Reply on CC14
Malcolm Levitt


That is a difficult question to answer. It depends of course on the precise nature of the effects and the analysis that was originally used. My guess is that in the great majority of cases there is nothing to worry about - it is likely that the trajectories of observables never differ by more than their thermal equilibrium values between the (accurate) Lindblad and (suspect) traditional approaches. For strong hyperpolarization effects these differences may often be ignored. Nevertheless there will always be residual doubt given that we now know that the standard dynamical equations do not rest on solid foundations. The safest course of action is to do redo some test calculations using the Lindblad method, or a presumably equivalent method such as the one described in this paper.