

**STUDY OF THE ELECTRICAL PARAMETERS LIKE DIELECTRIC CONSTANT,
EMISSIVITY AND SCATTERING COEFFICIENT OF ICE AT DIFFERENT
PHYSICAL TEMPERATURES AT MICROWAVE FREQUENCIES**

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ABSTRACT

The electrical properties like dielectric constant, permeability and the conductivity are very important to study the behaviour of snow. In this study the dielectric constant of ice is measured using wave guide cell method at physical temperature from -10°C to $+10^{\circ}\text{C}$ and emissivity is estimated using emissivity model for smooth surface. The perturbation model is used for estimating scattering coefficient assuming ice as slightly rough surface at different physical temperature. The variation of emissivity as well scattering coefficient for different microwave frequencies will be studied for angle of incidence, physical temperature and the polarization.