^{208}Pb(^{48}Ca,Xγ) 2012Mo11,2009Va06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong	NDS 144, 1 (2017)	1-Mar-2016

2012Mo11: Two experiments performed at LNL of INFN using PRISMA-CLARA system. Reactions used: 1. ^{64}Ni(^{48}Ca,Xγ) E=282 MeV, target= 0.98 mg/cm^2. Projectile-like products selected using PRISMA magnetic spectrometer. Measured $\gamma(\theta)$ and γ(lin pol) using CLARA array of 23 Compton-suppressed HPGe clover detectors. 2. ^{208}Pb(^{48}Ca,Xγ) E=310 MeV, target=1.0 mg/cm^2 evaporated on a 1.0 mg/cm^2 Ta layer. A 4 mg/cm^2 Mg foil was used after the target as an energy degrader. Projectile-like products selected using PRISMA magnetic spectrometer. Half-lives of excited states were measured using differential Recoil Distance Doppler Shift method. Comparisons with full *fp* shell-model calculations.

2009Va06: ^{208}Pb(^{48}Ca,Xγ) E=310 MeV, ^{48}Ca beam produced by the LNL Tandem-ALPI accelerator complex. Reaction products passed through a Mg degrader, before being selected by the magnetic spectrometer PRISMA. γ's were detected by the CLARA array, consisting of 23 Compton suppressed Clover detectors, 12 of which could be used to measure half-lives. Measured Eγ, Iγ, B(E2) values, half-lives using the Recoil Distance Doppler Shift method.

2005Br18: ^{208}Pb(^{48}Ca,Xγ) E=280 MeV. Measured Eγ using the Gammasphere array in deep-inelastic heavy ion reactions.

^{51}Sc Levels

E(level)	J$^\pi$[†]	T$_{1/2}$	Comments
0.0	7/2$^-$		
1065	11/2$^-$	19 ps *5*	T$_{1/2}$: from recoil-distance Doppler-shift method (RDDS, 2009Va06).

[†] From Adopted Levels.

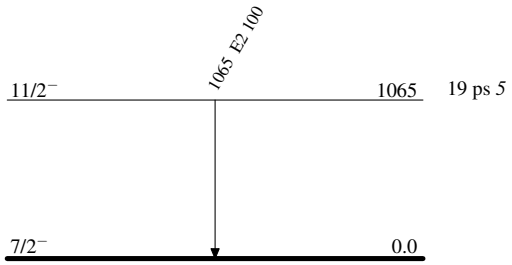
γ(^{51}Sc)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$	Mult.	Comments
1065	11/2$^-$	1065	100	0.0	7/2$^-$	E2	A$_2$=+0.34 *15* (2012Mo11) POL=+0.14 *15* (2012Mo11). Mult.: from $\gamma(\theta)$ and γ(pol) in 2012Mo11.

^{208}Pb(^{48}Ca,Xγ) 2012Mo11,2009Va06

Level Scheme

Intensities: % photon branching from each level



$^{51}_{21}Sc_{30}$