

RSIC Newsletter



RADIATION SHIELDING INFORMATION CENTER

OAK RIDGE NATIONAL LABORATORY

OPERATED BY UNION CARBIDE CORPORATION • FOR THE U.S. ATOMIC ENERGY COMMISSION

POST OFFICE BOX X •
OAK RIDGE, TENNESSEE 37831

No. 10

September 9, 1965

RECENT VISITORS TO RSIC

The following people visited RSIC during the month of August: Arthur W. Elias, Institute for Scientific Information, Philadelphia; William M. Schofield, GE Apollo Support Department, Daytona Beach; and John Newman, Civil Defense, ORNL.

CORRECTION TO ORNL-RSIC-CCC-7/NTC

V. E. Anderson, Central Data Processing Facility, Union Carbide Nuclear Division, Oak Ridge, and Harvey Israel, P-11, Los Alamos Scientific Laboratory, simultaneously and separately discovered an error in the high energy neutron transport code, NTC. The error was found in subroutine GEOM when the user attempted to run a geometry with more than one zone.

Mr. Anderson submitted the following correction:

The following cards must be removed from Subroutine GEOM:

TSX \$ FINDR,4
PZE XØNE
PZE YØNE
PZE ZØNE
PZE LOCATE
PZE NREG

These are cards 75_g through 102_g.

In Subroutine JØMIN, card 1366_g must be changed as follows.

Orig. Contents

TXI \$JOMR,1,1

New Contents

TXI \$JOM4,1,1

This is the 7th card after Loc. "FILL."

Remove Subroutine FINDR from the deck.

AUGUST ACCESSION LIST OF LITERATURE

The following accession list consists of literature which the RSIC obtained through its usual scanning procedures. This literature will be examined for assignment to various files or for possible rejection. The accession list is divided into three fields of (1) reactor and weapons shielding, (2) space and accelerator shielding, and (3) shielding computer codes.

Reactor and Weapons Shielding

INR-580-5

Calculation of Beta and Gamma Activities of Fission Products Formed in a Reactor Operating Discontinuously for Several Years
T. Zelenay and W. Smulek - November 1964

J. Nucl. Sci. Technol., 2(4), 121-125 (April 1965)

A Systematic Approach to the Duct Streaming Problem and Some Results to Unscattered Flux Calculation
A. Tsuruo, M. Shindo and M. Kawabata

ORNL-TM-1167

Calculations of Concrete Shields for Fission Sources
J. P. Nichols - June 17, 1965

ORNL-3809

Stochastic Models for the Distribution of Radioactive Material in a Connected System of Compartments
S. R. Bernard, V. R. Rao Uppuluri, et al. - June 1965

ORNL-TM-1078

Angular Distributions of Low-Energy Neutrons Leaking from Various Scattering Materials
V. V. Verbinski - May 13, 1965

NAA-SR-10735

SNAP 10A Flight System Prototype (FSM-1) Performance
L. L. Bixson - May 15, 1965

BNL-9220

A General Formulation of the Monte Carlo Method and a 'Strong Law' for Certain Sequential Schemes
John H. Halton - 1964

ANL-Trans-177

Yield Cross-Sections of γ -Quanta and of the Excitation of Nuclear Levels at Inelastic Neutron Scattering
D. L. Broder, A. I. Lashuk, et al. - 1964

ANL-Trans-178

γ -Rays at the Capture and Inelastic Scattering of Neutrons
V. S. Al'nikov, D. L. Broder, et al.

TPI-104 (AECL-2229)

Neutron Fluxes in Antimony - Beryllium Systems
S. A. Kushneriuk, P. M. Attree, et al. - November 1963

USNRDL-tr-861

Gamma Rays Resulting from Interactions of 14.7 MeV Neutrons with Magnesium,
Aluminum, Calcium, Titanium and Iron
W. E. Thompson and F. C. Engesser - June 1965

PSDC-tr-3

Expedient Community Fallout Shelter Earth Filled Walls
June 25, 1965

BNL-927

Optical Model Analysis of Elastic and Inelastic Scattering of Neutrons by
Aluminum in the MeV Region
S. O. Moore - June 1965

UCRL-12407

Neutron-Induced Activity in Earth and Sea Water from Buried and Surface
Neutron Sources
Richard M. Lessler and Frank W. Guy - April 9, 1965

ORNL-3822, Vol. II

Differential Fast-Neutron Albedos for Concrete. II. Results of Monte
Carlo Calculations for an Incident Angle of 0 Deg.
R. E. Maerker - July 1965

ORNL-TM-1156

Fast-Neutron Scattering from Small Cylinders of Steel, Aluminum, and
Graphite
John C. Courtney - July 1965

NSJ-tr-21

The Spectrum Matrix Method in γ -Ray Transmission Problems for Multiple
Layers
Akira Tsuruo

CEA-R-2774 (Translation requested)

Contribution A L'Etude de la Propagation des Neutrons Dans Des Cavities
Gilbert Hasselin - March 1965

GE Report No. 64GL140

An Analysis of Variance Test for Normality (Complete Samples)
S. Shapiro and M. B. Wilk - September 3, 1964

ARV(65)30 (Translation requested)

Coefficienti Del Fattore Di Accumulazione Espresso Con L'Equazione Di
J. J. Taylor per Cu, Ni e $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
Dr. Stefano Buscaglione - March 1965

LA-3296-MS

Integral Gamma and Neutron Measurements on the NRX-A2 Reactor
F. C. V. Worman and P. K. Lee - April 12, 1965

GMAD-3078-22 (C)

MCR Shield Spectrum Generator Design Report
R. Schamberger, S. Kellman, et al. - May 3, 1965

Kernenergie 8, 137-62 (March 1965) (Translation requested)

Radiation Streaming through Ducts and Voids in Shields
F. W. Kreuger and U. E. Michaelis

Hitachi Zosen Giho, 25(4), 24-32 (November 1964) (Translation requested)

Gamma-Ray Shielding Property, Strength and Workmanship of Builtup Type
Lead Slab Structure
Toshio Sakai and Mamoru Tanaka

XDC-59-10-69

Data Report and Analysis of Measurements Made in Water Behind Arrays of LiH
and Li^6H
A. W. Casper - October 1959

GA-5750

Measurement of Neutron Spectra in Liquid Hydrogen - Final Report
G. D. Trimble, G. K. Houghton, and J. H. Audas - September 30, 1964

NP-15094 (USNCEL-R-379)

Monte Carlo Calculation of Neutron Streaming through Two-Legged Duct
Entranceways
Leonard B. Gardner, Alan J. Mettler - June 1965

GA-6313

Neutron Spectra in Bulk Media by Time-of-Flight
J. L. Russell, et al. - April 9, 1965

GA-6291

Neutron Spectra in H_2O , D_2O , BeO , and CH_2
J. M. Neill, J. C. Young, G. D. Trimble and J. R. Beyster - April 6, 1965

GA-6295

Differential Neutron Scattering from Hydrogenous Moderators
J. R. Beyster, J. C. Young, J. M. Neill and W. R. Mowry - March 6, 1965

TID-21826

The Precision Energy Measurements of Gamma-Rays in the Energy Region of
90-2500 kev
J. J. Reidy - 1964

GEAP-4846

Transport Equivalent Diffusion Theory
Quarterly Progress Report No. 4 January 1 - March 31, 1965
G. H. Kear - April 1, 1965

AE-190

On the Use of Importance Sampling in Particle Transport Problems
B. Eriksson - 1965

ORNL-TM-1171

A New Method for the Evaluation of Neutron Emission, Kerma, Kerma Equiva-
lent, Dose Equivalent and the Spectrum below 1 MeV for (α, n) Sources,
Using Bonner Spheres
S. K. Mehta - July 1965

RRA-T52

Neutron Transport Data for Single and Multilayer Slabs of Aluminum, Poly-
ethylene, and Carbon
M. B. Wells and J. M. Newell - May 28, 1965

Space and Accelerator Shielding

ORNL-TM-196

EVAP - A Fortran Program for Calculating the Evaporation of Various
Particles from Excited Compound Nuclei
Lawrence Dresner - April 11, 1962

P-1020 (RAND) (AD-606268)

The Random Functions of Cosmic-Ray Cascades
T. E. Harris - February 1957

AEC-C-18-04

Accelerators
W. Mausberg - January 1965

AMP-166

The Production of BeV Potential Wells
G. S. Janes, R. H. Levy and H. E. Petschek - June 1965

NBS Report 8900

Transmission of 1-MeV Electrons through Aluminum
M. J. Berger and S. M. Seltzer - June 18, 1965