^{208}Pb(^{36}S,Xγ) 2010Wa12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 140, 1 (2017)	30-Sep-2015

2010Wa12: E=215 MeV ^{36}S beam was produced from the XTU-Tandem Van de Graaff-ALPI superconducting linear accelerator complex at the INFN Legnaro National Laboratory, Italy. Target was a thin 99.7% enriched ^{208}Pb of 300 μg/cm^2 thickness on a 20 μg/cm^2 carbon backing. Reaction products were analyzed with the PRISMA magnetic spectrometer and detected by a position sensitive microchannel plate (MCP) detector and a multiwire parallel-plate avalanche counter (MWPPAC) for position and time information, and by an ionization chamber for energy. γ rays were detected with the CLARA array of 25 escape-suppressed Ge clover detectors. Measured Eγ, Iγ, $\gamma\gamma$-coin. Deduced levels, J, π. Comparison with shell-model calculations.

^{40}S Levels

E(level)	J$^\pi$[†]
0[‡]	0$^+$
904[‡]	2$^+$
2256[‡]	(4$^+$)
3828[‡]	(6$^+$)

[†] As given by 2010Wa12 based on band structure.
[‡] Band(A): Yrast sequence. Configurations $\pi(2s^1_{1/2},1d^1_{3/2})$ and $\pi(2s^0_{1/2},1d^2_{3/2})$ are important for the yrast structure.

γ(^{40}S)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
904	904	2$^+$	0	0$^+$
1352	2256	(4$^+$)	904	2$^+$
1572	3828	(6$^+$)	2256	(4$^+$)

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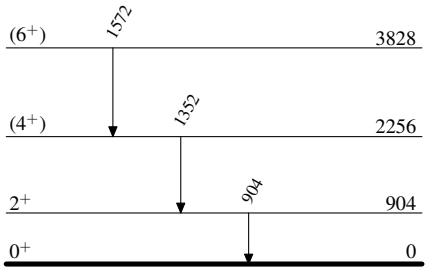
Level Scheme



$^{40}_{16}S_{24}$

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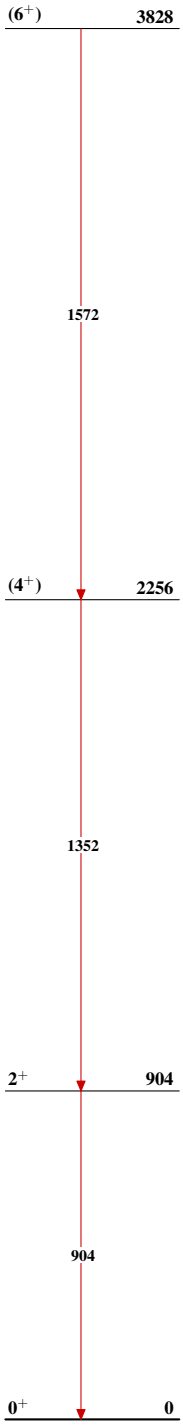
Band(A): Yrast sequence



$^{40}_{16}S_{24}$