

TWO SIMPLE NMR EXPERIMENTS ORGANIC CHEMISTS SHOULD KNOW ABOUT.

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TOCSY1D is a 1D experiment, standard on newer consoles. I will present the application of TOCSY1D in an improved protocol for the assignment of the absolute configuration of secondary alcohols (Mosher's method) which reduces the time and amount of work of a typical analysis from 4-6 hours over 1-2 days, to less than an hour.

gHMQC, a standard 2D experiment, can be turned to the 1D version by setting $n_1=1$. It can be very useful in probing reaction mechanisms by way of isotopic labeling, e.g. ^{13}C or ^{15}N . For ^{15}N , the spectra can be run 500,000 faster (or alternately using 700 times less labeled compound) than in the typical direct detection experiment.