## Adopted Levels

| | Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|---|
| | Full Evaluation | C. D. Nesaraja | NDS 125, 395 (2015) | 31-Mar-2014 |

Q($\beta^-$)=1620 *SY*; S(n)=5910 *SY*; S(p)=5530 *SY*; Q($\alpha$)=4850 *SY*    2012Wa38
$\Delta$Q($\beta^-$)=100, $\Delta$S(n)=100, $\Delta$S(p)=100, $\Delta$Q($\alpha$)=110 (syst, 2012Wa38).

Identification:
1983Po14: Pu irradiated with neutron followed by chemical extraction and measured by semiconductor $\gamma$ spectrometry.
1967Or02,1968Fi03: $^{244}$Pu irradiated with $\alpha$, followed by chemical extraction and measured $\gamma$-rays with Ge(Li) detector.

Experimental work:
1987We01: Measured $^{248}$Cm($^{129}$Xe,X) and $^{248}$Cm($^{132}$Xe,X) production cross-sections.
1974Ba73: Measured $^{248}$Cm(t,$\alpha$F) at E=16 MeV.
Measured $\alpha$ singles and $\alpha$-fission product coincidence spectra. $\alpha$ measured with $\Delta$E-E counter telescope with energy resolution of
    145 keV and the fission fragments were measured with fission detector. By using a statistical model, heights and curvatures for the
    peaks of double-humped fission barrier were deduced.
1968Fi03: Measured $^{244}$Pu($\alpha$,p) at E($\alpha$)=42 MeV from Argonne 60-inch cyclotron. 227- and 285-keV $\gamma$-rays assigned to $^{247}$Am.
1967Or02: Measured $^{244}$Pu($\alpha$,p) at E($\alpha$)=24 MeV. Measured T$_{1/2}$ from the decay of the 226- and 285-keV $\gamma$'s.

Theoretical studies:
2004Pa40: Calculated deformation parameters and the proton one quasiparticle states of heaviest nuclei using the
    macroscopic-microscopic approach.
2002Du16: Calculated partial half-lives for $\alpha$ and cluster decays.
2001YaZU: Calculated fission barrier with semimicroscopic model with account of possible dependence on excitation energy.
1997Mo25: Calculated ground-state binding energy, proton and neutron pairing gaps, neutron and proton separation energies, Q
    values and partial half-lives for $\alpha$ and $\beta$ decays.
1995Mo29: Calculated ground-state masses and nuclear ground-state deformations.
1988Po04: Estimated nuclear mass excess using a semiempirical method.
1981Mo24: Calculated ground-state electric multipole moments Q$_2$, Q$_4$ and masses.
1985Lo17: Ground-state spin and parity predicted on the basis on the calculated Nilsson potential parameters.
1984Ku05, : Calculated fission barrier with statistical approach and the two hump fission barrier model.
1981Mo24: Calculated ground-state electric multipole moments Q$_2$, Q$_4$ and masses.
1980Ku14: Quantitative description of the main characteristics of the fission probability using a simple phenomenological model.
1980Ho32: Calculated mass excess, S(n), S(p), Q($\beta$), Q($\alpha$), fission-barrier heights, deformation and energy at saddle-point.

### $^{247}$Am Levels

| E(level) | J$^\pi$ | T$_{1/2}$ | Comments |
|---|---|---|---|
| 0.0 | (5/2) | 23.0 min *13* | %$\beta^-$=100 |
| | | | J$^\pi$: From systematics of Nilsson orbitals (1977Ch27) suggesting 5/2$^+$[642] in $^{245}$Am or 5/2$^-$[523] in analogy to $^{243}$Am, $^{241}$Am and $^{239}$Am. |
| | | | T$_{1/2}$: From measurement of 1983Po14. Others: 20 min *4* (1968Fi03), 24 min *3* (1967Or02). |