Abstracts

Noise temperature of a lossy flat-plate reflector for the elliptically polarized wave-case

This paper presents the derivation of equations necessary to calculate noise temperature of a lossy flat-plate reflector. Reflector losses can be due to metallic surface resistivity and multilayer dielectric sheets, including thin layers of plating, paint, and primer on the reflector surface. The incident wave is elliptically polarized, which is general enough to include linear and circular polarizations as well. The derivations show that the noise temperature for the circularly polarized incident wave case is simply the average of those for perpendicular and parallel polarizations.

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