

# **Where is the end of acoustic branches in glasses ?**

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Recent results on the vibrational modes of glasses at frequencies of the order of 1 THz will be presented, using as main example various forms of silica. Acoustic waves in that frequency region start to experience strong scattering, so that they must cease to propagate. A high density of local excitations of SiO<sub>4</sub>-tetrahedra rotations is also observed, forming what is generally called the “boson peak”. The implications for the structure of silica at a scale of ~5 nm, and more generally for the structure of glasses at the extended length scale, will be discussed taking also into account informations available from simulations.