

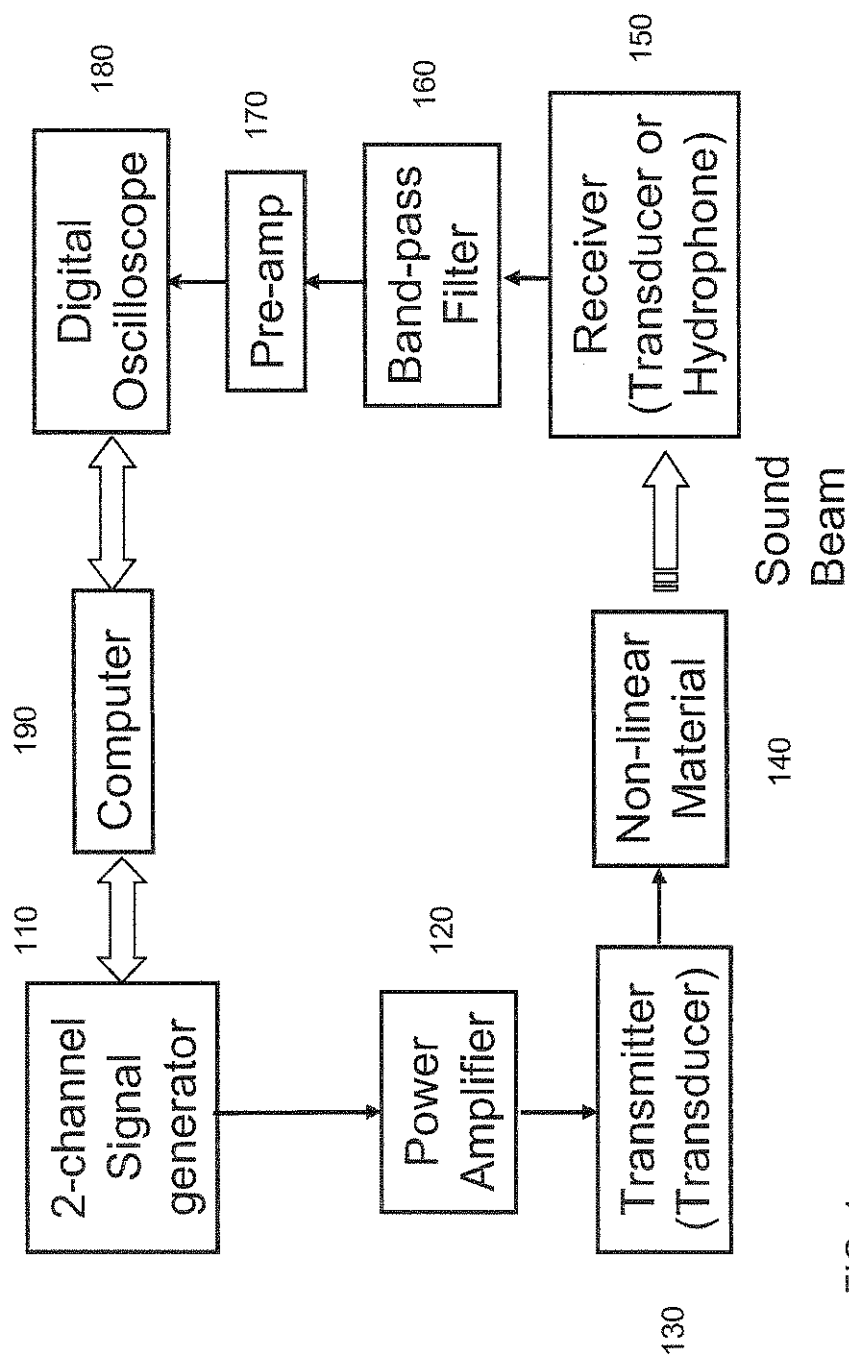


FIG. 1

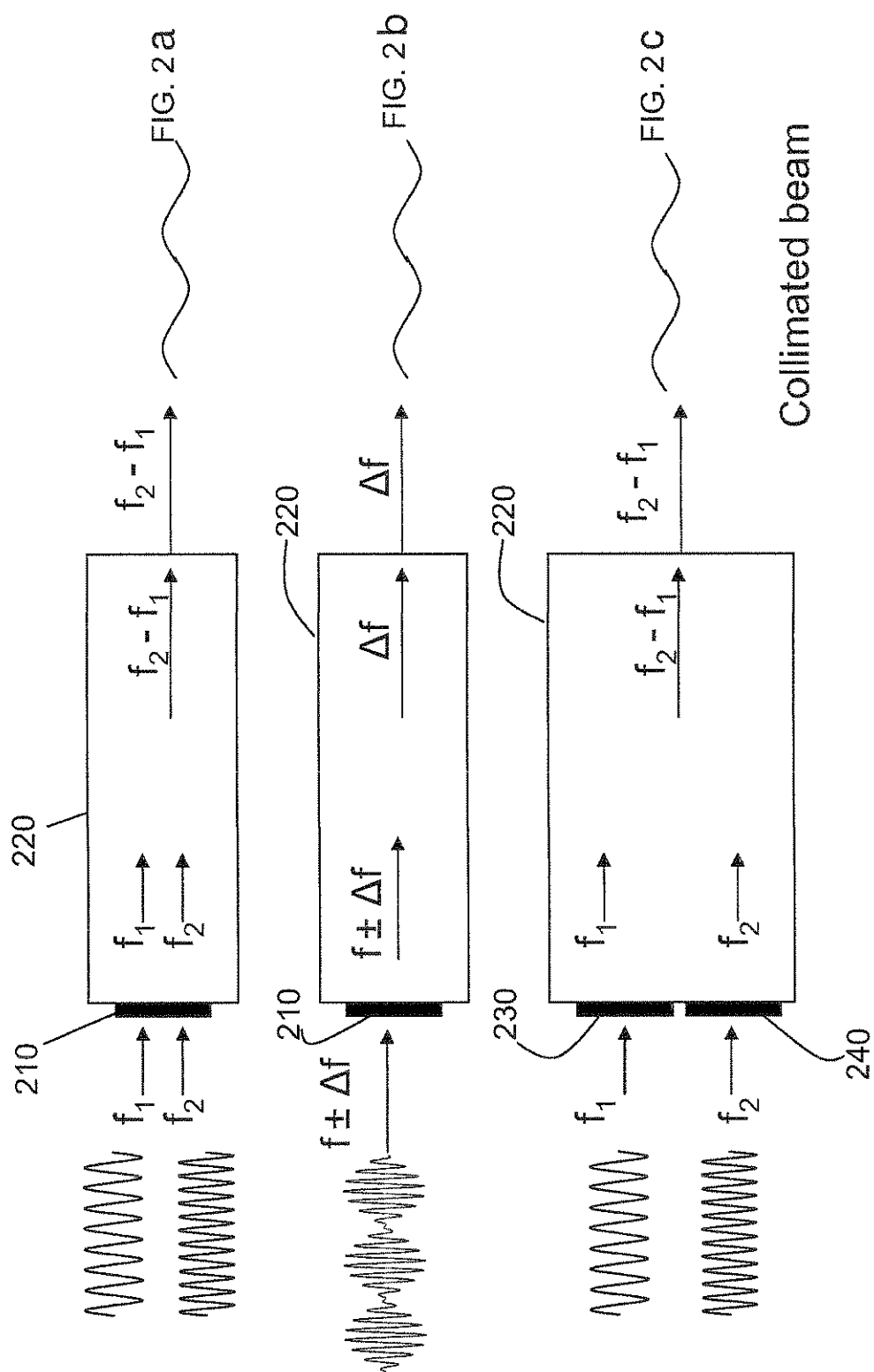
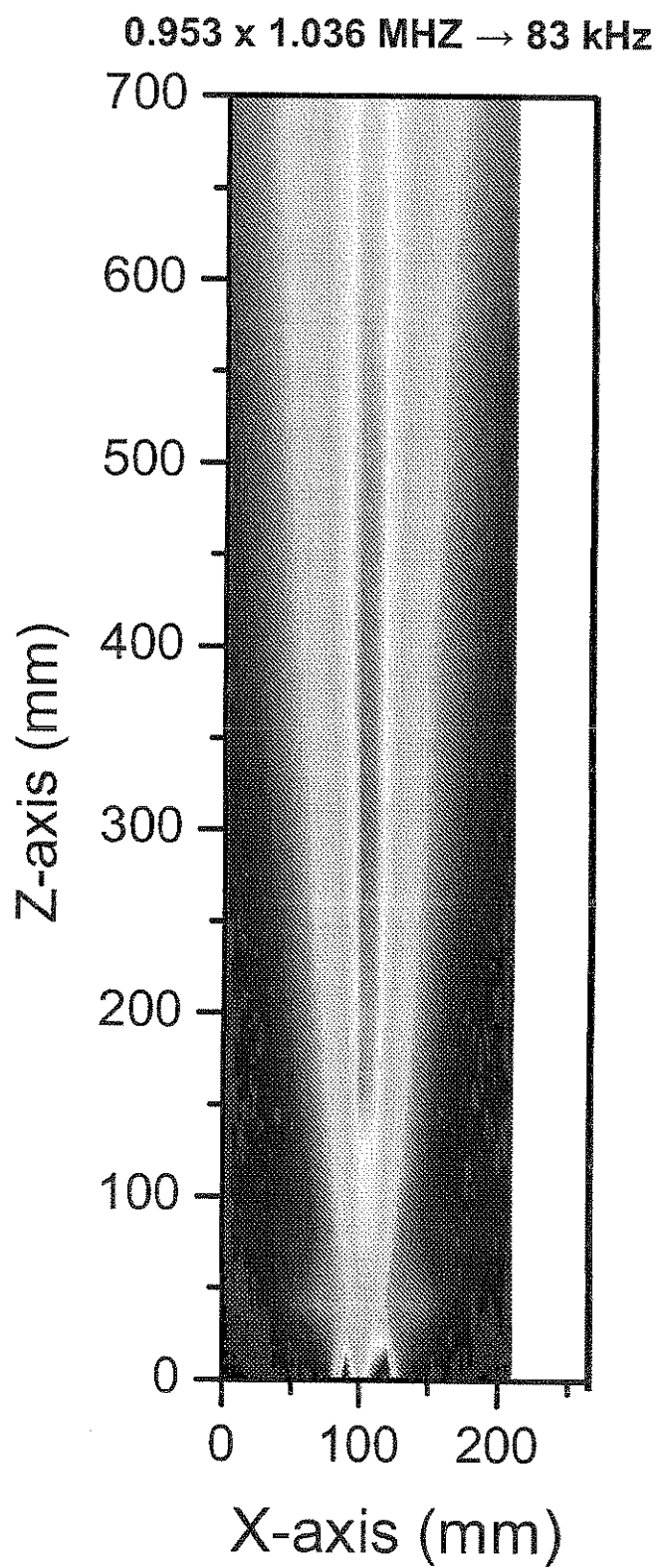
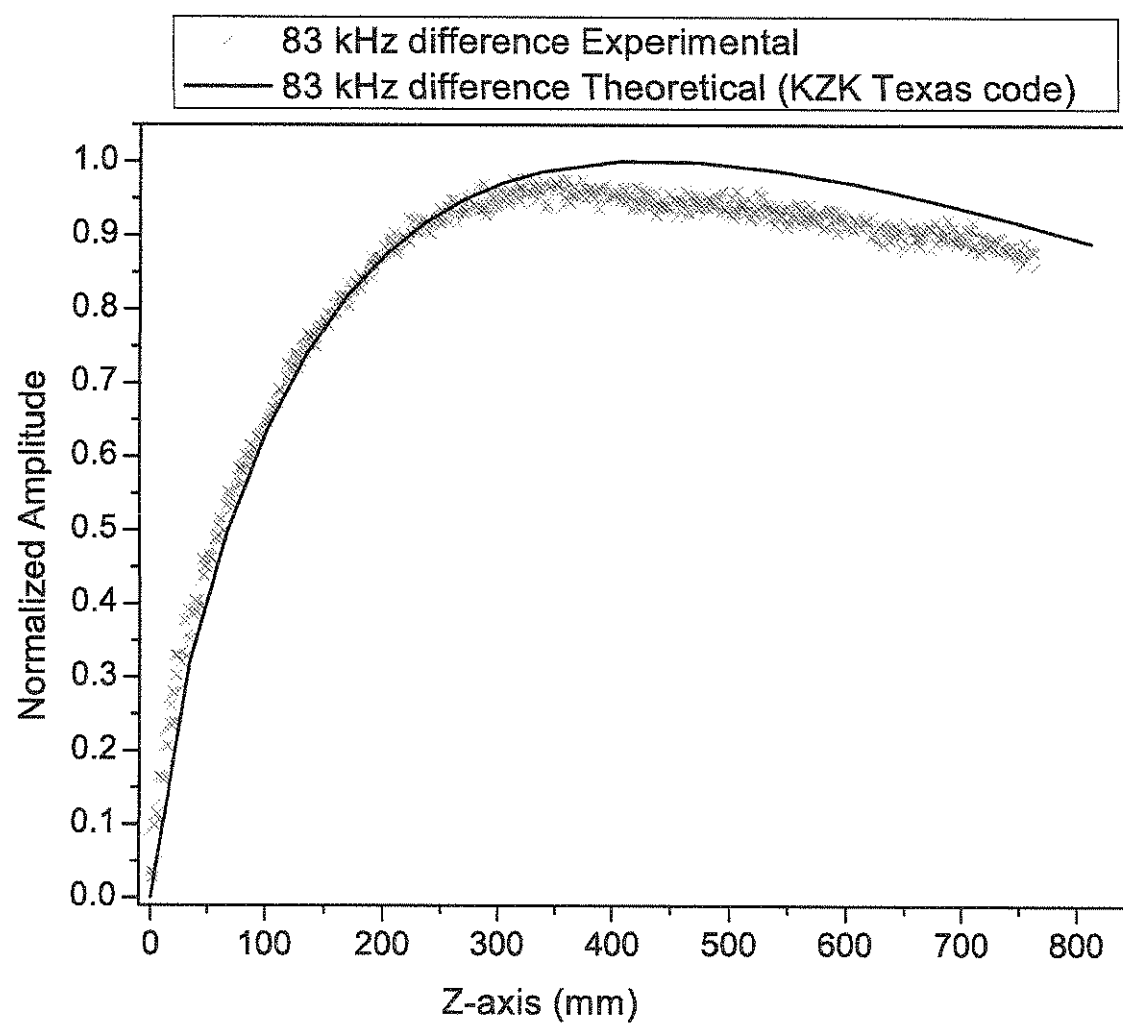


Fig. 3a



**Fig. 3B**

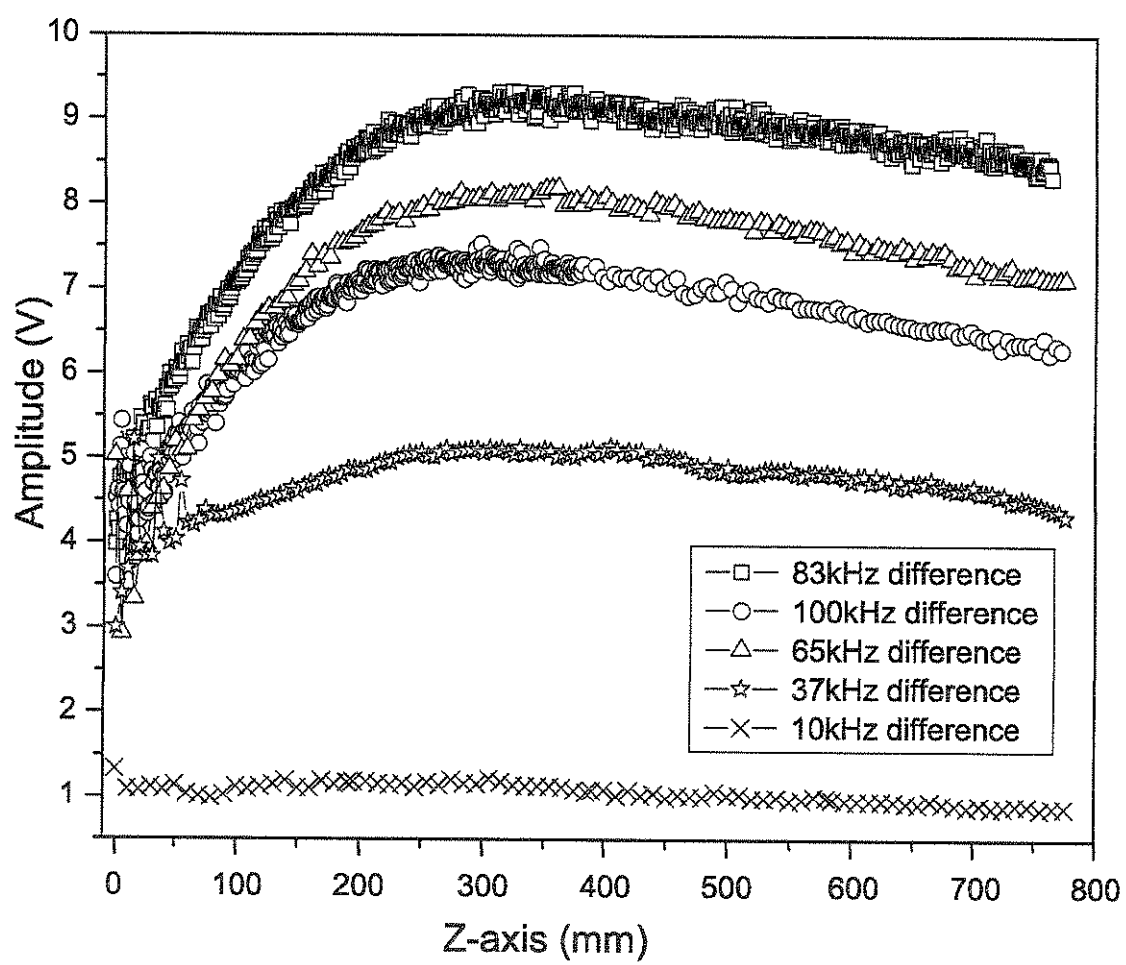


Fig. 4A

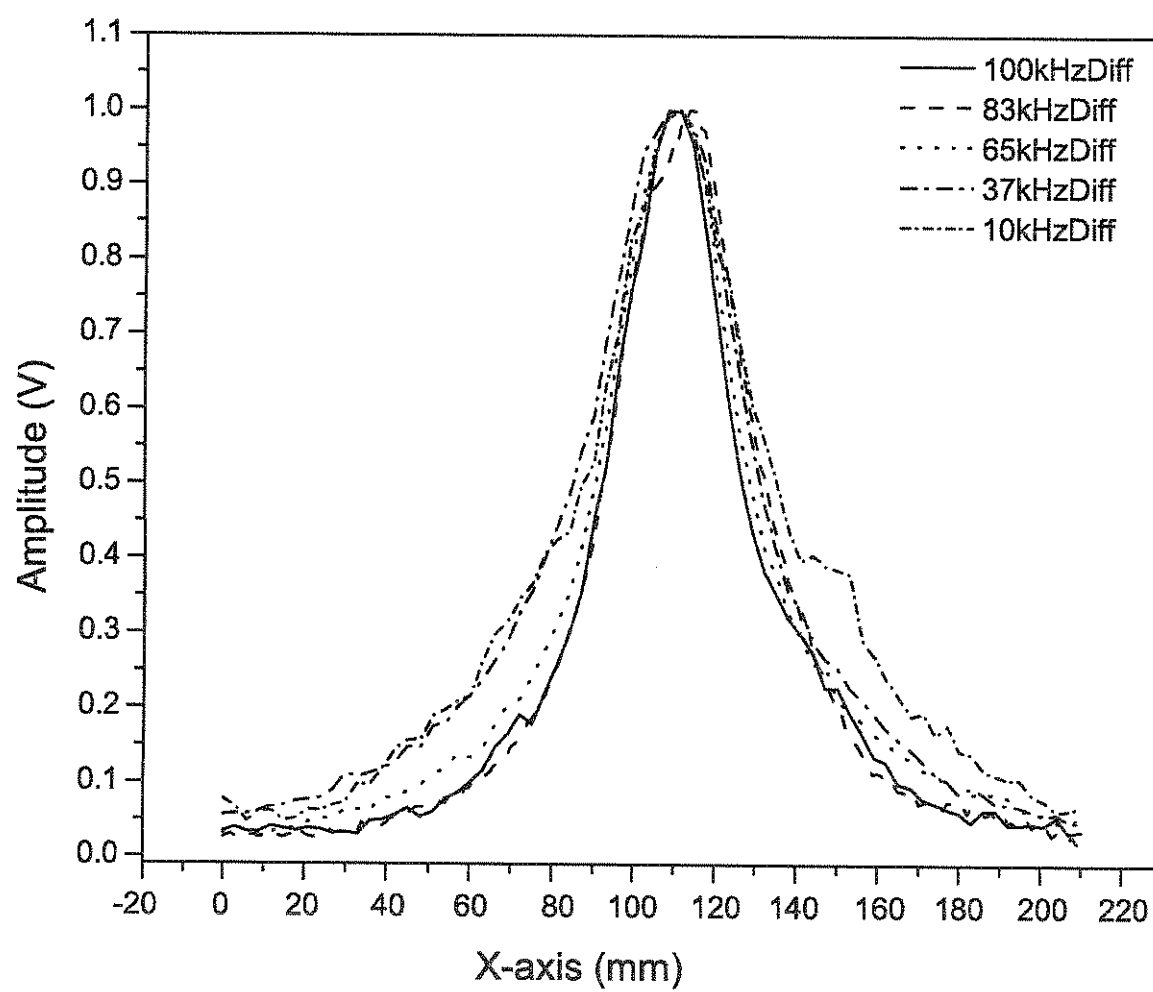
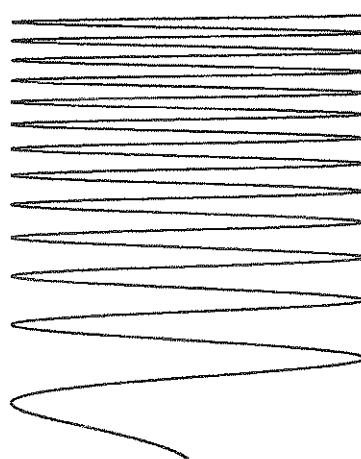
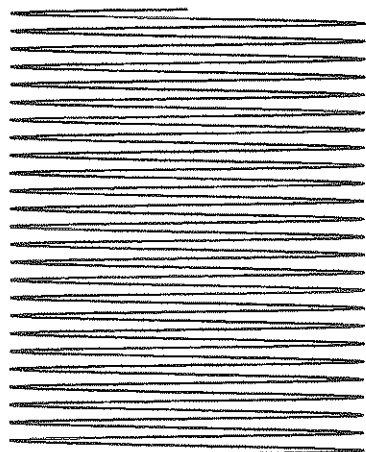


Fig. 4B

Fig. 5a
Single frequency burst



Frequency chirp (broadband)



Fig. 5b
Combined signal to transducer

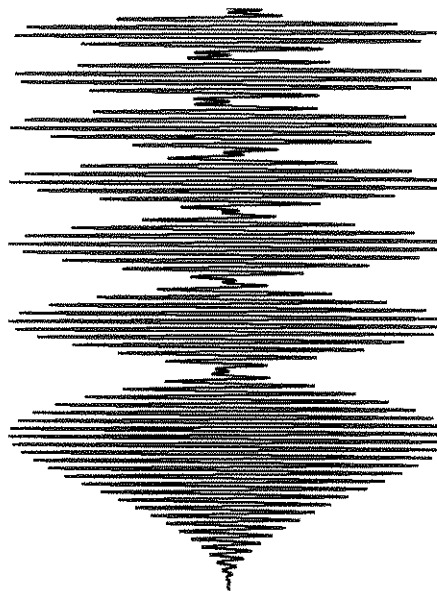


Fig. 6A

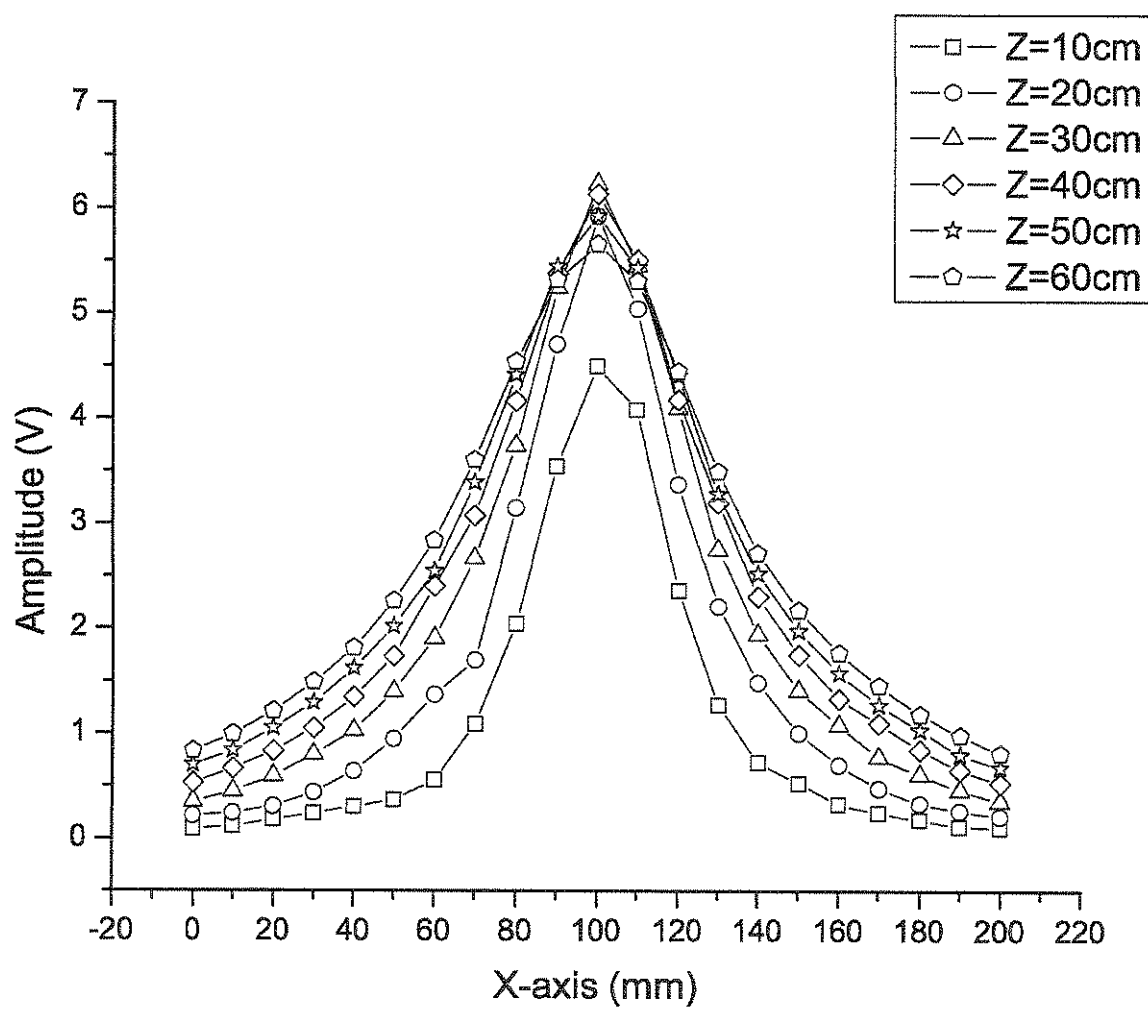
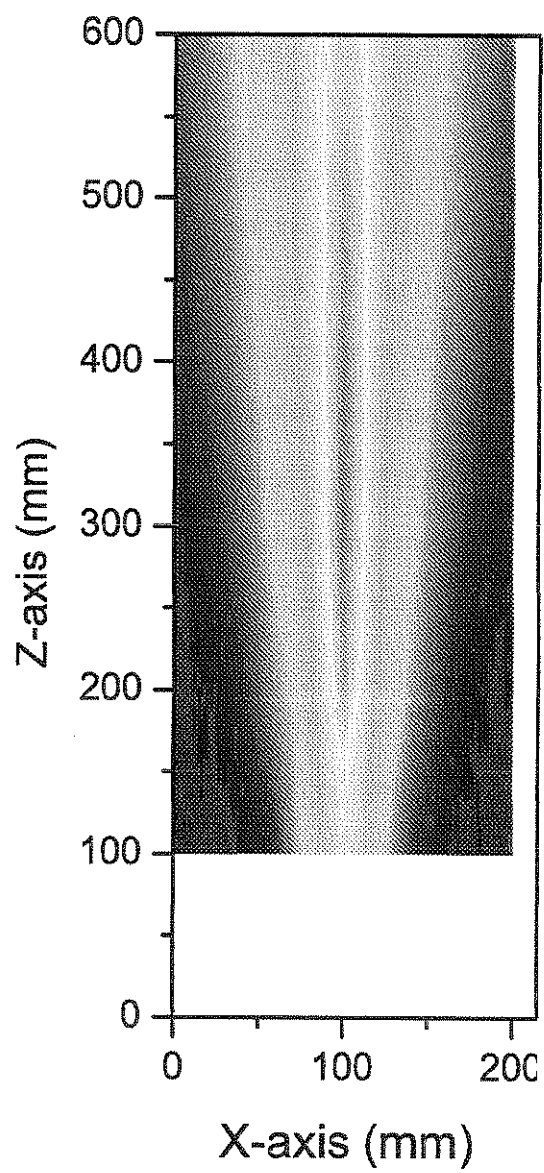


Fig. 6B



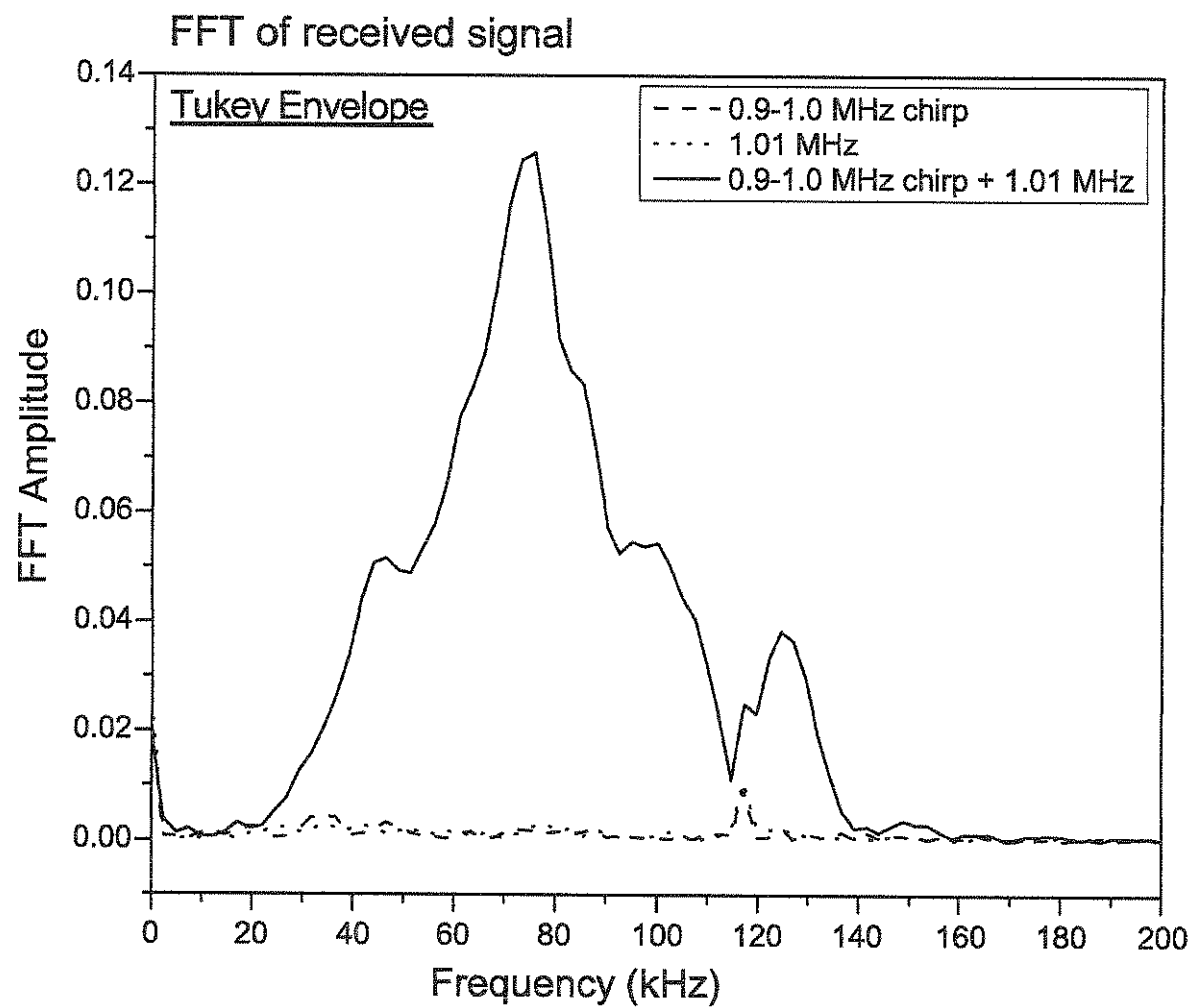


Fig. 6C

Fig. 7A

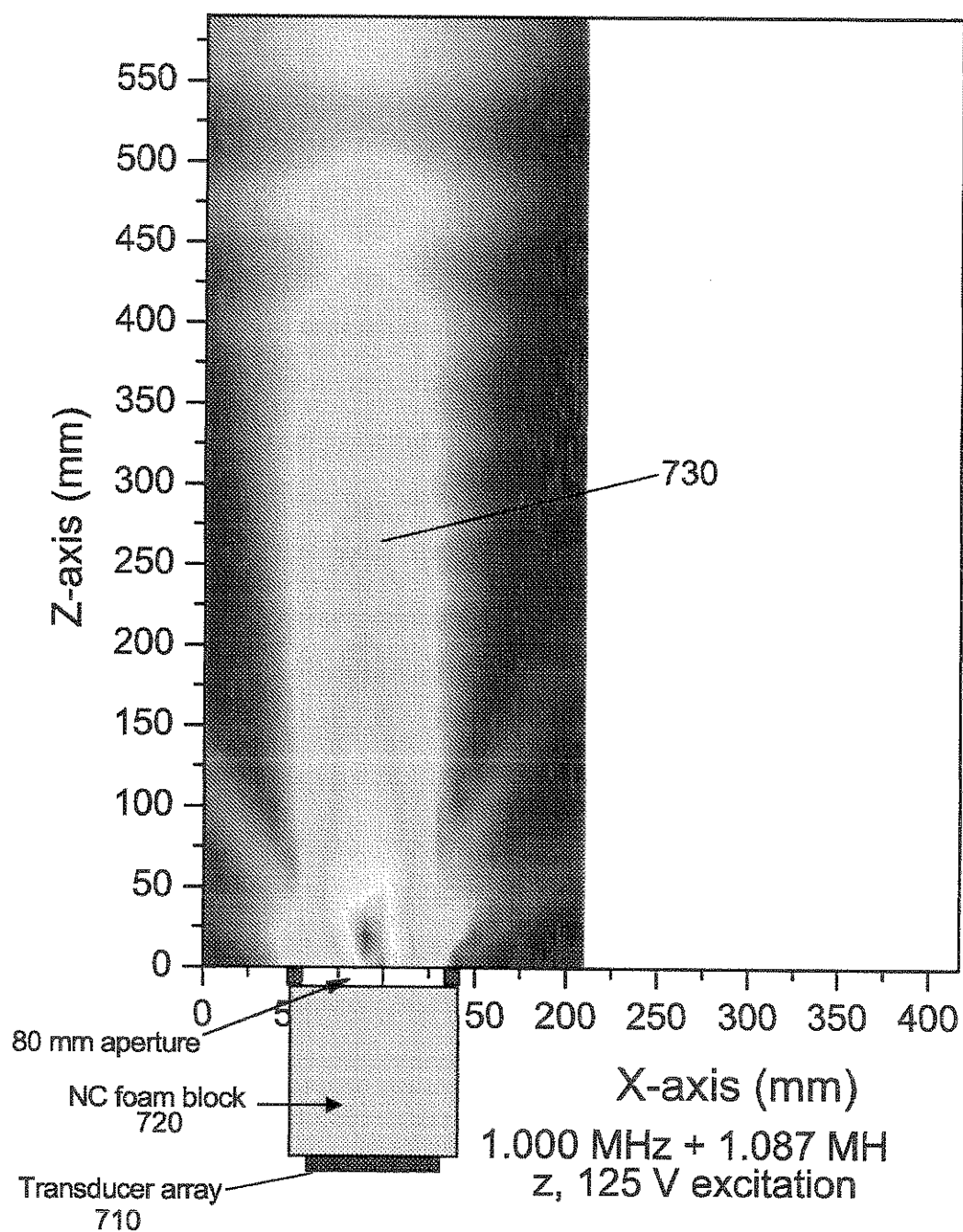


Fig. 7B
Difference signal

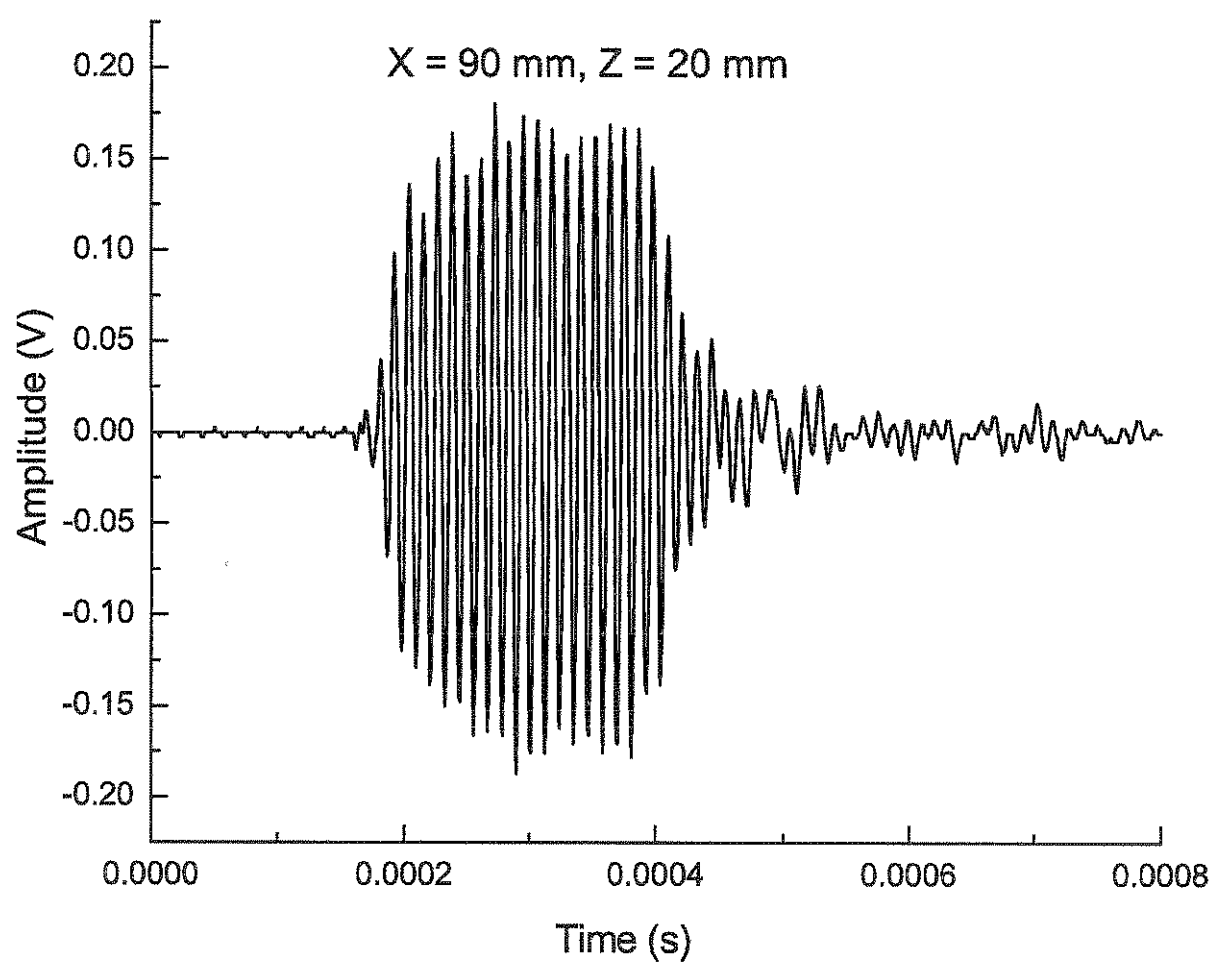
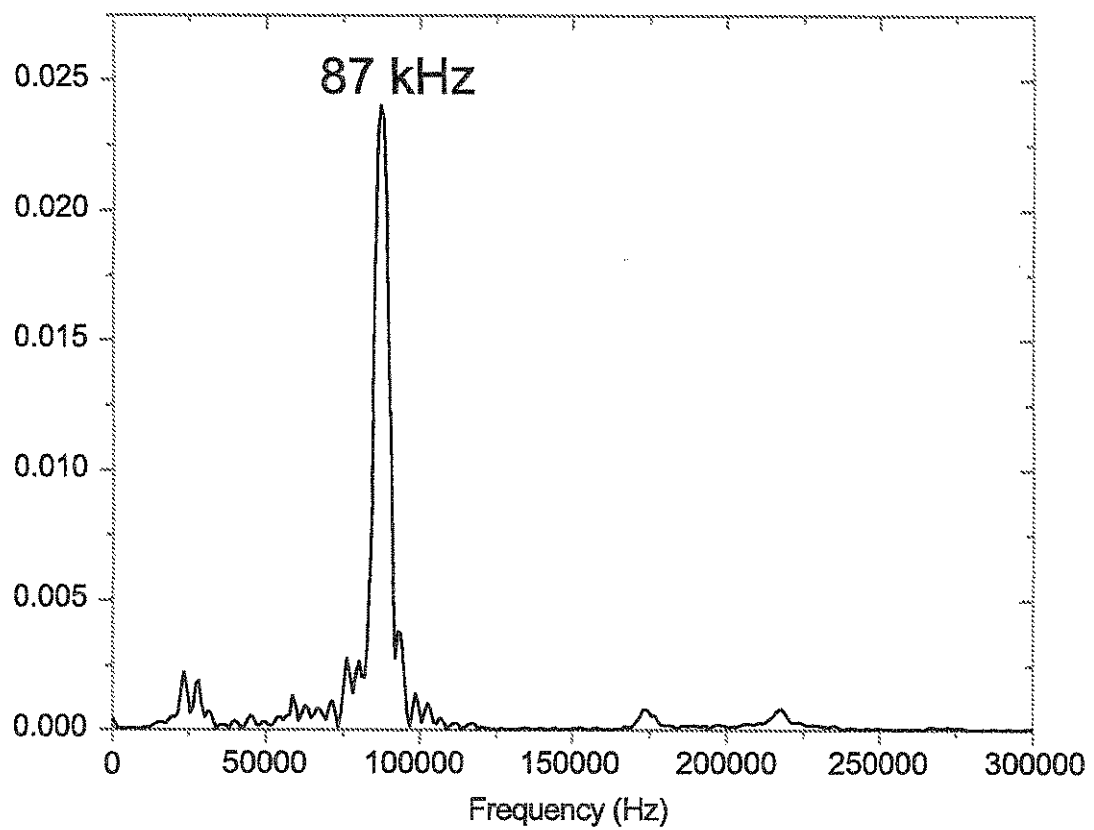


Fig. 7C
FFT of difference signal



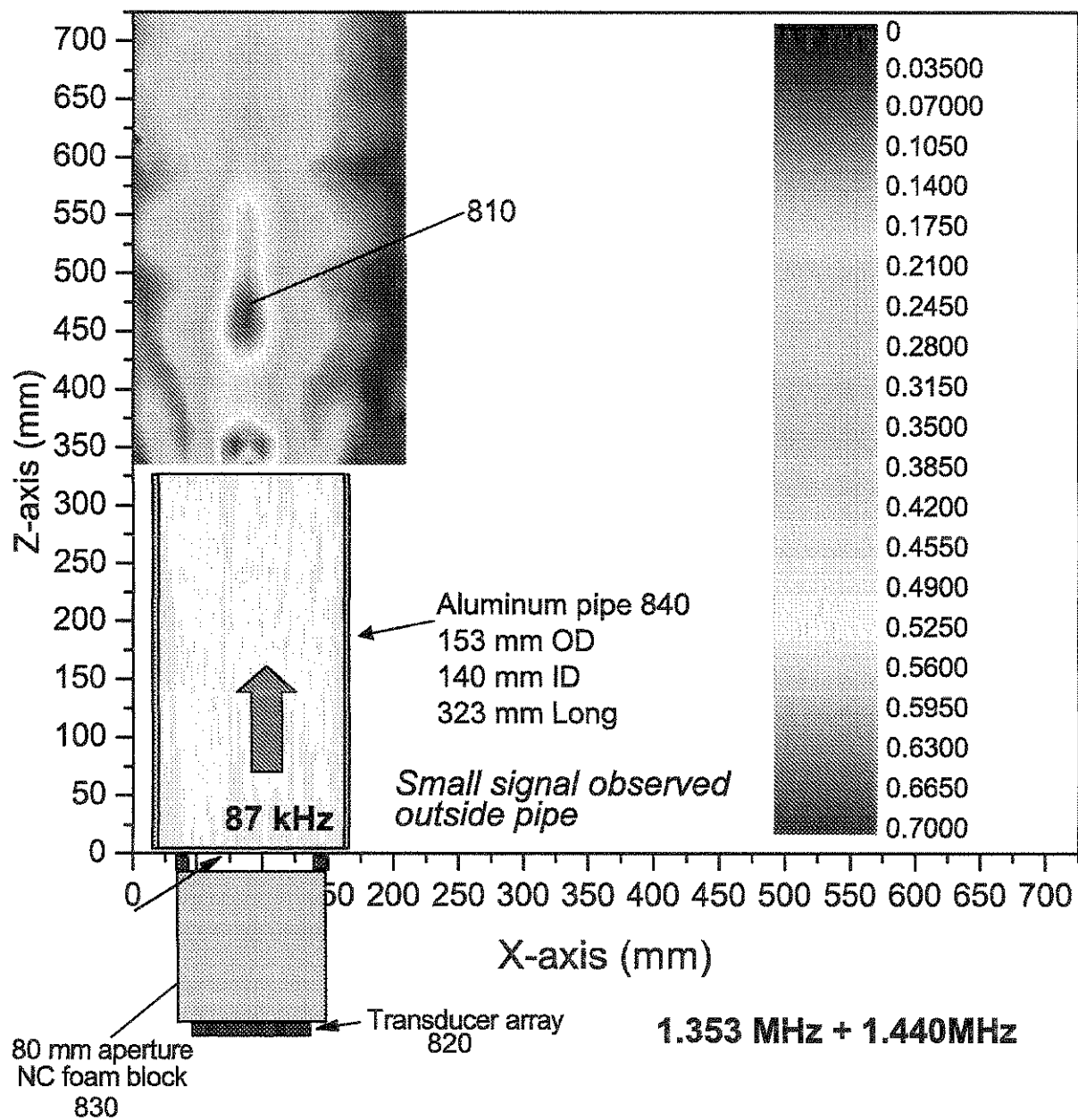
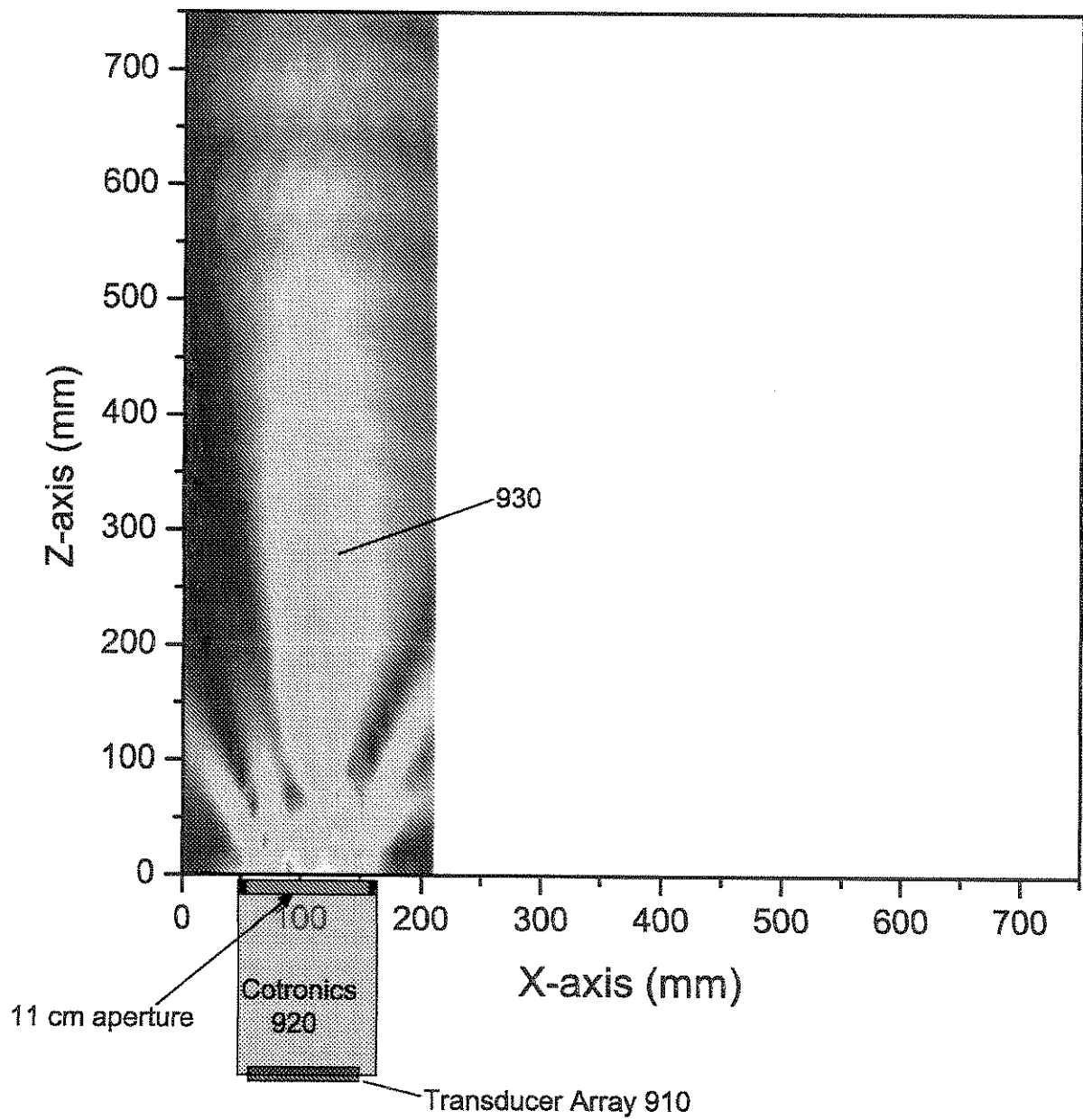


Fig. 8

Fig. 9



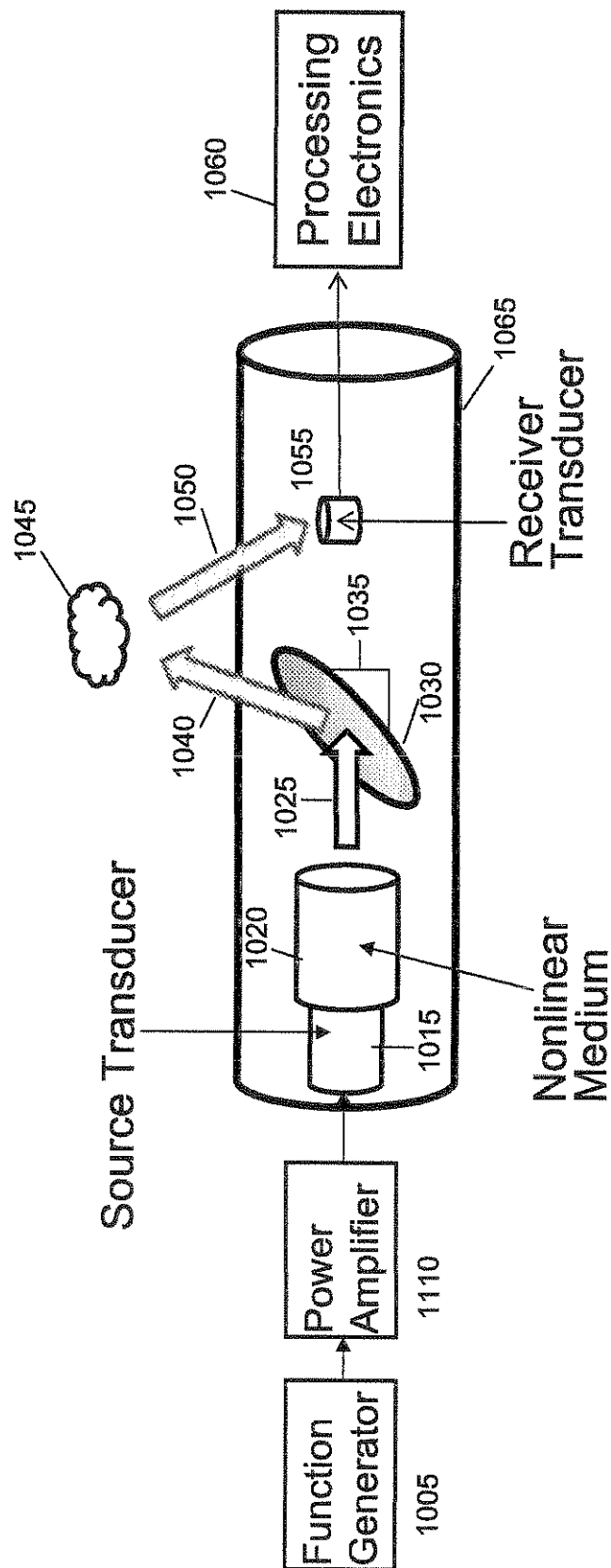
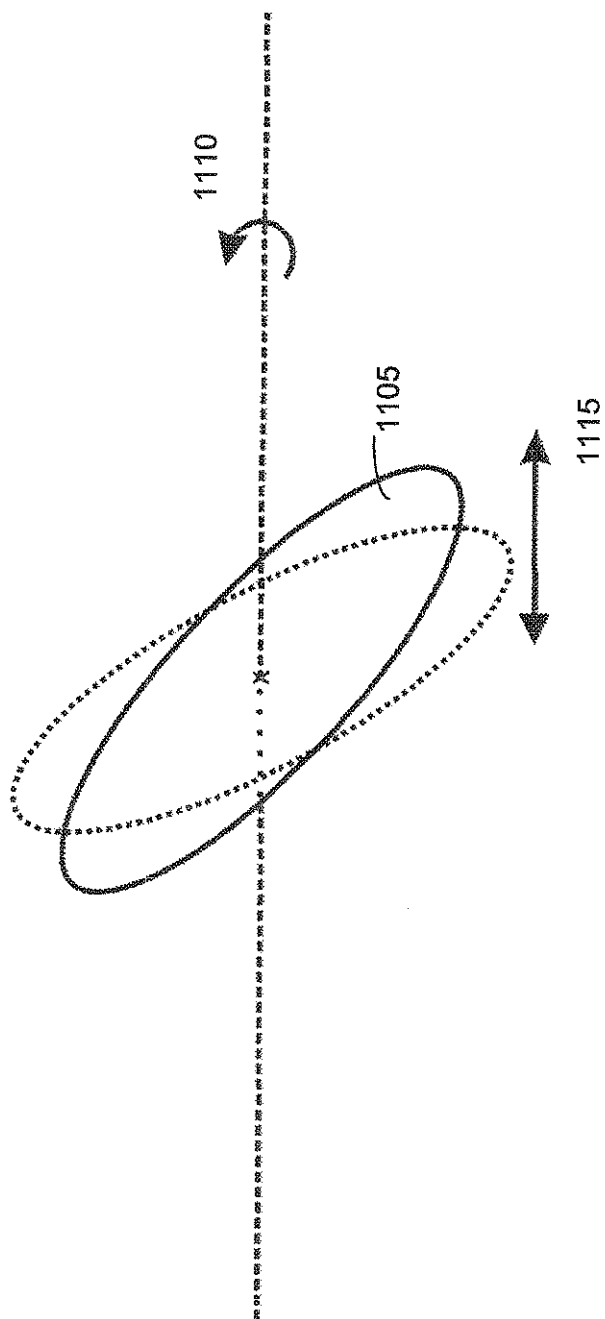


Fig. 10

Fig. 11



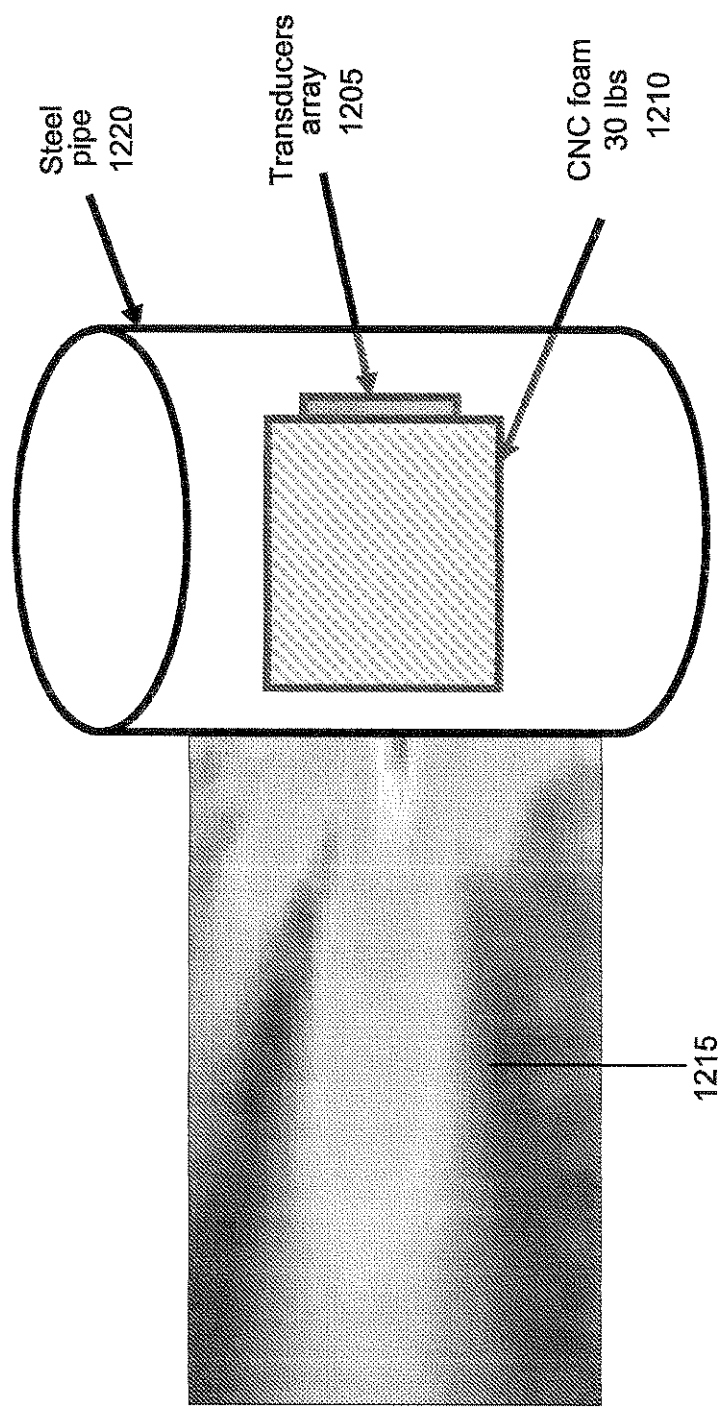


Fig. 12

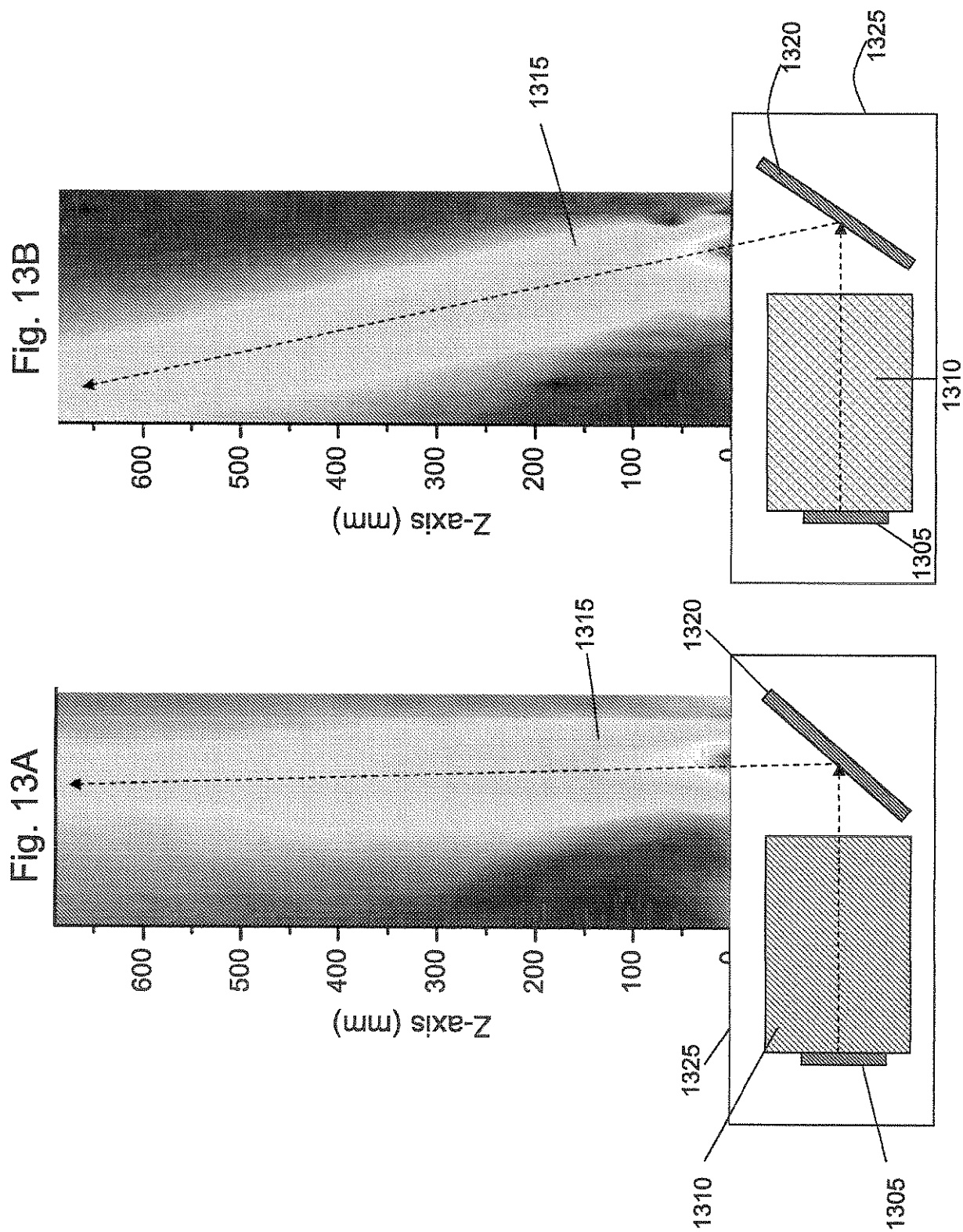
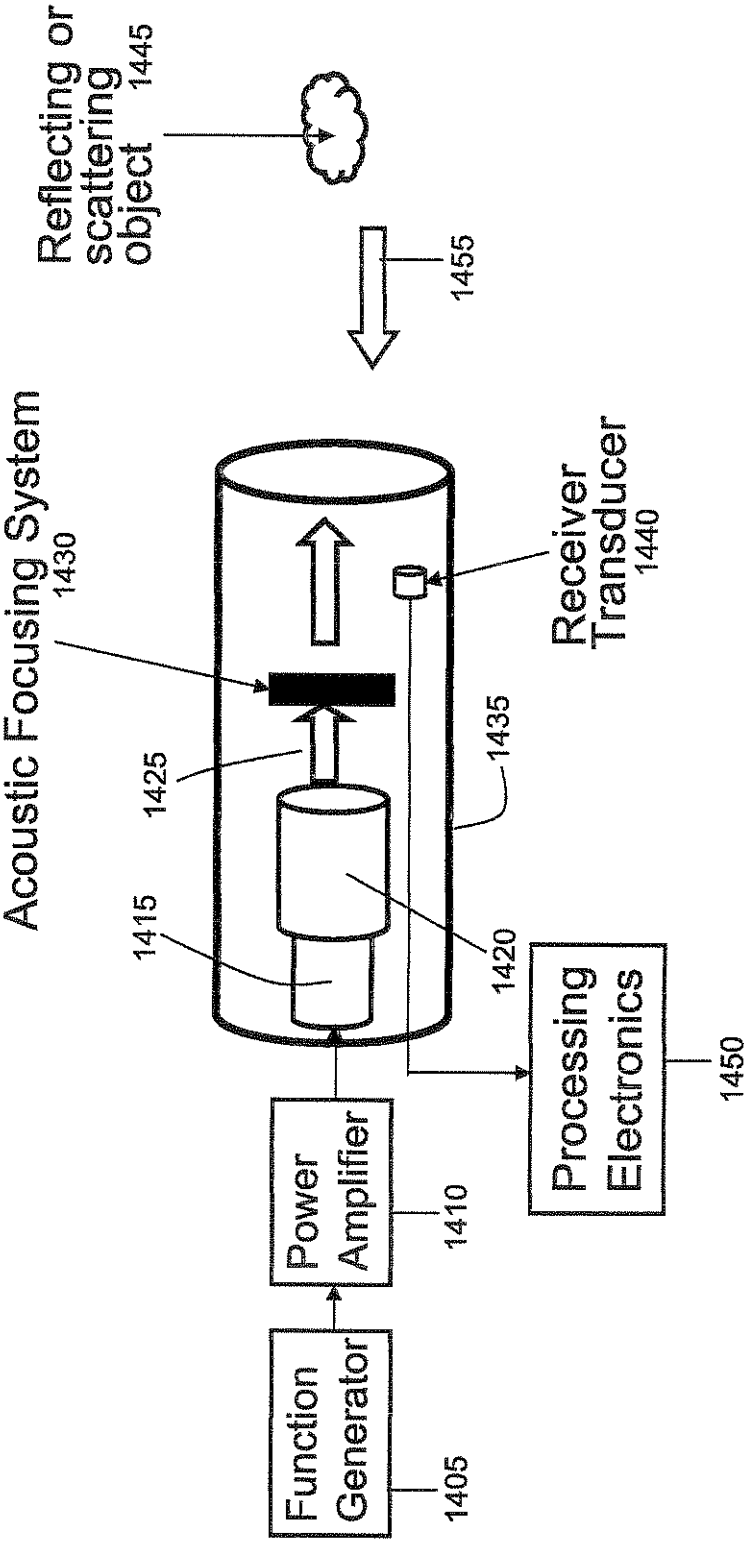


Fig. 14



Imaging of Object Outside Pipe

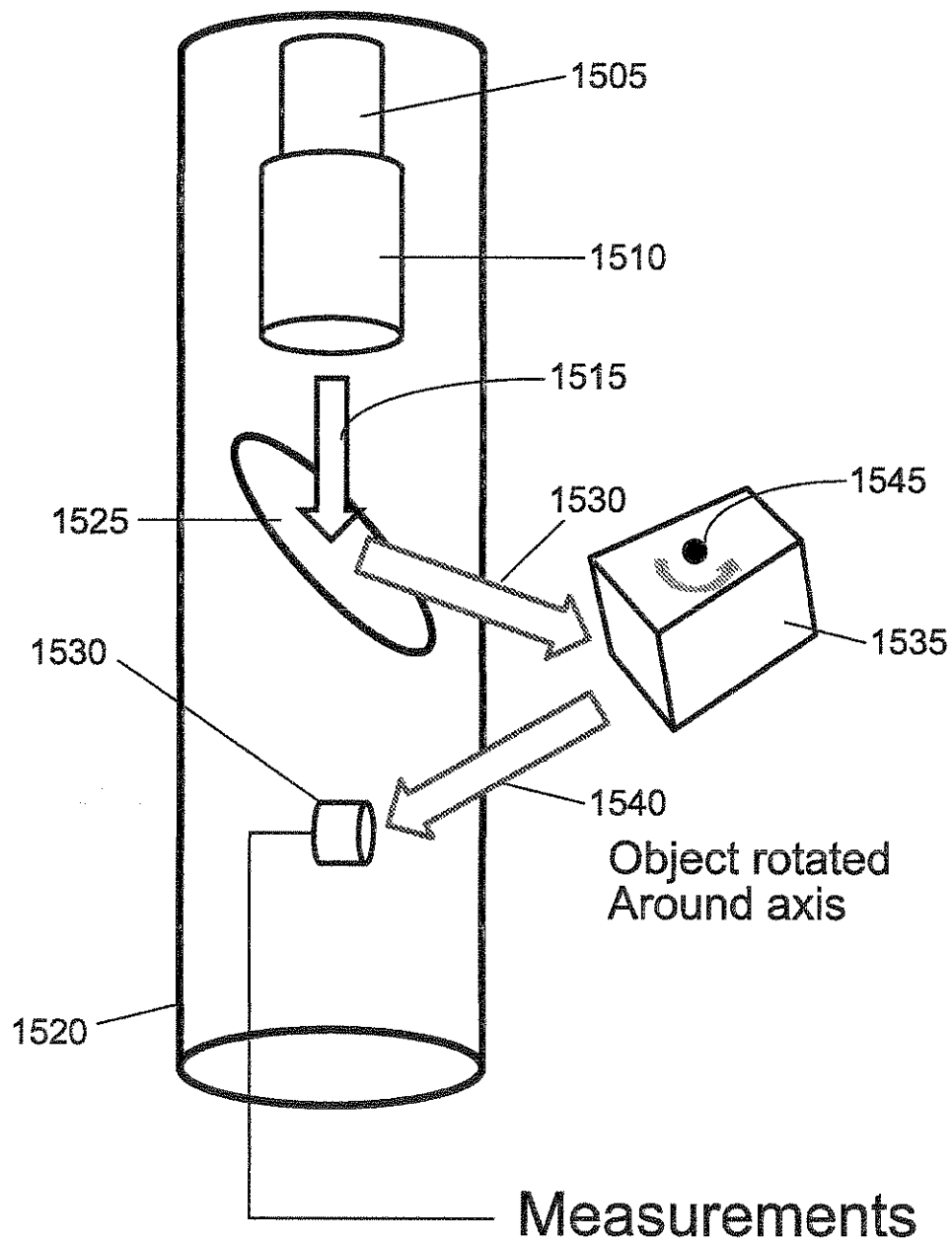
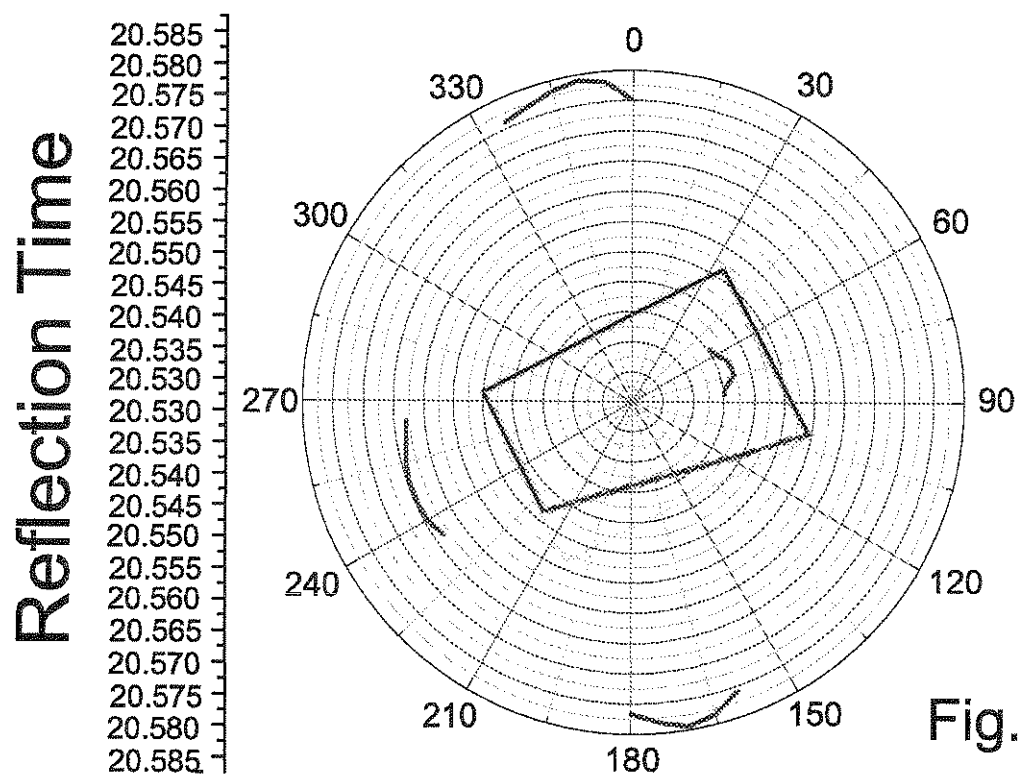
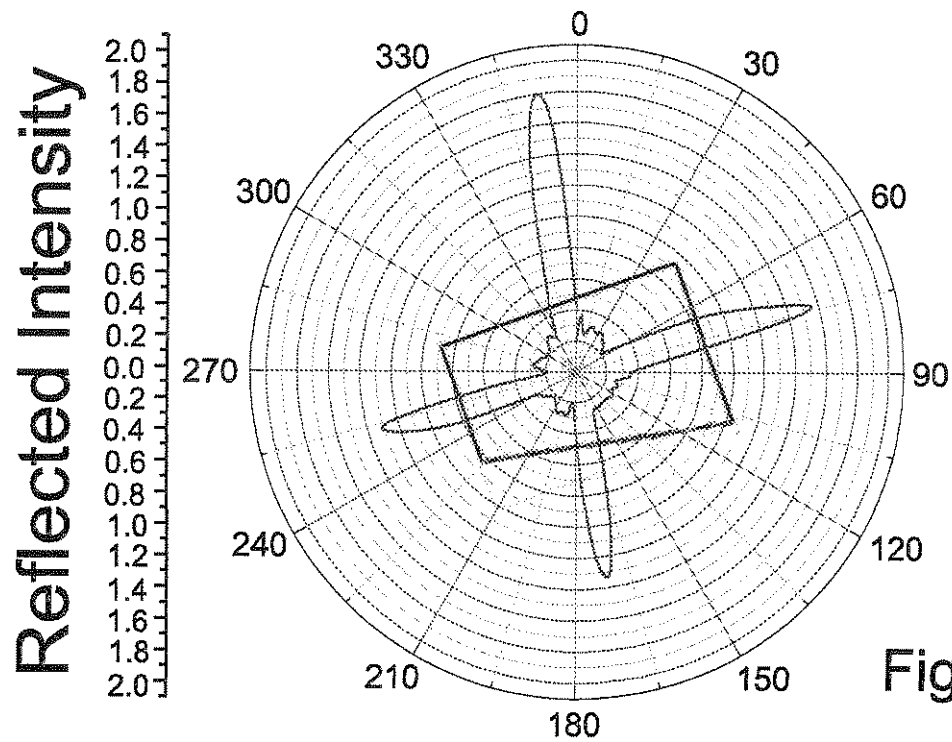


Fig. 15A



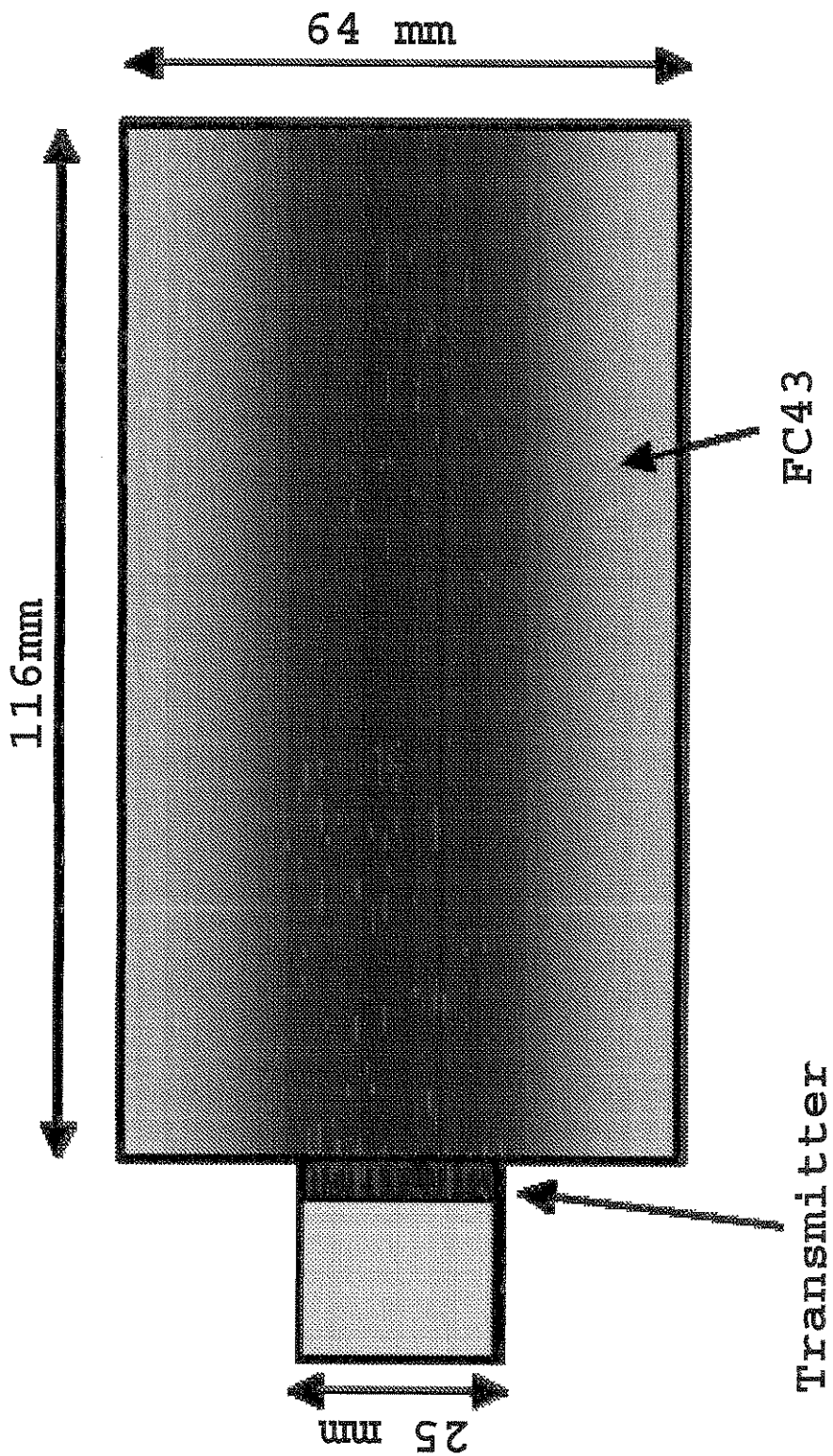


Figure 16

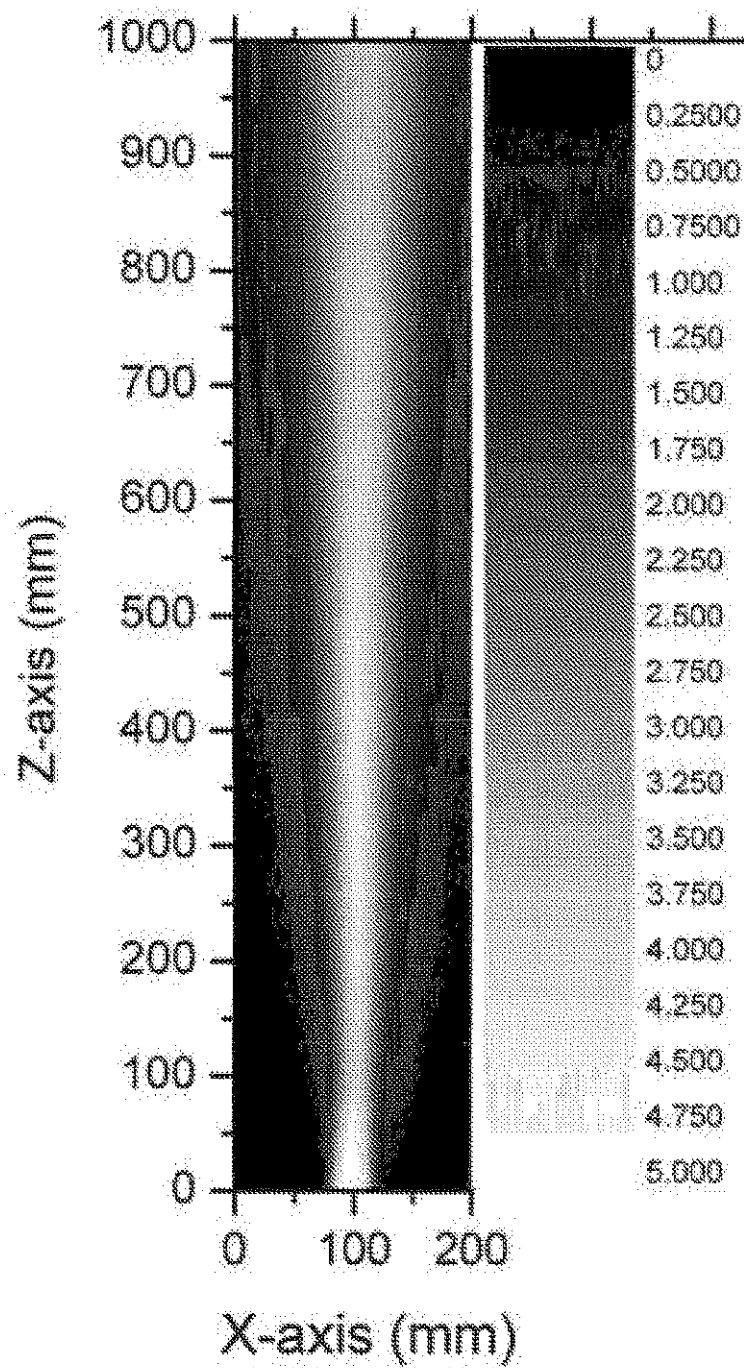
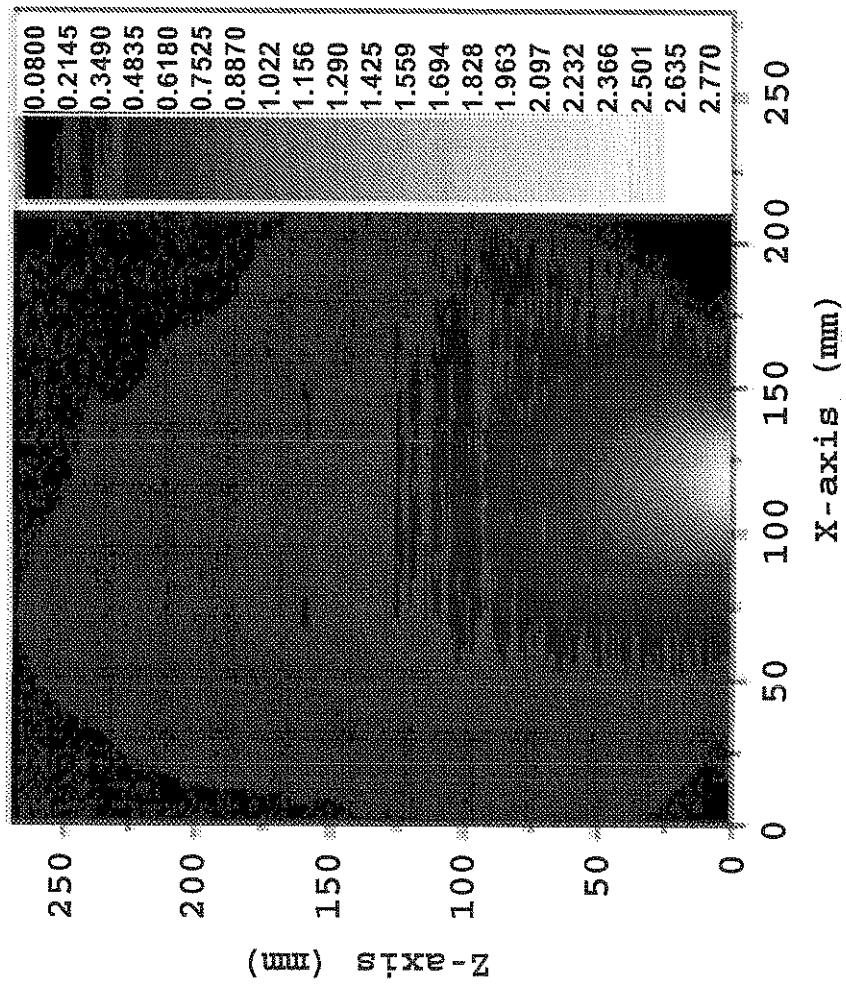


Figure 17



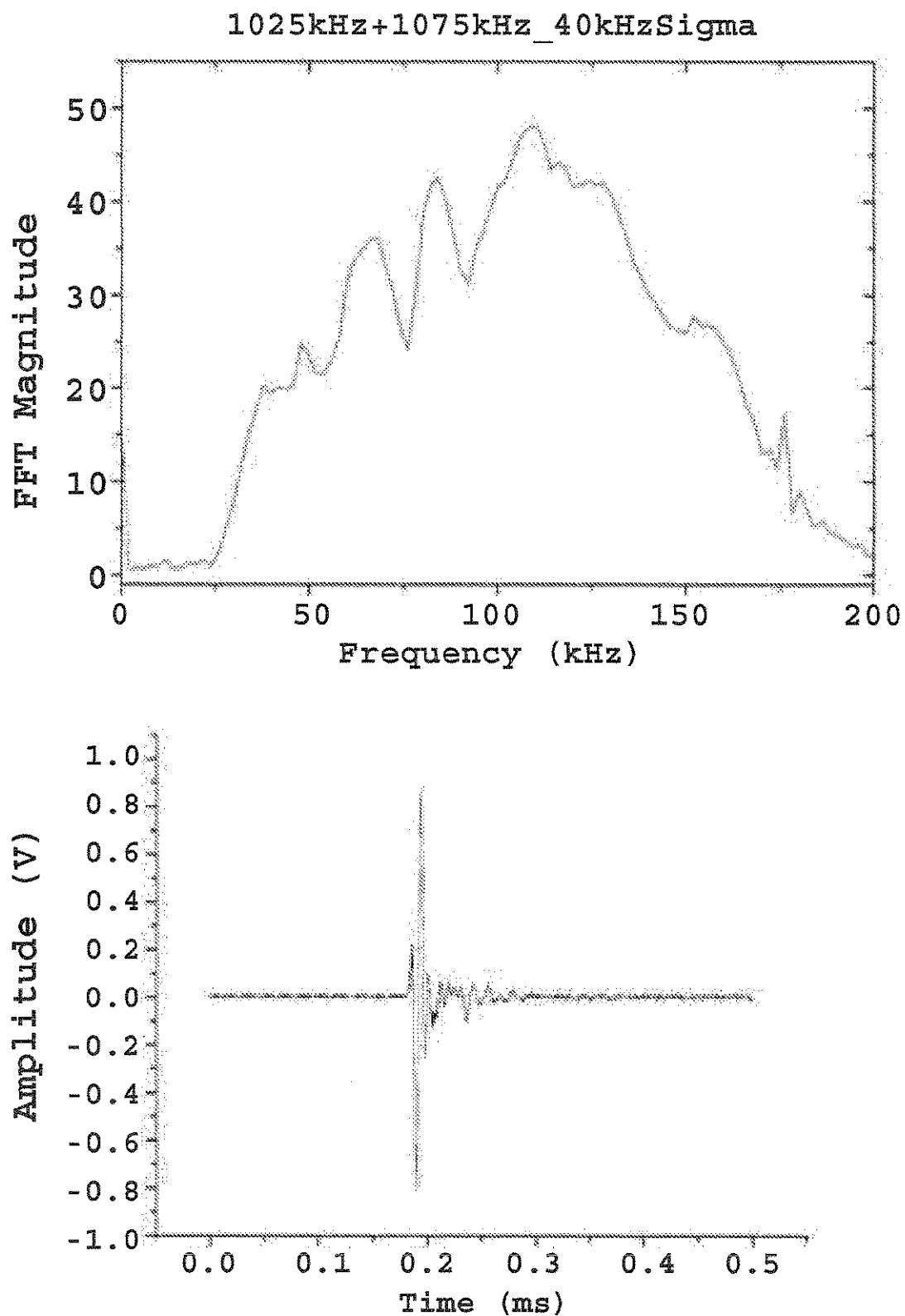


Figure 18

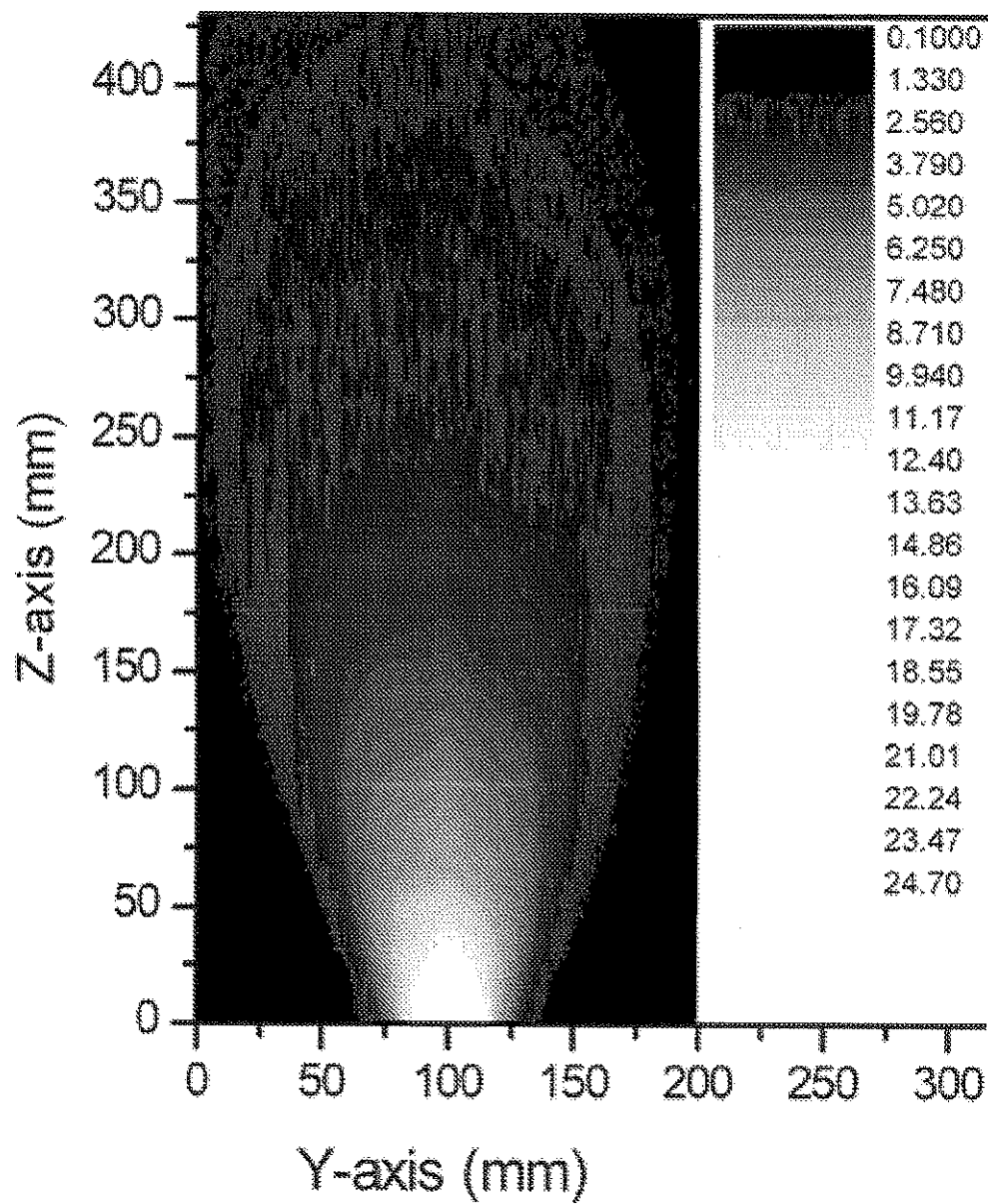


Figure 18 cont'd

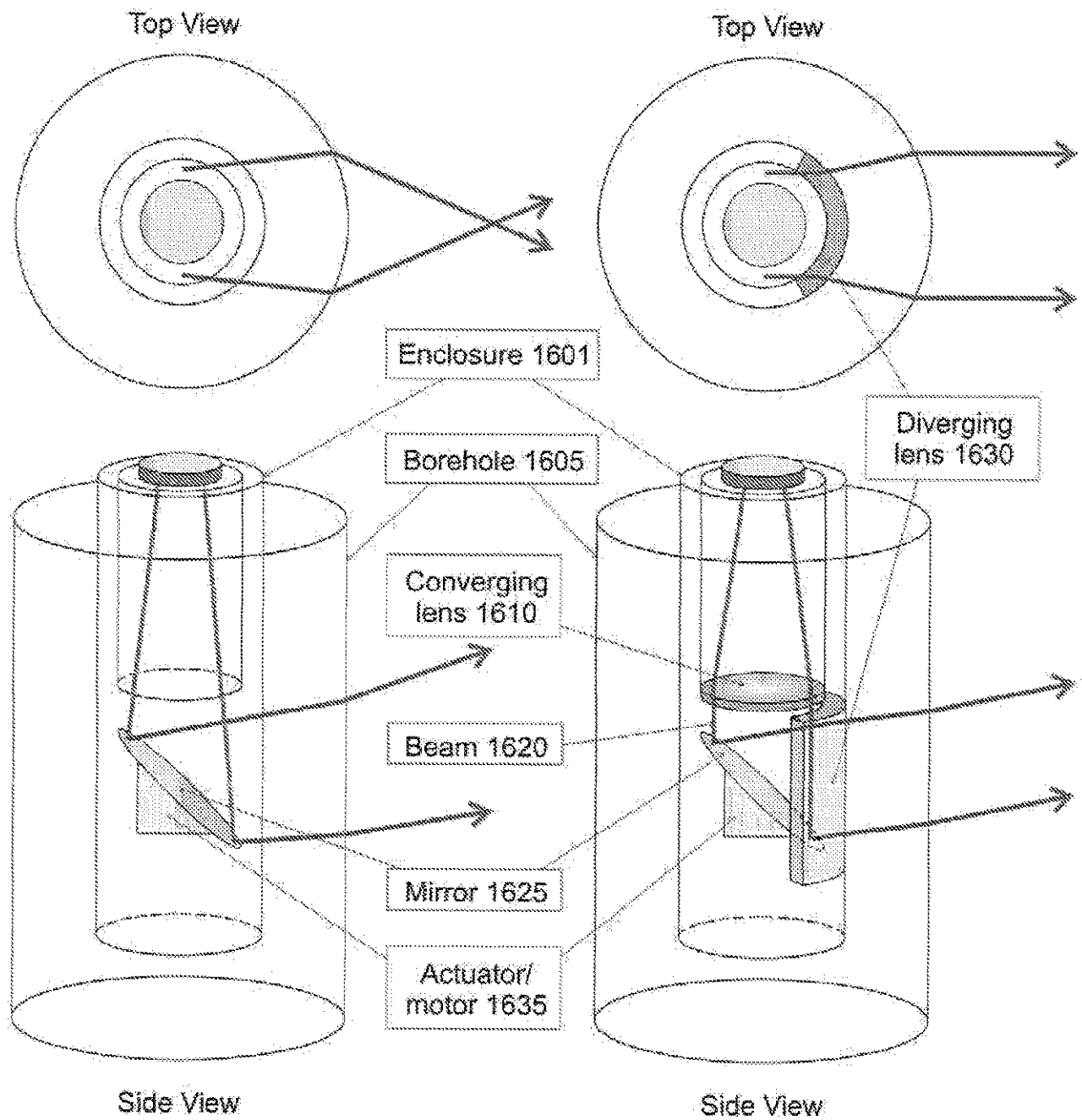


Figure 19a

Figure 19b

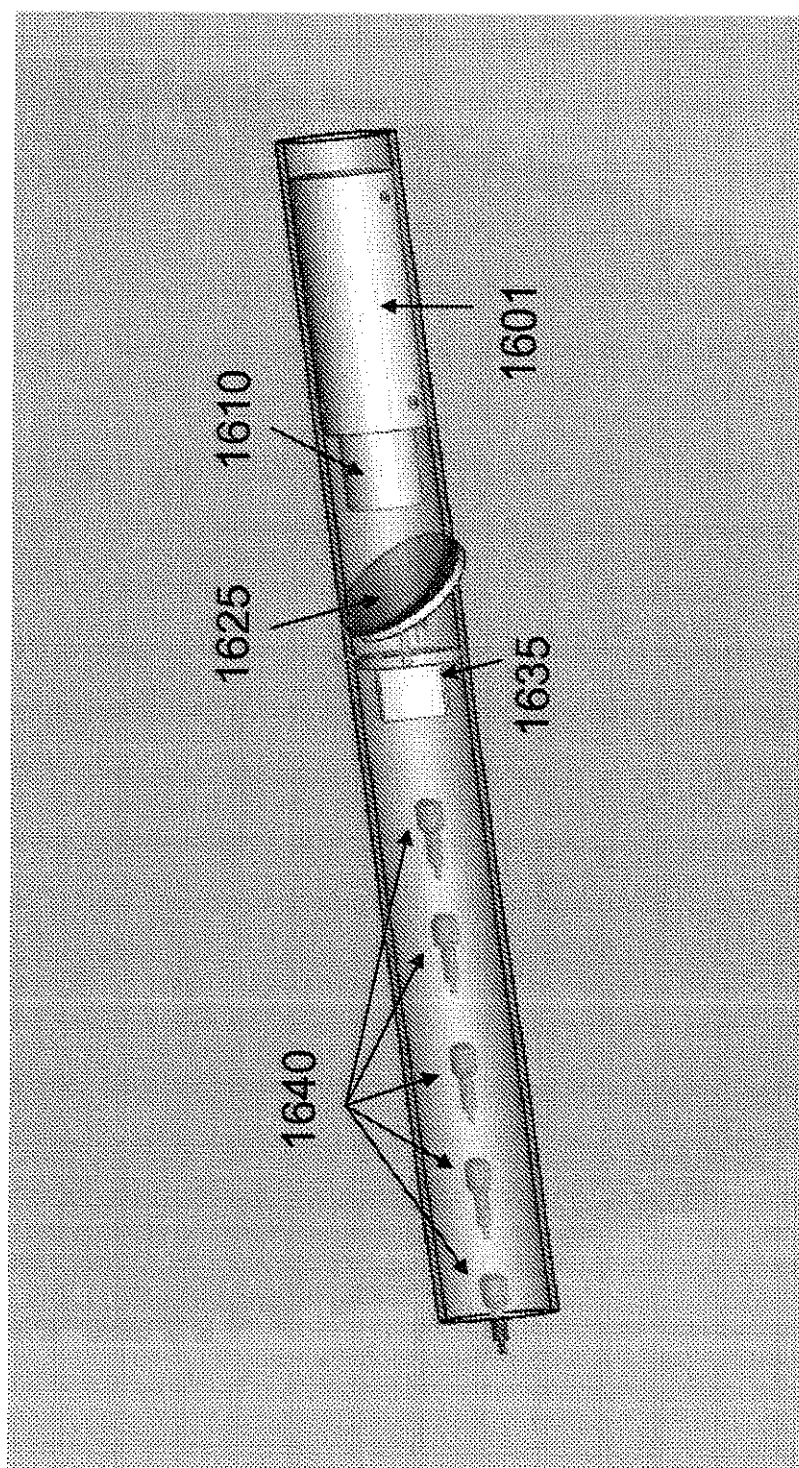
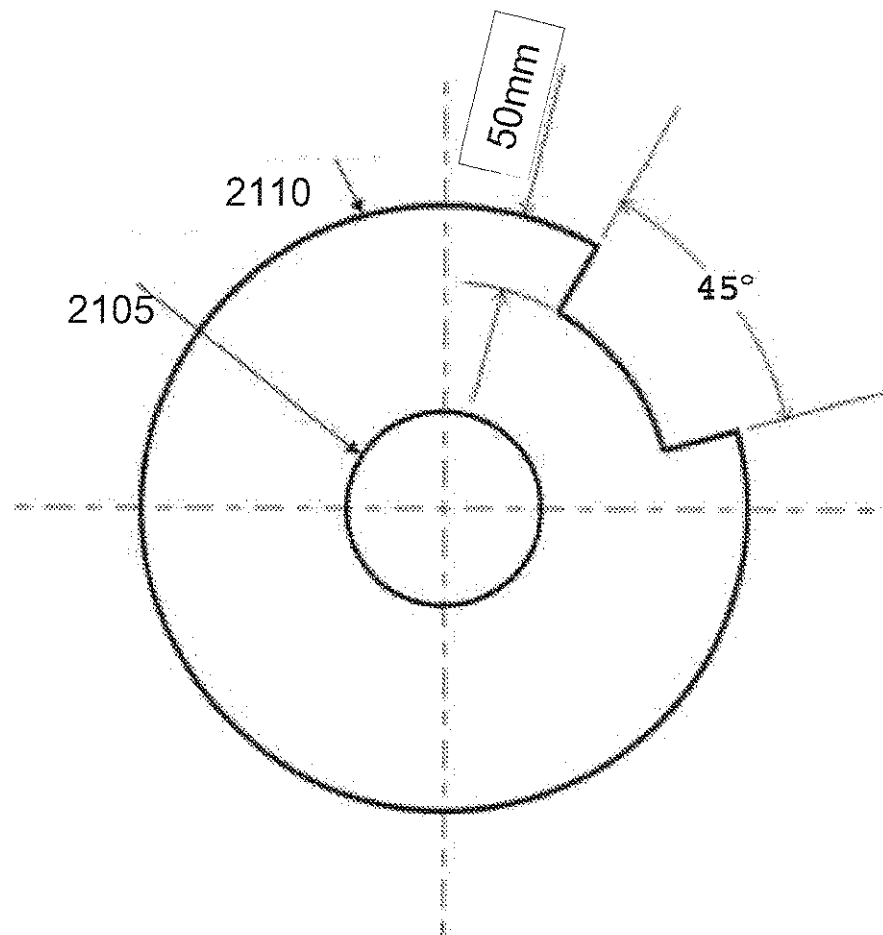


Figure 20



Plan view of proposed vertical cut in barrel

Figure 21a

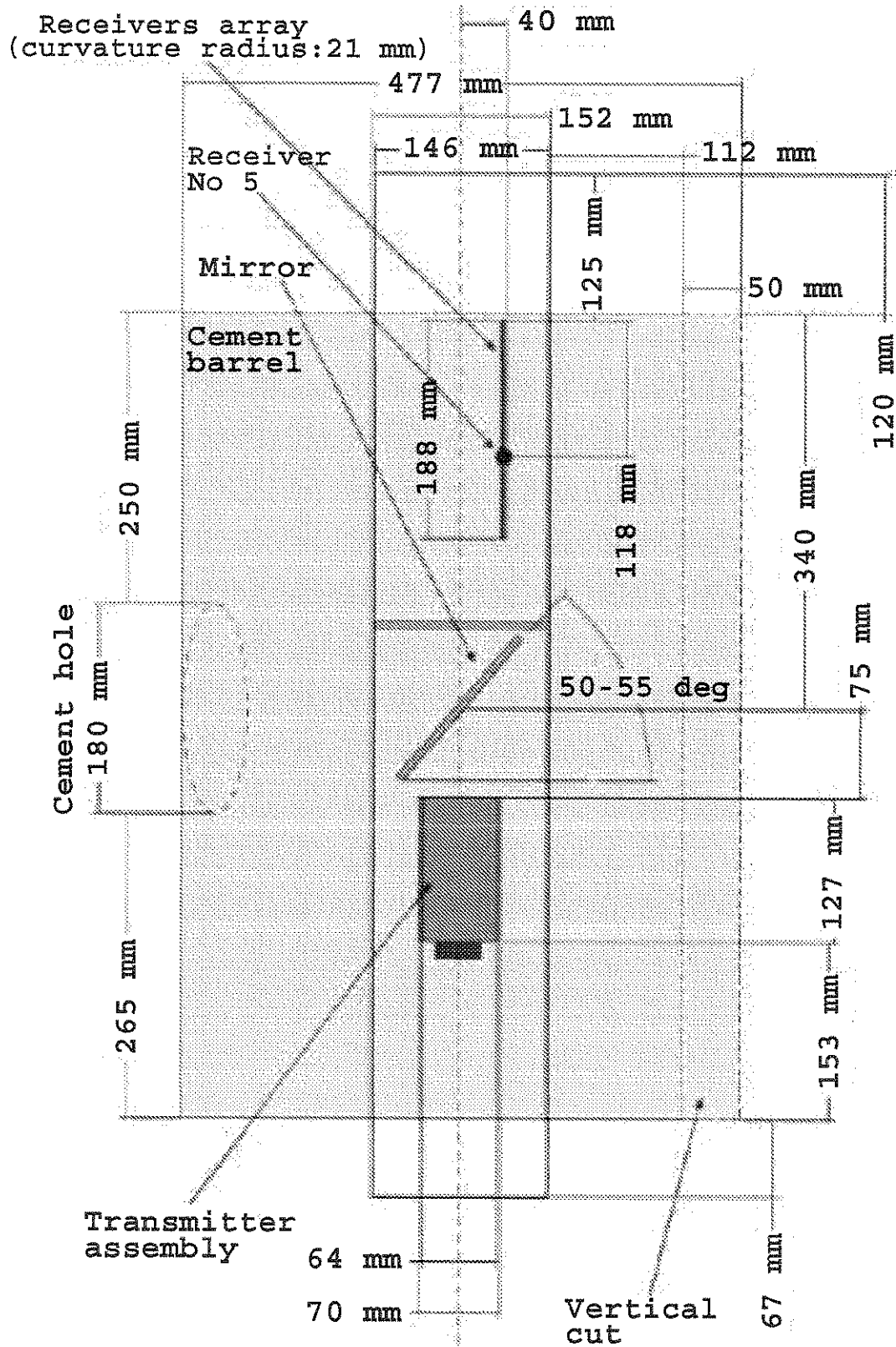
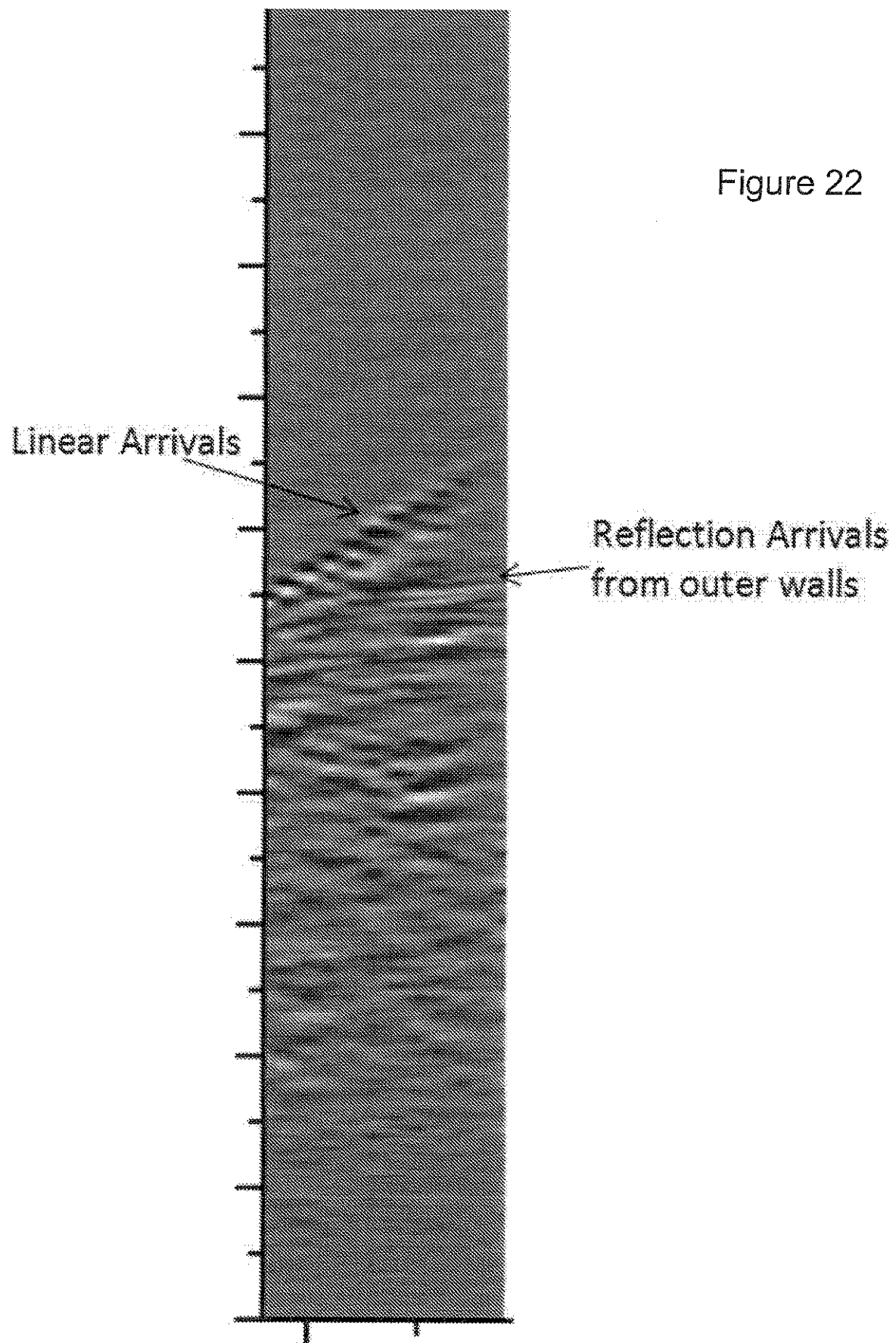
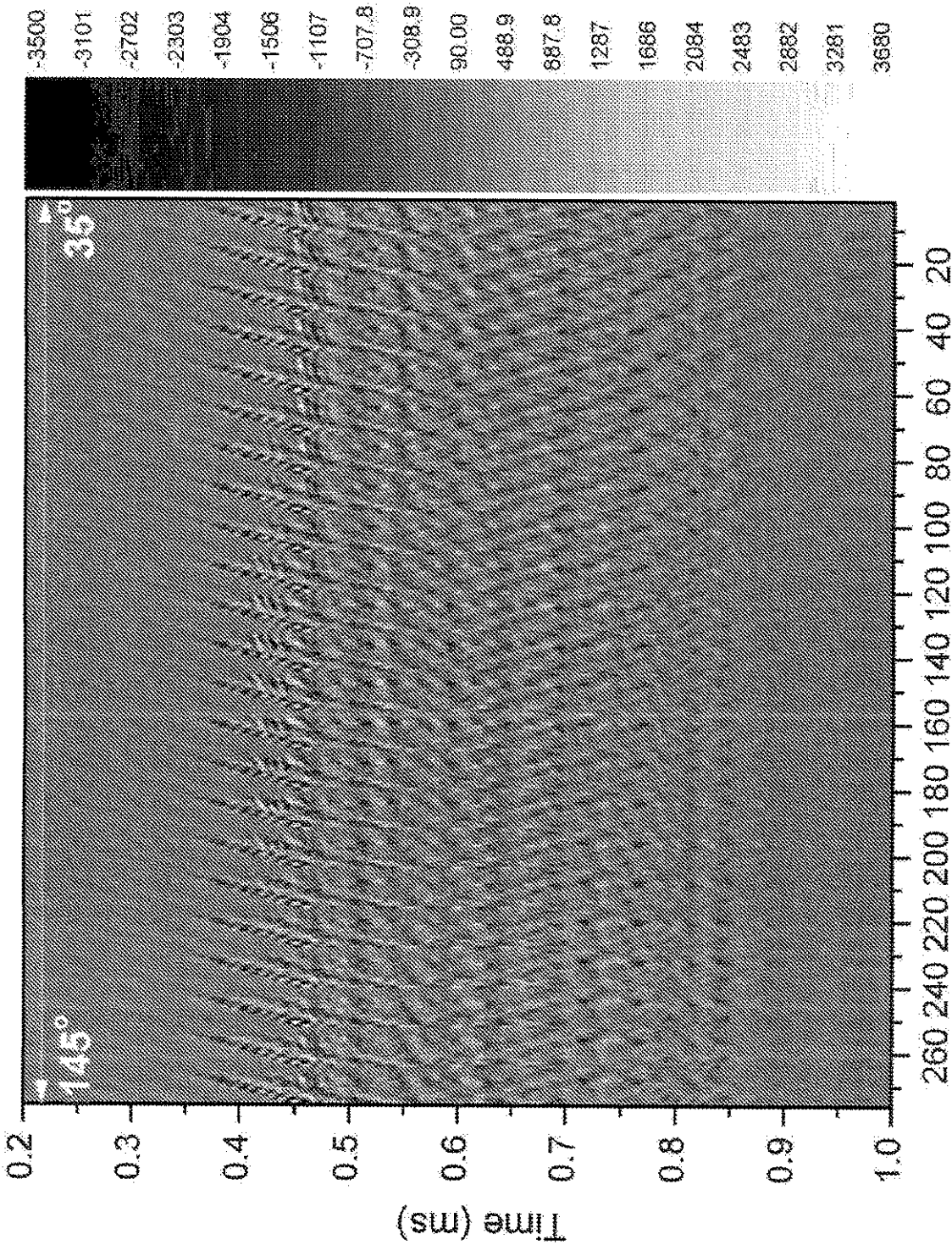


Figure 21b





Waveform No. **Figure 23**

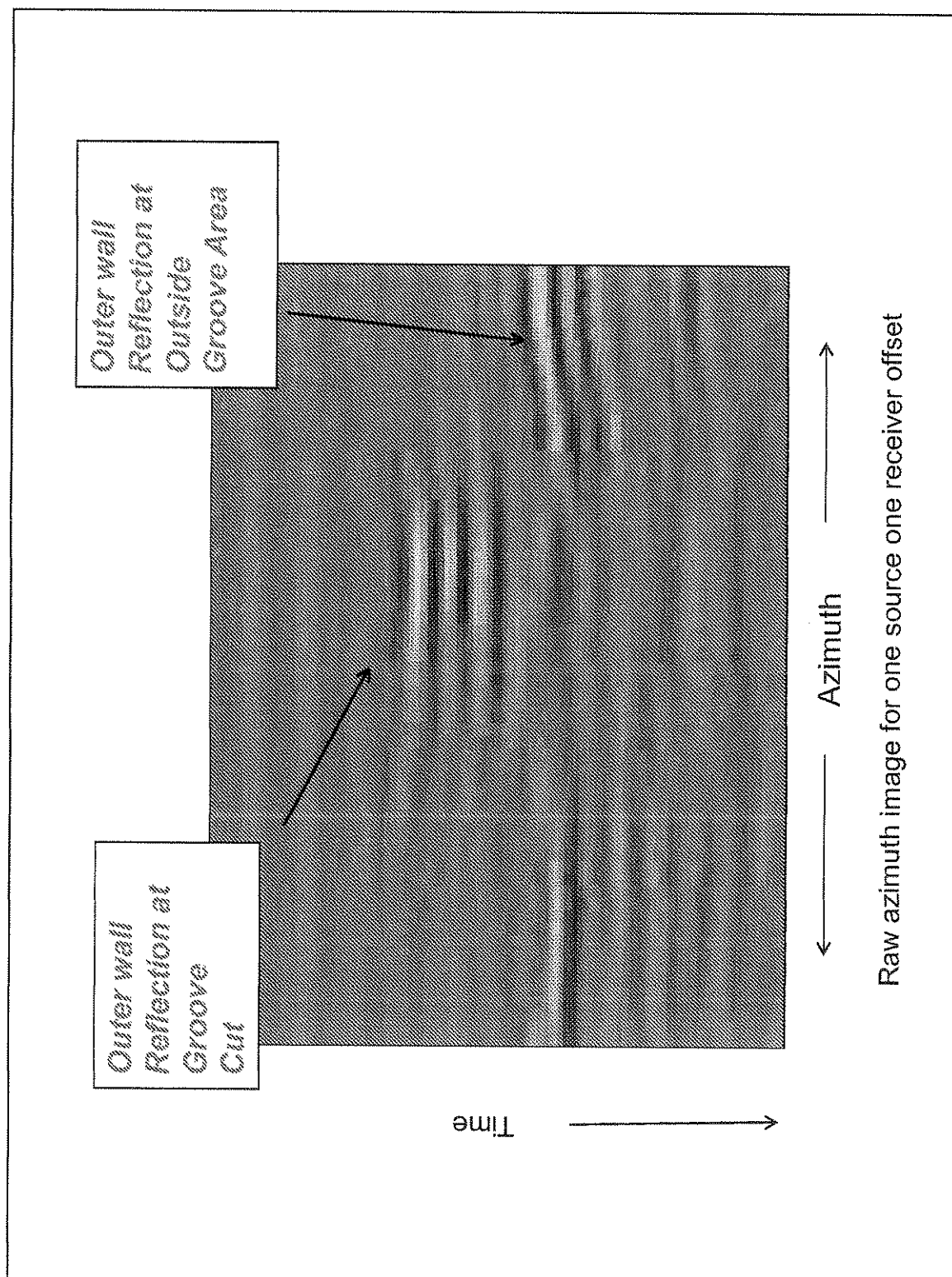


Figure 24