^{13}C(^{7}Li,^{7}Be) 1990Na03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

1984Gl06: ^{13}C(^{7}Li,^{7}Be) E=78 MeV. Measured σ(E(^{7}Be),θ). Deduced single-step spin-flip charge-exchange process dominance.
1990Na03: ^{13}C(^{7}Li,^{7}Be) E=21 MeV/nucleon beam from the AVF cyclotron of the RCNP, Osaka. Measured σ(E(^{7}Be),θ) for $\theta \leq 10°$ using the DUMAS spectrometer. Data taken with the RAIDEN spectrometer are also discussed. An energy resolution of ≈300 keV was obtained. Analyzed levels up to E_x=9.5 MeV using DWBA.

^{13}B Levels

E(level)	J^{π}	Γ	ΔJ^{π}‡
0	3/2$^-$		1-
3.5×10^3†			2-
4.0×10^3†			2-
5.1×10^3†#			2-+4-
6.3×10^3†#			2-+4-
7.0×10^3†#			2-+4-
7.6×10^3†#			1-
9.5×10^3†		≈2.3 MeV	1-

† Unresolved states. ΔE≈300 keV.
‡ (^{7}Li,^{7}Be) angular distributions were measured on ^{12}C(J^{π}=0$^+$) and ^{13}C(J^{π}=1/2$^-$) targets, and ΔJ^{π} values were deduced for population of ^{13}B states by comparison of angular distribution shapes with those to known ^{12}B states.
# Some states are not associated with Adopted Levels because inadequate details to make an association are given in the literature.