# Checking tools and finalization of an EXFOR entry

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#### Overview

- □ CHEX and Janis Trans Checker
- Common errors in compilation(few examples only)

The compilation is not complete/EXFOR entry is incomplete if error messages are shown by these checking tools.

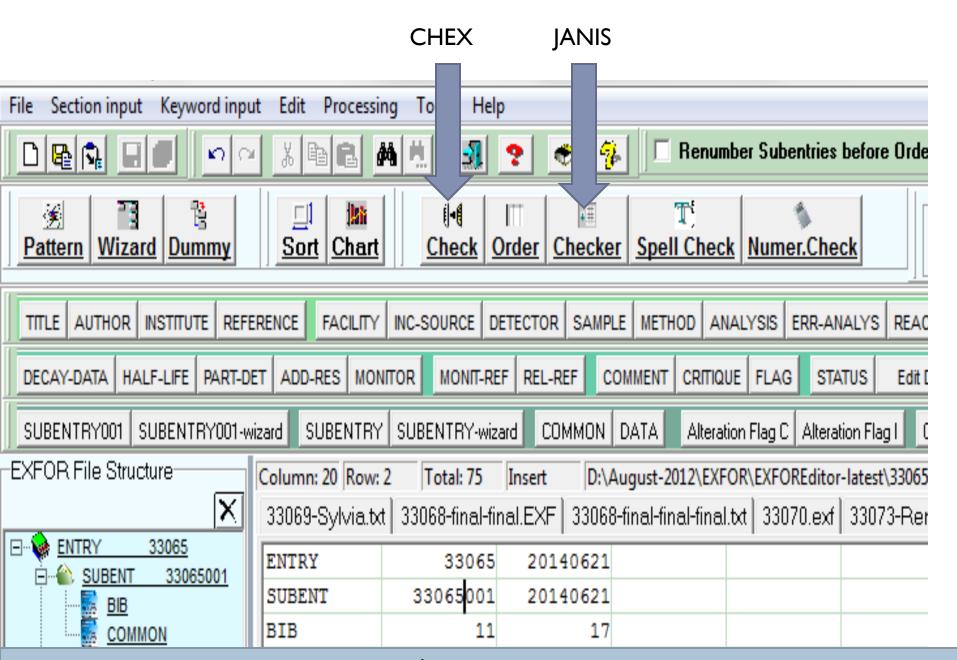
It is absolutely required that all error messages are removed before submission.

Two checking modules are included to the EXFOR-Editor:

- program code Chex
- program code JANIS Trans Checker

- ▶ Title: Program CHEX
- Author: V.McLane, BNL, USA, 1998-2001
- Versions since 2001: V.Zerkin, IAEA-NDS

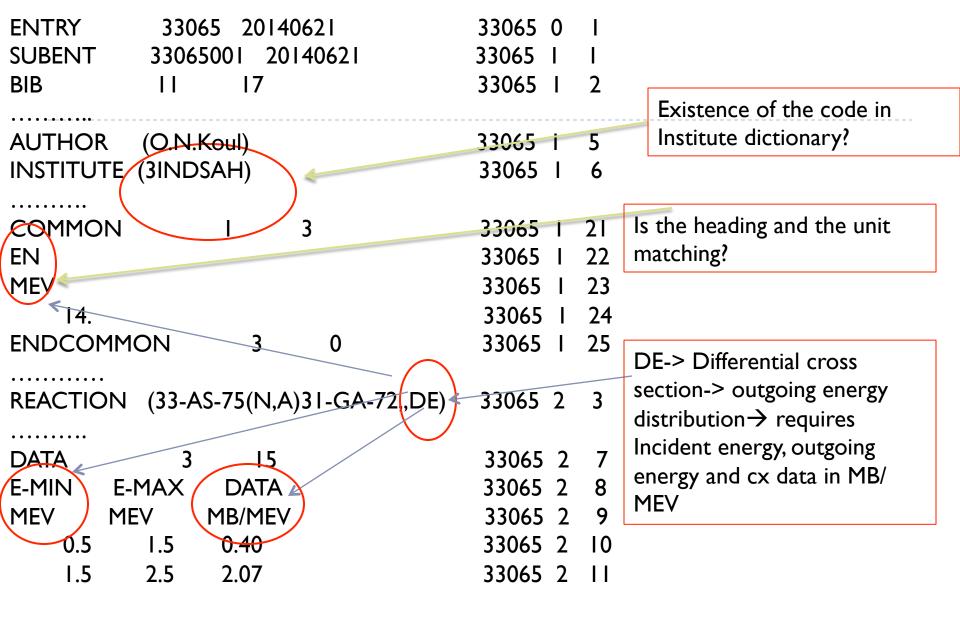
Purpose: Checking EXFOR entries



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#### What CHEX and Janis Trans Checker do?

- CHEX is checking
- Format(position of column etc.)
- > existence of the code in the dictionary,
- physical checking(e.g: units etc )
- > existence of required independent variables etc.
- > Charge and mass conservation etc.
- □ JANIS: Format, existence of the code in dictionary.
- □ JANIS checking is more strict/stringent than CHEX.



Procedure of data checking permits to attach the CHEX code to control information entered to the EXFOR library.

After the execution of checking procedure a window with a message containing the results of checking will appear.

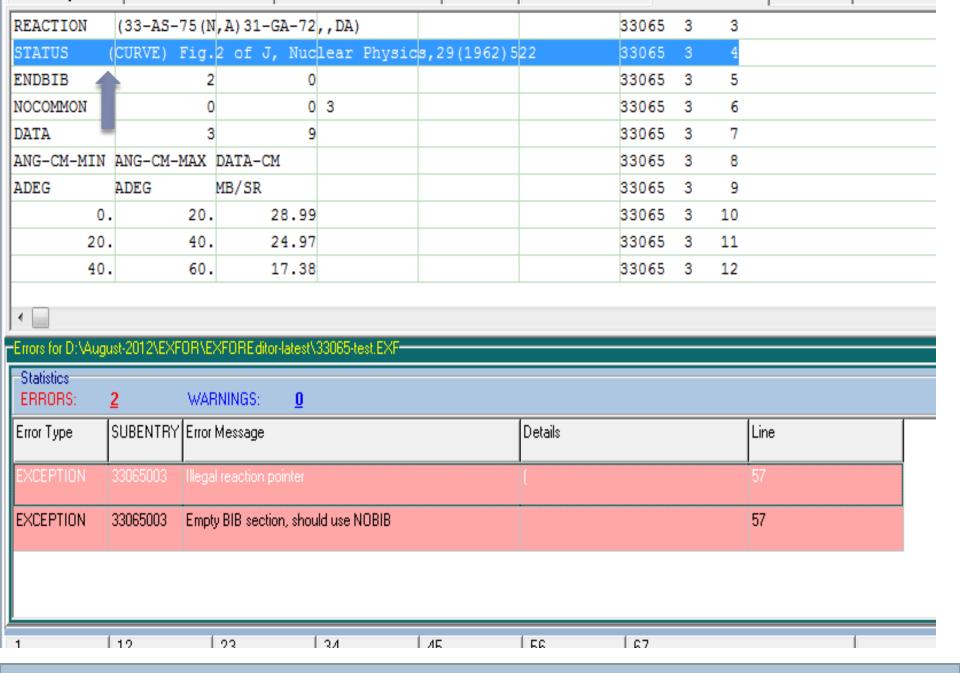
Double clicking on the row containing an error description in the window with checking results will highlight the wrong line. (Such possibility is available after processing of a file with the ORDER program).

	having a ma	gnification	of (8 x 10	0), as usua	1;	33065	1	12
	processing	was done by	the usual	temperature	method	33065	1	13
	using low P	H 6.6 amido	l developer	. For the h	ot stage	33065	1	14
	20 min and	17 degree c	elsius were	selected a	s the	33065	1	15
	suitable ti	me and temp	erature.			33065	1	16
FACILITY	(CCW, 3INDSA	H)				33065	1	17
ERR-ANALYS	No informat	ion on unce	rtainty			33065	1	18
HISTORY	(20140621C)	BL				33065	1	19
ENDBIB	17	0				33065	1	20
COMMON	1	3				33065	1	21
<b>←</b>								
-Errors for D:\August-2012\EXFOR\EXFOREditor-latest\33065-test.EXF								
First pass completed with no fatal errors  1 - Second pass checking - ENTRY 33065  ?? WARNING Extinct code found								
	ENCE (J,NP,2				33	065001	7	
** Nonmon	atonic data f 2.5		E-M1	IN	33	065002	12	

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Click the **Checker** button on the ToolBar or choose the «Checker» item in «Processing» menu to start **JANIS Trans Checker** 

program code. A window with a message containing the results of checking will appear.



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□It is absolutely necessary to run both these checking tools as CHEX sometimes missed some errors. EXAMPLE-→

## Common errors in EXFOR compilation (Some are specific to EXFOR EDITOR):

I.?? WARNING Extinct code found

REFERENCE (J,NP,29,522,1962) 33065001 7

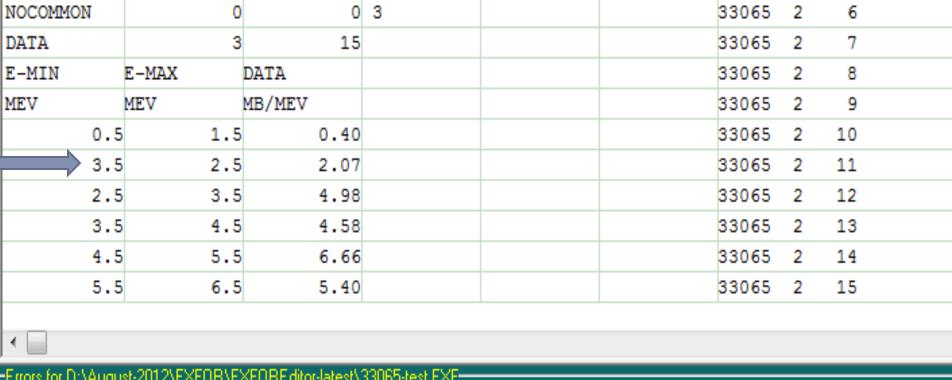
There are some journal codes that are already extinct, but You can neglect this warning message!!!

#### 2. \*\* Nonmonatonic data field

If there are multiple data points/sets to be entered in the DATA section, the first column needs to be in ascending order.

#### Example:

DATA	3	15		33065	2	7
E-MIN	E-MAX	DATA		33065	2	8
MEV	MEV	MB/ME\	/	33065	2	9
0.5	1.5	0.40		33065	2	10
1.5	2.5	2.07		33065	2	П
2.5	3.5	4.98		33065	2	12
3.5	4.5	4.58		33065	2	13
4.5	5.5	6.66		33065	2	14
5.5	6.5	5.40		33065	2	15
6.5	7.5	2.93		33065	2	16
7.5	8.5	2.10		33065	2	17
8.5	9.5	1.67		33065	2	18
9.5	10.5	1.26		33065	2	19
10.5	11.5	1.44		33065	2	20
11.5	12.5	0.82		33065	2	21
12.5	13.5	0.44		33065	2	22
13.5	14.5	0.64		33065	2	23
14.5	15.5	0.22		33065	2	24
ENDDAT	A	17	0	33065	2	25



#### Errors for D:\August-2012\EXFOR\EXFOREditor-latest\33065-test.EXF=

```
ZCHEX (Version 2012-03-21) run on 12-Jan-2015
Input file: D:\August-2012\EXFOR\EXFOREditor-latest\33065-test.EXF
ENTRY 33065
First pass completed with no fatal errors

1
- Second pass checking -
ENTRY 33065
** Nonmonatonic data field E-MIN
2.5 3.5 4.98
```

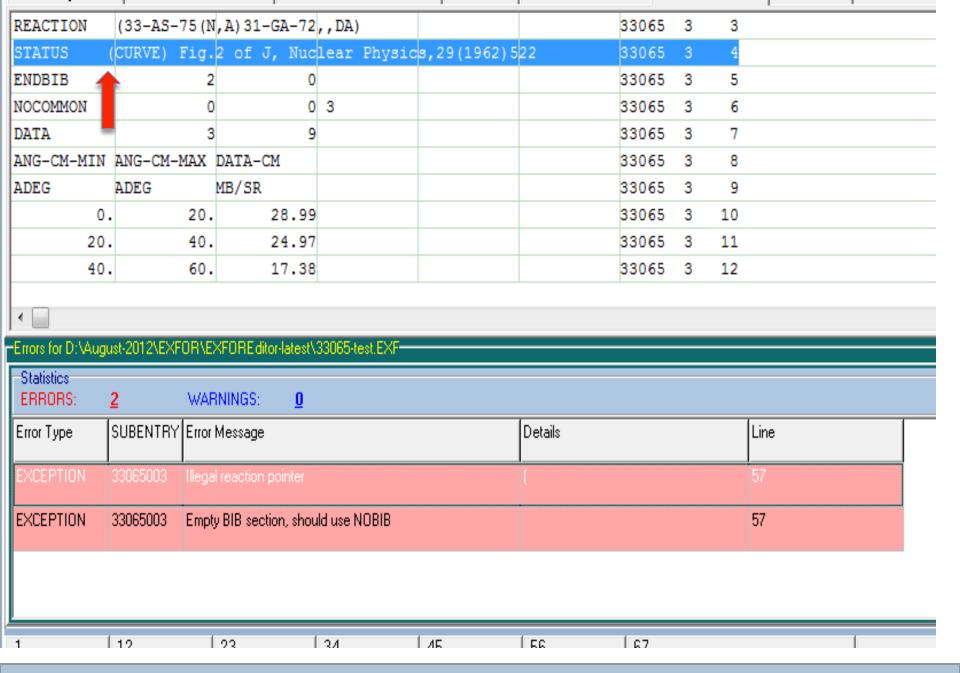
#### EXFOR-2017, 6-10<sup>th</sup> March 2017, NEHU, Shillong

33065002

12

## 3. \*\* Illegal reaction pointer(Editor Specific error)

- The opening bracket/paranthesis for coded information of the KEYWORD always shift to the 11th Column if we edit the contents.
- We have to manually move/shift right. Interestingly, this problem is associated with a particular keywords such ERR-ANALYS, HISTORY, STATUS, REACTION, DECAY-DATA, FLAG which are the keywords in this sample entry. There may be more.
- But there is no problem with keywords AUTHOR, INSTITUTE, REFERENCE, METHOD, FACILITY, DETECTOR.
- \*\*\*\*But CHEX can never detect this.
- \*\*\*\*Only JANIS could identify this.



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### 4. \*\* Missing independent variable \*\* Missing independent variable

#### ENERGY SEC. ENERGY

FVV-WMWT19	NO THIOTHIAC	TOIL OIL MILCE	τιατιιιν		33003	1
HISTORY	(20140621C)	BL			33065	1
ENDBIB	17	0			33065	1
NOCOMMON	0	0	3		33065	1
ENDSUBENT	20	0			33065	1
SUBENT	33065002	20140621			33065	2
BIB	2	2			33065	2
REACTION	(33-AS-75 (N	,A)31-GA-72	,,DE)		33065	2



#### Errors for D:\August-2012\EXFOR\EXFOREditor-latest\33065-test.EXF=

```
ENTRY 33065

First pass completed with no fatal errors

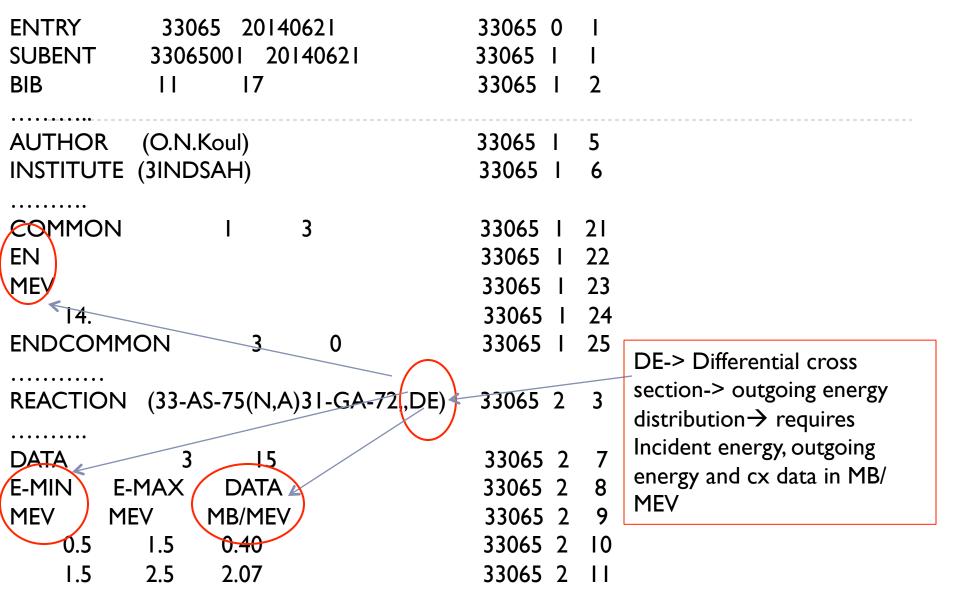
1

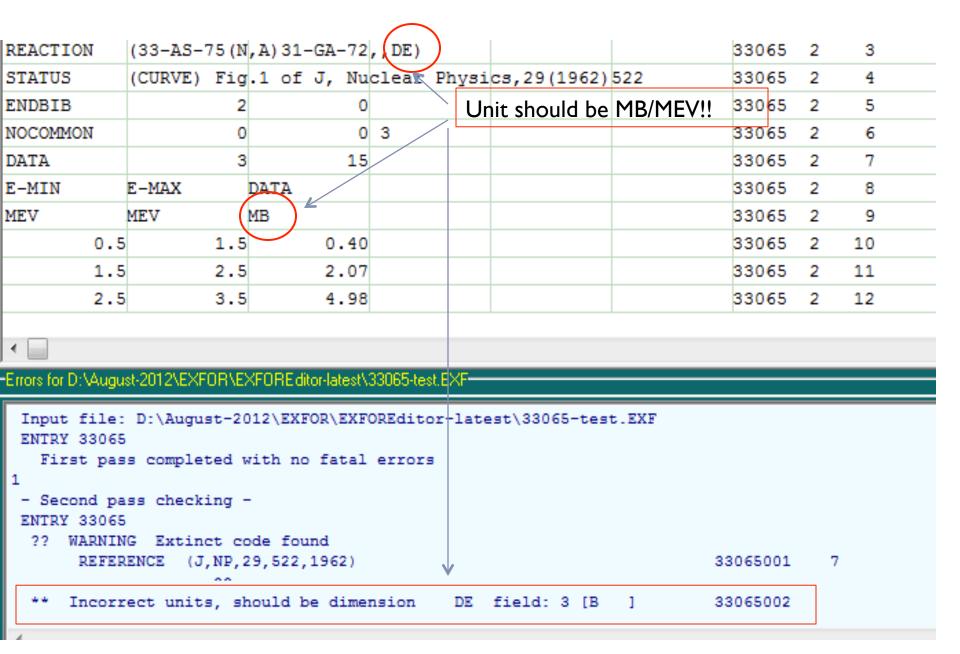
- Second pass checking -
ENTRY 33065

?? WARNING Extinct code found
REFERENCE (J,NP,29,522,1962)

** Missing independent variable ENERGY 33065002

** Missing independent variable ENERGY 33065003
```





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Remove all the Error messages by checking tools(CHEX+JANIS) before submission of your entry.

Exercise for the erroneous sample 33080erroneous.txt is available, and please do the exercise!!

- Download the file and save it in the EXFOR-EDITOR folder.
- 2. Open the file using EXFOR-EDITOR.
- Run CHECK(for ZCHEX) and see the error messages.
   Address and eliminate all the errors.
- Run CHECKER(for JANIS Trans Checker), make sure the entry is ok and free of any error messages.

Submit EXFOR entries you prepared to

Dr. B.Lalremruata(<u>marema08@gmail.com</u>) --- Entry # starting with "3"

Dr. Vidya Thakur(vidyathakur@yahoo.co.in) --- Entry # starting with "D"

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THANKS!!