^{266}Sg α decay

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Y. Akovali	NDS 94, 131 (2001)	1-Aug-2001

Parent: ^{266}Sg: E=0.0; $T_{1/2}$=21 s *+20−12*; Q(α)=8762 *51*; %α decay≥18.0

$T_{1/2}$(^{266}Sg)=21 s *+20−12* is the measurement of 1998Tu01.
The α branching was determined As 15≤%α≤50 and As 18≤%α by 1994La22 and 1998Tu01, respectively.
Q(α)(^{266}Sg)=8762 *51*, listed In 1995Au04 was calculated from Eα=8630 measured by 1994La22.
The adopted α energy, Eα(to ^{262}Rf g.s.)=8770 *40*, yields Q(α)(^{266}Sg)=8903 *40*.

^{262}Rf Levels

E(level)	J^π	Comments
0.0	0^+	
254? *50*		The level energy is calculated by the evaluator from Eα=8520 and Eα(to gs)=8770. If Eα(to gs)=8630, then E(level)=112 *50*.

α radiations

Eα	E(level)	HF	Comments
8520[†] *30*	254?		Measurements of 1998Tu01. The calculated hindrance factor of 0.3, if Iα=33% of alpha decay, may suggest the existence of a contaminant under this alpha peak.
8770 *40*	0.0	1.0	Eα: Measurements of 1998Tu01. The authors of 1994La22 assigned only one alpha at 8.63 *5* MeV to ^{266}Sg alpha decay. See also 1995Og02. Iα: The alpha intensities were measured by 1998Tu01 as Iα(8770α)/Iα(8520α)=66/33. When these intensities are used in hindrance-factor calculations, together with the half-life of 21 s and the alpha branching of 18≤%α≤50, the calculations yield 1.35 *8*≤r0≤1.39 *8*, and Hf(8520α)/Hf(8770α)=0.3. One would expect r0=1.45 *5* and Hf(8520α)>Hf(8770α). For %α=50, Iα(8770α)=100 per 100 alpha decays, the calculations give r0=1.40; if Eα=8630, measured by 1994La22 (together with %α=50, Iα=100) is used, then r0=1.44 *8*.

[†] Existence of this branch is questionable.