



## **RSGB Propagation Studies Committee**

### **Report for Spectrum Forum, October 2022**

#### **Cornish Beacons**

The three Cornish beacons on the 28, 40, and 60MHz bands came on air on Sunday 25th September. These effectively replace the former GB3RRAL beacons at the Rutherford Appleton Laboratory, which have been off air for some time.

The Mid Cornwall Beacon and Repeater Group brought into service three new Beacons at 28.215MHz, 40.050MHz and 60.300MHz, each using the callsign GB3MCB.

Located at IO70OJ in mid-Cornwall on a 100ft tower at 1,000ft above sea level, these beacons, constructed by Peter G8BCG, are ideally situated for trans-Atlantic Es/F2 and particularly for Trans Equatorial Propagation.

They may also be useful for inter-G short-skip Sporadic E research as they may be received in the East/North of the country - the next Es season should confirm this.

The new beacons are co-located with existing beacons on 50MHz (as part of the Synchronous Beacon Project), 70MHz, 144MHz, 432MHz, 1296MHz and 10GHz.

Early results have been encouraging with many reports received from around the world, including California on 28MHz.

#### **50MHz Meteor Beacon**

The 50MHz meteor scatter beacon project was featured in a recent RadCom article. A talk was also given by at the Newark Hamfest. The GB2MBA beacon runs 75W and is on 50.408MHz beaming directly vertically using a 6m Moxon antenna.

PSC supported the project by providing a letter outlining the importance of the research that would be possible with the beacon.

We wish Brian G4NNS all the best with the project.

#### **RadCom Propcharts**

Peter Duffett-Smith suggested that a more graphical, colourful approach to the RadCom predictions might be more suitable and we duly came up with some examples of what they could look like.



Gwyn G4FKH pointed out that we would only be able to display 12 charts at a time (RadCom has predictions for 26 locations), that it would be difficult to read as the plots are for four-hour increments and it would also be difficult to read the frequency info.

I spoke with the new RadCom editor Ed and asked if we could have two pages in the magazine. The answer came back as no, which is a shame, but also understandable.

So, at least for now, we are shelving the idea. The graphical charts were offered to RadCom Extra, but as that is not a monthly publication editor PeterG3XJE felt it wouldn't be appropriate. Discussions were had with the RadCom Editor about a text-based propagation page with monthly write-ups on what may be worked instead of the current charts. Further discussion needs to be had around this.

### **RSGB Yearbook**

An updated HF propagation page for the 2022-23 RSGB Yearbook was submitted, which has now been published.

### **RSGB Convention**

Steve G0KYA gave two talks at the Convention. One on "What the numbers mean", looking at the solar flux index, A and K indices, solar wind data etc. This seems to have been well received. The second talk looked at the RadCom predictions and the online add-ons we have, based on VOACAP and ITURHFPROP. While the numbers were down on the first talk it was also well received.

Chris G4IFX also gave a talk on 50MHz propagation, in particular relating to the results of his PhD project. And Jim G3YLA also gave a talk on his latest research into Sporadic E

### **Newark Hamfest**

PSC put on a stand at the Newark Hamfest for the first time in three years. Gwyn G4FKH helped out on Friday and John G4BAO helped on Saturday.

It was a good opportunity to spread the word and also promote the online RadCom add-ons, which allow the user to tailor their predictions to their particular station in terms of power, mode, antenna etc.

- The VOACAP version is at: [www.rsqb.org/voacap](http://www.rsqb.org/voacap)
- While the ITURHFPROP version is at: [www.rsqb.org/proppy](http://www.rsqb.org/proppy)

It might be an idea for a short piece in RadCom as many people have forgotten that these exist.



### **24GHz Web SDR**

John G4BAO is working on a 24GHz web SDR receiver project which he intends to install on the East Anglia coast, pointing towards Europe. This would give early indication of 24GHz propagation across the North Sea.

### **Long Delay Echo (LDE) project**

Peter G3XJE is currently looking at a beacon design that could be used to detect the possibility of long-delayed echoes on HF

*Steve Nichols G0KYA  
PSC Chairman*