

RADIO SOCIETY

of Great Britain

DRAFT / UNCONFIRMED

PROPAGATION STUDIES COMMITTEE

Minutes of a meeting of the Propagation Studies Committee held in Leicester on 14 October 2006 commencing at 1300.

1. Members Present

Prof. M. Harrison	G3USF	Chairman
Dr S. J. Reed	G0AEV	Secretary
Mr C. J. Deacon	G4IFX	
Mr A. Melia	G3NYK	
Mr R. Smith	G3SVW	
Mr L Butter-Fields	G0CIB	RSGB Board Member

The Chairman welcomed RSGB Board Member Leslie Butter-Fields G0CIB to PSC. G0CIB relayed the Board's appreciation of the work done by PSC to the meeting.

Apologies for absence were received from Mr G Adams G3LEQ, Mr R.G. Cracknell G2AHU and Mr S. Nichols G0KYA.

2. Minutes of the previous meeting

The minutes of the meeting held on 8 March 2006 were accepted as a correct record.

3. Matters Arising

From item 3 (4.1) RSGB Yearbook. Members were pleased with the additional propagation pages (prepared by G0KYA) in the RSGB Yearbook and trust that this page allocation will continue in future years.

From item 3 (4.1) RSGB Handbook. G3NYK reported useful responses from associate members K9LA and W3EP to his request for guiding ideas on the propagation content for future editions of the RSGB Handbook. He and G0AEV had copies of the text and comments.

From item 3 (4.2) Propagation studies posters. Members discussed in some detail the format of the proposed propagation posters and suggested that these should be high quality, probably A1 size, focussing on amateur experimentation and research topics that exhibited both scientific and instructional value.

G0CIB said HQ liked the idea and would be willing to provide assistance. HQ was looking for ways to generate interest in radio and would welcome PSC attempts to produce material that would enhance this aim. G0CIB was asked if assistance would include practical aid with production or production costs.

4. PSC membership and representation

G3NYK is to represent PSC on the 5 MHz Working Group.

5. Topics for discussion

5.1 Future beacon development

G3USF said that G4JNT had done a good service with his suggestions and proposals regarding beacons (presented to HFC and on www.scrbg.org/g4jnt), and asked for comment from PSC.

G4IFX thought we should start by determining what it is we wanted to measure and then establish the beacon specification. He wondered, for example, if we always require beacons using state of the art technology such as ultra-precise frequency control. G3NYK said it was important that beacons are capable of being auto-monitored and can act as sources of quantitative data rather than only cater for subjective observations. G3SVW reminded the meeting of the use of beacons as time standards.

G3USF believed amateurs need a flagship beacon network and noted that the NCDXF beacon chain had fulfilled this function well but was using 20 year old technology. He had emailed AB6WM on the thinking regarding the next generation of beacons but had received no reply as yet.

PSC was generally in agreement – a mix of new high standard and current standard ‘personal’ beacons can co-exist, and there was a need for a range of beacons to cover a variety of purposes. G3USF noted that G4JNT’s ideas didn’t represent a “one size fits all” standard. G3USF will contact G4JNT to relay PSC’s input to the discussion and to G3PSM for his information. Action G3USF.

G3USF said there was a need to set out reasons why we might need beacons at and below 7 MHz, part of the spectrum where pressure on frequency space has created some anti-beacon sentiment. Policy at the last IARU R1 conference was that there should be no beacons and no designated spectrum allocation for beacons below 10 MHz. This might change on 7MHz when all 300 kHz was available throughout Region 1.

G3NYK described the GB3SSS beacon, which is to transmit on 1.960 MHz this winter. With enough monitoring, it should be possible to acquire useful information on top band propagation. G3NYK thought that if this beacon was successful it might help with other sub-10 MHz beacons.

G3SVW believed that beacons transmitting on two frequencies – perhaps within the same band – could prove useful. G3USF said anything was possible for a temporary beacon if it had good scientific justification.

5.2 5 MHz Working Group

Written comments on the 5MHz experiment and analysis from G3LEQ and G3NYK were noted and their authors thanked for their contributions. After some discussion it was suggested that the ideas presented were best taken forward in the context of the 5 MHz Working Group. PSC was involved in the Working Group through representation by G3YNK.

G3NYK commented further on the use of SINPO in reporting 5 MHz beacons. SINPO was a subjective measure making analysis difficult, but G3NYK thought it might be possible to use the continuous automatic data to correlate with, and calibrate, individual reporter's SINPO data.

5.3 Propagation articles in RadCom

G0CIB said that G3NXC, Chair of Technical Committee, has asked for assistance with peer review of articles for publication. Committee members present believed that PSC was well placed to provide this service, and that members would be pleased to do so.

5. Projects

6.1 Grey line

G0KYA reported in a written contribution that the grey line group had been active trying to copy greyline signals from VK but with little success.

6.2 LF propagation

G3NYK was continuing to produce almost daily LF propagation reports. He was now getting DST data from Colorado and the LF receiving station in Portugal had returned to service.

LF propagation prognosis by G3NYK has been confirmed by US monitoring of a German utility. A CME shock arrival was accompanied by depression of LF signals by 6dB followed by a gradual (straight line) decline in signals as precipitation of particles continued. There was also a gradual rise in the recovery phase.

G3NYK also mentioned that 500 kHz was very interesting as this band lies mid way between top band and 136 KHz, and it had proved difficult to extrapolate conditions from top band to 136.

6.3 Multi-band Beacon project

G4IFX reported the multi-band beacon on 10m was off-air due to a PA failure. There has been a re-appraisal of this project. The current thinking was to build a more up to date beacon along the lines of the 5MHz beacons. This would be a 4-band beacon, probably built by the RAL club, and would cost around £200-£300. The design would be such that it would be easy to duplicate at other sites. The RAL beacon would be housed at the RAL Club building not with the ionosonde.

G3USF said that he hoped the new beacon would help promote time sharing (of beacons) in Europe and advances in monitoring techniques, as well as provide a reliable service.

6.4 Solar data and GB2RS news

G3USF reported that the solar data and propagation news service was ticking over

6.5 PSC posters

This item was discussed under matters arising

7. Activity reports

7.1 Chairman's report

The Chairman said that most of the points he wanted to raise had been covered during the meeting but he wanted to bring the following to the attention of members:

- a) DF5AI's web pages, and especially the article on long range Es at 2m. The Chairman noted an exchange of views on the relevance of water at ground reflection points.
- b) An article in *Six News* on JA to Europe summer "Es" 6m propagation
- c) The WA1ZMS 2m beacon, which was beaming "transatlantic".

7.2 Reports of activities

G0AEV read out a report of activities from G0KYA. G0KYA wrote an article on propagation software for the Chiltern DC Club and gave a presentation on "Propagation between 3Y0X and G – predictions v reality" at the recent HF Convention. An article on the latter has been submitted for publication in RadCom.

8. Any other business

8.1 G3USF asked if members had seen the recent *Observer* article on the "cooling sun", which described the case for decreasing sunspot activity in coming years.

8.2 G3NYK noted that 2 reverse polarity spots have been seen on the Sun.

8. Closure

The next meeting was provisionally booked for 14 April 2007 at Leicester. The meeting closed at 1615.

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M. Harrison, Chairman.