

	N.B.P. (°K)	$\Delta H_{\text{vap.}}$ (kcal/g atom)	ΔS (cal/g atom°K)	$T_{\text{red.}}$ based on Hg	$T_{\text{crit.}}$ (°K)
Fe	3160	83,900	26.7	0.31	10,000
Ni	3110	88,870	28.5	0.29	10,700

we obtain the values of 10,000 and 10,700°K for Fe and Ni respectively. If these values are correct it follows since the $D_{\text{b.p.}}/D_{\text{crit.p.}}$ given above would be the same for these two metals, that the slope of the D vs. T line and of the rectilinear diameter would be much more gradual than the experimental line. The D vs. T line for Fe, identified by D , if Fe corresponds to Hg, is the uppermost straight line in Fig. 1. It is apparent that the disagreement with the observed density line is outside of any

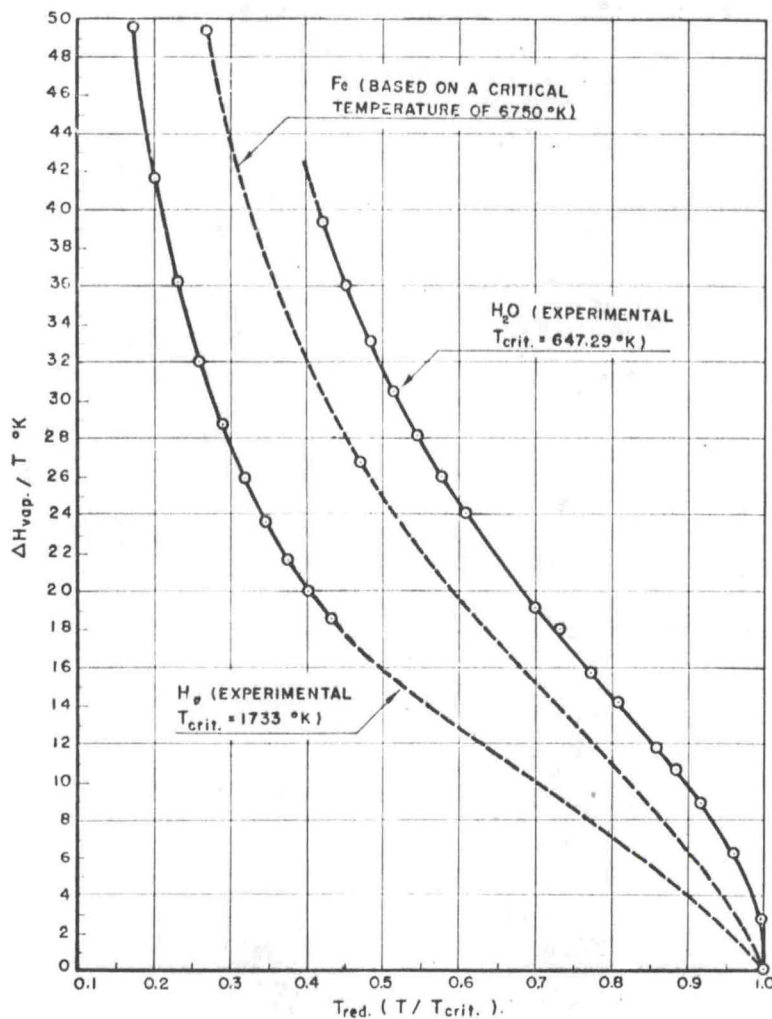


FIG. 2.

⁽¹⁰⁾ D. R. STULL and G. C. SINKE, *Thermodynamic Properties of the Elements*, p. 112 and 135. Advances in Chemistry Series 18, American Chemical Society, Washington, D.C. (1956).