

MILLIMETER WAVE SENSORS – AN OVERVIEW

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Millimeter-Submillimeter domain instrumentations and measurements remain a technological frontier, due to the lack of technological factors. The research and development activities towards the ever-increasing utilization of dielectric composite structures coupled with willingness of Non-destructive testing (NDT) and measurements has, in recent, produced wide-band sources and components. Microwave imaging techniques in biology, medicine & tissue engineering, materials characterization, plasma diagnostics, industrial and aerospace applications are examples of some research areas in which these techniques have been used in recent years.

In my presentation I will recall some Reflectometry measurement techniques which have been used in Fusion Plasma Diagnostics. These techniques can be easily exploited in Material characterization, as non-destructive technique, which is a growing research and development activities in microwave-millimeter-Submillimeter wave spectrum.