

$^{10}\text{B}(\text{n},\gamma)$ E=th 1967Th05,1986Ko19,2008FiZZ

| Type | Author | History | Citation | Literature Cutoff Date |
|-----------------|--------------------------|---------|-------------------|------------------------|
| Full Evaluation | J. H. Kelley, C. G. Sheu | | NP A880,88 (2012) | 1-Jan-2011 |

1969We07: $^{10}\text{B}(\text{N},\gamma)$ E=thermal, measured E_γ , Doppler shift attenuation. ^{11}B levels deduced $T_{1/2}$.

1975Ar19: $^{10}\text{B}(\text{N},\gamma)$ E=14 MeV, measured γ -yields, $I_\gamma(\text{THETA})$.

1986Ko19: $^{10}\text{B}(\text{N},\gamma)$ E=thermal, measured E_γ , I_γ . Deduced σ . ^{11}B deduced neutron binding energy, transitoin energies. ^{11}B deduced $J=(7/2)^+$, $J=(5/2)^+$ state relative importance, interference effects role.

2001Ac04: $^{10}\text{B}(\text{N},\gamma)$ E=thermal, measured E_γ , I_γ . Deduced k_0 factors.

2003ChZX: $^{10}\text{B}(\text{n},\gamma)$; measured E_γ , I_γ . Deduced prompt k_0 -factors, partial σ .

2003MoZU: $^{10}\text{B}(\text{n},\gamma)$, E=thermal; compiled, analyzed k_0 factors. $^{10}\text{B}(\text{n},\gamma)$, E not given; compiled, analyzed capture σ , neutron biniding energies.

2004Ma76: $^{10}\text{B}(\text{n},\gamma)$, E=cold, thermal; analyzed data. Deduced k_0 factors, γ -emission probabilities.

2004Sh01: $^{10}\text{B}(\text{n},\gamma)$, E=1-1000 eV; measured E_γ , I_γ , capture σ .

2005Ge07: $^{10}\text{B}(\text{pol. n},\gamma)$, E=low; measured parity-violating γ -ray asymmetry.

2008FiZZ: $^{10}\text{B}(\text{n},\gamma)$, E=thermal; measured cross sections.

 ^{11}B Levels

| E(level) [†] | J^π | Comments |
|-----------------------|------------------|--------------------------|
| 0 | $3/2^-$ | |
| 2120 5 | | |
| 4444.98 7 | $5/2^-$ | |
| 5020 5 | $3/2^-$ | |
| 6741.85 8 | $7/2^-$ | |
| 8920.47 11 | $5/2^-$ | |
| 11454.13 7 | $(5/2^+, 7/2^+)$ | E(level): Capture state. |

[†] Level energies are from a least squares fit to the γ -ray energies, with the recoil correction applied.

 $\gamma(^{11}\text{B})$

| E_γ [†] | I_γ [‡] | $E_i(\text{level})$ | J_i^π | E_f | J_f^π |
|-------------------------|-------------------------|---------------------|------------------|---------|-----------|
| 2120 5 | <3 | 2120 | | 0 | $3/2^-$ |
| 2296.63 13 | 8.9 16 | 6741.85 | $7/2^-$ | 4444.98 | $5/2^-$ |
| 2533.40 14 | 14.1 14 | 11454.13 | $(5/2^+, 7/2^+)$ | 8920.47 | $5/2^-$ |
| 4444.03 8 | 65.6 23 | 4444.98 | $5/2^-$ | 0 | $3/2^-$ |
| 4474.5 3 | 0.74 13 | 8920.47 | $5/2^-$ | 4444.98 | $5/2^-$ |
| 4711.18 7 | 25.6 9 | 11454.13 | $(5/2^+, 7/2^+)$ | 6741.85 | $7/2^-$ |
| 5019 5 | <2 | 5020 | $3/2^-$ | 0 | $3/2^-$ |
| 6739.53 16 | 19.0 8 | 6741.85 | $7/2^-$ | 0 | $3/2^-$ |
| 7006.75 7 | 55.3 16 | 11454.13 | $(5/2^+, 7/2^+)$ | 4444.98 | $5/2^-$ |
| 8916.67 16 | 13.3 8 | 8920.47 | $5/2^-$ | 0 | $3/2^-$ |
| 11447.72 13 | 4.70 26 | 11454.13 | $(5/2^+, 7/2^+)$ | 0 | $3/2^-$ |

[†] γ energies are from the weighted average of (1986Ko19) and references cited In (2008FiZZ).




[‡] γ -ray intensities are from the weighted average of (1967Th05, 1986Ko19) and references cited In (2008FiZZ).

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Level Scheme

Intensities: Type not specified

Legend

-  $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

