^{202}Po α **decay**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

Parent: ^{202}Po: E=0; J^π=0$^+$; T$_{1/2}$=44.6 min *4*; Q(α)=5701.1 *17*; %α decay=1.92 *7*

T$_{1/2}$(^{202}Po)=44.6 min *4* was from weighted average of 44.7 min *5* (1993Wa04), 45.0 min *15* (1971Ho01,1965Ti03), 43.7 min *13* (1970DaZM). Others: 44 min (1965Br17).

α branching of 1.92% *7* adopted here is based on parent-daughter (Eα_1(^{206}Rn)-Eα_2(^{202}Po)) correlations and their ratio of α intensities (1993Wa04). Others: 2.2% *3* (1971Ho01), 2.0% *2* (1967Le21), 2% (1965Br17).

^{198}Pb Levels

E(level)[†]	J^π[†]
0.0	0$^+$

[†] From Adopted Levels.

α radiations

Eα	E(level)	Iα[†][#]	HF[‡]	Comments
5588.1 *17*	0.0	100	1.0	Eα: 5587.2 *14* is recommended in 1991Ry01 from the measured values (energies are adjusted for changes in calibration energies, as suggested by 1991Ry01): 5583 *10* (1963Ho18), 5587 *5* (1967Ti04), 5579 *5* (1967Tr06), 5588 *2* (1968Go12), 5590 *5* (1970Jo26) and 5589 *3* (1970Ra14). From the recommended Q(α) of 5701.1 *17* Eα=5588.1 *17* is calculated.
				Iα: only one α group has been observed. Upper limits on intensities for unobserved α transitions to the 2$^+$, 1063.5-keV level and to the 0$^+$, 1392.1-keV level are obtained by requiring their hindrance factors to be greater than 1: Iα(4545.7α to 2$^+$ state)<8×10^{-5}, Iα(4223.6α to 0$^+$)<4×10^{-7} per 100 α decays.

[†] α intensity per 100 α decays.
[‡] r$_0$(^{198}Pb)=1.4719 *20* is calculated from HF(5588.1α)=1.0.
[#] For absolute intensity per 100 decays, multiply by 0.0192 *7*.