

XUNDL status report

(Includes current papers on Atomic Masses)
(October 1, 2010 – Sept 30, 2011)

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Contributors

- **McMaster:** Jeremie Choquette (*) (up to Aug 2011), Michael Birch (*) (since March 2011), Jun Chen, Balraj Singh.
Collaborator: Khalifeh Abusaleem (Univ. of Jordan)
- **TUNL (A=2-20):** John Kelley, Grace Sheu, Jim Purcell
- **ANL:** Filip Kondev, Gulhan Gurdal (up to Sept 1, 2011), William Murrey (*) (since August 1, 2011).
Collaborator: Daryl Hartley (US Naval Academy)
NP-A, PL-B, JP-G journals
- **LBNL :** Coral Baglin
- **NNDC, BNL:** Jagdish Tuli, Tim Johnson, Ramon Arcilla:
XUNDL database management
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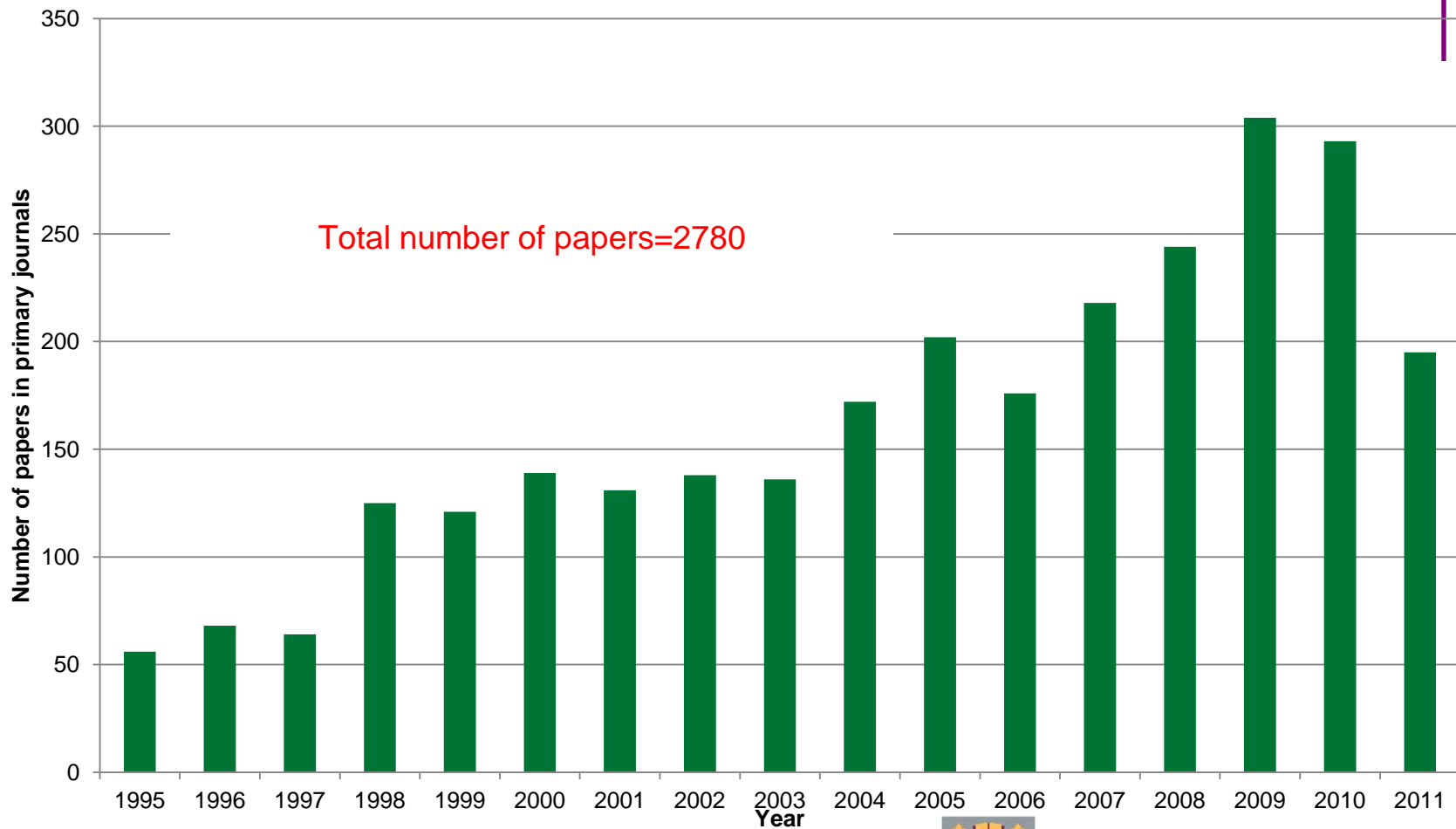


Current Contents of XUNDL

- Since the start in December 1998, **4360** compiled datasets added up to Sept 30, 2011.
 - In addition, many datasets updated for new papers from the same group/lab or data details received from the authors
(experimental nuclear structure data: reactions and decays)
- 2020 nuclides: ^1H to $^{294}118$, spread over 280 A-chains;
- From 2850 primary journal articles published during 1995 – 2011, including (~70) new papers on mass measurements.
- ~450 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



Papers in XUNDL database



Journals covered and content

(journal web-pages regularly scanned at McMaster, ANL, TUNL)

Priority journals

- PR-C; PRL; PL-B;
EPJ-A; NP-A; JP-G

PR-C: 199 (~64%)

PRL: 26

EPJ-A: 28

PL-B: 32

NP-A: 8

JP-G: 18

- 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.



Work during October 6, 2010 to October 6, 2011

- 594 datasets compiled from about 340 publications

McMaster: 477 + 10 (with U. of Jordan) + 6 (with US. Naval Acad.)

TUNL: 56

ANL: 43

LBNL 2

- 30 existing datasets were updated at McMaster based on either new papers from previous authors/groups or for additional information received from the authors.



Most papers are compiled and entered in XUNDL database prior to their entry in NSR database.

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

As of Nov 14, 2011, about 30 current papers are being compiled.

Active communications with the authors continued throughout the year. Data details and corrections received for many papers



Compilation of Atomic mass measurements

All mass measurement papers published from Nov 2010 to Oct 2011 have been compiled and dataset sent to ORNL for posting on www.nuclearmasses.org.

This file contains data from 22 primary papers and about 130 data points, including pairs of mass differences and Q values for beta or double-beta decay

This work is done at McMaster, currently by Michael Birch (undergraduate student) and B. Singh.

