

Abstracts

On the Correlation Radiometer Technique

K. Fujimoto. "On the Correlation Radiometer Technique." 1964 Transactions on Microwave Theory and Techniques 12.2 (Mar. 1964 [T-MTT]): 203-212.

The correlation radiometer is a system in which two antenna-receiver systems are employed, the outputs of the two systems being correlated electronically. This paper studies the two basic types of correlation radiometers, the intermediate-frequency correlation (IF) type and the video-frequency correlation (ENV) type. The SNR's, the minimum detectable temperature sensitivities, the effects of receiver gain and phase fluctuations and the uses of the two types are studied. A comparison of the various characteristics of the two types of correlation radiometers with the same characteristics of the Dicke-type radiometer is made.

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