

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows ^a	NDS 109,1879 (2008)	14-Jul-2008

S(n)=1.74×10⁴ *syst*; S(p)=1.0×10³ *syst*; Q(α)=-8.7×10³ *syst* [2012Wa38](#)

Note: Current evaluation has used the following Q record 1.747E4 *syst* -70 *syst* -7010 *syst* [2003Au03](#).

S(n): Estimated uncertainty=640 keV.

S(p): Estimated uncertainty=570 keV.

Q(α): Estimated uncertainty=460 keV.

Q(β⁺p)=19.87 MeV *4l* ([2003Au03](#), Systematics).

[2001Gi01](#), [2001Gi02](#): Ni(⁵⁸Ni,X) E=74.5 MeV/A. Fragments selected by the α-LISE3 separator with a 10.4 mg/cm² shaped Be degrader and Wien filter at GANIL. Ions implanted in a 5 Si-detector telescope which measured ΔE, E, and position. With *tof* measurements started both by the cyclotrons' high-frequency and a micro-channel plate detector before the Wien filter, implanted ions could be identified. The telescope was surrounded by Ge detectors to measure γ's in the radioactive decay. Six ⁴⁹Ni events observed. No evidence of 2p decay and no *py* coincidences observed.

[2007Do17](#): Ni(⁵⁸Ni,X) E=74.5 MeV/nucleon. α-LISE3 fragment separator. Fragment identification by energy loss, residual energy and *tof* measurements using two micro-channel plate (MCP) detectors and Si detectors. Double-sided silicon-strip detectors (DSSSD) and a thick Si(Li) detector were used to detect implanted events, charged particles and β particles. γ's detected by four Ge detectors. Coincidences measured between charged particles and γ's. T_{1/2} measured by time correlation of implantation events due to ⁴⁹Ni and subsequent emission of protons and γ's.

Others: [1996Bi21](#), [1999Bi08](#), [2000Bi01](#), and [2002Ch28](#).

⁴⁹Ni Levels

E(level)	T _{1/2}	Comments
0.0	7.5 ms <i>10</i>	%ε+%β ⁺ =100; %β ⁺ p=83 <i>13</i> (2007Do17) J ^π : (7/2 ⁻) from systematics (2003Au02). T _{1/2} : from 2007Do17 . Other: 12 ms +5-3 (2001Gi01 . Assuming a possible contamination of 0 to 10% from ⁴⁸ Fe β ⁺ p decay.). %β ⁺ p: assuming 969.5 5 γ is due to the 2+→0 ⁺ decay in ⁴⁸ Fe. Other: >0 (2001Gi01 . 3.7 MeV charged particle line observed.).