^{138}Ba(pol p,p),(pol p,p′):IAR 1989Ny02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	P. K. Joshi, B. Singh, S. Singh, A. K. Jain	NDS 138, 1 (2016)	15-Oct-2016

E=9.4-12.4 MeV. All data are from the resonance analysis of 1989Ny02 of ^{139}La isobaric analog resonances. See ^{138}Ba(pol p,p),(pol p,p′) IAR under ^{139}La for details and comparison to the data of 1977Cl02.

^{139}Ba Levels

E(level)[†]	J$^{\pi}$	Comments
0.0	7/2$^-$	E(level): 16182, 7/2$^-$ in ^{139}La is assigned as IAR of ^{139}Ba g.s.
631.0 *7*	3/2$^-$	E(level): from 16812, 3/2$^-$ IAR in ^{139}La.
1087.0 *5*	1/2$^-$	E(level): from 17268, 1/2$^-$ IAR in ^{139}La.
1305 *2*	9/2$^-$	E(level): from 17486, 9/2$^-$ IAR in ^{139}La.
1435.0 *6*	5/2$^-$	E(level): from 17616, 5/2$^-$ IAR in ^{139}La.
1575 *7*	13/2$^+$	E(level): from 17756, 13/2$^+$ IAR in ^{139}La.
1641 *8*	9/2$^-$	E(level): from 17823, 9/2$^-$ IAR in ^{139}La.
1692 *2*	7/2$^-$	E(level): from 17873, 7/2$^-$ IAR in ^{139}La.
1711 *1*	5/2$^-$	E(level): from 17892, 5/2$^-$ IAR in ^{139}La.
1780 *5*	3/2$^-$	E(level): from 17962, 3/2$^-$ IAR in ^{139}La.
1842	(9/2$^-$)	E(level): from possible 18024, (9/2$^-$) IAR in ^{139}La.
1943 *6*	7/2$^-$	E(level): from 18124, 7/2$^-$ IAR in ^{139}La.
1963 *3*	5/2$^-$	E(level): from 18144, 5/2$^-$ IAR in ^{139}La.
2115 *4*	7/2$^-$	E(level): from 18297, 7/2$^-$ IAR in ^{139}La.
2158 *2*	3/2$^-$	E(level): from 18339, 3/2$^-$ IAR in ^{139}La.
2182 *2*	5/2$^-$	E(level): from 18363, 5/2$^-$ IAR in ^{139}La.
2186 *2*	1/2$^-$	E(level): from 18368, 1/2$^-$ IAR in ^{139}La.
(2335[‡])	(5/2$^-$)	E(level): from 18517, (5/2$^-$) IAR in ^{139}La.
(2446[‡])	(3/2$^-$)	E(level): from 18630, (3/2$^-$) IAR in ^{139}La.

[†] Except for the ground and first two excited states, excitation energies derived in the analysis are generally 12 to 32 keV higher than the energies of the corresponding levels in Adopted Levels. Above 2 MeV or so, it is difficult to make unique assignments of IARs in ^{139}La to parent levels in ^{139}Ba due to high level density.

[‡] Resonances corresponding to these states were not fitted in the analysis but are necessary for a good fit to the data (1989Ny02).