

^{148}Nd $2\beta^-$ decay [2009Ba21](#)

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|---------|-------------------|------------------------|
| Full Evaluation | N. Nica | NDS 117, 1 (2014) | 1-Oct-2013 |

Parent: ^{148}Nd : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=\text{stable}$; $Q(2\beta^-)=1928.3$ 19; $\%2\beta^-$ decay=?

[2009Ba21](#): measured In the Modane Underground Laboratory At 4800 min under earth using 400-cm³ low-background HPGE measuring 3046 g of Nd_2O_3 powder placed In the detector cap for 11320.5 h.

Others: [1982Be20](#).

Level scheme quoted by [2009Ba21](#) from [2000Bh03](#).

 ^{148}Sm Levels

| E(level) | J^π | Comments |
|----------|---------|---|
| 0.0 | 0^+ | |
| 550.26 | 2^+ | $T_{1/2}(0\nu+2\nu, \text{BB})$ to this level: $>6.6\times 10^{20}$ Y (2009Ba21); other: $>0.03\times 10^{20}$ Y (1982Be20). |
| 1424.46 | 0^+ | $T_{1/2}(0\nu+2\nu, \text{BB})$ to this level: $>7.9\times 10^{20}$ Y (2009Ba21). |
| 1454.12 | 2^+ | $T_{1/2}(0\nu+2\nu, \text{BB})$ to this level: $>3.8\times 10^{20}$ Y (2009Ba21); other: $>0.027\times 10^{20}$ Y (1982Be20). |

 $\gamma(^{148}\text{Sm})$

| $E_i(\text{level})$ | J_i^π | E_γ | I_γ^\dagger | E_f | J_f^π |
|---------------------|-----------|------------|--------------------|--------|-----------|
| 550.26 | 2^+ | 550.3 | 100 | 0.0 | 0^+ |
| 1424.46 | 0^+ | 874.2 | 100 | 550.26 | 2^+ |
| 1454.12 | 2^+ | 903.83 | 100 | 550.26 | 2^+ |
| | | 1454.1 | 99.6 | 0.0 | 0^+ |

\dagger Relative branching from each level.

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Decay Scheme

Intensities: Relative photon branching from each level

