Coulomb excitation 1977Sc36

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1977Sc36: 24,25,26 Mg(33 S, 33 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 , σ (E γ), Doppler-shift attenuation. Deduced $T_{1/2}$.

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

³³S Levels

 E(level)
 $J^{\pi^{\dagger}}$ $T_{1/2}^{\ddagger}$ 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).

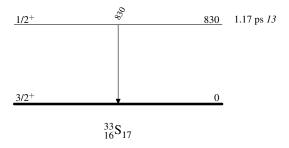
 $\gamma(^{33}S)$

 $\frac{E_{\gamma}}{830 \ 10} \quad \frac{E_{i}(\text{level})}{830} \quad \frac{J_{i}^{\pi}}{1/2^{+}} \quad \frac{E_{f}}{0} \quad \frac{J_{f}^{\pi}}{3/2^{+}} \quad \frac{E_{\gamma}: \text{ from 1961An09}.}{E_{\gamma}: \text{ from 1961An09}.}$

Comments

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Level Scheme



[†] From the Adopted Levels.

[‡] From DSAM in 1977Sc36.