

Coulomb excitation 1977Sc36

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

1977Sc36: $^{24,25,26}\text{Mg}(^{33}\text{S},^{33}\text{S}')$ E=49 MeV ^{33}S beam was produced from the MP Tandem Van de Graaff at BNL. Natural and enriched targets. γ rays were detected with 25-75 cm³ Ge(Li) detectors. Measured E_γ , $\sigma(E_\gamma)$, Doppler-shift attenuation. Deduced $T_{1/2}$.

1961An09,1960Le07: $^{33}\text{S}(^{20}\text{Ne},^{20}\text{Ne})$ E=23.2 MeV ^{20}Ne beam was produced from the Cyclotron laboratory of Leningrad Physical Technical Institute, USSR. Target was compressed sulfur powder (21.5% enriched in ^{33}S). γ rays were detected with a NaI(Tl) crystal. Measured E_γ , γ -ray yields. Deduced B(E2).

 ^{33}S Levels

E(level)	J^π [†]	$T_{1/2}$ [‡]	Comments
0	$3/2^+$		
830 10	$1/2^+$	1.17 ps 13	B(E2) \uparrow =0.0019 4 (1961An09) $T_{1/2}$: from τ =1.69 ps 18 (1977Sc36).
1966	$5/2^+$	55 fs 42	$T_{1/2}$: from τ =80 fs 60 (1977Sc36).

[†] From the Adopted Levels.

[‡] From DSAM in 1977Sc36.

 $\gamma(^{33}\text{S})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
830 10	830	$1/2^+$	0	$3/2^+$	E_γ : from 1961An09.

Coulomb excitation 1977Sc36Level Scheme