Muonic atom 1980Bu12

History

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

1980Bu12: Facility: Space Radiation Effects Lab; Target: 164 gm enriched to 92.8% in ^{207}Pb; Detectors:Ge(Li); Measured: Eγ, Iγ. Nuclear gammas measured in the presence of 1s muon. The measured isomer shifts for the weak-coupling doublet at 2.6 MeV indicate that the octupole core vibration is accompanied by an increase in the nuclear volume.

^{207}Pb Levels

E(level)[†]	J$^{\pi}$[‡]	Comments
0	1/2$^-$	
569.61 *22*	5/2$^-$	
898.47 *20*	3/2$^-$	
2630.0 *6*	5/2$^+$	E(level): muonic isomer shift=6.3 keV *8*.
2669.05 *24*	7/2$^+$	E(level): muonic isomer shift=6.6 keV *6*.

[†] From a least-squares fit to Eγ.
[‡] From the Adopted Levels.

$\gamma(^{207}Pb)$

E$_\gamma$[†]	I$_\gamma$[†‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
569.61 *22*		569.61	5/2$^-$	0	1/2$^-$
898.47 *20*		898.47	3/2$^-$	0	1/2$^-$
1731.5 *5*	0.8 *3*	2630.0	5/2$^+$	898.47	3/2$^-$
2099.43 *9*	4.4 *5*	2669.05	7/2$^+$	569.61	5/2$^-$

[†] From 1980Bu12.
[‡] Intensity per 100 (3d5/2 to 2p3/2) L x-rays.

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Level Scheme

Intensities: Type not specified