

## PLASMAS AND MICROWAVES

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### ABSTRACT

Since the inception of modern plasma research, microwaves have played an important role. It has first served as a diagnostic tool to determine such properties of the plasma as electron density, collision frequency and electron temperature. Second, the plasma with an applied magnetic field has served as a medium with interesting propagation properties, which may be exploited for various microwave devices.

This paper reviews the field of microwave interaction with plasma with special emphasis on the limitation and range of applicability of the microwave techniques. Examples embracing a variety of plasmas, such as, shocks, dc and RF discharges, rocket exhausts and plasma trails will be discussed.

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## NOTES

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Traveling Wave Tubes, High- and Superpower Klystrons,  
Voltage Tunable Magnetrons, Microwave Power Filters