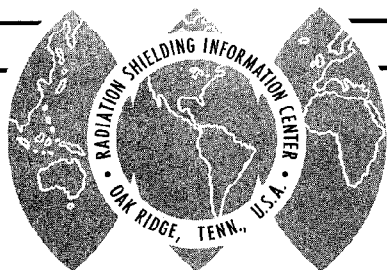


RSIC Newsletter



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. 15

February 21, 1966

SHIELDING COMPUTER CODE ABSTRACTS TO BE PUBLISHED

"Abstracts of Digital Computer Code Packages Assembled by the Radiation Shielding Information Center" has just gone to press, and will be issued as ORNL-RSIC-13. Copies will be mailed to the persons on the codes distribution list in the near future. Included in this distribution, in a loose-leaf notebook, are code packages CCC-1 through CCC-39.

Abstracts will continue to be distributed as additional codes are processed. Currently, material for 40 separate codes are in the RSIC pending file.

RECENT VISITORS TO RSIC

The following people visited RSIC during the month of January: C. W. Cleverdon, Librarian, The College of Aeronautics, United Kingdom; Wayne Scott, Chattanooga State Technical Institute; Mrs. D. Ledivelec, Librarian, EURATOM, Belgium; F. Lande, French C. E. A., Paris; Rowena Swanson, Air Force Office of Scientific Research, Washington, D. C.; Thomas B. Niland, USAEC-SROO, Aiken, South Carolina; Steward W. O'Rear, Savannah River Laboratories, Aiken, South Carolina.

JANUARY 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.

RSIC is not a documentation center. Hard copies of the literature cited below must generally be obtained elsewhere. In most cases, however, we will be able to supply microfiche copies upon request. There may be a delay if a microfiche original is not available and we must produce one. This will be the case with ordered and newly obtained literature only. Naturally, we cannot supply copies of literature which is copyrighted or whose distribution is restricted.

Reactor and Weapons Shielding

ORNL-P-1837

The Variation of Dose in Man from Unilateral Exposure to Gamma Rays
W. S. Snyder - 1964

NBS Report 8542

Neutron Penetration in Cylindrical Ducts
L. V. Spencer, J. A. Diaz, and E. Moses - September 1, 1964

Health Physics, 11, 1145-1154 (1965)

An Image Source Technique for Calculating Reflection of Gamma Rays or
Neutrons
C. Eisenhauer

NDL-tr-70 (AD 474963)

Measurements of Gamma Radiation and Gamma Spectra Versus Height Above
a Fallout Field Simulated with Co-60
M. J. Schumchyk, J. H. McNeilly, W. C. Hampton, J. C. Saccenti, I.
Murschel, and J. Jacobson - November 1965

HN-183 (Revised)

Structural and Shielding Considerations in the Design of Hardened
Facilities
R. H. Karcher and J. H. Wilson - June 30, 1965

ORNL-TM-1196

Some Conclusions Regarding the Use of the S_n Method in Shielding
Calculations
J. Wallace Webster - September 15, 1965

ER-8236

Evaluation of Methods for Computing Nuclear Rocket Radiation Fields
Lockheed Georgia Nuclear Laboratory

NASA CR- GA-6497

A Method of Solution for Particle Transport Problems
G. C. Pomraning - July 23, 1965

UNC-5100 (Secret)

The Determination of Gamma-Ray Exposures from Nuclear Weapons
J. Brooks, A. D. Krumbein, and R. Ross - November 1964

UNC-5122 (Secret)

An Analysis of the Time-Dependent Transport of X-Radiation through the Atmosphere
J. Brooks and M. O. Cohen - May 28, 1965

ORNL-tr-1060 (Translated from Inzenyrske Stavby, No. 8: 351-55 (1965))

Computation of the Thickness of Steel Shielding Walls Against Gamma Radiation
Arnost Honig

ORNL-tr-1061 (Translated from Inzenyrske Stavby, No. 9, 399-404 (1965))

Computation of the Thickness of Water Shields Against Gamma Radiation
Arnost Honig

EUR-2532.E

Neutron Spectra Measurement in Fast Reactors Using Foils Detectors
Part I. Theoretical Considerations
R. Dierckx - Oct. 1965

LA-DC-7323A

Determination of the Neutron Contribution to the REM Dose
D. E. Hankins - 1965

CONF-651101-41

Infinite Medium Spectrum-Weighted Group Constants for Gamma Heating Calculations
T. E. Dudley and M. R. Mendelson - 1965

AERE-R-5016

Multiple Scattering in Plane Samples Application to Scattering of Thermal Neutrons
S. J. Cocking, C. R. T. Heard - October 1965

NP-15644

Neutron Fluence Measurements in the Twelve Inch Duct of the Pulstar Reactor
J. DePangher, E. B. Pearson, and E. A. Smith - March 4, 1965

NP-15645

Neutron Fluence Measurements for the Second Test at the Pulstar Reactor
J. DePangher, E. B. Pearson, E. A. Smith - June 7, 1965

AERE-M-1641

Some Measurements of Neutron and Gamma Radiation from Critical Assemblies

J. A. Dennis and S. J. Booth - October 1965

N65-27373 (NASA CR 63600)

Gamma Spectrum Measurements, SNAP 8 Radiation Effects Test Program, Volume I

Lockheed-Georgia Company - September 1964

UCRL-16307

The Impact of Semiconductor Detectors on Gamma-Ray and Electron Spectroscopy

J. M. Hollander - August 1, 1965

N65-25268 (NASA CR 63147)

Calculation of Hydrogen Atomic Cross Sections, Final Report

May 15, 1964 - May 15, 1965

F. R. Pomilla, et al.

INR-630-9-A/PR

Tables of the Functions $X(C-NU)$ and $(C1, C2)$ for the Numerical Solution of Slab Geometry Neutron Transport Problems, Part I

K. Kowalska - May 1965

AERL-AMP-179

Plasma Radiation Shielding

R. H. Levy and S. Janes - December 1965

AEC-tr-6468

The Passage of Charged Particles through Matter

S. V. Starodubtsev and A. M. Romanov

LA-3383

Fission Product Yields from Fast (~ 1 MeV) Neutron Fission of Pu-239

Carl A. Anderson, Jr. - July 1965

UCRL-16445 (Rev.)

Accelerator Radiation Monitoring and Shielding

G. W. Patterson - November 17, 1965

NAA-SR-11685, Vol. 2 (C)

SNAP Systems Capabilities Volume 2. Study Introduction, Reactor, Shielding

Atomics International - December 1, 1965

TID-22499

Development of a $^{137}\text{-Cs}$ Facility for Ecological Research
F. B. Golley, J. F. McCormick - January 1966

ORNL-TM-1163

Fast and Thermal Neutron Flux Measurements in the ORR and LITR
H. A. O'Brien, Jr. - January 1966

NP-15692

The Attenuation of Thermal Neutrons in Cylindrical Ducts through a
Water Shield
C. C. Horton, D. B. Halliday - January 1965

ORNL-3694

Concerning the Moment Problem
G. G. Johnson - December 1965

Shielding Computer Codes

AI-MEMO-64-67

April 1964

TAPER II

A Fission Product Code
by Joanne S. Temple and R. A. Blaine
Fortran for IBM 709/7090

APEX-533

December 1958

09-0

Program Report, Aircraft Nuclear Propulsion Shielding Program 09-0
by J. W. Haffner, J. J. Loechler, and J. E. MacDonald
Fortran for IBM 7090

DC 60-10-150

October 1960

15-1

Determination of Suitable Parameters for Compiling Gamma Ray Air
Scattering Probabilities
by M. A. Capo
Fortran for IBM 7090

FOA 4A-4403-411

November 1964

SALOMON

A User's Manual for Salomon, An IBM 7090 Code for Gamma Transport
Calculations
by G. Engstrom
Fortran for IBM 7090

GEMP-384

August 1965

FMC-N

A Neutron Cross Section Library for Monte Carlo Codes FMC-N, 18-0, and
18-1
by L. S. Burns
Fortran for IBM 7090

NAA-SR-8684	April 1964	TYCHE
The Age of Fission Neutrons to Indium Resonance Energy in Graphite, Part II, Theory by Harry Alter Fortran for IBM 7090		
NAA-SR-MEMO 4649	November 1959	GRACE II
An IBM 709 Program for Computing Gamma-Ray Attenuation and Heating in Cylindrical and Spherical Geometries by D. S. Duncan and A. B. Speir Fortran for IBM 709 and 7090		
NAA-SR-MEMO 9069	October 1963	AICRT 3
A General Code for Display of Digital Data by M. Hoffman and W. A. Rhoades Fortran II for IBM 7090		
NASA TN D-1115	1962	MARTY
Nuclear Radiation Transfer and Heat Deposition Rates in Liquid Hydrogen by M. O. Burrell Fortran for IBM 7090		
ORNL-TM-1245	August 1965	SPCTRM
An O5R Monte Carlo Analysis Routine for Calculating the Neutron Energy Spectrum by G. W. Morrison, J. T. Mihalczko, and D. C. Irving Fortran for IBM 7090		
RRA-N413	July 1964	RRA02
Utilization Instructions for Radiation Research Program - Dose Transmission by J. M. Newell Fortran II for IBM 7090		
XDC-59-8-218	July 1959	05-0
Program Report, Aircraft Nuclear Propulsion Shielding Program 05-0 by J. J. Loechler, J. E. MacDonald, and H. M. VanValkenburg Fortran for IBM 7090		