'2001' Nuclear Quadrupole Moments

Q/millibarn (=10^{-31} m^2)

1 (I)	2 (II)	3	4	5	6	7	8	9	10	11	12	13 (III)	14 (IV)	15 (V)	16 (VI)	17 (VII)	18 (VIII)
1 m H 2 2.860(15)																	2 He –
3 m Li 6 −0.808 7 −40.1	4 a Be 9 52.88(38)											5 a B 10 84.59(24) 11 40.59(10)	6 a C 11 33.27(24)	7 a N 14 20.44(3)	8 a O 17 −25.58(22)	9 m+s F 19* −94.2(9)	10 a Ne 21 101.55(75)
11 m Na 23 104(1)	12 a Mg 25 199.4(20)											13 a+m Al 27 146.6(10)	14 Si -	15 P -	16 a S 33 −67.8(13) 35 47.1(9)	17 a Cl 35 −81.65(80) 37 −64.35(64)	18 Ar -
19 m K 39 58.5 40 −73 41 71.1	20 a Ca 41 −66.5(18) 43 −40.8(8)	21 m Sc 45 −220(2)	22 a Ti 47 302(10) 49 247(11)	23 a V 50 210(40) 51 −52(10)	24 a Cr 53 −150(50)	25 a Mn 55 330(10)	26 s Fe 57 160	27 a Co 59 +420(30)	28 a Ni 61 +162(15)	29 μ Cu 63 −220(15) 65 −204(14)	30 a Zn 67 +150(15)	31 m Ga 69 171(2) 71 107(1)	32 m Ge 73 −196	33 μ As 75 314(6)	34 Se -	35 a+m Br 79 313(3) 81 261.5(25)	36 m Kr 83 +259(1) 83 507(3)
37 m Rb 85 +276(1) 87 +133.5(5)	38 a Sr 87 335(20)	39 a Y 90 −125(11)	40 m Zr 91 −176(3)	41 μ Nb 93 −320(20)	42 a Mo 95 −22(1) 97 +255(13)	43 a Tc 99 −129(6)	44 a Ru 99 +79(4) 101 +457(23)	45 Rh -	46 μ Pd 105 +660(11)	47 as Ag 107 980(110)	48 a Cd 111* −850(90)	49 a In 113 +799 115 +810	50 s Sn 119 −128(7)	51 a Sb 121 −360(40) 121 −480(50) 123 −490(50)	52 Te 125 −310(20)	53 a+m I 127 −710(10) 127 −636(9) 129 −616(9)	54 m Xe 129 −393(10) 131 −114(1)
55 ms Cs 133 −3.43(10) 133 302(21)	56 a Ba 135 +160(3) 137 +245(4)	La–Lu	72 μ Hf 177 +3365(29) 179 +3793(33)	73 π Ta 181 3170(20) 181 3710(70)	74 W 182 −2130(350)	75 π Re 185 2180(20) 187 2070(20)	76 μ Os 189 +856(28)	77 μ Ir 191 +816(9) 193 +751(9)	78 Pt -	79 μ Au 197 547(16)	80 μ,s Hg 199 +674(77) 201 +386(49)	81 Tl	82 a Pb 209 −269(165)	83 a Bi 209 −516(15)	84 Po -	85 At -	86 Rn 209 +311(31)
87 a Fr 223 1170(10)	88 Ra -	Ac–Lr	104 Rf -	105 Db -	106 Sg -	107 Bh -	108 Hs -	109 Mt -									

		57 a La 138 +450(20) 139 +200(10)	58 Ce -	59 a Pr 141 −58.9(42)	60 a Nd 143 −630(60) 145 −330(30)	61 a Pm 147 740(200)	62 μa Sm 147 −259(26) 149 +75(8) 149 +1014(93)	63 μ Eu 151 903(10) 153 2412(21)	64 μ Gd 155 +1270(30) 155 −440(20) 157 +1350(30)	65 μ Tb 159 +1432(8)	66 μa Dy 161 +2507(20) 163 +2648(21)	67 π Ho 165 +3580(20)	68 μ Er 167 +3565(29)	69 Tm 169 −1200(100)	70 μ Yb 173 +2800(40)	71 μa Lu 175 +3490(20) 176 +4970(30)	
		89 a Ac 227 1700(200)	90 a Th 229 4300(900)	91 n Pa 231 −1720(50) 231 690(170)	92 μ U 233 3663(8) 235 4936(6)	93 μ Np 237 +3886(6) 237 +3850(40)	94 μ Pu 239 −3345(13) 241 5600(200)	95 a Am 243 +4210 243 4100	96 Cm -	97 Bk -	98 Cf -	99 a Es 253 6700(800)	100 Fm -	101 Md -	102 No -	103 Lr -	

Atomic number | Method** | Symbol
Isotope | Q/mb

** Methods for the primary Q value: 'a' atomic, 'm' molecular, 's' solid-state, 'μ' muonic, 'n' nuclear state lifetime, 'π' pionic. 'X+Y': combines 'X' and 'Y'.
A star (*) indicates an excited nuclear state. Underlined isotopes refer to Mössbauer states.

Figure 2: 'Year-2001' Q values. P. Pyykkö, *Mol. Phys.***99**, 1617-1629 (2001).