

# 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

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## ENDF/B FORMAT AVAILABLE FROM RSIC

As noted in the RSIC Newsletter No. 20, dated July 1966, a recent meeting was held to lay plans for implementing a common computer format for handling cross sections. The Center has made a number of copies of the preliminary draft of this format and will distribute copies to those persons who are truly interested.

## RSIC CODE COLLECTION DESCRIBED IN NUCLEONICS

An article in the August issue of Nucleonics describes the RSIC computer code collection. The accompanying table gives basic information for 60 codes now available from RSIC.

## TABLE OF EXPONENTIAL INTEGRALS AVAILABLE

A table of the exponential integrals

$$E_n(x) = x^{n-1} \int_x^{\infty} e^{-y} y^{-n} dy$$

has been produced by H. E. Hungerford and R. Artigas of Purdue University. The table covers the range for  $n \leq 6$  and  $x \leq 50$ . It is available from RSIC in microfiche form upon request.

## RECENT VISITORS TO RSIC

The following people visited RSIC during the month of August: D. J. Fisher, Health Physics Division, ORNL; Charles Eisenhauer, National Bureau of Standards, Gaithersburg, Maryland; and M. A. Manzelli, Phillip Morris Research Center, Richmond, Virginia.

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.

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

USNCEL-R-465

Differential Neutron Albedo for Thin Slabs  
D. R. Doty - August 1966

Boeing Report D2-125065-1

X-Ray Attenuation and Absorption Coefficients  
W. D. Brown - July 1966

CEX-59.7B

Experimental Radiation Measurements in Conventional Structures. Part I.  
Radiation Measurements in Two-Story and Three One-Story Typical Residential  
Structures Before and After Modification  
Z. G. Burson - July 1966

ORNL-TM-1260

Heating in Infinite Cylinders by Uniform Gamma Sources  
C. W. Nestor, Jr. and H. C. Claiborne - August 15, 1966

REIC Report No. 41

The Effect of Nuclear Radiation of Ceramic Coated-Particle Reactor-Fuel  
Materials  
H. S. Rosenberg and C. W. Townley - August 8, 1966

RRA-T61

Ground Roughness Calculations for Fallout Gamma Rays  
R. L. French and L. Olmedo - June 30, 1966

RRA-T61 Summary

Ground Roughness Calculations for Fallout Gamma Rays  
R. L. French and L. Olmedo - June 30, 1966

RRA-T55

An Analysis of the Performance of Enclosure Shields in a Real Fallout Field  
R. L. French, J. H. Price and K. W. Tompkins - December 31, 1965

RRA-T55 Summary

An Analysis of the Performance of Enclosure Shields in a Real Fallout Field  
R. L. French, J. H. Price and K. W. Tompkins - December 31, 1965

USNRDL-R&L-177

Fallout Phenomena Symposium - Proceedings/Part 1  
Office of Civil Defense - Defense Atomic Support Agency - April 12-14, 1966

NDL-tr-52 (AD-486361)

Evaluation of Internal Radiac Detector Positions for the M48A2 Tank and  
the M59 and M113 Armored Personnel Carriers  
M. A. Schmoke, R. E. Rexroad and M. J. Schumchyk - June 1966

Univ. of Illinois Nuclear Radiation Shielding Studies Report No. 1

A Comparison of Theory and Experiment for Shielding by a Structure Against  
Fallout Radiation  
K. Preiss and A. B. Chilton - June 1966

Univ. of Illinois Nuclear Radiation Shielding Studies Report No. 2

Exposure Field from a Point Isotropic Source Located at the Surface of a  
Thick Concrete Slab  
A. B. Chilton and C. Y. Fu - August 1966

Univ. of Illinois Nuclear Radiation Shielding Studies Report No. 3

Monte Carlo Calculation of Self Shielding by Encapsulated Gamma Ray  
Sources  
K. Preiss - August 1966

Shielding Computer Codes

AETT-210

1965

S4B

S4B Program for Solving Multi-Group Transport Equations with Carlson's  
S4 Approximation  
by M. G. Bhide  
IBM 704

EUR-2624.E (microfiche)

November 1965

COLPROB

A One-Group Collision Probability Code for Cylinders and Slabs  
by B. Quinquemelle  
Fortran II for IBM 7090

GAMD-1561(Rev.) (microfiche)	March 1963	COPE
Core Performance Code (COPE Code) by R. Katz FORTRAN for IBM 7090		
JAERI-1085 (microfiche)	December 1964	NELKER
A Code for Scattering Kernel Calculation for Bound Hydrogen by Syoichiro Shimada Fortran II for IBM 7090		
JAERI-1105 (microfiche)	March 1966	EPSILON
An IBM-7090 Code for Computing Fast Fission Effects in Lattice by Collision Probability Method by Ichiro Komatsu and Yuzo Fukai IBM 7090		
LA-DC-5663 (microfiche)	1964	DFC
A Two-Dimensional Data Preparation Code by B. M. Carmichael and W. H. Hannum Fortran for IBM 7090/7094		
AWRE-0-103/65 (microfiche)	1965	GALAXY 3
The Calculation of Group Averaged Neutron Cross Sections. The Develop- ment of Galaxy 3 Facilities in S2 (Fortran) Language for the IBM-7030 by P. Gately, et al. Fortran for IBM 7030		
GEMP-360 (microfiche)	August 1965	GAR
Gamma Ray Production Cross Sections (Supplement No. 1) by W. E. Edwards Fortran for IBM 7090/7094		
N65-30834 (microfiche) NASA-CR-64339	January 1964	
Computer Programs for Shielding Problems in Manned Space Vehicles by C. W. Hill, et al. Fortran and FAP for IBM 7090/7094		
GAMD-6519 (microfiche)	July 1965	RAD2
A Computer Program for Calculating Fission Product Radioactivities by F. E. Vanslager Fortran IV		
AEEW-M605	November 1965	SCATTER
Scatter by J. Broome Egtran dialect of Fortran		