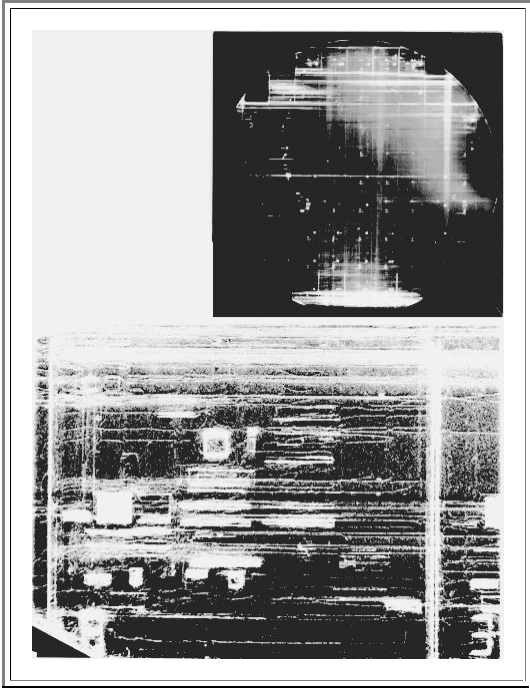


## X-Ray Topography

The big advantage of x-ray topography is that it can reveal the defect structure of large samples, in the case below whole (100 mm) Si wafers. If the negatives are enlarged, details on a 10  $\mu\text{m}$  scale may be seen.

Illustration



● X-ray topography of a **Si** wafer showing "**haze**" (milky area in the upper right half) and dislocation structures. The isolated bright small rectangles are transistors full of dislocations

● Enlargement of an area on the lower left. Some single dislocations are barely visible; the bright geometric structures correspond to device parts with high densities of dislocations.