^{33}S(p,p′),(p,p′γ) 1964Va12,1969An35

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 199,1 (2025)	30-Sep-2024

1964Va12: (p,p′γ) E=1.2-3.2 MeV proton beams were produced from the Utrecht 3 MV Van de Graaff accelerator. Target was CdS (22% ^{33}S) on a tantalum backing. Detectors: a cylindrical NaI(Tl) crystal for detecting γ-rays. Measured σ(E$_p$), Eγ, γ(θ). Deduced levels. Data in 1964Va12 are mainly for ^{33}S+p resonance levels in ^{34}Cl.

1969An35: (p,p′) E=6.03 MeV proton beam was produced from the U-120 cyclotron. Target was 0.107 mg/cm^2 InS (45.4% ^{33}S). Scattered protons were detected by a Si(Li) detector. Measured σ(E$_{p'}$,θ). Deduced levels.

^{33}S Levels

E(level)[†]	Comments
0	
840 *1*	
1960 *1*	E(level): other: 1950 (1969An35).
2310	
2870	
2940	
2970	
3220	

[†] Values with uncertainties from Eγ data and others are from 1969An35.

γ(^{33}S)

E$_i$(level)	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	Comments
840	840		0	
1960	1960	<97	0	A$_2$=−0.42 *4*; A$_4$=−0.03 *6* (1964Va12) A$_2$=−0.49 *1*; A$_4$=−0.04 *3* (1964Va12)

[†] From 1964Va12.

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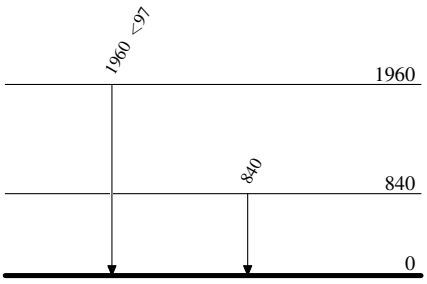
Level Scheme

Intensities: % photon branching from each level



$^{33}_{16}S_{17}$