



Photonuclear data in the MSU INP CDFE: data Index, EXFOR compilations and WWW presentation.

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This report contains the review of the works carried out by the CDFE after the IAEA Advisory Group Meeting on the Coordination of the Nuclear Reaction Data Centers (11 - 15 May 1998, Vienna, Austria).

1. The complete Photonuclear Data Index for period of time 1955 - 1996 has been produced on the base of two CDFE /1/ and JAERI /2/ indices with addition of the appropriate CDFE data file for 1996.

The combined system of codes for reaction, quantity and reference descriptions has been used, the duplications have been excluded and the data have been merged.

The complete Index has been put onto the CDFE Web-site (<http://depni.npi.msu.su/cdfe>) using hypertext presentation in addition to both initial indices have been put upon the Web-site before as downloadable sources.

2. The CDFE Photonuclear Data Informational file containing the data included into the indices "PHOTONUCLEAR DATA - 1997" and "PHOTONUCLEAR DATA - 1998" has been prepared for putting upon the CDFE Web-site.

3. The updating of the CDFE Web-site materials has been done:

- the new corrected and added version of the table "PARAMETERS OF GIANT DIPOLE RESONANCE" includes now altogether 1317 table entries;

- 846 various photonuclear reaction cross section EXFOR data sets are available now in forms of both table and graph;

- the table of photonuclear reaction threshold values includes now the rounded data from /3/;

- the counter for individual (unique) visits from different IP-addresses was installed (about 1000 visits since the beginning of 1998, of that about 400 for period (new counter version) since 10.11.1998).

4. The Atlas of Giant Dipole Resonances (GDR) has been prepared and published /4/ through the IAEA NDS. Included are the data deduced from the number of photoabsorption, total neutron production, neutron yield, and also single, double and triple neutron production, charged particle emission and fission reaction cross sections.

The Atlas contains information on the GDR parameters (cross section maximum energy, maximum cross section value, full width at half maximum, integrated cross section and first moment of the integrated cross section) for 215 isotopes and natural compositions with Z between 1 and 95. The reference and first author name is also presented for each entry. All 1317 entries are presented upon the CDFE Web-site..

The graphs for 846 cross sections also presented upon the CDFE Web-site have been produced using the international EXFOR nuclear reaction data library.

5. The new CDFE EXFOR TRANSES M023 (ENTRYS M0533 - M0536), M024 (pending retransmission of 29 ENTRYS from the CDFE TRANSES M011 - M014 corrected in accordance with the Memos CP-D/297 and CP-D/224), M025 (ENTRYS M0537 - M0550), M026 (ENTRYS M0551 - M0565), M027 (ENTRYS M0566 - M0580), and M028 (ENTRYS M0581 - M0595) have been produced and transmitted to the IAEA NDS:

TRANS	Number of ENTRYS	Number of DATA TABLES
M023	4	9
M024	29 (retransmitted)	246 (about 60 modified)
M025	14	72
M026	15	61
M027	15	76
M028	15	81

6. In accordance with the Program of Work of the IAEA Coordinated Research Program "Compilation and Evaluation of Photonuclear Data for Applications" the new CDFE contributions to the IAEA HANDBOOK ON PHOTONUCLEAR DATA which have been specified in /5, 6/ were prepared and transmitted to the IAEA NDS.

References

1. *V.V.Varlamov, V.V.Sapunenko, M.E.Stepanov.* Photonuclear Data Index 1976 -1995. Izdatel'stvo Moskovskogo Universiteta, Moscow, 1996.
2. *T.Asami, T.Nakagawa.* Bibliographic Index to Photonuclear Reaction Data (1955 - 1992). JAERI-M-93-195, INDC(JPN)-167L, JAERI, Japan, 1993.
3. *G.Audi, A.H.Wapstra* The 1995 Update to the Atomic Mass Evaluation. Nucl.Phys., A595 (1995) 409.
4. *A.V.Varlamov, V.V.Varlamov, D.S.Rudenko, M.E.Stepanov.* Atlas of Giant Dipole Resonances. Parameters and Graphs of Photonuclear Reaction Cross Sections. IAEA NDS, Vienna, INDC(NDS)-394, 1999, 311 pp.
5. Ed. by *P.Oblozinsky.* Summary Report of the 1-st Research Co-ordination Meeting on Compilation and Evaluation of Photonuclear Data for Applications (3 - 6 December 1996, Obninsk, Russia), INDC(NDS)-364, IAEA NDS, 1997.
6. Ed. by *P.Oblozinsky.* Summary Report of the 2-nd Research Co-ordination Meeting on Compilation and Evaluation of Photonuclear Data for Applications (23 - 26 June 1998, Los-Alamos, USA), INDC(NDS)-384, IAEA NDS, 1998.