Abstract Submitted
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Thermal Expansion at the Superconducting Phase Transition in Nb[1] RICHARD K. BOLLINGER, JOHN J. NEUMEIER, Montana State University, CARLOS A.M. DOS SANTOS, Escola de Engenharia de Lorena, Montana State University, HUGO R.Z. SANDIM, Escola de Engenharia de Lorena — Thermal expansion is an important thermodynamic quantity that is difficult to measure with sufficient precision to observe electronic phase transitions such as the normal to superconducting transition. Thermal expansion data will be presented on the superconducting to normal phase transition of Nb (T_c = 9.27 K), obtained with a novel quartz dilatometer cell. Surprisingly, only one prior report of this measurement has been published.* This report does not clearly show the predicted jump at T_c. Thermal expansion data can be used to compute the pressure derivative of T_c, and this analysis will be presented. * White, G.K., *Croyogenics* **2**, 292 (1962).

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