474 | On the asymmetry of nuclear fission B. T. Geilikman | 273 |
| P/2473 | Excitation energy of fragments in nuclear fission B. T. Geilikman | 279 |
| P/688 | Nuclear fission process: a study of the competition between fission and neutron emission as a function of excitation energy and nuclear type R. Vandenbosch and J. R. Huizenga | 284 |
| P/1429 | Spallation fission competition in the heaviest elements T. D. Thomas <i>et al.</i> | 295 |
| P/1615 | A Monte Carlo calculation of fission-spallation competition I. Dostrovsky <i>et al.</i> | 301 |
| P/2221 | Preliminary summary report of some new research data on effective cross sections and the fission process V.V. Vladimirovsky <i>et al.</i> | 309 |
| P/725 | Alpha-particle emission from oriented neptunium-237 and uranium-233 nuclei L. D. Roberts <i>et al.</i> | 322 |
| <i>Fission Fragment Studies</i> | | |
| P/665 | Neutrons and radiations from fission R. B. Leachman | 331 |
| P/663 | Fission cross sections at Mev excitation A. Hemmendinger | 344 |
| P/2187 | Average number and spectrum of prompt neutrons in fast-neutron-induced fission I. I. Bondarenko <i>et al.</i> | 353 |
| P/1633 | The angular distribution of prompt neutrons emitted in the fission of uranium-235 R. Ramanna and P. N. Rama Rao | 361 |
| P/1632 | Number of neutrons emitted per fission from the fast fission of uranium-238 V. R. Nargundkar <i>et al.</i> | 364 |
| P/670 | Gamma rays associated with fission F. C. Maienschein <i>et al.</i> | 366 |
| P/583 | The delayed neutron precursors in fission A. C. Pappas | 373 |
| P/691 | Halogen delayed-neutron activities A. F. Stehney and G. J. Perlow | 384 |
| P/690 | An experimental study of fission in the actinide elements A. Smith <i>et al.</i> | 392 |

LIST OF PAPERS

(Continued)

| | | <i>Page</i> |
|--------|---|---|
| P/642 | Fission angular distributions and fissionability at moderate energies | I. Halpern and C. T. Coffin 398 |
| P/694 | Study of angular and energy distributions of fission fragments by means of a multigrid ionization chamber | R. R. Roy 404 |
| P/1513 | Angular distributions in particle-induced fission at medium energies | I. Halpern and V. M. Strutinski 408 |
| P/1188 | Comparative probabilities for fission with the emission of long-range particles for various materials irradiated by slow and fast neutrons..... | M. F. Netter <i>et al.</i> 418 |
| P/1189 | Experimental measurement of the range of fission fragments in uranium, gold, zirconium and silicon | H. Faraggi and A. Garin-Bonnet 422 |
| P/198 | Semiempirical correlation of fission yields and kinetic-energy distributions | A. G. W. Cameron 425 |
| P/2031 | Spectrum of fragments of spontaneous fission of plutonium-240..... | T. A. Mostovaya 433 |
| P/187 | Absolute yields of the isotopes of xenon and krypton in the neutron fission of plutonium-239 | K. Fritze <i>et al.</i> 436 |
| P/551 | Mass distribution in fission..... | L. W. Roeland <i>et al.</i> 440 |
| P/644 | Extension of the fission-product region and yields of heavy products in the neutron fission of plutonium-239..... | L. R. Bunney <i>et al.</i> 444 |
| P/2040 | Mass-spectroscopic studies of fission products of uranium-233, uranium-235 and plutonium-239..... | M. P. Anikina <i>et al.</i> 446 |
| P/643 | Radiochemical studies of the fast neutron fission of uranium-235 and uranium-238 | L. R. Bunney <i>et al.</i> 449 |
| P/677 | Fission studies of elements lighter than thorium | A. W. Fairhall <i>et al.</i> 452 |
| P/201 | Mass-spectrometric studies of pile poisons and their yields in the fission of uranium-233, uranium-235 and plutonium-239..... | D. R. Bidinosti <i>et al.</i> 459 |
| P/7 | Rare earth fission product yields from highly irradiated plutonium-239 | E. A. C. Crouch and I. G. Swainbank 464 |
| P/672 | Studies of short-lived fission products and their importance to reactor technology | G. D. O'Kelley <i>et al.</i> 469 |