Technical Session	Technical Session Organizer
2.3 Slow-Wave Devices	Chris Grabowski (tcgrabo@sandia.gov)

Session TU 1.3: Fast- and slow-wave devices

Tuesday, May 23, 2017 10:00-11:45, Wildwood 12

Session Chair: Adrian Cross, Strathclyde University

10:00 TU 1.3-1 (invited) TESTING OF A DUAL-FREQUENCY 104/140 GHZ MEGAWATT-CLASS GYROTRON FOR FUSION PLASMA HEATING
S. Cauffman, M. Blank, P. Borchard, K. Felch
CPI, Palo Alto, CA, United States

10:30 TU 1.3-2 HEADING FROM W7-X GYROTRONS TOWARDS GYROTRONS FOR DEMO: RESEARCH STRATEGY AND RECENT DEVELOPMENTS AT KIT
J. Jelonnek[1], G. Aiello[2], K. Avramidis[1], J. Franck[1], G. Gantenbein[1], S. Illy[1], Z. C. Ioannidis[1], J. Jin[1], P. Kalaria[1], I. G. Pagonakis[1], T. Rzesnicki[1], S. Ruess[1], T. Scherer[2], D. Strauss[2], M. Thumm[1], C. Wu[1]
[1]*IHM, Karlsruhe Institute of Technology (KIT), Germany, Karlsruhe, Germany*
[2]*IAM-AWP, Karlsruhe Institute of Technology (KIT), Germany, Karlsruhe, Germany*

10:45 TU 1.3-3 PROGRESS OF THE EXPERIMENTS WITH THE EUROPEAN 1MW, 170GHZ INDUSTRIAL CW PROTOTYPE GYROTRON FOR ITER
Z. C. Ioannidis[1], T. Rzesnicki[1], K. Avramidis[1], G. Gantenbein[1], S. Illy[1], J. Jin[1], T. Kobarg[1], I. Pagonakis[1], M. Schmid[1], M. Thumm[1], A. Zein[1], J. Jelonnek[1], S. Alberti[2], F. Braunmueller[2], J. -P. Hogge[2], C. Schlatter[2], J. Genoud[2], M. Q. Tran[2], W. Kasparek[3], C. Lechte[3], J. Chelis[4], G. Latsas[4], A. Zisis[4], I. Tigelis[4], A. Bruschi[5], W. Bin[5], M. Lontano[5], V. Hermann[6], Y. Rozier[6], F. Legrand[6], F. Albajar[7], T. Bonicelli[7], P. -E. Frigot[7]
[1]*Institute for Pulsed Power and Microwave Technology (IHM), Karlsruhe Institute of Technology, Karlsruhe, Germany*
[2]*Swiss Plasma Center, Ecole polytechnique federale de Lausanne, Lausanne, Switzerland*
[3]*IGVP, University of Stuttgart, Stuttgart, Germany*
[4]*Faculty of Physics, National and Kapodistrian University of Athens, Athens, Greece*
[5]*IFP, CNR, Milano, Italy*
[6]*Thales Electron Devices, Velizy-Villacoublay, France*
[7]*Fusion for Energy, Barcelona, Spain*

11:00 TU 1.3-4 AMPLITUDE AND PHASE CONTROLLED MAGNETRON-BASED, RF SOURCE
L. Ives[1], M. Read[1], B. Chase[2], C. Walker[3], G. Collins[1], D. Marsden[1], R. Pasquinelli[2], T. Bui[1], J. Conant[3]
[1]*Calabazas Creek Research, Inc., San Mateo, CA, United States*
[2]*Fermi National Laboratory, Batavia, IL, United States*
[3]*Communications & Power Industries, LLC, Beverley, MA, United States*

11:15 TU 1.3-5 MULTI-BEAM MTM HIGH POWER MICROWAVE SOURCE
A. Elfrgani, H. Seidfaraji, E. Schamiloglu
Electrical and Computer Engineering, University of New Mexico, Albuquerque, NM, United States

11:30 TU 1.3-6 W-BAND GYROTRON TRAVELLING WAVE AMPLIFIER EXPERIMENT BASED ON A HELICALLY CORRUGATED WAVEGUIDE
W. He, C. R. Donaldson, L. Zhang, P. McElhinney, K. Ronald, A. W. Cross, A. D. R. Phelps
Department of Physics, SUPA, Strathclyde University, Glasgow G40NG, United Kingdom

Session WE 1.6: Microwave and Plasma Interactions, Vacuum Microelectronics and THz Devices and Slow Wave Devices

Wednesday, May 24, 2017 10:00-11:30, Wildwood 15

Session Chair: Rebecca Seviour, Huddersfield University

10:00 WE 1.6-1 RESEARCH PROGRESS ON LINEAR AVALANCHE MULTIPLICATION GAAS TERAHERTZ EMITTER
S. Wei, L. Hong, W. Ling
Applied Physics Department, Xi'an Uniecersity of Technology, Xi'an Shaanxi, China

10:15 WE 1.6-2 EFFECTS OF THZ TRANSMISSION ON THE NARROW GAP DC GLOW DISCHARGE PLASMAS
N. Alasgarzade[1], H. Altan[1], D. Mansuroglu[1,2], A. B. Sahin[3], I. U. Uzun-Kaymak[1]
[1]*Physics Department, Middle East Technical University, Ankara, Turkey*
[2]*Canakkale Onsekiz Mart University, Canakkale, Turkey*
[3]*Ankara Yildirim Beyazit University, Ankara, Turkey*

10:30 WE 1.6-3 NEXT GENERATION IONOSPHERIC HEATER ARRAY
B. Esser, J. C. Dickens, J. J. Mankowski, A. A. Neuber
Center for Pulsed Power and Power Electronics, Texas Tech University, Lubbock, TX, United States

10:45 WE 1.6-4 STUDYING PERMITTIVITY AND ELECTRIC FIELD FOR PLASMA GENERATION BY DIELECTRIC RESONATOR ARRAYS
S. Dennison, J. Hopwood, A. Chapman
Electrical and Computer Engineering, Tufts University, Medford, MA, United States

11:00 WE 1.6-5 DESIGN OF OVERSIZED TWTS WITH PHOTONIC BAND-GAP STRUCTURES
G. Rosenzweig, J. C. Stephens, M. A. Shapiro, R. J. Temkin
Plasma Science and Fusion Center, Massachusetts Institute of Technology, Cambridge, MA, United States

11:15 WE 1.6-6 A 140 GHZ GYRO-AMPLIFIER USING A DIELECTRIC-LOADED, SEVER-LESS CONFOCAL WAVEGUIDE
A. Soane, M. A. Shapiro, R. J. Temkin
MIT, Cambridge, MA, United States

Session TH 1.6: Slow-Wave Devices

Thursday, May 25, 2017 from 10:00-12:00, Wildwood 15

Session Chair: Jane Lehr, University of New Mexico

10:00 TH 1.6-1 HIGH POWER LONG PULSE MICROWAVE GENERATION FROM A METAMATERIAL BASED BACKWARD WAVE OSCILLATOR
X. Lu, J. S. Hummelt, M. A. Shapiro, R. J. Temkin
Massachusetts Institute of Technology, Cambridge, MA, United States

10:15 TH 1.6-2 RECENT ADVANCES IN MAGNETICALLY INSULATED TRANSMISSION LINE OSCILLATOR RESEARCH
Y. -W. Fan, X. -Y. Wang, A. -K. Li, J. -C. Ju, Z. -Q. Li, X. -P. Zhang, T. Jiang
College of Optoelectric Science and Engineering, National University of Defense Technology, Changsha, Hunan, China

10:30 TH 1.6-3 (invited) DESIGN AND SIMULATION OF A RELATIVISTIC INVERTED MAGNETRON
T. P. Fleming[1], M. R. Lambrecht[1], P. J. Mardahl[1], J. D. Keisling[2]
[1]*RDHE, Air Force Research Laboratory, Kirtland AFB, NM, United States*
[2]*Leidos Inc., Albuquerque NM, United States*

11:00 TH 1.6-4 MODELING OSCILLATIONS IN TWTS BY USING THE TESLA-FAMILY OF 2D LARGE-SIGNAL CODES
I. A. Chernyavskiy[1], A. N. Vlasov[1], B. Levush[1], T. M. Antonsen, Jr.[2]
[1]*U.S. Naval Research Laboratory, Washington, DC, United States*
[2]*Leidos, Inc., Reston, VA, United States*

11:15 TH 1.6-5 LOW VOLTAGE FOLDED WAVEGUIDE MULTIPLE BEAM MINI-TWTS: DESIGN AND MODELING
A. N. Vlasov[1], J. C. Rodgers[1], J. A. Pasour[1], I. A. Chernyavskiy[1], S. J. Cooke[1], B. Levush[1], T. M. Antonsen Jr.[2], D. Chernin[2], K. T. Nguyen[3]
[1]*Naval Research Laboratory, Washington, DC, United States*
[2]*Leidos Inc., Billerica, MA, Unirted States*
[3]*Beam-Wave Reasearch Inc., Bethesda, MD, United States*

11:30 TH 1.6-6 HARMONIC GENERATION IN AN OCTAVE BANDWIDTH TRAVELING-WAVE TUBE
P. Y. Wong[1], D. Chernin[2], Y. Y. Lau[1], P. Zhang[3], D. H. Simon[4], B. W. Hoff[4], G. B. Greening[1], R. M. Gilgenbach[1]
[1]*University of Michigan, Ann Arbor, MI, United States*
[2]*Leidos Inc., Reston, VA, United States*
[3]*Michigan State University, East Lansing, MI, United States*
[4]*Air Force Research Laboratory, Albuquerque, NM, United States*

11:45 TH 1.6-7 EVALUATION OF THE PIERCE PARAMETERS C AND Q IN A TRAVELING WAVE TUBE
D. H. Simon[1,2], P. Wong[1], D. Chernin[3], Y. Y. Lau[1], B. W. Hoff[2], P. Zhang[1,4], C. Dong[1,5], R. M. Gilgenbach[1]
[1]*University of Michigan, Ann Arbor, MI, United States*
[2]*Air Force Research Laboratory, Albuquerque, NM, United States*
[3]*Leidos, Reston, VA, United States*
[4]*Michigan State University, East Lansing, MI, United States*
[5]*Princeton Plasma Physics Laboratory, Princeton, NJ, United States*