^{85}Mo εp decay 1999Hu05,1997Hu15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. Kibedi and J. Timar	NDS 110,2815 (2009)	30-Sep-2009

Parent: ^{85}Mo: E=0; $J^\pi=(1/2^-)$; $T_{1/2}$=3.2 s *2*; Q(εp)=5.10×10^3 *20*; %εp decay=0.14 *2*

^{85}Mo-$T_{1/2}$: from timing of 540γ in ^{84}Zr populated in εp decay of ^{84}Zr (1999Hu05,1997Hu15,2005Xu04). Others: 5.6 s (1976HaXI) in delayed proton study, 6.3 s *+13−10* from β events correlated with ^{85}Mo fragments (2000WeZZ).

^{85}Mo-J^π: $1/2^-$ suggested by 1999Hu05 from comparison of measured delayed proton spectrum and statistical calculations, but $1/2^+$ is also shown in authors′ later paper: 2005Xu04. Others: $1/2^-$ (systematics, 2003Au02,2002Ma11), $3/2^+$ (calculated,1997Mo25).

^{85}Mo-Q(εp): from 2009AuZZ, 2003Au03.

^{85}Mo-%εp decay: %εp=0.14 *2* (1999Hu05), from measured half-life and predicted half-life for delayed proton decay.

1976HaXI: measurement of delayed protons from ^{85}Mo. Measured half-life.

1997Hu15, 1999Hu05: ^{85}Mo formed in ^{58}Ni(^{32}S,X) at 170 MeV. Delayed proton spectra measured using surface-barrier detectors, (proton)γ coin spectra. Measured half-life, deduced delayed proton branching.

2000WeZZ: Fragmentation of ^{112}Sn beam at 1 GeV/nucleon with a beryllium target, FRS spectrometer at GSI facility, measured half-life.

^{84}Zr Levels

E(level)	J^π	Comments
0	0^+	
540	2^+	J^π: from Adopted Levels.

γ(^{84}Zr)

E_γ	E_i(level)	J^π_i	E_f	J^π_f	Comments
540	540	2^+	0	0^+	E_γ: observed in pγ coin (1999Hu05).

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Decay Scheme