

The strength of ground-based surveillance is its continuous presence, able to ensure close to full-time coverage throughout the year. The size of antennae, volume of signal processing equipment, and supply of electrical power are not constrained by the limitations of a mobile vehicle. In remote northern locations attendance of operators and maintenance personnel is expensive, but this problem is being alleviated by minimum manning of installations and sending data to central operations centres, and by highly reliable electronics with automatic switchover to standby units in the event of component failure.

Against a planned attack, the vulnerability of surveillance installations would be a consideration, both for the threat of destruction and for electronic countermeasures designed to prevent both detection and recognition that hostile activity was in progress. Ground-based systems are the most vulnerable, aircraft less so, and satellites the least of the three.

Relative strengths and weaknesses of spaceborne, airborne, and ground-based surveillance are summarized in Table A.