^{205}Tl(t,p) 1969Ha11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Lalkovski	NDS 112, 707 (2011)	1-Aug-2010

Facility: Aldermaston Tandem; Beam: E(t)=13 MeV, FWHM≈25 keV; Target: 0.25 mg/cm^2 enriched to 99% in ^{205}Tl and evaporated on carbon backing; Detectors: multi-angle spectrograph, photo emulsions; Measured: $\sigma(\theta)$.

^{207}Tl Levels

E(level)[†]	Jπ[‡]	L[#]	Comments
0.0	1/2$^+$	0	configuration: $\pi(3s_{1/2})^{-1}$.
355	3/2$^+$[@]		configuration: $\pi(2d_{3/2})^{-1}$.
1693	5/2$^+$[@]		configuration: $\pi(2d_{5/2})^{-1}$.
2689			Jπ: (7/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(3s_{1/2})^{-1}$x3$^-$ doublet.
2721			Jπ: (5/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(3s_{1/2})^{-1}$x3$^-$ doublet.
2921			Jπ: (9/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x3$^-$ quadruplet.
3000			Jπ: (7/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x3$^-$ quadruplet.
3158			Jπ: (5/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x3$^-$ quadruplet.
3211			Jπ: (3/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x3$^-$ quadrupled.
3311			Jπ: (11/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(3s_{1/2})^{-1}$x5$^-$ doublet.
3351			Jπ: (9/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(3s_{1/2})^{-1}$x5$^-$ doublet.
3460			E(level): Probably unresolved lines (1969Ha11). Jπ: (7/2$^-$:13/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x5$^-$ multiplet.
3588			E(level): Probably unresolved lines (1969Ha11). Jπ: (7/2$^-$:13/2$^-$) based on the weakly coupled particle-hole-vibrational approach (1969Ha11). configuration: Probable member of the $\pi(2d_{3/2})^{-1}$x5$^-$ multiplet.
4352	1/2$^+$	0	
4536	1/2$^+$	0	
4574			

[†] From 1969Ha11. Authors′ quoted uncertainty is 20 keV; however a comparison of the energies with the Adopted Levels indicates that the (t,p) values are too large by 10 keV for the 1682.48-keV level increasing to 15 keV for the 2985.15-keV, 3142.91-keV, 3295.5-keV and 3335.68-keV levels.
[‡] Based on L-value measurements, unless otherwise noted.
[#] Based on $\sigma(\theta)$ and systematics of L=0 lines (1969Ha11).
[@] From the Adopted Levels