

Compilations: XUNDL and Atomic Masses (October 1, 2009 – Sept 30, 2010)

B. Singh
(McMaster)

USNDP November 2-3, 2010



Contributors

- **McMaster:** Allison MacDonald (up to Dec 2009), Babak Karamy, Jeremie Choquette (since Feb 2010), B. Singh
- **TUNL (A=2-20):** John Kelley, Grace Sheu, Jim Purcell
- **ANL:** Filip Kondev, Gulhan Gurdal
- **LBNL :** Coral Baglin
- **IFJ-PAN (Krakow):** Kazimierz Zuber
- **U. of Jordan:** Khalifeh Abusaleem
- **NNDC, BNL:** Jagdish Tuli (XUNDL database management)



Current Contents of XUNDL

- Since the start in December 1998, 3805 compiled datasets added up to Sept 30, 2010.
(experimental nuclear structure data)
- 1860 nuclides: ^1H to $^{294}\text{118}$, spread over 281 A-chains;
- From 2543 primary journal articles published during 1995 – 2010
- ~300 communications with the original authors to resolve data-related problems and to obtain additional data details.
- 4 recent publications in PRL/PRC, data only in XUNDL



Journals covered and content

- PRC; PRL; PL-B;
EPJ-A; NP-A; JP-G
Since 2009 (includes
mass, radius papers)

PRC: 180 (~67%)

PRL: 27

EPJ-A: 25

PL-B: 24

NP-A: 12

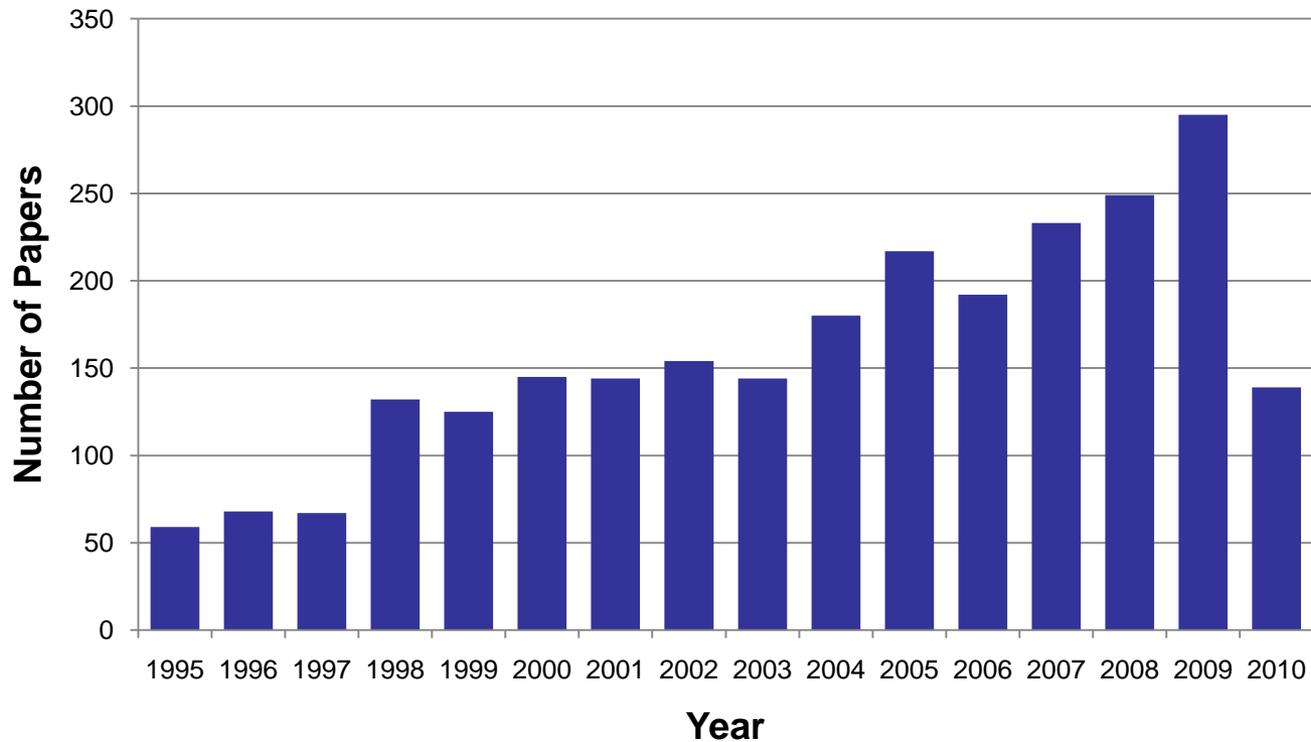
JP-G: 3

- Other journals /sources
Nucl Instr & Methods A
Acta Physica Polonica B
Chinese Physics Letters
Int. J. Modern Physics E
Bull. Russian Acad. Sci.
Physics of Atomic Nuclei
Applied Rad. & Isotopes
Chinese Physics C
arXiv- and other preprints.



XUNDL Paper Growth

Number of Papers per Year



Work during October 8, 2009 to October 6, 2010

- 483 datasets compiled from about 260 publications

McMaster: 305 + 37 (with U. of Jordan) + 30 (with Krakow)

TUNL: 65

ANL: 38

LBNL 8

- 40 existing datasets were updated based on either new papers from previous authors/groups or for additional information received from the authors (35 at McMaster; 5 at TUNL)



Since Nov 2007, we have been revisiting compiled datasets to identify permanent NSR keynumbers.

As of Oct 31, 2010, about 50 current papers are being compiled.

Active communications with the authors continued throughout the year. Data details and corrections received for many papers, including numerical values of fragmentation cross sections and TOF.



Compilation of Atomic mass measurements

All mass measurement papers published from Oct 2009 to Oct 2010 have been compiled and dataset sent to ORNL for posting on www.nuclearmasses.org.

This file contains data from 24 primary papers and about 140 data points, including pairs of mass differences and Q values.

