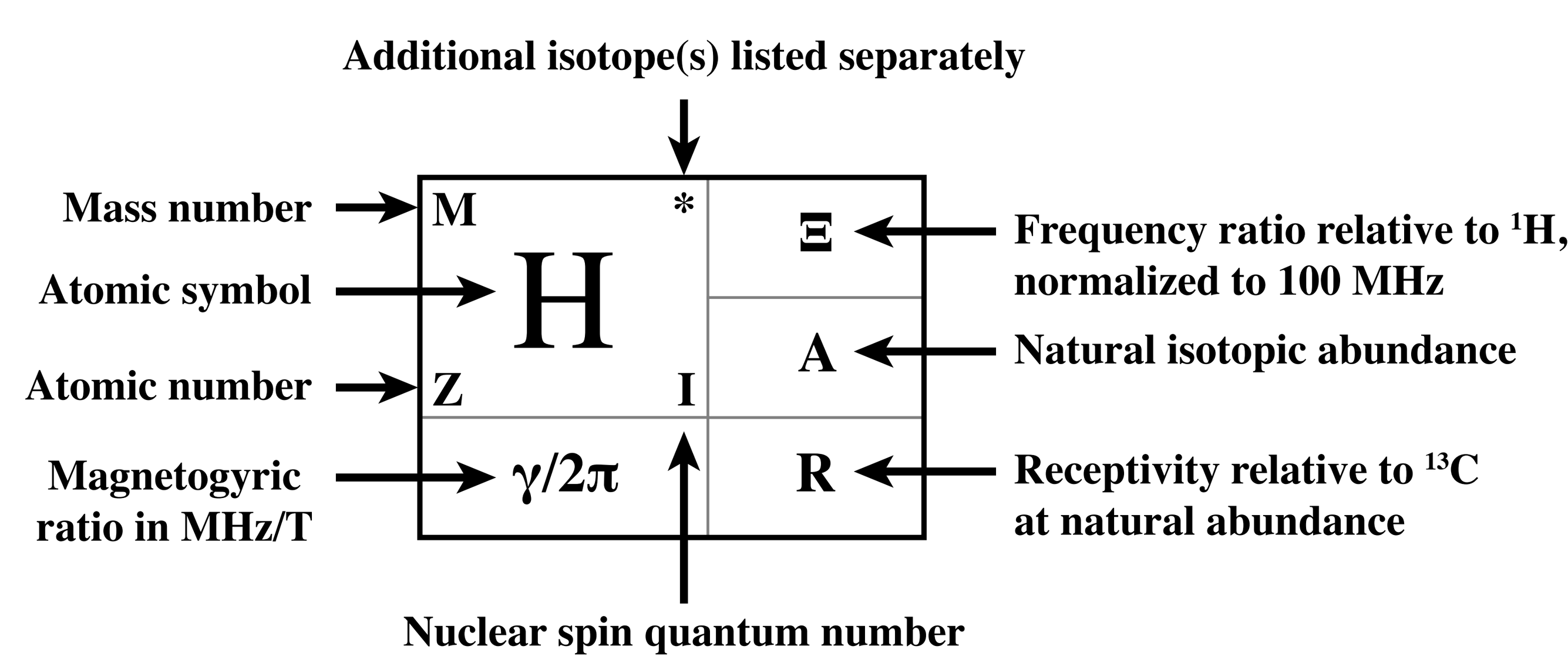
NMR Periodic Table: Spin–1/2 Nuclei

Symbol	M	Z	I	Ξ	A	γ/2π	R
H	1 *	1	1/2	100%	99.99%	42.5774691	5900
He	3	2	1/2	76.18%	$1\cdot10^{-4}$%	-32.4360300	$3.6\cdot10^{-3}$
Li	–	3	–	–	–	–	–
Be	–	4	–	–	–	–	–
B	–	5	–	–	–	–	–
C	13	6	1/2	25.15%	1.07%	10.70840	1.0
N	15	7	1/2	10.14%	0.368%	-4.31726570	$2.3\cdot10^{-2}$
O	–	8	–	–	–	–	–
F	19	9	1/2	94.09%	100%	40.07757	4900
Ne	–	10	–	–	–	–	–
Na	–	11	–	–	–	–	–
Mg	–	12	–	–	–	–	–
Al	–	13	–	–	–	–	–
Si	29	14	1/2	19.87%	4.683%	-8.4655	2.2
P	31	15	1/2	40.48%	100%	17.2514	390
S	–	16	–	–	–	–	–
Cl	–	17	–	–	–	–	–
Ar	–	18	–	–	–	–	–
K	–	19	–	–	–	–	–
Ca	–	20	–	–	–	–	–
Sc	–	21	–	–	–	–	–
Ti	–	22	–	–	–	–	–
V	–	23	–	–	–	–	–
Cr	–	24	–	–	–	–	–
Mn	–	25	–	–	–	–	–
Fe	57	26	1/2	3.238%	2.119%	1.381564	$4.3\cdot10^{-3}$
Co	–	27	–	–	–	–	–
Ni	–	28	–	–	–	–	–
Cu	–	29	–	–	–	–	–
Zn	–	30	–	–	–	–	–
Ga	–	31	–	–	–	–	–
Ge	–	32	–	–	–	–	–
As	–	33	–	–	–	–	–
Se	77	34	1/2	19.07%	7.63%	8.1573047	3.2
Br	–	35	–	–	–	–	–
Kr	–	36	–	–	–	–	–
Rb	–	37	–	–	–	–	–
Sr	–	38	–	–	–	–	–
Y	89	39	1/2	4.900%	100%	-2.0949233	0.70
Zr	–	40	–	–	–	–	–
Nb	–	41	–	–	–	–	–
Mo	–	42	–	–	–	–	–
Tc	–	43	–	–	–	–	–
Ru	–	44	–	–	–	–	–
Rh	103	45	1/2	3.186%	100%	-1.348	0.19
Pd	–	46	–	–	–	–	–
Ag	109 *	47	1/2	4.654%	48.16%	-1.9924025	0.29
Cd	113 *	48	1/2	22.19%	12.22%	-9.4870917	7.9
In	–	49	–	–	–	–	–
Sn	119 *	50	1/2	37.29%	8.59%	-15.9659	27
Sb	–	51	–	–	–	–	–
Te	125 *	52	1/2	31.55%	7.07%	-13.545423	13
I	–	53	–	–	–	–	–
Xe	129	54	1/2	27.81%	26.44%	-11.86039	34
Cs	–	55	–	–	–	–	–
Ba	–	56	–	–	–	–	–
Hf	–	72	–	–	–	–	–
Ta	–	73	–	–	–	–	–
W	183	74	1/2	4.166%	14.31%	1.7956502	$6.3\cdot10^{-2}$
Re	–	75	–	–	–	–	–
Os	187	76	1/2	2.282%	1.96%	10.70840	$1.4\cdot10^{-3}$
Ir	–	77	–	–	–	–	–
Pt	195	78	1/2	21.50%	33.83%	9.2923	21
Au	–	79	–	–	–	–	–
Hg	199	80	1/2	17.91%	16.87%	7.7123169	5.9
Tl	205 *	81	1/2	57.68%	70.48%	24.9748814	840
Pb	207	82	1/2	20.92%	22.1%	8.88158	12
Bi	–	83	–	–	–	–	–
Po	–	84	–	–	–	–	–
At	–	85	–	–	–	–	–
Rn	–	86	–	–	–	–	–
Fr	–	87	–	–	–	–	–
Ra	–	88	–	–	–	–	–
La	–	57	–	–	–	–	–
Ce	–	58	–	–	–	–	–
Pr	–	59	–	–	–	–	–
Nd	–	60	–	–	–	–	–
Pm	–	61	–	–	–	–	–
Sm	–	62	–	–	–	–	–
Eu	–	63	–	–	–	–	–
Gd	–	64	–	–	–	–	–
Tb	–	65	–	–	–	–	–
Dy	–	66	–	–	–	–	–
Ho	–	67	–	–	–	–	–
Er	–	68	–	–	–	–	–
Tm	169	69	1/2	8.29%	100%	-3.530	3.4
Yb	171	70	1/2	17.50%	14.3%	7.5261	4.6
Lu	–	71	–	–	–	–	–
Ac	–	89	–	–	–	–	–
Th	–	90	–	–	–	–	–
Pa	–	91	–	–	–	–	–
U	–	92	–	–	–	–	–



Additional spin–1/2 isotopes

Symbol	M	Z	I	Ξ	A	γ/2π	R
H	3	1	1/2	106.7%	–	45.4148278	–
Ag	107	47	1/2	4.048%	51.84%	-1.7330670	0.21
Cd	111	48	1/2	21.22%	12.80%	-9.0691470	7.3
Sn	115	50	1/2	32.72%	0.34%	-14.008	0.71
Sn	117	50	1/2	35.63%	7.68%	-15.2610	21
Te	123	52	1/2	26.17%	0.89%	-11.23490	0.96
Tl	203	81	1/2	57.12%	29.52%	24.7316179	340

NMR Periodic Table: Quadrapolar Nuclei

2 H 1 1	15.35%																																– He 2 –	–
	0.012%																																–	–
6.53590131	6.5·10^{-3}																																–	–
0.2860	0.41																																–	–
6 Li 3 1 *	14.72%	9 Be 4 3/2	14.05%															11 B 5 3/2 *	32.08%	– C 6 –	–	14 N 7 1	7.226%	17 O 8 5/2	13.56%	– F 9 –	–	21 Ne 10 3/2	7.894%
	7.59%		100%																80.1%		–		99.63%		0.038%		–		0.27%
6.2662021	3.79	-5.983694	81.5															13.662981	777	–	–	3.0777052	5.90	-5.77427	6.5·10^{-2}	–	–	-3.36307	3.9·10^{-2}
-0.00808	0.033	5.288	37															4.059	22	–	–	2.044	21	-2.558	2.1	–	–	10.155	140
23 Na 11 3/2	26.45%	25 Mg 12 5/2	6.122%															27 Al 13 5/2	26.06%	– Si 14 –	–	– P 15 –	–	33 S 16 3/2	7.676%	35 Cl 17 3/2 *	9.798%	– Ar 18 –	–
	100%		10.00%																100%		–		–		0.76%		75.78%		–
11.269522	545	-2.60834	1.58															11.103081	1220	–	–	–	–	3.271724	0.101	4.176541	21.0	–	–
10.4	140	19.94	130															14.66	69	–	–	–	–	-6.78	61	-8.165	89	–	–
39 K 19 3/2 *	4.666%	43 Ca 20 7/2	6.730%	45 Sc 21 7/2	24.29%	49 Ti 22 7/2 *	5.639%	51 V 23 7/2 *	26.30%	53 Cr 24 3/2	5.652%	55 Mn 25 5/2	24.79%	– Fe 26 –	–	59 Co 27 7/2	23.73%	61 Ni 28 3/2	8.936%	63 Cu 29 3/2 *	26.52%	67 Zn 30 5/2	6.257%	71 Ga 31 3/2 *	30.50%	73 Ge 32 9/2	3.488%	75 As 33 3/2	17.12%	– Se 34 –	–	81 Br 35 3/2 *	27.01%	83 Kr 36 9/2	3.848%
	93.26%		0.135%		100%		5.41%		99.75%		9.501%		100%		–		100%		1.140%		69.17%		4.10%		39.89%		7.73%		100%		–		49.31%		11.49%
1.9895336	2.79	-2.869673	5.1·10^{-2}	10.359073	1780	-2.40475	1.20	11.213280	2250	-2.4115	0.507	10.576251	1050	–	–	10.08	1640	-3.8114	0.240	11.318764	382	2.668532	0.692	13.02074	335	-1.489738	0.642	7.315021	149	–	–	11.53838	288	-1.64423	1.28
5.85	46	-4.08	2.3	-22.0	66	24.7	83	-5.2	3.7	-15.0	300	33.0	350	–	–	42.0	240	16.2	350	-22.0	650	15.0	72	10.7	150	-19.6	28	31.4	1300	–	–	26.2	920	25.9	50
87 Rb 37 3/2 *	32.72%	87 Sr 38 9/2	4.334%	– Y 39 –	–	91 Zr 40 5/2	9.296%	93 Nb 41 9/2	24.48%	95 Mo 42 5/2 *	6.517%	99 Tc 43 9/2	22.51%	99 Ru 44 5/2 *	4.605%	– Rh 45 –	–	105 Pd 46 5/2	4.576%	– Ag 47 –	–	– Cd 48 –	–	115 In 49 9/2 *	21.91%	– Sn 50 –	–	121 Sb 51 5/2 *	23.93%	– Te 52 –	–	127 I 53 5/2	20.01%	131 Xe 54 3/2	8.244%
	27.83%		7.00%		–		11.22%		100%		15.92%		0%		12.76%		–		22.33%		–		–		95.71%		–		57.21%		–		100%		21.18%
13.98399	290	-1.8524642	1.12	–	–	-3.97478	6.25	10.452	2870	-2.787	3.06	9.623	0	-1.956	0.848	–	–	-1.96	1.49	–	–	–	–	9.3857	1980	–	–	10.255	548	–	–	8.577772	560	3.515854	3.50
13.35	240	33.5	83	–	–	-17.6	99	-32.0	76	-2.2	1.5	-12.9	12	7.9	20	–	–	66.0	1400	–	–	–	–	81.0	490	–	–	-36.0	410	–	–	-71.0	1600	-11.4	170
133 Cs 55 7/2	13.12%	137 Ba 56 3/2	11.11%			177 Hf 72 7/2 *	4.007%	181 Ta 73 7/2	11.99%	– W 74 –	–	187 Re 75 5/2 *	22.75%	189 Os 76 3/2	7.765%	193 Ir 77 3/2 *	1.871%	– Pt 78 –	–	197 Au 79 3/2	1.729%	201 Hg 80 3/2	6.612%	– Tl 81 –	–	– Pb 82 –	–	209 Bi 83 9/2	16.07%	– Po 84 –	–	– At 85 –	–	– Rn 86 –	–
	100%		11.23%				18.60%		99.99%		–		62.60%		16.15%		62.7%		–		100%		13.18%		–		–		100%		–		–		–
5.6233482	284	4.76343	4.62			1.728	1.54	5.1627	220	–	–	9.8170	526	3.35360	2.32	0.8319	0.137	–	–	0.752898	0.162	-2.846914	1.16	–	–	–	–	6.9630	848	–	–	–	–	–	–
-0.343	0.016	24.5	800			336.5	15000	317.0	14000	–	–	207.0	14000	85.6	9800	75.1	7500	–	–	54.7	4000	38.6	2000	–	–	–	–	-51.6	200	–	–	–	–	–	–
– Fr 87 –	–	– Ra 88 –	–																																
	–		–																																
–	–	–	–																																
–	–	–	–																																

139 La 57 7/2 *	14.13%	– Ce 58 –	–	141 Pr 59 5/2	30.62%	143 Nd 60 7/2 *	5.45%	– Pm 61 –	–	149 Sm 62 7/2 *	3.44%	151 Eu 63 5/2 *	24.86%	157 Gd 64 3/2 *	4.03%	159 Tb 65 3/2	24.04%	163 Dy 66 5/2 *	4.82%	165 Ho 67 7/2	21.34%	167 Er 68 7/2	2.88%	– Tm 69 –	–	173 Yb 70 5/2	4.821%	175 Lu 71 7/2 *	11.40%						
	99.91%		–		100%		12.2%		–		13.82%		47.81%		15.65%		100%		24.90%		100%		22.93%		–		16.13%		97.41%						
6.0611483	356	–	–	13.036	1970	-2.319	2.43	–	–	-1.463	0.692	10.585	504	-1.7139	0.300	10.24	408	2.052	1.91	9.088	1200	-1.2280	0.679	–	–	-2.0730	1.28	4.8625	179						
20.0	54	–	–	-5.89	11	-63.0	540	–	–	7.4	7.5	90.3	2600	135.0	24000	143.2	27000	264.8	22000	358.0	17000	356.5	17000	–	–	280.0	25000	349.0	17000						
– Ac 89 –	–	– Th 90 –	–	– Pa 91 –	–	235 U 92 7/2	1.841%																												
	–		–		–		0.720%																												
–	–	–	–	–	–	-0.83	6.5·10^{-3}																												
–	–	–	–	–	–	493.6	33000																												

Additional quadrapolar isotopes

7 Li 3 3/2	38.86%	10 B 5 3	10.74%	37 Cl 17 3/2	8.156%	40 K 19 4	5.802%	41 K 19 3/2	2.561%	47 Ti 22 5/2	5.638%	50 V 23 6	9.970%	65 Cu 29 3/2	28.40%	69 Ga 31 3/2	24.00%																	
	92.41%		19.9%		24.22%		0.012%		6.730%		7.44%		0.250%		30.83%		60.11%																	
16.5484556	1590	4.5751931	23.2	3.476530	3.87	-2.4737220	3.6·10^{-3}	1.0919113	3.3·10^{-2}	-2.4040	0.918	4.2504699	0.818	12.1027	208	10.24776	246																	
-4.01	21	8.459	14	-6.435	55	-7.3	5.2	7.11	67	30.2	290	21.0	17	-20.4	550	17.1	390																	
79 Br 35 3/2	25.05%	85 Rb 37 5/2	9.655%	97 Mo 42 5/2	6.654%	101 Ru 44 5/2	5.161%	113 In 49 9/2	21.87%	123 Sb 51 7/2	12.96%	135 Ba 56 3/2	9.934%	138 La 57 5	13.19%	145 Nd 60 7/2	3.36%																	
	50.69%		72.17%		9.55%		17.06%		4.29%		42.79%		6.592%		0.090%		8.30%																	
10.70415	237	4.1264182	45.0	-2.846	1.95	-2.192	1.59	9.3655	88.5	5.5532	117	4.25819	1.93	5.661522	0.497	-1.43	0.387																	
31.3	1300	27.6	240	25.5	210	45.7	670	79.9	470	-49.0	330	16.0	340	45.0	120	-33.0	150																	
147 Sm 61 7/2	4.17%	153 Eu 63 5/2	10.98%	155 Gd 64 3/2	3.07%	161 Dy 66 5/2	3.44%	176 Lu 71 7	8.131%	179 Hf 72 9/2	2.517%	185 Re 75 5/2	22.52%	191 Ir 77 3/2	1.718%																				
	14.99%		52.19%		14.80%		18.91%		2.59%		13.62%		37.40%		37.3%																				
-1.775	1.340	4.6742	47.3	-1.3072	0.126	-1.464	0.527	3.4511	6.05	-1.086	0.438	9.7175	305	0.7659	0.064																				
-25.9	91	241.2	19000	127.0	22000	250.7	20000	497.0	6600	379.3	11000	218.0	15000	81.6	8900