Status Report of the Nuclear Data Project at McMaster University
(April 1999 – April 2000)
(Report prepared by B. Singh, April 14, 2000)

ENSDF RELATED ACTIVITY:

Permanent responsibility: A= **64, 89, 98, 100, 149**, **151, 164, 188, 190, 194**

The status of these mass chains in ENSDF is as follows (all published by the McMaster group).

A=64, NDS 78, 395-546 (1996).

A=89, NDS 85, 1-179 (1998)

A=98, NDS 84, 565-716 (1998).

A=100, NDS 81, 1-181 (1997).

A=149 (Update), NDS 73, 351-556 (1994).

A=151, NDS 80, 263-565 (1997).

A=164, Complete update submitted to BNL, December 1999.

A=188, NDS 59, 133 (1990): High-spin update in 1995.

A=190, NDS 61, 243 (1990): High-spin update in 1995.

A=194, NDS 79, 277 (1996)

.

Mass-chain/Nuclide Evaluations published/submitted since the 1999 US NDP meeting:

A=164, B. Singh, NDS (Submitted December 1999)

A=43, J.A. Cameron and B. Singh, NDS (Submitted December 1999)

A=163, B. Singh and A. Farhan, NDS 89, 1-211 (2000)

A=44, J.A. Cameron and B. Singh, NDS 88, 299-416 (1999)

A=75, A. Farhan and B. Singh, NDS 86, 785-954 (1999)

A=1, B. Singh, Updated and included in ENSDF in February 2000.

^{165}Lu, B. Singh and J. Chenkin, NDS 88, 1-78 (1999).

^{165}W, B. Singh NDS 87, 635-644 (1999).

^{58}Cu: B. Singh, NDS 87, 177-190 (1999).

^{62}Ga: B. Singh, NDS 87, 191-196 (1999).

^{58}Zn, ^{60}Zn, ^{61}Zn, ^{62}Zn, ^{165}Gd, ^{165}Re, ^{165}Os, ^{165}Ir nuclides:
All these were updated and included in ENSDF in June-August 1999.

Superdeformed Bands: Complete update of all SD band data from papers published between 1997 and 1999 was completed and included in ENSDF in September 1999.

Review work: **A=148** was reviewed in December 1999.

Compilation of data from recent publications (for XUNDL):

As part of the high-spin task force activities, about 230 compiled datasets, in ENSDF format, from recent publications in 1999-2000, primarily in the high-spin area, were prepared, edited and submitted to XUNDL database at BNL since April 1999. Another about 30 compiled datasets received from other data centers were edited/revised before including these in XUNDL.

Work in progress:

A=42 Complete datasets for all reactions.

A=130 (selected from recent priority list).

Superdeformed Bands: Evaluation of SD band data from about 30 papers published since Sept 99 is in progress for ENSDF update in September 2000.

Compilation of recent data for XUNDL: Continued work on compilation of, primarily, high-spin data in ENSDF format from recent publications.

Revision of rules for JPI, bands and multipolarity assignments: D.G. Burke and B. Singh have participated actively over the past year or so in formulating revised rules for spin-parity assignments.

Other (data related) publications since 1999 US NDP meeting:

Magnetic-rotational bands:

Table of Magnetic Dipole Rotational Bands: Amita, A.K. Jain and B. Singh, Atomic Data and Nuclear Data Tables (In Press, 2000).

E4 transition strengths:

Systematic Investigation of Hexadecapole Collectivity in Even-even Nuclei: R.K. Sheline, B. Singh, P.C. Sood and S.Y. Chu, Czech. Journal of Physics, 49, 1047-1066 (1999).