Topics this week:

Detailed electronics discussion and viable Plan B for the low power beacon receiver. Introduction to low noise measurements from AF through SHF.

Reading: Instrumentation Receiver White Paper

Study: The Ashar Farhan Minima Transceiver. Link on web page.

Y Factor Noise Figure Measurement--read the Agilent note below:

Block diagram and system hardware for Plan B receiver.

Homework for this week: A receiver is connected to a 50 ohm resistor at room temperature and the output noise in the speaker is measured using an audio voltmeter. The resistor is placed in a styrofoam cup of Liquid Nitrogen, and after it has stopped bubbling furiously, the audio noise has dropped by 1.3 dB. What is the noise temperature of the receiver, and what is the noise figure of the receiver. Show your work, and don’t just pick the number of one of the many graphs available on the web. The wise student will compare the calculated result with the graphic result.