

## **Session PP:**

# **Submillimeter Wave Techniques and Devices**

**Chairman: M. N. Afsar**

Tufts University  
Medford, MA

**PP**

Optically pumped lasers provided many milliwatts of power in the past at submillimeter wave frequencies. Stable solid state sources always being preferred, but these sources lacked in power until recently. Frequency multiplication provided energy at frequencies around and beyond 300 GHz. It is now possible to achieve many milliwatts of power by multiplication of solid state source energy. These enhanced the sensitive receiver technology to grow in recent years. Thermal bolometers are now in wide use as detector element in the submillimeter and mid infrared wavelength region. The recent trend is to fabricate a composite bolometer.

It is still debatable, whether to use an optical technology or a guided wave structure for submillimeter wave systems. A quasi-optical technique is a tentative solution at the present time.

**3:30 p.m.-5:00 p.m., Thursday, May 10, 1990**  
**West Ballroom C**