

subsequent tracking would be to confirm the nature of the attack, and to allow active and passive defence to function, provided that the means were in place.

There are many major differences between the systems needed to provide warning of attack and those with a capability for active defence. If the warning system functions as intended, then it has fulfilled its mission once warning is delivered, whether or not the system is destroyed in the attack. With the possible exception of cleverly designed covert incapacitation of the functioning of sensors, attack of the warning system should provide the desired warning.

But the early part of an attack may be directed against key components of the defences, with the intention of rendering the defence ineffective. Radars needed for the tracking of bombers or missiles, operations centres needed for the direction of the defences, and interceptor aircraft and anti-aircraft weapons intended for the destruction of the attackers may be targeted by bombs and missiles, degraded by electronic countermeasures, and possibly subjected to electromagnetic pulses from nuclear explosions.

Motivated by the difficulty of intercepting ICBMs, Canada and the United States have placed primary reliance for the protection of the North American continent on strategic nuclear deterrence rather than on active defence. Consequently, in the consideration of the various needs and means for surveillance over the continent and the approaches to it, priority should be given to effectiveness prior to attack, rather than to vulnerability if attack should occur.

A major advantage of space-based sensors would be their potential for detection of aircraft far to the north of the North Warning System, before cruise missiles had been launched, and for tracking of both aircraft and missiles as they made their way across Canada. It is, however, highly probable that it would require more satellites to provide continuous tracking north and south of the North Warning System (or some other line established as the "boundary for warning") than simply to produce a high probability of detection at that boundary.