======================================================================= 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

 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 2015-1) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 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

 Dermott E. Cullen Endf2c

 University of California (retired) Endf2c

 -----Present Home Address---------------------------------------------- Endf2c

 Dermott E. Cullen Endf2c

 1466 Hudson Way Endf2c

 Livermore, CA 94550 Endf2c

 U.S.A. Endf2c

 Telephone 925-443-1911 Endf2c

 E. Mail RedCullen1@Comcast.net Endf2c

 Website http://home.comcast.net/~redcullen1 Endf2c

 Endf2c

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