

Despite the fact that NMR technique is quite old, it still has large unsolved problems. Particularly, it is very hard to calculate Free Induction Decay signal (relaxation of transverse component of magnetization of spin system after perturbation; it is actually measured in experiments) from the first principles, which strongly limits the amount of data, which we can extract from the measurements.

The main goal of our work is to create a controllable approximation for numerical calculation of this effect. We propose a new hybrid quantum-classical method of modelling, which is now in the process of development.