======================================================================= Endf2c

Endf2c

Program ENDF2C Endf2c

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Convert ENDF Data to Standard FORTRAN, C and C++ Format. Endf2c

Endf2c

Version 2014-1 Feb. 2014 \* Initial version. Endf2c

2014-2 Oct. 2014 \* Changed from D to E exponential form Endf2c

to improve compatibility between Endf2c

computer languages. Endf2c

2015-1 Jan. 2015 \* General updates for release with Endf2c

PREPRO2015. Endf2c

\* Changed ENDF data filenames from ENDF2C Endf2c

to ENDFB, to agree with PREPRO default Endf2c

definitions. Endf2c

\* Added code name (to be compatible Endf2c

with PREPRO output), but NOT TIME (to Endf2c

keep this code as computer independent Endf2c

as possible). Endf2c

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Purpose Endf2c

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This code is designed for, Endf2c

1) ENDF Data in any ENDF format = ENDF-1 through ENDF-6. Endf2c

2) On any type of computer = 32 or 64 bit system/compiler Endf2c

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This code tries to keep things as simple as possible Endf2c

1) There are NO INPUT PARAMETERS. Endf2c

2) It reads an ENDF formatted file named ENDFB.IN Endf2c

3) It writes an ENDF formatted file named ENDFB.OUT Endf2c

4) It writes a report file named ENDF2C.LST Endf2c

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Author's Message Endf2c

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I consider insuring that ENDF data is in a standard, officially Endf2c

approved format for FORTRAN, C and C++ is SO IMPORTANT this code Endf2c

does only one thing - and only one thing - and it does it in the Endf2c

simplest possible manner - efficiency is NOT a consideration - Endf2c

ONLY accuracy and general utility of the ENDF data is considered. Endf2c

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Method Endf2c

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Other codes that attempt to do the same thing - including codes Endf2c

written be me decades ago - are very complicated, and therefore Endf2c

ERROR PRONE because they try to deal with each and every variant Endf2c

in which data can be coded in the ENDF format. Needless to say Endf2c

this means that every time the ENDF formats and procedures change Endf2c

these codes MUSE also be changed. Endf2c

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In contrast, ENDF2C uses my almost 50 years of experience dealing Endf2c

with the ENDF format to realize that except for the comments at Endf2c

the beginning for each evaluation (MF/MT=1/451), every line of Endf2c

ENDF data is IDENTICAL - in every version of the ENDF format, from Endf2c

the original ENDF to today's ENDF-6. So to translate ENDF data Endf2c

into an official format I do not have to consider differences in Endf2c

each section (MF/MT) of data. Endf2c

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Every line of ENDF is divided into 6 fields, each 11 columns wide. Endf2c

Each of the 6 fields is either, blank, integer or floating point. Endf2c

Floating point fields ALL include a decimal point (.). So that ALL Endf2c

this code does is convert every floating point field to standard Endf2c

format. Endf2c

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In order to insure that this PRESERVES the accuracy of the data Endf2c

this is done by reading and writing each ENDF line as characters. Endf2c

Blank and integer fields are copied exactly as read. ALL floating Endf2c

point number that are read are converted internally from character Endf2c

to floating point - they are then converted back into characters Endf2c

in a standard, officially approved format, for output. Endf2c

Endf2c

As a last step to insure the accuracy of results the characters Endf2c

to be output are again converted from characters to floating Endf2c

point, and the numerical value that is output is compared to the Endf2c

numerical value originally read, and if there is ANY DIFFERENCE Endf2c

the characters strings read and written are listed in the output: Endf2c

the characters strings read and written as well as the difference Endf2c

is listed in the output report (ENDF2C.LST) and on the screen. Endf2c

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Running Time Endf2c

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It takes only seconds to translate an ENDF formatted evaluation, Endf2c

so running time need not be a consideration. Concentrate on Endf2c

keeping it simple and reliable - that should be your focus. Endf2c

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Documentation Endf2c

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ALL of my codes that process ENDF data and change it in ANY WAY Endf2c

document what they have done by adding comment lines at the end Endf2c

of the comment section (MF/MT=1/451) of each evaluation. This Endf2c

allows data users to determine the pedigree of the data they are Endf2c

using, by reading these comments. This code documents what is has Endf2c

done by adding the following 2 comment lines. Endf2c

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\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Program ENDF2C (Version 2015-1) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Endf2c

Convert ENDF Data to Standard FORTRAN, C and C++ Format Endf2c

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WARNING - This documentation is IMPORTANT to data users and it Endf2c

should not be deleted. Endf2c

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Written by Endf2c

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