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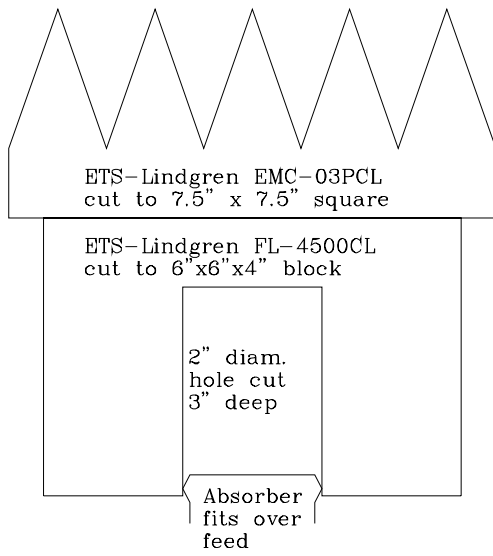
To: VSRT Group
From: Alan E.E. Rogers
Subject: Absorber for calibration of ozone spectrometer

Memo #45 describes the measurement of the “Y” factor to calibrate the ozone spectrometer. Initially small 8”x8” pieces of absorber were sent out with the spectrometers. These small pieces have been found to be unsatisfactory for the following reasons:

1. The absorber material itself was not consistent and some pieces were found to provide less than 10 dB attenuation to an incoming plane wave at 11 GHz.
2. The absorber was not a good match so that reflections of the noise coming out of the LNA were affecting the measurements. Changing the distance of the absorber from the feed changed the total power as a result of the change of phase of these reflections.
3. The absorber has to be held in place by hand to make a measurement

As a result of the deficiencies listed above a new absorber has been designed to provide more attenuation, a better match and the ability to stay in place without being held.

Figure 1 shows the design drawing of the absorber and Figure 2 is a photograph of the absorber in place over the feed.



Calibration absorber for Ozone Spectrometer

Fig. 1



Fig. 2