Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 130, 183 (2015)	30-Sep-2015

Q(β^-)=−3290 *SY*; S(n)=7700 *SY*; S(p)=2980 *SY*; Q(α)=7040 *SY* 2012Wa38
Δ(Q(β^-))=260, Δ(S(n))=250 , Δ(S(p))=200 and Δ(Q(α))=210 (syst, 2012Wa38).

Experimental Studies:
2003As01, 2001AsZY: ^{241}Bk was produced and identified from ^{239}Pu(^{6}Li,4n) at the JAERI tandem accelerator facility. The ions were mass separated using the gas-jet couple online separator. Observed Cm K, and L x-rays associated with ^{241}Bk ε through x-γ ray coin.
1989Ha27, 1973Es01, 1967Mi06: Alphas from the decay of ^{245}Es were measured with Si(Au) surface detectors.

Theoretical/Systematical Studies:
2011Sh13: Calculation of cluster radioactivity half-life.
2004Be10: Calculated single-quasiparticle level energies using the self-consistent microscopic calculations with Gogny force.
2004Pa40: Calculated deformation parameters and the proton one quasiparticle states of heaviest nuclei using the macroscopic-microscopic approach.

^{241}Bk Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0.0[#]	(7/2$^+$)	4.6 min *4*	%α=?; %ε+%β^+=? $T_{1/2}$: From decay curves of Cm $K_{\alpha1}$,$K_{\alpha1}$ and L_α x-rays in ^{241}Bk as measured by 2003As01.
51[@] *4*	(3/2$^-$)		
82[@] *6*	(5/2$^-$)		
128[@] *7*	(7/2$^-$)		

[†] Excited levels are reported only in ^{245}Es α decay.
[‡] Systematics suggests that the g.s. has configuration 7/2[633] or 3/2[521]. On the basis of the hindrance factors for the α branches to levels at 51, 82 and 128 keV, these levels are assigned to a rotational band, and based on the energy spacing, this band is probably 3/2[521] with the level at 51 keV being the band head. The g.s. is thus probably 7/2[633].
[#] Band(A): 7/2[633] state.
[@] Band(B): 3/2[521] band.

Adopted Levels

Band(B): 3/2[521] band

$(7/2^-)$ **128**

$(5/2^-)$ **82**

$(3/2^-)$ **51**

Band(A): 7/2[633] state

$(7/2^+)$ **0.0**

$^{241}_{97}Bk_{144}$