

**NUCLEAR DATA SERVICES**

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION



XA9950011

ENSDF ANALYSIS CODES

IBM Version. August 1982

Abstract

The nuclear structure analysis programme tape consists of physics computer processing codes used in the evaluation of mass-chain structure data. This tape was generated by the National Nuclear Data Centre, Brookhaven National Laboratory in the USA.

A. Lorenz
September 1982

30 - 21*f*

Contents of Nuclear Structure Analysis Program Tape

File #	Record Count	File Description
====	=====	=====
		Note - all program files are 80 column card images with identification and sequencing in columns 73 through 80.
		S(S)
1.	163	SETMDC program - Version 4(4) ⁵⁽⁵⁾ . Converts programs on this tape for use on other machines. Unit 21 - Input file to be converted. Unit 22 - Output file of converted program. Unit 5 - Control input single card image record indicating (output machine type: CDC, DEC or IBM). Unit 6 - Control output for messages (count of records).
2.	1613	ANGCOR program - Version 2(3). Unit 5 - Test data (see below). Unit 6 - Report file (using FORTRAN carriage control). Unit 20 - Data table (see below).
3.	3	Test data file for ANGCOR program (80 column card image).
4.	46	Data table file for ANGCOR program (80 column card image).
5.	690	NSDLIB subprogram library - Version 5(16). Single precision version of subprograms used with programs on this tape.
6.	715	NSDLIB subprogram library - Version 5(16). Double precision version of subprograms used with programs on this tape.
7.	1004	FORSTR subprogram library - Version 6(21). Machine independent character string handling routines for FORTRAN programs used with NSDLIB and other programs on this tape.
8.	185	CDLIB subprogram library - Version 3. Complex - double precision package of subprograms used with the double precision version of the LOGFT program.
9.	47	Sample ENSDF data set (205TL 205HG B- DECAY) file for use as input to GTOL, HSICC and LOGFT packages (80 column card image).
10.	958	GTOL program - Version 4(14). Load with NSDLIB (D.P.) and FORSTR. Unit 5 - Test data (see above). Unit 6 - Report file (using FORTRAN carriage control).

Contents of Nuclear Structure Analysis Program Tape

11. 119 BLDHST program - Version 2(7).
Builds ICC direct access files (DEC and IBM machines only)
from sequential input file (next on tape) for use with
HSICC program.
Unit 20 - Sequential input file (see below).
Unit 21 - Direct access data table.
Unit 22 - Direct access index to direct access data table.
Unit 6 - Control output for messages (count of records).
12. 13004 ICC sequential input file (80 column card image).
13. 1480 HSICC program - Version ~~4(36)~~⁴⁽⁴⁶⁾.
Load with NSDLIB (D.P.) and FORSTR.
Unit 5 - Test data (see above).
Unit 6 - Report file (using FORTRAN carriage control).
Unit 7 - Generated 2G cards with corrections
(80 column card image).
Unit 8 - Report of output to unit 7 (using FORTRAN
carriage control).
Unit 20 - Sequential data table for use on CDC machines only
(80 column card image).
Unit 21 - Direct access data table (see above).
Unit 22 - Direct access index to unit 21 (see above).
Direct access files used only on DEC and IBM machines
and were generated by BLDHST program.
14. 217 HSMRG program - Version ~~3(3)~~⁴⁽⁶⁾.
Merges data set deck used for input to HSICC (unit 5) and
generated 2G cards from HSICC (unit 7) to form a new data
set deck.
Load with NSDLIB (S.P.) and FORSTR.
Unit 21 - Input data set deck (see above).
Unit 22 - Generated 2G cards (see above).
Unit 23 - New data set deck (80 column card image).
Unit 6 - Control output for messages (count of records).
15. 92 SEQHST program - Version 2(1).
Reverses action of BLDHST program (for DEC and IBM machines
only).
Unit 20 - Direct access data table (as generated by BLDHST).
Unit 21 - Output sequential data table (equivalent to the
input to BLDHST).
Unit 6 - Control output for messages (count of records).

Contents of Nuclear Structure Analysis Program Tape

16. 1680 LOGFT program - version 4(63).
Single precision version.
Load with NSDLIB (S.P.) and FORSTR.
Unit 5 - Test data (see above).
Unit 6 - Report file (using FORTRAN carriage control).
Unit 20 - LOGFT data table (see below).
Unit 21 - Generated data set deck with new 2B cards
(80 column card image).
17. 1708 LOGFT program - version 4(63).
Double precision version.
Load with NSDLIB (D.P.), CDLIB and FORSTR.
Unit 5 - Test data (see above).
Unit 6 - Report file (using FORTRAN carriage control).
Unit 20 - LOGFT data table (see below).
Unit 21 - Generated data set deck with new 2B cards
(80 column card image).
18. 96 LOGFT data table (80 column card image).
19. 1245 ANGCOR report based on sample test data.
133 column line printer listing with FORTRAN carriage control.
20. 89 GTOL report based on sample test data.
133 column line printer listing with FORTRAN carriage control.
21. 300 HSICC report based on sample test data.
133 column line printer listing with FORTRAN carriage control.
22. 21 HSICC report of generated 2G cards.
133 column line printer listing with FORTRAN carriage control.
23. 49 HSMRG output of new data set deck
80 column card image.
24. 108 LOGFT report based on sample test data.
133 column line printer listing with FORTRAN carriage control.
25. 47 LOGFT output of new data set deck.
80 column card image.

File Description

FILE DESCRIPTION:SETMDC.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 1 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 163 +(37FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:ANGCOR.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 2 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1613 +(87FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:ANGCOR.TST

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 3 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 3 +(97FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:ANGCOR.DAT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 4 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 46 +(54FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:MSDLIB.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 5 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 690 +(10FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:DNSDLI.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 6 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 715 +(85FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:FORSTR.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 7 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1004 +(96FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:CDLIB.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 8 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 185 +(15FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:DATA.TST

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 9 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 47 +(53FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:GTOL.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 10 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 958 +(42FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:BLDHST.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 11 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 119 +(81FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:ICCSQ.DAT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 12 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 13004 +(96FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:HSICC.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 13 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1544 +(56FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:HSMRG.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 14 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 324 +(76FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:SEQHST.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 15 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 92 +(8FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:LOGFT.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 16 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1680 +(20FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:DLOGFT.IBM

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 17 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1708 +(92FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:LOGFT.DAT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 18 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 96 +(4FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:ANGCOR.RPT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 19 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 1245 +(55FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 133 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:GTOL.RPT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 20 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 89 +(11FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 133 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:HSICC.RPT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 21 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 300
NUM OF DATA CHARS PER LOG REC: VARIABLE

FILE DESCRIPTION:HSICC2.RPT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 22 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 21
NUM OF DATA CHARS PER LOG REC: VARIABLE

FILE DESCRIPTION:HSMRG.OUT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 23 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 49 +(51FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:LOGFT.RPT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 24 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 108 +(92FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 133 CHARS (NOT INCLUDING MARKERS)

FILE DESCRIPTION:LOGFT.OUT

TAPE DENSITY: GCR 6250 CREATION DATE: 25 AUG 1982
TAPE FILE: 25 CODE: EBCDIC UPPER & LOWER CASE
BLOCKING FACTOR: 100 TAPE IDENTIFICATION:3580
TAPE UNIT: MTA2 9TK NUM OF LOGICAL RECS: 47 +(53FILLER LOG RECS)
NUM OF DATA CHARS PER LOG REC: FIXED-- 80 CHARS (NOT INCLUDING MARKERS)