

Abstract Submitted
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Anomaly in the heat capacity of triethylamine and water RUTH SHEWMON, RYAN HARTSCHUH, D.T. JACOBS, Physics Department, The College of Wooster, Wooster OH 44691 — The heat capacity C_p of the liquid-liquid mixture triethylamine-water has been precisely measured using our own computer-based data acquisition and control, adiabatic calorimeter. A step process of adding heat and then waiting several minutes for a stable temperature assures equilibrium values for the heat capacity from the known heat added and the resulting change in temperature. For a sample with a much larger concentration of triethylamine than the critical concentration, we observe strikingly different behavior in the heat capacity than that observed near-critical. The unusual behavior is reproducible and may be due to a structure forming in the sample. We acknowledge support from NSF-REU grant DMR 0243811.

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