

Activity Title:	Millimetre-Wave Measurements at MilliLab		
Contract type	TRP	Budget (k	<mark>k€)</mark> 750
Company (-ies) (including country)	VTT Technical Research Centre of Finland and Aalto University (MilliLab partners)		
Team (name of the participants in the project)	Tauno Vähä-Heikkilä, Tero Kiuru, Mikko Kantanen, Pekka Rantakari, Jussi Varis, Antti Räisänen, Juha Mallat, Krista Dahlberg, Subash Khanal, Kimmo Silvonen, Ville Viikari		
(*) Speaker (s)	Tero Kiuru	Email	tero.kiuru@vtt.fi
Short Speaker Information (experience and involvement in this project – maximum 60 words)	Dr. Tero Kiuru is Senior Scientist at VTT Technical Research Centre of Finland. He has been involved in all Work Orders of the MilliLab Frame contract. His field of expertise is millimeter wave and THz measurement techniques.		
Summary of the activity (maximum 400 words and 2 pictures)	The work performed in the MilliLab Frame Contract (Millimetre-Wave Measurements at MilliLab) aims to the following goals: 1. Establish and maintain state-of-the-art technical know-how in the area of millimetre wave active and passive components and circuits as well as in the area of CAD, measuring and calibration methods. 2. Carry out the calibration, testing, modelling and characterization related services for ESA and for other customers. Primary service is given to ESA and customers of ESA. 3. Actively seek for customers, both in space and other fields. 4. Provide unbiased services to the customers and guarantee confidentiality on the activities performed and on the results obtained. 5. Be committed on continuing the services after the initial period of ESA support. In order to fullfill these goals, the Work Orders of the Frame Contract have concentrated in the topics including, but not limited to: 1. Improving on-wafer measurement techniques and calibration techniques up to 325 GHz 2. Improving electrical and thermal measurement techniques for state-of-the-art European Schottky diodes which are expected to be used in the MetOp Second Generation satellite instruments 3. Improving millimeter wave and THz noise measurement techniques 1. Improving millimeter wave and THz noise measurement techniques		