## Abstract Submitted for the MAR06 Meeting of The American Physical Society

Aging of Johari-Goldstein Relaxation in Structural Glasses HASAN YARDIMCI, ROBERT L. LEHENY, Department of Physics and Astronomy, Johns Hopkins University — Using frequency-dependent dielectric susceptibility measurements we characterize the aging in two supercooled liquids, sorbitol and xylitol, below their calorimetric glass transition temperatures,  $T_q$ . In addition to the alpha relaxation that tracks the structural dynamics, the susceptibilities of both liquids possess a secondary Johari-Goldstein relaxation at higher frequencies. Following a quench below  $T_g$ , the susceptibility slowly approaches equilibrium behavior. For both liquids, features of the Johari-Goldstein relaxation display a dependence on the time since the quench, or aging time, that is very similar to the age dependence of the alpha peak. However, one can not assign a single fictive temperature to both the alpha and Johari-Goldstein relaxations. For example, the peak frequency of the Johari-Goldstein relaxation remains constant during aging for sorbitol while it increases with age for xylitol, inconsistent with a decreasing fictive temperature. This behavior contrasts with that of the high frequency tail of the alpha peak whose shape and position track the aging of the main part of the peak.

Hasan Yardimci Department of Physics and Astronomy, Johns Hopkins University

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