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**Acoustic dynamics in glasses in the mesoscopic range**

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The investigation of the high-frequency acoustic excitations in glasses and of their connection to the universal anomalies in the thermal properties remains a largely debated topic. For instance, one interpretation is based on the observation that the high-frequency acoustic dynamics in simulated harmonic glasses shares the same main features as those found in experiments on real glasses [1]. Another interpretation is based on the observation that both acoustic dispersion and attenuation measured in glasses and in the corresponding polycrystals are indistinguishable [2]. A further interpretation is based on the observation that in some glasses the high-frequency acoustic attenuation increases as a power of  $q$  with an exponent of four or larger up to frequencies corresponding to the Boson peak [3]. Here, I will discuss the above approaches on the basis of recent inelastic x-ray scattering results on the high-frequency acoustic dynamics of glasses. [1] G.Ruocco et al., Phys. Rev. Lett. 84, 5788 (2000). [2] A.Matic et al., Phys. Rev. Lett. 93, 145502 (2004). [3] B.Ruffè et al., Phys. Rev. Lett. 96, 045502 (2006).