

## PANEL DISCUSSIONS

Monday Evening, May 5

### Session MEV-I      Microwave Energy Applications, Non-Communication

Session Organizer: M.C. Horton, *Bendix Research Laboratories*

The panel on Microwave Energy Applications is composed of representatives from five areas of applications of microwave power. Topics to be discussed will be presented from a tutorial point of view, and will include industrial applications, power transmission, solid-state techniques for generation of microwave power, high energy applications (ING proton accelerators, plasma generators, etc.), and biological effects related to microwave energy. Each panel member will give a short formal presentation covering his area of interest, after which the session will be open for general discussion with audience participation.

Chairman: W.A. Geoffrey Voss, *University of Alberta*

Panel: J.A. Jolly, *Varian Industrial Microwave Operation*

W.C. Brown, *Raytheon Company*

K.E. Mortenson, *Rensselaer Polytechnic Institute*

G.B. Walker, *University of Alberta*

L.D. Sher, *University of Pennsylvania*

### Session MEV-II

### Techniques for Fabrication and Production of Microwave Integrated Circuits

Session Organizer: B.T. Vincent, *Electro/Data, Inc.*

The purpose of this panel discussion is to present the most recent technology concerning fabrication and production of microwave components and subsystems using microwave integrated circuits. Each panel member will make a brief formal presentation including (1) a description of the technique(s) used by his company, (2) advantages of the technique(s), *i.e.* why the company prefers this particular method of fabrication, *etc.*, and (3) report the success to date using examples, stating quantity of circuits in production, *etc.* After the formal presentations, the panel will be open for general discussion with audience participation.

Chairman: J.B. LaGrange, *Air Force Avionics Laboratory*

Panel: J.F. Bunker, *Microwave Associates, Inc.*

P. Clar, *Motorola, Inc.*

R.B. Schilling, *RCA*

C. Snellings, *Texas Instruments, Inc.*

K. Sodomsky, *Bell Telephone Laboratories*

G.E. Bodway, *Hewlett Packard Company*

Session Organizer: K.E. Gsteiger, *Sperry Rand Corporation*

The principal objective of this panel discussion is to present some of the major problems encountered in dealing with noise in devices and how the device noise affects system performance. Noise in Gunn diode oscillators, avalanche diode oscillators, and multiplier chain sources will be discussed from the component aspect, followed by a discussion of the effects of these noise sources in radar and communication systems. Each panel member will present a formal review of noise in devices or systems as applied to his own area of interest. After the formal presentations, the panel will be open for general discussion with audience participation.

Chairman: J.R. Ashley, *University of Colorado, Colorado Spring.*

Panel: J.G. Josenhans, *Bell Telephone Laboratories*  
D. Leeson, *California Microwave Company*  
D.E. Wunsch, *Collins Radio Company*  
K.E. Gsteiger, *Sperry Rand Corporation*  
T.R. Turlington, *Westinghouse Corporation*  
J.F. White, *Microwave Associates, Inc.*  
R.A. Campbell, *Raytheon Company*

MICRO STATE ELECTRONICS, OPERATION OF RAYTHEON CO.

152 Floral Avenue, Murray Hill, N.J.

S.S. Tunnel diode & Mixer-preamps-Converters-Attenuators  
Duplexers-Modulators-Limiters-Switches-Sources  
Multipliers-Levelers-Phase shifters-Diodes-Materials