Kosterlitz–Thouless Transition

Figure B.2: Superfluid area density $\rho_s$ of $^4$He films of various thickness versus temperature $T$. The straight line marks the location of the universal jump according to Eq. (B.29). Taken from [6].

Figure 4. Inverse kinetic inductance vs temperature for circular film sample G-C at $\omega = 10^5$ s$^{-1}$ (solid curve). Inset: dependence near the transition at given frequencies.

$$\eta_{s_{20}}(T_{KT}) = \frac{2m^*k_B}{\pi\alpha^2} T_{KT}$$
**IV Curves at the Kosterlitz-Thouless Transition**

![Graph showing IV curves at the Kosterlitz-Thouless Transition](image)

**Fig. 23.** Schematic drawing of $R(T)$ (the array resistance) and $a(T)$ (the IV exponent) as function of the temperature in the low current limit. $R(T)$ varies with temperature according to Eq. (5.6); $a(T)$ varies according to Eq. (5.18).

**2D Josephson Junction Array**

![Graph showing 2D Josephson Junction Array](image)

**Fig. 24.** (a) Current-voltage characteristic curves for a square array of niobium cross on a gold underlayer (see Fig. 10). (From Ref. 39, Fig. 2(a).) (b) The power-law exponent $a(T)$ versus $T$ for the data in (a).