Abstracts

Synthetic aperture radiometer systems (Dec. 1999 [T-MTT])

D.M. Le Vine. "Synthetic aperture radiometer systems (Dec. 1999 [T-MTT])." 1999 Transactions on Microwave Theory and Techniques 47.12 (Dec. 1999 [T-MTT] (Special Issue on 1999 International Microwave Symposium)): 2228-2236.

Aperture synthesis is an emerging technology for passive microwave remote sensing from space. It is an interferometric technique similar to earth rotation synthesis employed in radio astronomy in which pairs of small antennas and signal processing are used to obtain the resolution of a single large antenna. The technique has the potential to overcome the barriers that antenna size has plated on passive microwave remote sensing from space. The technique has been demonstrated successfully for remote sensing at L-band with the aircraft prototype ESTAR. New aircraft instruments are under development and proposals have been submitted for instruments to demonstrate this technology in space.

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