Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal, E. A. Mccutchan	NDS 136, 1 (2016)	1-Jul-2016

Q(β^-)=17090 *SY*; S(n)=2750 *SY*; Q(α)=−16030 *SY* 2012Wa38
ΔQ(β^-)=860; ΔS(n)=920; ΔQ(α)=920 (2012Wa38).
S(2n)=7060 syst *860*; Q(β^-n)=11770 syst *810* (2012Wa38).
2009Ta05,2009Ta24: ^{70}Mn produced in fragmentation of ^{76}Ge beam at 132 MeV/nucleon on Be and W targets. Separated using A1900 fragment separator and S800 to form a two-stage separator system. Unambiguous identification of ^{70}Mn using multiple ΔE, magnetic rigidity, total energy and time-of-flight measurements. ΔE measured with a stack of eight Si PIN diodes and time of flight measured in four ways using plastic scintillators, Si detectors, and parallel-plate avalanche counters. Measured cross section=20×10^{-12} mb *+10−14* (read by the evaluators from figure 2 of 2009Ta05).
2015Be32: ^{70}Mn produced in in-flight fission of a ^{238}U beam at E=345 MeV/nucleon on a Be target and separated with the Big-RIPS separator combined with the ZeroDegree Spectrometer. Measured Eγ, Iγ, $\beta\gamma$, β(t), $\beta\gamma$(t) using the 5 silicon detectors of the WAS3ABI array which was surrounded by the EURICA spectrometer consisting of 12 HPGe EUROBALL cluster detectors and 18 small volume $LaBr_3$(Ce) scintillators.

^{70}Mn Levels

E(level)	$T_{1/2}$	Comments
0.0	19.9 ms *17*	%β^-=100; %β^-n=50 *20* (2015Be32) $T_{1/2}$: from implant-β(t) in 2015Be32; $\Delta T_{1/2}$ includes both statistical and systematic uncertainty. %β^-n: deduced as free parameters in the fit to implant-β(t) curves (2015Be32).