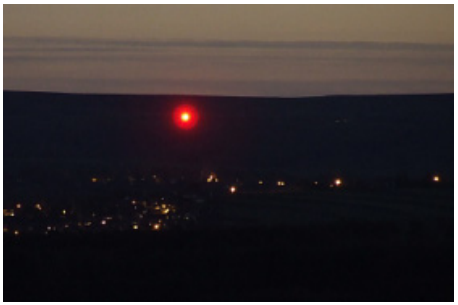
An Amateur Radio publication for the Microwave Enthusiast

scatterpoint

Published by the UK Microwave Group

2010 NOVEMBER-DECEMBER



G3PHO/P left receiving the red light voice transmissions of G8AGN/P over a 12km path in October. Next month's Scatterpoint will have an account of the recent marked upsurge in UK lightwave activity from East Anglia to South Yorkshire and the North East of England. Have you seen the light yet?

In this issue ...

Latest News ...

- **MERRY CHRISTMAS & A HAPPY NEW YEAR TO EVERYONE!**
- Scatterpoint delivery changes are imminent
- THz bands see new activity across the country (see editorial comments)
- Martlesham uW Round Table date changes from November to April next year
- UKuG appoints a new secretary … Martin, G8BHC
- Bumper 24 page issue this month!

MANY THANKS TO ALL OUR CONTRIBUTORS THIS MONTH ... WITHOUT YOU THERE WOULD BE NO SCATTERPOINT!

UK Microwave Group Contact Information

Chairman: G4BAO Dr. John C. Worsnop **Email:** chairman@microwavers.org **Located:** Cambridgeshire (JO02CG) **Address:** 20 Lode Avenue, Waterbeach, Cambs, CB25 9PX **Home Tel:** ++44 (0)1223 862480	**General Secretary: G8BHC Martin Richmond-Hardy** **Email:** secretary@microwavers.org **Located:** Suffolk (JO02PA) **Address:** 45 Burnt House Lane Kirton, Ipswich, Suffolk, IP10 0PZ **Home Tel:** ++44 (0)1394 44213	**Membership Secretary: G8DKK Bryan Harber** **Email:** membership@microwavers.org **Located:** Hertfordshire (IO91VX) **Address:** 45 Brandles Road Letchworth Hertfordshire, SG6 2JA **Home Tel: n/a**	**Treasurer: G4FSG Graham Murchie** **Email:** treasurer@microwavers.org **Located:** Suffolk (JO02) **Address**: 42 Catherine Road, Woodbridge, Suffolk, IP12 4JP **Home Tel:** ++44 (0)7860 356775
Scatterpoint General Editor: G3PHO, Peter Day **Email:** editor@microwavers.org **Located:** South Yorkshire (IO93GJ) **Address:** 146 Springvale Road, Sheffield, S6 3NU, United Kingdom **Home Tel:** ++44 (0)114 2816701 (after 6pm)	**Scatterpoint Activity News Editor: G8APZ Robin Lucas** **Email:** scatterpoint @microwavers.org **Located:** Essex (JO01DO) **Address:** 84 Woodman Road Brentwood Essex, CM14 5AZ **Home Tel:** ++44 (0)1277 211126	**Contest & Awards Manager: G3XDY John Quarmby** **Email:** g3xdy@btinternet.com **Located:** Suffolk (JO02OB) **Address:** 12 Chestnut Close, Rushmere St. Andrew, Ipswich, Suffolk, IP5 1ED **Home Tel:** ++44 (0)1473 717 830	**RSGB Microwave Manager: G6JYB Murray Niman** **Email:** g6jyb@microwavers.org **Located:** Essex (JO01) **Address:** 55 Harrow Way Great Baddow Chelmsford Essex, CM2 7AU **Home Tel:** ++44 (0)1245 474969

From the Editor's Desk

I edit this issue during what is the coldest and snowiest period I can remember in the 30 years I've been living at my present address. It's not portable weather, that's for sure, so I concentrate my operating on HF chasing the very rare Kermadec Island expedition ZL8X .. and yes I did eventually bag him (on CW of course) for an all time new one! HF in Scatterpoint? Surely not? Yes, a reminder is sometimes needed that this is a multi-facetted hobby and each to his own facet. I feel fortunate that I have many facets to play with in our hobby. Doing something other than microwaves is useful in preventing one from becoming an introvert who can, if gone too far down that road, become a kind of elitist 'snob' rubbishing others who may not practice his or her own particular brand of amateur radio. We are all in this together folks from DC to Light! Talking of Light, there have been some extremely interesting developments at the red light area of the spectrum (over 400THz … yes, THz!). Three Sheffielders and a bigger group of North Easterners have been busy building and operating gear using LEDs rather than lasers to make some great contacts, including a 66km path from Lincolnshire to Sheffield. Even SSB equipments transverting from 3.5MHz (80 metres!) to 25kHz, and then modulating the LED, are now in use by the NE group...and, wait for it, yes the East Anglian lads are getting in on the act!

Will they beam east to OZ, PA and DL, as is their habit ☺ or will they look inwards to work the rest of us who have finally seen the light? Look out for an article in RadCom early next year and hopefully some useful information in the January 2011 Scatterpoint.

Keep warm and a

VERY MERRY CHRISTMAS & A HAPPY NEW YEAR TO YOU ALL

73 from Peter, G3PHO

News, views and articles for this newsletter are always welcome. Please send them to G3PHO (preferably by email) to the address shown above. **The CLOSING date is the FIRST day of the month** if you want your material to be published in the next issue. (***This is a change from previous dates)***

SCATTERPOINT WILL VERY SOON BE INTERNET DOWNLOAD ONLY ….

(These notes do not apply to those overseas microwave societies who exchange their newsletters with us. They will continue to receive their complementary copy by email).

Page four of this issue outlines two important changes to the way you will be getting your ten Scatterpoints each year. Already two thirds of UKuG's membership have completed the change over described below but there is a way to go before the job is finished. If you have not yet signed up for the Yahoo Scatterpoint internet download facility then please read and follow the instructions below. **Do it now while you're in the mood!** The change over will hopefully eliminate problems we sometimes have of readers failing to receive their newsletter. Usually this is due to the reader not advising us of an email or postal address change but occasionally there are delays in cyberspace or even human error on the part of the editor! The Yahoo download is the most reliable way of getting Scatterpoint each month. What's more, you will have a choice of formats to download, from black and white single pages to high resolution colour booklet editions which look really great when printed out on your colour printer. To join the Yahoo Group go to:

http://uk.groups.yahoo.com/group/scatterpoint/

and click on **JOIN THIS GROUP** which can be seen on the top right hand corner above the UKuG logo. Only paid up UKuG members are be able to use this facility so there is no danger of 'freeloaders' or spurious mail affecting you. When you are asked to fill in an ID and password **please use your callsign as part of the ID** as this enables the editor and membership secretary to see who is on the Yahoo list. Also, when prompted for an email address to which the automatic Yahoo monthly Scatterpoint advice note is to be sent, it is important that you use the address that the old email version was sent to, otherwise Yahoo will allocate you a Yahoo.co.uk address which you will probably not want!

Do not confuse this group with the UK Microwaves Yahoo Reflector which is a place where folk can freely air their opinions, have silly arguments at times and even swap technical notes when they feel so moved! The only emails you will receive from the Scatterpoint Yahoo Group will be the monthly advice from Yahoo to say your new Scatterpoint is ready for download. It will remain there for TWO months. At any one time, there will always be the present month's Scatterpoint and that of the previous month available. Very occasionally, we might send readers a special important message via Yahoo. We are also planning to send membership renewal notices this way as the system lends itself nicely to that. **Many thanks for your co-operation**.

UK MICROWAVE GROUP SUBSCRIPTION INFORMATION

The following subscription rates now apply. **Please make sure that you pay the stated amounts** when you renew your subs next time. If the amount is not correct your subs will be allocated on a pro-rata basis and you could miss out on a newsletter or two!

Your personal renewal date is shown at the foot of your address label if, at present, you receive Scatterpoint in paper format.

If you are an email subscriber then you will have to make a quick check with the membership secretary if you have forgotten the renewal date. From now please try to renew in good time so that continuity of newsletter issues is maintained. Put a **renewal date reminder** somewhere prominent in your shack (the editor suggests having it tattooed on your forearm!).

Please also note the payment methods and be meticulous with Paypal and cheque details. **QUOTE YOUR CALLSIGN PLEASE!**

Renewal of subscriptions requiring a **paper copy** of Scatterpoint are as follows:

Delivery to:	**UK £**	**US $**	**Eur €**
UK	14.00	-	-
Europe	18.00	36.00	26.00
Rest of World	24.00	48.00	36.00

Payment can be made by:

*** Paypal to ukug@microwavers.org**

or

*** a cheque (drawn on a UK bank) payable to 'UK Microwave Group' and sent to the membership secretary** (or as a last resort, by cash sent to the treasurer!)

The standard membership rate for 2010 is:

UK	**£6.00**
US	**$12.00**
Europe	**€10.00**

This basic sum is for **UKuG membership.** For this you receive Scatterpoint for **FREE** by electronic means (now internet only).

THE FUTURE OF SCATTERPOINT
IMPORTANT NEWS FOR ALL READERS

The UK Microwave Group Committee held a meeting, just prior to its AGM at the Martlesham Microwave Round Table convention in mid November. The treasurer reported very positively on the general financial situation of the group but he had identified one area where the Group was running at a loss and that is the printed paper version of Scatterpoint. When Scatterpoint was first introduced some six years ago, ALL members received the paper version through the post but, once an email PDF version was offered for free, as part of the basic £6 (then $10US) UKuG subscription, the numbers wanting the paper edition fell dramatically but the Group was still able to provide it at an increased subscription rate to cover printing and postage costs. Unfortunately these costs have now risen to such an extent over the years and subscriptions to the printed Scatterpoint have fallen to below 100, that the Committee strongly feel that only an increase to £25 or more a year would cover the production costs and this would still leave very little if any for UKuG membership. Those members who take the email version have all of their £6 annual subs put into UKuG funds which supports beacon projects around the UK as well as underwriting various events and producing various microwave awards. In 2012, the Group will be hosting the International EME Conference at Cambridge and it's already pledged a substantial (but repayable) amount of UKuG funds to get the event organised. The cost *per member* of producing and posting the paper Scatterpoint is rising almost monthly and it has become uneconomic to carry on this way. **Taking all this into account, the committee have decided that the paper Scatterpoint should be discontinued as from the 1st June 2011.**

The committee are very aware that there will a handful of readers who have either no computer or internet or both and therefore will not be able to receive their newsletter by electronic means. However, this is estimated at somewhere between 1% and 2% of the current total membership and so we could not just keep the paper version going for such a small number. The subscriptions to the paper version seem to be falling monthly and it might not be long before the numbers might drop below 60 or so. To get the best printing rates we still have to print and pay for at least 100 copies so, without a massive rise, the subs for 60 readers would not cover the 100 copies and postage …. and with the situation very rapidly getting past the point of no return.

Those readers who will be hardest hit by this change should contact the editor and the membership secretary early in 2011 and we will do our best to help you. If you have no computer and printer then it's highly likely that there will be another UKuG microwaver near to you who can print you a copy each month, with you covering any expenses. You may also have access to a computer and printer in your local library.

Naturally we will be using the subs you may have already paid by June 1st to extend your UKuG membership beyond that date.

Any comments, good or otherwise (!) should **not** be sent to your editors! They merely put this journal together and are not responsible for the financial side of its production. The UKuG Chairman and the Treasurer are available, with flak jackets already on, to receive your emails (or letters if you don't have the internet!).

Please also note the need for you all to sign up to the SCATTERPOINT YAHOO GROUP in order to receive the electronic version of Scatterpoint as the committee has also decided to cease the email supply as of 1 January 2011. There is a handful of readers who have asked to be retained on a email list kept by the editor … we emphasise the word small! At the time of going to press there is at least a third of you (ie over 170) who have not made the change over. Since the editors cannot sign you up for Yahoo you have to do this yourself! Please make every effort to do this by the end of this year as we do not want this change over to drag along for months after that. How to join the Scatterpoint Yahoo Group is described once again on **page three** of this edition. Please be sure to make your primary contact email address in your Yahoo membership the same one as you normally use to get Scatterpoint by email, otherwise Yahoo will allocate you a yahoo.co.uk address which you may not want and which you may not notice in the mailbox. To do this will usually mean adding a new email address and marking that as your primary one instead of the one given to you by Yahoo. **MANY THANKS FOR YOUR CO-OPERATION IN BOTH THESE MATTERS …..**

Laser Transceiver Revisited

John, M0ELS

It's been a hectic year so far for me, with numerous projects popping up out of the "noise" so to speak, the latest being a rebuild of my laser transceiver, which is nearing completion. I could not bear to look at my feeble effort for a transceiver and wanted a more stable mechanical platform. Everything barring the receive LDR is mounted inside a diecast aluminium box as shown below.

The LDR was mounted inside a torch head at its focal point (see photo right) and mounted on top of the box as shown. The original light bulb was unscrewed and removed from its plastic holder. The LDR was then mounted on the end of the plastic bulb holder and then screwed back into place. This was done several times and trimmed to get the focal length. The LDR was then super glued into position. It's quite sensitive in that when the laser is aimed at a bicycle reflector at the bottom of the garden, I can hear my own audio from the reflected light. Once the reflected light is shone into the torch head, the audio becomes very loud.

The transceiver has the following functions and some of the switches and s-meter, can just be seen in the photo right. The small pcb on the bottom right corner is the 555 tone generator.

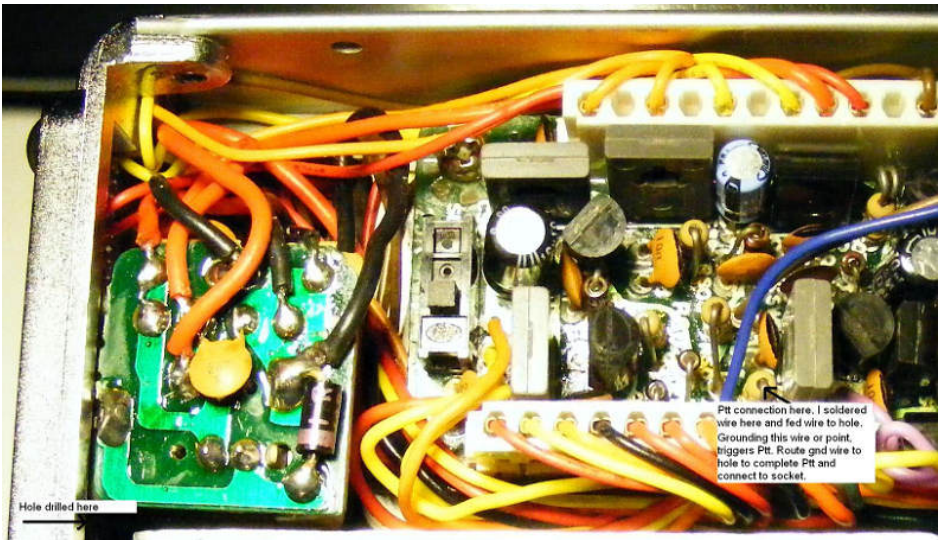
- A push button which gives a steady 1Khz tone used for alignment purposes with the other station.
- A CW function, which allows one to send cw as well as voice.
- A s-meter on Rx.
- A switch to switch the laser off when receiving.
- A master off/on switch.

Future modificationss are to change from the laser module to Lumiled lighting's Hi-power red led and conversion to SSB instead of AM. Having no-one locally to test with is not much fun but I will be making a trip to the nearby football fields to do some more tests, once the weather improves in the Spring. I keep changing things from time to time, so it's never really a completed project but rather work in progress.

73 from John – M0ELS

PTT MOD FOR THE STANDARD C58 2m TRANSCEIVER
by John M0ELS

The C58 is one of the earlier all mode 2m transceivers, with 1w output and several accessories such as a 25w amp, etc. It's an ideal candidate for portable work in that it can be run off internal AA 1.2V rechargeable batteries. One flaw in its design is the lack of an external PTT line and, as it is, it's quite useless for microwave work. I also discovered that one had to key the mic to supply PTT for the cw to work. I looked at a few options to add an external PTT line and came up with this simple mod.



Remove the top cover and you can see the AA battery holders occupying the back of the transceiver, making it impossible to add a socket in that area. I found a big enough gap to drill a 3mm diameter hole, which would allow me to take a couple of wires to the outside world (see bottom left corner of the photo)

Looking at the manual's circuit diagram, I located a nearby PTT line which, when grounded, would activate the PTT. I soldered one wire to this resistor leg as shown above and another to a nearby ground point, then fed them out through the small hole, with a small knot on the inside to prevent the wires from being pulled through the hole. A 3.5mm socket was then added to the free end. The PTT line from my 3cm transverter would then connect to this socket. I replaced the cover, connected the PTT to the transverter and everything is working 100%.

The 2011 VHF Contest Calendar is now available on the RSGBCC web site at www.rsgbcc.org

CAVEAT EMPTOR!

Be on the lookout when you order components.
Many big suppliers have a contract with couriers to supply shipping through their network, ignoring ordinary mail. They are making money, not only from components but also from shipping! Always see that the supplier has facilities for ordinary mail service especially for small components. Here are some suppliers who **do not** overcharge you for shipping :

http://www.rfmicrowave.it/
http://www.bitsbox.co.uk/
http://www.bardwells.co.uk/
http://www.ssejim.co.uk/39-rfcompsindex.ok.htm
http://www.futurlec.com/
http://www.rshelectronics.co.uk/
http://sellweb.co.uk/google728fe5813f7bcdb.html
http://www.frimu.nl/trafo.htm
http://www.rfcandy.biz/shop/
http://www.dapj.net/hobby/?cat=33
http://www.budgetronics.eu/N_frame.h...dgetronics.eu/
http://www.rfparts.com/
http://www.bartradio.co.uk/
http://www.jabdog.com/
http://www.xs4all.nl/~barendh/Indexeng.htm
http://home.kpn.nl/a.van.waarde/id18.htm
http://www.oldradioworld.de/
http://www.vandijkenelektronica.nl/

73 from Paul 9H1FQ

MARTLESHAM ROUND TABLE NOISE FIGURE TEST RESULTS ..

A postscript and 'health warning' for the NF measurements made at Martlesham this year. It appears that one of the cables used to link the transverters for 13/9/6cm to the NF meter may have been faulty, and this could mean that the NF measurements on those three bands are not accurate. G3LTF reports that his preamps on 9cm and 6cm showed much worse noise figures than when measured at the 2010 Dallas EME conference, for example. Hopefully full service will resume at the April 2011 Round Table.

73 from a snowy Suffolk
John G3XDY

AIM4170 antenna analyzer

If you're interested in the AIM4170 antenna analyzer, you might find my updated presentation useful:

http://homepage.ntlworld.com/wadei/aim4170.htm

I have no commercial interest in the analyzer -- I am just a very satisfied user.

73 Ian, G3NRW

FOR SALE … Price £5.00 including post and packing

Winstar LCD modules, type WH1604A (16 x 4 characters) ideal for PIC based projects SWR meters , Frequency counters, etc. A vast amount of PIC source code exists on the Web for interfacing or develop your own using PIC assembler or "C" . A PDF information sheet is available on request.

Contact Kevin G3AAF at:

Kevin@avery03.fsnet.co.uk<mailto:Kevin@avery03.fsnet.co.uk

G4BAO EME PRESENTATION (as shown at Martlesham)

"The Bodger's Guide to Patio Moonbounce"

is now downloadable at www.g4bao.com.

73 John, G4BAO

Useful Path Calculation Spreadsheet from Andy, G4JNT

The spreadsheet available at: http://www.g4jnt.com/ReflectedPathLoss.xls allows two stations to get an estimate of signal strengths and S/N ratio when reflecting off a common structure that is Line Of Sight to both such as aircraft scatter or large structures on adjacent hills. It implements standard radar equations to determine the received signal intercepted by a structure of known area, then assumes this to be re-scattered uniformly.

Input the values shown in blue specifying Tx power, distances, cross sectional of the scatterer and receiver data - all the other spreadsheet cells are protected - to see how reflected signals can be made to work for you. I'm not sure of the cross sectional area of aircraft for their scatter calculations, but when used for signals from GB3SCX reflected off a cylindrical tank and an ISO cabin on Cheesefoot head 16km away, it gives remarkably accurate results compared with actual observation.

TO ALL CW ENTHUSIASTS

.... an offer from Dave, G0DJA

I've been considering how to encourage the use of CW on the bands above 30MHz.

I know that CW is already a very popular mode on the VHF/UHF/SHF bands as most of my 'best DX' on these bands has been achieved using the mode. However, it can sometimes appear to be a bigger challenge to work a station in your own IARU square using CW than someone over 1000km away...

So, here's a suggestion that I'm prepared to administer, if there's support for the idea.

If people send me their lists of squares worked, using CW of course, per band per month I will put together a table of numbers of squares worked per person per band. I will rank them per band and as a total for all bands. These totals would then reset to zero at the start of every new month for all contributors.

I will then attempt to keep a score of different squares worked, month by month, quarter by quarter and then per year as well. I don't propose to keep a year by year score, as that would favour those who will have been licensed for a longer period than others. Those getting licensed in the mid part of a year I won't be able to help, other than the fact that they will start each new month at the same score as everyone else anyway and might be more enthusiastic when they start out on the bands.

The only administrative issue I would raise at this point is that I would not be prepared to filter out stations between reports. By this I mean that I would not, let's say, want to try to filter out contributors to one magazine over another.

What do you all think of these ideas?

Dave G0DJA <dave.g0dja@tiscali.co.uk>

UKuG CONTEST RESULTS 2010

April 2010 Lowband Contest Results

Entries were noticeably up this year compared with last year's April event, with a good level of portable activity and representation from G,GW,GI and GM in the logs. Conditions were nothing special but the activity was welcome, including a rare locator square in the shape of GM4GUF/P in IO76.

On **1.3GHz** Neil G3RIR was the winner by a large margin with some good DX to all corners of the UK. Runner up was Keith GW3TKH/P with a similar number of contacts but not such good DX.

2.3GHz was won by G4SJH/P with a good lead over Neil G4LDR, although DX contacts were few and far between.

3.4GHz was well supported this time, and GW3TKH/P takes the honours with a close fought win over Dave G1EHF/P. Leading fixed station was George G8AIM.

The overall winner was the "Gibberlets minus two" consisting of G1EHF/P and G4SJH/P, and the overall runner up was Keith GW3TKH/P. Leading fixed station was Neil G4LDR.

All of those mentioned above will receive certificates, with new entrant certificates going to G3RIR and GM4GUF/P.

73 from John G3XDY, UKuG Contest Manager

April 2010 Low Band Contest Results

Overall

Pos	Callsign	1.3GHz	2.3GHz	3.4GHz	Total
1	Gibberlets -2	402	1000	970	2372
2	GW3TKH/P	507	667	1000	2174
3	G4LDR	461	694	294	1449
4	G8AIM	259	372	503	1134
5	G3RIR	1000	0	0	1000
6	G0JMI/P	146	289	557	992
7	G3PHO/P	458	0	484	942
8	GM4GUF/P	309	0	0	309
9	G6GVI/P	231	0	0	231
10	G0EHV/P	218	0	0	218

1.3GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	G3RIR	IO92JL	14	GM4GUF/P	3230
2	GW3TKH/P	IO81LS	14	G4BAO	1636
3	G4LDR	IO91EC	11	GW8ASD	1488
4	G3PHO/P	IO93AD	11	GI6ATZ	1478
5	G1EHF/P	IO91GI	10	G6GVI/P	1299
6	GM4GUF/P	IO76HL	2	G3RIR	999
7	G8AIM	IO92FH	8	G4ALY	836
8	G6GVI/P	IO83RO	8	G1EHF/P	745
9	G0EHV/P	IO84XT	4	G3RIR	705
10	G0JMI/P	IO91ME	4	G3PHO/P	472

2.3GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	G4SJH/P	IO91GI	7	G3XDY	1299
2	G4LDR	IO91EC	7	G4DDK	902
3	GW3TKH/P	IO81LS	8	G4ALY	866
4	G8AIM	IO92FH	6	G0JMI/P	483
5	G0JMI/P	IO91ME	4	GW3TKH/P	375

3.4GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	GW3TKH/P	IO81LS	9	G3PHO/P	878
2	G1EHF/P	IO91GI	8	G3PHO/P	852
3	G0JMI/P	IO91ME	4.5	GW3TKH/P	489
4	G8AIM	IO92FH	5	GW3TKH/P	442
5	G3PHO/P	IO93AD	3.5	G1EHF/P	425
6	G4LDR	IO91EC	4	GW3TKH/P	258

June 2010 Low Band Contest Results

Overall

Pos	Callsign	1.3GHz	2.3GHz	3.4GHz	Total
1	Combe Gibberlets	528	1000	1000	2528
2	GM4CXM	1000	0	0	1000
3	G4DDK	420	543	0	963
4	G8AIM	218	335	409	962
5	G4LDR	55	361	499	915
6	GW3TKH	27	209	358	594
7	G4BRK	233	0	0	233
8	G6GVI/P	105	0	0	105
9	G4HQX/P	13	0	0	13

1.3GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	GM4CXM	IO75TW	26	OZ1FF	9635
2	G3WBQ/P	IO91GI	27	GM4CXM	5090
3	G4DDK	JO02PA	8	DL0GTH	4047
4	G4BRK	IO91HP	10	GM4CXM	2241
5	G8AIM	IO92FH	16	GM4CXM	2102
6	G6GVI/P	IO83RO	7	G3WBQ/P	1009
7	G4LDR	IO91EC	4	G4ALY	529
8	GW3TKH	IO81JM	2	G4ALY	257
9	G4HQX/P	IO81WT	2	G3WBQ/P	124

2.3GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	G3WBQ/P	IO91GI	9	G4ALY	1229
2	G4DDK	JO02PA	1	DL0GTH	667
3	G4LDR	IO91EC	4	G4ALY	444
4	G8AIM	IO92FH	4	G4LDR	412
5	GW3TKH	IO81JM	2	G4ALY	257

3.4GHz

Pos	Callsign	Locator	QSOs	Best DX	Points
1	G3WBQ/P	IO91GI	6	G4ALY	717
2	G4LDR	IO91EC	3	G4ALY	358
3	G8AIM	IO92FH	3	G3WBQ/P	293
4	GW3TKH	IO81JM	2	G4ALY	257

June 2010 Lowband Contest Results

A modest increase in entries over last year was evident, but down on the April event, with fewer portables in evidence despite the better weather at this time of year.

Ray GM4CXM won 1.3GHz by a substantial distance over G3WBQ/P, who could not compete with the high points per contact scored by Ray. Activity levels were good with a few stations making contacts into Europe.

2.3GHz was won by G3WBQ /P by some margin from Sam G4DDK, the latter made only one contact but it was the best DX worked on 2.3GHz by a long way.

G3WBQ/P also won 3.4GHz, again with a large gap to runner up Neil G4LDR.

The overall winner was the "Combe Gibberlets", G3WBQ/P, operated by G3WBQ, G3TCU, G1EHF, G3TCT, and G4SJH. Overall runner up and leading fixed station was Ray GM4CXM.

Certificates will go to the stations listed above. In addition a new entrant certificate will go to G4HQX/P

73

John G3XDY

24/47/76GHz Trophy Cumulative Results 2010

24GHz

				Scores				
Pos	Callsign	Overall Score	Total QSOs	Session	Session	Session	Best DX	km
1=	G3ZME/P	80	1	80	0	0	GW3TKH/P	80
1=	GW3TKH/P	80	1	80	0	0	G3ZME/P	80

47GHz No entries

76GHz No entries

5.7GHz Cumulatives 2010

One less entry was received this year, but the number of contacts made by the winner was up by nearly 20%, and the best DX distance achieved also increased, despite no remarkable improvement in conditions. A few stations managed to make contacts outside mainland UK, with PA/ON7BV/P providing the DX in many cases.

Congratulations to Telford & DARS G3ZME/P, operating from Brown Clee in Shropshire, who won the G3KEU Trophy by a considerable distance, and to runner-up Roger Ray G8CUB/P who receives a certificate. Leading fixed station Neil Underwood G4LDR will also receive a certificate, as will G8AIM who operated with Radio talkback only.

10GHz Cumulatives 2010

After a bumper crop of entries in 2009, there was a drop back to the same level as 2008 with 12 stations sending in logs, although many more took part. Several entries came from first time entrants.

Despite the reduced number of entries, this year's winners managed to better last year's winning number of contacts with 100 QSOs in their log. Conditions were generally uninspiring, with virtually no rainscatter contacts made this year but best DX distances are upon 2009. Once again PA/ON7BV/P appeared as best DX for several stations.

In the Open section Telford & DARS G3ZME/P took the honours. Runner up Peter Day G3PHO/P operated from a number of sites in IO83/IO93. Congratulations Telford ARS, who will receive the G3RPE Memorial Trophy, and to G3PHO/P who will receive the runners-up certificate.

Steve Cooke G1MPW/P (Ashdown Forest) continued his dominance of the restricted section, but Roger Ray G8CUB/P moves into the Runner Up position this year, operating from a number of sites in the SE of England. The G3JMB Memorial Trophy goes to G1MPW/P and the runners up certificate to G8CUB/P.

Neil Underwood G4LDR gains a certificate as the leading Fixed Station in the Open section, and George Tarver G8AIM is the leading Fixed Station in the Restricted Section.

Ian Wareing GW8OGI/P and Pete Morys GW4HQX/P will receive certificates as first time entrants.

24GHz G0RRJ Cumulatives 2010

Entries held steady this year, with more activity from stations in the North and West than last year. GW3TKH/P and G3PHO/P recorded the best DX in the contest at 148km.

Keith Winnard GW3TKH/P operated from sites in IO81 and IO82 to take top spot this year, followed by the Telford & DARS group G3ZME/P in close pursuit. Keith will receive the G0RRJ Trophy as winner and a certificate goes to G3ZME/P.

Neil Underwood G4LDR takes the Leading Fixed Station award, and also made the highest overall number of contacts.

24GHz/47GHz/76GHz Trophy Cumulatives 2010

As last year no entries were received for the 47/76GHz bands for this series of three events. Next years rules will change to run this as a single event rather than a cumulative, to provide a stronger focus for activity. Only two entries were received for 24GHz, with just the one contact between them so GW3TKH/P and G3Z (the contest call of G3ZME/P) are joint winners of the 24GHz Trophy.

73 from John G3XDY UKUG Contest Adjudicator

24GHz G0RRJ Cumulative Results 2010

Pos	Callsign	Overall Score	Total QSOs	Scores					Best DX	km
				Session #1	Session #2	Session #3	Session #4	Session #5		
1	GW3TKH/P	632	7	142	0	0	290	200	G3PHO/P	148
2	G3ZME/P	600	9	143	0	0	227	230	G3PHO/P	126
3=	G3PHO/P	360	3	0	0	0	235	125	GW3TKH/P	148
3=	G8CUB/P	360	8	160	0	39	109	91	GW3TKH/P	121
5	G4LDR	246	10	15	48	150	48	63	G4ZXO/P	102
6=	G1MPW/P	120	3	53	49	18	0	0	G8CUB/P	53
6=	G6KIE/P	120	3	53	49	18	0	0	G8CUB/P	53
8	G4WYJ/P	74	2	0	74	0	0	0	G1MPW/P	49

24GHz G0RRJ Cumulatives 2010

Entries held steady this year, with more activity from stations in the North and West than last year. GW3TKH/P and G3PHO/P recorded the best DX in the contest at 148km.

Keith Winnard GW3TKH/P operated from sites in IO81 and IO82 to take top spot this year, followed by the Telford & DARS group G3ZME/P in close pursuit. Keith will receive the G0RRJ Trophy as winner and a certificate goes to G3ZME/P.

Neil Underwood G4LDR takes the Leading Fixed Station award, and also made the highest overall number of contacts.

24GHz Trophy Cumulatives 2010

As last year no entries were received for the 47/76GHz bands for this series of three events. Next year's rules will change to run this as a single event rather than a cumulative, to provide a stronger focus for activity. Only two entries were received for 24GHz, with just the one contact between them so GW3TKH/P and G3Z (the contest call of G3ZME/P) are joint winners of the 24GHz Trophy.

73 John G3XDY UKUG Contest Adjudicator

5.7GHz Cumulative Results 2010

Pos	Callsign	Overall Score	Total QSOs	Scores					Best DX	km
				Session #1	Session #2	Session #3	Session #4	Session #5		
1	G3ZME/P	6539	54	1151	1553	2394	2031	2214	F1PYR/P	501
2	G8CUB/P	2298	18	0	0	343	726	1228	PA/ON7BV/P	342
3	G4LDR	2003	25	186	411	544	865	594	G3PHO/P	228
4	G3PHO/P	1750	11	265	0	0	1360	125	G4LDR	228
5	G4WYJ/P	1680	12	0	0	815	0	865	G3ZME/P	258
5	GW3TKH(/P)	284	3	149	135	0	0	0	G4ALY	134
7	G8AIM	126	2	0	126	0	0	0	G3ZME/P	74

10GHz Cumulative Results 2010

Open Section

Pos	Callsign	Overall Score	Total QSOs	Scores					Best DX	km
				Session #1	Session #2	Session #3	Session #4	Session #5		
1	G3ZME/P	11220	100	2700	3043	4524	3653	2520	F6DKW	533
2	G3PHO/P	6083	34	2591	0	0	1580	1912	G4ALY	366
3	G4LDR	5611	48	1695	1947	1358	1969	714	F6APE	423
4	G4KUX	2041	11	0	0	2041	0	0	G4ZXO/P	432

Restricted Section

Pos	Callsign	Overall Score	Total QSOs	Scores					Best DX	km
				Session #1	Session #2	Session #3	Session #4	Session #5		
1	G1MPW/P	4920	27	2095	415	2410	0	0	F1NPX/P	512
2	G8CUB/P	4031	40	269	576	1391	1119	1521	PA/ON7BV/P	342
3	G6KIE/P	3863	24	1700	415	1748	0	0	F1NPX/P	512
4	GW8OGI/P	3580	30	0	663	1286	1679	0	G4ALY	313
5	G4WYJ/P	2883	25	0	586	1184	0	1113	F6DKW	279
6	GW3TKH(/P)	1346	10	852	135	0	359	0	M0DTS/P	312
7	GW4HQX/P	774	6	0	0	0	0	774	G3PHO/P	202
8	G8AIM	126	2	0	126	0	0	0	G3ZME/P	74

Checklog with thanks from: G0EHV/P

Martlesham 2010

The Microwave Round Table held at Martlesham attracted more than 120 attendees, if the list who registered on the MRS website is anything to go by. Visitors came from far and wide and included our 'honorary Brit' Kent Britain WA5VJB, several German and Dutch microwavers and at least one Scot!

The lecturer programme, as usual, was very good and covered a wide range of topics from Backyard EME, EME with a big dish to the FUNcube Dongle Project. It was a pleasure once again to Zdenek, OK1DFC who showed us, as well as describing his excellent 2.3GHz portable EME tranverter, that we could all try EME with relatively simple gear. In fact Zdenek has worked people using just 17 elements and 30 watts on 70cm! His big dish does the work for both sides of the QSO course!

An innovative lecture method was that by Tom Williams WA1MBA, who talked about his 76GHz preamp via Skype, the actual Power Point presentation being operating here in the UK but with live commentary over the internet. Fellow American Kent Britain, WA5VJB, gave another entertaining talk, this time re stacking dissimilar antennas at HF and VHF, dispelling the myth that all our antenna farm has to have a certain stacking distance if severe interaction is to be avoided.

The fleamarket was, as always, full of interesting stuff although Kent seemed to have a surfeit of MUD 2010 Proceedings books … apparently a download URL had appeared on the net a week or so before the meeting so many had already got their "bootleg" copy that way!

Saturday saw an excellent, well attended dinner at the Queen Elizabeth Hotel, Copdock. It is always a good social occasion and it was pleasing to see so many there.

The AGM was well attended and important decisions were both made and announced. Therwere five places on the committee that members were asked to vote for. Eight candidates stood for election and the five successful ones were: G3XDY, G4DDK, G4NNS, G6JYB and G3AAF, the latter being the "new boy on the block" as far as UKuG committee membership goes but far from that in the wider UK microwave community where Kevin has been an important influence in helping to set up the, now annual, Finningley Microwave Convention. Welcome aboard Kevin! It's always good to have 'new blood' on a committee. Also announced at the AGM was the appointment of our new General Secretary, Martin Richmond-Hardy, G8BHC, who takes up the reins after Lehane G8KMH stepped down this year due to heavy commitments elsewhere. Our thanks go to Lehane for a job very well done.

The AGM was the time when the new Scatterpoint subscription policy was announced. You can read about this on page 4.

Various awards were presented by the UKuG Chairman, John G4BAO, including a very well deserved **G3EEZ Memorial Trophy and plaque to Peter Blair, G3LTF**. His contributions to UK microwaves are legend, particularly through EME but also in otherwise unseen areas where his professional expertise and advice have been invaluable. John **G3XDY was presented with the G3VVB Trophy** for Best Home Constructed equipment displayed at the Crawley Microwave Round Table in September.


G3LTF

The weekend was rounded off with the Contest Forum at which the few regular microwave contesters there had the chance to air their views to the Contest Manager, G3XDY. As you will see in next month's Scatterpoint, these views have been taken on board and some interesting and hopefully exciting new contest events will take place in 2011. Please do support these initiatives!

Thanks as always go to the Martlesham Radio Society for arranging the excellent venue and programme at BT Adastral Park, to the MRS members who brought along their own test gear so that visitors could get items tested and finally to the willing helpers who spent their weekend serving sandwiches, cake, tea and coffee!

G3XDY

BEACON NEWS

Not all readers of Scatterpoint look at the UK beacon reflector. Those interested should take a look at the updated list of the latest UK applications at: http://www.beacons.org.uk/

There is some extra info and a query on future mm-Wave Beacon MGM bandwidths (24GHz and above) in Beacon reflector posting:

http://groups.yahoo.com/group/uk_beacons/message/978"

Regards from **Murray G6JYB**

.....

As mentioned at the recent Martlesham Roundtable the new apps below are now all with Ofcom (though they may take some time to process) and the vetting status page on http://www.beacons.org.uk/ has been updated accordingly

Murray G6JYB

Vetting List Additions:

Call	MHz	Location	
GB3SEE	24048.960	Reigate	New Beacon
GB3UOB	3400.935	Bath	New Beacon
GB3FNY	10368.752	Finningley	New Beacon
GB3CCX	47088.940	Cheltenham	New Beacon
GB3CCX	75976.940	Cheltenham	New Beacon
GB3CCX	134xxx.940	Cheltenham	New Beacon
(Yes - 134GHz!)			

The Bath beacon forms part of an educational joint venture. The new mm-Wave CCX cluster (co-sited with the current 10GHz beacon) would be quite a pioneer. For such high frequencies I am also open to using a wider BW emission code to facilitate MGM experiments.

For those who missed it at the RSGB Convention, I have also formally linked the current planning map for the new UK 70cm Beacon Project onto www.beacons.org.uk. Any technical comments on the above are welcome

Note that clearances for any NoV in a Secondary band continue to be hard to progress at present due to Primary User issues, so you need to be patient with regards to approval times.

Regards, **Murray G6JYB**

NORWEGIAN 23cm BEACON

I was recently onsite to service a repeater and took a couple of pictures to illustrate the siting for the 23cm beacon previously mentioned in Scatterpoint by Kai, LA3QMA.

the beacon in its temporary position

The photograph below shows the tower where it is intended to install the beacon.

Permission is given for these photos to be published.

The title photo shows the view the beacon has to the west, over the North Sea … ie towards the UK.

Next time I'm up there I'll take pictures of the take off to the SE, S, and SW.

73 from **Peter Ebsworth, Forland, Sotra**

CONTEST and ACTIVITY REMINDER

NOVEMBER/DECEMBER

28-Nov 0900 - 2000 Low band 1.3/2.3/3.4GHz
Moved to avoid 144MHz AFS

December

21-Dec 2000 - 2230 1.3/2.3GHz Activity Contest
Arranged by VHFCC (RSGB Contest)
26-Dec 0900 - 2000 All-band Activity Day
Non competitive

For the first time in more than three years since I started editing this column, I have not only gone beyond the regular four pages, but even five pages wasn't enough! As a result, I've "commandeered " two more pages, and moved forward from the usual page 16. I hope that this trend continues!

October 2010 has been an exciting month on the microwave bands, with a widespread opening spread over a five day period. Conditions started to improve firstly in the Scandinavian and Baltic areas, and moved a few days later to cover the UK and parts of France.

Many stations were happy to work new countries and new squares, and for some of them, personal distance records. For others, there were "firsts" between countries. All of this came as a welcome surprise. Many of us have been bemoaning the apparent demise of the autumnal lifts which used to be so common and predictable.

With just a few remaining contests and activity periods left this year, we have some reports of the activity in the contests which are now behind us.

ERRATUM

Neil Underwood, **G4LDR** spotted an error in his previous activity report which he submitted in July.

He mistakenly listed **G4WYJ/p** as the station he had worked on **24GHz**, but it should have been **G4ZXO/p** as written in his log book.

Neil wishes to apologise to Peter for the error.

1.3/2.3GHz OCTOBER UKAC

The UK Activity Contest continues to be very popular, and it seems to be gaining more followers as the months go by. John Quarmby, **G3XDY** thought that conditions were a little above normal for this event, but of particular note was the activity level.

Not so long ago 15 contacts would have been a reasonable haul, but in the October session, John made 52 QSOs on **23cm** and nine on **13cm** in two and a half hours.

The highlights on **1.3GHz** were: **OZ1FF** (JO45), **DL0VV** (JO64), **DF2VJ** (JN39), **DC6UW** (JO44), **GM4CXM** (IO75), **GU6EFB** (IN89), **OZ9KY** (JO45), plus **G4SCY**, **M0ICK/p** and **G0MRL** from IO83 which John normally finds difficult.

Ray, **GM4CXM** has also commented on the increasing activity recently. For this session, Ray found conditions were not particularly good, but there was plenty of activity. A number of good signals made it as far as **GM** but on the whole, it was a struggle hearing many and so inevitably there were a few "gotaways".

Ray noted that eleven **GM**s were active but he missed four of them as well as not finding anyone in IO84, IO93 or IO81.

As usual, his ODX was with Kjeld **OZ1FF** with a contact by aircraft reflection. Ray caught this one at the beginning of the reflection, leaving enough time for Alan **GM0USI/p** (IO76xa) to tail-end. This gave Kjeld a new locator square.

The session finished with a haul of twenty five QSOs with eight of them over 500km and two "initials" in the form of **G4NBS** and **G8AKE**.

23cm & 13cm TROPHY

From: Keith Winnard, GW3TKH

On 2nd October, along with David, **M0GHZ** and Pete, **2E0NEY**, I operated from Cefn Y Galchen, (IO81ls).

13cm conditions were very flat, with **GB3MHS** coming in at 529 and nothing much heard further to the east. With a total of 14 contacts, just a few broke the 250km barrier: **G4EAT** (JO01hr) 252km, **G3XDY** (JO02ob) at 293km, and **PA6NL** (JO21bx) at 493km.

My recently "sanitised" Spectrian PA behaved very well after one minor hiccup. The switched mode PSU couldn't handle the 25 metre long mains lead from the generator. A steady carrier was no problem, but CW caused it to sulk! Resorting to two car batteries in series saved the day (thanks to **GW3PPF**).

23cm conditions were poor, but David managed to make 42 contacts, the best DX being **PA0EHG** (JO22hb), at 527km.

David's new trailer mounted pump up mast (see photo above) made easy work of erecting a dish for **23cm** and a long Yagi for 70cm, but the pre-amp on 70cm failed, which reduced the QSO rate considerably, adding to the gloomy RF conditions.

I also took gear for **6cm** to make a few contacts in the October UHF contest which was running concurrently. With a total of 6 contacts best DX was **M1CRO/p** (JO01pu) 299km. At 21:25 this signal was severely affected by RS, as were beacons, **GB3OHM**, **GB3FNM** and **GB3ZME**. The weather was dry during rigging and de-rigging operations, with rain and drizzle much of the time between! **73, Keith**

OCTOBER IARU UHF CONTEST

From: John Quarmby, G3XDY, Suffolk

Strong winds, and generally flat conditions for this event, though it did seem a little better to the east on Sunday morning, with **OK2A** on **23cm** audible for long periods (much longer than would be expected for aircraft reflection). There was some reasonable rainscatter on the Sunday for **6cm** and **3cm**, but no exceptional DX on those bands.

1.3GHz Highlights: The Saturday afternoon got off to a good start with three QSOs in JO52 (**DL4OL**, **DK6AS**, **DJ3AK**) in the first twenty minutes, then steady progress through the Saturday evening with **DR9A** (JN48), **DL3IAS** (JN49), **DC6UW** (JO44), **DF2VJ** (JN39), **GM4CXM** (IO75), **DF0OL** (JO40), **DL0GTH** (JO50), and **DK7QX** (JO42).

Sunday also went well with **DM5D** (JO61), **OK2A** (JO60), **DF5GZ/p** (JN47); **DH9NFM** (JO50); **DF6NA** (JN49); **DK0NA** (JO50), **GM4LBV** (IO86); **DL3JAN** (JO60); **OK1KIR** (JO60), **DJ3HW** (JO42), **DL7QY** (JN59), **DF0MTL** (JO61), **DF0YY** (JO62), **GM4JR** (IO85), and **GM0USI** (IO75).

2.3GHz DX included **DL3IAS** (JN49), **DK0ZB** (JO42); **DK0NA** (JO50), whilst on **3.4GHz** QSOs worthy of note: **DF0MU** and **DK2MN** in JO32, and **DK0PU** in JO31. The activity on **9cm** was rather low and my system seemed a bit deaf. Signals were exchanged with **DK0ZB** (JO42) but not enough for a QSO.

On **5.7GHz**, **F1PYR/p** and **F6DWG/p** in JN19, **ON7BV/p** in JO30.

10GHz DX included: **DF0MU** (JO32), three French portables: **F6KUP/p** (JN29), **F1PYR/p** (JN19), and **F6DWG/p** (JN19), plus **ON7BV/p** (JO30), and **G4KUX** (IO94)

THE OCTOBER LIFT RETURNS

The weekend of 8th-10th October saw the start of some very welcome widespread DX propagation conditions on the microwave bands. Ten or twenty years ago, October could be relied upon to produce annual openings, but something has changed, and it is a rare event these days.

On 9th October, stations in Scandinavia were having a ball with DX paths across the Baltic, but with UK stations largely out of the ducts.

This continued through the night into 10th with **DL**, **OZ**, **SM**, **SP**, **LY**, **YL** and **OK** stations all known to be QRV, and enjoying conditions.

LY2R worked Theo, **PA3AWJ** on **23cm** for a new DXCC and # for them both. By 07:30z, Lars **SM4DHN** reported hearing **GB3MHL** at 599 whereas in the previous hour, conditions did not seem to reach the UK, and various attempts by east coast UK stations came to nought.

Ulf, **SM0LCB** operates a remote station as **SM7LCB** (JO86GH). This is his account of the opening as seen from Scandinavia:-

"During the weekend 8th-10th October we finally got a tropo opening on the microwave bands. I think we last had this kind of opening in December 2007, so we waited nearly 3 years.

The weekend started during the evening of 8th October with nice conditions towards north, east and south with the best DX to the south. To the north I got a new square from **SM0DFP** on **9cm**. We didn't try on the other bands.

I also tried with **OH2AXH** on **9cm** but it was not good for an SSB QSO at that time.

On the Saturday evening it stated well when I got my 122nd square on **23cm** by working **SP5QAT** in KO02. We have tried several times during NAC **23cm** contest by using aircraft scatter but never got it to work. Now finally the conditions came and the QSO was complete.

It was also good to the north but most of the active stations I have already worked, except **SM4DHN** which I now have on **13cm** as a new square. Conditions to the south were good with many QSOs but it slowly opened up to the south west with all the German stations. At the end of the evening I was working Holland with some new squares on several bands.

After just four hours sleep, I woke up early on the Sunday morning hoping for more good DX towards Germany and Holland. It started well, and quite soon it opened to England when I listened for the **GB3MHL** beacon. Shortly after that I had QSOs with **G3XDY** on three bands and with a nice QRB on **9cm** with 1100 km, that was great!

Later I still copied the **GB3MHL** beacon but it was not possible to work any stations. At about 18z I closed the station after some attempts and checking of beacons. Even **GB3MHL** had then gone down into the noise. I'm glad that the autumn tropo openings still exist, and I hope it will be back soon. My station seems to work well even if I'm a bit of a QRP station.
The remote control of the station was also working very well during this opening. I work most of my QSOs from my home in Stockholm which is about 470 km by car from the radio site (6 hours driving). For this weekend I only had a few problems on the Saturday evening for about 10 minutes." **73, Ulf**

Some possible "Firsts" appear in the following accounts, **G-LY** on **23cm**, and **G-GJ** on **9cm**.

From: John Wood, G4EAT, Danbury, Essex
This extensive opening was long overdue. Let's hope we don't have to wait another seven years! Here are the highlights:

The first sign of the opening was hearing **SP6GWB** 559 from JO80 at 1125km working **G3XDY**. Unfortunately my 50W against Staszek's 250W was not enough for a QSO.

The main fun started on Sunday morning (10th October) when **SM** stations were strong on **23cm**. **SM6DVG** in JO66 was a new #. I worked **YL3AG** at good strength from KO06 on 70cm and QSY'd to **23cm**. He was a good signal on **23cm** but a wall of **PA** stations was waiting and eventually he faded away before I got my chance! On **23cm** several **OZ**s and **SP**s followed and then I heard **LY2WR** in KO24fo calling CQ on CW. He came back to my call and is my best DX at 1612km. The op said he was pleased with "first **LY-G**" on **23cm** and so am I if the record books show it to be true.

In the evening after sunset the higher frequency bands opened up. On **23cm** new #'s worked in **OZ1IEP** JO55 (rare) and **DL3BUA** JO73.

On **3cm** I have tried many times without success with stations in JO54 and then like buses, two came along, **OZ2LD** and **OZ3ZW**. **DL0VV** was a pleasant surprise in JO64 for another new #.

LY2WR was stronger on **23cm** in the evening opening and was working many UK stations. By Monday 11th many stations in mainland Europe had worked **OY**s on **23cm** but even though the **OY** beacon had several UK spots, few if any UK ops had QSOs with **OY**. In the afternoon conditions peaked to **GM** and I worked **GM3SBC/p** IO86 on **23cm** and **3cm**.

A CW CQ on **23cm** brought in a very strong signal from **OY9JD** in IP62 with "QRZ" on SSB. His 23ele 10W station showed that even with

modest stations, if you have to wait for good conditions, then easy QSOs are possible.

Conditions on 12th Oct favoured the northern UK. French **3cm** beacons in IN88 and IN99 showed some slight sea path ducting, and I was pleased to work Mark **GJ4ISM/p** for a new DXCC on **3cm**. Thanks to Mark for his efforts.

73, John, G4EAT

As John noted, Monday 11th October saw the conditions spread across the UK and down in Cornwall, Ralph, **G4ALY** (IO70vl) was having a great time of it, and his account of it follows:

Not that many QSOs in the past few days, but for me a lot of new # and countries. The 11th October produced some long paths on **23cm**, to **DJ6JJ** (819km), **PA2M** (636km), **DL3YEE** (905km), and **DF0MU** (819km).

On **9cm** I worked **GJ4ISM/p** at 201km for a possible "first" **G-GJ** on **9cm**. Also worked my first **9cm** station outside the UK, in the form of **DJ6JJ** (819km) for a new country.

Jersey is rarely activated on **3cm**, but a QSO with **GJ4ISM/p** at 201km finished off the day.

On 12th Oct, **23cm** yielded **G4KUX** at 489km, whilst on **13cm** I worked **F6APE** (435km) along with **PA6AWJ** (630km).

PA6AWJ was also contacted on **9cm** for a new country, my second in two days. Still on **9cm**, **G3UKV** at 275km was also worked.

On **6cm F6APE** (435km), **PA6AWJ** (630km), and **G3LRP** (399km), whilst on **3cm PA6AWJ** (630km), **F6APE** (435km) and **G3LRP** (399km) completed the haul. **73, Ralph, G4ALY**

On the 11th, Marc, **F6DWG/p** braved the cold and the wind during the morning, and as a result, he was rewarded with a QSO on **10GHz** with **SM7ECM** (JO65NQ) in CW at 1023km.

Marc also had QSOs with **OZ3ZW** at 877km on **13cm** and **3cm**, and also with **OZ1FF**. Sadly, there was nothing on **6cm**, and he only heard **SM7ECM** but no contact resulted.

During the morning, Marc heard beacons from **G/PA0** at 59++ on **13cm**, **6cm**, and **3cm** and **SK6MHI** on **2320mhz** was 559 at 1129kms, but regretfully, few others to work.

Marc noted the enormous difference between the 5° temperature at 05:00utc and a pleasant 20° during the afternoon.

Not far from Marc's location, André **F1PYR** wasn't hearing the beacons as well as Marc, but nevertheless he had some QSOs on **6cm**, one with **OZ1FF** (JN45bo) for a new locator.

On **23cm** André bagged **GM4LBV** in IO86 and **G4KUX** (IO94) for new squares, and also worked **G4KUX** on **3cm**.

The **OY9BEC** beacon was heard on **23cm** for the first time at a distance of over 1500 km, but André was unable to make any QSOs with **OY**.

From: Nick Peckett, G4KUX, IO94bp
Bishop Auckland, Co. Durham

The opening was undoubtedly one of the best in recent years, although not as far reaching as that of December 2007 which favoured 2m in particular, and during which I worked into KO63 at 2300km.

There was nothing like that this time. One gotaway was **LY2WR** on **23cm** who just wasn't audible. Despite a hurried dash up the M1 from the RSGB Convention he was below the noise with me, however I did manage a QSO on 70cms. Had I been able to be QRV earlier in the day I think a contact on **23cm** would have been very likely.

On the morning of the 13th October, every **23cm** beacon in the UK was copied at my QTH, a very rare event indeed, in fact I will be lucky to live long enough to see that ever repeated! I am now running 250W from a **PE1RKI** PA module on **23cm** and now with 4x23 ele, all of which has made a substantial difference to the QSO success rate. **73, Nick G4KUX**

Nick's log makes interesting reading, but there is too much to list here. I have extracted some of the QSOs from it starting with 10th October on **3cm**. I believe that Nick has broken the 1000km barrier for the first time with **OK1JKT** (JO6Ørn) 1127km, for which congratulations are due. He also worked **SM7ECM** (JO65nq) 958km, **DLØVV** (JO64ad) 901km, **DC6UW** (JO44vj) 752km, and **PA2M** (JO21ip) at 551km.

On the morning of 11th October, on **3cm** SSB **PA0EZ** (JO22OF) and **F1PYR/p** (JN19BC) were worked, but conditions were on the way out by lunchtime.

Nick's top five QSOs on **23cm** (all of them on SSB) were: **SP4MPB** (KOØ3) 1459km, **SP1FJZ** (JO84) 1178km, **DK3WG** (JO72) 1112km, **SM7ECM** (JO65) 958km, and **SM7FMX** (JO65) at 942km.
Thanks to Nick for the DX view from IO94.

The exceptional conditions, and the level of reports this month means that apart from the column extending to six pages, I've had to reduce the font size for the last two pages in order to fit everything in! We continue with the reports:-

From: Gordon Fiander, G0EWN, Sheffield

The event started here in IO93 on the 10th, and it became particularly intense into the evening causing severe co-channel interference to the TV.

Working on **23cm**, **13cm** and **3cm** there was lots of EU DX with countries from **LA** round through **SM**, **OZ**, **D**, **SP**, **OK**, **ON PA** and **F**. My best DX was **SP4MPB** (KO03ht) who was 59 on **23cm** at 1475km, and **OK1JKT**, also 59 (JO60rn) at 1075kms. Best on **13cm SM6EAN** (JO57) at 975kms.

On the 11th conditions moved. I was chatting on **3cm** with **OK1JKT** and was tail-ended by a CW call which turned out to be **F6DKW**, in spite of a 45 degree offset!! I worked other **F** stations on **3cm** as well as more **DL** and **OZ** etc on **23cm** and **13cm**.

I worked a number of QRP stations, **OK7RA** seemed amazed I heard him call me with just 5w on **23cm** from JO60LJ and **DL3YEE** turned his **23cm** power down to its lowest possible at just 300mW and he was still 55 from JO42.

I missed some real DX in the form of **LY**/**YL** (radar noise was particularly intense) the worst I have encountered) making weak signals very difficult to detect.

From: Gus Coleman, G3ZEZ, Clacton

What a few days!! One of the best for a long long time. On the 10th October, at 18:30 I noticed some co-channel interference on the TV and decided to check the bands. There was lots of activity, so I had obviously missed a lot but I had an immediate QSO on 70cm with **SP1JPQ/p** in JO74. After several more **SP**s I then went to **23cm**, where I hooked up with **SM6AFV** (JO67) and worked him also on **13cm**, **6cm** and **3cm** for a new country and my furthest distance on that band. I tried on **24GHz** too, but no luck.

On the 11th, lots more contacts on all bands which on **23cm** included **GW8ASD** and **GI6ATZ** for a new country on that band.

I tried with **G4BAO** on **9cm** and copied him OK but although he could hear me we could not make it a two way. It will be interesting to see what else I missed as so much was going on.

From: Martyn G3UKV, IO82, Shropshire

Just a brief report following the 'high' last week on all the VHF/UHF/Microwave bands, and what a high it was - I can't say with any certainty when we had the last real tropo opening, 3 years ago?

Usual indicators on Sunday - above normal signal from **GB3MHL**, and **GB3IOW** on **23cm**, local comment etc. Rather unusually, the dish for **3.4GHz** was on the mast, and '**KST** was 'alive', so my first attempt was with John, **G4BAO** in Cambridge. I heard him straight away, but for some reason he wasn't hearing me - in fact I started to wonder if all was well with my transmitter. However, my concerns were overcome when **SM7ECM** in JO65NQ 'meeped' me on '**KST**, and let me know he was hearing me. A QSO quickly followed at 22:00z, RST 539/529, giving me only my third country on **3.4GHz** from home (**G**, **GI** and now **SM**) at a distance of 1068km - Wow!

The following morning, I called **DJ6VV** (JO64AD) who I heard working '**BAO** at 07:33z on **9cm**, but no-go. Deep QSB was the problem - he only peaked about S3 here, since there's rising ground in an easterly direction.

Rare beacons heard on **3.4GHz** included **PA0JCA**, **GB3MHS** and **GB3SCF**.

The rest of the opening was relatively run-of-the-mill stuff, but nonetheless, great fun.

Monday (Oct 11th) evening brought **DJ6JJ** (JO32PC), **PA3FXO** (JO22GD), **PA0EHG** (JO22HB) and **PA2M** (JO21IP) all on **23cm**, plus several beacons not usually audible here, such as the Cornish one, **GB3MCB** at RST 579.

Conditions slowly declined from then on, and fizzled out round Thursday 14th October.

73, Martyn G3UKV

From: John Quarmby, G3XDY, nr Ipswich

Friday 8th October, and the first signs of the opening. Worked **SP6GWB** on **1.3GHz** (JO80), **DC6UW** on **1.3GHz** and **2.3GHz** (JO44), and **OK1JKT** on **10GHz** (JO60).

Nothing on Saturday 9th, but early on Sunday 10th (I was off to the RSGB Convention at 0600z!) **SM7LCB** (JO86) was 59 on **1.3GHz**, 57 on **2.3GHz**, and 519 on CW on **3.4GHz** for a new square and my best DX on **9cm** at 1100km.

On the air soon after 1700z after arriving back from the convention, and some choice DX on **23cm**: **SP4MPB** (KO03), **OZ2OE** (JO45), **DL3BUA** & **DG1BHA** (JO73), **SP1FJZ** 59 from JO84, **DJ1LP** (JO64), **DG4BAQ** & **DJ8ES** & **DR3M** (JO43), **DL7YS** & **DL9GBH** (JO62), **LY2WR** (KO24) 1561km, **SP2WPY** (JO94) (at the second attempt, QSB was tricky), **DJ8MS** (JO64), **GM4GUF/p** (IO85), **GI6ATZ** (IO74), **GM3UAG** (IO87).

On **2.3GHz GM3UAG** (IO87), and **3.4GHz DG0RG** (JO62), whilst on **10GHz DL0VV** (JO64), **DG0RG** (JO62), and **PA3EAQ** (JO31).

Then onto Sunday 11th, on **23cm**, **DL3JAN** (JO61), **OZ9PP** (JO47), **GM4BYF** (IO85),
followed by a call from **OY9JD** (IP62) on SSB at 56. The **OY6BEC** beacon had been 599 - 599+ for 24hrs by this time, but it took time for the duct to drop low enough for Jon to get into it. The **OY** beacon peaked 40dB over the noise in 2.5kHz and was there solid for over 48 hours. It runs just 6W to a 13ele beam.

Then **OK1MAC** (JN79), **GI0GDP** (IO74), and **GD8EXI in** IO74.
3.4GHz brought in **GM3UAG** (IO87) - the first time we've worked on **9cm** - at 59 on SSB.

On **10GHz**, **F9OE** (IN78), and the beacons from **IN88** were heard on **6cm** & **3cm** at good strength but drifting a lot *[Have a look at **F1ZAO** or **F1ZAP** with Spectran, or SpecJT to see that both trace a sine wave pattern in their drifting!].*

A shorter list for the 12th, with **G8ARM** (IO70) and **GM3SBC/p** (IO86) on **23cm**, and on **13cm**, **F4BUC/p** (JN08), whilst 9cm yielded **GM4LBV** (IO86) and **GJ4ISM/p** (IN89) for a new country and square.

Finally, on **10GHz**, **GM3SBC/p** (IO86), and **GJ4ISM/p** (IN89) for a new country and square. Mark's mini expedition to **GJ** was well timed to catch the conditions. All in all a memorable opening after several mediocre years. Lets hope for more soon!
73, John G3XDY

Dave, **G0DJA** was also QRV but mostly chasing new squares on 70cm. On **23cm** he worked **SP1FJZ** on 10th October at a distance of 1164km using 10W CW to his 37 element Wimo (44ele if you count all 8 reflector elements!). I agree with Dave, and I would prefer a reflector to be counted as only one element.

24GHz TROPO OVER 400km

27th October saw an impromptu appearance from Guy, **F2CT/p** (JN15BS) in the Creuse(23) on the Plateau de Millevaches (alt about 900 m). At 15:00 utc it was 5°C, no wind, low humidity, no obstructions to the north, and a superb view of the snow covered mountains of the Auvergne.

A quick check on the **10 GHz** beacons didn't look good, with **F5ZWM** (67km) only 559. The first test on **10GHz** with **F1VL** (205 km) failed, but finally worked at only 52/53.

Guy then turned towards Paris, where he found **F6DKW** (JN18cs) was 58/59 then **F1RJ** at 53/54. '**DKW** wondered about a **24GHz** test given the relatively low **10GHz** signal, but they decided to try, and **F2CT/p** immediately heard Maurice at 519 with slight qsb but made the QSO on CW (333 km). The sun then set, and the temperature fell - by 17:00utc it was 0 °C!

A try with **F1BZG** while waiting for **F6DWG** and **F1PYR** gave 55 on **10GHz** but nil on **24GHz** at 232 km. The first test on **24GHz** with F6DWG/p (JN19AJ) at 402km gave absolutely nothing in spite of a 59 signal on **10GHz**.

Then André **F1PYR/p** (JN19BC) tried. The **10GHz** signal was "copyable" but not very impressive. On moving to **24GHz** Guy was astonished to get a CW signal at 539, and on SSB André was 55 with QSB - distance 370 km.

The test with **F6DWG/p** resumed. It was 18:00utc, very dark, and Guy was very cold. He received Marc's signal on **24GHz** in peaks of QSB. After a few minutes, of dish peaking, Marc's signal was a stable 519/529 at 402 km. The 400km barrier was crossed on tropo across an entirely terrestrial path. Guy's equipment for **24GHz** consisted of the **F9HX** driver, along with a 432/24048MHz transverter by **I3OPW**, LNA 1.7 dB and an impressive QRO PA delivering 11W (4 x TGA4905) into an Alcatel offset 75cm dish.

SNIPPETS

A few days later, on 30th Oct, **F2CT/p** was QRV from **IN86ww** Ile de Noirmoutier (Vendee) for the activity weekend. Ralph, **G4ALY**(IO70vl) worked Guy on **13cm** and **6cm**, and on the 31st also made it on **3cm** for the "hat-trick".

MONDAY EVENING ACTIVITY

From: Neil Underwood, G4LDR

Monday evenings have continued to see **G4ALY**, **G4NNS**, **G1JRU**, **G8ACE** and myself active.

I have now managed to install six microwave bands (**1.3GHz** to **24 GHz**) on the pump up mast, although I don't raise it to its full height as the head load now greatly exceeds the maximum specified load. I have been able to resume regular contacts with **G4ALY** of the five lower bands over a 195 km path, as well as contacts on **24GHz** with **G4NNS** and **G1JRU**.

To work **G4ALY** I have to beam through a large oak tree at the edge of our property so I am hoping that as the leaves begin to fall signal strengths with Ralph will increase.

BEACONS

Another milestone has been reached, with in excess of 900 registered users on www.beaconspot.eu and the 1000 mark is now within sight.

A recent enhancement automatically corrects a fair proportion of "erroneous" spots in beacon callsigns, and the log of these shows that since the beginning of July, over 300 such typos have been corrected. The most common of these is the misreading of the digit in the call, but some others involve anagrams of the callsign. Other typos have been auto-corrected usually where one letter is wrong, e.g. **SK4MPI** spotted as **SP4MPI**.

...AND FINALLY

October has been a most interesting month on the microwave bands. Although I was only able to be QRV for a short time with just 10w on **23cm**, I managed to make a few contacts into **LA** and **SM**, but no trace of the **OY** beacon! My thanks to all of the contributors to the extended column this time, and I look forward to another bumper postbag next month.
73, Robin, G8APZ

Please send your activity news for this column to:

scatterpoint@microwavers.org

From GB2RS NEWS October 2010 ...

Ofcom updates Spectrum Plan for the London Olympics ...
Impending changes to the 5MHz beacon chain ...

Ofcom published an update to the Spectrum Plan for the 2012 Olympics on 18 October. They intend to issue a more detailed plan in early 2012. From the plan, 6 and 2m are unlikely to be used and efforts are being made by Ofcom not to use 70cm, as it is accepted that this could be heavily used by amateurs. Likewise, Ofcom is trying to avoid use of the amateur satellite bands. There is also extensive use planned for the lower microwave bands in the greater London area for wireless cameras. The Society meets regularly with Ofcom and was able to discuss this update when they met earlier this week.

During the summer, the 5MHz Working Group reviewed certain aspects of the 5MHz Experiment and agreed a number of changes and improvements. These will be implemented over the next few months. The largest change is that it has been decided to remove the 0.5ms pulse sequence at the end of each beacon transmission. It has also been decided to build a new beacon for GB3RAL. The new design will incorporate a PSK31 transmission in the place of the pulse sequence. The design of the other two 5MHz beacons does not allow this addition. A date for these changes has not been set, but it is hoped to complete the changes before the end of the year.

Earlier this year Ofcom announced an exemption for Railway Level Crossings systems to use a part of the 24GHz band where we have secondary status. More recently, on 6 October, the European Union's Radio Spectrum Committee published a review of automotive ultra-wideband short-range radars that currently operate across the entire 24GHz band and which have caused considerable concern. The Society actively participates in consultations on these matters and, along with IARU Region 1, is working to protect and enhance our 24-24.05GHz Primary allocation where innovative DX and Beacon activity is concentrated.

Propagation Studies Committee has now moved its info from the original Keele University webspace at http://www.keele.ac.uk/depts/por/psc.htm to the main RSGB website.

http://www.rsgb.org/psc/

HEELWEG MICROWAVE 2011

Dear SHF amateur,
With around 170 visitors from 7 countries, the Heelweg Microwave meeting 2010 has been a fantastic happening. We are planning our next meeting on Saturday January 15th 2011. The meeting will be held in the small Village called Westendorp in the eastern part of The Netherlands.

The aim of this meeting will be to exchange all types of experiences and information in order to increase the SHF activity in the area. All types of radio equipment antennas, transverters, ATV equipment , measuring devices, etc, will shown from 23cm up to 122GHz.

In 2011 we will have an excellent equipped measuring team:
PE1BMC, PE1FOD, PA0EHG, PA2M, PA3CEG, PA3DZL, PA7JB, PA3EXV, PE1NFE, PE1FYB, PE0SSB, PA0JEN, PB0AOK and PA3ACJ

Available equipment:
- Sweepers 0-26 GHz
- Spectrum analyser Agilent to3GHz
- Spectrumanalyzers to 26GHz.
- Spectrumanalyzer to 325GHz
- Spectrumanalyzer 10 kHz-3.8GHz + Tracking generator
- Signal generator 10 kHz-3.3GHz (AM, FM, CW&Pulse)
- SWR bridge 5 MHz-3.0GHz (RF-SWR)
- Vector network analyzer to 20 GHz
- Tektronix Video generator with sin x/x signal
- Tektronix VM700 video measuring set
- Barco Receiver I en II ontvanger/videodemodulator for 23cm 13cm en 3cm,
- NKF video demodulator, baseband analyzer for ATV.
- Noise measurement up to 76GHz
- Power meter up to 76GHz
- Sweeper unit for 24GHz Filters
- Signal generator van 0 to 18.6GHZ (Mar 2031 HP8673) also for ATV.
- Spectrum analyzer from 0-26.5 (of 31.8)GHz + Tracking up to 2.7GHz.
- AM-70 cm ATV generator
- Counter up to 24GHz with rubidium stab.
- Power meter 250 Watt up to 2.5 GHz.

If you have a special need for measurement please send a mail as lot s of other equipment can be made available during this day.

HEELWEG MICROWAVE MEETING 2011
Saturday 15th of January 2011
Time 10 AM to 3 PM

Location: CAFE ZAAL " DE VOS"
Halseweg 2
NL 7054 BH WESTENDORP
The Netherlands

Questions or requests please mail to info@pamicrowaves.nl
You are also invited to join our microwave group at our SHF forum **www.PAmicrowaves.nl**