

## Development of Software for Input and Editing of Experimental data in EXFOR format

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*(Action A56 – Continue development and testing of the EXFOR-Editor in cooperation with NDS and other data Centres, taking into account compilers' remarks)*

According to Action A56 the bugs pointed by the members of the community were corrected. In December 2011 we issued the updated version 1.11.1 of the EXFOR-Editor. It is accessible for downloading on the web page of our site ([en\\_cnpd.vniief.ru/download](http://en_cnpd.vniief.ru/download)) and from the NRDC web page ([www.nds.iaea.org/nrdc/nrdc-sft](http://www.nds.iaea.org/nrdc/nrdc-sft)). The main changes in this version are the following:

- Error arising in the Author's Second Name containing hyphen was corrected.
- Pointers are preserved when editing code information containing pointers.
- Displacement of position when entering many code words under one Keyword is now eliminated.
- Error arising when launching CHEX after automatic changing of subentry number is corrected.
- Lines with keywords without information are inserted in DUMMY-File now.
- Conversion of numerical data presented in old scientific format (without exponent symbol 'E') into proper scientific format in the mode of DATA TABLE was implemented.

There were few feedbacks and requests on the EXFOR-Editor improvement from the users of our Centre and other Data Centres during the last year. When testing the software we did not discover any serious errors. So we could draw a symbolic line under its development. We don't plan to upgrade substantially the EXFOR-Editor any more. The only problem we are going to solve is the installation of our program. The way to launch the program without any registration is found and will be implemented soon. So in future we are planning to maintain the EXFOR-Editor and take into account feedbacks from the users.

The experience of the EXFOR-Editor usage by new compilers shows the necessity in the simple and flexible software for non-advanced users. This package could include the following functions:

- creation of EXFOR files on the basis of existing patterns;
- automatic control of input and editing of data;
- implementation of often changing rules for EXFOR data input.

So we decided to renew the concepts of EXFOR-Wizard.

First it should be noted that the content of dictionaries and their interrelations permit to arrange checking at the stage of data input. Reaction field could determine the structure of the whole subentry.

This work is at the initial stage. But some useful decisions were introduced into the new version of the EXFOR-Editor 2.0. This version is not completed. We have the trial one for distribution.

It includes the new version of JANIS Trans Checker. We thank Emmeric Dupont and Nicolas Soppera, NEA DATA BANK for fruitful cooperation.

The dialog window for the reaction input was changed. A new order of filling out SF5-8 fields is suggested. First it is necessary to determine the reaction type according to the Dictionary 213 and then select corresponding field combination from the Dictionary 236.

Additional tools for validation of input data were developed.

Checking on equal values of numeric data along abscissa was implemented. The results of checking are presented in a special window "Numeric Check". There is a possibility to insert a special column with a flag which points at the equal values.

Graphic presentation is a convincing way to carry out the express control of numeric data. In the articles data on different reactions are often presented in one figure. So we implemented the possibility of numeric data presentation from different Subentries on one plot.

The new version of the EXFOR-Editor includes the following additions:

- Automatic editing change of data in Entry and Subentries titles is available.
- Digital numeric data in COMMON section is left justified now to escape errors of CHEX processing for exponential format.
- Simplification of CHEX diagnostic message was implemented.

We think that the possibility of Entry presentation with highlighted syntax in X4+ format would be very useful for additional checking. This function could be implemented with the help of Victor Zerkov.

So the main activity of our Centre in the area of software development for EXFOR compilation is the following:

1. The maintenance and improvement of the EXFOR-Editor.
2. The development of software for control of input information (EXFOR-Wizard).
3. The creation of updated version of EXFOR-Digitizer.

We thank the members of community for help and cooperation.