Erratum: "A general framework to quantify the effect of restricted diffusion on the NMR signal with applications to double pulsed field gradient NMR experiments" [J. Chem. Phys. 130, 104702 (2009)]

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Citation: J. Chem. Phys. **138**, 149901 (2013); doi: 10.1063/1.4801635
View online: http://dx.doi.org/10.1063/1.4801635
View Table of Contents: http://jcp.aip.org/resource/1/JCPSA6/v138/i14
Published by the American Institute of Physics.

Erratum: "A general framework to quantify the effect of restricted diffusion on the NMR signal with applications to double pulsed field gradient NMR experiments" [J. Chem. Phys. 130, 104702 (2009)]

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(Received 19 March 2013; accepted 27 March 2013; published online 12 April 2013)

[http://dx.doi.org/10.1063/1.4801635]

In Ref. 1 two equations have errors. Equation (24) should read

$$X_{km,k'm'} = r_0 \delta_{m,m'\pm 1} \beta_{km} \beta_{k'm'} \frac{\alpha_{km}^2 + \alpha_{k'm'}^2 - 2mm'}{\left(\alpha_{km}^2 - \alpha_{k'm'}^2\right)^2} \tag{1}$$

and Eq. (30) should have been

$$Y_{km,k'm'} = i\, r_0 \left(\delta_{m,m'-1} - \delta_{m,m'+1}\right) \times \beta_{km} \beta_{k'm'} \frac{\alpha_{km}^2 + \alpha_{k'm'}^2 - 2mm'}{\left(\alpha_{km}^2 - \alpha_{k'm'}^2\right)^2} \,. \tag{2}$$

Note that these results are obtained starting from the basis functions given by

$$u_{km}(r, \phi) = \frac{\beta_{km}}{\sqrt{\pi}\, J_m(\alpha_{km})} J_m(\alpha_{km} r) e^{im\phi} \,, \tag{3}$$

where the index m takes all integer values including the negative ones.

Alternatively, one could employ functions whose angular parts are $\cos m\phi$ and $\sin m\phi$, where m is any natural number. The elements of the corresponding matrices are available upon request. In either case, matrices larger than those prescribed originally[2] have to be constructed if the gradient waveform features differently oriented pulses.

The above corrections affect neither the results nor the conclusions of Ref. 1.

The authors thank Frederik B. Laun for pointing out the errors above in his article.[3]

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