Abstracts

The Effect of Quasi-Optics Errors on Reflector Antenna Performance

P.R. Foster and R.J. Wylde. "The Effect of Quasi-Optics Errors on Reflector Antenna Performance." 1992 Transactions on Microwave Theory and Techniques 40.6 (Jun. 1992 [T-MTT] (Special Issue on Microwaves in Space)): 1318-1322.

The use of quasi-optics feed systems with a reflector antenna allows multiple frequency operation over a very wide bandwidth for remote sensing of the earth and atmosphere from space. The errors in such a multichannel quasi-optical feed system must be controlled in order to limit the degradation of system performance. These errors can be attributed to the presence of higher order Gaussiau modes but the errors can be minimised if the quasi-optical system can be made independent of frequency. If volume limitations preclude a frequency independent design, the amplitude of the higher order Gaussian modes must be controlled.

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