Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 122, 377 (2014)	1-Sep-2014

Q(β^-)=3170 *SY*; S(n)=4660 *SY*; S(p)=5830 *SY*; Q(α)=4940 *SY* 2012Wa38
The systematics uncertainties are 200, 230, 280, and 360 for Q(β^-), S(n), S(p), and Q(α), respectively.
Other than an update to the Q values, there are No new data on ^{248}Am since the 1999 Nuclear Data Sheets, 1999Ak02.

^{248}Am Levels

E(level)	Comments
(0.0)	^{248}Am has not been observed. The systematics of orbitals for this region (see, for example, 1972El21) suggests that the 153rd neutron is probably in the 1/2[620] Nilsson orbital, and the 95th proton is in either the 5/2[523] or the 5/2[642] orbital. $T_{1/2}$: $T_{1/2}(\beta^-)$: A partial half-life for β decay was calculated by 1973Ta30 using β decay gross theory as >700 s. Calculations of 1997Mo25 yield >100 s. From systematics, 2012Au07 report ≈180 s. A partial α half-life, of 1×10^{11} d – 4×10^{11} d is calculated by the evaluator for an unhindered (unobserved)≈4600−keV α to a level with the same configuration as that of the ^{248}Am g.s.; the energy of this level is expected at about 250-350 keV above the ^{244}Np g.s. (with configuration π5/2[642], ν9/2[734]). The excitation energy of this level is estimated from 1/2[620] state energies in ^{245}Pu (305 keV) and in ^{247}Cm (403.6 keV). The energy differences between the 1/2[620] and the 9/2[734] neutron orbitals are 223 keV in ^{243}Pu, 403.6 keV in ^{247}Cm and 434.4 keV in ^{249}Cf. The α energy of ≈4600 keV is calculated from Q(α)(^{248}Am)=4940, a systematics value from 2012Wa38.