

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

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Compilation activity

Three transmission files TRANS.F043, TRANS.F044 and PRELIM.F045 were prepared for the EXFOR data library within the past period. They include 47 new entries and 36 revised entries.

Scanning of home journals “Yadernaya Fizika”, “Izvestiya Akademii Nauk” was continued. Articles from old issues of «Physical Review» and «Nuclear Physics» were also reviewed.

As usual much attention was paid to the search and compilation of the old articles (from 60-s to 90-s). We scan journals referring not only to area F but to other areas as well. Now it is impossible to obtain data immediately from the authors in a tabular form, so we are forced to digitized figures. This process is very laborious, it demands a lot of time. For example, entry F1060 Y.Ozawa,Y.Oguri,E.Arai, J,NP/A,440,13,1985, it contains 27 989 points).

SoftwareEXFOR-Editor

Intensive development of EXFOR – Editor is being continued. On the basis of different comments and proposals of the participants of the last Meeting in Vienna in 2011, there was prepared a version of EXFOR – Editor 1.11.1. The distributive and a file describing the main changes made in the program were placed at the NDS open area and at the web page of CNPD.

Now we are completing the work on a new version of Editor 2.0. We plan it to be a final version containing basic functions of data processing. Further maintenance of our product will be provided.

We closely connect with other data centers on the problem of EXFOR–Editor development. Now three program codes (ZCHEX, ZORDER – NDS production and JANIS Trans Checker – NEA DATA Bank) are included into the Exfor-Editor in a form of separate executable modules. To coordinate this activity and to provide more effective cooperation in this area a Memo with our proposals was prepared and sent to the members of the community.

General

The members of our center took an active part in preparation and conducting of the 60th Meeting on Nuclear Spectroscopy and Nuclear Structure “Nucleus-2011” which was held in Sarov in October 10-14, 2011.

On the initiative of our center a new section “Nuclear data in modern technologies” was introduced to the conference program for the first time. Organization of such section is the recognition of importance and necessity of carrying out the research in the field of obtaining, processing and using nuclear data to provide the appropriate level of the development of Nuclear branch as a whole. By the invitation of our center N. Otsuka, member of IAEA Nuclear Data Section, and O. Gritzay, head of the Ukrainian Data Centre, took part in the conference activities for the first time. V. Varlamov, head of CDFE also participated in this conference.

The members of our centre were the authors and co-authors of the following reports:

1. S.N. Abramovich, S.M. Taova “Analysis of experimental data on the key thermonuclear reactions going within the low energy range”.
2. L.N. Generalov, V.A. Zherebtsov, S.M. Taova “Optical model program code OptModel”.
3. G.N. Pikulina, C.M. Taova, S.A. Dunaeva “Optimization and ensuring of validation of data input format into the international library EXFOR by software package Exfor-Editor”.