Time-Frequency Refinement Results

($\theta_{1/2}$ case in a random medium)

June 20, 2002

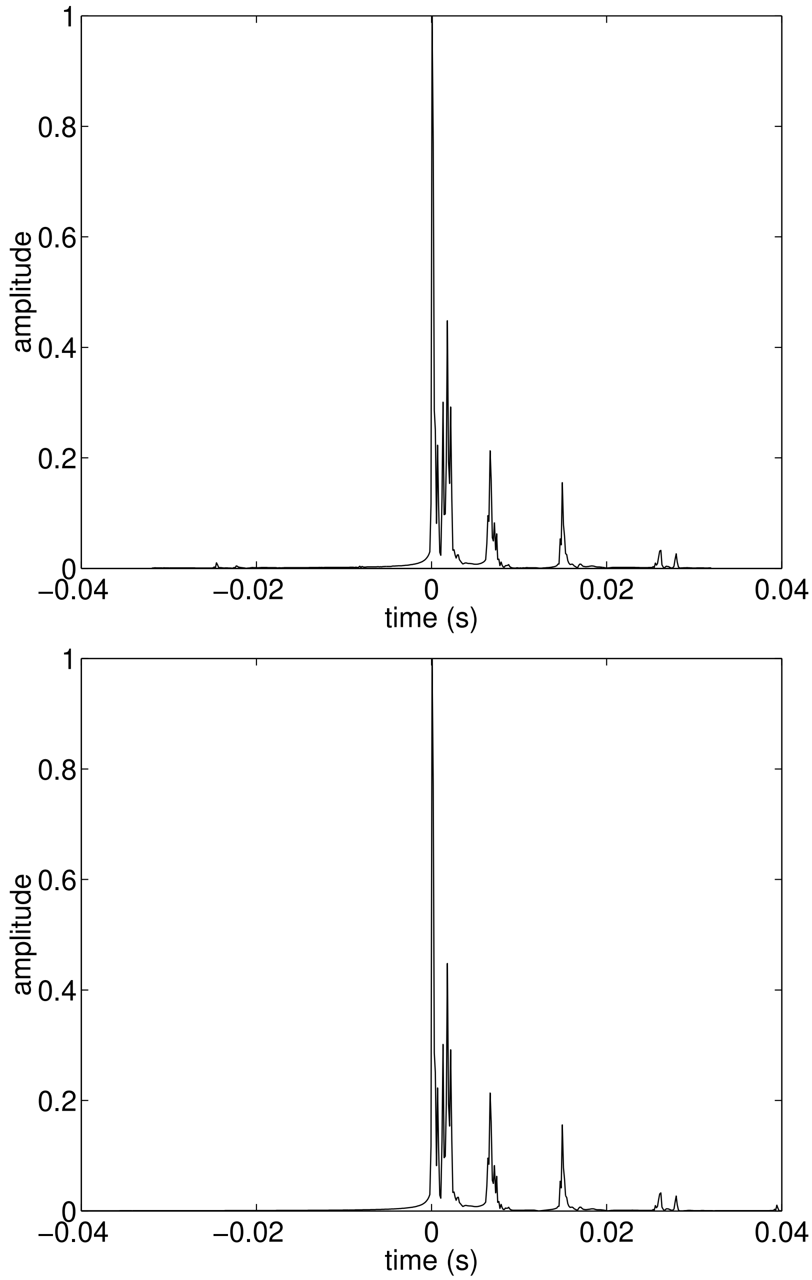

Figure 1: Time slices of the signal received in the center of a 1 m TRM. The upper plot is the 512 frequency point case and the lower plot is the 2048 frequency point case. Both were computed over a 8 kHz band centered at 4.5 kHz. The pulse is Gaussian with a bandwidth of 2 kHz. The time axes were rescaled to be the same for both plots. The *angular aperature* is $\theta_{1/2}$ and there are 512 spatial modes for the 50 m waveguide of length 500 m.

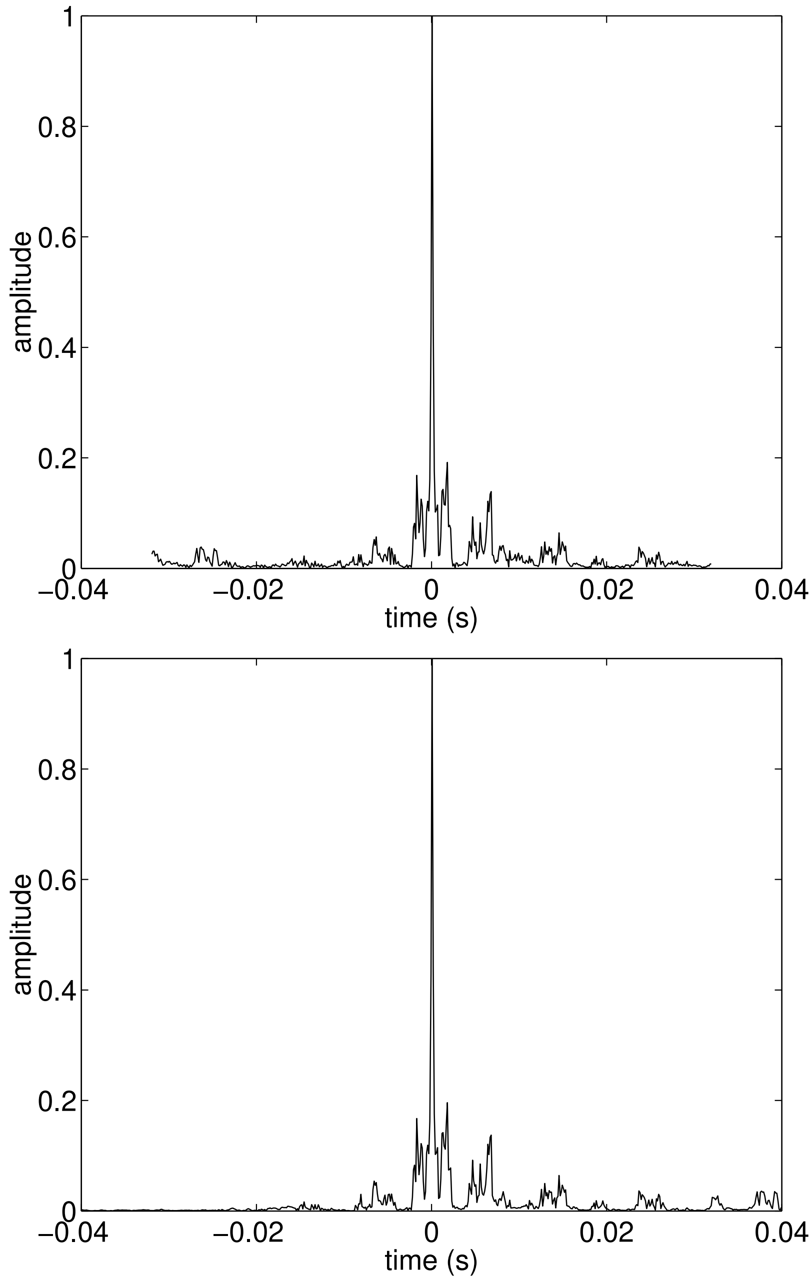

Figure 2: Time slices of the refocused signal at the location of the source. The upper plot is the 512 frequency point case and the lower plot is the 2048 frequency point case. Both were computed over a 8 kHz band centered at 4.5 kHz. The pulse is Gaussian with a bandwidth of 2 kHz. The time axes were rescaled to be the same for both plots. The *angular aperature* is $\theta_{1/2}$ and there are 512 spatial modes for the 50 m waveguide of length 500 m.

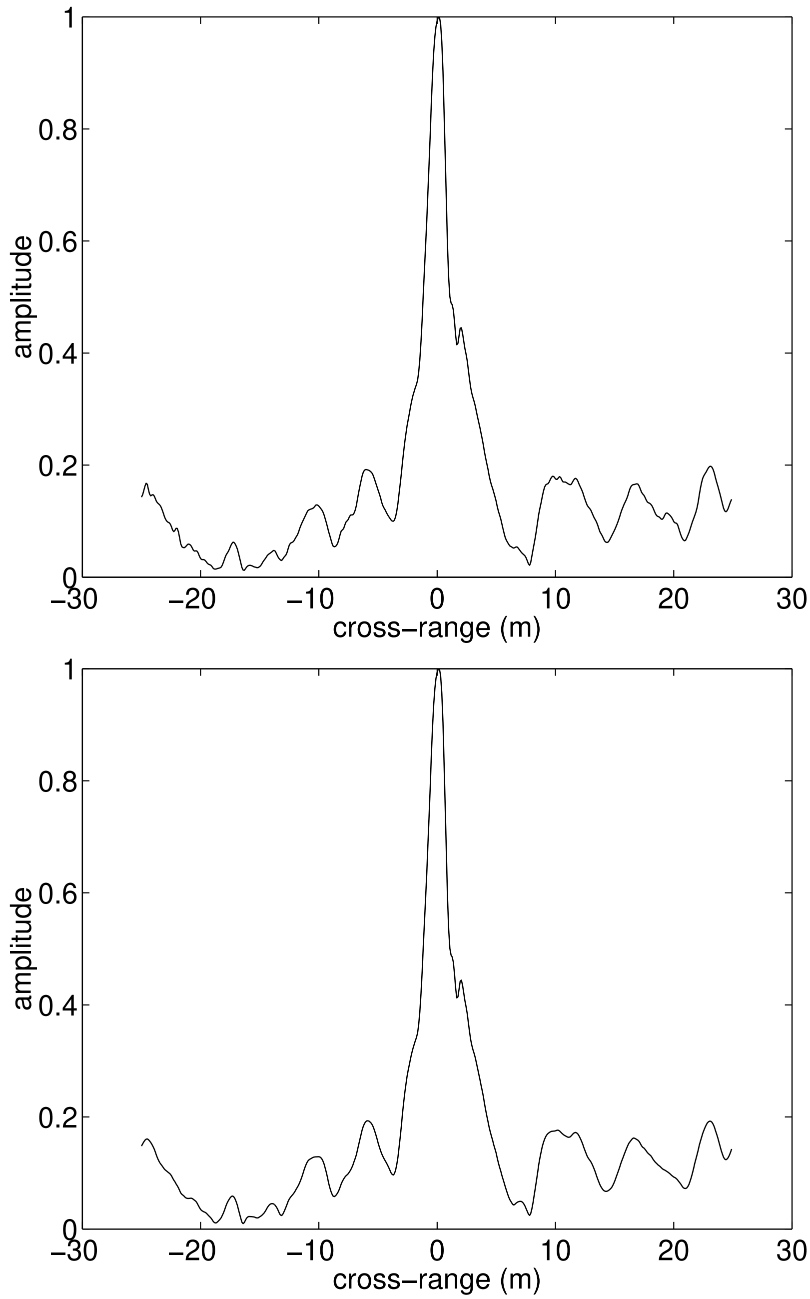

Figure 3: Spatial slices of the refocused signal at the location of the arrival time of the refocused signal. The upper plot is the 512 frequency point case and the lower plot is the 2048 frequency point case. Both were computed over a 8 kHz band centered at 4.5 kHz. The pulse is Gaussian with a bandwidth of 2 kHz. The *angular aperature* is $\theta_{1/2}$ and there are 512 spatial modes for the 50 m waveguide of length 500 m.