

$^{160}\text{Gd}(^{36}\text{S}, ^{38}\text{S}\gamma)$ 1994Fo04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

1994Fo04: E=159 MeV ^{36}S beam was produced from the ATLAS linear accelerator at ANL. Target was 1.0 mg/cm² ^{160}Gd (98% enriched) on a gold backing. γ rays were detected with the Argonne-Notre Dame BGO γ -ray array of 12 Compton-suppressed Ge detectors. Measured E_γ , $\gamma\gamma$ -coin. Deduced levels. Comparisons with shell-model calculations.

 ^{38}S Levels

E(level)	J^π †
0	0 ⁺
1292	2 ⁺
2805	(2 ⁺)
2825	4 ⁺
3674	(6 ⁺)

† From Adopted Levels. Assignments in brackets are from shell-model predictions in 1994Fo04.

 $\gamma(^{38}\text{S})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
849	3674	(6 ⁺)	2825	4 ⁺
1292	1292	2 ⁺	0	0 ⁺
1513	2805	(2 ⁺)	1292	2 ⁺
1533	2825	4 ⁺	1292	2 ⁺

 ${}^{160}\text{Gd}({}^{36}\text{S}, {}^{38}\text{S}\gamma)$ 1994Fo04Level Scheme