

# Radar Range Equation in Logarithmic Form\*:

$$Z = C + P_r + 20\log_{10}(r)$$

Z: Radar reflectivity factor, dBZ

C: Radar constant, dB

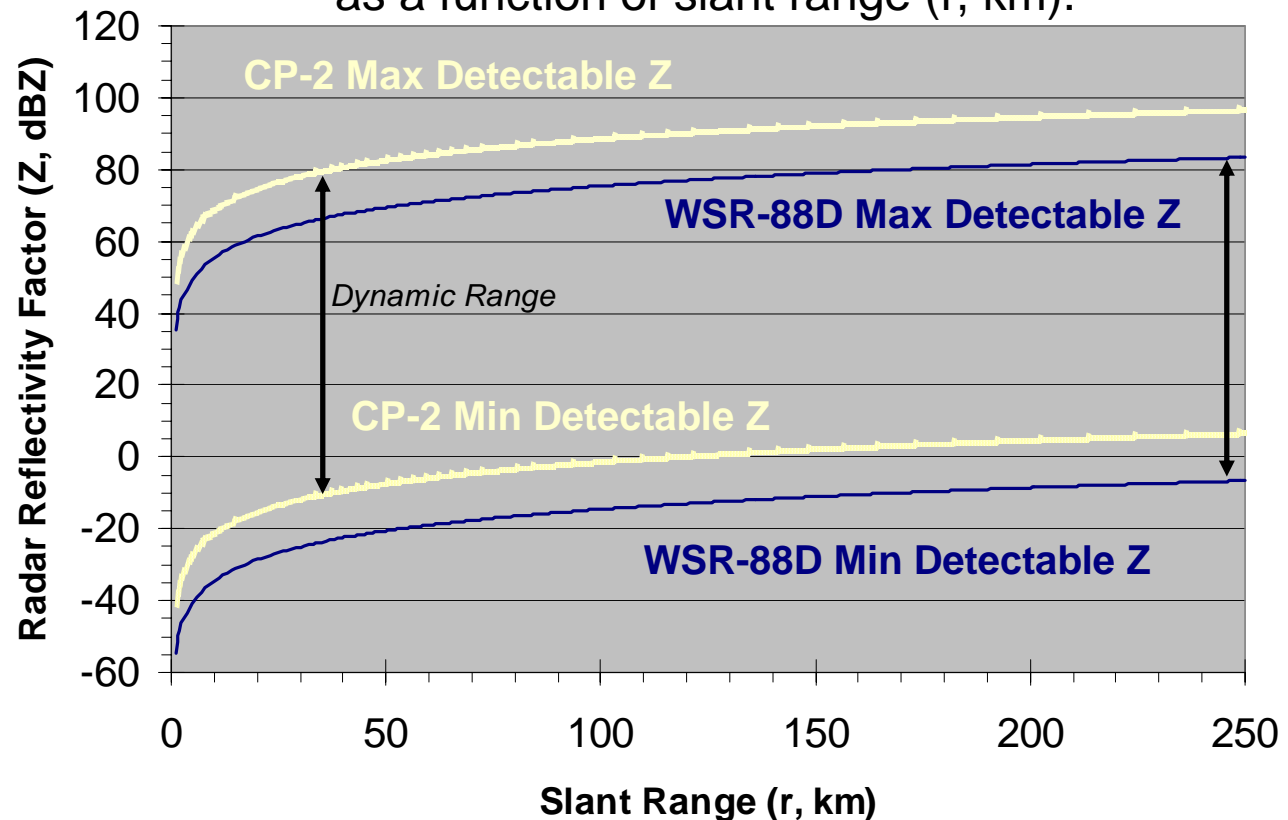
$P_r$ : Received Power, dBm

r: (slant) range, km

radar	C dB	MDS dBm
WSR-88D	58.4	-113
CP-2	67.7	-109

Assume: Dynamic range of 90 dB for both radars.

Minimum and Maximum *Detectable* Reflectivity as a function of slant range (r, km).



\* Loss term ignored here.