

flow curves (1); $d = 3.36 \mu$

values $(T_1 - T_0)/(T_\lambda - T_0)$ of the and 6 the experimental curves were even values of the temperature.) is remarkably parallel and that for er than 20%. Another way of pre- where $[(X_{\text{obs}} - X_{\text{calc}})/X_{\text{obs}}] \times 100$ or various values of T_0 ; here X lit. Generally the fountain pressure erimental results closely similar to s. Although in the regions of $T_0 \leq$ igh T_1 the correspondence between , the calculated fountain pressures with the measurements. We have ature deviations and indicated that turbulence. The high temperature

based on the assumption that the on- sible for the observed nonlinear $F_n(\mathbf{v}_n)$, which act on each velocity ided in the equations of motion (1) may be drawn from the data repre- is assumption as well as the appli-

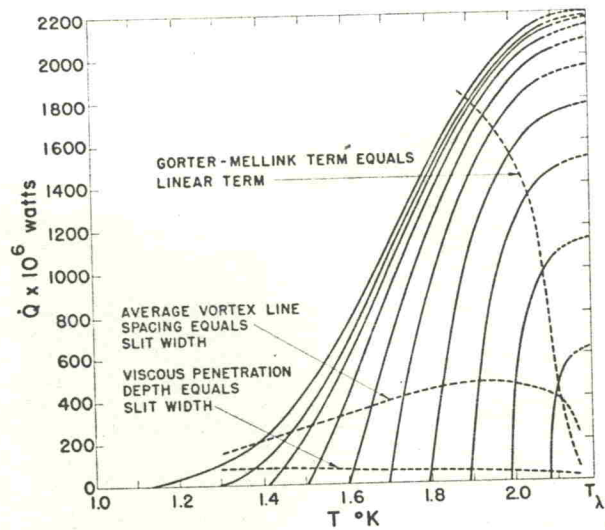


FIG. 4. Family of heat flow curves as calculated using Eq. (26); $d = 3.36 \mu$, $v_e = 0$, A as given by Vinen (4). Dashed lines across the heat flow curves indicate several regions useful in interpreting the vortex line model used for the calculations (see Section V).

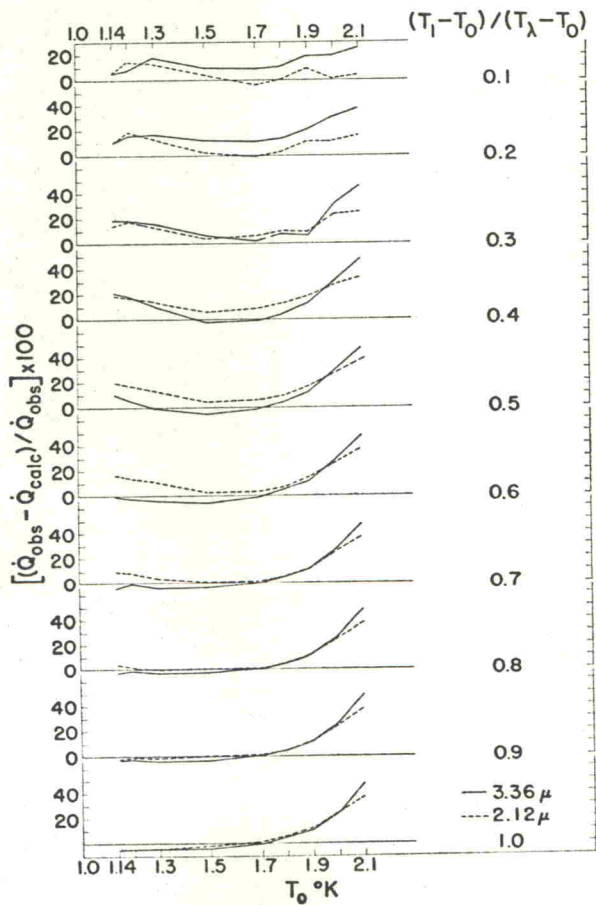


FIG. 5. Percent deviation of calculated heat flow with respect to observed heat flow as a function of initial temperature T_0 for various values of the reduced temperature parameter $(T_1 - T_0)/(T_\lambda - T_0)$; solid curves: $d = 3.36 \mu$; dashed curves: $d = 2.12 \mu$.