^{9}Be(p,p),(p,pn),(p,pα) 1988Aj01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. L. Godwin, et al.	NP A745 155 (2004)	31-Mar-2004

1967Sa13: ^{9}Be(p,p),(p,p′) E=46 MeV, analyzed $\sigma(\theta)$.
1968Si07,1969Si20: ^{9}Be(p,p) E=2-2.1 MeV, measured $\sigma(E_P,\theta)$ for elastic scattering.
1969An27: ^{9}Be(pol. p,P) E=1-3 MeV, measured polarization(E).
1969Mo29: ^{9}Be(p,p) E=0.8-1.8 MeV, measured $\sigma(E,\theta)$. ^{10}B deduced resonances, J, π, Γ-level, L_P.
1970Co06: ^{9}Be(p,p) E=1.99-2.10 MeV, measured σ(E).
1970Lo03: ^{9}Be(p,p) E_P=3.0 to 12.0 MeV, measured polarization P(E,θ). Deduced optical-model parameters.
1970Si12: ^{9}Be(p,p) E=2-2.1 MeV, measured $\sigma(E,\theta)$. ^{10}B deduced resonances.
1971Go33: ^{9}Be(p,p) E=1.97-2.18 MeV, measured σ(E).
1971In05: ^{9}Be(p,p) E=180 MeV, analyzed $\sigma(\theta)$. Deduced optical model parameters.
1971Ma13: ^{9}Be(p,p) E_P=49.75 MeV, measured $\sigma(\theta)$, P(θ).
1971Va34: ^{9}Be(p,p),(p,p′) E=6.36-6.48 MeV, measured $\sigma(E,E_P,\theta)$. Deduced reaction mechanism.
1971We07: ^{9}Be(p,p) E=6-30 MeV, measured nothing. Analyzed $\sigma(E,\theta)$, P(E,θ). Deduced optical model parameters.
1972Vo17: ^{9}Be(p,p) E=6-8 MeV, analyzed σ(E). Deduced threshold resonance effects. ^{10}B deduced resonance parameters.
1972Vo20: ^{9}Be(p,p) E=1000 MeV, measured polarization(θ).
1972Ya06: ^{9}Be(p,p),(p,p′) E=4-6 MeV, measured $\sigma(E,\theta)$. ^{10}B deduced resonances, Γ-level.
1973Ma59,1976Ma58: ^{9}Be(p,p),(pol. p,P) E=1.95-2.8 MeV, measured $\sigma(E,\theta)$, P_P(THETA).
1973Ro24: ^{9}Be(pol. p,P) E=0.9 to 2.7 MeV, measured analyzing (θ,E). Deduced phase shifts for E=0.8 to 1.6 MeV. Deduced channel spin, s-d mixing. ^{10}B deduced levels, J, π.
1973Vo02: ^{9}Be(P,P_0) E=13.0-30.3 MeV, measured vector polarization analyzing power A(θ); ^{9}Be(P,P_2) E=8.0-15.0 MeV, measured $\sigma(E,\theta)$, 6<E<15 MeV.
1974Bi14: ^{9}Be(pol. p,P) E=25 MeV, measured depolarization parameter D(θ).
1974Va03: ^{9}Be(p,p) E=6-7 MeV, measured $\sigma(\theta)$, P_P.
1974Wi21: ^{9}Be(p,p) E=6.5-9.5 MeV, measured $\sigma(E,E_P,\theta)$, $\sigma(E,E_d,\theta)$.
1977Ki04: ^{9}Be(p,p) E=2.30-2.70 MeV, measured $\sigma(E,\theta)$. ^{10}B deduced levels, J, π, Γ, $T_{1/2}$.
1980Fa07: ^{9}Be(p,p),(p,p′) E=35.2 MeV, measured $\sigma(\theta)$. Deduced optical-model parameters. ^{10}B level deduced β_2.
1983Al10: ^{9}Be(p,p) E=2-3.8 MeV, measured absolute $\sigma(\theta)$, σ(E). ^{10}B deduced resonance, Γ, Γ_P/Γ, IAR, J, π. R-matrix analysis.
1983An18: ^{9}Be(p,p) E=1 GeV, measured $\sigma(E_P,\theta$=156 degree) vs. proton momentum.
1979Al26,1985Al16: ^{9}Be(p,p) E=1 GeV, measured $\sigma(\theta)$. Deduced model parameters, rms matter radii.
1985Ro15: ^{9}Be(pol. p,P),(pol. p,P′) E=220 MeV, measured $\sigma(\theta)$, analyzing power vs. θ, depolarization parameter vs. θ for elastic channel. DWBA analysis.
1988La07: ^{9}Be(p,p) E=2.3-2.7 MeV, measured σ(E), $\sigma(\theta)$.
1988Ke04,1989Ke03: ^{9}Be(pol. p,P′),(pol. p,P) E=135 MeV, measured $\sigma(\theta)$, analyzing power vs. θ.
1994Le18: ^{9}Be(p,p) E=2.4-2.7 MeV, measured σ(E), θ=170.5 degree.
1994Wr01: ^{9}Be(p,p) E≤2-66 MeV, measured $\sigma(\theta)$. Deduced (α,N) reaction rate vs. temperature, astrophysical S-factor.
1996Ku14: ^{9}Be(p,p),(pol. p,P) E=30.3-100 MeV, analyzed $\sigma(\theta)$, vector analyzing power vs. θ.
1997Do01: ^{9}Be(pol. p,P) E=200 MeV, analyzed $\sigma(\theta)$, polarization observables data.
1969Co06: ^{9}Be(p,pn) E=12, 17 MeV, measured $\sigma(E,\theta)$.
1974Mi05: ^{9}Be(p,pn) E=46 MeV, measured $\sigma(E_P,\theta)$.
1975Ch42: ^{9}Be(p,pn) E=5.5 MeV, measured σ.
1977Je01: ^{9}Be(p,pn) E=12.7 MeV, measured $\sigma(E_P,\theta)$, E_N.
1977Wa05: ^{9}Be(p,pn) E=45, 47 MeV, measured excitation energy. PWIA, DWIA calculations.
1978Ch07: ^{9}Be(p,pn) E=5.5 MeV, measured σ, pn-coin In kinematically complete experiment.
1978Je01: ^{9}Be(p,pn) E=10-24 MeV, measured $\sigma(E_P,\theta$(P), θ(N)) In kinematically complete geometry. Deduced reaction mechanism.
1984Wa21: ^{9}Be(pol. p,np) E=148.8 MeV, measured separation energy spectra, $\sigma(E_P,\theta_P,\theta_N)$, analyzing powers. DWIA calculations.
1985Be30: ^{9}Be(p,np) E=1 GeV, measured angle-integrated $\sigma(E_{P_1})$, $\sigma(E_N)$. Deduced proton, neutron space distribution role.
1985Do16: ^{9}Be(p,np) E=1 GeV, measured energy spectra. Deduced potential parameters.
2000Sh01: ^{9}Be(p,np) E=70 MeV, measured proton spectra, neutron spectra, pp-, np-coin, $\sigma(E,\theta)$. Deduced 1S and 1p shell contributions.

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1968Ro19: ^{9}Be(P,pα) E=57 MeV, measured σ(E$_P$,E$_\alpha$,θ_P,θ_α). Deduced quasifree scattering contribution.
1970Go12: ^{9}Be(P,P′α) E=160 MeV, measured σ(E$_{P'}$,E$_\alpha$,$\theta_{P'}$,θ_α).
1972Qu01: ^{9}Be(P,pα) E=46.8,35,26 MeV, measured σ(E$_P$,E$_\alpha$,θ_P,θ_α).
1977Ro02: ^{9}Be(P,pα) E=100 MeV, measured σ(E$_P$,E$_\alpha$,θ). DWIA analysis.
1980Na09: ^{9}Be(P,pα) E$_{lab}$=101.5 MeV, measured σ(E1,E2,θ_1,θ_2).
1985Wa13: ^{9}Be(pol. p,P α) E=150 MeV, measured quasifree $\sigma(\theta)$, analyzing power vs. θ, σ(θ_P,E$_P$), energy sharing σ. Deduced optical potentials parameters. DWIA.
1998Yo09: ^{9}Be(pol. p,pα) E=296 MeV, measured σ(θ_P,θ_α,E$_P$), A$_Y$. Deduced α spectroscopic factor.

^{10}B Levels

E(level)	J$^\pi$	T$_{1/2}$	Comments
6882	1$^-$	145 keV	Γ_p/Γ=0.28 E(level): from E$_{res}$=330 keV (1956Mo90). Γ: Γ_p/Γ from (1969Mo29).
7436	1$^-$	130 keV *10*	Γ_p/Γ=0.38 *6* E(level): from E$_{res}$=945 keV *10* (1969Mo29). Γ: Γ_p/Γ from (1969Mo29).
7468 *5*	(1,2)$^+$	65 keV *10*	Γ_p/Γ=1.0 E(level): from E$_{res}$=980 keV *10* 1$^+$ (1973Ro24) and 980 keV *6* 2$^+$ (1969Mo29). There is agreement that two resonances exist near E$_P$=980 keV; however there is poor agreement on the J$^\pi$ values for these states. Γ: Γ_p/Γ from (1969Mo29).
7477 *4*	2$^-$	80 keV *8*	Γ_p/Γ=0.90 *5* E(level): from E$_{res}$=980 keV *10* 2$^-$ (1973Ro24) and 992 keV *4* 2$^-$ (1990Mo90). There is agreement that two resonances exist near E$_P$=980 keV; however there is poor agreement on the J$^\pi$ values for these states. Γ: Γ_p/Γ from (1969Mo29).
7562 *2*	0$^+$	2.7 keV	Γ_p/Γ=1.0 E(level): from E$_{res}$=1084 keV *2* (1956Mo90). (1956Mo90) also postulates that a J$^\pi$=2$^+$ state exists At E$_{res}$=0.90 MeV; such a state was required to produce interference that would reproduce the backward scattering data At this energy. Γ: from (1956Mo90). Γ_p/Γ from (1969Mo29). Also see Γ=3 keV (1956Mo90), =3.3keV (1969Mo29).
7666? *27*	(1$^+$)	250 keV *20*	Γ_p/Γ=0.30 *10* E(level): from E$_{res}$=1200 keV *30* (1969Mo29). Γ: Γ_p/Γ from (1969Mo29).
7811 *17*	(1$^-$,2$^-$)	265 keV *30*	Γ_p/Γ=0.90 *5* E(level): from E$_{res}$=1361 keV *19*, the weighted average of E$_{res}$=1370 keV *20* 1$^-$ (1973Ro24) and E$_{res}$=1340 keV *30* 2$^-$ (1969Mo29). Also see 1330 keV (1956Mo90). Γ: Γ_p/Γ from (1969Mo29). Also see Γ=0.40 MeV *10* (1956Mo90) and 0.30 MeV (1973Ro24). J$^\pi$: there is poor agreement on the J$^\pi$ value for this state.
8.07×10^3? *18*		≈800 keV	Γ_p/Γ<0.2 E(level): from E$_{res}$=1650 keV *200* (1969Mo29). Γ: Γ_p/Γ from (1969Mo29).
8449? *9*	(1$^-$,2$^-$)	70 keV *10*	Γ_p/Γ=0.43 E(level): Γ: Γ_p/Γ: from E$_{res}$=2070 keV *10* (1976Ma64).
8656?	(1$^+$,2$^+$)	≈300 keV	E(level): from E$_{res}$=2.3 MeV (1973Ro24).
8817?	3$^-$		T=(1). E(level): from E$_{res}$=2.48 MeV (1969An27).
8881 *5*	3$^-$	105 keV *5*	Γ_p/Γ=0.85 T=(1) (1956De33, also see 1974Aj01). E(level): from E$_{res}$=2550 keV *5* (1983Al10). A level At E$_{res}$=2560 with large Γ_p/Γ and J≥2 was reported In (1956De33, also 1974Aj01). Γ: Γ_p/Γ from (1983Al10).
8893 *5*	2$^+$	36 keV *5*	Γ_p/Γ=0.35

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^{10}B Levels (continued)

E(level)	J^{π}	$T_{1/2}$	Comments
			E(level): from E_{res}=2563 keV *5* (1983Al10). Γ: Γ_p/Γ from (1983Al10).
10.64×10^3?		1 MeV	E(level): Γ: from E_{res}=4500 keV (1972Ya06).
10.64×10^3?		0.2 MeV	E(level): Γ: from E_{res}=4500 keV (1972Ya06).
10833 *90*	2^+	0.40 MeV *10*	E(level): Γ: J^{π}: from E_{res}=4.72 MeV *10* (1983Al10). Also see E_{res}=4700 keV with $J^{\pi}=2^+$ and Γ=0.3 MeV (1972Ya06).
11175?		0.3 MeV	E(level): Γ: from E_{res}=5100 keV (1972Ya06).
12616			Γ: broad. E(level): from E_{res}=6700 keV (1972Vo17,1973Vo02).