



15th International EME Conference

Churchill College, Cambridge, England

17–18th August 2012

Organised by
The UK Microwave Group



www.microwavers.org

Published for the UK Microwave Group
by the Radio Society of Great Britain, 3 Abbey Court, Fraser Road,
Priory Business Park, Bedford MK44 3WH. Tel: 01234 832700.
Web: www.rsqb.org

Published 2012.

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ISBN: 9781 9050 8683 2

Cover design: Kevin Williams
Editing and layout: Ian White GM3SEK
Production: Mark Allgar M1MPA
Printed in Great Britain by Page Bros Ltd of Norwich in Norfolk

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Welcome to Cambridge and to EME2012, the 15th International EME Conference.

Previous events have been hugely successful and we have every intention of maintaining the high standards!



The response to the Call for Papers was almost overwhelming – the number and quality were excellent, and we had a real challenge identifying those to be formally presented. As well as the programme of conference papers, EME2012 is featuring a new series of multi-media presentations; we hope these will be at least as successful as the mainline presentations.

We are delighted that the conference is being held at **Churchill College** in its 50th Anniversary Year. The college environment means that everything we need is on one site – lectures, bedrooms, food and bar - not necessarily in the order of importance!

The visit to **Bletchley Park** is well timed, as they are celebrating the 100th anniversary of the birth of Alan Turing, who worked there as a code-breaker and is widely acknowledged as the ‘father’ of electronic computing. Also at Bletchley Park, the Radio Society of Great Britain opened its new National Radio Centre in July. Everyone who has previously visited Bletchley Park has reported back very favourably so I am sure you will all enjoy the visit.

The Partners’ Programme has, we hope, the right mix of ‘retail therapy’ and the opportunity to see, in detail, a number of famous historic buildings and towns.

As with all conferences of this size and complexity the success is dependent on many organisations and individuals. The main support organisation is the **UK Microwave Group** (which has membership in 23 countries despite its name!) The UKuG covers all aspects of Microwaves so please take the opportunity to join if you are not already a member. Thanks also to **the RSGB** for their support and, in particular, the publication of these Proceedings. Additionally, we appreciate the efforts of the Moderators for each session, the work put in by **the volunteers** from Camb-Hams on reception and the British Amateur Television Club. The real effort has been by the individuals on the Organising Committee and, as Chairman, I would like to thank them all for their unstinting efforts.

Finally, thanks to our Sponsors, and in particular to **our Principal Sponsor, Waters & Stanton**.

I personally operate on all bands from 50 MHz to 10 GHz but only terrestrially at the moment. My eyes have been opened over the last two years to the challenges and opportunities of moonbounce and I hope that others will be enthused to operate EME after hearing the talks and meeting the delegates at this conference.

Have a wonderful time in Cambridge!

73

Graham G4FSG

Chairman, EME2012 Organising Committee



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More detailed versions of most presentations are available in each contributor's folder on the Conference DVD, with other supporting material.

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The **Conference DVD** is a new initiative for EME2102. The DVD includes all the material from the Multimedia sessions and has given the paper authors the freedom to expand their presentations, using other digital media if they wish.

The DVD has also given us space to welcome other contributions, both technical material and further information from our advertisers.

The UK Microwave Group has also included **Backscatter**, the technical archives of the Group's newsletter *Scatterpoint*.

The **Conference DVD** is organised into three major folders:

- **Expanded Conference Papers**

Each of the paper presenters has a personal folder containing (in most cases) a longer and more detailed version of their printed paper, with copies of references and additional supporting material.

- **Multimedia Conference Presentations**

These are the files of the Multimedia presentations that took place alongside the main conference sessions.

Amateur Deep Space Reception – Equipment and Techniques

Paul Marsh MOEYT

A Comparison of Wattmeter Accuracies at 1296 MHz based on Calorimetric Measurements

Douglas Millar K6JEY

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Ingo Gaspard DF1VH

VLNA – A Very Low Noise (pre)-Amplifier for the UHF Bands

update by Sam Jewell G4DDK

Ground Gain – Between Theory & Practice

Gaëtan Horlin ON4KHG

- **Other Contributors**

Among others, this folder contains technical contributions from the UK Microwave Group (*Backscatter*), DK3UC, F5SE, F5JWF, G4HUP, G4NNS and WD5AGO. Also in this folder are contributions from advertisers.