

PROGRESS REPORT
to NRDC Meeting (28 - 30 May 2001, Vienna)

V.N.Manokhin, S.A.Maev

Russia's Nuclear Data Center (CJD, IPPE, Obninsk)

Introduction.

In CJD during the period passed after previous Meeting the current work continued concerning EXFOR compilation and fulfillment of NRDC-2000 Recommendations and Actions. Much efforts were applied for restoring CJD Web page and guarantee access to it from the users. Evaluation works were also in process. The details are given below.

CINDA and EXFOR activity. Compilation into EXFOR continues on steady level. Since March 2000 up to April 2001 four TRANS tapes (4119 - 4122) containing 69 Entries (24 - new, 45 - corrected) were prepared and sent to other centers. 25 new EXFOR Entries were compiled.

Unfortunately some technical problems did not permit us to send CINDA Entries during long period of time. We hope to eliminate this backlog this year and to continue compilation into CINDA on the steady level as well.

EVALUATED DATA. An analysis and evaluation are made for the threshold reactions cross sections leading to production of the long-lived radioactive nuclides on the irradiation of steel by thermonuclear neutron spectrum. Fifty excitation functions were evaluated. Many of them are considerably different from available evaluations of other libraries.

During two years, together with JAERI, comparative analysis was performed of (n,2n) and (n,3n) reactions for 150 fission products from available evaluated data libraries. The result of analysis will be published this year. The joint work on consistent evaluation of some (n,2n) and (n,np) excitation functions for even-even isotopes was made on the basis of empirical systematics.

Together with the specialists from Sarov the work was completed on evaluation of the spectra and production cross sections of gamma-rays in inelastic interactions of 14-Mev neutrons with the number of nuclei: Li-6, Li-7, Al, Ti, Cr, Fe, Cu, Pb, Bi, U-235.

CJD continues the work on evaluation of neutron data for minor actinides. This year Am-242m will be evaluated, and Np-237, Am-241, Am-243, Cm-243, Cm-244 will be tested and improved.

Full file of Bi was prepared. Full files for Pb isotopes are in process of preparation.

There exist a plan to analyze full files for isotopes of Cr, Fe, Ni from existing evaluated data libraries, to select more reliable cross sections, and to create improved files for these isotopes. At the present time the analysis and the new evaluations are being made for threshold reactions excitation functions.

Together with the Theoretical Department of our Division the work is in progress on the determination of uncertainties of existing evaluated data and development of covariance matrices for some important isotopes.

Some efforts are applied to revise the threshold reactions data from FENDL/A-2.

CUSTOMER SERVICE. Our WWW-site on PC was restored, and the access to it was improved. Some important papers in English, published in Nuclear Constants (=YK) will be inserted.

On the relational data base platform the interface code was developed for access to the CINDA and EXFOR data on PC.