

Technical Session	Technical Session Organizer
2.2 Fast-Wave Devices	John Jelonnek ( <a href="mailto:john.jelonnek@kit.edu">john.jelonnek@kit.edu</a> )

### 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<sup>1</sup>, G. Aiello<sup>2</sup>, K. Avramidis<sup>1</sup>, J. Franck<sup>1</sup>, G. Gantenbein<sup>1</sup>, S. Illy<sup>1</sup>, Z. C. Ioannidis<sup>1</sup>, J. Jin<sup>1</sup>, P. Kalaria<sup>1</sup>, I. G. Pagonakis<sup>1</sup>, T. Rzesnicki<sup>1</sup>, S. Ruess<sup>1</sup>, T. Scherer<sup>2</sup>, D. Strauss<sup>2</sup>, M. Thumm<sup>1</sup>, C. Wu<sup>1</sup>  
<sup>1</sup>IHM, Karlsruhe Institute of Technology (KIT), Germany, Karlsruhe, Germany  
<sup>2</sup>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<sup>1</sup>, T. Rzesnicki<sup>1</sup>, K. Avramidis<sup>1</sup>, G. Gantenbein<sup>1</sup>, S. Illy<sup>1</sup>, J. Jin<sup>1</sup>, T. Kobarg<sup>1</sup>, I. Pagonakis<sup>1</sup>, M. Schmid<sup>1</sup>, M. Thumm<sup>1</sup>, A. Zein<sup>1</sup>, J. Jelonnek<sup>1</sup>, S. Alberti<sup>2</sup>, F. Braunmueller<sup>2</sup>, J. -P. Hogge<sup>2</sup>, C. Schlatter<sup>2</sup>, J. Genoud<sup>2</sup>, M. Q. Tran<sup>2</sup>, W. Kasperek<sup>3</sup>, C. Lechte<sup>3</sup>, J. Chelis<sup>4</sup>, G. Latsas<sup>4</sup>, A. Zisis<sup>4</sup>, I. Tigelis<sup>4</sup>, A. Bruschi<sup>5</sup>, W. Bin<sup>5</sup>, M. Lontano<sup>5</sup>, V. Hermann<sup>6</sup>, Y. Rozier<sup>6</sup>, F. Legrand<sup>6</sup>, F. Albajar<sup>7</sup>, T. Bonicelli<sup>7</sup>, P. -E. Frigot<sup>7</sup>  
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<sup>2</sup>Swiss Plasma Center, Ecole polytechnique federale de Lausanne, Lausanne, Switzerland  
<sup>3</sup>IGVP, University of Stuttgart, Stuttgart, Germany  
<sup>4</sup>Faculty of Physics, National and Kapodistrian University of Athens, Athens, Greece  
<sup>5</sup>IFP, CNR, Milano, Italy  
<sup>6</sup>Thales Electron Devices, Velizy-Villacoublay, France  
<sup>7</sup>Fusion for Energy, Barcelona, Spain

#### 11:00 TU 1.3-4 AMPLITUDE AND PHASE CONTROLLED MAGNETRON-BASED, RF SOURCE

L. Ives<sup>1</sup>, M. Read<sup>1</sup>, B. Chase<sup>2</sup>, C. Walker<sup>3</sup>, G. Collins<sup>1</sup>, D. Marsden<sup>1</sup>, R. Pasquinnelli<sup>2</sup>, T. Bui<sup>1</sup>, J. Conant<sup>3</sup>  
<sup>1</sup>Calabazas Creek Research, Inc., San Mateo, CA, United States  
<sup>2</sup>Fermi National Laboratory, Batavia, IL, United States  
<sup>3</sup>Communications & Power Industries, LLC, Beverly, 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  
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