Abstracts

State of the Art: Background and Recent Developments--Millimeter and Submillimeter Waves

P.D. Coleman. "State of the Art: Background and Recent Developments--Millimeter and Submillimeter Waves." 1963 Transactions on Microwave Theory and Techniques 11.5 (Sep. 1963 [T-MTT]): 271-288.

The aim of this survey is to discuss the basic problems encountered in the general areas of generation, transmission, and detection of millimeter waves. Representative examples of work in these three areas since 1959 are reviewed with respect to the methods and techniques employed to circumvent present limitations and extend the frontier into the submillimeter range. Subject classifications include classical and quantum electronics, harmonic generation optical frequency pumping and mixing, waveguide and optical transmission systems, resonators, and detectors. At the end of each section, a few critical evaluation remarks are made on the work in progress and the prospects of success in the near future. A fairly comprehensive list of some 157 references dating from 1959 is listed by year and subject title. While substantial progress has been made, especially in technology, in the last few years, the submillimeter wave problem appears as formidable as ever and no breakthrough idea has yet been recognized.

❑ Return to main document.