Erratum: Relaxation in kinetic models on alternating linear chains [Phys. Rev. E 63, 026114 (2001)]

L. L. Gonçalves, M. López de Haro, and J. Tagüeña-Martínez

(Received 14 July 2003; published 13 October 2003)

DOI: 10.1103/PhysRevE.68.049903 PACS number(s): 64.60.Ht, 75.10.Hk, 99.10.Cd

Due to the definition of the full width at half height in a linear rather than a logarithmic scale (which was used to obtain them), the plots reported in Figs. 1–5 do not correspond to Nagel scaling. This situation is similar to what was pointed out in L.L. Gonçalves, M. López de Haro, J. Tagüeña-Martínez and R.B. Stinchcombe, Phys. Rev. Lett. **88**, 089901(E) (2002) and the main remarks there also apply in this restricted dynamics case. In particular, the analytical results for the susceptibilities both for the Glauber dynamics and for the restricted dynamics case, as well as the main conclusions drawn from them, are not affected. The correct Nagel plots are shown below. It is worth mentioning that the new scaling that was employed in the original figures seems to have a wider perspective than the one explored up to now, an issue that we plan to address elsewhere in the near future.

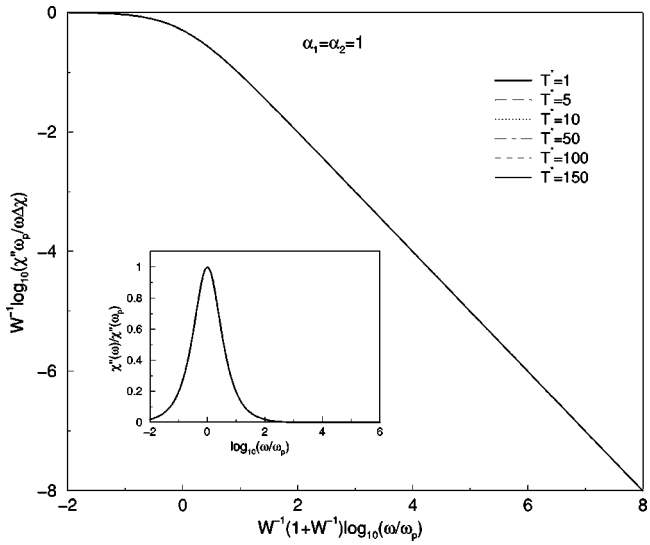

FIG. 1. Nagel plot for the case of a uniform chain ($\alpha_1=\alpha_2=1$). Note that the results for the different reduced temperatures all fall in the same curve as they should. Further, as the inset shows, the susceptibility obeys the usual Debye scaling.

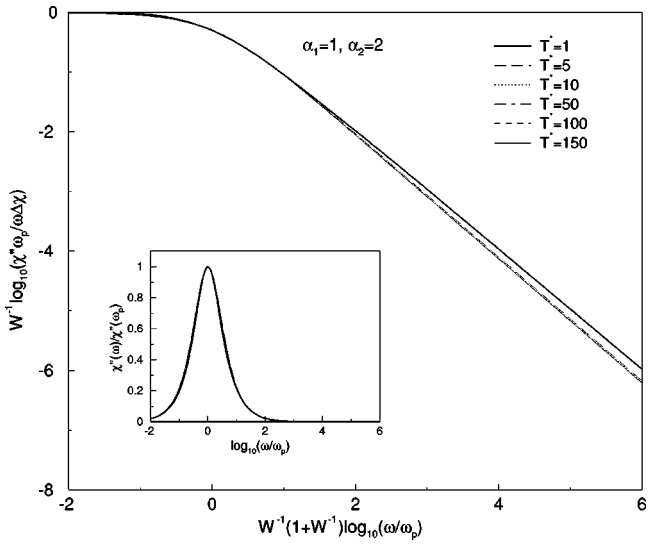

FIG. 2. Nagel plot for $\alpha_1=1$ and $\alpha_2=2$. The behavior is very similar to the uniform chain case, except at low T^*. The inset shows the performance with respect to the Debye scaling.

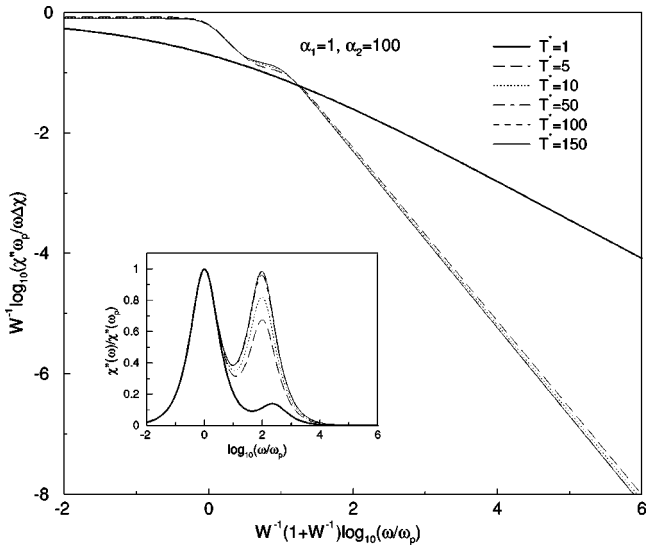

FIG. 3. Same as Fig. 2 but for the choice $\alpha_1=1$ and $\alpha_2=100$. The trend of improvement of the agreement with the Nagel scaling is aparent, while the opposite happens with respect to the Debye scaling. The behavior at $T^*=1$ separates even more from the rest of the results than in the previous case and a plateau region in the Nagel plot is now apparent.

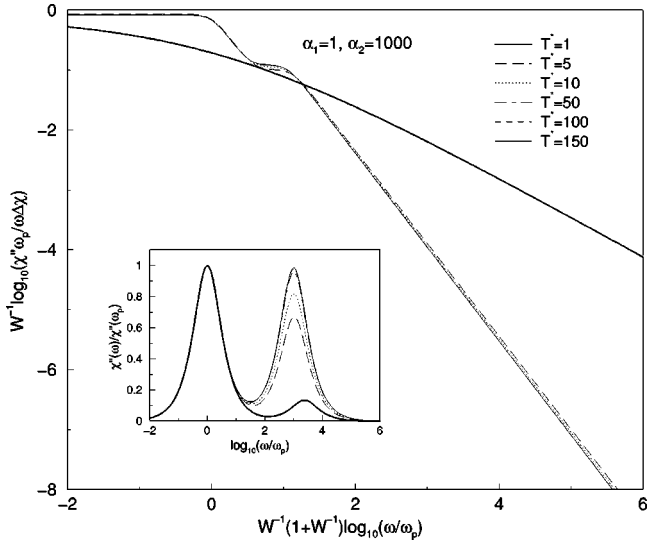

FIG. 4. Same as Figs. 2 and 3 but for $\alpha_1=1$ and $\alpha_2=1000$. The scaling is rather good in this case, except again at $T^*=1$. Notice that the scaling holds much better in plateau region in the Nagel plot than it did in Fig. 3. The behavior is here definitely non-Debye.

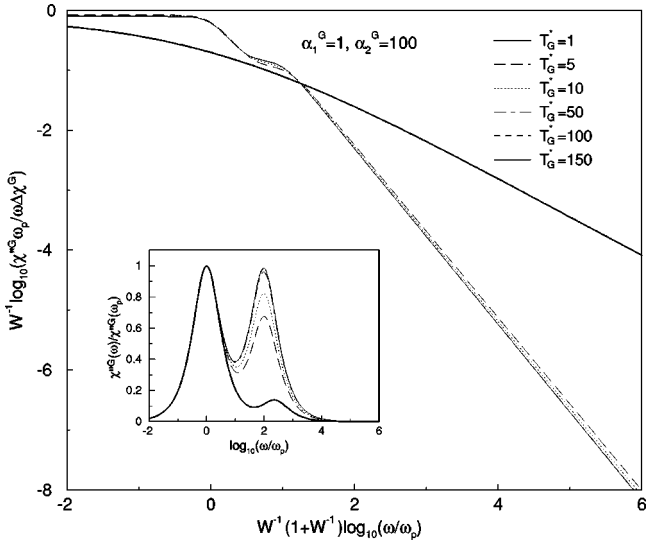

FIG. 5. Nagel plot for an alternating isotopic chain with Glauber dynamics with $\alpha_1=1$ and $\alpha_2=100$ and different values of the reduced temperature T_G^*. Note the similarity of these results with respect to those of Fig. 3.