



FIG. 8. α_f as a function of T for He^4 at $P = 25.47 \text{ kg cm}^{-2}$ and $T < T_m$.

perature. The curve of Fig. 3 exhibits a sharp rise in α_f with decreasing P_m until a maximum is reached at $\sim 50 \text{ kg cm}^{-2}$. At pressures below this, α_f decreases rapidly, becomes discontinuous at the λ -point by assuming large negative values which decrease in magnitude with further decreases in P_m , as shown in Fig. 8. The α_f values of Keesom and Keesom (9), plotted in Fig. 8, were derived from their PVT measurements and show good agreement with the present data.

The V_f measurements of Table I agree with those of Dugdale and Simon (3) to within 1 percent. The newly determined melting curve, expressed by Eq. (2) and Table VI, forms a smooth extension of that reported earlier (1).