資料リスト（その II）

79 Knoxville Conference 発表論文リスト

昨年10月22日～26日に米国Knoxvilleで行われた通称“79Knoxville Conf.”（正式にはInternational Conference on Nuclear Cross Sections for Technology）で発表された全論文のリストを示します。このリストは，この会議に出席された東北大学工学部原子核工学科の椙山一典教授が作成されたもので，同氏のお許しをえてこゝに利用させていたゞきました。実は，前号の“あとがき”で「発表論文リストの適当なものがなくて……」と書いたところ，早速，椙山氏から氏の研究室で作成されたものをお送りいたゞきました。編集係では本号のためにタイプをする矢先でしたので，そのまゝ利用させていたゞいた次第です。厚くお礼申し上げます。

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（事務局編集係）

INTERNATIONAL CONF. NUCLEAR CROSS SECTIONS FOR TECHNOLOGY

Oct. 22 - 26, 1979
Knoxville, Tennessee

AA: STANDARD FISSION REACTORS

*1. Nuclear data needs for thermal uranium reactors, Ozer (EPRI).
*2. Nuclear data needs for Pu breeders, Hammer (Cadarache).
*3. Nuclear data needs for analysis of generation and burnup of actinide isotopes in nuclear reactors, Kusterns (KFK).
*4 Fission-product decay heat for thermal reactors, Dickens (ORNL).

AB: NEUTRON INTERACTIONS WITH LIGHT AND MEDIUM WEIGHT NUCLEI

1. Neutron total cross sections of H, C, O and Fe from 500 keV to 60 MeV, Larson, Harvey and Hill (ORNL).
2. Elastic scattering of 14.8 MeV neutrons from deuterons, Gul et al. (Pakistan).
3. Neutron scattering from ^{7}Li at incident energies of 5.1, 6.6 and 15.4 MeV, Baba et al. (Tohoku Univ.).
4. Total cross section measurements of ^{6}Li, ^{7}Li, ^{12}C from 3 to 40 MeV, Lamaze et al.
5. A coupled-channels model for radiative capture of neucleons by ^{12}C, Johnson.
6. Evaluation of ^{23}Na for ENDF/B-V, Larson (ORNL).
7. Simultaneous evaluation of $^{32}S(n,p)$, $^{56}Fe(n,p)$ and $^{63}Cu(n,an)$ cross sections, Fu.
8. Evaluations of the Fe58(n,γ)Fe59 and Fe54(n,p)Mn54 reactions for the ENDF/B-V dosimetry file, Chenter et al. (Hanford).
9. Calculation of neutron cross sections on iron between 1 and 40 MeV, Arthur & Young.
10. Neutron energy spectra and angular distributions for the Al and Nb(n,xn) reaction at 15.4 MeV, Iwasaki et al. (Tohoku Univ.).

X11. Scattering of 10 MeV neutrons on silicon, Pilz et al. (Dresden).

AC: CHEMICAL BINDING EFFECTS

1. Doppler broadening effect to neutron resonance cross sections for Ag, AgCl and Ag_2O Chrien & Moreh (BNL).
2. Measurement of the $^{10}B/^{6}Li$ cross section ratio below 2keV, Czirr & Carlson (NBS).
3. The neutron total cross section of single crystal silicon at 21°K, Brugger et al.
4. A comparison of (n,α) cross section measurements for $^{10}BF_3$ and solid ^{10}B from 1 to 10,000 eV, Carlson et al. (ORNL).

5. The influence of vibrations of gas molecules on neutron reaction cross section, Bowman & Schrack (NBS).
6. A comparison of the ^{10}BF and $^{3}He(n,\alpha)$ cross section at 0.025 and 2000 eV, Bowman and Behrens (NBS).
7. Measurements of the total neutron cross sections of Be, Ni, and Cu at different temperatures in the energy range from 2 meV to 5 meV. Adib et al. (Egypt).
8. Chemical dependence of uranium fission, Schrack and Bowman (NBS).
9. Molecular binding effects on fusion cross section measurement, Bowman (NBS).

BA: ALTERNATE FUEL CYCLES

(1) Advanced converters, Kasten (ORNL).
*2. Denatured fuel cycles, Till (ANL).
*3. The use of thorium in fast breeder reactors, Bartine (ORNL).
(4) Deep penetration integral experiment for a thorium blanket mockup, Ingersoll (ORNL)
5. Analysis of the Swiss thorium blanket integral experiments, White & Ingersol (ORNL)
6. Data needs for fuel handling and waste management aspects of thorium fuel cycles, Nair and MacDonald (UK).

BB: NEUTRON INTERACTIONS WITH MEDIUM WEIGHT NUCLEI

1. An $^{56}Fe(n,n'\gamma)^{56}Fe$ compilation and comparisons of neutron inelastic scattering cross sections, McDaniels et al. (Univ. Kentucky).
(2) Double-differential neutron scattering cross sections of Fe, Cu, Ni, and Pb between 8 and 12 MeV, Beyerle et al. (TUNL).
3. Neutron elastic and inelastic scattering from ^{63}Cu, ^{65}Cu, ^{56}Fe between 8 and 14 MeV.
4. Elastic and inelastic scattering of 24 MeV neutrons from even isotopes of Ni, Yamanouti et al. (OHIO)
5. Measurement of differential elastic and inelastic scatterin cross sections with 14 MeV neutrons on Barium and Chromium, Winkler et al. (Vienna).
6. Determination of the capture width of the 27.7 keV s-wave resonance in ^{56}Fe, Wisshak and Kaeppeler (KFK).
7. Total neutron cross section measurements on Fe-54, Fe-56 and Fe-57, Cornelis (Geel)
8. Neutron capture cross section measurements of Fe-54 and Fe-56, Brusegan etal(Geel).
9. Fast-neutron total and scattering cross sections of Chromium, Iron and ^{60}Ni, Smith.
10. Neutron resonance parameters of ^{79}Br and ^{81}Br up to 15 MeV, Okubo et al. (JAERI).

BC: INTEGRAL EXPERIMENTAL AND CROSS SECTION PROCESSING

1. Cross section adjustment applied to estimation of uncertainty in the breeding ratio of a large LMFBR, Marable et al. (ORNL).
2. An adjusted nuclear data library for fast reactor core physics, Yeivin etal.(ORNL).
3. A test of ENDF/B library in the criticality prediction of fast assemblies,Shukla(In
4. Basic nuclear data and the fast reactor shielding design formulaire propane Do, Estiot et al. (Cadarache).
5. Nuclear data for shielding calculations: Na cross section adjustment using propagation experiment, de Carli et al. (Italy and Cadarache).
6. On the discrepancy between differential and integral results for the $^{63}Cu(n,\alpha)^{60}Co$ cross section, Winkler et al. (ANL).
7. Vitamin E: A multipurpose ENDF/B-V coupled neutron-gamma cross section library, Barhen et al. (ORNL).
8. Verification of photon production processing methods, Barrett et al. (LASL,ORNL,..)
9. The MATXS-TRANSX system and the CLAW-IV nuclear data library, Barrett (LASL).
10. ENDF/B-IV and V cross section libraries for thermal power reactor analysis, MacFarlane (LASL).
11. Finite element bases used in consistent nuclear data evaluation, Schmittroth (Hanf.
12. Effect of resonance interference between U-238 and Cs-133 on isotopic correlation of fission product, Takano et al. (JAERI).

CA: FUSION

1. Neutron cross sections for fusion, Haight (LLL).
2. Shielding of fusion reactors, Alsmiller (ORNL).
*3. Tritium breeding in fusion, Swinhoe (AERE).
*4. General charge particle requirements for advanced fuel fusion, Conn (U. Wisconsin)

CB: INTEGRAL EXPERIMENTS

1. Measurements and analysis of neutron spectra in some assemblies of reactor material Kimura (KUR)
*2. Neutron transport in structural materials and shielding design, Salvatores (CEA).
3. Neutron dosimetry for radiation damage in fission and fusion reactors, D.Smith(ANL)

*4. Critical test assemblies, Lesage (ANL).

CC: NUCLEON CROSS SECTION, $75 < A < 200$

1. Cross sections for fast neutron capture on Se, Cd, and Os isotopes, Herman (Poland)
2. Optical model calculations of nucleon interactions with ^{93}Nb from 10 keV up to 50 MeV, Lagrange (LASL).
3. Neutron resonance parameters for Pd isotopes, Staveloz et al. (Geel).
4. Resonance parameters of ^{96}Zr below 37 keV, Coceva et al. (Bologna).
5. Neutron capture cross sections of Y, Nb, Gd, W and Au between 0.5 MeV and 3.0 MeV, Grenier et al. (Bruyeres-le-Chatel).
6. Neutron radiative capture and transmission measurements of ^{147}Sm and ^{149}Sm, Mizumot et al. (JAERI).
7. Calculation of neutron cross sections for Tungsten isotopes, Arthur & Philis (LASL)
8. Coherent potical and statistical model analysis of ^{182,183,184,186}W neutron cross sections, Delaroche et al. (Bruyeres-le-Châtel).
9. The neutron capture cross sections of natural Yb, ^{170}Yb, ^{175}Lu and ^{184}W in the energy range from 5 to 200 keV for the ^{176}Lu-chronometer, Beer et al. (KFK)
10. Stellar nucleosynthesis and the 24-keV neutron capture cross sections of some heavy nuclei, Bradley et al. (BNL).
11. The measurement of Maxwellian averaged capture cross sections for ^{138}Ba, ^{140}Ce, ^{175}Lu and ^{176}Lu with a special activation technique, Beer et al. (KFK).

DA: FISSILE FUEL BREEDING AND DISPOSAL

*1. Nuclear data needs for accelerator breeder concepts, Garvey (Chalk River).
*2. Nuclear development needs for fusion-fission hybrid reactors, Jassby (Princeton).
*3. Burning nuclear waste in fusion reactors, Meldner (LLL).
*4. Safeguards, Higinbotham (BNL).

DB: CROSS SECTION MEASUREMENTS

1. Fast neutron capture, Poenitz (ANL).
2. Measurements of the fast neutron capture cross section of ^{238}U ralative to $^{235}U(n,f)$, Fawcett et al. (ANL).
*3. Selected topics in research program on IBR-2, Sharapov (Dubna).
4. Radiative thermal neutron capture by Deuteron, Alfimenkov et al. (Dubna).
5. Status of gamma-ray production cross section data, Sugiyama (Tohoku Univ.).
6. Gamma-ray production cross sections for fast neutron interactions with Al, Ni, Cu and Nb, Hino et al. (Tohoku Univ.).

DC: HIGH ENERGY BIOMEDICAL INSTRUMENTATION

1. Neutron spectra from 800 MeV (p,n) reactions on target of Al, Cu, In, Pb and U, Howe et al. (LASL).
2. Neutron spectrum at 90° from 800 MeV (p,n) reactions on a Ta target, Howe et al.
3. Analysis of neutron yield produced by high energy proton, Takahashi (BNL).
4. Calculated particle production spectra and multiplicities from nucleon-fissile element collisions at medium energies (< 1 GeV), Alsmiller et al. (ORNL).
5. The inclusion of fission in the high energy particle transport code HETC,
6. Photoneutron leakage from W(γ,n) at radiation therapy centers, Holt et al. (ANL).
7. An accelerator facility for a nuclear energy laboratory of medical and agricultural sciences (NEIMA), Madueme (Nigeria).
8. Neutron spectrometry and neutron therapy, Cranberg (TDN).
9. The $^{127}I(n,2n)^{126}I$ reaction as a fast neutron flux monitor, Santry (Chalk River).
10. Resonance neutron radiography for nondestructive assay of fresh nuclear reactor fuel, Behrens et al (NBS).

EA: BIOMEDICAL APPLICATIONS

*1. Fast neutron therapy, Broerse (Netherlands).
*2. Dosimetry, Almond (Univ. Texas).
*3. In vivo Neutron activation analysis, Cohn (BNL).
*4. Accelerators for isotope production, Clark (Hammersmith).

EB: FISSION CROSS SECTIONS

1. Evaluation of the fission and capture cross sections of ^{240}Pu and ^{241}Pu for ENDF/B-V, Weston (ORNL).
2. Calculations of the ^{232}Th cross sections from 0.3 to 2.4 MeV including a fission channel analysis, Jary et al. (Bruyeres-le-Chatel).
3. Measurement of the integral capture and fission cross sections for ^{232}Th in the CFRMF, Anderl (INEL, Idaho).
4. The fission cross section of ^{230}Th and ^{232}Th relative to ^{235}U, Meadows (ANL).
5. The evaluation of ^{235}U(n,f) above 100 keV for ENDF/B-V and the implications of a unified ^{235}U mass scale, Poenitz et al. (ANL).
6. The measurement of absolute value α of U-235 within the range of neutron energy of 0.1 - 30 keV, Muradyan et al. (Kurchatov).
7. High resolution neutron fission cross section of ^{231}Pa, Plattard et al. (ORNL).
8. Fission cross section of ^{245}Cm from 10^{-3} eV to 10^{4} eV, White et al. (LLL).
9. First and second chance fission calculations for actinides and related topics, Maino et al. (Bologna).
10. Neutron induced fission cross sections for E_n = 1 - 18 MeV, Jhingan et al. (Bombay).
11. The influence of various nuclear-level density concepts on neutron cross section calculation of actinides, Antsipov et al. (Minsk).

EC: DETECTOR AND ACCELERATOR TECHNIQUES

1. Finite geometry and multiple scattering corrections for neutron cross section measurements. Hogue et al. (TUNL).
2. Fast neutron detection capabilities of NaI(Tl) scintillator and HgI semiconductor gamma ray spectrometers, Cecil et al. (Colorado).
3. Fission track recorder techniques for fission rate measurements, Chou et al. (Purdue)
4. Analysis of particlulates for very light elements by forward scattering of alpha particles, Wolfe (U. Mississippi).
5. The secondary radiation multiplicity spectrometry as the method for measuring neutron cross=sections and investigation of nuclei, Muradyan (Kurchatov).
6. Neutron total cross section measurement at WNR, Lisowski et al. (LASL).
7. Study of neutron-induced charged particle reactions on deuterium using Quadrupole triplet spectrometer, Kulkarni et al. (Ohio Univ.).

EC 8. Neutron production using low energy electron beams, Bowman (NBS).
9. Performance improvements of the Geel linac neutron source, Salome & Böckhoff.
10. Recent modifications of the TUNL fast neutron cross section facility, Seagondollar
11. A study of source neutron reactions, Grabmyr et al. ()hio Univ.).

ED: INTEGRAL EXPERIMENTS

1. Neutron spectra measurements upon a spherical assembly of Thoria, Block etal.(RPL).
2. Integral measurements for higher actinides in the CFRMF, Harker et al. (INEL, Idaho)
3. Evaluation of actinide cross sections by integral experiments in fast critical assembly FCA, Mukaiyama et al. (JAERI).
4. Neodymium, Samarium and Europium capture cross section adjustments based on EBR-II integral measurements, Anderl and Harker (INEL, Idaho).
5. Measurements and analysis of neutron transport through Iron, Hertel etal. (Illinois)
6. Neutron energy spectra in the fast breeder blanket facility, Vehar et al.(Purdue).
7. ^{197}Au, ^{238}U and ^{232}Th capture rates in the FBBF, Harms et al (Purdue).
8. Gamma-ray heating in the fast blanket facility, Koch et al.(Purdue).
9. Benchmark tests of Japanese evaluated nuclear data library (JENDL), Kikuchi et al.
10. Request to evaluating neutron cross section of structural material for shielding application, Kawai et al.(JNDC).
11. Integral experiments for fusion reactor design: experimentation, Chapman&Morgan,
12. same above : analysis, Santoro et al. (ORNL).

FA: APPLICATION IN INDUSTRY AND SPACE

*1. Use of nuclear techniques in oil well logging, Quisenberry
*2. Neutron induced radioactivity for mineral explosion, Senftle
*3. Terrestrial and maritime metal exploration, Michaelis
*4. Neutron cross sections of importance for astrophysics, Browne

FB: EVALUATION OF CROSS SECTIONS

*1. Open problems in nuclear data evaluation, Pearlstein (BNL).
*2. Application of nuclear models, Young (LASL).
*3. R-Matrix analysis of light element reactions for fusion applications, Hale (LASL).
4. Evaluated data collections from ENSDF, Ewbank (BNL).

5. Evaluations fission product capture cross sections for ENDF/B-V, Schenter et al.
6. Beta and gamma decay heat evaluation for the thermal fission of ^{235}U, Schenter

FC: NEUTRON INTERACTION FOR A >200

1. Fast neutron scattering cross sections for actinide nuclei, Haouat et al.
2. Measurement of $^{238}U(n,n'\gamma)$ and $^{7}Li(n,n'\gamma)$ gamma-ray production cross sections Olsen et al. (ORNL).
3. Neutron inelastic scattering cross sections of ^{238}U via $(n,n'\gamma)$, Mittler etal(Lowell
4. Neutron inelastic scattering cross sections of ^{232}Th obtained from$(n,n'\gamma)$ measurements, Egan et al. (Lowell).
5. Neutron total cross section of ^{233}U from 0.01 to 1.0 eV, Harvey et al. (ORNL).
6. Transmission and self-indication measurements with ^{235}U and ^{239}Pu in the 2 eV - 20 keV energy region, Bakalov et al. (Dubna).
7. Total-neutron cross sections of heavy nuclei, Poenitz et al. (ANL).
8. Total cross section of ^{242}Pu between 0.7 and 100 MeV, Moore et al. (LASL).
9. Neutron total cross section measurements on ^{249}Cf, Carlton et al. (ORNL).
10. Intercomparison of coupled channel and sherical optical models in the analysis of Thorium neutron cross sections, Garg et al. (Bhabha).
11. Simultaneous evaluation of nuclear data for heavy nuclides, Matsunobu et al.(JNDC).

GA: NUCLEAR CROSS SECTIONS AND FLUX STANDARDS

*1. Nuclear cross sections standards, Wasson (NBS).
*2. Absolute measurement of $\bar{\nu}_p$ for ^{252}Cf by the large liquid scintillator tank technique, Spencer (ORNL).
*3. Data discrepancies in and new experiments for the (d+d), (d+t) and (t+t) fusion reactions, Jarmie (LASL).
4. The ^{252}Cf $\tilde{\nu}$ discrepancy and the sulfur discrepancy, Smith (INEL, Idaho).
5. Neutron capture cross section standards for BNL-325, Holden (BNL).
6. NBS neutron flux calibration facility, Duvall et al. (NBS).

GB: MODEL CALCULATIONS

1. Capture cross section and gamma-ray spectrum calculations for medium-weight nuclei, Gardner (LLL).
2. A consistent nuclear model for compound and precompound reactions with conservation of angular momentum, Fu (ORNL).
3. Improved formulae for compound nucleus cross sections, Tepel et al. (KFK).
4. Neutron emission spectra induced by 14-MeV neutrons from the evaluated nuclear data file (ENDF/B-V) - A critical review, Hetrick et al. (ORNL).
5. A new parameterization of the E1 gamma-ray strength function, Gardner (LLL).
6. Gamma-ray production cross sections for MeV neutrons, Kitazawa et al. (TIT).
7. Semiempirical calculation of excitation functions for proton-induced nuclear reactions, Petersen (NRL).
8. R- matrix analysis of neutron elastic and inelastic scattering data, Knox etal(Ohio)
9. Calculation of prompt fission neutron spectra, Madland & Nix (LASL).
10. Simple parameterization for optical reaction cross sections, Murthy et al.(Bombay).
12. Delayed neutron calculations using ENDF/B-V data, England et al. (LASL, HEDL).
11. Exact solution of the excited model master equations for nuclear reactions, Gupta and Chatterjee (Bhabha).

GC: FUSION

1. Utilization of the reaction $^{10}B(d,n)^{11}C$ as a high temperature deuterium plasma diagnostic, Len and Cecil (Colorado).
2. Measurement of the 2.35-MeV window in O + n, Johnson et al. (ORNL).
3. The staus of neutron dosimetry and damage analysis for the fusion materials program, Greenwood (ANL).
4. Nuclear data needs for FMIT, Schenter et al. (HEDL).
5. The spatial dependence of flux and damage in the FMIT test cell, Mann et al.(HEDL).
6. Measurements of neutron spectra from 35 keV deuterons on thick Lithium for the FMIT facility, Johnson et al. (HEDL, U.C.).
7. Measured and evaluated Bismuth data for fusion-hybrid and electro-nuclear breeding applications, Guenther et al. (ANL).
8. The influence of nuclear data uncertainty on Thorium fusion-fission hybrid blanket neutronic performance, Cheng and Mathews (GE).

9. Sensitivity of the performance of symbiotic systems to Tritium production data, Renier et al. (Univ. Lowell).
10. Measurement of (n,α) cross sections on Cr, Fe and Ni in the 5 to 10 MeV Neutron energy range, Paulsen et al. (Geel).
11. Neutron nuclear cross section data for fusion technology, Rao et al. (Andhra Univ).
12. Production cross sections for (n,t) reactions in ^{40}Ca, ^{54}Fe, ^{86}Sr, ^{89}Y, ^{102}Pd, ^{112}Sn, ^{114}Cd, ^{130}Te, ^{139}La, ^{204}Pb and ^{205}Tl with 14.6 MeV neutrons, Salaita and Woo (Southern Methodist Univ.).

HA: GENERAL INTEREST

*1. Natural fission reactor - Gabon, Etienne Roth (France).
*2. Lessons from Three Mile Island, Buhl (Technol. for Energy Corp.).

IA: NUCLEAR INSTRUMENTS AND TECHNIQUES

*1. Pulsed "White" neutron sources, Auchampaugh (LASL).
*2. Neutron cross section measurements at ORELA, Dabbs (ORNL).
*3. Use of high resolution γ-ray spectroscopy for neutron cross sections, Stelts(BNL).
#4. New fission fragment detectors for cross section and angular distribution measurements at CBNM, Knitter (Geel).

IB: STANDARD

1. Least squares methodology applied to LWR-PV damage dosimetry, experience and expectations, Wagschal et al. (ORNL).
2. $^{235}U(n,\alpha)$ cross section measurements and related problems, Wagemans et al. (Mol).
3. Absolute measurement of the standard cross section $^{235}U(n,f)$ from 0.2 - 1.2 MeV, Meier et al. NBS).
4. ^{237}Np fission cross section measurements in the MeV energy region, Carlson (NBS).
5. Absolute fast fission cross section measurements on ^{273}Np, Grady et al. (michigan).
6. The cross section for the $^{56}Fe(n,p)$ reaction for 14.73 MeV neutrons, Axton etalNPL).
7. Polarization measurements and the Carbon standard, Weil et al. (U. Kentucky).
8. Parasitic absorption and leakage correlations for $MnSO_4$ baths, Goldstein (Columbia)
9. The application of a time-correlated associated particle method for absolute cross section measurements of heavy nuclides, Arlt et al. (Dresden, Khlopin Inst. USSR).
10. Absolute cross section measurements of heavy nuclides for both ^{252}Cf fission spectrum neutrons and 14.7-MeV neutrons, Adamov et al. (Khlopin Inst. USSR, Dresden)

GD: POST_DEADLINE PAPERS

1. KeV neutron capture cross sections for the s-process isotopes of Se, Br and Kr and the abundance of Krypton in the Solar system, Ledgers & Kaepeler(KFK).
2. Complete evaluation of ^{241}Am between thermal energy and 15 MeV - Nuclear models used - consistency with integral data, Fort et al.(Cadarache).
3. The branching ratio in ^{242}Am after neutron capture in ^{241}Am in the keV region, Wisshak et al. (KFK).
4. Evaluation of the ^{237}Np neutron cross sections in the energy range from 10^{-5} eV to 15 MeV, Cerrien and Fort (Cadarache).
5. The measurement of the total ^{145}Nd neutron cross section, Anufriev et al (Lenin).
6. Fast neutron radiative capture cross section and average resonance parameters for rare earth nuclei, Konohov et al. (Obninsk).
7. Neutron resonances of odd-odd radioactive isotopes, Vertebnyi et al. (Kiev).
8. Perturbation theory and sensitivity anaysis in fission products kinetics, Usachev
9. Total neutron cross section of ^{45}Sc at the 2 keV interference minimum, Razbudey etal.
10. Scattering cross sections of neutrons up to 3.0 MeV by Chromium, Iron and Nickel isotopes, Pasechnik et al. (Kiev).
11. Scattering of neutrons by Nickel isotopes in the energy range from 5 to 7 MeV, Korzh et al. (Kiev).
12. Neutron-spectrometric analysis of the samples, Ivanov et al. (Lenin Inst.).