X4TOC4: conversion of full EXFOR database to computational format

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Program X4TOC4 (written by Dermott E. Cullen, modified by A.Trkov) converts EXFOR to computational format C4. This program is used under several packages such as Empire, EndVer, NDS Web retrieval system. The program uses a system of dictionaries describing the algorithm of the conversion. Most important dictionary is in the file EXFOR14A.DAT. Basically, this file describes the correspondence between EXFOR reaction code, ENDF pair MF-MT, ZA-projectile and type of conversion. When reaction can not be converted, this case should be reported and the dictionary should be extended (sometimes, a new piece of algorithm should be written). Active users suggest extensions to A.Trkov and he updates the dictionary file. Most typical reactions are converted at the present time. Of course this system covers not all possible cases from EXFOR, and some attempts were done to be able to convert more data for the plotting purposes (see e-mail). The task of good coverage requires expertise in both formats EXFOR and ENDF and needs some additional efforts.

X4TOC4 and general EXFOR-ENDF statistics

ZERKIN, Viktor

You replied on 2006-04-19 17:01.

To: TRKOV, Andrej; SCHWERER, Otto; CAPOTE NOY, Roberto Mario; MENGONI, Alberto; NICHOLS, Alan

Dear all,

Working on EXFOR-ENDF plotting task, I use two algorithms to cover more data types:
1) extension of EXFOR14A.DAT by similar reaction codes just having another projectile
2) extension of EXFOR14A.DAT by Vladimir's file with correspondence [MF-MT-LR] <-> [EXFOR-Reaction]

Both need manual checking (1-st - less manual work, I believe), 2-nd - need revision of other programs (Andrej ?).
Staistics:

Current EXFOR14A.DAT:	274 lines	
Total data tables in EXFOR:	119,709	
Resolved (have MF-MT):	42,276	(35%)
1) addition to EXFOR14A.DAT:	845 lines	
Resolved (after implem.):	55,273	(46%)
2a) MF1-MF6 add to EXFOR14A.DAT:	2278 lines	
Resolved (after implem.):	75,487	(63%)
2b) MF1-MF15 add to EXFOR14A.DAT:	4781 lines	
Resolved (after implem.):	111,509	(93%)

Next week, I would like to propose to discuss next steps: using this information and results of your tests. (?)

Viktor