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Glassiness in RNA folding

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We study secondary structures of random RNA molecules by means of a renormalized field theory based on an expansion in the sequence disorder. We show that there is a continuous phase transition from a molten phase at higher temperatures to a low-temperature glass phase. Based on an exact inequality, we argue that RNA conformations in the glass phase are similar to those at the transition.

[1] M. Laessig and K.J. Wiese, The freezing of random RNA, *Phys. Rev. Lett.* 96 (2006), 228101.

[2] F. David and K.J. Wiese, Systematic field theory of the RNA glass transition, q-bio.BM/0607044 (2006); accepted for publication in *Phys. Rev. Lett.*