The 48th European Microwave Conference

Duration: 08:30 – 17:50
Room: N110

WM-02
High Power RF Breakdown and PIM in Space Applications

Organisers:
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Abstract
This one-day workshop seeks to present in a condensed format the most relevant advances achieved in the field of high power radio-frequency breakdown effects in space applications: Multipactor, Corona and Passive Intermodulation. For this purpose, most of the relevant topics will be covered. Following a phenomena introduction, the speakers will present the status-quo in material science, simulations, testing, component design and regulation. At the end of the workshop the attendees will be able to understand this topic as a whole.
By selecting speakers from industry and research entities, this workshop aims to present its content not only from an academic point of view but also from a practical approach. Having this in mind, the workshop has been prepared to cover areas of interest for students/researchers and engineers dealing with the design and manufacture of high power RF devices for space applications.
In addition, this workshop will emphasize the effort paid in order to achieve a consensus on how multipactor testing and simulation is conducted along the European partners.

Programme

Introduction to High Power RF Breakdown Effects and PIM
David Raboso Garcia-Baquero[1]
[1]European Space Agency

Secondary Electron Emission Yield in Multipactor Breakdown
Mohamed Belhaj[1]
[1]ONERA

High Power Breakdown in Dielectrics and Ferrites
John Petit[1]
[1]Honeywell Aerospace

Additive Manufacturing for High Power Applications
Petronilo Martín-Iglesias[1], Isabel Montero[2]
[1]ESTEC (European Space Agency), [2]ICMM-CSIC

Multipactor Simulations with Arbitrary Geometries and Waveforms
Carlos Vicente[1]
[1]Aurora Software and Testing, Dassault Systemes

Signal Management in High Power Modulated Testing
Òscar Monerris Belda[1]
[1]Val Space Consortium

Passive Intermodulation Measurement and Extension to Multicarrier Scenarios
Davide Smacchia[1]
[1]Val Space Consortium

Towards a New Regulatory Consensus (New ECSS Standard on Multipaction)
Jérôme Puech[1]
[1]Centre National d'Études Spatiales (CNES)