

${}^{61}\text{Ni}(\gamma, \gamma')$ 1989Gr24, 1981Ca10

| Type | History | | Literature Cutoff Date |
|-----------------|--------------|----------|------------------------|
| | Author | Citation | |
| Full Evaluation | Balraj Singh | ENSDF | 20-Jan-2020 |

No changes made since the 2015 update.

1989Gr24: E=67.4 keV. Measured Mossbauer spectra. Deduced magnetic hyperfine field.

1981Ca10: E=0.5-1.65 MeV bremsstrahlung. Measured $\gamma(\theta)$, self-absorption, absolute γ -transition strength. Deduced $T_{1/2}$.

2018In01: $E_\gamma=67.41$ keV; measured spectra of nuclear forward scattering using a lead-loaded plastic scintillator.

 ${}^{61}\text{Ni}$ Levels

| E(level) [†] | J^π [†] | $T_{1/2}$ | Comments |
|-----------------------|----------------------|-------------|--|
| 0.0 | $3/2^-$ | | |
| 67.4 | $5/2^-$ | | |
| 1185.7 | $3/2^-$ | 0.145 ps 35 | $T_{1/2}$: from $g[\Gamma_0^2/\Gamma]\omega(\theta)=0.0019$ eV 5 with $\Gamma_0/\Gamma=0.77$ 8 and $\delta(1185\gamma)=0.14$ taken from Adopted Gammas. |

[†] From Adopted Levels.

 $\gamma({}^{61}\text{Ni})$

| E_γ | $E_i(\text{level})$ | J_i^π | E_f | J_f^π |
|-----------------------|---------------------|-----------|-------|-----------|
| 67.4 [†] | 67.4 | $5/2^-$ | 0.0 | $3/2^-$ |
| 1118.3 [#] | 1185.7 | $3/2^-$ | 67.4 | $5/2^-$ |
| 1185.7 [‡] 6 | 1185.7 | $3/2^-$ | 0.0 | $3/2^-$ |

[†] From 1989Gr24.

[‡] From 1981Ca10.

[#] From Adopted Gammas.

${}^{61}\text{Ni}(\gamma,\gamma')$ 1989Gr24,1981Ca10Level Scheme