^{170}Os α decay 1996Pa01,1995Hi02,1982En03

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 1103 (2008)	1-Mar-2008

Parent: ^{170}Os: E=0; $J^\pi=0^+$; $T_{1/2}$=7.37 s *18*; Q(α)=5539 *3*; %α decay=9.5 *10*

^{170}Os-%α decay: From weighted average of %α(to ^{166}W g.s.)=12 *1* (1982En03), 8.6 *6* (1996Pa01), 10 *3* (2004GoZZ). The unweighted average is 10.2 *10*. Others: %α=3 estimated by 1978Sc26 based on comparison of measured α intensities and calculated excitation function for reaction producing ^{170}Os; %α=5 *1* (1995Hi02, assuming 162γ and 216γ In ^{170}Re are M1), or %α=9 *2* (1995Hi02, neglecting internal conversion of 162γ and 216γ).

Parent $T_{1/2}$=7.37 s *18* from weighted average of 7.2 s *2* (2004GoZZ, α(t)) 9.0 s *10* (1996Pa01), 7.9 s *3* (1995Hi02, from α(t)), 8.5 s *5* (1995Hi02, from 216γ(t)), 9.3 s *16* (1995Hi02, from 162γ(t)), 6.9 s *8* (1984Sc06), 7.1 s *2* (1982En03), 7.1 s *5* (1972To06). other: 4.0 s *2* (1978Sc26). The unweighted average is 7.9 s *3*.

^{166}W Levels

E(level)	J^π	$T_{1/2}$	Comments
0	0^+	19.2 s *6*	J^π,$T_{1/2}$: from Adopted Levels.

α radiations

Eα	E(level)	Iα[†#]	HF[‡]	Comments
5407.1 *24*	0	97 *3*	1.0	Eα: weighted average of 5410 *5* (2004GoZZ), 5407 *10* (2002Ro17), 5408 *15* (2002Ro17), 5403 *7* (1995Hi02), 5393 *8* (1984Sc06), 5411 *4* (1982De11), 5405 *10* (1982En03), 5403 *10* (the 5400 *10* datum of 1972To06, after adjustment by 1991Ry01). other Eα: 5400 *10* (1978Sc26) for line with discrepant $T_{1/2}$. Eα=5406 *3* implies Q(α)=5537.4 *24* cf. 5539 *3* In 2003Au03.

[†] This is the only α observed. were there a 5161α to the 2^+ 252 level of ^{166}W, the requirement that HF exceed 1 implies that its intensity must Be <6% of all ^{170}Os α decays. consequently, the evaluator adopts 97 *3* for I(g.s.)/Iα(total).

[‡] r_0=1.560 *6* from HF=1 for α to ^{166}W g.s., consistent with r_0 systematics for W.

[#] For absolute intensity per 100 decays, multiply by 0.095 *10*.