Supplemental Material: Tugarinov *et al.*

Figure S1. ^{1}H-^{13}C pulse scheme to record ^{1}H-coupled double quantum correlation maps of methyl groups. Details of the sequence not described here can be found in the legend to Figure 1. The phase cycling employed is: $\phi1$ = (-y, -x, y, x); $\phi2$ = 2(x, y), 2(-x, -y); $\phi3$ = 8(x), 8(-x); rec = (x, -x, -x, x), 2(-x, x, x, -x), (x, -x, -x, x). Quadrature detection in F_1 is achieved using an enhanced sensitivity method in which two separate spectra are recorded for each t_1 point (with and without the ^{1}H composite 180° pulse shown with dashed lines) and subsequently manipulated in a manner analogous to what is done during the processing of data sets which use gradients for coherence transfer selection[1].

1. Kay, L.E.; Keifer, P.; Saarinen, T. *J. Am. Chem. Soc.* **1992**, 114, 10663-10665.

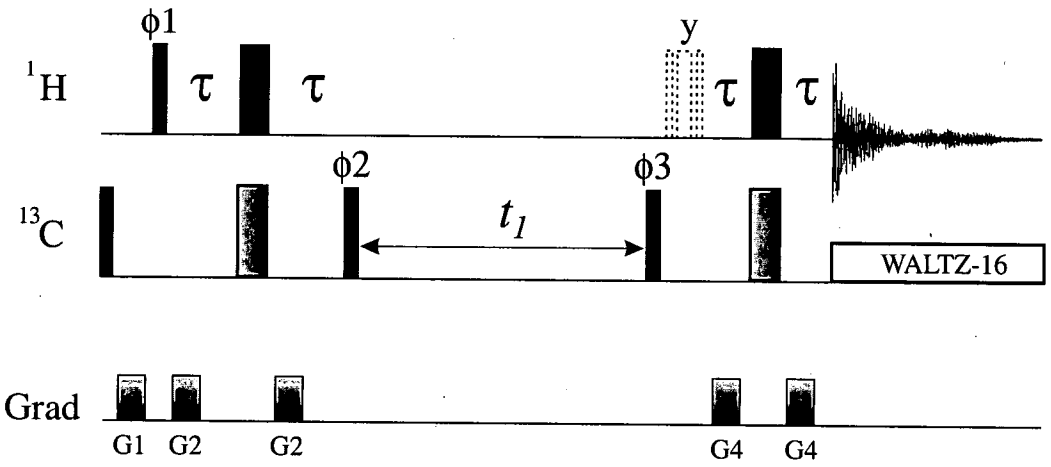

Figure S1