

(1) General overview: Relaxation tendencies for heteronuclei

Lineshape considerations (for $I > 1/2$):

- Calculating linewidth for different spin quantum numbers, one sees the tendency in relation with linewidth

I	1	3/2	2	5/2	3	7/2	4	9/2	5	11/2
$\frac{2I + 3}{I^2(2I - 1)}$	5	1.333	0.583	0.320	0.200	0.163	0.098	0.074	0.058	0.046
$\Delta\nu$ Hz	10	2.6	1.16	0.64	0.4	0.32	0.19	0.14	0.11	0.09

Lit.: Brevard/Granger, *Handbook of HR Multinuclear NMR*, **1981** (Wiley)