

RADIO SOCIETY

of Great Britain

DRAFT/UNCONFIRMED

PROPAGATION STUDIES COMMITTEE

Minutes of a meeting of the Propagation Studies Committee held in Leicester on 18 October 2008 commencing at 1300hrs local.

1. Members Present

Prof. M. Harrison	G3USF	Chairman
Mr S. Nichols	G0KYA	Secretary
Mr A. Melia	G3NYK	
Mr L. Butterfields	G0CIB	
Mr G. Williams	G4FKH	
Dr M. Walden	G0IJZ	

Apologies for absence were received from Ron Smith G3SVW, Gordon Adams G3LEQ and Prof. Barry Chambers, G8AGN.

2. Death of PSC members

Martin G3USF passed on news that two of the committee's long-standing members, Ray Cracknell G2AHU and Ray Flavell G3LTP, had passed away since the last meeting. Ray Cracknell had been a very active member of PSC and was the discoverer, with colleagues, of Trans Equatorial Propagation. He was also a regular contributor to Six News. Before his retirement Ray Flavell was the chief meteorologist at Lerwick and contributed many articles on VHF and UHF propagation.

The committee said that both would be sorely missed and wished to pass its condolences to both families.

3. Matters Arising

3.1 Membership

The committee welcomed Marcus Walden G0IJZ as a corresponding member. Marcus is best known for his recent RadCom feature on 5MHz NVIS propagation and the importance of the extraordinary ray when contemplating the critical frequency. Marcus came to the October meeting to meet the rest of the team.

Gwyn G4FKH is now back on the committee as a full member and was welcomed by everyone concerned.

A decision was taken that propagation matters are now well represented across the committee and we are not actively looking for new members.

3.2 RadCom Propagation features

At the last meeting Leslie G0CIB had said he would talk to the editor of RadCom to gauge his requirements for any future propagation features. Since then there has been a change of editor and G0KYA is now running a monthly "band of the month" column. This

will open up to include other HF propagation issues in the spring, once all the HF bands have been covered.

3.3 Automated beacon monitoring

There was extensive discussion around automated beacon monitoring and logging. The view is still that we still want to encourage beacon monitoring. Both the Faros IBP monitoring beacon and software and Peter Martinez's 5MHz beacon software were discussed. SpectrumLab was also discussed, but the view is that it isn't very user friendly for newcomers.

G0KYA said he would contact Alex Shovkoplyas, VE3NEA, the author of Faros, to see if he might be persuaded to write a simple, single beacon monitoring program, along the lines of Faros that could be used to log single-frequency beacons.

At the last meeting Ron G3SVW had said that he might give some further thought as to what type of software might be suitable, but nothing has been heard.

3.4 DUBUS Transatlantic beacon project

Nothing had been heard on the progress of the 2m trans-Atlantic beacon. D4C is now active on 6m from HK76MV on 50.0328MHz and in June was copied in the UK on at least 13 days and 20 days elsewhere in Europe. This has been a useful beacon and much information about propagation along this path is being learned.

3.4. Multiband Beacon

It was noted that the GB3RAL 28MHz beacon still appears to be transmitting a continuous carrier. The person at RAL responsible for the beacon has now retired, but it is hoped that it can be repaired very soon.

The 50MHz and 70MHz beacons are well used and reported, but the 40MHz and 60MHz are less popular. The permission granted from Ofcom allows these latter two beacons to be used for two years before permission needs to be sought again. This resubmission is due next year. The Danish 40MHz beacon is on a similar timescale. The UK approval of its 40MHz beacon was helped by the Danes getting permission for theirs and some effort will be made to get more publicity for the 40MHz and 60MHz beacons through DUBUS. G0KYA also said that he would contact the editor of RadCom to see if a small item of news could be included, reminding readers about the beacons.

3.5 Spectrum Forum

The Spectrum Forum met as scheduled. G3USF said that he wasn't aware of anything that touched on propagation issues.

3.6 Budgets

At the last meeting there was some discussion about committee expenditure. Nothing more has been heard, but Leslie G0CIB said that PSC is well within budget as far as he is aware. He will ask RSGB if the planned changes in the accounting software have now taken place.

3.7 6 and 10 reports

The May issue is on the web, covering the period up to 5/08. However, June 2008 saw more 6m contacts being reported than previously and G3USF became snowed under. In fact, some 50,000 – 60,000 reports were received, making it an “interesting month”. Reports were also received from other areas including the Azores, Caribbean and Madeira, all showing a lot of interest in 6m. In June there were at least 19 days on which there was propagation between the USA and Europe, 23 days with propagation from Europe to the Caribbean and 19 days of propagation between Japan and Europe. There were also a substantial number of days with very long distance propagation, such as Japan to Haiti. A discussion took place on the effects of sub storms on propagation and the effects of an influx of charged particles from the magnetotail.

The 6 and 10 report can be found at <http://g7kse.co.uk/6and10/>

3.8. RSGB Handbook

New material for the RSGB Handbook has been requested by the editor. The suggestion is that some of the graphics, in particular the graph of the solar cycle, need updating. G4FKH will contact Mike Dennison, the editor, to request a PDF of the chapter. This will then be distributed to members for comment.

4. Projects and other discussions

4.1 LF

Alan G3NYK said that he continues to publish a daily LF report on his web site at <http://www.alan.melia.btinternet.co.uk/>. He said that 500kHz long-distance activity is down. He did have some graphs of the reception of the Magdeburg DCF-39 beacon at W3EEE's QTH in Pennsylvania. These showed a Kp index of 7 affecting 136 kHz propagation badly. See <http://www.hifidelity.com/w3eee/>. Alan added that the DST index is still proving to be a good predictor of LF propagation.

4.2 GB2RS

The 10am GB2RS transmission on 40m is now being broadcast from a station in Germany, in view of the low critical frequencies currently being enjoyed at the bottom of the solar cycle. G3USF said that with the current low sunspot numbers it is very difficult to “ring the changes” and make the bulletins different each week.

5. Activity reports

5.1 Chairman's report

The chairman said that he had received a letter from Peter Kirby, RSGB GM, saying that support for events like the Leicester Show was in decline, adding that overnight expenses for attendance by committee representatives could be paid. The committee said that an invite to the October Leicester Show had arrived too late, but thought would be given to the October 2009 show at the next meeting. A discussion then followed as to what exactly was required and Leslie G0CIB said he would take this up with the RSGB.

A discussion then followed about funding cuts for propagation studies. G4FKH said that the funding for the RAL and Falklands Ionosondes will continue as the military needs the data. The feeling was that radio science is losing out to other ICT-based programmes when it comes to funding.

G3USF reported that the PSC web site still gets significant hits. The 50MHz beacon list gets an average 3,000 hits a month, while the 28MHz beacon lists gets 1,700. The PSC pages are accessed around 1,000 times a month and the Saturday propagation update gets 300 hits a month.

5.2 Reports of activities

5.2.1 RSGB Board

There are no issues from the Board. There was some discussion about the level of knowledge assumed with RadCom articles. Steve G0KYA said that he was told that his monthly column has to be readable by everyone, from complete novice to experienced amateur. Leslie G0CIB said that he would distribute the guidelines as to peer review of RadCom technical articles.

5.2.2 Marcus G0IJZ

Marcus gave a brief introduction. He is a radio engineer at Plextek in Cambridge and has an interest in HF propagation, QRP, antennas and is involved with the 5MHz research. He has submitted an abstract based on his 5MHz extraordinary wave piece for RadCom to the IET (The Institution of Engineering and Technology) conference in Edinburgh.

Secretary's note: This is the 11th International Conference on Ionospheric Radio Systems and Techniques (IRST 2009) on 28 April - 1 May 2009 at the Edinburgh Conference Centre, Heriot-Watt University, Scotland.

5.2.3 Steve G0KYA

Steve said that the greyline work had been put on hold due to lack of reliable signal sources around the globe. He said that he is continuing to produce a monthly radio programme to the "This Week In Amateur Radio" Podcast in the USA. He also produced a downloadable PDF booklet of HF predictions for the last RSGB HF SSB field day. This was promoted on GB2RS as well.

He did a similar thing for the International Marconi Day.

He also wrote the HF propagation section of the 2009 RSGB Yearbook and is continuing to write a monthly "band of the month" column for RadCom.

Steve gave a talk on HF propagation as part of the Icom Contest University at the RSGB conference in October and did an analysis of Top Band and 80m contacts from VP6DX that was fed back to CDXC.

5.2.4 Barry G8AGN

Barry sent in the following before the meeting: "I've been refining my Doppler tracking approach by investigating in more detail the actual backscatter and forward scatter from a generic aircraft. This was the subject of quite a lot of interest about a year ago on the UK Microwave Group Reflector. This should enable me to get a better match between measured and computer generated Doppler curves.

I'm also still monitoring the GRAVES radar via meteor and satellite scatter. I haven't ruled out that some of the data may be coming from aircraft scatter since I only seem to see this when propagation conditions are good. Whether this is due to backscatter (aircraft south of the radar Tx) or forward scatter (illuminator is radiation from the Tx antenna backlobes - Tx power is 1MW), I don't know. It would be good to get other reports. I have been in contact with G7IZU in Devon(?) who monitors GRAVES but we haven't yet reached the stage of exchanging regular reports."

5.2.5 Gwyn G4FKH

Gwyn gave a talk at RSGB HFC on "Solar Cycle 24 – what will it bring". This was very well attended.

6. Any other business

6.1 Gwyn G4FKH said that he was disappointed with the readability of his propagation charts in RadCom. They appeared to be printed in a very light font that made them hard to read. He showed a page of the same charts from an Italian magazine to show the difference. He will approach RadCom to see if anything can be done. The text that accompanies the chart will also be amended to say that the forecasts are based on amateurs using 100W and a dipole. Steve G0KYA will also try to refer to the charts in his column to help promote them.

7. Closure

The next meeting was provisionally booked for Saturday 18 April 2008 at Leicester.

The meeting closed at 1600hrs.

Steve Nichols G0KYA