

Coulomb excitation [2021Lo08,1997G102](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 190,1 (2023)	20-Jun-2023

2021Lo08: $^{209}\text{Bi}(^{44}\text{S},^{44}\text{S}'\gamma), E=73$ MeV/nucleon. ^{44}S secondary beam was produced via fragmentation of 140 MeV/nucleon primary beam of ^{48}Ca on a ^9Be target at focal plane of A1900 separator at NSCL. Reaction target was 492 mg/cm^2 ^{209}Bi at the target position of the S800 magnetic spectrograph. Measured E_γ , I_γ , $\gamma\gamma$ -coin, (recoils) γ -coin using the CAESAR array with 192 CsI(Na) detectors. Deduced cross sections for populating the first two 2^+ states, and B(E2) using Alder and Winther relativistic model for Coulomb excitation.

1997G102: $^{197}\text{Au}(^{44}\text{S},^{44}\text{S}'), E(^{44}\text{S})=1.5$ GeV. Measured E_γ , (particle) γ -coin. Deduced B(E2).

^{44}S Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0	0^+		
1324 6	2^+	3.0 ps 4	B(E2) \uparrow =0.0230 28 B(E2) \uparrow : weighted average of 0.0221 28 (2021Lo08) and 0.0314 88 (1997G102). $T_{1/2}$: deduced from B(E2).
2265 20	(2^+)		B(E2) \uparrow =0.0010 6 (2021Lo08)

[†] From E_γ data.

[‡] From the Adopted Levels.

$\gamma(^{44}\text{S})$

E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
941 19	2265	(2^+)	1324	2^+		
1324 6	1324	2^+	0	0^+	[E2]	E_γ : other: 1297 18 (1997G102).

[†] From [2021Lo08](#).

Coulomb excitation 2021Lo08,1997G102Level Scheme