^{209}Bi(μ^-,5nγ) 2007Me09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. J. Chiara and F. G. Kondev	NDS 111,141 (2010)	1-Oct-2009

Additional information 1.

2007Me09: 3.5-g/cm^2 Bi powder target, 221 g contained in 9-cm diameter and 10-mm thick volume; μ^- beam produced from decay of 90-MeV/c π^- beam; two HPGe detectors, only one used in analysis, with 37.5% efficiency, 7-ns timing resolution, FWHM=3 keV at 1.3 MeV, 5 keV at 2.8 MeV, and 10 keV at 6.1 MeV; μ^- stop defined by coincident signals in two plastic scintillators preceding target and anticoincidence with scintillator behind target; additional scintillator in front of Ge to identify electrons entering detector; measured Eγ, Iγ; Iγ efficiency corrected for self-absorption by comparison of muonic x-ray intensities.

^{204}Pb Levels

E(level)†
0
899.166 *25*
1274.15 *5*

† From Adopted Levels.

$\gamma(^{204}Pb)$

Iγ normalization: Iγ normalized to (4f->3d) muonic-Bi x-ray intensity, which has a yield of 77 *7* per 100 μ^- stops.

E$_\gamma$	I$_\gamma$	E$_i$(level)	E$_f$	Comments
374.76 *7*	1.2 *4*	1274.15	899.166	E$_\gamma$: γ was observed in 2007Me09, but they quote Eγ from the previous Nuclear Data Sheets evaluation; here, Eγ taken from adopted gammas.
899.15 *3*		899.166	0	E$_\gamma$: Not observed in 2007Me09, obscured by a stronger 897.78-keV line from ^{209}Bi(μ^-,2nγ)^{207}Pb; Eγ taken from adopted gammas.

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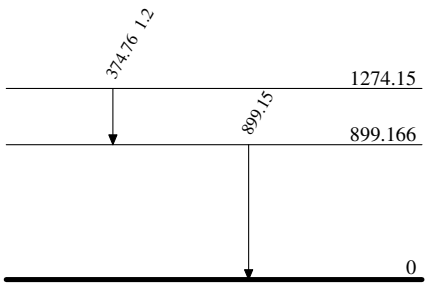
Level Scheme

Intensities: Type not specified



$^{204}_{82}Pb_{122}$