Elastic and plastic transformations of vitreous silica under pressure

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The talk focuses on the thermodynamic properties of vitreous silica submitted to high pressures in a diamond anvil cell as obtained directly from Brillouin Light Scattering experiments or indirectly from standard relations. The analysis reveals non-negligible differences between static and dynamic compressibilities which are mostly related to the existence of thermally activated relaxational processes. Estimate of the residual densifications after complete cycles of compression/decompression is discussed.