

RADIO SOCIETY

of Great Britain

DRAFT/UNCONFIRMED

PROPAGATION STUDIES COMMITTEE

Minutes of a meeting of the Propagation Studies Committee held in Leicester on Saturday 6th April 2013, commencing at 1300hrs.

1. Members present

Steve Nichols	G0KYA	Chairman
Chris Deacon	G4IFX	Secretary
Ron Smith	G3SVW	
Gwyn Williams	G4FKH	
Dr John Worsnop	G4BAO	
Alan Melia	G3NYK	
Prof Barry Chambers	G8AGN	
Sam Jewell	G4DDK	
Dr John Gould	G3WKL	RSGB Board Representative

Apologies for absence had been received from Prof Martin Harrison, G3USF.

2. Minutes of last meeting held on 6th October 2012

Accepted as a true and accurate record.

3. Matters arising from the minutes

Item 8: Gwyn has been in touch with Les Barclay about the 2014 update to the propagation sections of the RSGB Handbook. It has been agreed that G0KYA and G4FKH will review the draft when it is available.

Action: G4FKH and G0KYA

Item 6.3: Correction: this item should refer to 472kHz, not 572kHz

4. PSC membership

G3USF had asked to move from full to corresponding membership and this was agreed by the committee. It was also agreed that the Chairman would write to Martin to express the thanks of the committee for his outstanding contribution as member and chairman of the committee over many years.

Action: G0KYA

A number of the associates have now signed up for the yahoo group. There was a further discussion about membership of and use of the PSC forum on Yahoo.

Action: G4IFX for agenda at next meeting.

Contact remaining associates and the 'missing' corresponding members who are not on the Yahoo reflector to find out whether they continue to have an interest in participation on the reflector.

Action: G0KYA, (plus **G3NYK** for Väinö OH2LX)

It was suggested that the HF, VHF and Microwave managers should keep themselves informed about PSC activities and contact G0KYA with suggestions for others who are involved in propagation research and could/should be brought in to the PSC ambit.

Action: G3WKL

RSGB Board member - G3WKL is stepping down from the RSGB Board on 20th April. It is not yet clear who will be taking over his role as the Board link with PSC.

5. Topics for discussion

5.1 Charlie Newton G2FKZ bequest

It had previously been agreed to award £500 to the GB3WGI transatlantic beacon project. John, G4BAO reported that the new tower had been delayed by problems with the crane company and with the weather. Of the £500 donation, £90 was left and it was proposed to spend this on 70cm beacon drivers. The team are no longer planning to use equipment which was to be donated from the US kit because of higher than expected shipping costs. The best guess at the time of the meeting of when the beacon would be on the air was in the next month.

Action: G4BAO to keep the committee informed and to link with G3WKL for possible publicity.

It was also agreed to contact suitable people in the US who might be interested in putting up a web-linked 24x7 receiving station to monitor the beacon.

Action: G3WKL (via Amrad), G4BAO, G4DDK (via Dayton Weak Signal Dinner)

It was agreed to hold the remaining £500 of the legacy in reserve for possible future use.

5.2 RSGB Hamfest, 27th/28th September 2013

In principle it was agreed to put on a PSC stand at the Hamfest, subject to enough people being willing to commit to being available to man the stand on both days.

Action: G0KYA

5.3 Propagation Forum

G0CAS had previously offered the chance to take his spots and flares forum under the wing of PSC but at this stage there is little appetite for taking it on and/or building a new forum. Also some concerns had been expressed from the RSGB's insurers about possible legal liabilities. It was agreed to keep the proposal under review while the RSGB website is at an early stage of development.

Action: G4IFX for agenda next meeting.

The PSC Twitter feed has been set up (@RSGBpropnews) and has 40 followers.

6. Projects

6.1 GB3WGI beacon (G4BAO)

See above

6.2 Noise Measurement Campaign (G4FKH)

Gwyn G4FKH reported that an active aerial is now available from CCW for £159.99. He has been testing one and has some concerns about its effectiveness at the moment. He has it horizontally oriented because his interest is in manmade noise propagated via the ionosphere in order to give a broad-based view of general noise levels and eliminate local effects. Unfortunately the shape of the noise profile by frequency does not match the expected rate of decline with frequency, which his G5RV antenna does. G3WKL suggested that the cause could be noise being fed from the house up the feeder along the power line. It was also suggested that a comparison with a magnetic loop might shed some light on the issue.

A dozen people are now reporting ad hoc noise measurements, well spread across England but not from other parts of the UK.

The prototype CCW receiver has been delayed; it has been promised 'very soon' but no progress has been seen to date. The boards have apparently been received from China.

Action: G4FKH report progress at next meeting

John, G3WKL reported that a paper has been produced on a project to evaluate locally propagated noise, with the intention that it is a mass experiment.

An early priority will be the investigation of the RF noise floor effects of multiple PLA sources. Also, the EMC committee wants to measure specific installations in order to help members diagnose local sources of noise.

John has tried to get universities interested in order to give the study credibility but has made little progress. But there has been some interest in RF noise floor measurements

from Mike Warrington at Leicester, as the basis for possible MSc project(s). A starting point would be three receivers: one each in residential, rural, quiet rural areas (or possibly two per location type), re-using interfaces from ISCAT work on Svalbard.

The next step is a proposal to the RSGB Legacy Committee for funding (about £10k), probably combined with a request for funding for Gwyn's noise measurement campaign. It's important to ensure that they are shown to be complimentary.

Action: G3WKL to produce draft proposal for review by PSC.

6.3 Six and Ten Report (G3USF)

Martin reports via email that SV1DH's comprehensive monthly reports continue to be posted on line promptly, but Martin's full reports lag behind; and at the time of the meeting he had nearly completed February 2013.

It has been gratifying recently to note the greater activity from Africa, though regrettably much of it is short-termish. Still, it is moving us towards a more informed understanding of propagation around and across the geomagnetic equator.

Martin has been intrigued by propagation from 6W and J5 into Europe and, more occasionally, the Caribbean in February. It rather looks like F2 - but how could it be?

6.4 GB2RS propagation bulletins (G3USF)

No report received.

6.5 LF Propagation (G3NYK)

Alan reported that he has plotted measurements of 137 kHz signal strength (Canada - UK LF path) v/s Dst, counting the total accumulated time per night that the signal exceeded a threshold level. The data shows a clear cut-off in propagation where Dst is below a threshold value of -60nT. Unfortunately, although there is clearly a correlation it appears that there is another variable which this analysis does not take into account, possibly Bz and/or the solar wind speed.

Action: G3NYK to circulate his analysis to the committee.

Alan also been asked to update the propagation chapter in 'LF Today' (Mike Dennison).

7. Reports

7.1 Chairman's report (G0KYA)

The Chairman reported that he was working to resolve an issue with the bandplan for DK0WCY. He has also recently given a talk on propagation programs to CDXC in a

session (which ended up lasting for three hours!) and he has been interviewed for a US podcast on what is going on propagation-wise in the current cycle.

In January, Steve did some work on the US medium wave station WWBR (100kW in New York) 1130 kHz and comparing it with Dst to test a theory that positive Dst is good for MW propagation. The data did not reveal any clear correlation between signal strength and Dst.

7.2 RSGB Board issues (G3WKL)

John, G3WKL reported that the intent is that all committees put their approved minutes up within three weeks.

John requested that draft minutes circulated only to the people who were at the meeting rather than via the reflector.

Action: G4IFX

It was agreed that PSC Minutes will be put onto the new website. The first step is to create an appropriate page under the PSC page

Action: G4FKZ, G4IFX

7.3 Reports of activities

Gwyn (G4FKH)

See above (Noise measuring experiment).

Barry (G8AGN)

Barry reported that there has recently been little activity at nanowaves because of the poor weather.

John (G4BAO)

John reported that he has taken over the GHz column in RadCom. His very small dish (1.9m) EME system on 2320MHz is now fully operational, with 15 initials from 10 DXCCs so far. It is featured on the front page of the May issue of Practical Wireless.

John also confirmed that Camb-Hams GS3PYE/P expedition will be active on 472 kHz from the southern tip of Mull, 10th - 17th May. There will be five simultaneous stations: HF, plus 6, 4 and 2 meteor scatter. They will also be doing 2m digital EME with elevation.

Ron (G3SVW)

Ron is continuing his regular talks at the South Manchester Club and he will be putting propagation publicity materials on the South Manchester stand at the NARSA exhibition tomorrow.

Chris (G4IFX)

Chris reported that this year there have been extensive F2 openings on six metres, unfortunately only at low latitudes and not generally reaching to the UK.

Sam (G4DDK)

Sam reported that there has been quite a bit of activity on JT65C low power EME on 10GHz, focusing on low-libration periods. Only very small antennas are required for success.

It has also recently been announced that RW3BP has received his own 76GHz echoes off the moon. His antenna has a 0.3 degree beamwidth!

Martin (GUSF) (by email)

Martin continues for the time being to maintain the HF and 50MHz beacon lists. This gives rise to no comments apart from the fact that, as yet, little progress has been made towards moving Region 1 50MHz beacons to their new slots. Martin understands that preliminary proposals for synchronized beacons on 50MHz will be aired at the forthcoming interim Region 1 meeting in Vienna but full plans have yet to take form.

A propos of Vienna, there has been considerable discussion of band planning on 30m. DK0WCY came into that discussion and its continuing value noted.

Martin's beacon articles appeared across two issues of RadCom and are now to be translate for publication in the journal of the Danish society.

Martin also notes in passing that higher MUFs have brought a return of OTH radar interference on our 'exclusive' 28MHz band. Band segments of up to 600kHz have been rendered unusable for hours on end. He is unsure whose radars these are.

8. Any other business

None

9. Closure

The next meeting was provisionally booked for Saturday 21st September 2013.

The meeting closed at 15.55 hrs.

Chris Deacon G4IFX
PSC Secretary