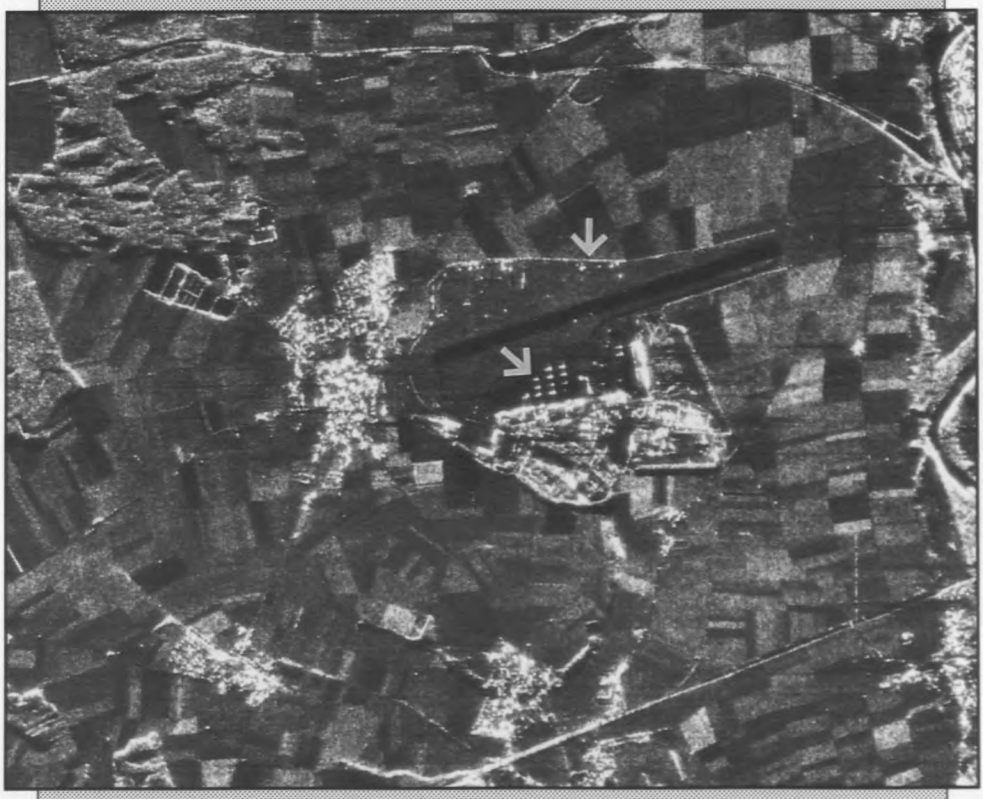
Figure 18 Synthetic Aperture Radar Imagery of an Airfield



The image was acquired using a SAR with 3 m × 3 m resolution. The aircraft on the tarmac appear as bright returns. The asphalt runway and river are surfaces providing low returns and appear dark. Perimeter fences appear as bright lines, particularly if they are oriented parallel to the aircraft's line of flight when the image was acquired. (Courtesy of Intera Technologies Ltd.)

aircraft and ships all appear very bright in radar imagery, making them easy to detect. A number of aircraft are clearly evident on the tarmac in Figure 18. The bright targets in Figure 19 are tethered destroyers. Although the aircraft and ships are clearly detectable, the imagery does not provide enough information to identify the actual types of aircraft or ships.

Airborne Synthetic Aperture Radar (SAR) has potential for patrolling large areas. With a typical swath width of 25 km, an airborne SAR can collect imagery for large areas in a single sortie. A twin-engine turbo-prop aircraft equipped with a SAR could acquire imagery of the entire coast of Namibia, a distance of 1350 km, in a period of four hours.