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**Sum rules for the visco-elastic response of disordered solids at zero temperature** ANAEL LEMAITRE, CRAIG MALONEY, UCSB – Department of Physics — We study exact results concerning the non-affine displacement fields observed by Tanguy et al [Europhys. Lett. **57**, 423 (2002), Phys. Rev. B **66**, 174205 (2002)] and their contributions to elasticity. A normal mode analysis permits us to estimate the dominant contributions to the non-affine corrections to elasticity, and relate these corrections to the correlator of a fluctuating force field. We extend this analysis to the visco-elastic response of the system.

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