^{208}Pb(^{36}S,^{35}Siγ) 2010WaZT

2010WaZT,2010Wa20: A 215-MeV $^{36}S^{9+}$ beam was produced from the XTU-Tandem ALPI-superconducting linear accelerator complex at the INFN Legnaro National Laboratory, Italy. The target was 300 μg/cm^2 99.7% enriched ^{208}Pb with 20 μg/cm^2 carbon backing. Projectile-like fragments produced in binary grazing reactions were separated and identified by the PRISMA spectrometer. γ rays were detected using the CLARA array of 22 escape-suppressed Ge clover detectors covering the azimuthal angles from 98° to 180°. Measured Eγ with Doppler corrections, Iγ, and (^{35}Si)γ-coin. Deduced levels. Compared with shell-model calculations.

^{35}Si Levels

E(level)†	J$^\pi$‡
0	(7/2$^-$)
910 *1*	(3/2$^-$)
974 *1*	(3/2$^+$)

† From a least-squares fit to γ-ray energies.
‡ As given in 2010WaZT, based on shell-model calculations.

γ(^{35}Si)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
910 *1*	100 *25*	910	(3/2$^-$)	0	(7/2$^-$)
974‡ *1*	21 *10*	974	(3/2$^+$)	0	(7/2$^-$)

† From 2010WaZT.
‡ Placement of transition in the level scheme is uncertain.

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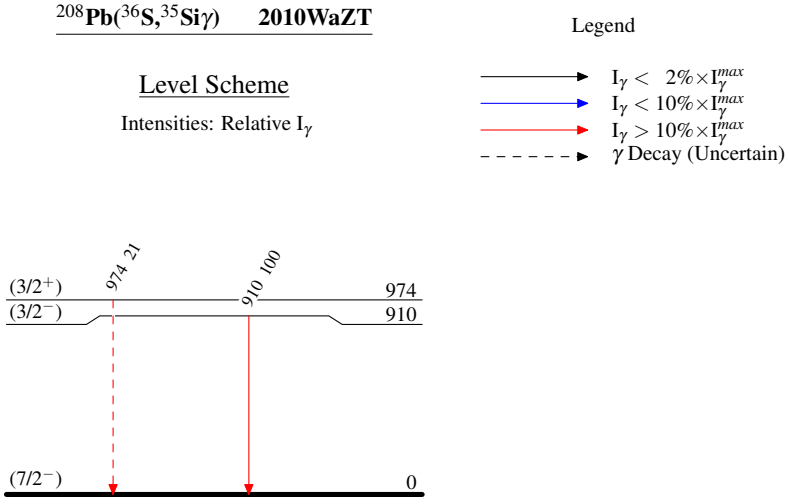
Level Scheme

Intensities: Relative I$_\gamma$



$^{35}_{14}Si_{21}$