

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes		NDS 161, 1 (2019)	1-Apr-2019

$Q(\beta^-)=8450$ 13; $S(n)=-3812$ 15; $S(p)=-14690$ 5Y; $Q(\alpha)=-8564$ 15 [2017Wa10](#)

$\Delta S(p)=401$ from systematics in [2017Wa10](#).

[2009Pe06](#): Facility: Superconducting Cyclotron Laboratory at Michigan State University; Beam: ^{136}Xe at 120 MeV/nucleon, $I=1.5$ pA; Target: 1242 mg/cm² ^9Be ; Detectors: fragment separator, three plastic scintillator detectors, degraders, four silicon PIN detectors, 40x40 pixel double-sided silicon strip detector, 10 mm Ge detector, neutron detector (NERO) comprising 16 ^3He and 44 B_3F proportional gas counters; Measured: Time-of-flight, energy loss, HI positions, mass-to-charge ratio, HI- β and HI- β -n(t) correlations; Deduced: β^-n , $T_{1/2}$;

[1996Me09](#): Facility: University of Jyvaskyla cyclotron; Beam: $E(^2\text{H})=50$ MeV; Target: U; Detectors: IGISOL, collection tape, plastic scintillator, planar Ge detector, neutron counter comprising 42 ^3He ionization chambers; Measured: n(t), $\beta(t)$, $\gamma(t)$; Deduced: $T_{1/2}$;

[1992Ay02](#): Facility: University of Jyvaskyla cyclotron; Beam: $E(p)=20$ MeV; Target: 20 mg/cm² thick ^{238}U ; Detectors: IGISOL, one 10-mm thick planar Ge detector, two plastic detectors, one HPGe; Measured: γ - β -x- rays; Deduced: $T_{1/2}$; Also, from the same collaboration: [1992AyZX](#), [1992AyZY](#), [1992AyZZ](#).

 ^{105}Zr LevelsCross Reference (XREF) Flags

A $^9\text{Be}(^{238}\text{U},\text{X})$

E(level) [†]	J^π	$T_{1/2}$	XREF	Comments
0 [‡]	[5/2 ⁺]	0.66 s 5	A	$\% \beta^- = 100$; $\% \beta^- n \leq 2$ (2009Pe06) J^π : Based on systematics. $T_{1/2}$: from maximum likelihood analysis in $^9\text{Be}(^{136}\text{Xe},\text{X})$ (2009Pe06); Others: 0.6 s 1 (1996Me09), and 1.0 s +12-4 in $^{238}\text{U}(p,\text{X}\gamma)$ (1992Ay02). configuration: 5/2 ⁺ [413].
124.0 [‡] 10	[7/2 ⁺]		A	J^π : 124 γ to [5/2 ⁺]; band member.
285.0 [‡] 15	[9/2 ⁺]		A	J^π : 161 γ to [7/2 ⁺]; band member.
507.0 [‡] 18	[11/2 ⁺]		A	J^π : 222 γ to [9/2 ⁺]; band member.

[†] From E_γ .

[‡] Band(A): $\Delta J=1$ band, based on the g.s.

 $\gamma(^{105}\text{Zr})$

$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ	E_f	J_f^π
124.0	[7/2 ⁺]	124 1	100	0	[5/2 ⁺]
285.0	[9/2 ⁺]	161 1	100	124.0	[7/2 ⁺]
507.0	[11/2 ⁺]	222 1	100	285.0	[9/2 ⁺]

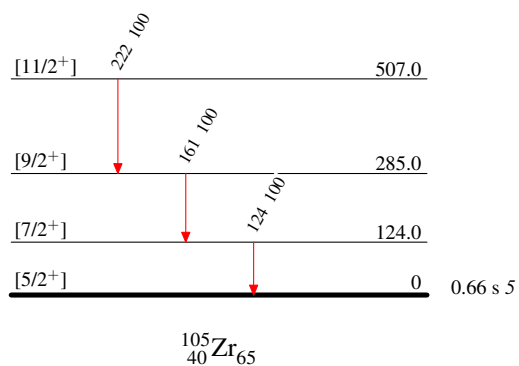
[†] From $^9\text{Be}(^{238}\text{U},\text{X})$.

Adopted Levels**Level Scheme**

Intensities: Type not specified

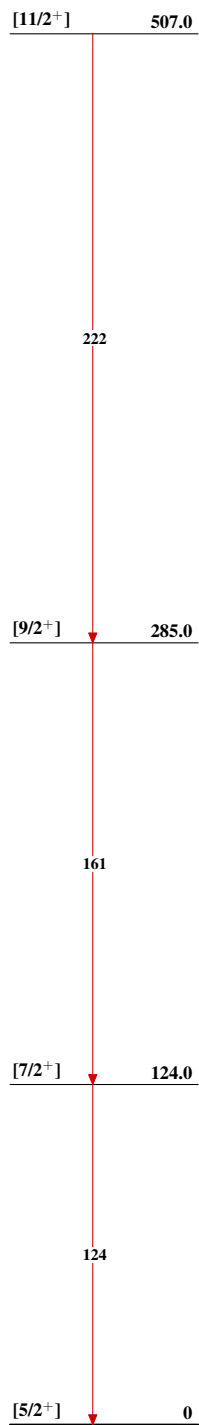
Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$



Adopted Levels

Band(A): $\Delta J=1$ band,
based on the g.s



$^{105}_{40}\text{Zr}_{65}$