Abstracts

A 110 GHz Ozone Radiometer with a Cryogenic Planar Schottky Mixer

O.P. Koistinen, H.T. Valmu, A. Raisanen, V.F. Vdovin, Y.A. Dryagin and I.V. Lapkin. "A 110 GHz Ozone Radiometer with a Cryogenic Planar Schottky Mixer." 1993 Transactions on Microwave Theory and Techniques 41.11 (Dec. 1993 [T-MTT] (1993 Symposium Issue)): 2232-2236.

A total power radiometer is presented for monitoring of the stratospheric ozone spectral line at 110 GHz. Special features such as a cooled planar Schottky mixer as the front end and efficient reduction of standing waves in the quasi-optics, are discussed in detail. The noise temperature of the receiver is 530 K (SSB), and the total bandwidth of the receiver is 1 GHz. A dual acousto-optical spectrometer is used for the signal detection.

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