

^{45}Sc IT decay (325.8 ms)

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|---------------|---------------------|------------------------|
| Full Evaluation | T. W. Burrows | NDS 109, 171 (2008) | 30-Oct-2007 |

Parent: ^{45}Sc : E=12.40 5; $J^\pi=3/2^+$; $T_{1/2}=318$ ms 7; %IT decay=100.0

All information is from the Adopted Levels and Gammas, except as noted.

 ^{45}Sc Levels

| E(level) | J^π | $T_{1/2}$ |
|----------|---------|-------------|
| 0.0 | $7/2^-$ | stable |
| 12.40 5 | $3/2^+$ | 325.8 ms 42 |

 $\gamma(^{45}\text{Sc})$

| E_γ | I_γ^\dagger | $E_i(\text{level})$ | J_i^π | E_f | J_f^π | Mult. | α^\ddagger | $I_{(\gamma+ce)}^\dagger$ | Comments |
|------------|--------------------|---------------------|-----------|-------|-----------|-------|-------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.40 5 | 0.236 5 | 12.40 | $3/2^+$ | 0.0 | $7/2^-$ | (M2) | 423 9 | 100 | $\Delta E=+1-2$ $ce(K)/(\gamma+ce)=0.855$ 10; $ce(L)/(\gamma+ce)=0.126$ 4; $ce(M)/(\gamma+ce)=0.0156$ 5; $ce(N)/(\gamma+ce)=0.000703$ 22 $\alpha(K)=362$ 8; $\alpha(L)=53.5$ 12; $\alpha(M)=6.63$ 15; $\alpha(N)=0.298$ 7 E_γ : from level energy. Comment added B. Singh, May 01, 2021. I_γ : from $I(\gamma+ce)$ and α . I_γ value modified and comment modified by B. Singh, May 01, 2021. α : from BrIcc for M2. Other: 501 43 from $\alpha(K)_{exp}=428$ 37, and $\alpha=1.17(\alpha(K)_{exp})$, the ratio of total $\alpha/\alpha(K)$ (theory) from BrIcc. 2008Bu01 evaluation used $K/L+=3$. Comment added by B. Singh, May 01, 2021. |

† Absolute intensity per 100 decays.

‡ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

 ${}^{45}\text{Sc}$ IT decay (325.8 ms)**Decay Scheme**

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

