Abstracts

Radar-Echo Location of Conducting Spheres in Waveguide (Short Papers)

P.I. Somlo. "Radar-Echo Location of Conducting Spheres in Waveguide (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.1 (Jan. 1984 [T-MTT]): 120-122.

The radar-echo locations of conducting spheres placed in the center of the broad wall of a rectangular guide were measured using the synthetic-pulse technique. The measuring instrument was a six-port reflectometer whose results in the frequency domain were transformed digitally into the time domain. It was found that, as the size of the spheres was reduced, the radar-echo locations approached the center of the spheres in an oscillatory manner. The findings are somewhat unexpected, as the echo centers for some sphere sizes appear to be farther away from the source than their physical centers.

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