**======================================================================= Endf2c**

**Endf2c**

**Program ENDF2C Endf2c**

**============== Endf2c**

**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**

**2017-1 May 2017 \* Updated based on user feedbsck Endf2c**

**2018-1 Jan. 2018 \* Added on-line output for ALL ENDERROR Endf2c**

**2019-1 June 2019 \* Added /UNITS/ to allow correct output Endf2c**

**at end = output either o.k. or error. Endf2c**

**Endf2c**

**Purpose Endf2c**

**================================================================== Endf2c**

**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**

**Endf2c**

**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**

**Endf2c**

**Author's Message Endf2c**

**---------------- Endf2c**

**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**

**Endf2c**

**Method Endf2c**

**------ Endf2c**

**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**

**Endf2c**

**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**

**Endf2c**

**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**

**Endf2c**

**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**

**Endf2c**

**Running Time Endf2c**

**------------ Endf2c**

**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**

**Endf2c**

**Documentation Endf2c**

**------------- Endf2c**

**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**

**Endf2c**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Program ENDF2C (Version 2019-1) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Endf2c**

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

**Endf2c**

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

**should not be deleted. Endf2c**

**Endf2c**

**Written by Endf2c**

**------------------------------------ Endf2c**

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**Endf2c**

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