

$^{160}\text{Gd}(^{34}\text{S},x\gamma),(^{37}\text{Cl},X\gamma)$ 1994Fo04

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Lijie Sun and Jun Chen		NDS 211,1 (2026)	30-Sep-2025

1994Fo04: 159-MeV ^{34}S and 167-MeV ^{37}Cl beams were produced from the Argonne Tandem Linac Accelerator System (ATLAS). Targets were 1 mg/cm² 98.1% enriched ^{160}Gd backed by 15 mg/cm² gold. γ rays were detected using the Argonne-Notre Dame BGO γ -ray facility consisting of 12 Compton-suppressed Ge detectors and a 50-element bismuth germanate (BGO) array. Measured E_γ , I_γ , $\gamma\gamma$ -coin. Deduced levels. $\gamma\gamma$ -coin gates were placed on known γ rays in specific $A \approx 160$ products to select individual reaction channels and identify coincident γ rays in light product partners. $\gamma\gamma$ -correlation matrices produced with the fold condition $4 \leq k \leq 9$ were found to include most of the events associated with deep inelastic processes.

 ^{35}S Levels

E(level) [†]	Comments
0	
1991	
4022	J^π : 1994Fo04 suggests this level is a likely candidate to be the expected $9/2^-$ yrast excitation, while $(11/2)^-$ is adopted in the Adopted Levels.

[†] From E_γ data in 1994Fo04.

 $\gamma(^{35}\text{S})$

E_γ [†]	$E_i(\text{level})$	E_f
1991	1991	0
2031	4022	1991

[†] From 1994Fo04.

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Level Scheme

