

Abstract Submitted
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Thermal Hysteresis in Magnetic Phases of Solid Oxygen N. S. SULLIVAN, University of Florida, M. PILLA, Triquint Semiconductor Inc., J. A. HAMIDA, University of Florida — Measurements of the dielectric susceptibility of solid oxygen have been carried out in the temperature range $4.2 < T < 54$ K. Relatively large hysteresis effects ($\sim 0.4\%$) have been observed for the dielectric response in the α and β phases on thermal cycling below 44 K. The temperature for the transition between the two-sublattice antiferromagnetic α phase and the frustrated quasi-helical β phase is observed to be independent of the thermal cycles. The areas of the thermal hysteresis scale with the extent of the thermal excursion in the frustrated α phase.

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