208 Pb(36 S,X γ) **2010WaZT**

2010WaZT,2010Wa20: A 215-MeV ³⁶S beam was produced from the XTU-Tandem ALPI-superconducting linear accelerator complex at the INFN Legnaro National Laboratory, Italy. The target was 1 mg/cm² 99.7% enriched ²⁰⁸Pb with 1 mg/cm² Nb backing and mounted onto the Cologne differential plunger. 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 (³⁵Si)γ-coin. Deduced levels. Compared with shell-model calculations.

35Si Levels

E(level) [†]	$J^{\pi \ddagger}$
0	$(7/2^{-})$
910.0 <i>10</i>	$(3/2^{-})$
974.0 <i>10</i>	$(3/2^+)$

 † From a least-squares fit to γ -ray energies.

[‡] As given in 2010WaZT, based on shell-model calculations.

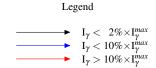
$$\gamma$$
(35Si)

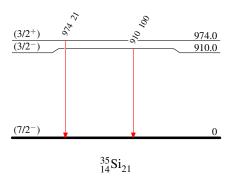
$$\frac{E_{\gamma}^{\dagger}}{910 \ I} \quad \frac{I_{\gamma}^{\dagger}}{100 \ 25} \quad \frac{E_{i}(\text{level})}{910.0} \quad \frac{J_{i}^{\pi}}{(3/2^{-})} \quad \frac{E_{f}}{0} \quad \frac{J_{f}^{\pi}}{(7/2^{-})}$$
974 \ I \ 21 \ IO \ 974.0 \ (3/2^{+}) \ 0 \ (7/2^{-})

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Level Scheme

Intensities: Relative I_{γ}





[†] From 2010WaZT.