

RADIO SOCIETY

of Great Britain

PROPAGATION STUDIES COMMITTEE

Minutes of a meeting of the Propagation Studies Committee held in Leicester on Saturday 30th April 2016, commencing at 1300hrs.

1. Members Present

Steve Nichols	G0KYA	Chairman
Dr John Worsnop	G4BAO	Vice Chairman
Chris Deacon	G4IFX	Secretary
Alan Melia	G3NYK	
Ron Smith	G3SVW	
Gwyn Williams	G4FKH	
Prof Barry Chambers	G8AGN	

Apologies for absence: Alan Messenger, G0TLK and Sam Jewell, G4DDK

2. Minutes of meeting held on 31st October 2015

These minutes had previously been approved via email and posted on the RSGB website.

3. Matters arising from the minutes of the previous meeting

Covered elsewhere in these minutes.

4. PSC Membership

4.1 Full Members

No changes.

4.2 Corresponding/Associate Members

G4IFX reported that David Newman, G4GLT had asked to be removed from the corresponding member list because he is no longer active.

Chris also reported that another corresponding member, Tony Williams G4AWW, unfortunately passed away on 19th February 2016.

4.3 Attracting new blood to PSC

G0KYA reported that unfortunately contact with the RSGB Youth Committee had not resulted in any candidates being put forward for PSC membership.

5. Topics for Discussion

5.1 Propagation ideas for YOTA 2017

Members were keen that PSC should contribute to this event, which will take place in the first week of August 2017. A number of ideas were discussed for what could be done to engage and educate event attendees about propagation.

One activity considered was to engage the young people in making live predictions using HF propagation models and/or Es prediction models and then in each case observing what was really happening. Another opportunity would be to help attendees to access online ionosonde data and then to observe what that meant in terms of real communications opportunities across the bands.

5.2 5MHz beacons

PSC has been consulted by the RSGB President about the future of the 5MHz beacon experiment. Currently the RAL beacon (GB3RAL) has been switched off because it was interfering with experiments at the laboratory, the Orkney beacon (GB3ORK) is believed to be still active but the Westmorland beacon (GB3WES) is not, and the keeper is not keen to continue running it.

The 5MHz beacon licences expire next year. It was noted that guidance from the IARU R1 Beacon coordinator is that the beacons should not continue operation indefinitely because they contravene the agreed IARU R1 policy not to have permanent beacons below 10MHz. In addition, volunteers to continue the project have been sought, but no-one has come forward.

It was agreed that a full solar cycle of valuable data has been collected and considerable learning has been gained about the possibilities of this new band. But because two of the three beacons are no longer active, the continuous data set has now been broken.

After discussion, the conclusion reached by the committee was that the beacons have served their purpose in demonstrating the value of 5MHz and encouraging activity and developing our knowledge of the possibilities of this band, but that there is no strong argument for continuing the experiment.

6. Projects and Potential Projects

6.1 ITURHFProp graphical interface (G4FKH)

The latest version of the front end to ITURHFPROP (including a pre-development version known as 'Proppy') was demonstrated by G4FKH with both area forecasts and point-to-point predictions. It was agreed that the user graphics are impressive. Feedback from HF operators who have looked at the system (CDXC members) was good although they would like it to be possible to make predictions for larger stations than the standard 100W and dipole.

A number of changes to the prototype are in the pipeline, including extension to a wider range of modes (SSB, digital modes) and point-to-point predictions (Proppy)

should be available for wider evaluation via the <http://predtest.uk> website around early June.

It was noted that RSGB is now paying the predtest website running costs.

Action: G4FKH to prepare an item for RadCom to show progress, describe the new features and to invite further evaluation by the wider amateur population.

6.2 HF/VHF Propagation Presentations (G0KYA)

The HF propagation presentation, plus a set of show notes, has now been taken by 82 clubs and 16 live Skype Q&A sessions have been delivered so far by G0KYA. Other groups within RSGB are hoping to do something similar. Circulation is by direct contact with G0KYA in order to retain control and the decision has been made not to put it on YouTube (for copyright reasons).

The VHF presentation and script have been prepared by G4BAO but they are awaiting the addition of the voiceover.

Action: G0KYA

6.3 RAL 'Cheap as Chips' Digisonde (G0KYA)

Ruth Bamford of RAL initially seemed to be very keen to push this project forward and, as part of that, to set up a user group. G0KYA reported that unfortunately no progress has been reported and Ruth Bamford has not responded to requests for an update.

It was agreed that it is still very important to retain an ionosonde in the UK. The problem with the RAL Digisonde is that the computer hardware and software are obsolete and may quickly become impossible to maintain. It was noted that even if new hardware could be acquired it was still highly preferable that the unit should still be installed at RAL because the antenna system required is very large (two vertically-pointed rhombics).

Apparently the ex-Falklands Digisonde is now owned by Terry Jeacock, GW0EZY.

Action: G0KYA contact to establish what state it's in and whether he would be willing to let it be used.

6.4 Update to Ian Poole's "Radio Propagation Principles and Practice" (G0KYA)

As previously agreed, G0KYA has written a number of updates (with support on VLF from G3NYK) with one more chapter to be written.

6.5 Noise Measurement Projects (G4FKH)

Data still being submitted by the team of reporters monthly.

Contrary to what was stated in the RadCom article published last year, the noise level measured at G4FKH has been steadily increasing. Calibration has demonstrated that the sensitivity of G4FKH's receiver was stable to within 0.2dB between July 2015 and April 2016.

Action: G4FKH to investigate whether the noise increase that he has observed is reproduced in reports from the other stations in the network.

The RSGB VHF Manager has approached PSC about noise measurement at 50 and 70MHz. Ofcom has changed the basis for frequency sharing (in terms of allowed co-channel interference) in the 50 - 70 MHz range and there is concern that in future this higher noise level will become the 'norm'. He has asked whether PSC will sponsor an investigation.

Action: G3NYK will, as a first step, find out what plans the EMC Committee have.

Action: G4BAO/G4IFX to discuss a measurement campaign which could be promoted by the UKSMG (of which G4IFX is chair).

6.6 IARU 50MHz Synchronised Beacons (G4IFX)

The prototype coordinated beacon (funded by UKSMG) is currently under test at G8BCG and installation at GB3MCB is expected to be in time for the Es season (June/July). The total cost of the prototype was of the order of £650 but work is also on a much cheaper alternative (more like £70).

The question was raised of a potential PSC role in the management of beacons. It is believed that the IARU Region 1 VHF beacon coordinator is Ian Phillips, G0RDI and the committee is not aware of any plans to change that.

6.7 Other projects for the next 12 months

Steve, G0KYA reported that he is instigating an experiment correlating sporadic-E with solar flares.

No other new projects were put forward.

7. Reports

7.1 Chairman's Report (G0KYA)

G0KYA reported that the new GB2RS process seems to be working well, involving G0KYA, G4BAO, G4DDK and G3YLA. Google Docs is used to support the collaboration between the contributors.

Simon Brown, G4ELI has reported that his contact at Goonhilly has now left, so the prospect of installing a transatlantic SDR there is now very limited.

G0KYA reported that he is intending to put on a PSC stand at this year's Newark Hamfest (30th Sep/1st Oct) and he also advised that anyone wanting to offer a talk for the RSGB Convention would be advised to contact the organisers soon.

7.2 Chris, G4IFX showed early results of his polarisation monitoring on 50MHz signals. Tropo signals from GB3RAL (a 58km highly-obstructed path) demonstrate clearly that the system is truly separating 'vertical' from 'horizontal' signals. Aircraft scatter has been observed very clearly, and sometimes it can be observed on one polarisation (normally horizontal) while totally absent on the other. GB3RAL has a horizontal antenna so the 'vertical' signal is presumably some sort of scatter.

The system currently charts the intensity of the separate 'horizontal' and 'vertical' signals. The next step would be to develop the capability for real-time polarisation measurement to allow discrimination between slant and elliptical polarisation.

7.3 Barry, G8AGN reported that he is now the UK Microwave Group committee member for 24GHz and above. He has also been conducting interesting experiments with 'car scatter' at 134GHz (2mm wavelength).

7.4 Alan, G3NYK continues his role as the 'link man' between PSC and the EMC Committee.

7.5 Gwyn, G4FKH's principal activities have already been reported above, but he also reported that he will shortly be doing a propagation talk in Shefford.

7.6 Ron, G3SVW has done more talks at local clubs and conducts a regular propagation/aerials clinic, using RBN as a demonstration method.

7.7 John, G4BAO reported that the 24GHz beacon in Clacton is now live.

7.8 No reports had been received from corresponding members.

8. Any Other Business

None

9. Date of Next Meeting

The date of the next meeting was agreed to be Saturday 24th September 2016.

10. Close

The meeting closed at 16.30.

Chris Deacon G4IFX
PSC Secretary