Abstract Submitted
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BZT and PMN: overt and covert soft quasi spin glasses? DAVID SHERRINGTON, Theoretical Physics, University of Oxford, UK — PMN ($PbMg_{1/3}Nb_{2/3}O_3$) is probably the most famous relaxor ferroelectric. BZT ($BaZr_{1-x}Ti_xO_3$) is a more recently discovered relaxor, within an appropriate concentration range. Both exhibit sharp frequency-dependent susceptibility peaks as a function of temperature, with evidence of polar nanodomains above this region. It will be argued that both BZT and PMN are effectively analogs of soft spin glasses, the former fairly overtly, the latter more covertly, reminiscent of metallic alloys with minority elements that are itinerant magnets in the bulk but without good local moments in isolation in the host. A further analogy with a Anderson localization explains both the features mentioned above.

David Sherrington
Theoretical Physics, University of Oxford

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