^{93}Nb(γ,γ′) E=6465 keV 1978Be45

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 112, 1163 (2011)	15-Dec-2010

1978Be45: Eγ≈6465 from ^{51}V(n,γ) E=th; Ge(Li) detectors, Compton polarimeter; measured Eγ, Iγ, γ(θ) at θ=100°−150° for primary γ rays deexciting the 6465-keV resonance, and polarization of 6465γ and 5516γ.
See ^{93}Nb(γ,γ′): E<2.75 MeV dataset for information from measurements using Eγ<2750.

^{93}Nb Levels

E(level)[†]	Jπ[#]	Comments
0	9/2+	Jπ: adopted value.
949 *3*	13/2+	
979 *3*		
1081[‡] *3*	9/2,13/2	
1297[‡] *3*	9/2,13/2	
1486 *3*		
1494 *3*		
1682 *3*		
1951 *3*	11/2	
2370 *3*	9/2,13/2	
2839 *3*	11/2	
6465 *3*	11/2+	Γγ=0.038 eV *17* Jπ: polarization and γ(θ) exclude 7/2 and favor 11/2 over 9/2. Γγ: Determined from the elastic cross section (1.6 mb *7*), the ratio of the scattering cross sections at 78° K and 293° K (1.022 *11*), the nuclear selfabsorption ratio (0.004 *3*), and the g.s. branching ratio (12% 3).

† From 1978Be45, based on measured Eγ, except As noted.
‡ ADOPTED J=9/2.
# From 1978Be45, based on γ(θ) and polarization of 6465γ and 5516γ, except As noted.

γ(^{93}Nb)

Eγ	Iγ	Ei(level)	Jiπ	Ef	Jfπ	Mult.[†]	Comments
949	>280	949	13/2+	0	9/2+		
3626 *3*	80 *25*	6465	11/2+	2839	11/2	D	A2=−0.17 *11*.
4095 *3*	80 *25*	6465	11/2+	2370	9/2,13/2	D	A2=+0.07 *10*.
4514 *3*	32 *3*	6465	11/2+	1951	11/2	D	A2=−0.19 *12*.
4783 *3*	31 *1*	6465	11/2+	1682			
4971 *3*	26 *1*	6465	11/2+	1486			
4979 *3*	12 *3*	6465	11/2+	1494			
5168 *3*	30 *2*	6465	11/2+	1297	9/2,13/2	D	A2=+0.14 *8*.
5384 *3*	47 *2*	6465	11/2+	1081	9/2,13/2	D	A2=+0.02 *7*.
5486 *3*	2 *2*	6465	11/2+	979			
5516[‡] *3*	280 *5*	6465	11/2+	949	13/2+	(M1)	A2=+0.06 *4*.
6465 *3*	100 *2*	6465	11/2+	0	9/2+	(M1)	A2=+0.04 *5*.

† From 1978Be45 based on γ(θ) and, for 6465γ and 5516γ, on ratio of number of Compton γ′s scattered parallel and perpendicular to the resonance scattering plane.
‡ Eγ coincides with that for γ in ^{51}V(n,γ) spectrum, but authors established that observed 5516γ was primarily an inelastically (not elastically) scattered line (1978Be45).

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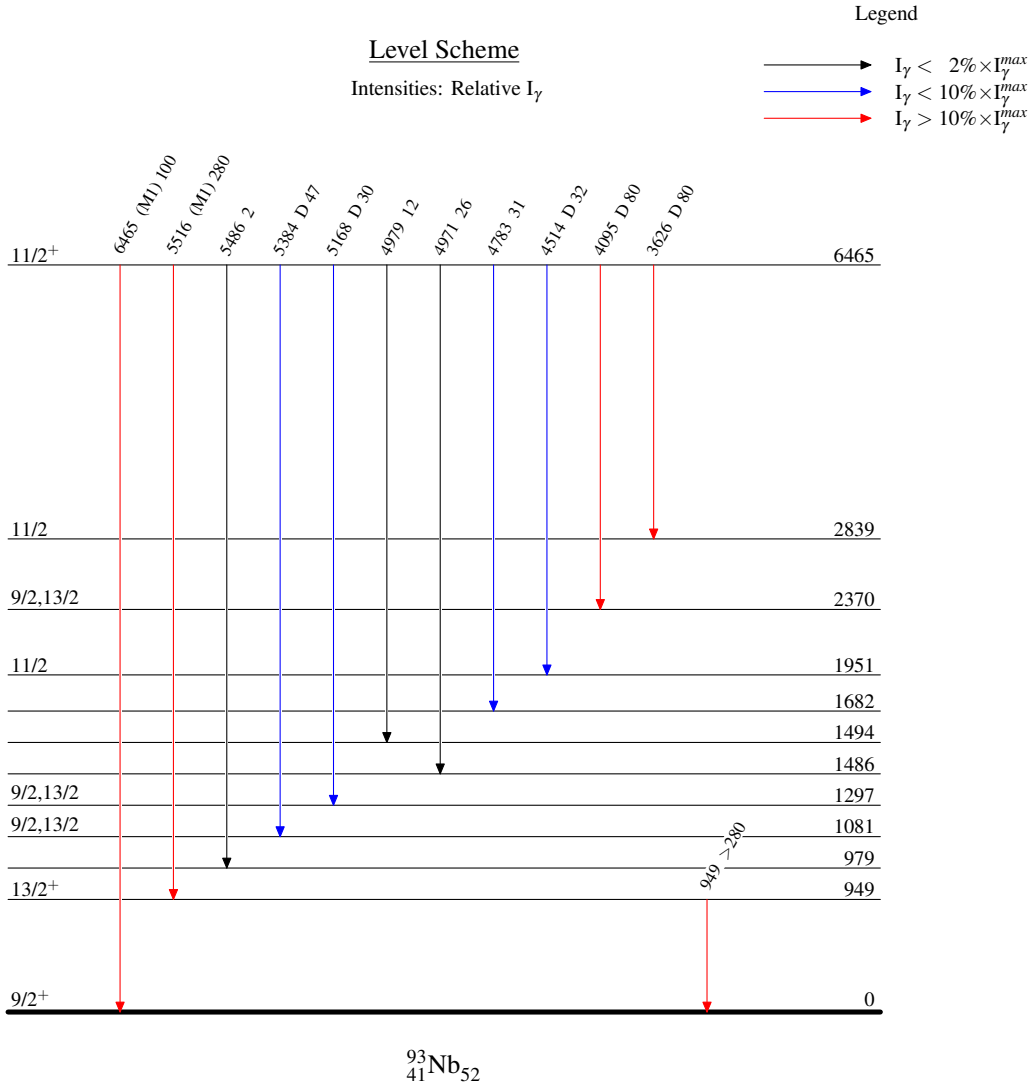

$^{93}_{41}Nb_{52}$