^{18}O(α,n): res   **2013Be12,1973Ba10**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 127, 69(2015)	1-Apr-2015

2013Be12: E(α)=1280-2300 keV provided by the 4 MV KN accelerator at the University of Notre Dame Nuclear Science Laboratory. Target=^{18}O (97.2%). Measured Eγ, Iγ, E(n), neutron yield, (n)γ-coin, σ(E) using a HPGe detector and 20 ^{3}He counters. Deduced levels, J, π, single-particle widths, L, s.

1973Ba10: ^{18}O(α,n), E=1-5 MeV, measured σ(E), deduced resonances, level-width.

^{22}Ne Levels

E(level)[‡]	J$^{\pi}$[@]	Γ[†]	Comments
10615 *3*	[2$^+$]	6 keV	$\Gamma(\alpha)$=0.133 eV for l=2, s=0; Γ(n0)=1.47 keV for l=0, s=2.
10713[#]	[3$^-$]		$\Gamma(\alpha)$=0.0445 eV for l=3, s=0; Γ(n0)=1.7 keV for l=1, s=2.
10749 *3*	[4$^+$]	6 keV	E(level): Other value: 10751 (2013Be12). $\Gamma(\alpha)$=0.225 eV for l=4, s=0; Γ(n0)=1.6 keV for l=2, s=2.
10853 *3*	[3$^-$]	6 keV	$\Gamma(\alpha)$=0.224 eV for l=3, s=0; Γ(n1)=1.9 keV for l=1, s=2; Γ(n1)=45.8 eV for l=1, s=3; Γ(n0)=1.7 keV for l=1, s=2.
10919 *3*	[1$^-$]	24 keV	E(level): Other value: 10922 (2013Be12). $\Gamma(\alpha)$=10.5 eV for l=1, s=0; Γ(n1)=6.1 keV for l=1, s=2; Γ(n0)=14.1 keV for l=1, s=1; Γ(n0)=6.6 keV for l=1, s=2.
11030[#]	[6$^+$]		$\Gamma(\alpha)$=0.0014 eV for l=6, s=0; Γ(n1)=9.3 eV for l=4, s=3; Γ(n0)=9.0 eV for l=4, s=2.
11172[#]	[3$^-$]		$\Gamma(\alpha)$=0.359 eV for l=3, s=0; Γ(n1)=19.3 keV for l=1, s=2; Γ(n1)=476 eV for l=1, s=3.
11192 *3*	[2$^+$]	7 keV	E(level): Other value: 11195 (2013Be12). $\Gamma(\alpha)$=13.8 eV for l=2, s=0; Γ(n1)=440 eV for l=0, s=2; Γ(n0)=4.8 keV for l=0, s=2.
11266 *5*	[3$^-$]	12 keV	E(level): Other value: 11268 (2013Be12). $\Gamma(\alpha)$=1.6 eV for l=3, s=0; Γ(n1)=412 eV for l=1, s=2; Γ(n1)=10.2 eV for l=1, s=3; Γ(n0)=1.2 keV for l=1, s=2.
11323[#]	[5$^-$]		$\Gamma(\alpha)$=0.098 eV for l=5, s=0; Γ(n0)=7.4 keV for l=3, s=2.
11434 *8*	[1$^-$]	48 keV	E(level): Other value: 11432 (2013Be12). $\Gamma(\alpha)$=126 eV for l=1, s=0; Γ(n1)=25.0 keV for l=1, s=2; Γ(n0)=10.2 keV for l=1, s=1; Γ(n0)=5.1 keV for l=1, s=2.
11463 *3*	[4$^+$]	≤3 keV	$\Gamma(\alpha)$=49.9 eV for l=4, s=0; Γ(n1)=1.0 keV for l=2, s=2; Γ(n1)=1.0 keV for l=2, s=3; Γ(n0)=2.5 keV for l=2, s=2.
11518[#]	[2$^+$]		$\Gamma(\alpha)$=4.6 eV for l=2, s=0; Γ(n1)=1.6 keV for l=0, s=2; Γ(n0)=1.5 keV for l=0, s=2.
11577 *5*		18 keV	
11685 *5*		9 keV	
11709[#]	[0$^+$]		$\Gamma(\alpha)$=3.3 keV for l=0, s=0; Γ(n1)=199 keV for l=2, s=2; Γ(n0)=476 keV for l=2, s=2.

[†] From 1973Ba10. Values from 2013Be12 are listed in comment column. *l* and *s* are relative angular momentum and channel spin, respectively (2013Be12).

[‡] From 1973Ba10, except otherwise noted. Excited energies deduced from Eα*0.818 *08* + 9667.0 keV in 1973Ba10.

[#] From 2013Be12.

[@] Assumed value (2013Be12) for the fit (e-mail from 1st author of 2013Be12 – Oct. 17, 2017). Square brakets introduced by evaluator. Not considered for spin-parity in the Adopted Levels.