Figures 7 and 8 showed orbits with inclination 75° and period 91 minutes. Figure 9 depicts comparable information for inclinations 60°, 70°, 75°, 80°, and 90°, each still with a 91 minute period and a swath width of 100 km centred on the ground track. Reducing the inclination makes a very small improvement to the coverage at lower latitudes, but more for latitudes just below the inclination angle. It removes all coverage much beyond the inclination angle. The absolute maximum (above the limits of Figure 8) is the circle of radius 50 km from the north pole, which will be crossed 15.8 times (i.e. by every orbit) by the 100 km swath of a satellite with an inclination of 90°, giving an accessibility interval of 91 minutes. If the period is increased, the number of daily crossings will be proportionately reduced.

RADARSAT, a satellite planned for remote sensing over Canada, is to have an inclination of 98.5°[34] and a period of 101[35] minutes. This was chosen to produce a circular sun-synchronous orbit. RADARSAT's synthetic aperture radar is designed to survey a swath beginning 250 km to the right of the ground track (beyond the nadir hole) and ending 750 km to the right. The coverage of this satellite is shown on Figure 9 as a dashed line, with the number of crossings in 24 hours for latitudes between 83°N and 88°N being too large to be plotted on the diagram. These 500 km offset swaths are also shown on Figure 10 for the 14.3 orbits completed in 24 hours. The swath of a single RADARSAT will survey every point above latitude 69°N at least once a day (on the average), but the more southerly areas of Canadian territory will have accessibility intervals of about two days.

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[34] An orbit with an inclination between 90° and 180° is said to be "retrograde" as it is moving westward.

[35] "Team of Canadian, U.S. firms begins detailed design work on Radarsat", *Aviation Week & Space Technology*, 12 February 1990, pp. 111-115.