An open-access WebApp for Inverse Laplace Transform analysis of TD-NMR signals by Moraes et al.

General

The manuscript reports the availability, access, and use of an open-access, on-line platform to convert NMR relaxation data into distributions or relaxation times. Despite the availability of different open-access 'Laplace-transform' algorithms, this platform provides a useful tool for research and teaching, as it is easy to use. The authors review the non-negative least squares algorithm with Tikhonov regularization and singular value decomposition and provide helpful advice for the beginner to achieve best results. I value this work, as it will benefit a growing community attracted to diverse incarnations of time-domain NMR. Moreover, this manuscript is well written, albeit it would still benefit from the language editing service of Copernicus Publishers. Nevertheless, I see this work outside the scope of Magnetic Resonance as it does not report a significant advance in magnetic resonance: "To be suitable for publication in *MR*, articles must describe substantial advancements in magnetic resonance. They should include significant innovation regarding new insights into magnetic resonance methodology, or into systems studied by magnetic resonance techniques, or expand the applicability of magnetic resonance. Routine applications of established techniques and minor technical advances are considered to be outside its scope." Therefore, I recommend it to be submitted to a different Journal.

Detailed comments

Line 119: Equation number missing. The text reads "like equation ??".

Line 240 (dito lines 270, 280): A validation of the algorithm with only 1% RMS Gaussian white noise added to the noise-free simulation data is a very benevolent test. It would be helpful to illustrate the limits of the algorithm, by showing how the distributions of relaxation times change with decreasing signal-to noise ratio. This would guide the unexperienced user in producing experimental data of sufficient quality.