

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106,619 (2005)	1-Nov-2005

$S(n)=1.150\times 10^4$ syst; $S(p)=-1.53\times 10^3$ syst; $Q(\alpha)=8.14\times 10^3$ syst [2012Wa38](#)

Note: Current evaluation has used the following Q record 11330 syst -1540 syst 8160 syst [2003Au03](#).

$\Delta S(n)=140$, $\Delta S(p)=50$, $\Delta Q(\alpha)=50$ ([2003Au03](#)).

$S(p)=-1607$ 16, including electron screening, proton energy from [2001Po05](#), see comment on E(level).

$Q(\alpha)=8259$ 31 ([2001Po05](#)), see comment on E(level).

Experimental works:

[2004An07](#): $^{93}\text{Nb}(^{95}\text{Mo},3n)$, $E=380\text{--}480$ MeV, Velocity filter (SHIP), 16-strip position sensitive silicon detector; $E\alpha$, E_p and branching ratio measured. See also, [2003AnZZ](#).

[2001Po05](#): $^{95}\text{Mo}(^{92}\text{Mo},pn)$, $E=420$ MeV, recoil mass separator (FMA) with a parallel grid avalanche counter (PPAC) and double-sided silicon strip detector (DSSD). $E\alpha$, E_p and branching ratio measured.

[1996Da06](#): earlier work from ANL, superseded by [2001Po05](#).

Theoretical works: [2005Ba04](#), [2004De54](#), [2004Xu02](#), [2001Go20](#), [2000Ta23](#), [1997Mo25](#), [1995Mo29](#), [1995Ab38](#), [1976Li30](#).

 ^{185}Bi Levels

E(level)	J^π	$T_{1/2}$	Comments
0	$1/2^+$	$58\ \mu\text{s}$ 4	$\%p=90$ 2; $\% \alpha=10$ 2 $\%p=90$ 2; $\% \alpha=10$ 2 (2004An07). Other: $\%p=85$ 6; $\% \alpha=15$ 6 (2001Po05). $T_{1/2}$: weighted average of $60\ \mu\text{s}$ 4 (2004An07) and $50\ \mu\text{s}$ 8 (2001Po05). J^π: Ground states with $J^\pi=9/2^-$ and low-lying isomers with $J^\pi=1/2^+$ have been observed for heavier Bi isotopes. In particular, for ^{187}Bi, the $1/2^+$ isomer is at 112 21 keV (see discussion in 1996Da06). Since proton or alpha radioactivity from a $9/2^-$ state was not observed, the evaluator assumes that the ^{185}Bi ground state is indeed the $1/2^+$ state. $E(p)=1598$ keV 16 to the ground state of ^{184}Po (2001Po05), $S(p)=1607$ keV 16. 2004An07 measured $E(p)=1583$ keV 16, but adopted the value from 2001Po05. $E(\alpha)=8080$ keV 30, $Q(\alpha)=8259$ keV 31 from 2001Po05. $\sigma \approx 60$ nb (2001Po05).