

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu	NDS 182,2 (2022).	1-Apr-2022

Q(β^-)=4.8×10² 5; S(n)=5.74×10³ 5; S(p)=4.83×10³ 5; Q(α)=5.01×10³ 5 2021Wa16

S(2n)=12720 50, S(2p)=11540 50 (2021Wa16).

Fission T_{1/2}, Cross section: 1998Er01, 1998Ro17, 1992Gr16, 1990Ro23, 1989Ko12, 1987Gr34.

²³⁶Np Levels

Cross Reference (XREF) Flags

A ²⁴⁰Am α decay

E(level)	J ^{π}	T _{1/2}	XREF	Comments
0	6 ⁽⁻⁾ ‡	1.55×10 ⁵ y 1	A	% β^- =12.0 1; % ϵ =87.8 2; % α =0.16 4 % β^- , % ϵ , % α , T _{1/2} : from T _{1/2} (β^-)=1.29×10 ⁶ y 1, T _{1/2} (ϵ)=1.760×10 ⁵ y 4 and T _{1/2} (α)=9.5×10 ⁷ y 25 (1981Li30). % β^- : other: 13 % 1 (1983Ah02). T _{1/2} : other: T _{1/2} (β^-)=1.29×10 ⁶ y +7-5 (1972En06). % ϵ : other: 87% 1 (1983Ah02). J ^{π} : ϵ decay to 6 ⁺ level in ²³⁶ U and β^- decay to 6 ⁺ level in ²³⁶ Pu; no ϵ decay and β^- decay to 2 ⁺ or 0 ⁺ levels; large log ft values suggesting large K-hindrance and possible configuration=((π 5/2[642])-(ν 7/2[743])) or ((π 5/2[523])-(ν 7/2[743])) while Gallagher-Moszkowski rule favors ((π 5/2[642])-(ν 7/2[743])) with J ^{π} =6 ⁻ for lower energy (1981Li30).
57 51	1 ⁽⁻⁾	22.5 h 4	A	% β^- =49 1; % ϵ =51 1 % β^- : weighted average of 57 5 (1956Gr11), 49 1 (1959Gi58) and 50 5 (1969Le05); other: 33 (1951Or02). % ϵ : from 1-% β^- and no α decay observed; others: 43 5 (1956Gr11), 51 8 (1959Gi58), 50 5 (1969Le05) and 67 (1951Or02). E(level): deduced from E(β^- , ²³⁶ Np(22.5 h))=537 keV 8 (1969Le05) and Q(β^- , ²³⁶ Np(g.s.))=480 keV 50 (2021Wa16). J ^{π} : ϵ decay to 0 ⁺ , 2 ⁺ and 1 ⁻ levels in ²³⁶ U and β^- decay to 0 ⁺ and 2 ⁺ levels in ²³⁶ Pu; Gallagher-Moszkowski rule favors ((π 5/2[642])-(ν 7/2[743])) with J ^{π} =1 ⁻ for higher energy (1981Li30). T _{1/2} : from 1969Le05 and 1949Ja01.
241 † 50	(3 ⁻)‡		A	E(level): from ²⁴⁰ Am α decay.
283 † 50	(4 ⁻)‡		A	E(level): from ²⁴⁰ Am α decay.
334 † 50	(5 ⁻)‡		A	E(level): from ²⁴⁰ Am α decay.

† Band(A): π 5/2[523]+ ν 1/2[631].

‡ Favored α decay from ((π 5/2[523])-(ν 1/2[631]))3⁻ with I α and E α in agreement with the rotational band built on this configuration.

Adopted Levels**Band(A): π 5/2[523] $+\nu$
1/2[631]**(5⁻) 334(4⁻) 283(3⁻) 241 $^{236}_{93}\text{Np}_{143}$