

${}^9\text{Be}(t,p)$ 1990Li09,1972Aj01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu		NP A880, 88 (2012)	1-Jan-2011

1962Pu01: ${}^9\text{Be}(t,p)$ E=6, 10 MeV.

1971Ha25: ${}^9\text{Be}(t,p\gamma)$ E=3.5 MeV, measured Doppler shift attenuation. ${}^{11}\text{Be}$ deduced level, $T_{1/2}$.

1972Aj01: ${}^9\text{Be}(t,P)$ E=20 MeV, measured $\sigma(E_p)$. ${}^{11}\text{Be}$ deduced levels, Γ -level.

1978Aj02: ${}^9\text{Be}(t,P)$ E=23 MeV, measured $\sigma(E_p, \theta)$. ${}^{11}\text{Be}$ deduced levels, J, π , Γ .

1983Mi08: ${}^9\text{Be}(t,p\gamma)$ E=1.5-3.3 MeV, measured DSA. ${}^{11}\text{Be}$ level deduced $T_{1/2}$.

1990Li19: ${}^9\text{Be}(t,P)$ E=15 MeV, measured $\sigma(\theta)$, $\sigma(E_p)$. ${}^{11}\text{Be}$ levels deduced J^π configuration.

 ${}^{11}\text{Be}$ Levels

E(level)	J^π	$T_{1/2}$	L	Comments
0	$1/2^+$		1	E(level): observed In (1962Pu01,1972Aj01,1978Aj02,1990Li19). J^π : L: from (1990Li19).
320.04 10	$1/2^-$	115 fs 10	2	E(level): from (1983Mi08, who averaged their result with 1971Ha25); also see 319 keV 10 (1962Pu01), 322 keV 10 (1972Aj01), 318 keV 10 (1978Aj02), and 320 keV 2 (1990Li19). Γ : from (1983Mi08) $T_{\text{mean}}=166$ fs 15. J^π : L: from (1990Li19).
1783 4	$5/2^+$	100 keV 15	1+3	E(level): from weighted average of 1780 keV 20 (1962Pu01), 1790 keV 20 (1972Aj01), 1764 keV 20 (1978Aj02), and 1784 keV 4 (1990Li19). Γ : from weighted average of 83 keV 12 (lab:110 keV 15) (1962Pu01), 130 keV 25 (1972Aj01) and 104 keV 21 (1990Li19). The uncertainty has been increased by the evaluator. J^π : L: from (1990Li19).
2650 10	$3/2^-$	214 keV 12	0+2	E(level): from weighted average of 2700 keV 25 (1962Pu01), 2680 keV 30 (1972Aj01) and 2642 keV 9 (1990Li19). There is poor overlap with the most precise measurement. Γ : from weighted average of 205 keV 15 (lab:250 keV 20) (1962Pu01), 250 keV 50 (1972Aj01) and 228 keV 21 (1990Li19). J^π : L: from (1990Li19).
3399 6	$3/2^-$	113 keV 11	0	E(level): from weighted average of 3410 keV 25 (1962Pu01), 3410 keV 30 (1972Aj01) and 3398 keV 6 (1990Li19). Γ : from weighted average of 115 keV 15 (lab:150 keV 20) (1962Pu01), 145 keV 30 (1972Aj01) and 104 keV 17 (1990Li19). J^π : L: from (1990Li19).
3888 1	$3/2^+$	<8 keV	1	J^π : L: from (1990Li19). Also see $\geq 7/2$ (1978Aj02). E(level): from weighted average of 3890 keV 10 (1962Pu01), 3890 keV 30 (1972Aj01), 3877 keV 30 (1978Aj02), and 3888 keV 1 (1990Li19). Γ : from $\Gamma < 8$ keV lab (1962Pu01), <10 keV (1972Aj01).
3955 1	$3/2^-$	10 keV 5	2	E(level): from weighted average of 3960 keV 20 (1962Pu01), 3960 keV 30 (1972Aj01), 3943 keV 30 (1978Aj02), and 3955 keV 1 (1990Li19). Γ : from $\Gamma < 10$ keV (1962Pu01), 15 keV 5 (1972Aj01). J^π : L: from (1990Li19).
5255 3	$5/2^-$	45 keV 10	2	E(level): from weighted average of 5250 keV 30 (1972Aj01), 5231 keV 30 (1978Aj02), and 5255 keV 3 (1990Li19). Γ : from (1972Aj01). J^π : L: from (1990Li19).
5849 10	$1/2^+$	139 keV 17	1	E(level): from (1990Li19) also see $E_x=5860$ (1972Aj01). Γ : from (1990Li19) also see $\Gamma \approx 300$ (1972Aj01). J^π : L: from (1990Li19). Also see $J^\pi=1/2^-$ In (1972Aj01).
6510 50		120 keV 50		E(level): Γ from (1972Aj01).
6705 21		40 keV 20		E(level): from weighted average of 6720 keV 30 (1972Aj01), 6690 keV 30 (1978Aj02). Γ : from (1972Aj01).

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$^9\text{Be}(t,p)$ 1990Li09,1972Aj01 (continued) ^{11}Be Levels (continued)

<u>E(level)</u>	<u>T_{1/2}</u>	<u>Comments</u>
7030 50	0.30 MeV 10	E(level): Γ from (1972Aj01).
8815 31	0.20 MeV 5	E(level): from weighted average of 8840 keV 50 (1972Aj01), 8800 keV 40 (1978Aj02). Γ : from (1972Aj01).
10590 50	210 keV 40	E(level): Γ from (1978Aj02).

 $\gamma(^{11}\text{Be})$

<u>E_{γ}</u>	<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Comments</u>
320.04 10	320.04	1/2 ⁻	0	1/2 ⁺	from (1983Mi08).

 $^9\text{Be}(t,p)$ 1990Li09,1972Aj01Level Scheme