

Area of a delay-Doppler resolution cell when the sub-radar point is at (0 N, 0 E), and the spin axis lies along the N-S axis:

$$\Delta A = \frac{c\lambda\tau_p}{4T_c\omega_p [\sin^2(lat) + \cos^4(lat)\cos^2(long)\sin^2(long)]^{1/2}} \quad (4.27)$$