

⁸⁵Rb(n,n),(n,γ):resonances 2006MuZX

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh		NDS 124, 1 (2015)	30-Nov-2014

2006MuZX: Evaluation of neutron resonances.

Original references: 1984Oh05 (E(n)<18.5 keV), 1973Mu20 (E(n)=18-28 keV), 1958Go01 (E(n)=3-9 keV), 1954Ne02 (E(n)=0.97 keV).

J^π(⁸⁵Rb g.s.)=5/2⁻.

⁸⁶Rb Levels

E(level) [†]	J ^π	L	Comments
8649.5? 2	(3) ⁻	0	Fictitious level. E _n (lab)=-1.545 keV. Γ _γ =(250) meV, 2gΓ _n ⁰ =1006.2 meV.
8651.17 20	+	1	E _n (lab)=175.6 1 eV. 2gΓ _n =1.17 11 meV, 2gΓ _n ¹ =296 meV, gΓ _n Γ _γ /Γ=0.5 1 meV.
8651.22 20	+	1	E _n (lab)=223.2 1 eV. 2gΓ _n =1.05 12 meV, 2gΓ _n ¹ =185 meV, gΓ _n Γ _γ /Γ=0.7 1 meV.
8651.23 20	[0]		E _n (lab)=235.0 1 eV. 2gΓ _n =15.6 15 meV, 2gΓ _n ⁰ =1.02 10 meV gΓ _n Γ _γ /Γ=5.8 1 meV.
8651.42 20	+	1	E _n (lab)=427.1 2 eV. 2gΓ _n =3.40 33 meV, 2gΓ _n ¹ =220 meV, gΓ _n Γ _γ /Γ=1.7 1 meV.
8651.46 20	+	1	E _n (lab)=461.0 2 eV. 2gΓ _n =3.4 3 meV, 2gΓ _n ¹ =202 meV, gΓ _n Γ _γ /Γ=1.8 1 meV.
8651.47 20	[2] ⁻	0	E _n (lab)=474.0 2 eV. 2gΓ _n =48 3 meV, 2gΓ _n ⁰ =2.20 12 meV, gΓ _n Γ _γ /Γ=19.6 1 meV.
8651.52 20	3 ⁻	0	E _n (lab)=526.7 2 eV. 2gΓ _n =1.63 3 eV, Γ _γ =239 3 meV, 2gΓ _n ⁰ =71.2 12 meV, gΓ _n Γ _γ /Γ=119.0 4 meV.
8651.54 20	+	1	E _n (lab)=542.7 2 eV. 2gΓ _n =13.0 14 meV, 2gΓ _n ¹ =610 meV, gΓ _n Γ _γ /Γ=4.2 1 meV.
8651.59 20	+	1	E _n (lab)=593.2 2 eV. 2gΓ _n =7.3 10 meV, 2gΓ _n ¹ =297 meV, gΓ _n Γ _γ /Γ=3.6 1 meV.
8651.65 20	[2] ⁻	0	E _n (lab)=654.9 2 eV. 2gΓ _n =292 15 meV, Γ _γ =258 11 meV, 2gΓ _n ⁰ =11.4 6 meV, gΓ _n Γ _γ /Γ=61.9 2 meV.
8651.77 20	+	1	E _n (lab)=781.2 2 eV. 2gΓ _n =1.6 2 meV, 2gΓ _n ¹ =43 meV, gΓ _n Γ _γ /Γ=0.8 1 meV.
8651.79 20	+	1	E _n (lab)=799.1 2 eV. 2gΓ _n =20.4 17 meV, 2gΓ _n ¹ =532 meV, gΓ _n Γ _γ /Γ=9.0 1 meV.
8651.99 20	-	0	E _n (lab)=1007.0 3 eV. 2gΓ _n =133 13 meV, 2gΓ _n ⁰ =4.2 4 meV, gΓ _n Γ _γ /Γ=42.3 1 meV.
8652.00 20	+	1	E _n (lab)=1010.0 3 eV. 2gΓ _n =11.7 21 meV, 2gΓ _n ¹ =215 meV, gΓ _n Γ _γ /Γ=5.6 1 meV.
8652.02 20	+	1	E _n (lab)=1030.0 3 eV. 2gΓ _n =2.8 2 meV, 2gΓ _n ¹ =50 meV, gΓ _n Γ _γ /Γ=1.4 1 meV.
8652.03 20	[3] ⁻	0	E _n (lab)=1042.0 3 eV. 2gΓ _n =0.89 7 eV, Γ _γ =215 4 meV, 2gΓ _n ⁰ =27.6 22 meV, gΓ _n Γ _γ /Γ=97.85 meV.
8652.17 20	+	1	E _n (lab)=1181.0 3 eV. 2gΓ _n =3.04 20 meV, 2gΓ _n ¹ =44 meV, gΓ _n Γ _γ /Γ=1.5 1 meV.
8652.19 20	3 ⁻	0	E _n (lab)=1203.0 4 eV. 2gΓ _n =1.46 3 eV, Γ _γ =220 3 meV, 2gΓ _n ⁰ =42.1 9 meV, gΓ _n Γ _γ /Γ=109.3 7 meV.
8652.23 20	+	1	E _n (lab)=1241.0 4 eV. 2gΓ _n =3.0 2 meV, 2gΓ _n ¹ =40 meV, gΓ _n Γ _γ /Γ=1.5 1 meV.
8652.24 20	+	1	E _n (lab)=1250.0 4 eV. 2gΓ _n =2.8 2 meV, 2gΓ _n ¹ =37 meV, gΓ _n Γ _γ /Γ=1.4 1 meV.
8652.39 20	3 ⁻	0	E _n (lab)=1408.0 4 eV. 2gΓ _n =6.07 15 eV, Γ _γ =212 2 meV, 2gΓ _n ⁰ =162 4 meV, gΓ _n Γ _γ /Γ=119.0 9 meV.
8652.44 20	+	1	E _n (lab)=1456.0 4 eV. 2gΓ _n =1.8 2 meV, 2gΓ _n ¹ =19 meV, gΓ _n Γ _γ /Γ=0.9 1 meV.
8652.49 20	-	0	E _n (lab)=1506.0 4 eV. 2gΓ _n =132 16 meV, 2gΓ _n ⁰ =3.4 4 meV, gΓ _n Γ _γ /Γ=51.2 2 meV.
8652.65 20	3 ⁻	0	E _n (lab)=1670.0 5 eV. 2gΓ _n =0.51 5 eV, Γ _γ =232 16 meV, 2gΓ _n ⁰ =12.5 12 meV, gΓ _n Γ _γ /Γ=87.3 14 meV.
8652.66 20	+	1	E _n (lab)=1677.0 5 eV. 2gΓ _n =10.8 17 meV, 2gΓ _n ¹ =93 meV, gΓ _n Γ _γ /Γ=5.2 1 meV.
8652.89 20	+	1	E _n (lab)=1915.0 6 eV. 2gΓ _n =35 4 meV, 2gΓ _n ¹ =246 meV, gΓ _n Γ _γ /Γ=11.4 1 meV.
8652.94 20	+	1	E _n (lab)=1964.0 6 eV. 2gΓ _n =5.3 3 meV, 2gΓ _n ¹ =360 meV, gΓ _n Γ _γ /Γ=2.6 1 meV.
8652.96 20	3 ⁻	0	E _n (lab)=1984.0 6 eV. 2gΓ _n =1.38 9 eV, Γ _γ =184 4 meV, 2gΓ _n ⁰ =31 2 meV, gΓ _n Γ _γ /Γ=92.9 6 meV.
8653.02 20	+	1	E _n (lab)=2041.0 6 eV. 2gΓ _n =7.0 5 meV, 2gΓ _n ¹ =45 meV, gΓ _n Γ _γ /Γ=3.4 1 meV.
8653.06 20	3 ⁻	0	E _n (lab)=2082.0 6 eV. 2gΓ _n =0.42 4 eV, Γ _γ =241 19 meV, 2gΓ _n ⁰ =9.3 8 meV, gΓ _n Γ _γ /Γ=84.6 10 meV.
8653.14 20	+	1	E _n (lab)=2161.0 7 eV. 2gΓ _n =37 4 meV, 2gΓ _n ¹ =217 meV, gΓ _n Γ _γ /Γ=12.7 1 meV.
8653.19 20	+	1	E _n (lab)=2213.0 7 eV. 2gΓ _n =37 4 meV, 2gΓ _n ¹ =209 meV, gΓ _n Γ _γ /Γ=16.5 2 meV.
8653.21 20	+	1	E _n (lab)=2241.0 7 eV. 2gΓ _n =4.3 2 meV, 2gΓ _n ¹ =24 meV, gΓ _n Γ _γ /Γ=2.1 1 meV.
8653.26 20	+	1	E _n (lab)=2282.0 7 eV. 2gΓ _n =25 1 meV, 2gΓ _n ¹ =135 meV, gΓ _n Γ _γ /Γ=11.3 1 meV.
8653.27 20	+	1	E _n (lab)=2293.0 7 eV. 2gΓ _n =63 6 meV, 2gΓ _n ¹ =339 meV, gΓ _n Γ _γ /Γ=31.9 2 meV.
8653.37 20	3 ⁻	0	E _n (lab)=2398.0 7 eV. 2gΓ _n =7.71 15 eV, Γ _γ = 231 2 meV, 2gΓ _n ⁰ =158 3 meV, gΓ _n Γ _γ /Γ=128.0 6 meV.
8653.47 20	[2] ⁻	0	E _n (lab)=2503.0 7 eV. 2gΓ _n =0.44 3 eV, Γ _γ =251 9 meV, 2gΓ _n ⁰ =8.7 6 meV, gΓ _n Γ _γ /Γ=70.4 8 meV.

⁸⁵Rb(n,n),(n,γ):resonances 2006MuZX (continued)

⁸⁶Rb Levels (continued)

E(level) [†]	J ^π	L	Comments
8653.55 20	3 ⁻	0	E _n (lab)=2583.0 8 eV. 2gΓ _n =1.84 10 eV, Γ _γ =190 2 meV, 2gΓ _n ⁰ =36.2 20 meV, gΓ _n Γ _γ /Γ=98.8 8 meV.
8653.61 20	+	1	E _n (lab)=2640.0 8 eV. 2gΓ _n =12.2 24 meV, 2gΓ _n ¹ =53 meV, gΓ _n Γ _γ /Γ=5.8 2 meV.
8653.62 20	+	1	E _n (lab)=2653.0 8 eV. 2gΓ _n =69 3 meV, 2gΓ _n ¹ =298 meV, gΓ _n Γ _γ /Γ=34.5 4 meV.
8653.63 20	+	1	E _n (lab)=2663.0 8 eV. 2gΓ _n =6.4 4 meV, 2gΓ _n ¹ =28 meV, gΓ _n Γ _γ /Γ=3.1 1 meV.
8653.74 20	+	1	E _n (lab)=2776.0 8 eV. 2gΓ _n =0.9 8 eV, 2gΓ _n ¹ =364 meV, gΓ _n Γ _γ /Γ=35.0 4 meV.
8653.88 20	+	1	E _n (lab)=2916.0 8 eV. 2gΓ _n =81 8 meV, 2gΓ _n ¹ =304 meV, gΓ _n Γ _γ /Γ=27.9 2 meV.
8653.95 20	+	1	E _n (lab)=2985.0 9 eV. 2gΓ _n =40 9 meV, 2gΓ _n ¹ =145 meV, gΓ _n Γ _γ /Γ=17.2 3 meV.
8653.96 20	3 ⁻	0	E _n (lab)=2994.0 9 eV. 2gΓ _n =3.31 20 eV, Γ _γ =232 2 meV, 2gΓ _n ⁰ =61 4 meV, gΓ _n Γ _γ /Γ=123.2 6 meV.
8653.97 20	3 ⁻	0	E _n (lab)=3008.0 9 eV. 2gΓ _n =2.18 10 eV, Γ _γ =151 3 meV, 2gΓ _n ⁰ =39.8 18 meV, gΓ _n Γ _γ /Γ=81.4 6 meV.
8653.98 20	+	1	E _n (lab)=3020.0 9 eV. 2gΓ _n =72 5 meV, 2gΓ _n ¹ =260 meV, gΓ _n Γ _γ /Γ=28.5 3 meV.
8654.12 20	+	1	E _n (lab)=3161.0 9 eV. 2gΓ _n =11.9 22 meV, 2gΓ _n ¹ =40 meV, gΓ _n Γ _γ /Γ=5.7 2 meV.
8654.17 20	[2] ⁻	0	E _n (lab)=3210.0 10 eV. 2gΓ _n =2.38 23 eV, Γ _γ =226 4 meV, 2gΓ _n ⁰ =42 4 meV, gΓ _n Γ _γ /Γ=93.3 12 meV.
8654.20 20	+	1	E _n (lab)=3246.0 10 eV. 2gΓ _n =29 3 meV, 2gΓ _n ¹ =93 meV, gΓ _n Γ _γ /Γ=13.1 3 meV.
8654.30 20	-	0	E _n (lab)=3335.0 10 eV. 2gΓ _n =0.67 7 eV, Γ _γ =277 17 meV, 2gΓ _n ⁰ =11.6 12 meV, gΓ _n Γ _γ /Γ=130.2 12 meV.
8654.39 20	+	1	E _n (lab)=3426.0 11 eV. 2gΓ _n =145 12 meV, 2gΓ _n ¹ =428 meV, gΓ _n Γ _γ /Γ=48.2 3 meV.
8654.51 20	+	1	E _n (lab)=3549.0 11 eV. 2gΓ _n =95 12 meV, 2gΓ _n ¹ =265 meV, gΓ _n Γ _γ /Γ=46.2 3 meV.
8654.54 20	+	1	E _n (lab)=3577.0 11 eV. 2gΓ _n =120 12 meV, 2gΓ _n ¹ =332 meV, gΓ _n Γ _γ /Γ=42.1 3 meV.
8654.59 20	+	1	E _n (lab)=3633.0 12 eV. 2gΓ _n =84 12 meV, 2gΓ _n ¹ =227 meV, gΓ _n Γ _γ /Γ=31.0 3 meV.
8654.63 20	+	1	E _n (lab)=3675.0 12 eV. 2gΓ _n =34 2 meV, 2gΓ _n ¹ =90 meV, gΓ _n Γ _γ /Γ=15.1 5 meV.
8654.66 20	+	1	E _n (lab)=3704.0 12 eV. 2gΓ _n =8.0 11 meV, 2gΓ _n ¹ =21 meV, gΓ _n Γ _γ /Γ=3.9 4 meV.
8654.67 20	+	1	E _n (lab)=3712.0 12 eV. 2gΓ _n =8.3 10 meV, 2gΓ _n ¹ =22 meV, gΓ _n Γ _γ /Γ=4.0 3 meV.
8654.81 20	+	1	E _n (lab)=3854.0 12 eV. 2gΓ _n =82 4 meV, 2gΓ _n ¹ =203 meV, gΓ _n Γ _γ /Γ=31.3 7 meV.
8654.97 20	+	1	E _n (lab)=4015.0 13 eV. 2gΓ _n =74 4 meV, 2gΓ _n ¹ =172 meV, gΓ _n Γ _γ /Γ=28.8 18 meV.
8654.97 20	[2] ⁻	0	E _n (lab)=4021.0 13 eV. 2gΓ _n =4.2 4 eV, Γ _γ =198 4 meV, 2gΓ _n ⁰ =66 6 meV, gΓ _n Γ _γ /Γ=79.2 17 meV.
8654.98 20	+	1	E _n (lab)=4030.0 13 eV. 2gΓ _n =46 3 meV, 2gΓ _n ¹ =106 meV, gΓ _n Γ _γ /Γ=19.6 11 meV.
8655.08 20	+	1	E _n (lab)=4124.0 14 eV. 2gΓ _n =23.7 12 meV, 2gΓ _n ¹ =53 meV, gΓ _n Γ _γ /Γ=10.9 7 meV.
8655.16 20	[2] ⁻	0	E _n (lab)=4211.0 14 eV. 2gΓ _n =6.7 5 eV, Γ _γ =246 10 meV, 2gΓ _n ⁰ =103 8 meV, gΓ _n Γ _γ /Γ=99.5 15 meV.
8655.22 20	+	1	E _n (lab)=4267.0 14 eV. 2gΓ _n =69 4 meV, 2gΓ _n ¹ =147 meV, gΓ _n Γ _γ /Γ=27.5 7 meV.
8655.24 20	+	1	E _n (lab)=4295.0 14 eV. 2gΓ _n =3.7 6 meV, 2gΓ _n ¹ =7.8 meV, gΓ _n Γ _γ /Γ=1.8 3 meV.
8655.27 20	+	1	E _n (lab)=4323.0 14 eV. 2gΓ _n =95 6 meV, 2gΓ _n ¹ =198 meV, gΓ _n Γ _γ /Γ=35.0 4 meV.
8655.31 20	+	1	E _n (lab)=4367.0 14 eV. 2gΓ _n =117 10 meV, 2gΓ _n ¹ =2.4 meV, gΓ _n Γ _γ /Γ=40.7 11 meV.
8655.32 20	+	1	E _n (lab)=4347.0 14 eV. 2gΓ _n =87 5 meV, 2gΓ _n ¹ =178 meV, gΓ _n Γ _γ /Γ=32.7 9 meV.
8655.44 20	+	1	E _n (lab)=4496.0 15 eV. 2gΓ _n =67 13 meV, 2gΓ _n ¹ =132 meV, gΓ _n Γ _γ /Γ=36.5 10 meV.
8655.46 20	+	1	E _n (lab)=4508.0 15 eV. 2gΓ _n =47.0 24 meV, 2gΓ _n ¹ =92 meV, gΓ _n Γ _γ /Γ=20.1 8 meV.
8655.51 20	+	1	E _n (lab)=4562.0 15 eV. 2gΓ _n =23 3 meV, 2gΓ _n ¹ =44 meV, gΓ _n Γ _γ /Γ=10.5 5 meV.
8655.62 20	+	1	E _n (lab)=4671.0 15 eV. 2gΓ _n =34.5 15 meV, 2gΓ _n ¹ =64 meV, gΓ _n Γ _γ /Γ=15.2 5 meV.
8655.64 20	+	1	E _n (lab)=4694.0 16 eV. 2gΓ _n =144 14 meV, 2gΓ _n ¹ =266 meV, gΓ _n Γ _γ /Γ=48.3 8 meV.
8655.67 20	+	1	E _n (lab)=4723.0 16 eV. 2gΓ _n =13 3 meV, 2gΓ _n ¹ =23 meV, gΓ _n Γ _γ /Γ=6.1 7 meV.
8655.68 20	+	1	E _n (lab)=4731.0 16 eV. 2gΓ _n =47 3 meV, 2gΓ _n ¹ =86 meV, gΓ _n Γ _γ /Γ=19.8 7 meV.
8655.69 20	+	1	E _n (lab)=4745.0 16 eV. 2gΓ _n =23.5 11 meV, 2gΓ _n ¹ =43 meV, gΓ _n Γ _γ /Γ=10.8 5 meV.
8655.78 20	+	1	E _n (lab)=4836.0 17 eV. 2gΓ _n =112 11 meV, 2gΓ _n ¹ =119.7 meV, gΓ _n Γ _γ /Γ=42.8 9 meV.
8655.82 20	[3] ⁻	0	E _n (lab)=4877.0 17 eV. 2gΓ _n =10.1 6 eV, Γ _γ =267 13 meV, 2gΓ _n ⁰ =145 8 meV, gΓ _n Γ _γ /Γ=151.2 1 meV.
8655.83 20	+	1	E _n (lab)=4885.0 17 eV. 2gΓ _n =66 3 meV, 2gΓ _n ¹ =115 meV, gΓ _n Γ _γ /Γ=26.3 11 meV.
8655.85 20	+	1	E _n (lab)=4903.0 17 eV. 2gΓ _n =150 20 meV, 2gΓ _n ¹ =259 meV, gΓ _n Γ _γ /Γ=47.5 10 meV.
8655.94 20	[2] ⁻	0	E _n (lab)=5001.0 17 eV. 2gΓ _n =0.85 10 eV, Γ _γ =0.25 12 meV, 2gΓ _n ⁰ =12.0 14 meV, gΓ _n Γ _γ /Γ=90.1 5 meV.
8656.02 20	+	1	E _n (lab)=5084.0 17 eV. 2gΓ _n =62 3 meV, 2gΓ _n ¹ =102 meV, gΓ _n Γ _γ /Γ=25.2 9 meV.
8656.05 20	+	1	E _n (lab)=5106.0 17 eV. 2gΓ _n =8 8 meV, 2gΓ _n ¹ =13 meV, gΓ _n Γ _γ /Γ=3.9 6 meV.
8656.07 20	+	1	E _n (lab)=5131.0 17 eV. 2gΓ _n =143 10 meV, 2gΓ _n ¹ =231 meV, gΓ _n Γ _γ /Γ=45.6 13 meV.
8656.09 20	[3] ⁻	0	E _n (lab)=5149.0 18 eV. 2gΓ _n =2.38 10 eV, Γ _γ =222 11 meV, 2gΓ _n ⁰ =33.2 14 meV, gΓ _n Γ _γ /Γ=117 3 meV.

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$^{85}\text{Rb}(\text{n},\text{n}),(\text{n},\gamma)$:resonances 2006MuZX (continued) ^{86}Rb Levels (continued)

<u>E(level)[†]</u>	<u>J^π</u>	<u>L</u>	<u>Comments</u>
8656.11 20	[2] ⁻	0	meV. E _n (lab)=5172.0 18 eV, 2gΓ _n =0.99 10 eV, Γ _γ =241 12 meV, 2gΓ _n ⁰ =13.8 14 meV, gΓ _n Γ _γ /Γ=83.4 4

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⁸⁵Rb(n,n),(n,γ):resonances 2006MuZX (continued)

⁸⁶Rb Levels (continued)

E(level) [†]	J ^π	L	Comments
			meV.
8656.22 20	+	1	E _n (lab)=5287.0 18 eV, 2gΓ _n =54 4 meV, 2gΓ _n ¹ =83 meV, gΓ _n Γ _γ /Γ=22.5 10 meV.
8656.26 20	[1] ⁺	1	E _n (lab)=5319.0 18 eV, 2gΓ _n =0.22 3 eV, 2gΓ _n ¹ =335 meV, gΓ _n Γ _γ /Γ=31.7 10 meV.
8656.30 20	+	1	E _n (lab)=5364.0 18 eV, 2gΓ _n =75 4 meV, 2gΓ _n ¹ =114 meV, gΓ _n Γ _γ /Γ=29.3 10 meV.
8656.32 20	+	1	E _n (lab)=5387.0 18 eV, 2gΓ _n =51 2 meV, 2gΓ _n ¹ =77 meV, gΓ _n Γ _γ /Γ=21.1 9 meV.
8656.34 20	+	1	E _n (lab)=5407.0 18 eV, 2gΓ _n =32 2 meV, 2gΓ _n ¹ =48 meV, gΓ _n Γ _γ /Γ=14.2 7 meV.
8656.43 20	+	1	E _n (lab)=5497.0 19 eV, 2gΓ _n =56 3 meV, 2gΓ _n ¹ =82 meV, gΓ _n Γ _γ /Γ=23 1 meV.
8656.44 20	+	1	E _n (lab)=5509.0 19 eV, 2gΓ _n =8.1 14 meV, 2gΓ _n ¹ =12 meV, gΓ _n Γ _γ /Γ=3.9 7 meV.
8656.48 20	+	1	E _n (lab)=5546.0 19 eV, 2gΓ _n =128 15 meV, 2gΓ _n ¹ =184 meV, gΓ _n Γ _γ /Γ=38.0 13 meV.
8656.53 20	[3] ⁻	0	E _n (lab)=5599.0 20 eV, 2gΓ _n =3.25 20 eV, Γ _γ =190 10 meV, 2gΓ _n ⁰ =43 3 meV, gΓ _n Γ _γ /Γ=104 3 meV.
8656.64 20	+	1	E _n (lab)=5709.0 20 eV, 2gΓ _n =166 15 meV, 2gΓ _n ¹ =229 meV, gΓ _n Γ _γ /Γ=65.8 18 meV.
8656.67 20	[3] ⁻	0	E _n (lab)=5734.0 20 eV, 2gΓ _n =0.94 9 eV, Γ _γ =383 20 meV, 2gΓ _n ⁰ =12.4 12 meV, gΓ _n Γ _γ /Γ=151.6 25 meV.
8656.75 20	+	1	E _n (lab)=5822.0 20 eV, 2gΓ _n =55 5 meV, 2gΓ _n ¹ =74 meV, gΓ _n Γ _γ /Γ=22.9 12 meV.
8656.80 20	[2] ⁻	0	E _n (lab)=5869.0 21 eV, 2gΓ _n =5.1 5 eV, Γ _γ =0.28 4 eV, 2gΓ _n ⁰ =67 6 meV, gΓ _n Γ _γ /Γ=110.0 2 meV.
8656.85 20	+	1	E _n (lab)=5923.0 21 eV, 2gΓ _n =0.33 9 eV, 2gΓ _n ¹ =430 meV, gΓ _n Γ _γ /Γ=73.5 18 meV.
8656.88 20	+	1	E _n (lab)=5949.0 21 eV, 2gΓ _n =41 6 meV, 2gΓ _n ¹ =53 meV, gΓ _n Γ _γ /Γ=17.9 10 meV.
8657.05 20	+	1	E _n (lab)=6123.0 21 eV, 2gΓ _n =44 6 meV, 2gΓ _n ¹ =55 meV, gΓ _n Γ _γ /Γ=18.8 11 meV.
8657.10 20	+	1	E _n (lab)=6176.0 22 eV, 2gΓ _n =136 16 meV, 2gΓ _n ¹ =166 meV, gΓ _n Γ _γ /Γ=50.3 17 meV.
8657.13 20	+	1	E _n (lab)=6200.0 22 eV, 2gΓ _n =23 3 meV, 2gΓ _n ¹ =28 meV, gΓ _n Γ _γ /Γ=10.7 9 meV.
8657.20 20	[2] ⁻	0	E _n (lab)=6277.0 23 eV, 2gΓ _n =1.09 11 eV, Γ _γ =186 9 meV, 2gΓ _n ⁰ =13.8 14 meV, gΓ _n Γ _γ /Γ=67.8 17 meV.
8657.24 20	+	1	E _n (lab)=6314.0 23 eV, 2gΓ _n =112 20 meV, 2gΓ _n ¹ =133 meV, gΓ _n Γ _γ /Γ=39.4 17 meV.
8657.25 20	+	1	E _n (lab)=6326.0 23 eV, 2gΓ _n =47 10 meV, 2gΓ _n ¹ =56 meV, gΓ _n Γ _γ /Γ=20.0 15 meV.
8657.35 20	+	1	E _n (lab)=6426.0 23 eV, 2gΓ _n =53 10 meV, 2gΓ _n ¹ =61 meV, gΓ _n Γ _γ /Γ=22.1 11 meV.
8657.52 20	[3] ⁻	0	E _n (lab)=6599.0 23 eV, 2gΓ _n =1.58 16 eV, Γ _γ =259 13 meV, 2gΓ _n ⁰ =19.5 20 meV, gΓ _n Γ _γ /Γ=127.2 24 meV.
8657.54 20	+	1	E _n (lab)=6623.0 24 eV, 2gΓ _n =17 2 meV, 2gΓ _n ¹ =188 meV, gΓ _n Γ _γ /Γ=8.0 9 meV.
8657.62 20	[2] ⁻	0	E _n (lab)=6694.0 25 eV, 2gΓ _n =1.15 16 eV, Γ _γ =213 11 meV, 2gΓ _n ⁰ =14.1 20 meV, gΓ _n Γ _γ /Γ=76.8 19 meV.
8657.76 20	+	1	E _n (lab)=6840.0 25 eV, 2gΓ _n =182 17 meV, 2gΓ _n ¹ =191 meV, gΓ _n Γ _γ /Γ=65.4 4 meV.
8657.78 20	+	1	E _n (lab)=6863.0 25 eV, 2gΓ _n =132 20 meV, 2gΓ _n ¹ =138 meV, gΓ _n Γ _γ /Γ=44.2 16 meV.
8657.84 20	+	1	E _n (lab)=6924.0 25 eV, 2gΓ _n =29 2 meV, 2gΓ _n ¹ =30 meV, gΓ _n Γ _γ /Γ=13.2 10 meV.
8657.87 20	+	1	E _n (lab)=6954.0 25 eV, 2gΓ _n =85 6 meV, 2gΓ _n ¹ =87 meV, gΓ _n Γ _γ /Γ=32.3 14 meV.
8657.97 20	[3] ⁻	0	E _n (lab)=7052.0 26 eV, 2gΓ _n =2.18 25 eV, Γ _γ =234 12 meV, 2gΓ _n ⁰ =26 3 meV, gΓ _n Γ _γ /Γ=122 3 meV.
8658.08 20	[3] ⁻	0	E _n (lab)=7167.0 27 eV, 2gΓ _n =6.8 5 eV, Γ _γ =343 17 meV, 2gΓ _n ⁰ =80 6 meV, gΓ _n Γ _γ /Γ=189.3 3 meV.
8658.13 20	+	1	E _n (lab)=7215.0 27 eV, 2gΓ _n =93 6 meV, 2gΓ _n ¹ =90 meV, gΓ _n Γ _γ /Γ=34.5 15 meV.
8658.19 20	+	1	E _n (lab)=7277.0 27 eV, 2gΓ _n =0.36 11 eV, 2gΓ _n ¹ =345 meV, gΓ _n Γ _γ /Γ=76.6 22 meV.
8658.25 20	+	1	E _n (lab)=7335.0 27 eV, 2gΓ _n =16 3 meV, 2gΓ _n ¹ =15 meV, gΓ _n Γ _γ /Γ=7.6 16 meV.
8658.34 20	[3] ⁻	0	E _n (lab)=7430.0 28 eV, 2gΓ _n =1.72 17 eV, Γ _γ =243 12 meV, 2gΓ _n ⁰ =20 2 meV, gΓ _n Γ _γ /Γ=122 3 meV.
8658.45 20	+	1	E _n (lab)=7537.0 29 eV, 2gΓ _n =44 4 meV, 2gΓ _n ¹ =40 meV, gΓ _n Γ _γ /Γ=18.9 19 meV.
8658.46 20	+	1	E _n (lab)=7547.0 29 eV, 2gΓ _n =75 5 meV, 2gΓ _n ¹ =68 meV, gΓ _n Γ _γ /Γ=29 3 meV.
8658.47 20	(1) ⁺	1	E _n (lab)=7556.0 29 eV, 2gΓ _n =0.52 7 eV, Γ _γ =247 13 meV, 2gΓ _n ⁰ =472 meV, gΓ _n Γ _γ /Γ=50 3 meV.
8658.50 20	+	1	E _n (lab)=7586.0 29 eV, 2gΓ _n =104 8 meV, 2gΓ _n ¹ =94 meV, gΓ _n Γ _γ /Γ=36.9 18 meV.
8658.56 20	+	1	E _n (lab)=7652.0 30 eV, 2gΓ _n =0.35 9 eV, 2gΓ _n ¹ =312 meV, gΓ _n Γ _γ /Γ=94 3 meV.
8658.58 20	+	1	E _n (lab)=7668.0 30 eV, 2gΓ _n =0.17 5 eV, 2gΓ _n ¹ =154 meV, gΓ _n Γ _γ /Γ=45.3 25 meV.
8658.59 20	(2) ⁻	0	E _n (lab)=7684.0 30 eV, 2gΓ _n =0.53 7 eV, Γ _γ =289 14 meV, 2gΓ _n ⁰ =6.1 8 meV, gΓ _n Γ _γ /Γ=83 3 meV.
8658.63 20	+	1	E _n (lab)=7719.0 30 eV, 2gΓ _n =28 3 meV, 2gΓ _n ¹ =24 meV, gΓ _n Γ _γ /Γ=12.5 12 meV.
8658.69 20	(3) ⁺	1	E _n (lab)=7784.0 30 eV, 2gΓ _n =0.35 7 eV, Γ _γ =225 25 meV, 2gΓ _n ¹ =4.0 8 meV, gΓ _n Γ _γ /Γ=74.9 25 meV.
8658.73 20	+	1	E _n (lab)=7825.0 30 eV, 2gΓ _n =3.7 18 meV, 2gΓ _n ¹ =3.1 meV, gΓ _n Γ _γ /Γ=1.8 9 meV.
8658.79 20	(3) ⁻	0	E _n (lab)=7886.0 30 eV, 2gΓ _n =0.78 9 eV, Γ _γ =0.26 3 eV, 2gΓ _n ⁰ =8.8 10 meV, gΓ _n Γ _γ /Γ=108.9 7 meV.
8658.83 20	+	1	E _n (lab)=7920.0 31 eV, 2gΓ _n =0.27 7 eV, 2gΓ _n ¹ =226 meV, gΓ _n Γ _γ /Γ=28.8 16 meV.
8658.87 20	[2] ⁻	0	E _n (lab)=7964.0 31 eV, 2gΓ _n =3.0 3 eV, Γ _γ =0.27 3 eV, 2gΓ _n ⁰ =34 3 meV, gΓ _n Γ _γ /Γ=105 3 meV.

$^{85}\text{Rb}(\text{n},\text{n}),(\text{n},\gamma)$:resonances 2006MuZX (continued) ^{86}Rb Levels (continued)

<u>E(level)[†]</u>	<u>J^π</u>	<u>L</u>	<u>Comments</u>
8659.07 20	+	1	$E_n(\text{lab})=8163.0 \text{ 32 eV}$. $2g\Gamma_n=56 \text{ 3 meV}$, $2g\Gamma_n^1=45 \text{ meV}$, $g\Gamma_n\Gamma_\gamma/\Gamma=23.3 \text{ 23 meV}$.
8659.08 20	-	0	$E_n(\text{lab})=8181.0 \text{ 32 eV}$. $2g\Gamma_n=0.72 \text{ 9 eV}$, $2g\Gamma_n^0=8.0 \text{ 10 meV}$, $g\Gamma_n\Gamma_\gamma/\Gamma=149 \text{ 4 meV}$.

Continued on next page (footnotes at end of table)

$^{85}\text{Rb}(\text{n,n}),(\text{n},\gamma)$:resonances 2006MuZX (continued) ^{86}Rb Levels (continued)

E(level) [†]	J ^π	L	Comments
8659.17 20	+	1	$E_n(\text{lab})=8262.0$ 32 eV. $2g\Gamma_n=56$ 3 meV, $2g\Gamma_n^1=44$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=23.3$ 16 meV.
8659.23 20	[2] ⁻	0	$E_n(\text{lab})=8327.0$ 33 eV. $2g\Gamma_n=0.55$ 9 eV, $2g\Gamma_n^0=6$ 1 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=97$ 3 meV.
8659.29 20	[3] ⁻	0	$E_n(\text{lab})=8390.0$ 33 eV. $2g\Gamma_n=3.3$ 4 eV, $\Gamma_\gamma=304$ 15 meV, $2g\Gamma_n^0=36$ 4 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=160$ 4 meV.
8659.37 20	+	1	$E_n(\text{lab})=8471.0$ 34 eV. $2g\Gamma_n=0.37$ 6 eV, $2g\Gamma_n^1=283$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=90$ 3 meV.
8659.42 20	+	1	$E_n(\text{lab})=8521.0$ 34 eV. $2g\Gamma_n=0.37$ 6 eV, $2g\Gamma_n^1=281$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=80$ 3 meV.
8659.48 20	+	1	$E_n(\text{lab})=8579.0$ 34 eV. $2g\Gamma_n=0.26$ 6 eV, $2g\Gamma_n^1=195$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=66$ 3 meV.
8659.54 20	+	1	$E_n(\text{lab})=8639.0$ 35 eV. $2g\Gamma_n=162$ 40 meV, $2g\Gamma_n^1=121$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=50.4$ 23 meV.
8659.57 20	+	1	$E_n(\text{lab})=8669.0$ 35 eV. $2g\Gamma_n=7.2$ 22 meV, $2g\Gamma_n^1=5.3$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=3.5$ 11 meV.
8659.62 20	+	1	$E_n(\text{lab})=8722.0$ 35 eV. $2g\Gamma_n=270$ 6 meV, $2g\Gamma_n^1=198$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=66.7$ 25 meV.
8659.66 20	+	1	$E_n(\text{lab})=8761.0$ 35 eV. $2g\Gamma_n=13.9$ 30 meV, $2g\Gamma_n^1=10$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=6.6$ 12 meV.
8659.72 20	+	1	$E_n(\text{lab})=8825.0$ 35 eV. $2g\Gamma_n=52$ 4 meV, $2g\Gamma_n^1=38$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=21.7$ 17 meV.
8659.81 20	+	1	$E_n(\text{lab})=8912.0$ 36 eV. $2g\Gamma_n=0.28$ 6 eV, $2g\Gamma_n^1=201$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=56.3$ 25 meV.
8659.88 20	+	1	$E_n(\text{lab})=8989.0$ 36 eV. $2g\Gamma_n=0.29$ 8 eV, $2g\Gamma_n^1=200$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=114.0$ 7 meV.
8659.97 20	+	1	$E_n(\text{lab})=9077.0$ 37 eV. $2g\Gamma_n=154$ 17 meV, $2g\Gamma_n^1=110$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=48.9$ 23 meV.
8660.03 20	[3] ⁻	0	$E_n(\text{lab})=9142.0$ 37 eV. $2g\Gamma_n=19.1$ 13 eV, $\Gamma_\gamma=251$ 25 meV, $2g\Gamma_n^0=200$ 14 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=144.1$ 1 meV.
8660.07 20	+	1	$E_n(\text{lab})=9182.0$ 37 eV. $2g\Gamma_n=150$ 16 meV, $2g\Gamma_n^1=105$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=48$ 3 meV.
8660.09 20			$E_n(\text{lab})=9200.0$ 37 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=75$ 3 meV.
8660.19 20	[2] ⁻	0	$E_n(\text{lab})=9303.0$ 38 eV. $2g\Gamma_n=1.60$ 20 eV, $2g\Gamma_n^0=16.6$ 21 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=168$ 8 meV.
8660.24 20	[2] ⁻	0	$E_n(\text{lab})=9352.0$ 39 eV. Possible doublet. $2g\Gamma_n=6.4$ 5 eV, $2g\Gamma_n^0=66$ 5 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=277$ 6 meV.
8660.36 20	+	1	$E_n(\text{lab})=9476.0$ 39 eV. $2g\Gamma_n=138$ 14 meV, $2g\Gamma_n^1=92$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=45.6$ 23 meV.
8660.39 20	[2] ⁺	1	$E_n(\text{lab})=9502.0$ 39 eV. $2g\Gamma_n=0.43$ 10 eV, $\Gamma_\gamma=214$ 31 meV, $2g\Gamma_n^1=277$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=63$ 3 meV.
8660.45 20	+	1	$E_n(\text{lab})=9559.0$ 39 eV. $2g\Gamma_n=140$ 14 meV, $2g\Gamma_n^1=90$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=45.9$ 24 meV.
8660.58 20	+	1	$E_n(\text{lab})=9697.0$ 40 eV. $2g\Gamma_n=8.0$ 24 meV, $2g\Gamma_n^1=5$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=3.9$ 12 meV.
8660.63 20	+	1	$E_n(\text{lab})=9746.0$ 41 eV. $2g\Gamma_n=150$ 16 meV, $2g\Gamma_n^1=94$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=48$ 3 meV.
8660.66 20	[3] ⁻	0	$E_n(\text{lab})=9775.0$ 41 eV. $2g\Gamma_n=5.9$ 6 eV, $\Gamma_\gamma=256$ 26 meV, $2g\Gamma_n^0=60$ 6 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=142.1$ 2 meV.
8660.78 20	+	1	$E_n(\text{lab})=9898.0$ 41 eV. $2g\Gamma_n=174$ 22 meV, $2g\Gamma_n^1=106$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=52.7$ 26 meV.
8660.83 20	+	1	$E_n(\text{lab})=9950.0$ 41 eV. $2g\Gamma_n=41.1$ 32 meV, $2g\Gamma_n^1=25$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=17.8$ 16 meV.
8660.89 20	+	1	$E_n(\text{lab})=10010.0$ 42 eV. $2g\Gamma_n=9.3$ 22 meV, $2g\Gamma_n^1=6$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=4.5$ 11 meV.
8660.97 20	+	1	$E_n(\text{lab})=10090.0$ 42 eV. $2g\Gamma_n=130$ 11 meV, $2g\Gamma_n^1=77$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=43.0$ 23 meV.
8661.01 20	-	0	$E_n(\text{lab})=10130.0$ 43 eV. Possible doublet. $2g\Gamma_n=11.7$ 12 eV, $2g\Gamma_n^0=116.0$ 12 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=226$ 5 meV.
8661.11 20	+	1	$E_n(\text{lab})=10230.0$ 43 eV. $2g\Gamma_n=19.8$ 26 meV, $2g\Gamma_n^1=12$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=9.2$ 13 meV.
8661.16 20	[2] ⁺	1	$E_n(\text{lab})=10280.0$ 44 eV. $2g\Gamma_n=0.61$ 20 eV, $\Gamma_\gamma=0.27$ 3 eV, $2g\Gamma_n^1=350$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=82$ 3 meV.
8661.19 20			$E_n(\text{lab})=10310.0$ 44 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=78$ 3 meV.
8661.33 20	+	1	$E_n(\text{lab})=10450.0$ 44 eV. $2g\Gamma_n=0.33$ 10 meV, $2g\Gamma_n^1=185$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=90$ 3 meV.
8661.52 20	+	1	$E_n(\text{lab})=10650.0$ 45 eV. $2g\Gamma_n=183$ 6 meV, $2g\Gamma_n^1=100$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=54.4$ 25 meV.
8661.59 20			$E_n(\text{lab})=10720.0$ 45 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=88$ 3 meV.
8661.69 20	[2] ⁻	0	$E_n(\text{lab})=10820.0$ 47 eV. $2g\Gamma_n=3.1$ 4 eV, $\Gamma_\gamma=216$ 15 meV, $2g\Gamma_n^0=30$ 4 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=85$ 3 meV.
8661.77 20	[2] ⁻	0	$E_n(\text{lab})=10900.0$ 47 eV. $2g\Gamma_n=3.6$ 4 eV, $\Gamma_\gamma=243$ 24 meV, $2g\Gamma_n^0=35$ 4 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=96$ 4 meV.
8661.79 20	+	1	$E_n(\text{lab})=10920.0$ 47 eV. $2g\Gamma_n=0.20$ 3 eV, $2g\Gamma_n^1=106$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=58$ 3 meV.
8661.82 20	+	1	$E_n(\text{lab})=10950.0$ 48 eV. $2g\Gamma_n=79$ 5 meV, $2g\Gamma_n^1=41$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=31$ 3 meV.
8661.83 20	-	0	$E_n(\text{lab})=10960.0$ 48 eV. $2g\Gamma_n=9.2$ 8 eV, $2g\Gamma_n^0=88$ 8 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=47.5$ 1 meV.
8661.90 20	+	1	$E_n(\text{lab})=11130.0$ 48 eV. $2g\Gamma_n=0.19$ 3 meV, $2g\Gamma_n^1=98$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=55$ 3 meV.
8661.98 20	+	1	$E_n(\text{lab})=11120$ 5 eV. $2g\Gamma_n=24.4$ 24 meV, $2g\Gamma_n^1=13$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=11.2$ 14 meV.
8662.03 20	+	1	$E_n(\text{lab})=11160$ 5 eV. $2g\Gamma_n=16.6$ 26 meV, $2g\Gamma_n^1=8.4$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=7.8$ 13 meV.
8662.09 20	+	1	$E_n(\text{lab})=11220$ 5 eV. $2g\Gamma_n=107$ 9 meV, $2g\Gamma_n^1=54$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=38.0$ 23 meV.
8662.17 20	[3] ⁻	0	$E_n(\text{lab})=11300$ 5 eV. $2g\Gamma_n=1.11$ 21 eV, $\Gamma_\gamma=0.34$ 4 eV, $2g\Gamma_n^0=1044$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=146$ 4 meV.
8662.27 20			$E_n(\text{lab})=11400$ 5 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=73$ 3 meV.
8662.35 20	+	1	$E_n(\text{lab})=11490$ 5 eV. $2g\Gamma_n=0.20$ 3 eV, $2g\Gamma_n^1=99$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=58$ 3 meV.
8662.41 20			$E_n(\text{lab})=11550$ 5 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=105$ 3 meV.
8662.49 20	[2] ⁻	0	$E_n(\text{lab})=11630$ 5 eV. $2g\Gamma_n=3.2$ 4 eV, $\Gamma_\gamma=221$ 15 meV, $2g\Gamma_n^0=30$ 4 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=87$ 3 meV.
8662.52 20	[3] ⁺	1	$E_n(\text{lab})=11660$ 5 eV. $2g\Gamma_n=0.50$ 11 eV, $\Gamma_\gamma=207$ 25 meV, $2g\Gamma_n^1=238$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=82$ 3 meV.
8662.56 20	[3] ⁻	0	$E_n(\text{lab})=11700$ 5 eV. $2g\Gamma_n=1.28$ 22 eV, $\Gamma_\gamma=0.30$ 3 eV, $2g\Gamma_n^0=11.8$ 20 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=138$ 4 meV.

 $^{85}\text{Rb}(\text{n},\text{n}),(\text{n},\gamma)$:resonances **2006MuZX** (continued)

 ^{86}Rb Levels (continued)

<u>E(level)[†]</u>	<u>J^π</u>	<u>L</u>	<u>Comments</u>
8662.63 20	+	1	$E_n(\text{lab})=11770.5$ eV. $2g\Gamma_n=126.12$ meV, $2g\Gamma_n^1=59$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=42.823$ meV.
8662.68 20	+	1	$E_n(\text{lab})=11820.5$ eV. $2g\Gamma_n=700.22$ meV, $2g\Gamma_n^1=328$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=80.3$ meV.

Continued on next page (footnotes at end of table)

⁸⁵Rb(n,n),(n,γ):resonances 2006MuZX (continued)

⁸⁶Rb Levels (continued)

E(level) [†]	J ^π	L	Comments
8662.72 20	+	1	E _n (lab)=11860 5 eV. 2g _n ⁰ =0.39 11 eV, 2g _n ¹ =181 meV, g _n Γ _γ /Γ=69 3 meV.
8662.76 20	+	1	E _n (lab)=11900 5 eV. 2g _n ⁰ =47 6 meV, 2g _n ¹ =22 meV, g _n Γ _γ /Γ=20 3 meV.
8662.78 20	+	1	E _n (lab)=11920 5 eV. 2g _n ⁰ =190 26 meV, 2g _n ¹ =88 meV, g _n Γ _γ /Γ=55 4 meV.
8662.83 20	+	1	E _n (lab)=11970 5 eV. 2g _n ⁰ =0.28 11 eV, 2g _n ¹ =130 meV, g _n Γ _γ /Γ=95 4 meV.
8662.97 20			E _n (lab)=12110 6 eV. g _n Γ _γ /Γ=124 8 meV.
8662.99 20	[3] ⁻	0	E _n (lab)=12130 6 eV. 2g _n ⁰ =5.5 7 eV, Γ _γ =0.29 3 eV, 2g _n ⁰ =50 6 meV, g _n Γ _γ /Γ=160 7 meV.
8663.08 20			E _n (lab)=12220 6 eV. g _n Γ _γ /Γ=72 4 meV.
8663.12 20	-	0	E _n (lab)=12260 6 eV. 2g _n ⁰ =1.11 22 eV, 2g _n ⁰ =10 2 meV, g _n Γ _γ /Γ=148 6 meV.
8663.21 20	-	0	E _n (lab)=12360 6 eV. 2g _n ⁰ =1.89 22 eV, 2g _n ⁰ =17 2 meV, g _n Γ _γ /Γ=110 4 meV.
8663.27 20			E _n (lab)=12420 6 eV. g _n Γ _γ /Γ=87 4 meV.
8663.32 20	-	0	E _n (lab)=12470 6 eV. 2g _n ⁰ =10.1 9 eV, 2g _n ⁰ =80 meV, g _n Γ _γ /Γ=222.9 6 meV.
8663.42 20			E _n (lab)=12570 6 eV. 2g _n ⁰ =0.67 22 eV, g _n Γ _γ /Γ=123.6 8 meV.
8663.46 20			E _n (lab)=12570 6 eV. 2g _n ⁰ =2.47 22 eV, g _n Γ _γ /Γ=119.0 8 meV.
8663.53 20	+	1	E _n (lab)=12680 6 eV. 2g _n ⁰ =0.68 23 eV, 2g _n ¹ =290 meV, g _n Γ _γ /Γ=150 5 meV.
8663.61 20	+	1	E _n (lab)=12760 6 eV. 2g _n ⁰ =53 7 meV, 2g _n ¹ =22 meV, g _n Γ _γ /Γ=22 3 meV.
8663.64 20	[2] ⁻	0	E _n (lab)=12790 6 eV. 2g _n ⁰ =16.5 23 eV, 2g _n ⁰ =146 20 meV, g _n Γ _γ /Γ=81 4 meV.
8663.68 20			E _n (lab)=12830 6 eV. g _n Γ _γ /Γ=78 5 meV.
8663.71 20			E _n (lab)=12860 6 eV. g _n Γ _γ /Γ=142 5 meV.
8663.80 20	[3] ⁻	0	E _n (lab)=12950 6 eV. 2g _n ⁰ =3.4 5 eV, Γ _γ =244 20 meV, 2g _n ⁰ =30 4 meV, g _n Γ _γ /Γ=131.2 5 meV.
8663.90 20			E _n (lab)=13050 6 eV. g _n Γ _γ /Γ=99 4 meV.
8664.00 20			E _n (lab)=13150 6 eV. g _n Γ _γ /Γ=97 4 meV.
8664.11 20			E _n (lab)=13270 6 eV. g _n Γ _γ /Γ=89 4 meV.
8664.18 20			E _n (lab)=13340 6 eV. g _n Γ _γ /Γ=62 6 meV.
8664.20 20	-	0	E _n (lab)=13360 6 eV. Possible doublet. 2g _n ⁰ =2.5 4 eV, 2g _n ⁰ =22 3 meV, g _n Γ _γ /Γ=213 8 meV.
8664.24 20	-	0	E _n (lab)=13400 6 eV. 2g _n ⁰ =2.1 4 eV, Γ _γ =244 25 meV, 2g _n ⁰ =18 3 meV, g _n Γ _γ /Γ=125.0 8 meV.
8664.38 20	-	0	E _n (lab)=13540 6 eV. Possible doublet. 2g _n ⁰ =10.9 12 eV, 2g _n ⁰ =94 10 meV, g _n Γ _γ /Γ=213.6 4 meV.
8664.47 20			E _n (lab)=13630 6 eV. g _n Γ _γ /Γ=99 5 meV.
8664.49 20	+	1	E _n (lab)=13650 6 eV. 2g _n ⁰ =144 15 meV, 2g _n ¹ =54 meV, g _n Γ _γ /Γ=47 4 meV.
8664.58 20	+	1	E _n (lab)=13740 6 eV. 2g _n ⁰ =166 20 meV, 2g _n ¹ =62 meV, g _n Γ _γ /Γ=51 3 meV.
8664.65 20			E _n (lab)=13810 6 eV. g _n Γ _γ /Γ=81 4 meV.
8664.72 20	+	1	E _n (lab)=13880 6 eV. 2g _n ⁰ =21 5 meV, 2g _n ¹ =78 meV, g _n Γ _γ /Γ=9.8 24 meV.
8664.77 20			E _n (lab)=12930 6 eV. g _n Γ _γ /Γ=81 4 meV.
8664.83 20	+	1	E _n (lab)=13990 6 eV. 2g _n ⁰ =0.40 16 eV, 2g _n ¹ =150 meV, g _n Γ _γ /Γ=59 4 meV.
8664.90 20			E _n (lab)=14070 6 eV. g _n Γ _γ /Γ=81 4 meV.
8664.98 20	[3] ⁺	1	E _n (lab)=14150 7 eV. 2g _n ⁰ =0.67 24 eV, Γ _γ =261 25 meV, 2g _n ¹ =240 meV, g _n Γ _γ /Γ=105 5 meV.
8665.02 20			E _n (lab)=14190 7 eV. g _n Γ _γ /Γ=84 9 meV.
8665.04 20	+	1	E _n (lab)=14210 7 eV. 2g _n ⁰ =0.46 19 eV, 2g _n ¹ =160 meV, g _n Γ _γ /Γ=55 5 meV.
8665.13 20	[2] ⁻	0	E _n (lab)=14300 7 eV. 2g _n ⁰ =3.6 4 eV, Γ _γ =262 26 meV, 2g _n ⁰ =30 3 meV, g _n Γ _γ /Γ=103 4 meV.
8665.16 20	+	1	E _n (lab)=14330 7 eV. 2g _n ⁰ =121 10 meV, 2g _n ¹ =43 meV, g _n Γ _γ /Γ=42 4 meV.
8665.19 20			E _n (lab)=14360 7 eV. g _n Γ _γ /Γ=93 4 meV.
8665.34 20			E _n (lab)=14510 7 eV. g _n Γ _γ /Γ=81 5 meV.
8665.37 20	[3] ⁻	0	E _n (lab)=14540 7 eV. 2g _n ⁰ =4.8 5 meV, Γ _γ =282 20 meV, 2g _n ⁰ =40 4 meV, g _n Γ _γ /Γ=154 6 meV.
8665.53 20	[2] ⁻	0	E _n (lab)=14700 7 eV. 2g _n ⁰ =5.1 7 eV, Γ _γ =226 22 meV, 2g _n ⁰ =42 6 meV, g _n Γ _γ /Γ=91 4 meV.
8665.56 20	+	1	E _n (lab)=14730 7 eV. 2g _n ⁰ =58 4 meV, 2g _n ¹ =20 meV, g _n Γ _γ /Γ=24 3 meV.
8665.60 20	+	1	E _n (lab)=14770 7 eV. 2g _n ⁰ =0.34 10 eV, 2g _n ¹ =110 meV, g _n Γ _γ /Γ=75 4 meV.
8665.69 20	+	1	E _n (lab)=14860 7 eV. 2g _n ⁰ =78 6 meV, 2g _n ¹ =26 meV, g _n Γ _γ /Γ=30 5 meV.
8665.72 20			E _n (lab)=14890 7 eV. g _n Γ _γ /Γ=114 6 meV.
8665.77 20	+	1	E _n (lab)=14950 7 eV. 2g _n ⁰ =0.31 8 eV, 2g _n ¹ =102 meV, g _n Γ _γ /Γ=72 4 meV.
8665.85 20	[2] ⁻	0	E _n (lab)=15030 7 eV. 2g _n ⁰ =1.5 4 eV, Γ _γ =0.29 3 eV, 2g _n ⁰ =12 3 meV, g _n Γ _γ /Γ=102 5 meV.
8665.91 20	+	1	E _n (lab)=15090 7 eV. 2g _n ⁰ =103 9 meV, 2g _n ¹ =34 meV, g _n Γ _γ /Γ=37 3 meV.
8665.96 20	[2] ⁻	0	E _n (lab)=15140 7 eV. 2g _n ⁰ =1.23 25 eV, Γ _γ =0.31 3 eV, 2g _n ⁰ =10 2 meV, g _n Γ _γ /Γ=106 5 meV.
8666.00 20			E _n (lab)=15180 8 eV. g _n Γ _γ /Γ=92 5 meV.
8666.17 20			E _n (lab)=15350 8 eV. g _n Γ _γ /Γ=99 5 meV.
8666.24 20	+	1	E _n (lab)=15420 8 eV. 2g _n ⁰ =60 7 meV, 2g _n ¹ =19 meV, g _n Γ _γ /Γ=24 4 meV.
8666.30 20	2 ⁻	0	E _n (lab)=15480 8 eV. Possible doublet. 2g _n ⁰ =1.24 25 eV, 2g _n ⁰ =10 2 meV, g _n Γ _γ /Γ=263 9 meV.

 $^{85}\text{Rb}(\text{n},\text{n}),(\text{n},\gamma)$:resonances [2006MuZX](#) (continued) ^{86}Rb Levels (continued)

<u>E(level)[†]</u>	<u>J^π</u>	<u>L</u>	<u>Comments</u>
8666.44 20	+	1	$E_{\text{n}}(\text{lab})=15620.8$ eV. $2g\Gamma_{\text{n}}=87.7$ meV, $2g\Gamma_{\text{n}}^1=27$ meV, $g\Gamma_{\text{n}}\Gamma_{\gamma}/\Gamma=33.3$ meV.

Continued on next page (footnotes at end of table)

$^{85}\text{Rb}(\text{n},\text{n}),(\text{n},\gamma)$:resonances 2006MuZX (continued) ^{86}Rb Levels (continued)

E(level) [†]	J ^π	L	Comments
8666.50 20	+	1	$E_n(\text{lab})=15680$ 8 eV. $2g\Gamma_n=150$ 16 meV, $2g\Gamma_n^1=46$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=48$ 4 meV.
8666.54 20			$E_n(\text{lab})=15720$ 8 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=88$ 5 meV.
8666.64 20	+	1	$E_n(\text{lab})=15830$ 8 eV. $2g\Gamma_n=55$ 6 meV, $2g\Gamma_n^1=17$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=23$ 3 meV.
8666.72 20	[3] ⁻	0	$E_n(\text{lab})=15910$ 8 eV. $2g\Gamma_n=1.51$ 25 eV, $2g\Gamma_n^0=12$ 2 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=249$ 9 meV.
8666.85 20	+	1	$E_n(\text{lab})=16040$ 8 eV. $2g\Gamma_n=113$ 9 meV, $2g\Gamma_n^1=34$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=40$ 4 meV.
8666.94 20			$E_n(\text{lab})=16130$ 8 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=269$ 11 meV.
8667.01 20	-	0	$E_n(\text{lab})=16200$ 8 eV. Possible doublet. $2g\Gamma_n=1.66$ 25 eV, $2g\Gamma_n^0=13$ 2 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=243$ 11 meV.
8667.13 20	+	1	$E_n(\text{lab})=16320$ 8 eV. $2g\Gamma_n=0.22$ 4 eV, $2g\Gamma_n^1=64$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=61$ 6 meV.
8667.17 20			$E_n(\text{lab})=16360$ 8 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=102$ 6 meV.
8667.21 20	+	1	$E_n(\text{lab})=16400$ 8 eV. $2g\Gamma_n=110$ 9 meV, $2g\Gamma_n^1=32$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=39$ 5 meV.
8667.28 20	[2] ⁻	0	$E_n(\text{lab})=16470$ 8 eV. $2g\Gamma_n=3.90$ 77 eV, $2g\Gamma_n^0=30$ 6 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=151$ 7 meV.
8667.41 20			$E_n(\text{lab})=16600$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=78$ 6 meV.
8667.44 20	[2] ⁻	0	$E_n(\text{lab})=16640$ 9 eV. $2g\Gamma_n=18.10$ 26 eV, $\Gamma_\gamma=207$ 21 meV, $2g\Gamma_n^0=140$ 2 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=85$ 6 meV.
8667.56 20			$E_n(\text{lab})=16760$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=200$ 9 meV.
8667.65 20	-	0	$E_n(\text{lab})=16850$ 9 eV. $2g\Gamma_n=5.2$ 8 eV, $2g\Gamma_n^0=40$ 6 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=97$ 12 meV.
8667.68 20			$E_n(\text{lab})=16880$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=97$ 7 meV.
8667.74 20	[3] ⁻	0	$E_n(\text{lab})=16940$ 9 eV. $2g\Gamma_n=5.2$ 10 eV, $\Gamma_\gamma=262$ 26 meV, $2g\Gamma_n^0=40$ 8 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=144$ 20 meV.
8667.77 20	-	0	$E_n(\text{lab})=16970$ 9 eV. $2g\Gamma_n=14.0$ 13 eV, $2g\Gamma_n^0=108$ 10 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=278$ 17 meV.
8667.83 20	+	1	$E_n(\text{lab})=17030$ 9 eV. $2g\Gamma_n=122$ 15 meV, $2g\Gamma_n^1=33$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=42$ 5 meV.
8667.93 20			$E_n(\text{lab})=17130$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=109$ 6 meV.
8668.01 20			$E_n(\text{lab})=17210$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=118$ 6 meV.
8668.06 20			$E_n(\text{lab})=17260$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=80$ 5 meV.
8668.20 20			$E_n(\text{lab})=17400$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=292$ 11 meV.
8668.39 20			$E_n(\text{lab})=17600$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=82$ 7 meV.
8668.43 20			$E_n(\text{lab})=17640$ 9 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=259$ 11 meV.
8668.64 20			$E_n(\text{lab})=17850$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=60$ 8 meV.
8668.67 20			$E_n(\text{lab})=17880$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=240$ 13 meV.
8668.76 20			$E_n(\text{lab})=17970$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=164$ 9 meV.
8668.81 20	+	1	$E_n(\text{lab})=18020$ 10 eV. $2g\Gamma_n=164$ 22 meV, $2g\Gamma_n^1=41$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=51$ 5 meV.
8668.87 20			$E_n(\text{lab})=18080$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=164$ 9 meV.
8668.91 20			$E_n(\text{lab})=18120$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=134.0$ 7 meV.
8668.96 20			$E_n(\text{lab})=18170$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=102$ 6 meV.
8669.07 20			$E_n(\text{lab})=18280$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=334$ 8 meV.
8669.21 20			$E_n(\text{lab})=18430$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=94.8$ 1 meV.
8669.24 20			$E_n(\text{lab})=18460$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=103.9$ 1 meV.
8669.29 20	+	1	$E_n(\text{lab})=18510$ 10 eV. $2g\Gamma_n=88$ 9 meV, $2g\Gamma_n^1=21$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=33$ 4 meV.
8669.31 20	+	1	$E_n(\text{lab})=18530$ 10 eV. $2g\Gamma_n=94$ 9 meV, $2g\Gamma_n^1=23$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=35$ 4 meV.
8669.34 20	+	1	$E_n(\text{lab})=18560$ 10 eV. $2g\Gamma_n=180$ 26 meV, $2g\Gamma_n^1=43$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=54$ 4 meV.
8669.39 20	+	1	$E_n(\text{lab})=18610$ 10 eV. $2g\Gamma_n=41$ 9 meV, $2g\Gamma_n^1=10$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=18$ 5 meV.
8669.42 20	+	1	$E_n(\text{lab})=18640$ 10 eV. $2g\Gamma_n=99$ 13 meV, $2g\Gamma_n^1=24$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=36$ 5 meV.
8669.46 20			$E_n(\text{lab})=18680$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=179$ 6 meV.
8669.63 20	+	1	$E_n(\text{lab})=18850$ 10 eV. $2g\Gamma_n=43$ 5 meV, $2g\Gamma_n^1=10$ meV, $g\Gamma_n\Gamma_\gamma/\Gamma=18.4$ 23 meV.
8669.72 20			$E_n(\text{lab})=18940$ 10 eV. $g\Gamma_n\Gamma_\gamma/\Gamma=90$ 4 meV.
8669.86 20	(3) ⁻	0	$E_n(\text{lab})=19080$ 10 eV. $2g\Gamma_n=13.0$ 5 eV, $2g\Gamma_n^0=94$ 4 meV, $g\Gamma_n\Gamma_\gamma/\Gamma=329$ 9 meV.

[†] E(level energy)=S(n)(^{86}Rb) + $E_n(\text{lab})$ [mass of ^{85}Rb] / [mass of neutron+mass of ^{85}Rb], where S(n)=8651.0 2 (2012Wa38).