

^{172}Ir ε decay (4.4 s) 1992Sc16,1992Bo21

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 75,199 (1995)	31-May-1995

Parent: ^{172}Ir : $E=0$; $J^\pi=(3^+)$; $T_{1/2}=4.4$ s 3; $Q(\varepsilon)=9840$ SY; $\% \varepsilon + \% \beta^+$ decay=98.0

^{172}Ir - $\% \varepsilon + \% \beta^+$ decay: $\% \alpha=2$ (1992Sc16).

1992Sc16: measured α , γ , $\alpha\gamma$, $\gamma\gamma$, $T_{1/2}$. Sources: $^{141}\text{Pr}(^{36}\text{Ar},5n)$ $E=234$ MeV. Recoil products collected with a helium jet system.

1992Bo21: measured γ , $\gamma\gamma$. Sources: $^{144}\text{Sm}(^{32}\text{S},p3n)$ $E=210$ MeV. Recoil products stopped in helium and transported on lead chloride aerosols.

^{172}Ir (4.4 s) decays by $\varepsilon + \beta^+$ (98%) and α (2%) (1992Sc16).

1992Bo21 report $T_{1/2}=2.9$ s 3 for both activities from 228 $\gamma(t)$.

 ^{172}Os Levels

E(level)	J^π	Comments
0.0	0^+	
227.9 2	2^+	
606.3 3	4^+	
702.9? 3	(2^+)	From 1992Bo21 only.

 ε, β^+ radiations

E(decay)	E(level)
(9233 SY)	606.3
(9612 SY)	227.9

 $\gamma(^{172}\text{Os})$

E_γ †	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	$\alpha^\#$
227.9 2	227.9	2^+	0.0	0^+	E2	0.218
378.4 2	606.3	4^+	227.9	2^+	E2	0.047
475.0 2	702.9?	(2^+)	227.9	2^+		

† Weighted averages from 1992Sc16 and 1992Bo21. For intensities see ^{172}Ir ε decay (2.0 s).

‡ From ^{172}Ir ε decay (2.0 s).

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.

^{172}Ir ϵ decay (4.4 s) 1992Sc16,1992Bo21

Decay Scheme

