



RSGB Propagation Studies Committee

Report for Spectrum Forum, January 2024

The purpose of the Propagation Studies Committee (PSC) is to promote interest in radio propagation amongst amateurs and shortwave listeners, to enable them to make better use of the amateur bands and encourage research into the subject.

Main points:

- After a recent discussion, it was agreed to end the distinction between Corresponding members and Associate members of PSC and use the term 'Associate Members' for both. A consolidated list is being produced.
- Peter Duffett-Smith GM3XJE has been developing an automatic Long Delay Echo (LDE) sounder, with the ambition of providing software (WSTJX-style) that any radio amateur may use to search for these elusive events. Peter gave a talk about it at the RSGB Convention and, as a result, Heather Nickalls M0HMO has volunteered to produce the software.
- John G4BAO has plans for a 24GHz WebSDR for the Essex coast. Its intention is to study trans-North Sea propagation at 24GHz using the Dutch and Belgian beacons. The hardware and software have been completed and tested for well over 12 months and has been trialled from John's QTH in Cambridgeshire. There are plans to add it to the Martello Tower Repeater Group's site at Holland-on-Sea. Installation is on hold until the better weather arrives.
- The Propquest website, kindly hosted by Weatherquest, continues to provide near real-time displays of ionosonde data. During the main Es season, Jim also prepared a daily blog on the likely importance to Es of various weather features on upper air charts. Further work will be done on the refinement of the EPI map and possible inclusion of detailed ionosonde time-domain plots of Es events.

Jim also hopes to be able to add data from the RSGB meteor beacon project by Brian Coleman G4NNS into the Es database in the future.

- Gwyn G3ZIL has completed a study of two-hop sidescatter at HF, with talks, a RadCom article and a poster at the American Geophysical Union (AGU). Work in progress includes documenting the October 2023 annular eclipse propagation changes using FST4W data and an AGU poster.
- Chris G4IFX and others contributed sections to US-based HamSCI's Nathaniel Frissell W2NAF's "Heliophysics and Amateur Radio" article and work by other PSC members was also featured. He also gained his PhD with a thesis entitled "Radio propagation through ionospheric sporadic-E".
- GB3MCB in Cornwall is now back on the air and has been spotted on 28, 40, 50, 70, 144, 432 and 1296 MHz. Funding for power provision to the whole cluster of beacons and



repeaters was provided by RSGB Legacy Committee and the beacons are now being fed via solar power - see the story in November's RadCom.

The 10W GB3MCB TX on 28.215MHz has just been repaired and the antennas, which were badly affected by the weather have been replaced with temporary ones. This may be why it hasn't been spotted for a while. Tip: If searching for it on the RBN use GB3MCB/B.

- Ron G3SVW, PSC's man in the northwest, has been maintaining an interest in propagation with a small group in the South Manchester area. One subject of discussion has been the categorisation of fading for signal reporting.
- Sam G4DDK continued to push 9cm EME paths with a smallish system and says the threat and challenges to 23cm EME are still of concern.
- Barry G8AGN had three articles published in DUBUS and one in RadCom Plus on 30THz. He also gave two talks and demonstrations of 30THz operating at the Finningley Round Table in June.
- And finally, PSC Chairman Steve G0KYA continued his work on the HF section and compilation of GB2RS, wrote an HF propagation update for the RSGB Yearbook and gave several online talks to clubs around the UK.
- As there was no Newark Hamfest this year we were asked if could put on a small exhibit at the RSGB Convention in Milton Keynes. Steve chose not to give a talk this year but concentrated on getting the stand together.

This he did, and he met quite a few interested people at the event. Gwyn, G3ZIL also used a large-screen monitor to demonstrate how he uses FST4W for propagation studies. He was also interviewed live on RSGB TV showing how the North American annular eclipse was affecting HF propagation over the west coast.

Live talks were given by PSC members Peter Duffett-Smith (long-delayed echoes) and Jim G3YLA (update on Es propagation). John G4BAO also participated in a talk entitled "Moving forward on 23cm".

Steve Nichols, G0KYA
Propagation Studies Committee chairman
10 May 2024