

Adopted Levels, Gammas

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|-----------------|---------------------|------------------------|
| Full Evaluation | Coral M. Baglin | NDS 113,2187 (2012) | 15-Sep-2012 |

S(n)=1.69×10⁴ syst; S(p)=3.6×10³ syst; Q(α)=-3.1×10³ syst 2012Wa38

Note: Current evaluation has used the following Q record 16.87E3SY 3560 syst -3096 syst 2011AuZZ.

ΔS(n)=710, ΔS(p)=640, ΔQ(α)=585 (2011AuZZ).

Q(β⁻),S(n),S(p),Q(α) from 2011AuZZ; -16170 760, 3680 640, -2280 640, respectively, from systematics (2003Au03).

Q(εp)=5880 500 from systematics (2011AuZZ).

Production:

Fragmentation of 112 GeV ¹¹²Sn beam by Be target (2000WeZZ); fragment mass separation, time of flight for identification; four double-sided Si strip detectors, Si β detectors, segmented-clover Ge γ detector; measured T_{1/2}.

Ni(¹⁰⁶Cd,x), E(¹⁰⁶Cd)=60 MeV/nucleon (1994He28; see also 1995Mo26, 1995He39); fragment mass separator with 150 ns flight path.

Ni(¹¹²Sn,X), E(¹¹²Sn)=63 MeV/nucleon (1995Le08; see also 1995Le14, 1995Ry03); ≈1.5 μs flight path between target and Alpha or LISE3 fragment mass analyzers.

Be(¹¹²Sn,x): E=112 GeV (2001Ki13,2002Fa13).

⁵⁸Ni(³⁶Ar,2nγ): E=111 MeV (2011Ce01).

Theory: calculation of potential energy surface in an axially-deformed relativistic mean-field approach; deduced binding energy and quadrupole deformation β₂ (2002Pa23).

⁹²Pd Levels

Cross Reference (XREF) Flags

A ⁵⁸Ni(³⁶Ar,2nγ)

| E(level) [†] | J ^π [‡] | T _{1/2} | XREF | Comments |
|-----------------------|-----------------------------|-------------------------|------|-------------------------|
| 0.0 [#] | 0 ⁺ | 1.0 [@] s +3-2 | A | %ε+%β ⁺ =100 |
| 873.6 [#] 2 | (2 ⁺) | | A | |
| 1786.0 [#] 3 | (4 ⁺) | | A | |
| 2535.8 [#] 5 | (6 ⁺) | | A | |

[†] From E_γ.

[‡] Highly tentative values from (³⁶Ar,2nγ); consistent with shell-model calculations (2011Ce01). Structure interpreted as evidence for a spin-aligned isoscalar neutron-proton phase in ⁹²Pd.

[#] Band(A): g.s. band.

[@] From 2007WeZX, 2002StZZ and 2001Ki13; presumed to supersede preliminary value of 0.7 s +4-2 from 2000WeZZ.

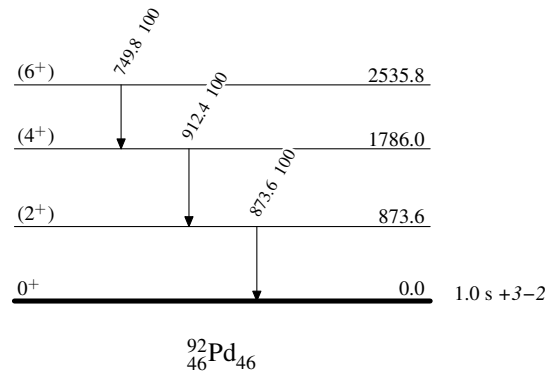
γ(⁹²Pd)

| E _i (level) | J _i ^π | E _γ [†] | I _γ [†] | E _f | J _f ^π |
|------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|-----------------------------|
| 873.6 | (2 ⁺) | 873.6 2 | 100 | 0.0 | 0 ⁺ |
| 1786.0 | (4 ⁺) | 912.4 2 | 100 | 873.6 | (2 ⁺) |
| 2535.8 | (6 ⁺) | 749.8 3 | 100 | 1786.0 | (4 ⁺) |

[†] From ⁵⁸Ni(³⁶Ar,2nγ).

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Intensities: Relative photon branching from each level



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