

12th April 1985

Greetings Lloyd:

Thanks for your good letter of 27/11/84 plus enclosure. They arrived on 25/3/85. I have read the tome by Bruce Veidt and am greatly impressed. The idea of building a small low frequency array around the high frequency horn is novel. It is carried out with imagination and competence. Figures 2.3 and 2.6 tell the story. The discussion about phase stability and local oscillator I found interesting. The maps at end testify the whole apparatus functions in a worthy manner. I've seen PhD theses displaying a lot less imagination, effort and competence. A further extrapolation of the concentric antenna idea would be to place a 5 or 6 cm horn inside the 21cm horn and thereby achieve three simultaneous frequencies. The CLBA people can only use one at a time. Are there any takers?

Bob Roger was here for a few hours one day last January. We discussed low frequency equipment. Reading the above thesis caused me to remember something I forgot to mention to him. About 1964 I designed and constructed a prototype horizontal dipole system to work at fundamental and third harmonic. In sample case, these were 2mc and 6mc. Both frequencies were tightly coupled and heavily damped. At each a 20% bandwidth was secured. Also, by great good fortune, the output impedances were same, so both frequencies went out over same 600 ohm balanced line. They could be sorted out at receiver by high and low pass filters. Future low frequency installations ^hould incorporate this design.

Keep up the good work,

Best wishes,

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