^{116}Sn(^{6}Li,^{6}Li′) 2007Ch76,2009Ch06

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111, 717 (2010)	1-Dec-2009

E=240 MeV beam provided by Texas A&M K500 cyclotron. Enriched target. Detected charged particles in the range 4° (c.m.) to 32° (c.m.) with a multipole-dipole-multipole (MDM) spectrometer. 2007CH76: Measured cross sections and angular distribution for g.s.

Calculated B(EL) values using three different models: Deformed Potential (DP), Density Independent Folding (DIF), and Density Dependant Folding (DDF). Uncertainty in cross sections=10%. DWBA analysis.

2009CH06: Measured cross sections, angular distribution and widths resonances. Double-folding model analysis.

^{116}Sn Levels

E(level)[†]	J^{π}	Γ	Comments
0	0^+		
1290	2^+		B(E2)↑=0.209 *6* (2001Ra27) Calculated B(E2)=0.229 *+7−24* (DP model), 0.182 *+6−19* (DIF model), 0.233 *+7−24* (DDF model).
2270	3^-		B(E3)↑=0.132 *18* (2001Ra27) Calculated B(E3)=0.116 *+3−12* (DP model), 0.101 *+3−11* (DIF model), 0.133 *+4−14* (DDF model).
14.34×10^3 *23*	2^+	6.90 MeV *+78−18*	E(level): 14340 *+206−200* quoted for isoscalar quadrupole E2 (ISGQR) resonance; E2 EWSR=94% *+14−10*. Gaussian fit gives energy of 14.09 MeV *27* and Γ=5.48 MeV *35*.
15.32×10^3 *20*	1^-	5.56 MeV *+20−19*	E(level): isoscalar dipole E1 (ISGDR) resonance; E1 EWSR=66% *10*.
15.39×10^3 *28*	0^+	6.10 MeV *+85−34*	E(level): 15390 *+305−200* quoted for isoscalar monopole E0 (ISGMR) resonance; E0 EWSR=106% *+27−11*. Gaussian fit gives energy of 15.58 MeV *19* and Γ=5.46 MeV *18*.
21.66×10^3 *21*	3^-	10.87 MeV *23*	E(level): isoscalar octupole E3 (ISGOR) resonance; E3 EWSR=116% *11*.
21.73×10^3 *20*	1^-	2.80 MeV *+26−28*	E(level): isoscalar dipole E1 (ISGDR) resonance; E1 EWSR=52% *+20−14*. Total E1 (ISGDR) EWSR=118% *+20−14*.

[†] Centroid energies.