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**Quench, equilibration, and subaging in structural glasses** JOERG ROTTLER, University of British Columbia, MYA WARREN, University of California, San Diego — In the glassy state, structural relaxations become increasingly sluggish with the wait time $t_w$ since vitrification. While most theoretical models of aging predict that the relaxation times $t_\alpha$ should increase linearly with the wait time, results from both experiments and simulations are frequently better described by a sublinear scaling: $t_\alpha \sim t_w^\mu$, with an aging exponent $\mu < 1$. We show with molecular dynamics simulations of a Lennard-Jones glass former at various temperatures that this apparent "subaging" behavior may be explained by crossover effects from the freshly quenched state at short $t_w$, and into the equilibrated state at long $t_w$. Additionally, the aging behavior on the molecular level is quantitatively reproduced by a coarse-grained continuous time random walk description over the entire range of temperatures and wait times. Since this model is formally equivalent to the well known trap model of aging, this suggests that the Lennard-Jones glass belongs to the "full" aging class $t_\alpha \sim t_w$.

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