Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 114, 1041 (2013)	1-Mar-2012

Q(β^-)=−3261 *SY*; S(n)=7211 *SY*; S(p)=2506 *SY*; Q(α)=9008 *SY* 2012Wa38
ΔQ(β^-)=45 syst, ΔS(n)=94 syst, ΔS(p)=45 syst, ΔQ(α)=31 (2012Wa38).
Additional information 1.

Calculations, compilations:
Favored α decay: 1993Bu09.
g.s. properties: 1997Mo25, 1995Mo29.
Single-particle Nilsson levels: 2004Pa40, 1994Cw02.
Q(α), $T_{1/2}$: 2011Sa40, 2010Si27, 2009Do22, 2008Do12, 2008Ro06, 2007Zh41, 2002Re37, 2001Mo07.
1994Cw02 calculate the following single-particle level sequence: g.s. 7/2[514], 0.13 MeV *9*/2[624], 0.13 MeV *1*/2[521], 0.75 MeV *5*/2[512], 0.83 MeV *7*/2[633].

Assignment: produced by ^{249}Cf(^{15}N,α3n), ^{250}Cf(^{14}N,α2n) excit; parent of ^{253}Md (1971Es01).

^{257}Lr Levels

Cross Reference (XREF) Flags

A ^{261}Db α decay
B ^{257}Rf ε decay (4.4 s)
C ^{257}Rf ε decay (4.1 s)

E(level)	$T_{1/2}$	XREF	Comments
0	≈4 s	BC	%α≤100; %ε<15; %SF<0.033 %ε+%β^+: <15 (1971Es01) from absence of ^{257}No α's. %SF: From 1970Fl16, 2000Ho27. $T_{1/2}$(SF)>1×10^5 s (1971Fl02). Calculated $T_{1/2}$(SF)≈30 s (1985Lo17). J^π: favored α decay to ^{253}Md feeds two levels separated by ≈65 keV (65 *40*); if this indicates a rotational band then the band-head probably has 5/2≤J≤11/2. The possible Nilsson assignments are: 9/2[624], 7/2[514] and 1/2[512] (see above for calculations by 1994Cw01). $T_{1/2}$: 1997He29: 3.3 s *+5−4* from 887α(t), 4.3 s *+13−8* 8810α(t); 4.1 s *+24−13* (2009Qi04). Others: 0.646 s *25* from 1976BeYM, 0.6 s *1* (1971Es01).
1.5×10^2 *10*		ABC	E(level): from ^{261}Db α decay.