

Antarctica Ice Modeling for Cross-Calibration

$$\sigma_0 = 10 \log_{10} \left[\underbrace{AT(\theta_i)^2}_{\text{Volume backscatter}} \underbrace{\cos(\theta_i)}_{\text{Volume modulation}} \underbrace{M_v(\theta_a)}_{\text{Volume modulation}} + \underbrace{\sigma_s(\theta_i)}_{\text{Surface Backscatter}} \underbrace{M_s(\theta_a)}_{\text{Surface Modulation}} \right] + \mathbf{C}$$

Volume Component Surface Component

Volume backscatter Volume modulation Surface Backscatter Surface Modulation

