

DETERMINATION OF THE COMPLEX
DIELECTRIC PERMITTIVITY OF ICE
IN THE MILLIMETER-WAVE RANGE
BY THE RESONATOR METHOD

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S u m m a r y

A resonator method for the determination of the complex dielectric permittivity of ice in the 8-mm wavelength range has been proposed. For this purpose, a dielectric resonator was fabricated of the material under investigation, and it was excited at whispering gallery (WG) waves. The electrodynamic characteristics of resonators that had been made by freezing water of various types have been measured experimentally. This allowed the corresponding values of the real and imaginary parts of the dielectric permittivity to be calculated.