

Center of Nuclear Physics Data (CNPD), RFNC-VNIIEF

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Compilation activity

Five final files TRANS.F068, TRANS.F069, TRANS.F070, TRANS.A089 and TRANS.A090 have been submitted for the EXFOR data library within the past period. Preliminary file PRELIM.F071 has also been prepared. Files TRANS.F069, TRANS.A089 and TRANS.A090 include the corrected entries only. In total 40 new entries and 118 revised entries were prepared.

The number of entries compiled from old literary sources, early physics conferences, journal issues of 60-70-th increased significantly.

Software

EXFOR-Editor, InpGraph

The works on perfecting EXFOR-Editor and InpGraph programs are being carried out constantly. Two versions of the ExfData program - 3.4 and 3.5 - were released. User's comments and wishes were taken into account when implementing the following improvements:

- in the Chart mode there is a possibility to plot several curves from different entries opened simultaneously in the Editor;
- in the mode of Decay Data input automatic breaking of rows is available now.

Dictionary update is being performed on a regular basis.

Within the last year a new version of the ExfData program (4.0) was designed in CNPD. It provides the possibility of creating the exchanged file TRANS to transfer the compiled data to NDS. So it is possible now not only to treat a separate entry in the Exfor-Editor but to process the entire TRANS as well. New version is under testing now.

A problem of designing the Internet version of Exfor-Editor is being discussed now.

Changes were made in program InpGraph.

- Free move of a magnifier and a window of reference input on a screen are now available.
- Digitizing of points with asymmetric errors is possible.
- Export of image under treating into BMP or GPEG format was implemented.

General

S. Selyankina was invited as a consultant to the NDS. During the visit S. Selyankina performed a large amount of work on data compilation and journal scanning.

In October, 22-25, 2018 S. Taova, G. Pikulina and S. Selyankina took part in the Workshop on the Compilation of Experimental Nuclear Reaction Data. Several technical papers were prepared for this Workshop: “Contribution of the RFNC-VNIIEF Center of nuclear physics data to the development of international library of experimental nuclear data Exfor”, “Digitizer InpGraph to input numeric data into Exfor Library” and illustrated Manual “Examples and exercises to work with the program of discrete image treatment InpGraph on entering numeric data into the Exfor library”. The last one was presented to NDS.

Designing of the Exfor leaflet (short description of Exfor data library (Library + Information System) was completed. The last version includes all the wishes and recommendations obtained within the discussion. Materials were submitted for printing.

There were also prepared and submitted to NDS the materials on the CNPD functioning which may be helpful when preparing the “Big Exfor Article”. These materials are based on two articles publishes in 2018:

1. Voprosy Atomnoy Nauki i Tekhniki, Seriya Reak., Issue 4, 2018. (In Russian).

“Activities of the RFNC-VNIIEF Center of Nuclear Physics Data on the Compilation of Experimental Data for the EXFOR International Library”.

2. Physics of Atomic Nuclei, 2018, Vol. 81, No. 10 «Activities of the RFNC-VNIIEF Center of Nuclear Physics Data on the Compilation of Experimental Data for the EXFOR International Library. EXFOR-EDITOR Software Package».

Scanning of journals “Izvestiya Akademii Nauk” and “Yadernaya Fizika” is being performed regularly to reveal articles relevant to be compiled to Exfor library. The reports on scanning results are submitted to the NDS, IAEA every month.