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**Session A-2 Complete Characterization of Rectangular Waveguide Measurement Standards for Vector Network Analyzer in the range of Millimeter and Sub-millimeter wave frequencies''t 04**

M. Horibe, R. Kishikawa, M. Shida, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

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Y. Lau, OML Inc., Morgan Hill, United States

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U. Arz<sup>1</sup>, M. Rohland<sup>1</sup>, S. Buttgenbach<sup>2</sup>, <sup>1</sup>Physikalisch-Technische Bundesanstalt, Braunschweig, Germany, <sup>2</sup>Institut für Mikrosystemtechnik, Braunschweig, Germany

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X. Shang<sup>1</sup>, M. J. Lancaster<sup>2</sup>, M. Ke<sup>3</sup>, Y. Wang<sup>4</sup>, <sup>1</sup>the University of Birmingham, Birmingham, United Kingdom, <sup>2</sup>the University of Birmingham, Birmingham, United Kingdom, <sup>3</sup>the University of Birmingham, Birmingham, United Kingdom, <sup>4</sup>the University of Birmingham, Birmingham, United Kingdom

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N. Otegi<sup>1</sup>, J. Collantes<sup>1</sup>, M. Sayed<sup>2</sup>, <sup>1</sup>University of the Basque Country (UPV/EHU), Bilbao, Spain, <sup>2</sup>Microwave&MillimeterWave Solutions, Santa Rosa, United States

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H. Huang<sup>1</sup>, X. Liu<sup>1</sup>, Y. B. Lee<sup>2</sup>, <sup>1</sup>National Institute of Metrology, China, Beijing, China, <sup>2</sup>Anritsu Company, Morgan Hill, United States

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