Abstracts

Noise in the Presence of Strong Signals

B. Senitzky. "Noise in the Presence of Strong Signals." 1968 Transactions on Microwave Theory and Techniques 16.9 (Sep. 1968 [T-MTT] (Special Issue on Noise)): 728-732.

The electrical noise at millimeter wavelengths generated by an absorbing gas in a cavity is computed as a function of the intensity of an applied coherent signal. The phase of the noise components is strongly correlated with the phase of the coherent signal and the absorption and emission spectrum are similar in the neighborhood of the coherent signal frequency. As the intensity of the coherent field is reduced, the noise emitted by the gas-filled cavity becomes random and can be described by Nyquist's equation.

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