Example and Test File for `nucleardata` Package

Commands applied to ^{40}Ca

symbol	Ca
Z	20
name	calcium
Name	Calcium
Spin/parity	7/2-
mass excess	-35137.76
atomic mass (u)	40.962278
atomic mass (u)	40.96
atomic mass (keV)	38156443.937
atomic mass (keV)	38156443.94
atomic mass (MeV)	38156.443937
atomic mass (MeV)	38156.44394
nuclear mass (u)	40.951307
nuclear mass (keV)	38146223.9
nuclear mass (MeV)	38146.223937
BE/A	8.547 MeV
Q_α	-6.615016 MeV
Q_{β^-}	-6.49537 MeV
Q_{β^+}	-0.60069 MeV
Q_ϵ	0.42131 MeV
random A	35

Halflife Commands applied to ^{184}Au

Unit	Value
ns	47 600 000 000.0 ns
us	47 600 000.0 µs
ms	47 600.0 ms
s	47.6 s
min	0.793 333 333 333 min
hr	0.013 222 222 222 2 h
d	0.000 550 925 925 926 d
y	$1.508\,352\,979\,95 \times 10^{-6}$ yr
My	$1.508\,352\,979\,95 \times 10^{-12}$ My

Five randomly selected nuclides and their masses and halflives

nuclide	mass (u)	halflife
^{79}Zn	78.94265	0.995 s
^{245}Es	245.07132	1.1 min
^{64}Ga	63.936839	2.627 min
^{256}Cf	256.09344	12.3 min
^{81}Se	80.917992	57.28 min