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## BIBLIOGRAPHY OF THE COMPUTER CODES LITERATURE EXAMINED BY THE RADIATION SHIELDING INFORMATION CENTER

July 1966

Betty F. Maskewitz      Betty L. McGill      Jane Gurney

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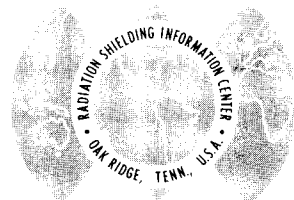
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BIBLIOGRAPHY  
OF THE COMPUTER CODES LITERATURE  
EXAMINED BY THE  
RADIATION SHIELDING INFORMATION CENTER

July 1966

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OAK RIDGE NATIONAL LABORATORY  
Oak Ridge, Tennessee  
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U.S. ATOMIC ENERGY COMMISSION

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## INTRODUCTION

One of the most important functions of an information center is that of keeping abreast of literature in the area of interest. The staff of the Radiation Shielding Information Center makes a continuous effort to survey the literature to select that which may be of interest to the shielding community. Literature describing computer codes is kept separate from the general literature since indexing schemes would be quite different and the useful life of a code is comparatively short. Thus, the bibliographies of the general literature are published separately.\*

This bibliography covers literature which describes not only shielding computer codes, but nuclear codes in a fringe area of shielding, and some miscellaneous information which might be of general interest. Thus this literature may be useful even though the codes which are described may not be considered suitable, or may not be available, for the codes collection.

The reports are grouped according to the originating installations, with the report number listed in alphabetical and/or numerical order. There has been no attempt to classify or categorize the reports, other than to indicate the computer for which a code was written and the programming language in which it was written, although this may be done in the future.

RSIC collects and maintains a file of documents for its own use and does not perform the service of a documentation center. In general, the literature selected for this bibliography may be obtained elsewhere. An exception made to this policy is that documentation is included in the code packages distributed by the Center.

The RSIC staff requests that the users of this bibliography call to the attention of the staff any literature which has not been covered in this issue and that RSIC be included in the external distribution of literature describing computer codes originating at their installations.

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IBM 7090 FORTRAN II CODE FOR THE CALCULATION OF A NEUTRON  
SPECTRUM FOR A HETEROGENEOUS LATTICE  
BY H. TAKAHASHI AND H. DEWALDE  
FORTRAN FOR IBM 7090

FOA - FORSVARETS FORSKNING SANSTALT  
RESEARCH INSTITUTE OF NATIONAL DEFENSE  
STOCKHOLM, SWEDEN

FOA-4 A-4403-411 NOVEMBER 1964 SALOMON  
A USERS MANUAL FOR SALOMON, AN IBM 7090 CODE FOR GAMMA  
TRANSPORT CALCULATIONS  
BY G. ENGSTROM  
FORTRAN FOR IBM 7090

FOA-4 A-4411-411 JANUARY 1965 PROTOS  
A MONTE CARLO PROCEDURE FOR CALCULATING THE MIGRATION OF  
PROTONS TAKING ACCOUNT ONLY OF ELECTROMAGNETIC INTERACTIONS  
BY C. JOHANSSON AND M. LEIMDORFER  
FORTRAN II FOR IBM-7090

FOA-4 A-4436-411 JULY 1965 PROTOS  
PROGRAM DESCRIPTION AND USERS MANUAL FOR PROTOS, A COMPUTER  
PROGRAM FOR TREATING PROTON SLOWING DOWN DUE TO ATOMIC  
COLLISIONS  
BY C. JOHANSSON  
FORTRAN II FOR IBM-7090

FZK - SEE NARF AND CONVAIR

GA - GENERAL ATOMIC, DIVISION OF GENERAL DYNAMICS  
SAN DIEGO, CALIFORNIA

GA-3152 AUGUST 1962 GAZE-2  
GAZE-2, A ONE-DIMENSIONAL, MULTIGROUP, NEUTRON DIFFUSION  
THEORY CODE FOR THE IBM-7090  
BY S. R. LENIHAN

GA-4132 JULY 1963 GATHER II  
GATHER-II - AN IBM-7090 FORTRAN II PROGRAM FOR THE COMPU-  
TATION OF THERMAL-NEUTRON SPECTRA AND ASSOCIATED MULTIGROUP  
CROSS SECTIONS  
BY G. D. JOANOU, C. V. SMITH, AND H. A. VIEWEG

- |   |                |                   |
|---|----------------|-------------------|
| GA-4246   | JUNE 1963      | GAMBLE            |
| GAMBLE - A PROGRAM FOR THE SOLUTION OF THE MULTIGROUP NEUTRON-DIFFUSION EQUATIONS IN TWO DIMENSICNS, WITH ARBITRARY GROUP SCATTERING, FOR THE IBM-7090 FORTRAN II SYSTEM<br>BY J. P. DORSEY   |                |                   |
| GA-4265   | SEPTEMBER 1963 | GAM II            |
| GAM-II, A B3 CODE FOR THE CALCULATION OF FAST-NEUTRON SPECTRA AND ASSOCIATED MULTIGROUP CONSTANTS<br>BY G. D. JOANOU AND J. S. DUDEK<br>IBM 7090  |                |                   |
| GA-4436   | DECEMBER 1963  | GGC II            |
| GGC-II A PROGRAM FOR USING THE GAM-II AND GATHER-II SPECTRUM CODES IN PREPARING MULTIGROUP CROSS-SECTION INPUT ON PUNCHED CARDS FOR THE GAZE, GAZED, DSN, GAPLSN, 2DXY, TDC, GAMBLE, FEVER AND GAD CODES<br>BY C. V. SMITH AND H. A. VIEWEG<br>IBM 7090 |                |                   |
| GA-4972   | MARCH 1964     | GAPLSN            |
| GAPLSN - A MODIFIED DSN PROGRAM FOR THE SOLUTION OF THE CNE-DIMENSIONAL ANISOTROPIC TRANSPORT EQUATION<br>BY J. H. ALEXANDER, G. W. HINMAN, AND J. R. TRIPLETT<br>IBM 7090  |                |                   |
| GA-5418 (MF)  | JULY 1964      | CAP               |
| A COLLIMATOR ANALYSIS PROGRAM<br>BY HENRY C. HONECK<br>FORTRAN  |                |                   |
| GA-6096   | DECEMBER 1964  | HEXSCAT<br>GASKET |
| QUARTERLY PROGRESS REPORT FOR THE PERIOD ENDING DECEMBER 31, 1964<br>BY J. R. BEYSTER, ET AL.   |                |                   |
| GA-6685 (MF)  | SEPTEMBER 1965 | UNPACK            |
| A NEUTRON CROSS SECTION DATA RETRIEVAL PROGRAM<br>BY C. V. SMITH AND M. K. DRAKE<br>FORTRAN IV AND MAP FOR IBM 7044   |                |                   |
| GAMD-2610   | NOVEMBER 1961  | DSN               |
| A NEW VERSION OF DSN<br>BY J. H. ALEXANDER<br>IBM 7090  |                |                   |
| GAMD-2797   | MARCH 1962     | DDB               |
| DDB - A TWO DIMENSIONAL REACTOR DIFFUSION CODE WITH CRITICITY SEARCH AND BURNOUT OPTIONS, VOLUME I<br>BY J. H. ALEXANDER, C. CYL-CHAMPLIN, J. E. GRATTEAU, P. C. KAESTNER, E. J. LESHAN, W. A. GROWDON, AND M. H. MERRILL                               |                |                   |

GAMD-5239 (MF)    NOVEMBER 1964    PIZZA  
 AN IBM COMPUTER CODE FOR THE PLANE STRESS ANALYSIS OF  
 TWO DIMENSIONAL BODIES, INPUT INSTRUCTIONS  
 BY D. C. CORNELL  
 FORTRAN FOR IBM 7044

GAMD-6644 (MF)    AUGUST 1965    BLOOST-5  
 BLOOST-5 - A COMBINED REACTOR KINETICS-HEAT TRANSFER CODE  
 FOR THE IBM-7044. PRELIMINARY DESCRIPTION  
 BY M. MERRILL  
 FORTRAN IV

GAMD -    SEE GA

GEAP - GENERAL ELECTRIC COMPANY  
 ATOMIC POWER EQUIPMENT DEPARTMENT  
 SAN JOSE, CALIFORNIA

GEAP-4772 (MF)    JANUARY 1965    DARE  
 EVESR-NUCLEAR SUPERHEAT FUEL DEVELOPMENT PROJECT. DARE  
 CODE FOR THE THERMAL HYDRAULIC FUEL PERFORMANCE EVALUATION  
 BY B. G. ATRAZ

GEMP -    SEE XDC

GNE - AIR FORCE INSTITUTE OF TECHNOLOGY  
 WRIGHT-PATTERSON AFB, OHIO

GNE-PHYS-64-7 (MF)    AUGUST 1964    THESIS  
 THEORETICAL CALCULATION OF NEUTRON AGE  
 BY ROBERT HANS HANSEN  
 IBM 1620



HW - HANFORD ATOMIC PRODUCTS OPERATION  
RICHLAND, WASHINGTON  
(SEE ALSO BNWL)

HW-73381	APRIL 1962	MAC
MAC - A BULK SHIELDING CODE BY E. G. PETERSON IBM 7090		
HW-73381 SUP.1	JANUARY 1964	MAC X-SECTS
TWO CROSS SECTION LIBRARIES FOR USE WITH MAC SHIELDING CODE BY J. GREENBERG		
HW-80246 (MF)	FEBRUARY 1964	MIDAS
A SIMPLIFIED METHOD FOR PROGRAMMING A 7090 COMPUTER FOR SIMULATION OF DYNAMIC SYSTEMS BY R. D. BENHAM IBM 7090		
HW-80968 (MF)	MARCH 1964	HFN CALX
USERS MANUAL FOR HFN AND CALX CHAIN BY E. L. KELLEY, JR. IBM 7090		
HW-83784	SEPTEMBER 1964	BREMRAD
A COMPUTER CODE FOR EXTERNAL AND INTERNAL BREMSSTRAHLUNG CALCULATIONS BY H. H. VAN TUYL FORTRAN II, IBM 7090		
HW-83785	SEPTEMBER 1964	ISOGEN
ISOGEN - A COMPUTER CODE FOR RADIOISOTOPE GENERATION CALCULATIONS BY H. H. VAN TUYL		
HW-SA-3769	OCTOBER 1964	ISOGEN
RADIONUCLIDE GENERAL CALCULATIONS BY H. H. VAN TUYL FORTRAN FOR IBM 7090		



JAERI - JAPAN ATOMIC ENERGY RESEARCH INSTITUTE  
TOKAI RESEARCH ESTABLISHMENT

JAERI-1082                                      FEBRUARY 1965                                      KPARAM  
MULTIGROUP CALCULATIONS OF KINETICS PARAMETERS IN  
FAST REACTORS  
BY KINICHI MORIGUCHI AND TOMOO SUZUKI  
FORTRAN II, IBM 7090 AND FORTRAN IV, IBM 7044

K       -                                      SEE UCC

KAPL - KNOLLS ATOMIC POWER LABORATORY  
SCHENECTADY, NEW YORK  
(OPERATED FOR USAEC BY GENERAL ELECTRIC CO.)

KAPL-1549                                      AUGUST 1956                                      TRIXY  
TRIXY - A COMPUTER PROGRAM FOR MULTIGROUP NUCLEAR REACTOR  
CALCULATIONS IN THREE-SPACE DIMENSIONS  
BY P. GREEBLER

KAPL-1724                                      APRIL 1957                                      CURE  
CURE - A GENERALIZED TWO-SPACE-DIMENSION MULTIGROUP  
CODING FOR THE IBM-704  
BY E. L. WACHSPRESS

KAPL-2039                                      JUNE 1959                                      TRAM  
TRAM, A MONTE CARLO THERMAL NEUTRON CODE FOR THE IBM 704  
BY M. A. MARTINO AND W. W. STONE

KAPL-2225                                      SEPTEMBER 1962                                      KERNEL  
PAM  
PROGRAMS FOR USE IN THE CALCULATION OF THE THERMAL  
SCATTERING MATRIX FOR CHEMICALLY BOUND SYSTEMS  
BY F. D. FEDERIGHI AND D. T. GOLDMAN  
FORTRAN AND ALTAC FOR PHILCO 2000

KAPL-3013                                      JUNE 1964                                      DRAM  
A MONTE CARLO PROGRAM FOR THE CALCULATION OF CAPTURE PROB-  
ABILITIES  
BY G. J. HABETTER, R. A. PFEIFFER, AND J. E. TUECKE  
ALTAC AND TAC FOR THE PHILCO 2000

KAPL-M-6119                                      FEBRUARY 1964                                      FICS  
 FICS, A PROGRAM TO COMPUTE FEW-GROUP CONSTANTS WITHIN  
 THE KARE DIFFUSION THEORY SYSTEM  
 BY D. E. GOODMAN

KAPL-M-6159                                      MAY 1964                                      SOSH I  
 SOSH I - A COMPUTER PROGRAM FOR SHIELDING CALCULATIONS  
 BY M. S. PENDERGAST, JR.

KAPL-M-6160 (MSP-4)                                      MAY 1964                                      SOSH II  
 SOSH II - A COMPUTER PROGRAM FOR SHIELDING CALCULATIONS  
 (A REVISION AND EXTENSION OF SOSH I)  
 BY M. S. PENDERGAST, JR.

KAPL-M-6174 (MF)                                      JULY 1964                                      MOST  
 A MULTIDIMENSIONAL OPTIMIZATION SCHEME  
 BY C. R. LUBITZ AND G. A. SHANHOLT  
 FORTRAN

KAPL-M-6185 (MF)                                      JULY 1964                                      HOTSTICK  
 KARE AXIAL POWER DISTRIBUTION PROGRAM FOR THE PHILCO 2000  
 BY D. E. GOODMAN  
 PHILCO 2000

KAPL-M-6420 (MF)                                      DECEMBER 1964                                      ETC4A  
 A ONE DIMENSIONAL MONOENERGETIC TRANSPORT PROGRAM  
 (REVISION II)  
 BY E. I. BROOKS, JR., C. W. DAWSON AND T. E. DUDLEY

KAPL-M-6424 (MF)                                      NOVEMBER 1964                                      MULE  
 A PROGRAM FOR MULTI-LEVEL, MULTI-CHANNEL CALCULATION OF  
 NEUTRON CROSS SECTIONS WITH DOPPLER AND RESOLUTION  
 BROADENING  
 BY E. J. BROOKS, JR. AND E. L. SLAGGIE

KAPL-M-6430 (MF)                                      NOVEMBER 1964                                      OSCAR  
 A PILE OSCILLATOR DATA REDUCTION PROGRAM FOR THE PHILCO  
 2000 DIGITAL COMPUTER  
 BY J. N. BRAZOS, B. A. GOTTSCHALK, AND A. L. LIEDEL  
 FORTRAN FOR IBM 704 AND PHILCO S-2000

KAPL-M-FDF-2                                      NOVEMBER 1962                                      SWAKRAUM  
 SWAKRAUM - A SPATIALLY DEPENDENT THERMAL SPECTRUM CODE  
 FOR THE PHILCO-2000  
 BY F. D. FEDERIGHI

KAPL-M-GES-4                                      MAY 1962                                      GAM I  
 GAM I - A GAMMA CROSS SECTION CODE FOR THE PHILCO  
 TRANSAC S-2000  
 BY G. E. SABIAN

KDP - SEE UCC

KN - KAMAN NUCLEAR  
COLORADO SPRINGS, COLORADO

KN-63-76(R)                      JUNE 1963                      TGRMM  
A FORTRAN PROGRAM FOR THE CALCULATION OF THE TRANSPORT  
OF GAMMA RAYS BY THE METHOD OF MOMENTS  
BY RICHARD E. VOGEL  
IBM 1620

KOA - SEE UCC

KR - INSTITUTT FOR ATOMENERGI  
KJELLER RESEARCH ESTABLISHMENT  
KJELLER, NORWAY

KR-71                              JUNE 1964                      K-7 TRANSPD  
ONE GROUP NEUTRON TRANSPORT IN A HETEROGENEOUS CYLINDRI-  
CALLY SYMMETRIC REACTOR CELL  
BY R. J. J. STAMMLER

LA - SEE LAMS

LAMS - LOS ALAMOS SCIENTIFIC LABORATORY  
 LOS ALAMOS, NEW MEXICO  
 (OPERATED FOR THE USAEC BY THE UNIVERSITY OF CALIFORNIA)

LA-2161	MARCH 1957	FIRE
A ONE DIMENSIONAL INTERMEDIATE REACTOR COMPUTING PROGRAM		
BY C. B. MILLS AND F. BRINKLEY		
LA-3264-MS	MARCH 1965	RATH
RATH THERMAL ANALYSIS PROGRAMS		
BY R. F. THOMAS, JR. AND M. D. J. ROBERTS		
FORTRAN FOR IBM-7030, -7094		
LA-3267	APRIL 1965	GAMLEG
A FORTRAN CODE TO PRODUCE MULTIGROUP CROSS SECTIONS FOR PHOTON TRANSPORT CALCULATIONS		
BY K. D. LATHROP		
FORTRAN FOR IBM-7030		
LA-3373	JULY 1965	DTF-IV
DTF-IV, A FORTRAN-IV PROGRAM FOR SOLVING THE MULTIGROUP TRANSPORT EQUATION WITH ANISOTROPIC SCATTERING		
BY K. D. LATHROP		
FORTRAN IV FOR IBM 7030 AND 7090		
LAMS-2339	AUGUST 1959	FLOCO II
FLOCO II MANUAL		
BY B. CARLSON, C. S. KAZEK, JR., AND C. LEE		
LAMS-2346	OCTOBER 1959	DSN, TDC
THE DSN AND TDC NEUTRON TRANSPORT CODES		
BY B. CARLSON, C. LEE, AND J. WORLTON		
LAMS-2346-APPENDIX I	OCTOBER 1959	DSN
THE DSN CODE		
BY B. CARLSON, C. LEE, AND J. WORLTON		
LAMS-2346-APPENDIX II	OCTOBER 1959	TDC
THE TDC CODE		
BY B. CARLSON, C. LEE, AND J. WORLTON		
LAMS-2856	MARCH 1963	MCS
A GENERAL MONTE CARLO NEUTRONICS CODE		
BY ROBERT R. JOHNSTON		
IBM 7090		



MND-C-2501    MAY 1961    CSDP  
 APWRC--CSDP, A GENERALIZED FORTRAN II PROGRAM FOR  
 AUTOMATED CROSS SECTION DATA REDUCTION AND ANALYSIS  
 BY R. S. HUBNER

MND-MC-2856    JULY 1962    GMCM-9  
 GENERALIZED MONTE CARLO PROGRAM FOR NEUTRONS  
 BY M. KNIEDLER AND T. JORDAN.

MND-P-2726    MAY 1962    M-1  
 SNAP PROGRAMS - M-1 MONTE CARLO RADIOISOTOPE SHIELDING  
 CODE  
 BY M. J. KNIEDLER

MPC     -    COMBUSTION ENGINEERING, INC., NUCLEAR DIVISION  
 WINDSOR, CONNECTICUT

MPC-20    SEPTEMBER 1959    CEPTR  
 CEPTR - AN IBM-704 CODE TO SOLVE THE P-3 APPROXIMATION  
 TO THE ONE-VELOCITY TRANSPORT EQUATION IN CYLINDRICAL  
 GEOMETRY  
 BY P. B. DAITCH, B. J. MCGOVERN, AND M. SCHILDER

MR     -    SEE CONVAIR, NARF, AND FZK

NAA     -    ATOMICS INTERNATIONAL  
 DIVISION OF NORTH AMERICAN AVIATION, INC.  
 CANOGA PARK, CALIFORNIA  
 (SEE ALSO AI)

NAA-SR-3719    JUNE 1959    GRACE I  
 GRACE I - AN IBM 704-709 PROGRAM DESIGNED FOR COMPUTING  
 GAMMA-RAY ATTENUATION AND HEATING IN REACTOR SHIELDS  
 BY D. S. DUNCAN AND A. B. SPEIR



NAA-SR-7357	JUNE 1962	TYCHE
A MONTE CARLO SLOWING DOWN CODE BY R. A. BLAINE FORTRAN FOR IBM-7090		
NAA-SR-8427	APRIL 1963	ANNEX I
ANALYTIC TECHNIQUES FOR THE CALCULATION OF THE ORNL TOWER SHIELD EXPERIMENTS, PART I, ANNEX-I BY R. S. HUBNER FORTRAN		
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-8884	JUNE 1965	CURIE DOSE THUNDERHEAD
A DIGITAL COMPUTER PROGRAM FOR EXTERNAL AND INTERNAL RADIATION DOSE CALCULATIONS BY G. P. KENFIELD, W. R. LAHS, W. B. SAYER, R. M. MACADAMS, AND N. A. HARRIS FORTRAN FOR IBM-7094		
NAA-SR-9190	APRIL 1964	SNAPKIN VI
THE SNAPKIN VI COMPUTER PROGRAM FOR SNAP REACTOR KINETICS CALCULATIONS BY W. A. RHOADES		
NAA-SR-9233	APRIL 1964	QUICKIE
QUICKIE - A COMPUTER PROGRAM FOR SPATIALLY INDEPENDENT MULTIGROUP SLOWING-DOWN AND THERMALIZATION CALCULATIONS BY M. BOLING AND W. RHOADES		
NAA-SR-9982	OCTOBER 1964	AISITE II
A DIGITAL COMPUTER PROGRAM FOR INVESTIGATION OF REACTOR SITING, INCLUDING EXTERNAL RADIATION DOSE CALCULATIONS BY R. A. BLAINE AND E. L. BRAMBLETT FORTRAN II FOR IBM 7094		
NAA-SR-10951	MARCH 1966	DTF-II
A ONE-DIMENSIONAL, MULTIGROUP NEUTRON TRANSPORT PROGRAM BY W. W. ENGLE, M. A. BOLING, AND B. W. COLSTON FORTRAN II FOR IBM-7090		
NAA-SR-11231	DECEMBER 1965	CHAD
CODE TO HANDLE ANGULAR DATA BY R. F. BERLAND FORTRAN IV FOR IBM 7090 AND 7094		

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-4822                      MAY 1959                      CLOUD  
AN IBM 709 PROGRAM FOR COMPUTING GAMMA-RAY DOSE RATE FROM  
A RADIOACTIVE CLOUD  
BY D. S. DUNCAN, A. B. SPEIR, G. H. ANNO, AND D. C. KOLESAR  
FORTRAN II FOR IBM-709

NAA-SR-MEMO-7776                      OCTOBER 1962                      SIG-CUM  
SIG-CUM - A CODE TO TREAT ANISOTROPIC ELASTIC SCATTER-  
ING OF NEUTRONS  
BY F. D. RUDNICK AND H. J. LORENZI

NAA-SR-MEMO-8969                      OCTOBER 1963                      RATRAP  
THE RATRAP CODE - A MODIFICATION OF THE FARSE METHOD  
FOR SNAP SHIELD GEOMETRY  
BY W. B. GREEN  
FORTRAN

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

NAA-SR-MEMO-9202                      NOVEMBER 1963                      S4CGCC  
S4 CYLINDRICAL GEOMETRY CELL CODE  
BY J. S. TEMPLE AND R. A. BLAINE  
FORTRAN, IBM 7090

NAA-SR-MEMO-9423                      JANUARY 1964                      CAESAR  
CAESAR, A MULTIGROUP, ONE DIMENSIONAL DIFFUSION EQUATION  
CODE WITH CROSS SECTION AVERAGING USING ENERGY SPECTRUM  
WITH ARES FOR THE RESONANCE  
BY DOROTHY C. BALLER

NAA-SR-MEMO-9721                      APRIL 1964                      ISRCH  
A BINARY SEARCH FORTRAN FUNCTION SUBPROGRAM  
BY R. A. BLAINE  
FORTRAN FOR IBM 7090  
(USED IN TYCHE III)

NAA-SR-MEMO-9802                      MAY 1964                      TYCHE III  
IMPROVEMENTS TO THE TYCHE MOMENTS CODE AND OPERATING  
INSTRUCTIONS FOR TYCHE III  
BY R. A. BLAINE  
FORTRAN FOR IBM 7090

NAA-SR-MEMO-10008 (MF)                    JUNE 1964                    MALINDA  
MANIPULATION AND LISTING OF NUCLEAR DATA  
BY D. W. ROEDER  
FORTRAN II FOR IBM 7090 OR 7094

NAA-SR-MEMO-10421 (MF)                    SEPTEMBER 1964                    AVR  
A METHOD OF CALCULATING ANNULAR VOID REACTIVITY EFFECTS  
IN CYLINDRICAL REACTORS  
BY R. H. NORMAN, D. G. OLIVER, AND W. R. CASTLE

NAA-SR-MEMO-10544                    NOVEMBER 1964                    MAG  
A PROGRAM TO PREPARE FAST GROUP CROSS SECTIONS IN THE  
DTF FORMAT  
BY R. S. HUBNER  
FORTRAN II FOR IBM 7090

NAA-SR-MEMO-10557(P.T.1) (MF) OCTOBER 1964                    COLEFF  
MONTE CARLO EVALUATION OF COLLIMATOR EFFICIENCY. PART 1.  
DESCRIPTION OF THE CLUB COMPUTER CODE  
BY W. B. GREEN AND R. S. HUBNER  
FORTRAN AND FAP FOR IBM-7094

NAA-SR-MEMO-10557(P.T.2) (MF) OCTOBER 1964                    COLEFF  
MONTE CARLO EVALUATION OF COLLIMATOR EFFICIENCY PART 2.  
LISTING OF THE CLUB CODE  
BY W. B. GREEN AND R. S. HUBNER  
FORTRAN AND FAP FOR IBM-7094

NAA-SR-MEMO-10881 (MF)                    JANUARY 1965                    ANNEX III  
ANALYTIC TECHNIQUES FOR THE CALCULATION OF THE ORNL TOWER  
SHIELD EXPERIMENTS, PART III, ANNEX 3  
BY R. S. HUBNER  
FORTRAN II, IBM 7090

NAA-SR-MEMO-10922                    JANUARY 1965                    SHOE  
A SHIELD WEIGHT OPTIMIZATION CODE  
BY R. L. BERNICK  
FORTRAN FOR IBM-7094

NAA-SR-MEMO-11516                    JULY 1965                    OPEX  
THE OPEX SHIELD OPTIMIZATION CODE  
BY R. L. BERNICK  
FORTRAN FOR IBM 7090

NAA-SR-TDR-5772                    OCTOBER 1960                    FARSE  
FARSE - A FIRST ORDER APPROXIMATION OF REACTOR SHIELDS  
FOR SNAP SYSTEMS, PART I, NON-SCATTERED DOSE  
BY K. ROONEY AND M. BOLING.  
FORTRAN

- NAA-SR-TDR-5954                      DECEMBER 1960                      FARSE-IA  
 FARSE-IA A MODIFICATION OF FARSE TO INCLUDE ANGULAR  
 DEPENDENCE OF SHIELD LEAKAGE  
 BY K. L. ROONEY
- NAA-SR-TDR-8516 REV.                      MAY 1963                      ANNEX II  
 ANALYTIC TECHNIQUES FOR THE CALCULATION OF THE ORNL  
 TOWER SHIELD EXPERIMENTS, PART II  
 BY R. S. HUBNER  
 FORTRAN
- NAA-SR-TDR-9327                      DECEMBER 1963                      MORTIMER  
 MORTIMER - A MODIFICATION OF THE RATRAP CODE WHICH INCLUDES  
 THE TWO COMPONENT METHOD OF SHIELD ANALYSIS  
 BY W. B. GREEN  
 FORTRAN

NARF - NUCLEAR AIRCRAFT RESEARCH FACILITY  
 GENERAL DYNAMICS  
 FORT WORTH, TEXAS

- NARF-6C-8T-VOL.I                      MAY 1960                      K-74  
 (FZK-9-147, VOL. I)  
 MONTE CARLO CALCULATIONS OF FAST-NEUTRON SCATTERING IN  
 AIR  
 BY M. B. WELLS
- NARF-6C-8T-VOL.II                      AUGUST 1960                      K-74  
 (FZK-9-147, VOL. II)  
 MONTE CARLO CALCULATIONS OF FAST-NEUTRON SCATTERING IN  
 AIR  
 BY M. B. WELLS
- NARF-6I-33T                      NOVEMBER 1961                      L05  
 A MONTE CARLO PROCEDURE FOR CALCULATING PENETRATION OF  
 NEUTRONS THROUGH STRAIGHT CYLINDRICAL DUCTS  
 BY D. G. COLLINS.  
 FAP
- NARF-6I-39T                      DECEMBER 1961                      C-17, L-63  
 SHIELD PENETRATION PROGRAMS C-17 AND L-63  
 BY D. M. PETERSON  
 FAP

- NARF-62-13T SEPTEMBER 1962 L05  
A MONTE CARLO MULTIBEND DUCT PROCEDURE  
BY D. G. COLLINS  
FAP
- FZK-134-3 MARCH 1962 C-18  
RADIATION RESISTANT COMBAT VEHICLE INVESTIGATION - FINAL  
REPORT, VOLUME III - MONTE CARLO MULTILAYER SLAB GEOMETRY  
SHIELDING CODE C-18  
BY M. B. WELLS  
FAP
- FZK-156 OCTOBER 1962 COHORT-I  
A MONTE CARLO PROCEDURE FOR RADIATION TRANSPORT AND  
HEATING STUDIES  
BY M. B. WELLS AND C. F. MALONE  
FORTRAN, IBM-7090
- FZK-176-1 DECEMBER 1963 COHORT  
MONTE CARLO CALCULATIONS OF ENERGY DEPOSITIONS AND RADI-  
ATION TRANSPORT, VOL. 1 - VALIDATION OF COHORT CODES  
BY D. G. COLLINS AND T. W. DEVRIES  
FORTRAN/FAP
- FZK-176-2 DECEMBER 1963 COHORT  
MONTE CARLO CALCULATIONS OF ENERGY DEPOSITIONS AND  
RADIATION TRANSPORT, VOL. 2 - UTILIZATION OF COHORT  
CODES  
BY D. G. COLLINS AND T. W. DEVRIES  
FORTRAN AND FAP
- FZK-200-5A JUNE 1965 SPARC (P09)  
RADIOLOGICAL ARMOR PROGRAM METHODS AND DATA COMPILATION,  
VOLUME 5A. COMPUTER PROCEDURES. SLAB PENETRATION AND  
REFLECTION CALCULATION  
BY J. R. STOKES AND J. L. HUNTER  
FAP, IBM 7090
- FZK-200-5A SUPP JUNE 1965 SPARC (P09)  
RADIOLOGICAL ARMOR PROGRAM METHODS AND DATA COMPILATION,  
VOLUME 5A. COMPUTER PROCEDURES. SLAB PENETRATION AND  
REFLECTION CALCULATION - PROGRAMMERS MANUAL SUPPLEMENT  
BY J. L. HUNTER  
FOR IBM 7090
- FZK-200-5B JUNE 1965 COMBINE (E20)  
RADIOLOGICAL ARMOR PROGRAM METHODS AND DATA COMPILATION,  
VOLUME 5B, COMPUTER PROCEDURES. COMBINE TRANSMISSION  
CALCULATION (E20)  
BY R. F. FALKENBURY, J. L. HUNTER, AND J. R. STOKES  
FORTRAN IV FOR IBM 7090

FZK-200-5B SUPP                      JUNE 1965                      COMBINE (E20)  
 RADIOLOGICAL ARMOR PROGRAM METHODS AND DATA COMPILATION,  
 VOLUME 5B COMPUTER PROCEDURES. COMBINE TRANSMISSION  
 CALCULATION (E20) - PROGRAMMERS MANUAL SUPPLEMENT  
 BY J. L. HUNTER  
 FORTRAN IV FOR IBM 7090

FZK-200-5C                              JUNE 1965                      COMBINE (F29)  
 RADIOLOGICAL ARMOR PROGRAM METHODS AND DATA COMPILATION,  
 VOLUME 5C. COMPUTER PROCEDURES. COMBINE REFLECTION  
 CALCULATION  
 BY R. F. FALKENBURY AND J. L. HUNTER  
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FZK-200-5C SUPP                      JUNE 1965                      COMBINE (F29)  
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 CALCULATION -- PROGRAMMERS MANUAL SUPPLEMENT  
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FZK-234                                  JUNE 1965                      SPARC (E59)  
 COMPUTER PROCEDURE. SLAB PENETRATION AND REFLECTION  
 CALCULATION  
 BY J. R. STOKES AND J. L. HUNTER  
 FORTRAN II FOR IBM 7090 AND 7094

FZK-234 SUPP                              JUNE 1965                      SPARC (E59)  
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FZK-235                                  JUNE 1965                      COMBINE (E91)  
 COMPUTER PROCEDURE. COMBINE TRANSMISSION CALCULATION  
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FZK-235 SUPP                              JUNE 1965                      COMBINE (E91)  
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NASA 3- NASA MANNED SPACECRAFT CENTER  
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NDA - SEE UNC

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NSL - NORTHROP SPACE LABORATORIES  
HAWTHORNE, CALIFORNIA

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NUC - NUCLEAR ENGINEERING DEPARTMENT  
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ORNL - OAK RIDGE NATIONAL LABORATORY  
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(OPERATED FOR THE USAEC BY UNION CARBIDE CORPORATION)

ORNL-2789    SEPTEMBER 1961                          CORNPONE  
A MULTIGROUP, MULTIREGION REACTOR CORE  
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- ORNL-3041 MARCH 1966 SDC  
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- ORNL-3150 AUGUST 1961 WHIRLAWAY  
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- ORNL-3150 - ADDENDUM JANUARY 1962 WHIRLAWAY  
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- ORNL-3198 FEBRUARY 1962 NIGHTMARE  
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- ORNL-3199 FEBRUARY 1962 EQUIPOISE-3  
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- ORNL-3199 - ADDENDUM JUNE 1962 EQUIPOISE-3A  
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- ORNL-3200 FEBRUARY 1962 20 GRAND  
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- ORNL-3240 JANUARY 1962 SALLY  
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- ORNL-3507 JANUARY 1964 ALBEDO  
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- ORNL-3576 APRIL 1964 SPECTRA  
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- ORNL-3610 AUGUST 1964 NTC  
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- ORNL-3622 FEBRUARY 1965 O5R  
O5R, A GENERAL-PURPOSE MONTE CARLO NEUTRON TRANSPORT CODE  
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- ORNL-3648 AUGUST 1964 MYRA  
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REACTOR FUELS AS A FUNCTION OF BURNUP, SPECIFIC POWER,  
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- ORNL-3715 NOVEMBER 1964 STATEST  
PROGRAM STATEST, AN APPLICATION OF THE METHOD OF  
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- ORNL-3734 MARCH 1965 SANC  
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- ORNL-3742, REVISED JUNE 1965 MAX  
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NUMERICAL FORMULATION  
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- ORNL-3759 MARCH 1965 WIREDAT  
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| BY S. K. PENNY, D. K. TRUBEY, AND M. B. EMMETT  |            |      |
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| ORNL-3844   | MARCH 1966 | LEP |
| INSTRUCTIONS FOR THE OPERATION OF CODES ASSOCIATED WITH THE LOW-ENERGY INTRANUCLEAR CASCADE CALCULATION |            |     |
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| ORNL-3846  | 1965 | XTREME |
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| BY F. B. K. KAM AND F. H. S. CLARK   |      |        |
| FORTRAN 63, CDC-1604A  |      |        |
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| ORNL-CF-60-11-67   | NOVEMBER 1960 | EQUIPOISE-2 |
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| BY T. B. FOWLER AND MELVIN TOBIAS  |               |             |
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| ORNL-CF-63-10-74  | OCTOBER 1963 | XENOSC |
| XENOSC IN FORTRAN |              |        |
| BY J. V. WILSON   |              |        |
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| ORNL-CF-64-4-94  | APRIL 1964 | - |
| AUXILIARY PROGRAMS FOR NEUTRON THERMALIZATION COMPUTATIONS |            |   |
| BY J. V. WILSON AND M. E. TSAGARIS                         |            |   |
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| A PROGRAM TO PREPARE A PORTION OF THE INPUT TO CODES GHT, GHTR, AND GHTRC |          |                      |
| BY J. V. WILSON   |          |                      |
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OGRE-P2, A MONTE CARLO PROGRAM FOR COMPUTING GAMMA-RAY  
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- ORNL-TM-422                              DECEMBER, 1962                              HEEP  
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- ORNL-TM-838                              FEBRUARY 1964                              KAY-CHAIN  
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- ORNL-TM-1325                                  JANUARY 1966                                  REACT, CONVRG  
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FORTRAN FOR CDC 1604

PWAC - SEE CANEL

RP - SEE AAEC

RPI - RENSSELAER POLYTECHNIC INSTITUTE  
TROY, NEW YORK

RPI-328-18 (MF) NOVEMBER 1964 EXPAND  
A SET OF THREE INTERRELATED FORTRAN II PROGRAMS  
BY R. L. HOBSON  
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RRA - RADIATION RESEARCH ASSOCIATES, INC.  
FORT WORTH, TEXAS

RRA-N413 JULY 1964 RRA02  
UTILIZATION INSTRUCTIONS FOR RADIATION RESEARCH PROGRAM  
- DOSE TRANSMISSION  
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RRA-T44 MAY 1964 L05  
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BY D. G. COLLINS

RRA-T53 JUNE 1965 05R-SOURCE  
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SM - MISSILE AND SPACE SYSTEMS DIVISION  
DOUGLAS AIRCRAFT COMPANY, INC.  
SANTA MONICA, CALIFORNIA

SM-43594 APRIL 1963 LIPRECAN I  
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TID - TECHNICAL INFORMATION DIVISION  
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OAK RIDGE, TENNESSEE

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BY DOMINIC J. RASO AND SAMUEL S. HOLLAND  
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TO-B 63-82 OCTOBER 1963 TORN  
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TO-B 63-83    OCTOBER 1963    TORG, TORN  
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 AN ISOTROPIC POINT SOURCE IN AN EXPONENTIAL ATMOSPHERE  
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 FORTRAN

TRG     -     UK-AEA, THE REACTOR GROUP  
                  RISLEY, WARRINGTON, LANCASHIRE

TRG REPORT 229(R)    MARCH 1962    MDE-20  
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 BY G. BLACK  
 FORTRAN II FOR IBM-7090

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 A REVIEW OF COMPUTER PROGRAMMES FOR SOLVENT EXTRACTION  
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 FORTRAN II, IBM 7090

UCC - UNION CARBIDE CORPORATION (NUCLEAR DIVISION - K-25)  
OAK RIDGE, TENNESSEE

K-1520 SEPTEMBER 1962 MODRIC  
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BY JAMES REPLOGLÉ

KDP-168 OCTOBER 1963 GAM-MOD-2  
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BY J. L. LUCIUS

KOA-1015 JUNE 1962 GAM-MOD  
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UCRL - LAWRENCE RADIATION LABORATORY  
LIVERMORE, CALIFORNIA  
(OPERATED FOR THE USAEC BY THE UNIVERSITY OF CALIFORNIA)

UCRL-5682 AUGUST 1959 ZOOM  
9-ZOOM - A ONE-DIMENSIONAL, MULTIGROUP, NEUTRON DIFFUSION  
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BY S. P. STONE, E. T. COLLINS, AND S. R. LENIHAN

UCRL-6076 OCTOBER 1960 ANGIE  
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UCRL-6604 OCTOBER 1961 BANZAI  
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A CALCULATIONAL METHOD TO DETERMINE GAMMA HEATING IN  
INFINITE SOURCE MEDIA  
BY ALEX LORENZ

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UCRL-6912	MAY 1962	SOPHIST II
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UCRL-7023	JUNE 1962	ABYSS
ABYSS - A NARROW RESONANCE, EPITHERMAL NEUTRON CAPTURE PROBABILITY CODE FOR INFINITE PLANE LATTICES BY G. M. BENSON AND B. K. CROWLEY		
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YOGI-N - A NEUTRON MONTE CARLO PROGRAM BY SIMON KELLMAN AND JOSEPH PETTIBONE IBM 7090		
UCRL-11647	SEPTEMBER 1964	RANGE
FORTRAN-SUBROUTINE RANGE- CALCULATING THE RANGE-ENERGY RELATION FOR CHARGED PARTICLES IN CHEMICAL ELEMENTS BY W. PETER TROWER		
UCRL-11650 (MF)	SEPTEMBER 1964	KINE
FORTRAN PROGRAM KINE -- CALCULATING KINEMATICAL AND DYNAM- ICAL QUANTITIES FOR PARTICLE INTERACTIONS AND DECAYS BY W. PETER TROWER		
UCRL-12005	AUGUST 1964	YOGI-G
YOGI-G- A GAMMA-RAY MONTE CARLO PROGRAM BY SIMON KELLMAN FORTRAN II FOR IBM 7090 AND 7094		
UCRL-14165	MAY 1965	FOTRAC
A MONTE CARLO PHOTON TRACING COMPUTER PROGRAM BY NAN DAVIES AND JOHN TERRALL FORTRAN FOR IBM 7090		

UCRL CROSS SECTIONS                      SEPTEMBER 1963                      MESNE  
 MESNE, A CROSS SECTION AVERAGING CODE  
 BY WALTER ARON

UMNE - DEPARTMENT OF CHEMICAL ENGINEERING  
 UNIVERSITY OF MARYLAND  
 COLLEGE PARK, MARYLAND

UMNE-2                                      JUNE 1962                                      DDA  
 (TID-17014)  
 INTERIM REPORT ON SCATTERING OF GAMMAS THROUGH DUCTS  
 FORTRAN FOR IBM-1620

UNC - UNITED NUCLEAR CORPORATION  
 WHITE PLAINS, NEW YORK

ARL TECH. RPT. 60-314                      DECEMBER 1960                      NIOBE  
 A PROGRAM FOR THE NUMERICAL INTEGRATION OF THE BOLTZMANN  
 TRANSPORT EQUATION  
 BY S. PREISER, G. RABINOWITZ, AND E. DEDUFOUR

NDA-2120-3                                      DECEMBER 1959                                      RENUPAK  
 RENUPAK - AN IBM-704 PROGRAM FOR NEUTRON MOMENT CALCULATIONS  
 BY J. CERTAINE, E. DEDUFOUR, AND G. RABINOWITZ

NDA 2143-18                                      AUGUST 1961                                      NIOBE  
 MILITARY COMPACT REACTOR PROGRAM - DESCRIPTION OF INPUT  
 PREPARATION AND OPERATING PROCEDURES FOR 9-NIOBE, AN IBM-  
 7090 CODE  
 BY D. YETMAN, B. EISENMAN, AND G. RABINOWITZ

UNC-5031                                      AUGUST 1962                                      NAGTRAN  
 A DESCRIPTION OF AN IBM-7090 MONTE CARLO PROGRAM FOR THE  
 SOLUTION OF THE TIME DEPENDENT NEUTRON AND GAMMA TRANSPORT  
 PROBLEMS IN AN ATMOSPHERE WITH DENSITY DEPENDENT ON HEIGHT  
 BY C. MAROTTA AND W. GUBER

UNC-5043                                      NOVEMBER 1962                                      HANGER  
 AN IBM-7090 MONTE CARLO PROGRAM TO CALCULATE NEUTRON TRANS-  
 PORT IN CYLINDRICALLY SYMMETRIC SHIELDS WITH PARTICULAR  
 EMPHASIS ON NEUTRON HEATING IN LIQUID HYDROGEN  
 BY G. RABINOWITZ, F. MALMBORG, AND M. SHAPIRO



USNRDL- U.S. NAVAL RADIOLOGICAL DEFENSE LAB.  
SAN FRANCISCO, CALIFORNIA

USNRDL-TR-829 MARCH 1965 PULS-HT  
A COMPUTER PROGRAM FOR UNFOLDING PULSE-HEIGHT DISTRIBUTIONS  
BY C. V. SMITH AND N. E. SCOFIELD  
FORTRAN FOR IBM-704

WADC - WRIGHT AIR DEVELOPMENT CENTER, USAF,  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

WADC-TR-58-80 APRIL 1958 TRIG-I  
A MONTE CARLO CODE FOR GAMMA RAY TRANSMISSION THROUGH  
LAMINATED SLAB SHIELDS  
BY R. A. LIEDTKE AND H. A. STEINBERG  
IBM 704

WADC-TR-58-383 APRIL 1958 TRIG-I  
TRANSMISSION MATRIX AND MONTE CARLO GAMMA RAY PENETRATION  
BY RAPHAEL ARONSON  
IBM 704

WADC-TR-59-443 SEPTEMBER 1960 FANTASIA,  
TRIPOD  
FANTASIA AND TRIPOD - SHIELDING CODES FOR THE I103A  
UNIVAC  
BY H. STEINBERG, J. HEITNER, AND R. ARONSON

WADC-TR-59-771 AUGUST 1960 TRIGR  
MONTE CARLO CALCULATIONS OF GAMMA RAY PENETRATION  
BY RAPHAEL ARONSON  
IBM 704

WADC-TR-59-772 AUGUST 1960 TRAMM-P  
THE TRANSMISSION MATRIX METHOD FOR PENETRATION PROBLEMS  
BY DAVID YARMUSH, JULIUS ZELL, AND RAPHAEL ARONSON  
FORTRAN II FOR IBM 704

WANL - WESTINGHOUSE ELECTRIC CORPORATION  
ASTRONUCLEAR LABORATORY  
PITTSBURGH 36, PENNSYLVANIA

WANL-TNR-063 SEPTEMBER 1962 ACT I  
ACTIVATION SOURCE STRENGTH PROGRAM  
BY P. C. HEISER AND L. O. RICKS  
FORTRAN II FOR IBM-7090

WANL-TNR-063-ADDENDUM - ACT II  
AN ADDENDUM TO ACTIVATION SOURCE STRENGTH PROGRAM  
BY P. C. HEISER AND L. O. RICKS  
FORTRAN

WANL-TNR-133 (MF) SEPTEMBER 1963 VARI-QUIR  
A TWO-DIMENSIONAL TIME-DEPENDENT MULTI-GROUP DIFFUSION CODE  
BY J. W. RIESE AND G. COLLIER  
FORTRAN

WAPD - BETTIS ATOMIC POWER LABORATORY  
PITTSBURGH, PENNSYLVANIA  
(OPERATED FOR THE USAEC BY WESTINGHOUSE ELECTRIC CORP.)

WAPD-232 MAY 1960 RDR-5, PREP  
A P-9 MULTIGROUP METHOD FOR SOLUTION OF THE TRANSPORT  
EQUATION IN SLAB GEOMETRY  
BY R. C. GAST  
NORC COMPUTER

WAPD-BT-31 (PAGE 43-49) 1964 GR-I  
PENETRATION OF POINT MONODIRECTIONAL GAMMA RAYS THROUGH  
SLAB SHIELDS  
BY K. SHURE  
PHILCO-2000

WAPD-CONF-39-61 MAY 1963 STATURE  
COMPUTER ANALYSIS OF THERMAL STRESSES IN ANNULAR CONCRETE  
SHIELD  
BY DAVID R. THOMAS  
FORTRAN FOR IBM 7094

WAPD-T-1734 (MF) JULY 1964 CORSAMP  
THE USE OF CORRELATED SAMPLING IN MONTE CARLO CALCULATION  
OF CHANGES IN THERMAL ABSORPTION  
BY N. J. CURLES, JR. AND L. A. ONDIS

- WAPD-TM-28-ADD. 2                            JULY 1959                            WANDA  
ADDENDUM 2 -- WANDA - A ONE-DIMENSIONAL FEW-GROUP DIFFUSION EQUATION CODE FOR THE IBM-704  
BY O. J. MARLOWE
- WAPD-TM-70                                    AUGUST 1957                            PDQ  
PDQ--AN IBM-704 CODE TO SOLVE THE TWO-DIMENSIONAL FEW-GROUP NEUTRON-DIFFUSION EQUATIONS  
BY G. G. BILODEAU, W. R. CADWELL, J. P. DORSEY,  
J. G. FAIREY, AND R. S. VARGA
- WAPD-TM-125                                  NOVEMBER 1959                          TUT-T5  
TUT-T5 - A TWO DIMENSIONAL MONTE CARLO CALCULATION OF CAPTURE PROBABILITIES FOR THE IBM-704  
BY J. SPANIER, H. KUEHN, AND W. GUILINGER
- WAPD-TM-134                                  MARCH 1959                              FLIP  
FLIP - AN IBM-704 CODE TO SOLVE THE PL AND DOUBLE-PL EQUATIONS IN SLAB GEOMETRY  
BY B. L. ANDERSON, J. A. DAVIS, E. M. GELBARD,  
AND P. H. JARVIS
- WAPD-TM-135                                  JULY 1959                                PIMG  
PIMG - A ONE-DIMENSIONAL MULTIGROUP PI CODE FOR THE IBM-704  
BY H. BOHL, JR., E. M. GELBARD, G. R. CULPEPPER, AND P. F. BUERGER
- WAPD-TM-143                                  OCTOBER 1959                            TKO  
TKO - A THREE-DIMENSIONAL NEUTRON-DIFFUSION CODE FOR THE IBM-704  
BY W. R. CADWELL
- WAPD-TM-156                                  NOVEMBER 1959                            ART  
ART - A PROGRAM FOR THE TREATMENT OF REACTOR THERMAL TRANSIENTS ON THE IBM-704  
BY J. E. MEYER, R. B. SMITH, H. G. GELBARD, D. E. GEORGE,  
AND W. D. PETERSON
- WAPD-TM-i62                                  JANUARY 1959                              HERD  
HERD 1, 2, AND 3 - IBM-704 CODES USED TO SOLVE THE ONE-DIMENSIONAL, ONE-VELOCITY TRANSPORT EQUATION WITH ISOTROPIC SCATTERING  
BY L. A. HAGEMAN
- WAPD-TM-176                                  AUGUST 1959                                SPAN-2  
SPAN-2 - AN IBM-704 CODE TO CALCULATE UNCOLLIDED FLUX OUTSIDE A CIRCULAR CYLINDER  
BY P. A. GILLIS, T. J. LAWTON, AND K. W. BRAND



- WAPD-TM-179    MARCH 1960    PDQ-3  
PDQ-3 - A PROGRAM FOR THE SOLUTION OF THE NEUTRON-DIF-  
FUSION EQUATIONS IN TWO DIMENSIONS ON THE IBM-704  
BY W. R. CADWELL, J. P. DORSEY, H. P. HENDERSON,  
J. M. LISKA, J. T. MANDEL, AND M. C. SUGGS
- WAPD-TM-186    JANUARY 1960    TUT-T5  
THE PHYSICS AND MATHEMATICAL ANALYSIS FOR THE TUT-T5  
MONTE CARLO CODE  
BY J. SPANIER
- WAPD-TM-196    NOVEMBER 1959    SPIC-1  
SPIC-1 - AN IBM-704 CODE TO CALCULATE THE NEUTRON  
DISTRIBUTION OUTSIDE A RIGHT-CIRCULAR CYLINDRICAL SOURCE  
BY P. GILLIS
- WAPD-TM-205    FEBRUARY 1960    EURIPUS-3,  
DAEDALUS  
EURIPUS-3 AND DAEDALUS--MONTE CARLO DENSITY CODES FOR THE  
IBM-704  
BY H. J. AMSTER, H. G. KUEHN, AND J. SPANIER
- WAPD-TM-217    JULY 1960    TRIP-1  
A TWO-DIMENSIONAL P-3 PROGRAM IN X-Y GEOMETRY FOR THE  
IBM-704  
BY E. GELBARD, J. DAVIS, J. DORSEY, H. MITCHELL, AND  
J. MANDEL  
IBM 704
- WAPD-TM-230    JUNE 1961    PDQ-4  
PDQ-4 - A PROGRAM FOR THE SOLUTION OF THE NEUTRON-  
DIFFUSION EQUATIONS IN TWO DIMENSIONS ON THE PHILCO-2000  
BY W. R. CADWELL, J. P. DORSEY, J. T. MANDEL, S. H. MEANOR,  
AND H. H. MITCHELL
- WAPD-TM-235    FEBRUARY 1962    SPAN-3  
SPAN-3 A SHIELD DESIGN PROGRAM FOR THE PHILCO-2000  
BY W. H. GUILINGER, N. D. COOK, AND P. A. GILLIS
- WAPD-TM-241    NOVEMBER 1960    WANDA-5  
WANDA-5 A ONE-DIMENSIONAL NEUTRON DIFFUSION EQUATION  
PROGRAM FOR THE PHILCO 2000  
BY O. J. MARLOWE AND M. C. SUGGS
- WAPD-TM-272    SEPTEMBER 1963    P3MG1  
P3MG1 - A ONE-DIMENSIONAL MULTIGROUP P-3 PROGRAM FOR  
THE PHILCO-2000  
BY H. BOHL, JR., E. M. GELBARD, B. L. ANDERSON, A. P. HEMP-  
HILL, AND B. P. PETERSON

- WAPD-TM-273                                    MAY 1962                                    MARC  
 MARC - A MULTIGROUP MONTE CARLO PROGRAM FOR THE  
 CALCULATION OF CAPTURE PROBABILITIES  
 BY E. M. GELBARD, H. B. ONDIS, AND J. SPANIER
- WAPD-TM-292                                    NOVEMBER 1961                                    MDD86  
 A FORTRAN CODE FOR GAMMA PENETRATION IN A FINITE SLAB  
 BY B. D. OREILLY
- WAPD-TM-315                                    APRIL 1962                                    MO150  
 MO150 - A FORTRAN PROGRAM TO SOLVE THE DOUBLE P-3  
 EQUATIONS IN SLAB GEOMETRY  
 BY R. M. CANTWELL
- WAPD-TM-320                                    APRIL 1962                                    MO176  
 MO176 - A FORTRAN PROGRAM TO SOLVE SEVERAL P-APPROXI-  
 MATIONS TO THE FEW GROUP NEUTRON TRANSPORT EQUATION  
 IN SLAB GEOMETRY  
 BY R. M. CANTWELL
- WAPD-TM-334(REC.) (MF)                                    JUNE 1964                                    CINDER  
 A ONE POINT DEPLETION AND FISSION PRODUCT PROGRAM  
 BY T. R. ENGLAND
- WAPD-TM-352                                    OCTOBER 1962                                    MO322, MO332  
 FORTRAN PROGRAMS FOR CALCULATING NEUTRON ABSORPTION IN  
 SPHERES DISTRIBUTED RANDOMLY  
 BY R. M. CANTWELL  
 IBM-7C9D
- WAPD-TM-356                                    APRIL 1963                                    GRESG  
 A FORTRAN PROGRAM TO SOLVE THE P-3 GAMMA RAY EQUATIONS  
 IN SLAB GEOMETRY  
 BY W. D. LANNING
- WAPD-TM-363                                    FEBRUARY 1963                                    PDQ-5  
 PDQ-5 -- A FORTRAN PROGRAM FOR THE SOLUTION OF THE  
 TWO-DIMENSIONAL NEUTRON-DIFFUSION PROBLEM  
 PART I - STEADY-STATE VERSION  
 BY W. R. CADWELL, J. P. DORSEY, G. M. MORRIS, C. J. PFEIFER,  
 AND A. J. VIGIOTTI
- WAPD-TM-365                                    FEBRUARY 1963                                    -  
 BETTIS FORTRAN PROGRAMMING, AUXILIARY SUBROUTINES
- WAPD-TM-369                                    OCTOBER 1963                                    MULE  
 MULE - A FORTRAN PROGRAM FOR THE CALCULATION OF THREE  
 TYPES OF OVERTONE MODES  
 BY R. L. EWEN

- WAPD-TM-377    DECEMBER 1963    -  
EQUATIONS AND PROGRAMS FOR SOLUTIONS OF THE NEUTRON  
GROUP DIFFUSION EQUATIONS BY SYNTHESIS APPROXIMATIONS  
BY S. KAPLAN, O. J. MARLOWE, AND W. R. CADWELL
- WAPD-TM-396    SEPTEMBER 1963    CTS-3  
A MULTI-GROUP TRANSPORT PROGRAM FOR INFINITE CYLINDERS  
BY J. H. BENNETT  
PHILCO-2000
- WAPD-TM-407    OCTOBER 1963    RECAP-1  
RECAP-1 - A MONTE CARLO PROGRAM FOR ESTIMATING  
EPITHERMAL CAPTURE RATES IN SLABS  
BY N. R. CANDELORE AND R. C. GAST  
PHILCO-2000
- WAPD-TM-427    APRIL 1964    RECAP-2  
RECAP-2 - A MONTE CARLO PROGRAM FOR ESTIMATING EPITHERMAL  
CAPTURE RATES IN ROD ARRAYS  
BY N. R. CANDELORE AND R. C. GAST  
FORTRAN FOR PHILCO 2000
- WAPD-TM-436    APRIL 1964    EMPIRE-1, -2  
EMPIRE-1 AND EMPIRE-2 FORTRAN MULTIGROUP DISCRETE ORDINATE  
TRANSPORT CODES TO SOLVE SLAB GEOMETRIES  
BY J. D. BUTLER
- WAPD-TM-437    MARCH 1964    RECAP-3  
RECAP-3 - A MONTE CARLO PROGRAM FOR ESTIMATING EPITHERMAL  
CAPTURE RATES IN RECTANGULAR OR 60 DEGREE PARALLELOGRAM  
GEOMETRY  
BY N. R. CANDELORE AND R. C. GAST  
FORTRAN
- WAPD-TM-477 (MF)    JANUARY 1965    PDQ-5  
PDQ-6  
THE PDQ-5 AND PDQ-6 PROGRAMS FOR THE SOLUTION OF THE  
TWO-DIMENSIONAL NEUTRON DIFFUSION-DEPLETION PROBLEM  
BY W. R. CADWELL, P. F. BUERGER, AND C. J. PFEIFER  
FORTRAN II FOR PHILCO 212
- WAPD-TM-478 (MF)    JANUARY 1965    HARMONY  
SYSTEM FOR NUCLEAR REACTOR DEPLETION COMPUTATION  
BY R. J. BREEN, O. J. MARLOWE, AND C. J. PFEIFER
- WAPD-TM-481    OCTOBER 1964    SNUG  
A MONTE CARLO SHIELD DESIGN PROGRAM FOR THE PHILCO-2000  
COMPUTER  
BY N. D. COOK

WAPD-TM-482                                OCTOBER 1964                                TXYD1  
 A ONE-GROUP TRANSPORT PROGRAM FOR X-Y GEOMETRY  
 BY J. H. BENNETT  
 ALTAC AND TAC FOR PHILCO 2000

WAPD-TM-493                                -    ROC-1  
 ROC-1 A FORTRAN PROGRAM FOR STORAGE OF EVALUATED NUCLEAR  
 DATA  
 BY D. R. HARRIS, A. V. VOTA, G. E. MORRIS, C. B. NOLL,  
 AND H. BOHL, JR.  
 FORTRAN FOR PHILCO 2000

WAPD-TM-494                                NOVEMBER 1964                                M0564  
 A FORTRAN PROGRAM FOR SYMMETRIC AND ASYMMETRIC RESONANCE  
 INTEGRALS  
 BY D. R. HARRIS AND G. J. PETERS  
 FORTRAN FOR PHILCO 2000

WAPD-TM-501                                APRIL 1965                                        RAM-1  
 A FORTRAN PROGRAM TO TRANSFORM AND AVERAGE CROSS SECTIONS  
 FROM THE ROC LIBRARY TAPE FOR USE IN MULTIGROUP NEUTRON  
 TRANSPORT PROGRAMS  
 BY D. R. HARRIS, C. B. NOLL, AND A. V. VOTA  
 FORTRAN FOR PHILCO 2000

WCAP - WESTINGHOUSE ELECTRIC CORPORATION  
 ATOMIC POWER DIVISION  
 PITTSBURGH 30, PENNSYLVANIA

WCAP-3269-26                                SEPTEMBER 1963                                LEOPARD  
 A SPECTRUM DEPENDENT NON-SPATIAL DEPLETION CODE FOR THE  
 IBM-7094  
 BY R. F. BARRY  
 FORTRAN II AND FAP

WCAP-6058    JANUARY 1964                                CNCR-2  
 CNCR-2 - A ONE-DIMENSIONAL FEW GROUP DEPLETION CODE  
 FOR THE IBM-7090, WHICH INCLUDES THE EFFECTS OF WATER  
 DENSITY VARIATIONS ON NEUTRON MODERATION  
 BY S. M. HENDLEY AND R. A. MANGAN

WCAP-6058 TEMPORARY ERRATA            JUNE 1964                                        CNCR-2

WCAP-6059    MARCH 1964                                        TURBO  
 TURBO - A TWO DIMENSIONAL FEW-GROUP DEPLETION CODE  
 FOR THE IBM-7090  
 BY S. M. HENDLEY AND R. A. MANGAN

WL - AIR FORCE WEAPONS LABORATORY  
KIRTLAND AIR FORCE BASE  
ALBUQUERQUE, NEW MEXICO

WL-TDR-64-46, VOL. I                      JULY 1964                      TRG-SGD  
TRG-SGD, A MONTE CARLO PROGRAM TO CALCULATE SECONDARY  
GAMMA RAY DOSE FROM A NUCLEAR WEAPON DETONATION  
BY HERBERT STEINBERG AND RAPHAEL ARONSON  
FORTRAN/CODAP

WL-TDR-64-46, VOL. II                      JULY 1964                      TRG-SGD  
TRG-SGD, A MONTE CARLO PROGRAM TO CALCULATE SECONDARY  
GAMMA RAY DOSE FROM A NUCLEAR WEAPON DETONATION  
BY HERBERT STEINBERG AND RAPHAEL ARONSON  
FORTRAN/CODAP

WL-TDR-64-71, VOL. I                      AUGUST 1964                      SPARES  
COMPUTER CODES FOR SPACE RADIATION ENVIRONMENT AND SHIELDING  
BY J. A. BARTON, J. R. BENBROOK, W. R. DOHERTY,  
G. L. KEISTER, B. W. MAR, K. MORIYASU, W. R. SHELDON,  
J. R. THOMAS, AND M. C. WILKINSON

XDC, GEMP, DC, AND APEX  
NUCLEAR MATERIALS AND PROPULSION OPERATION, NMPO  
GENERAL ELECTRIC CORPORATION  
CINCINNATI, OHIO

APEX-404                                      AUGUST 1958                      12-0  
SHIELDING COMPUTER PROGRAM 12-0, GAMMA RAY PENETRATION  
POINT SOURCE  
BY W. E. EDWARDS AND J. J. LOECHLER  
IBM-704

APEX-503                                      MARCH 1958                      10-0  
AIRCRAFT NUCLEAR PROPULSION SHIELDING PROGRAM 10-0  
BY J. W. HAFFNER, J. J. LOECHLER, AND J. E. MACDONALD  
IBM 704

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

APEX-552	MAY 1958	FCGH
FINITE CYLINDER GAMMA HEATING PROGRAM BY J. R. BEELER AND A. H. BARNETT IBM-704		
APEX-605	APRIL 1961	20-7
SHIELD REGION DATA CONVERTER PROGRAM 20-7 BY J. M. MARTIN		
APEX-608	APRIL 1961	FN-GAMMA
MULTIGROUP, MULTIREGION, ONE-SPACE-DIMENSION PHOTON-DIF- FUSION THEORY CALCULATION - PROGRAM FN-GAMMA BY MARY S. FERRY IBM-7090		
APEX-610	MAY 1961	20-0
SHIELDING COMPUTER PROGRAM 20-0 BY J. E. MACDONALD AND J. T. MARTIN FAP		
APEX-613	MARCH 1961	-
PHOTON CROSS SECTIONS BY MARY S. FERRY		
APEX-618	MARCH 1961	-
SYMBOLIC MATRIX TRANSLATOR PROGRAM, FLOCO V FIELD-TEST FORMULATION BY B. H. DUANE		
APEX-645	FEBRUARY 1961	S
MULTIGROUP NUCLEAR DATA FOR GE-ANPD COMPUTER PROGRAM S BY R. L. DOUGH		
APEX-706	APRIL 1961	FMC-N, -G
FLEXIBLE MONTE CARLO PROGRAMS FMC-N AND FMC-G BY J. J. LOECHLER AND J. E. MACDONALD FAP		
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		
GEMP-102	OCTOBER 1961	18-0
SPECIALIZED REACTOR-SHIELD MONTE CARLO PROGRAM 18-0 BY J. E. MACDONALD, J. T. MARTIN, AND J. P. YALCH FAP		

- GEMP-113                                  JUNE 1962                                  20-2  
PROGRAM 20-2, A PROGRAM FOR APPROXIMATING CROSS SECTION  
DEPENDENCE ON ENERGY  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-114                                  JUNE 1962                                  20-3  
PROGRAM 20-3, A PROGRAM FOR COMPUTATION OF TOTAL MACRO-  
SCOPIC CROSS SECTION AND COLLISION PROBABILITIES FOR  
SPECIFIED MATERIAL COMPOSITION  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-115                                  JUNE 1962                                  20-4  
PROGRAM 20-4, A PROGRAM FOR AVERAGING DIFFERENTIAL  
SCATTERING CROSS SECTIONS  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-116                                  JUNE 1962                                  20-5  
PROGRAM 20-5, A PROGRAM FOR PREPARATION OF SPECTRUM TABLES  
FROM EVAPORATION MODEL  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-117                                  JUNE 1962                                  20-6  
PROGRAM 20-6, A PROGRAM FOR COMPUTING NUCLEAR EXCITATION AND  
TRANSITION PROBABILITIES FROM MEASURED GAMMA RAY INTENSITIES  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-123                                  JULY 1962                                  20-8  
PROGRAM 20-8, A PROGRAM FOR INTERPRETING PROGRAM 18-0  
SOURCE AND ESCAPE PARTICLE TAPES  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN
- GEMP-272                                  JANUARY 1964                                  18-1  
ADDENDA TO GEMP-102 DESCRIBING PROGRAM 18-1  
BY J. P. YALCH AND J. E. MACDONALD  
FORTRAN FOR IBM-7090
- GEMP-329 (MF)                                  OCTOBER 1964                                  FLUXWT  
PROGRAM FLUXWT (NMP-800) -- A FLUX WEIGHTING PROGRAM  
BY W. B. HENDERSON  
FORTRAN II AND FAP
- 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

- XDC 57-11-101 NOVEMBER 1957 04-2  
SHIELDING COMPUTER PROGRAM 04-2, REACTOR SHIELD ANALYSIS  
BY W. E. EDWARDS, J. E. MACDONALD, AND J. J. LOECHLER  
IBM 704
- XDC 58-1-116 JANUARY 1958 04-2  
DESCRIPTION OF SHIELDING COMPUTER PROGRAM 04-2 POST MORTEM  
PRINT OUTS  
BY M. A. CAPO AND K. PAINE
- XDC 58-3-149 JANUARY 1958 3-DMCRS  
MONTE CARLO PROGRAM FOR CYLINDRICAL GEOMETRY, PART ONE,  
PHYSICS AND METHOD  
BY J. R. BEELER AND J. W. RYAN  
IBM 704
- XDC 58-4-121 APRIL 1958 04-1  
SHIELDING COMPUTER PROGRAM 04-1, REACTOR SHIELD ANALYSIS  
BY W. E. EDWARDS, M. A. CAPO, AND K. PAINE  
IBM-704
- XDC 58-7-76 MAY 1958 04-0  
SHIELDING COMPUTER PROGRAM 04-0, REACTOR SHIELD ANALYSIS  
BY W. E. EDWARDS, J. E. MACDONALD, B. GOLDBERG, AND  
K. PAINE  
IBM-704
- XDC 58-11-208 NOVEMBER 1958 04-1, -2, 14-0  
COMPARISON OF BSF WATER CENTERLINE MEASUREMENTS WITH PRE-  
DICTIONS (04-1, 04-2, 14-0)  
BY A. W. CASPER
- XDC 58-12-73 AUGUST 1958 S3  
DIGITAL COMPUTER PROGRAM S3  
BY M. J. STANLEY  
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