Abstracts

Design and Performance of a 215 GHz Pulsed Radar System

R.E. McIntosh, R.M. Narayanan, J.B. Mead and D.H. Schaubert. "Design and Performance of a 215 GHz Pulsed Radar System." 1988 Transactions on Microwave Theory and Techniques 36.6 (Jun. 1988 [T-MTT]): 994-1001.

The advent of high-power extended interaction oscillators and low-noise receivers in the 215 GHz frequency window has made it possible to design and operate radar systems at these wavelengths. This paper describes a high-power 215 GHz pulsed radar system developed for remote sensing applications that is capable of making backscatter measurements from terrain targets at ranges of several kilometers under normal atmospheric conditions. The paper also discusses system performance and calibration, together with measurements of snow backscatter coefficients made during early 1987.

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