^{209}Bi(n,γ):resonances 2006Do20

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 121, 561 (2014)	31-Mar-2014

Neutron capture cross sections measured at CERN neutron time-of-flight facility by the pulse-height weighting technique. A total of 21 resonances identified, deduced parameters.

^{210}Bi Levels

2006Do20 take L, J^π assignments and Γ_n values from 1984MuZY/literature.

E(level)[†‡]	J^π	L	Comments
4605.43 *8*	5	0	Γ_n=4.31 eV *15*, Γ_γ=0.0333 eV *12*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0182 eV *6*.
4606.95 *8*	4	0	Γ_n=17.9 eV *3*, Γ_γ=0.0268 eV *17*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0120 eV *8*.
4607.98 *8*	5	1	Γ_n=0.087 eV *9*, Γ_γ=0.0182 eV *3*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0095 eV *2*.
4609.09 *8*	5	1	Γ_n=0.173 eV *13*, Γ_γ=0.0232 eV *22*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0113 eV *11*.
4609.74 *8*	5	0	Γ_n=5.6 eV *3*, Γ_γ=0.065 eV *2*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0353 eV *11*.
4610.92 *8*	4	1	Γ_n=0.116 eV *18*, Γ_γ=0.0170 eV *17*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0067 eV *7*.
4611.16 *8*	3	1	Γ_n=0.96 eV *10*, Γ_γ=0.0253 eV *14*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0086 eV *5*.
4613.65 *8*	6	1	Γ_n=0.41 eV *8*, Γ_γ=0.0211 eV *14*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0130 eV *9*.
4613.79 *8*	5	1	Γ_n=0.26 eV *5*, Γ_γ=0.0214 eV *21*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0109 eV *11*.
4614.35 *8*	4	1	Γ_n=0.104 eV *22*, Γ_γ=0.074 eV *7*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0195 eV *21*.
4614.40 *8*	3	1	Γ_n=0.90 eV *11*, Γ_γ=0.090 eV *8*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.029 eV *3*.
4616.73 *8*			g$\Gamma_\gamma\Gamma_n/\Gamma$=0.065 eV *4*.
4620.28 *8*	5	1	Γ_n=1.00 eV, Γ_γ=0.047 eV *4*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0202 eV *17*.
4622.07 *8*	6	1	Γ_n=1.5 eV *3*, Γ_γ=0.032 eV *3*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0204 eV *18*.
4622.47 *8*	5	1	Γ_n=0.46 eV *18*, Γ_γ=0.043 eV *4*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0217 eV *20*.
4625.50 *8*	5	1	Γ_n=0.95 eV *23*, Γ_γ=0.034 eV *3*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0183 eV *17*.
4625.68 *8*	4	1	Γ_n=7.4 eV *8*, Γ_γ=0.033 eV *3*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0148 eV *3*.
4626.92 *8*	5	1	Γ_n=0.18 eV *9*, Γ_γ=0.034 eV *3*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0151 eV *15*.
4627.78 *8*	6	1	Γ_n=0.21 eV *15*, Γ_γ=0.0253 eV *25*, g$\Gamma_\gamma\Gamma_n/\Gamma$=0.0147 eV *15*.

† Neutron energy is in the lab system, the recoil correction varies from 3.8 eV to 111 eV over the energy range of 0.8016-23.149 keV.

‡ Deduced by evaluator from reported resonance energy in 2006Do20 and S(n)(^{210}Bi)=4604.63 keV 8 (2012Wa38).