

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Agda Artna-cohen	NDS 88,155 (1999)	31-Jul-1999

$S(n)=8.3\times 10^3$ syst; $S(p)=7.0\times 10^2$ syst; $Q(\alpha)=1.050\times 10^4$ 5 [2012Wa38](#)

Note: Current evaluation has used the following Q record 8100 syst 430 syst 10560 50 [1995Au04](#).

Estimated $\Delta S(n)=700$, $\Delta S(p)=240$ ([1995Au04](#)).

$Q(\alpha)$: Based on the assumption that the highest energy α group goes to the ^{257}Db g.s.

Calculations, compilations:

Favored α decay: [1993Bu09](#).

g.s. properties: [1997Mo25](#), [1995Mo29](#).

Single-particle Nilsson levels: [1994Cw02](#).

[1994Cw02](#) calculate the following single-particle level sequence: g.s. 5/2[512], 0.42 MeV 9/2[624], 0.86 MeV 9/2[505], 0.88 MeV 1/2[521].

Assignment: $^{209}\text{Bi}(^{54}\text{Cr},2n)$ 4.87 to 5.07 MeV/nucleon, parent of ^{257}Db , grandparent of ^{253}Lr from α - α - α correlation ([1989Mu09](#),[1986MuZX](#),[1988MuZX](#)).

[1976Og02](#) ($^{209}\text{Bi}(^{54}\text{Cr},2n)$) observed an ≈ 1.2 ms SF activity followed by an ≈ 5 ms SF activity and assigned these to ^{261}Bh and daughter ^{257}Db . [1989Mu09](#) have not confirmed the SF activity of ^{261}Bh and suggest that the 5 s SF activity is from ^{258}Rf (from ^{258}Db ε).

 ^{261}Bh Levels

E(level)	$T_{1/2}$	Comments
0.0	12 ms +5-3	$\% \alpha = 95$ 5; $\% \text{SF} < 10$ $T_{1/2}$: from 11.8 ms +53-28 (1989Mu09). Others: 6.1 ms +43-18 (1986MuZX), 9.0 ms +44-23 (1988MuZX). $\% \text{SF}$: SF not observed. $\% \text{SF} < 10$ (1989Mu09). Calculated $T_{1/2}(\text{SF}) \approx 1 \times 10^2$ s (1988Lo03). Calculated: $T_{1/2}(\varepsilon + \beta^+) = 13$ s, $T_{1/2}(\alpha) = 8$ ms (1997Mo25).