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**Aging mechanisms in field cooled PMN-PT 12%** MATTHEW DELGADO, EUGENE COLLA, MICHAEL WEISSMAN, University of Illinois Urbana-Champaign — In the relaxor ferroelectric PMN-PT 12%  $((\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3)_{0.88}(\text{PbTiO}_3)_{0.12})$  the dielectric susceptibility ( $\epsilon'$ ,  $\epsilon''$ ) and pyroelectric current  $I_P$  were measured after different field-temperature histories. As previously reported [1], when the sample was cooled in zero field, standard spinglass-like aging of  $\epsilon''$  was found in the glassy relaxor regime. Cooling in a DC electric field of 0.67 kV/cm drove a transition into a polarized ferroelectric-like state, which retained its polarization after the field was removed at low temperature. During 10 hours of subsequent zero-field aging at 160K,  $\epsilon''$  showed almost no change. This suggests that the mechanisms responsible for glassy aging in the relaxor state are absent in the ferroelectric state. [1] L. Chao, et. al. **PRB** 74, 014105 (2006).

Matthew Delgado  
University of Illinois Urbana-Champaign

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