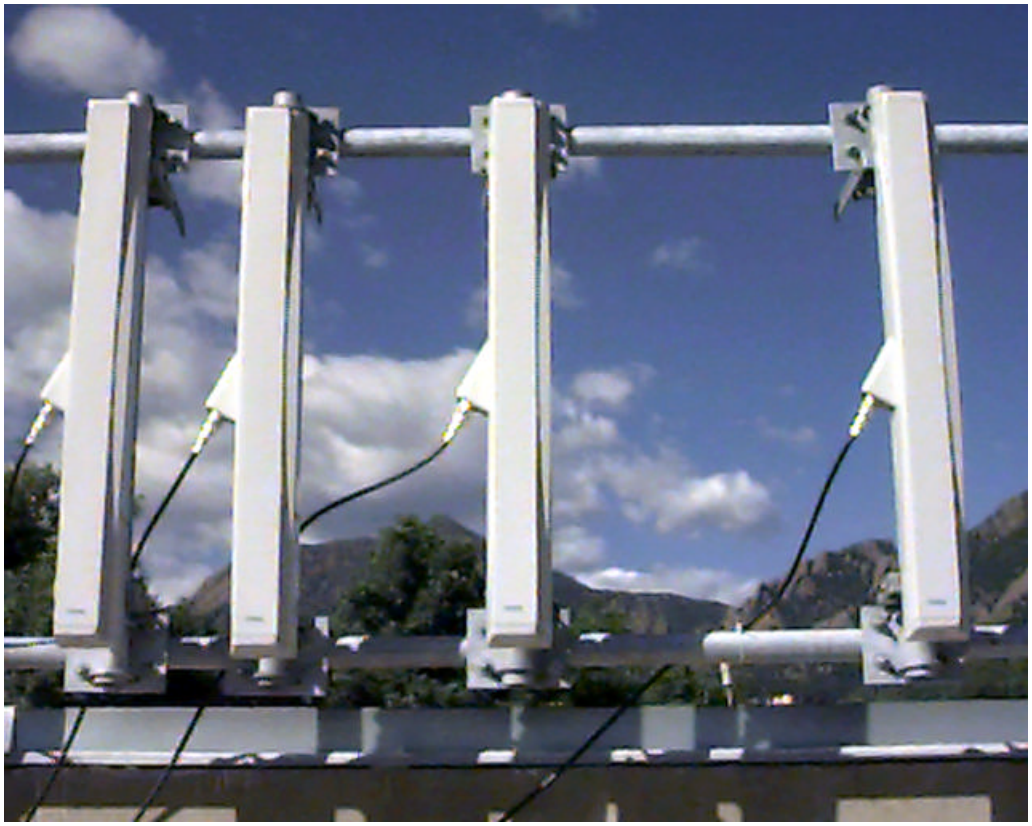

Figure 1. Four element linear antenna array spaced 2λ, 5λ, and 10λ from leftmost element.

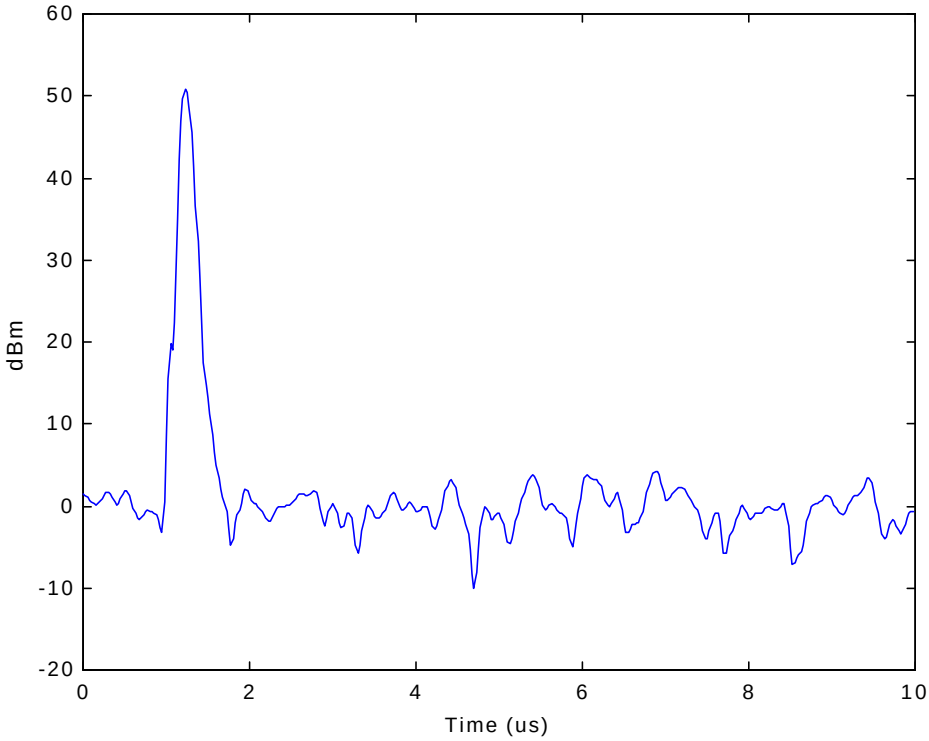

Figure 2. Sample calibration impulse.

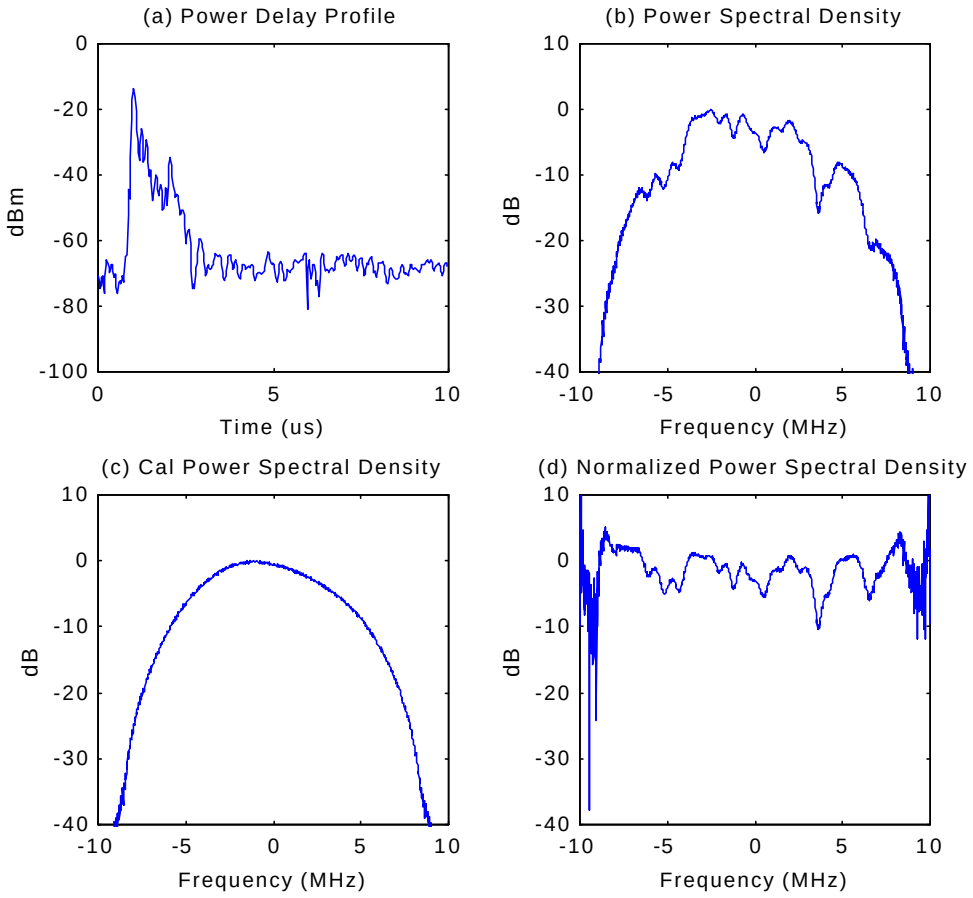

Figure 3. Example of a received impulse and the resulting normalized PSD.

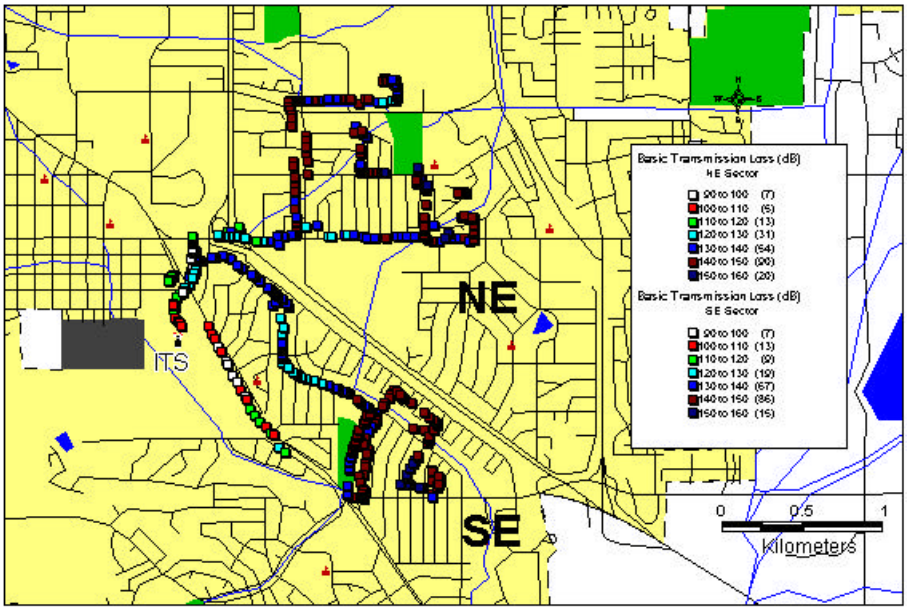

Figure 4. Drive routes and received signal strength (RSS) for NE and SE sectors of the GMM cell.

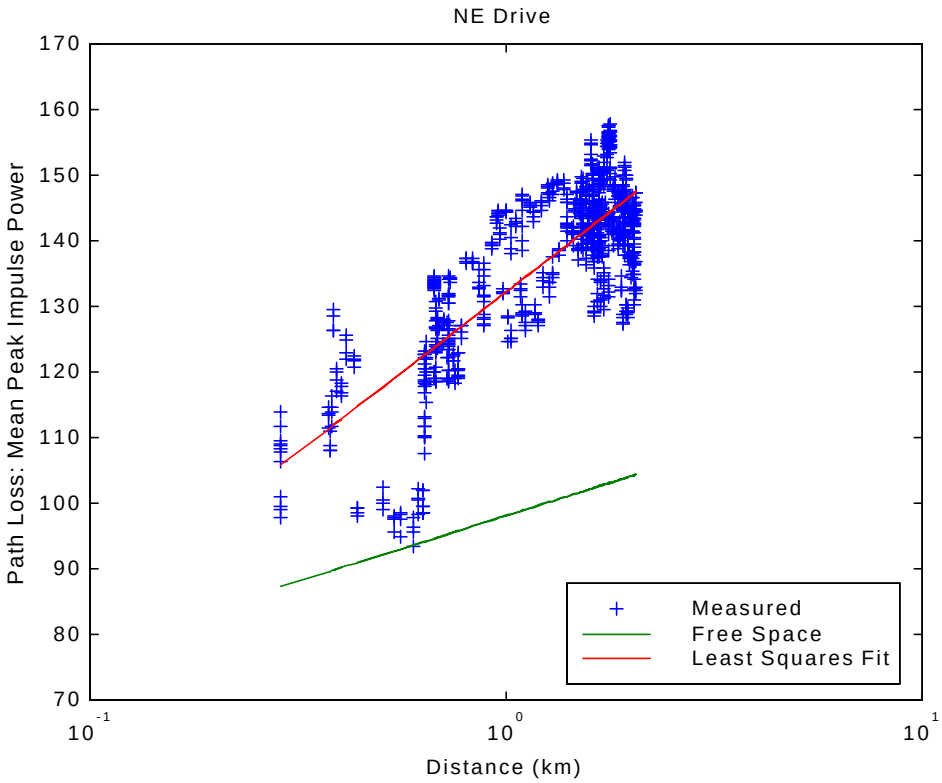

Figure 5. Path loss versus distance for the NE sector of the GMM cell. The least squares curve fit has a slope of 4.89.

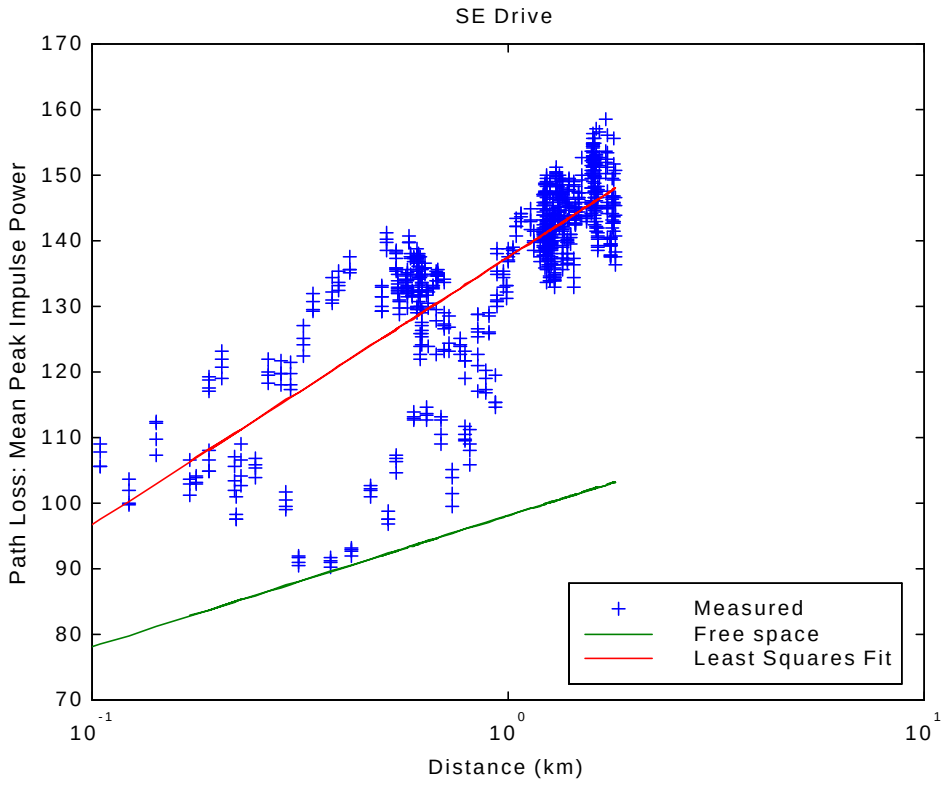

Figure 6. Path loss versus distance for the SE sector of the GMM cell. The least squares curve fit has a slope of 4.08.

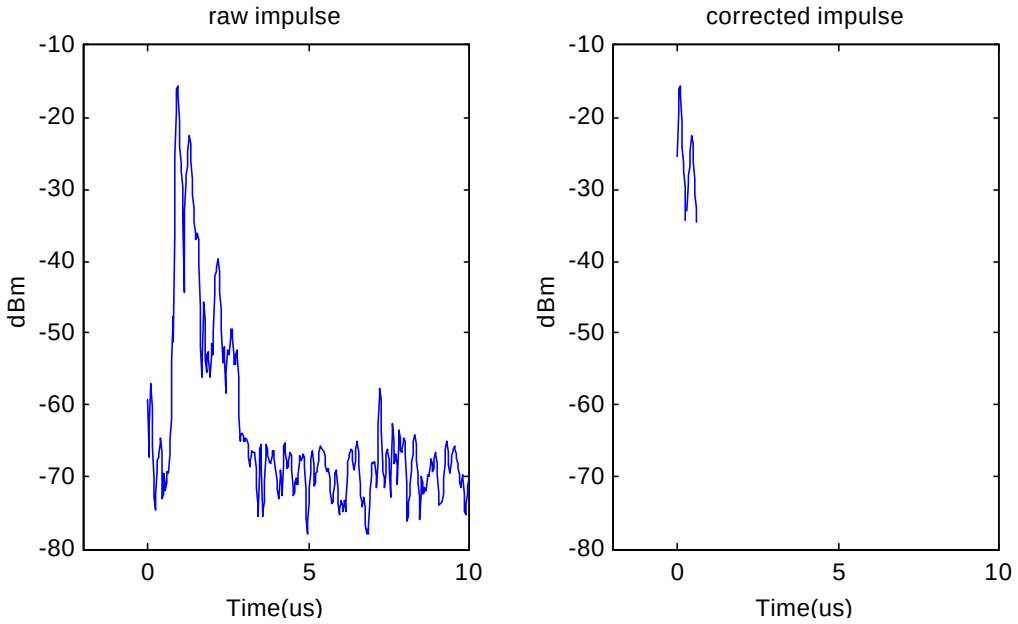

Figure 7. An example of a raw APDP and corrected APDP (NE drive, burst 1, impulse 8, channel 1). The corrected APDP consists of the signal within 20 dB of the peak signal time shifted to t = 0.

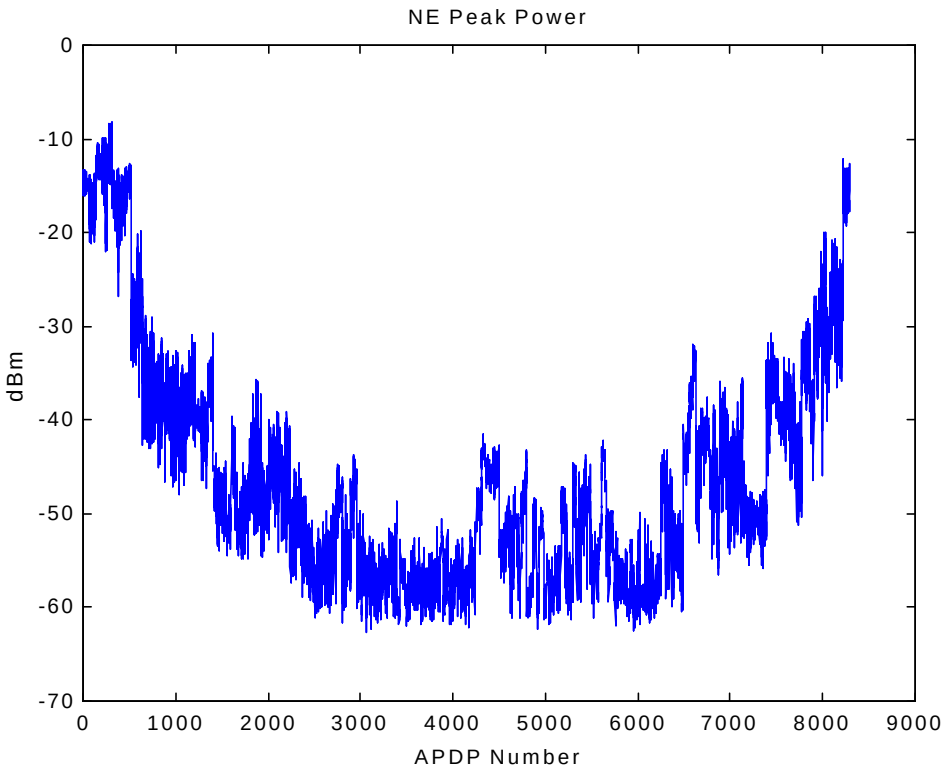

Figure 8. The peak power for the 8286 valid NE drive APDPs. The APDPs are ordered sequentially in time.

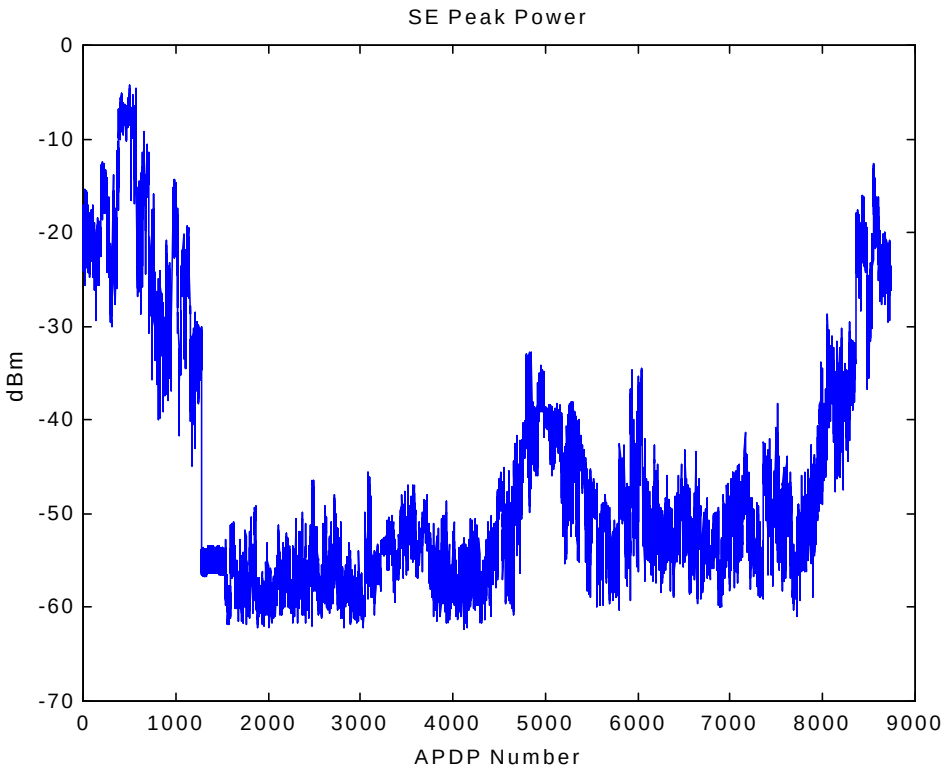

Figure 9. The peak power for the 8735 valid SE drive APDPs. The APDPs are ordered sequentially in time.

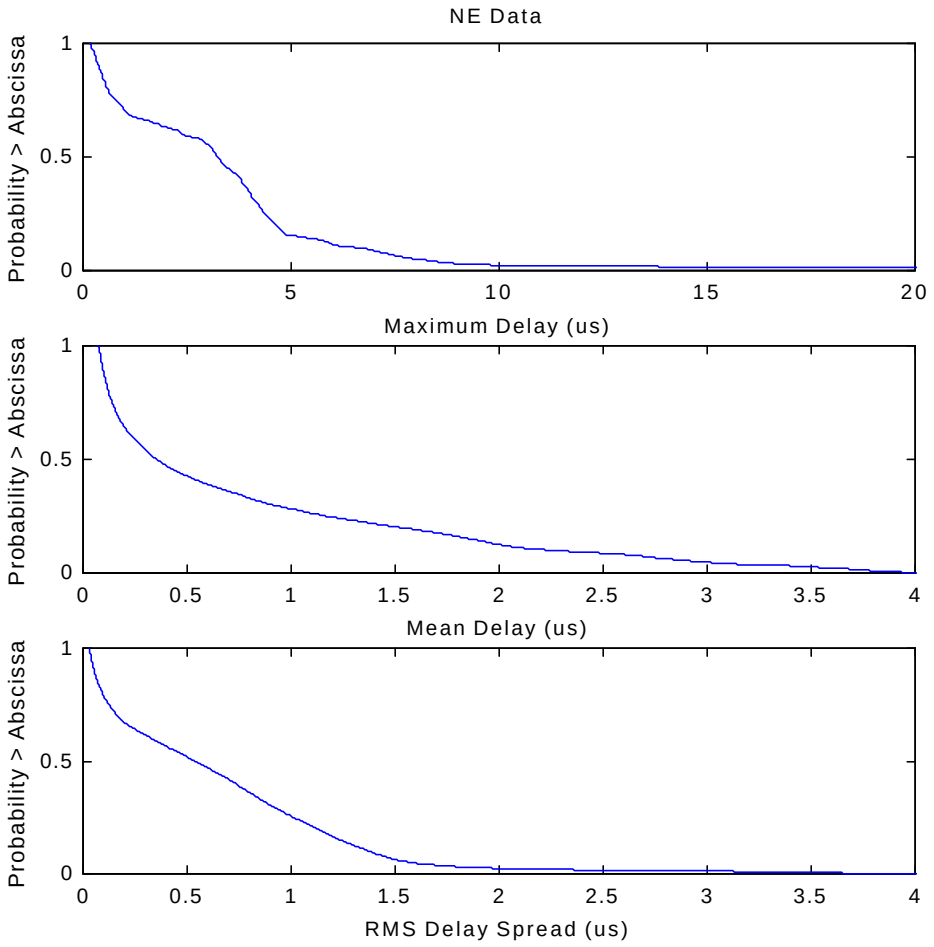

Figure 10. Delay spread statistics for the NE data set. Shown are maximum delay, mean delay, and RMS delay spread probabilities.

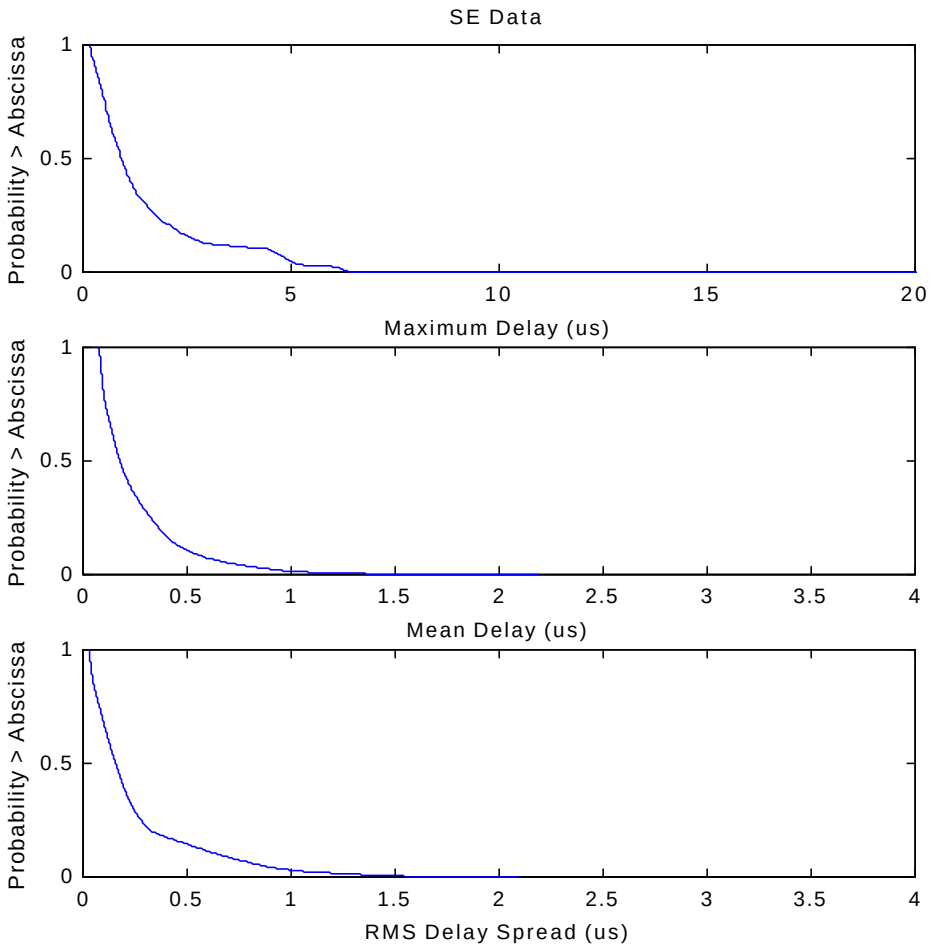

Figure 11. Delay spread statistics for the SE data set. Shown are maximum delay, mean delay, and RMS delay spread probabilities.

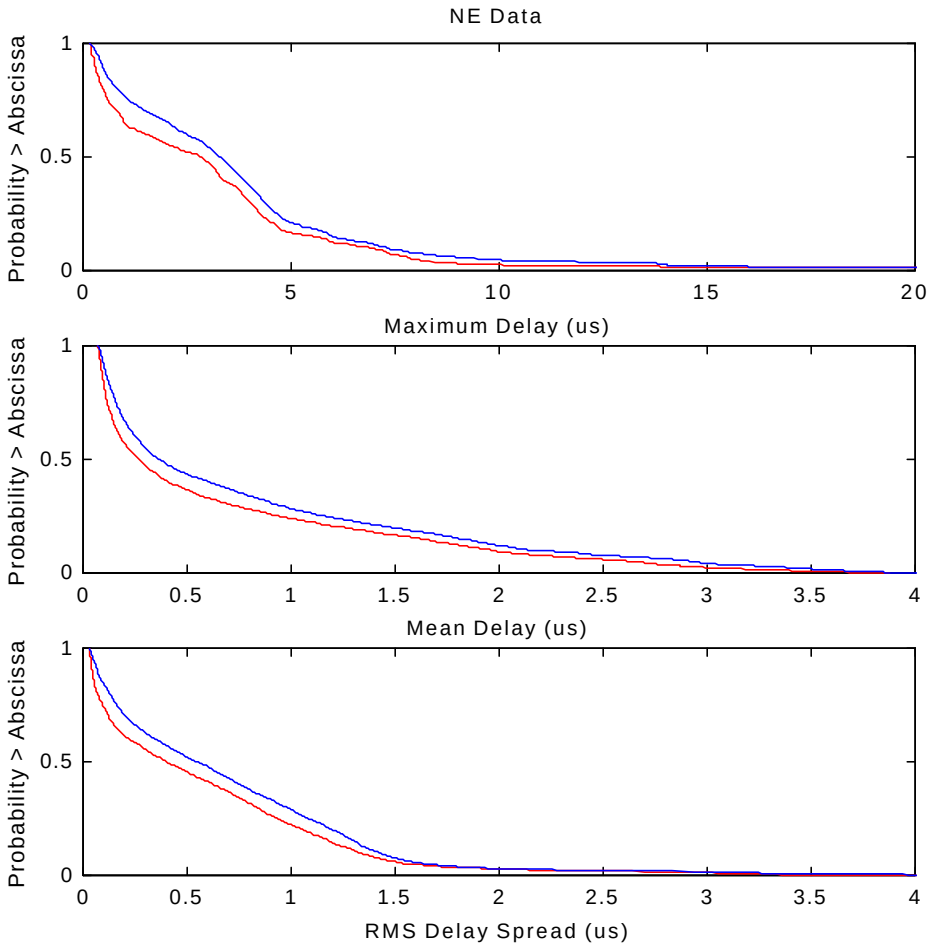

Figure 12. Diversity delay spread statistics for the NE data set. Plotted are the four channel minimum (red) and four channel mean (blue) probabilities for the maximum delay, mean delay, and RMS delay spread.

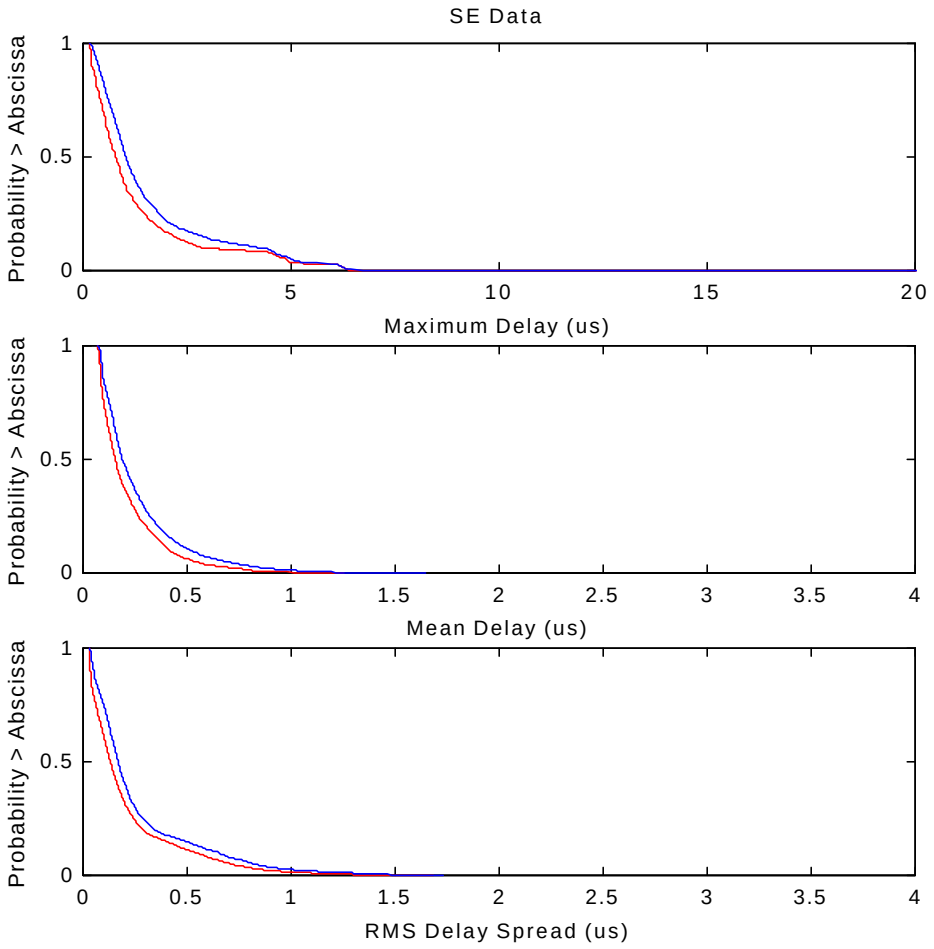

Figure 13. Diversity delay spread statistics for the SE data set. Plotted are the four channel minimum (red) and four channel mean (blue) probabilities for the maximum delay, mean delay, and RMS delay spread.

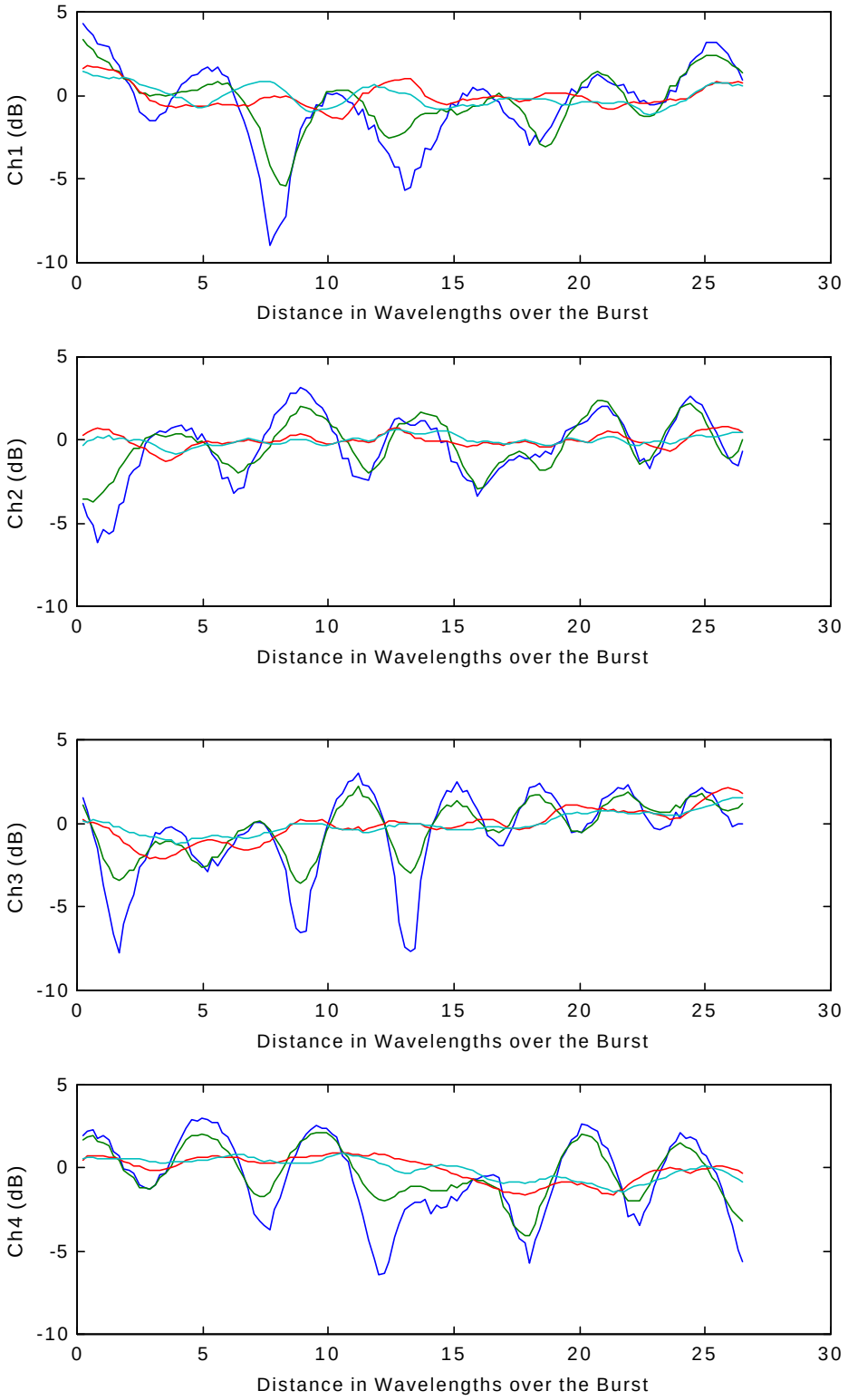

Figure 14. The normalized power spectral density for the four bandwidths (19.6 kHz-blue, 1.25 MHz-green, 5.0 MHz-red, 10 MHz-cyan) and four channels for a typical burst (NE Drive, Burst 1).

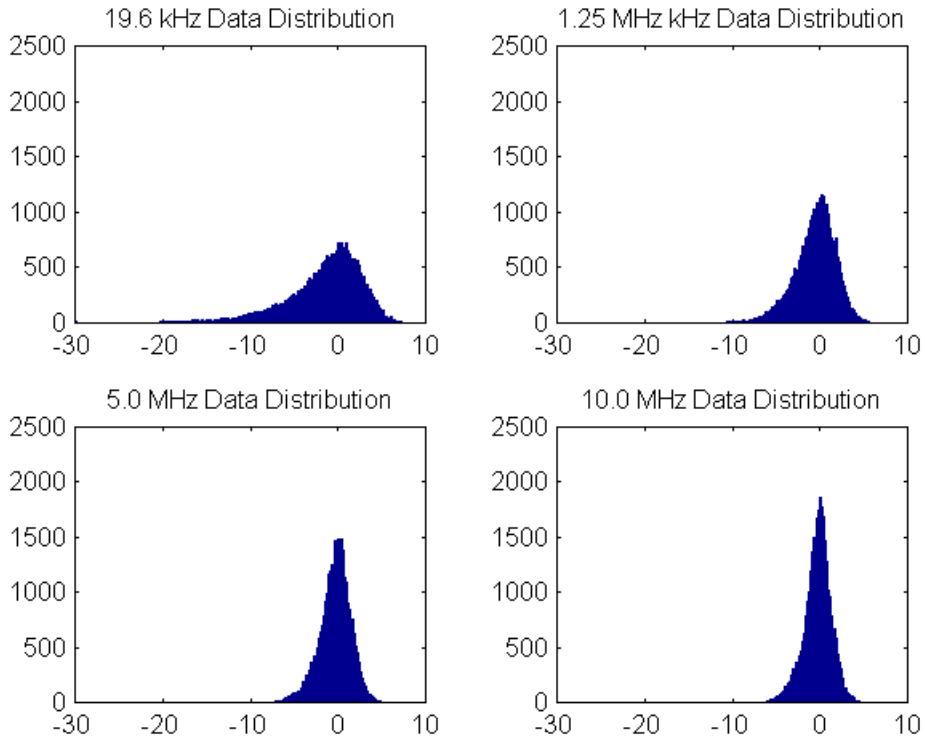

Figure 15. Distribution profiles (combined channel data) for the NE data set for the four bandwidths.

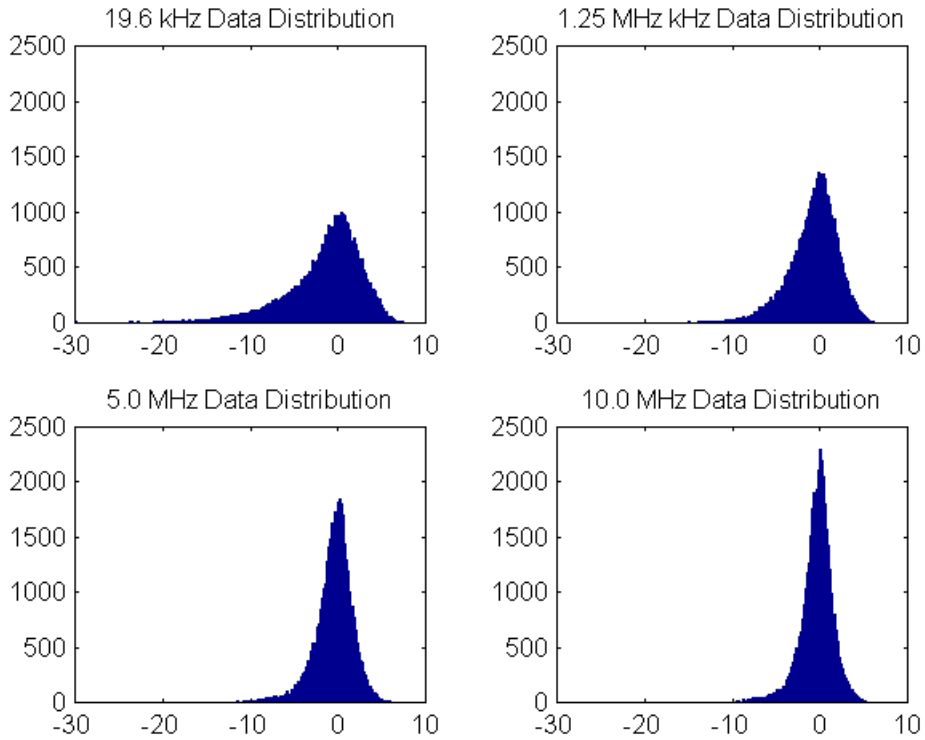

Figure 16. Distribution profiles (combined channel data) for the SE data set for the four bandwidths.

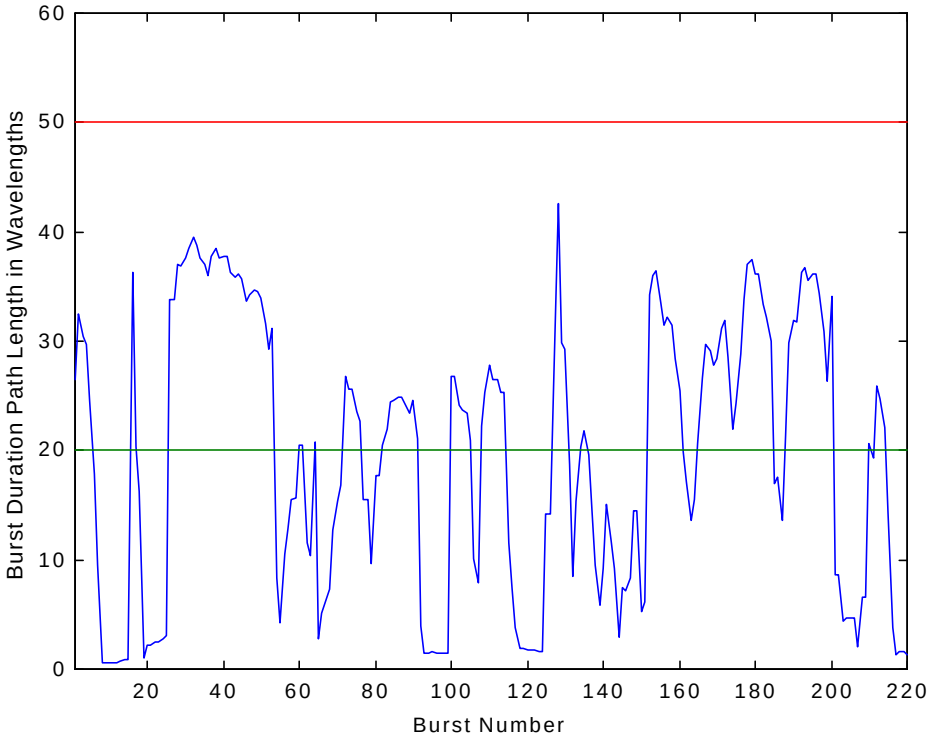

Figure 17. The path length per burst for the NE data set. 118/220 bursts are valid (in the 20-50λ range).

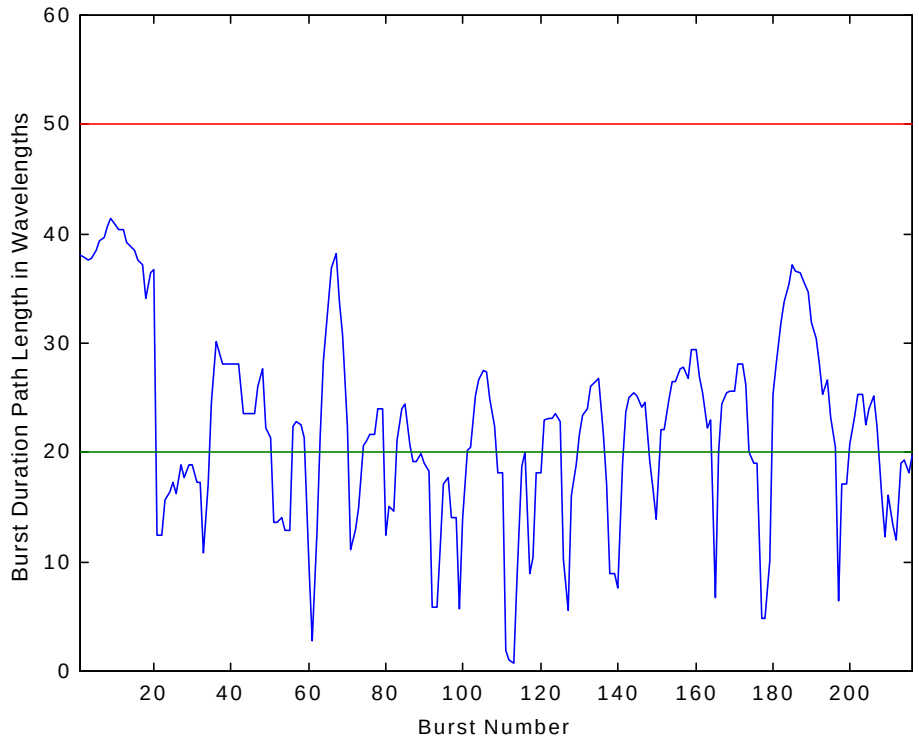

Figure 18. The path length per burst for the SE data set. 132/206 bursts are valid (in the 20-50λ range).

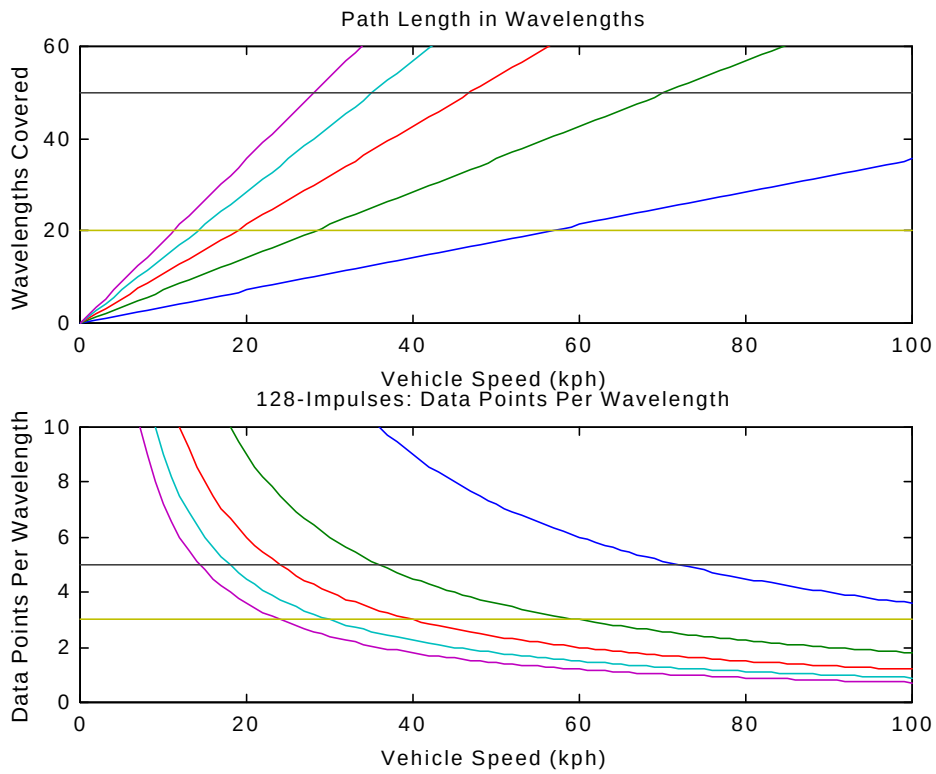

Figure 19. The straight line path length in wavelengths versus vehicle speed for burst durations of 0.2 s to 1.0 s in 0.2 s steps (upper curves) and the data points per wavelength for a 128 impulse burst for the same range of values (lower curves).

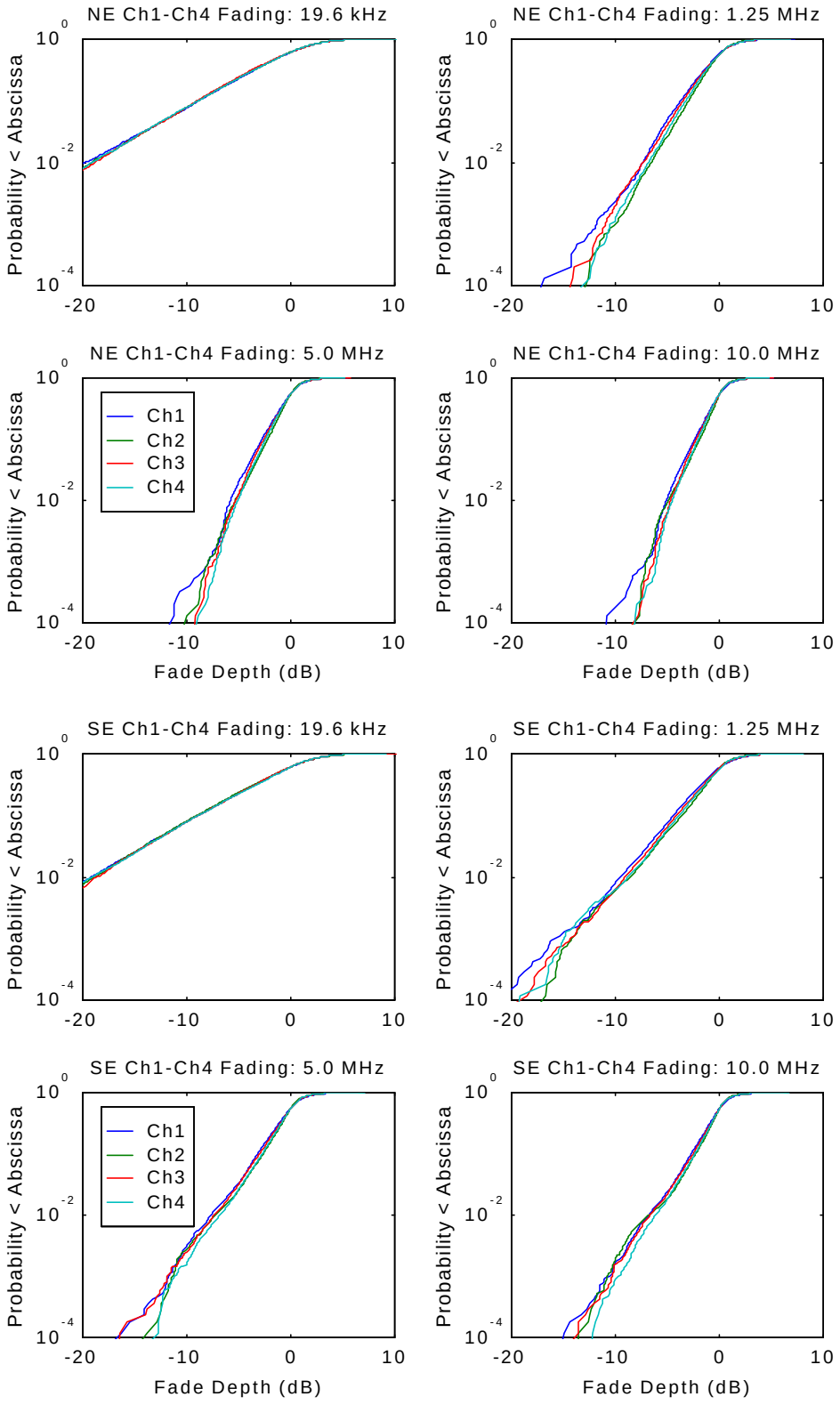

Figure 20. CDFs for channels 1-4 versus bandwidth for the NE (upper) and SE (lower) data sets.

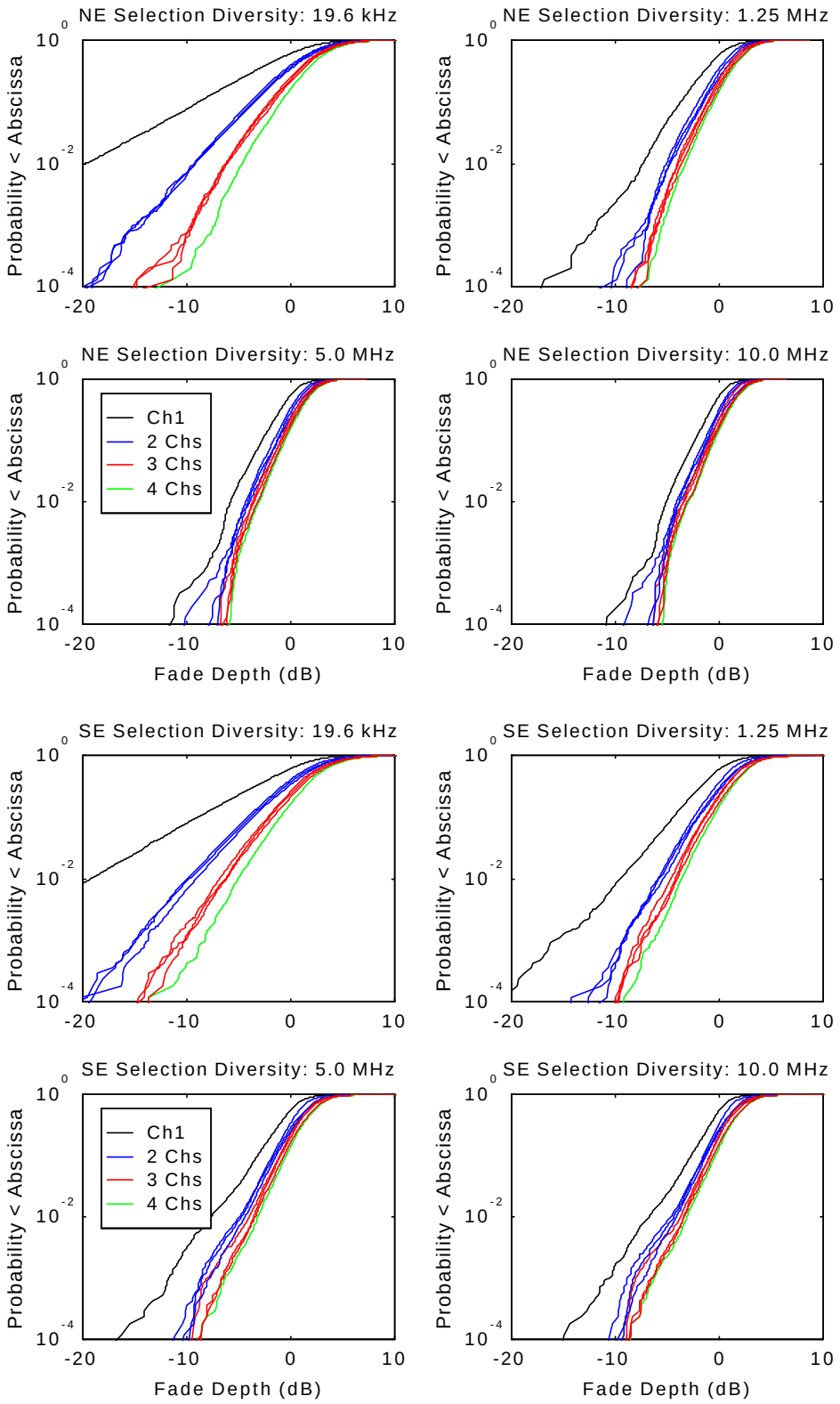

Figure 21. Selection diversity CDFs for the NE (upper) and SE (lower) data sets.

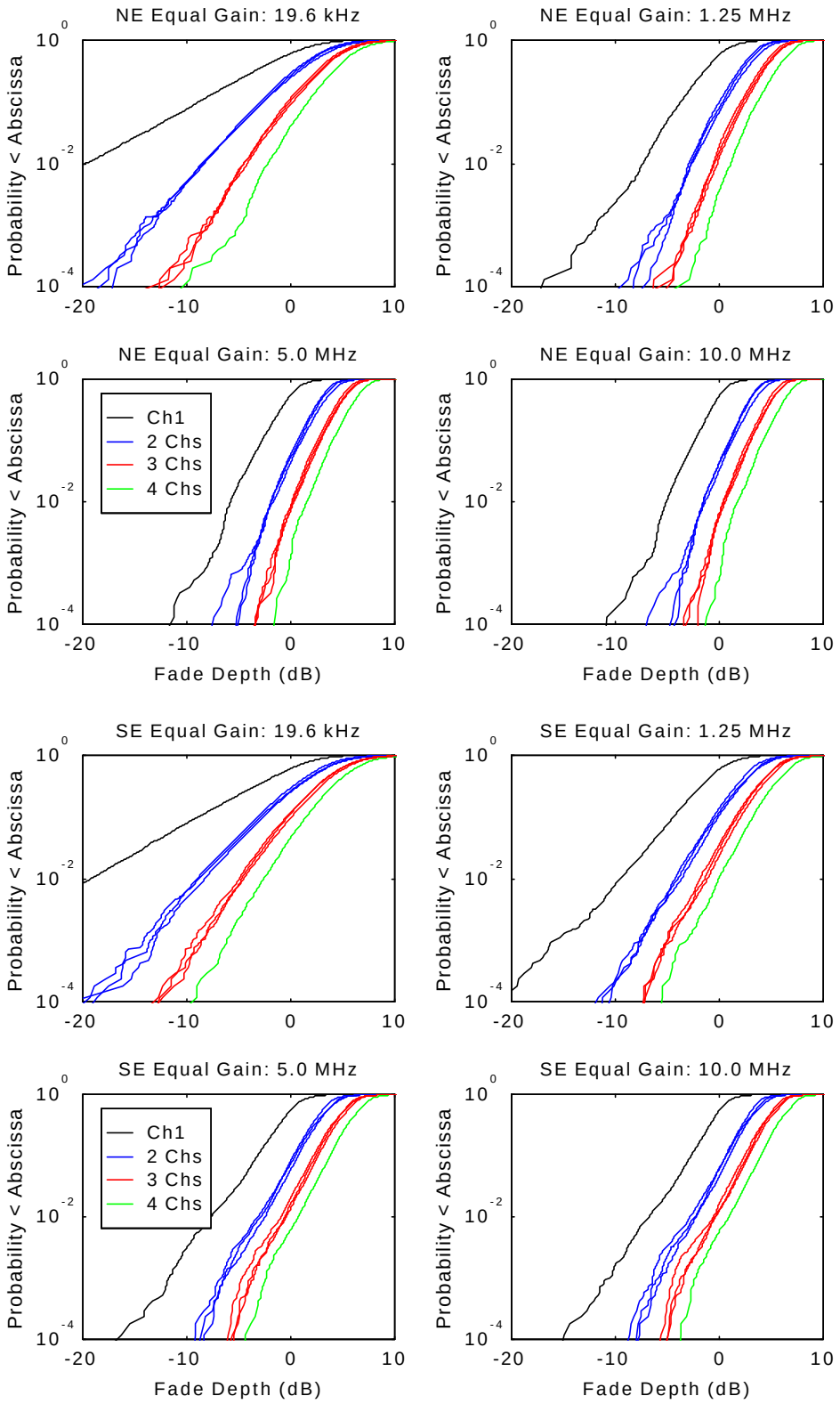

Figure 22. Equal gain diversity CDFs for the NE (upper) and SE (lower) data sets.

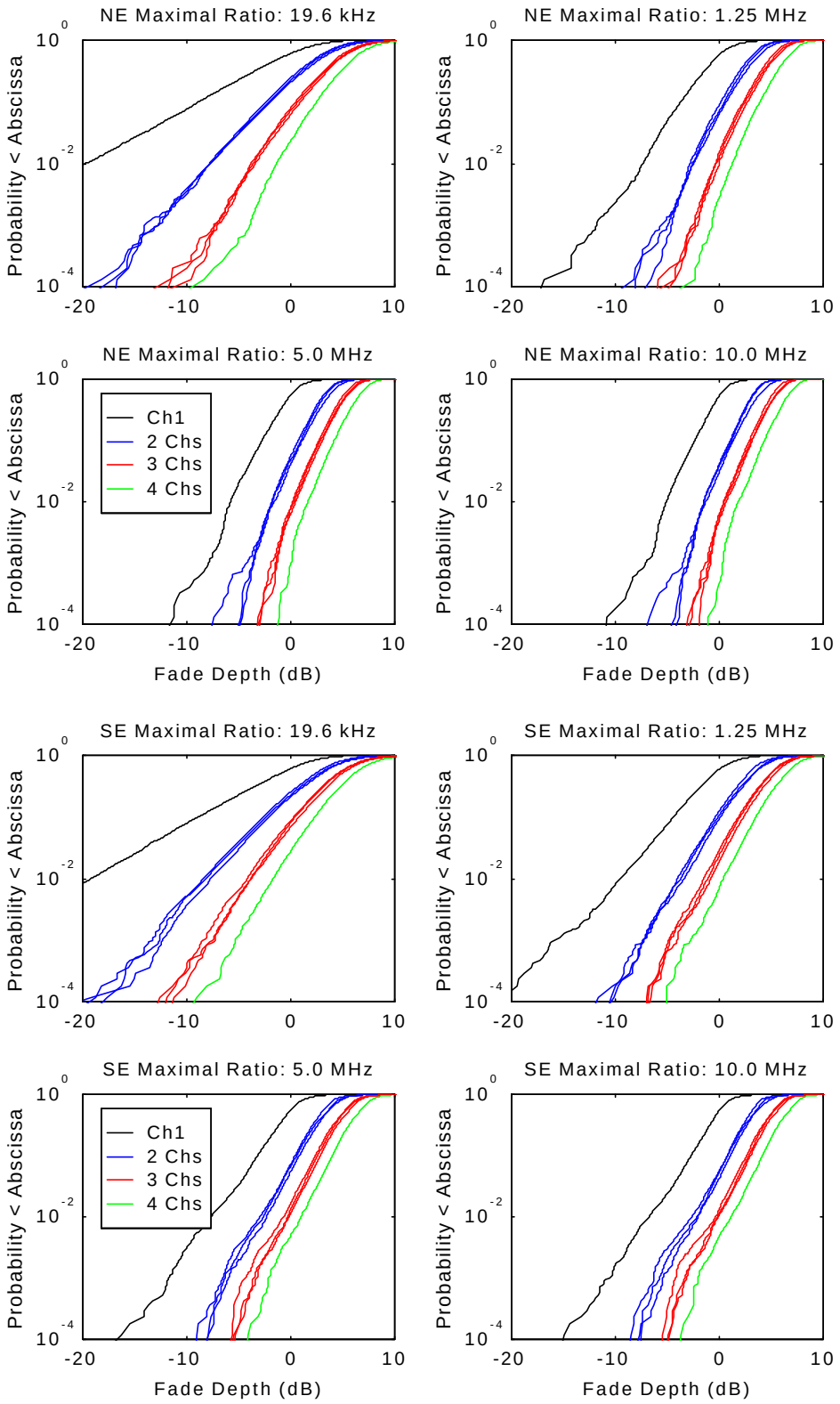

Figure 23. Maximal ratio combining diversity CDFs for the NE (upper) and SE (lower) data sets.

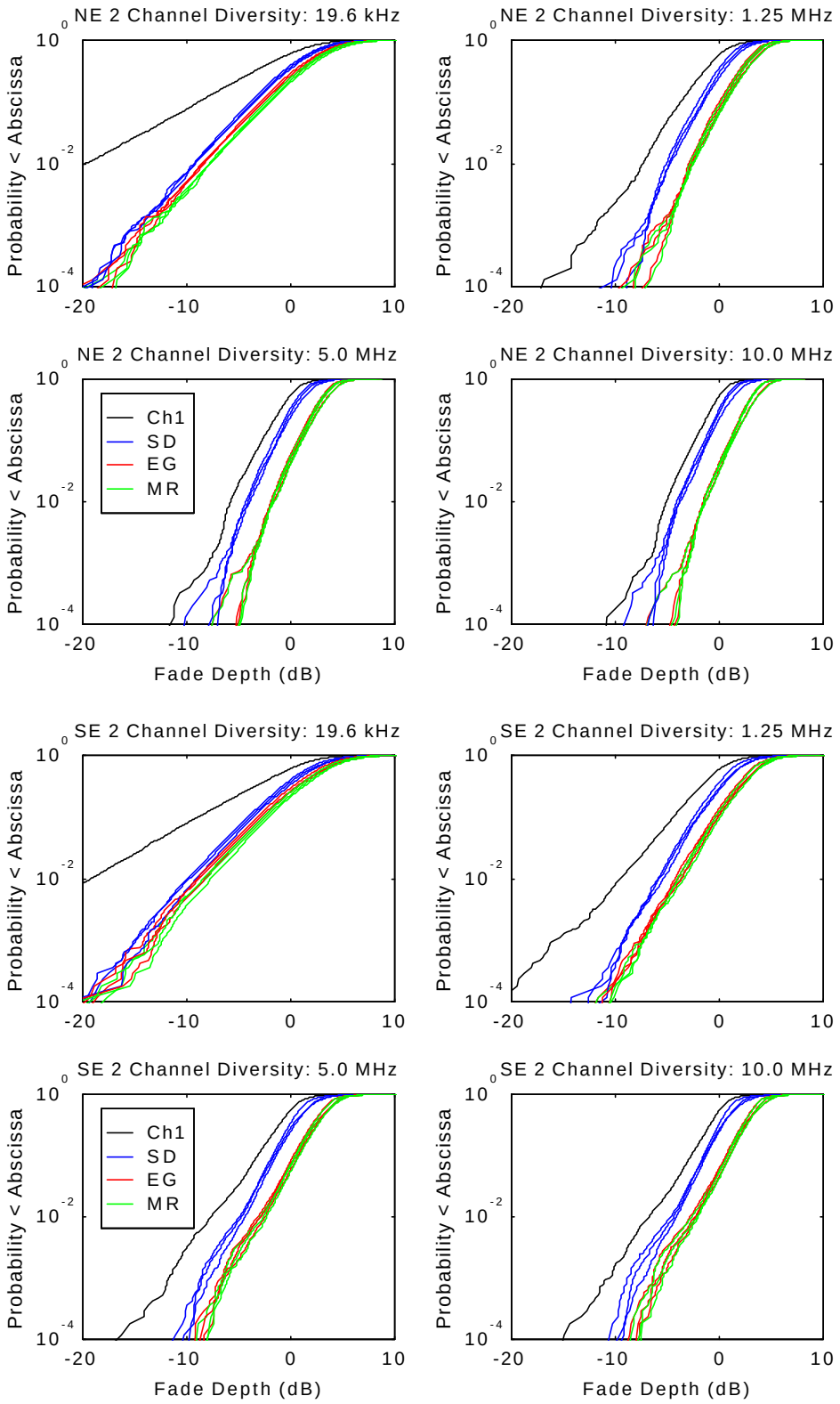

Figure 24. 2 channel diversity CDFs (ch1-blk, SD-blue, EG-r, MR-g) for the NE (upper) and SE (lower) data sets.

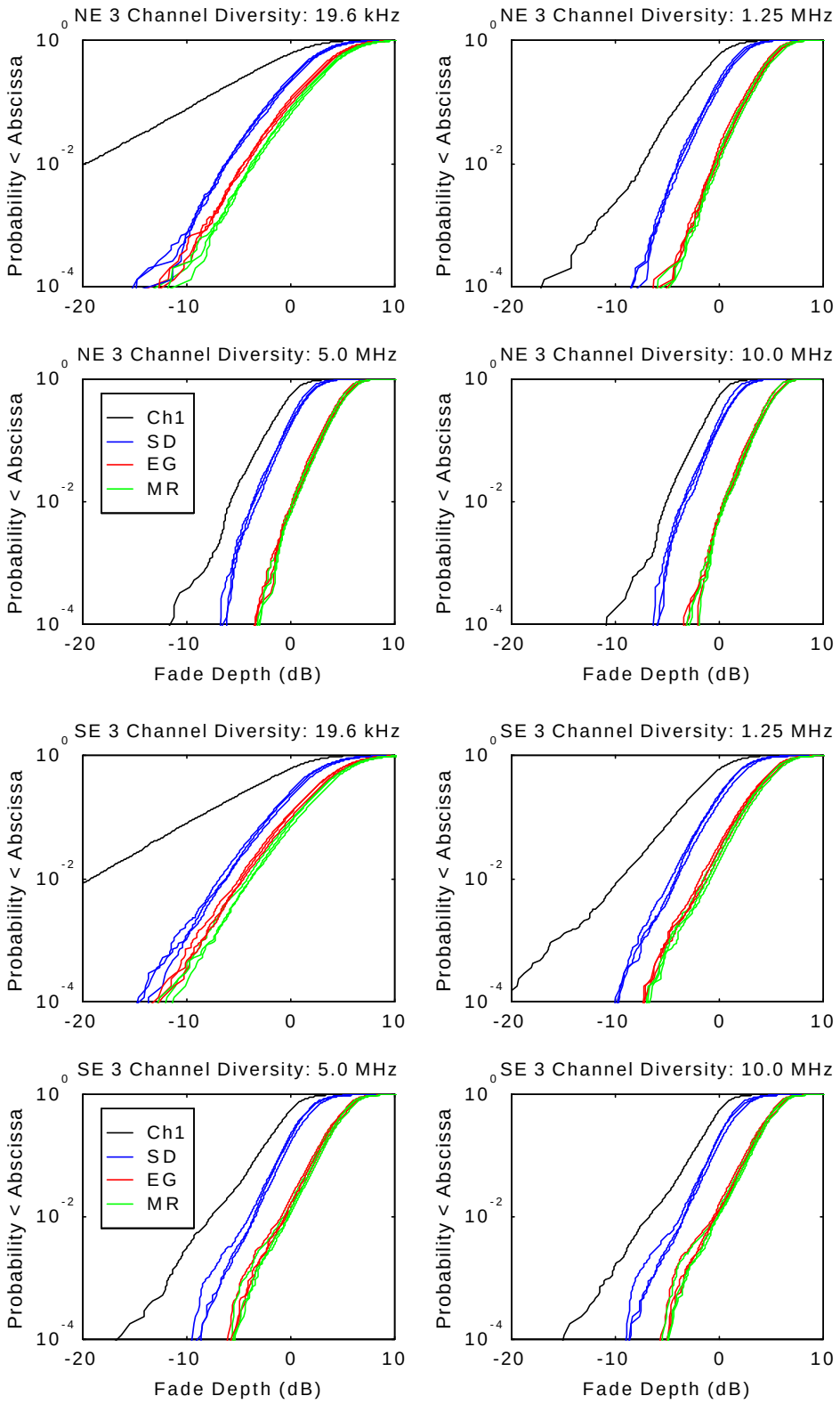

Figure 25. 3 channel diversity CDFs (ch1-blk, SD-blue, EG-r, MR-g) for the NE (upper) and SE (lower) data sets.

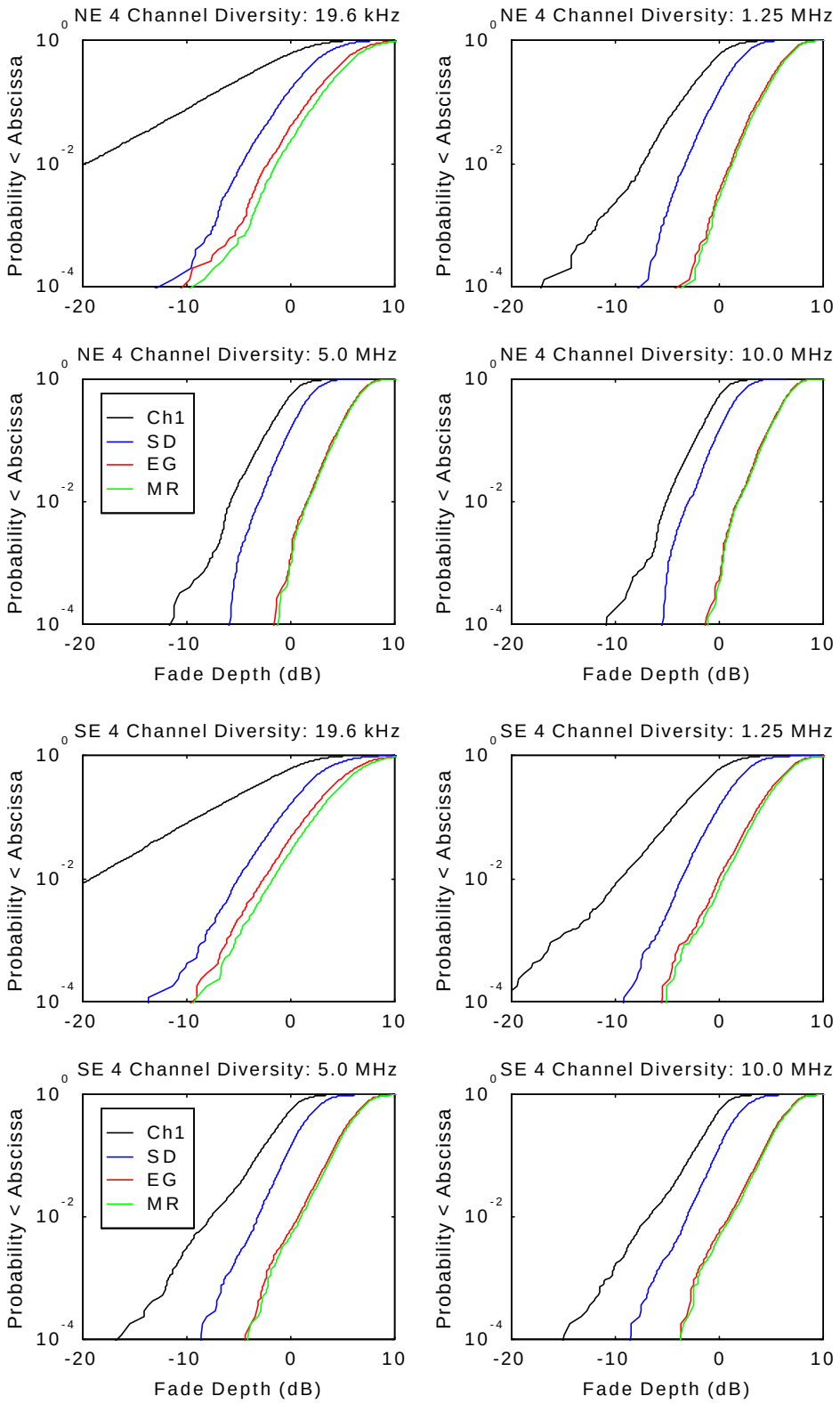

Figure 26. 4 channel diversity CDFs (ch1-blk, SD-blue, EG-r, MR-g) for the NE (upper) and SE (lower) data sets.