

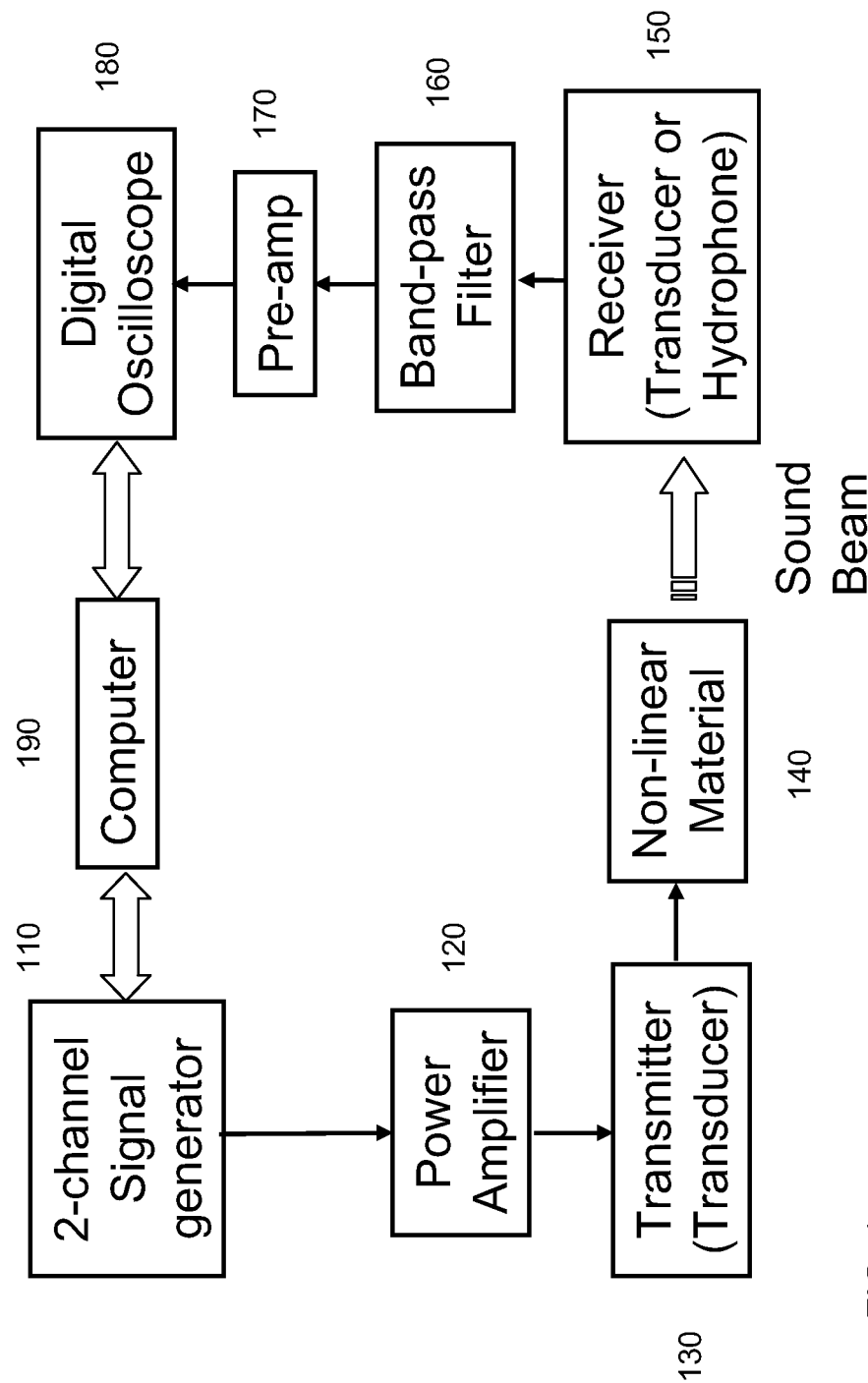


FIG. 1

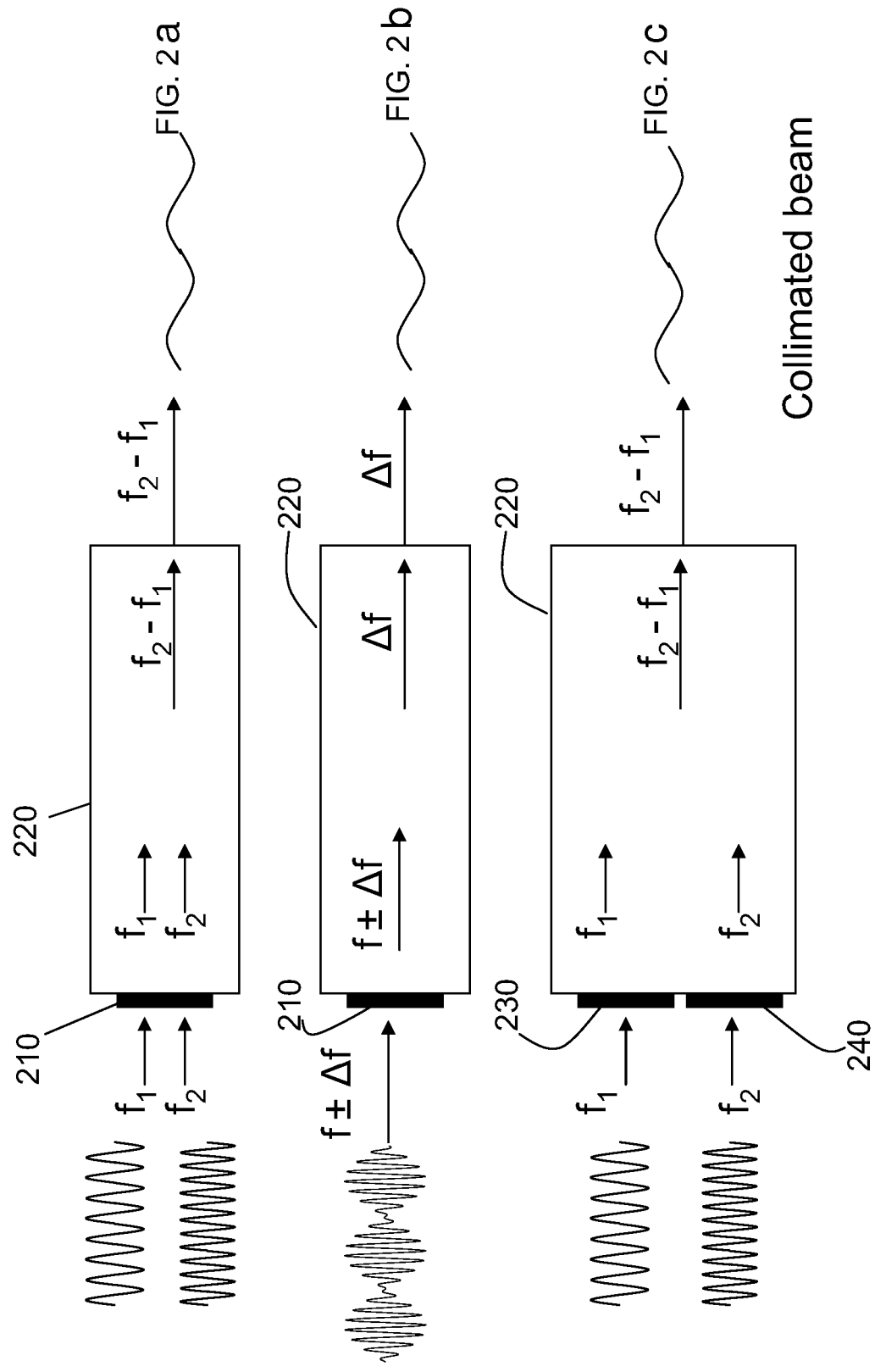
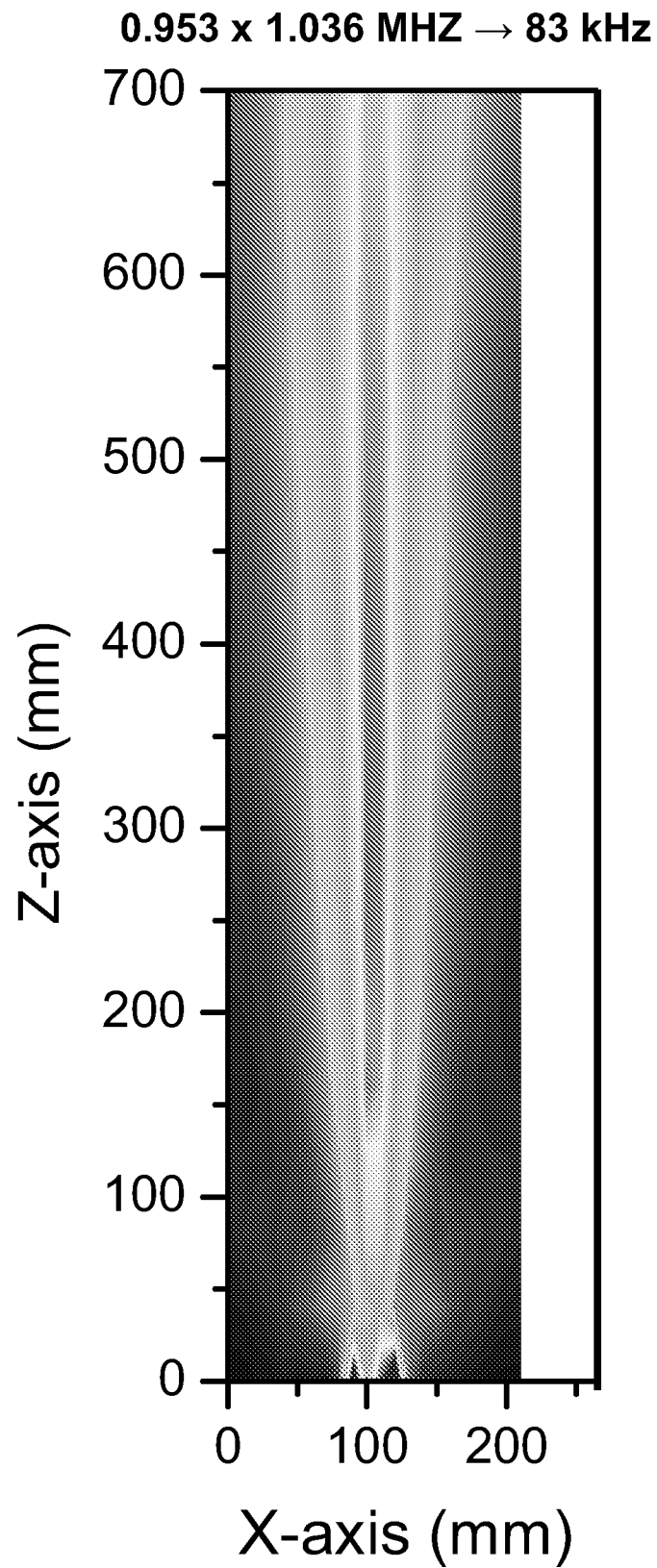
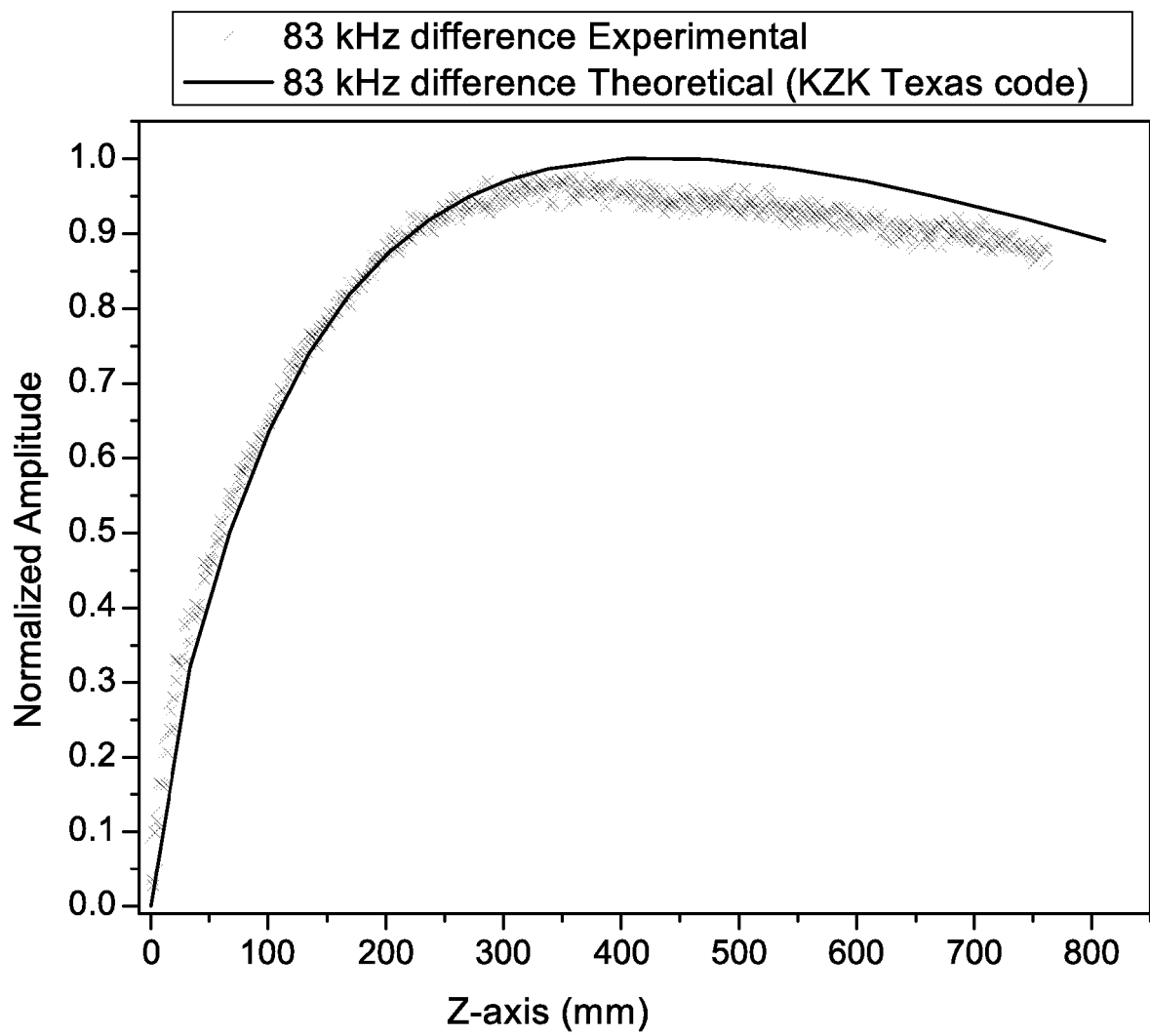


Fig. 3a



**Fig. 3B**

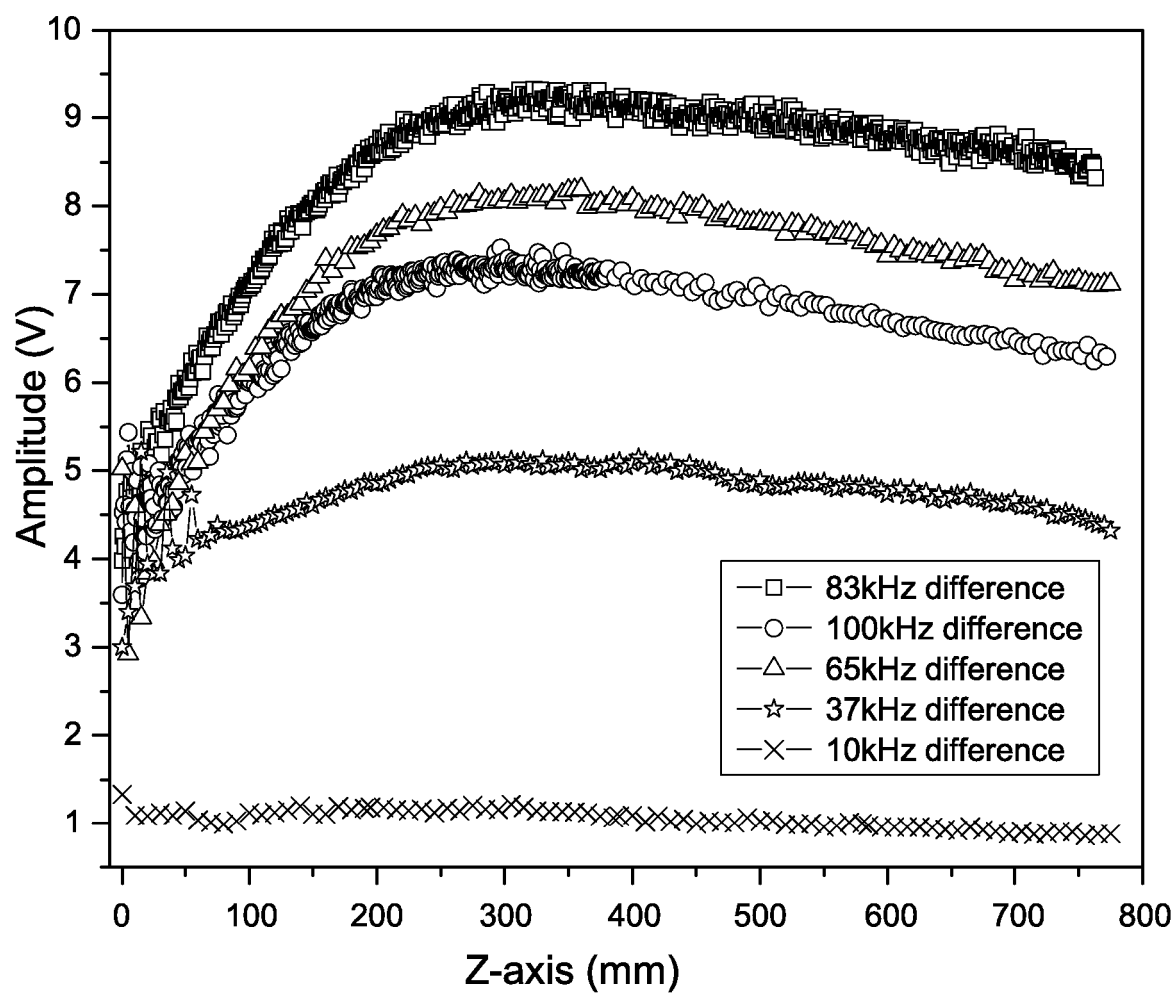


Fig. 4A

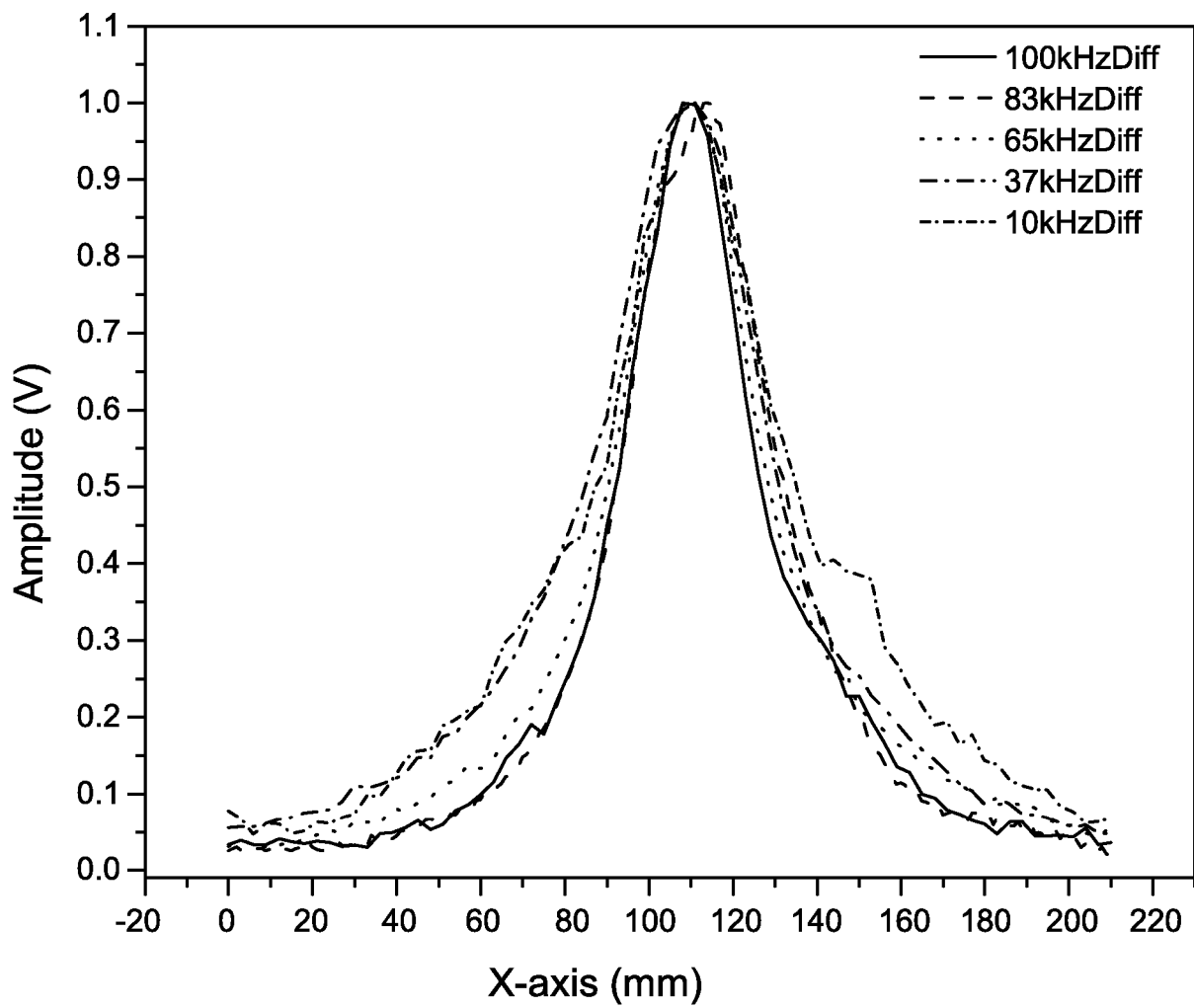
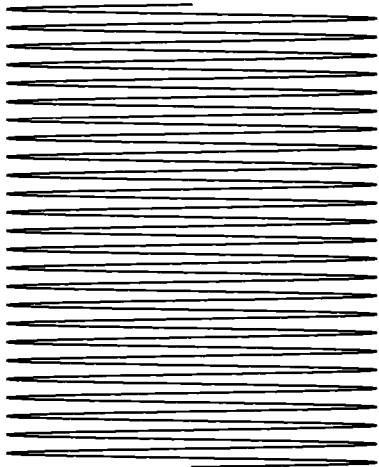


Fig. 4B

Fig. 5a

Single frequency burst



Frequency chirp (broadband)

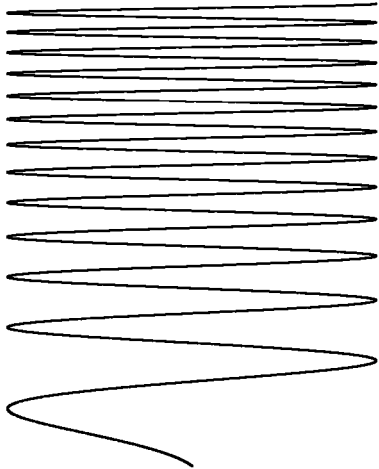


Fig. 5b

Combined signal to transducer

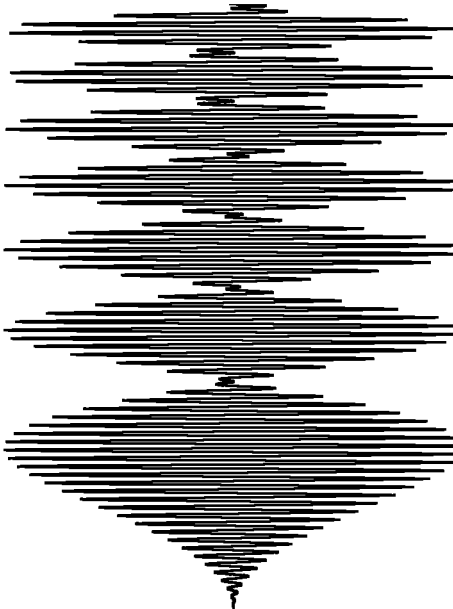


Fig. 6A

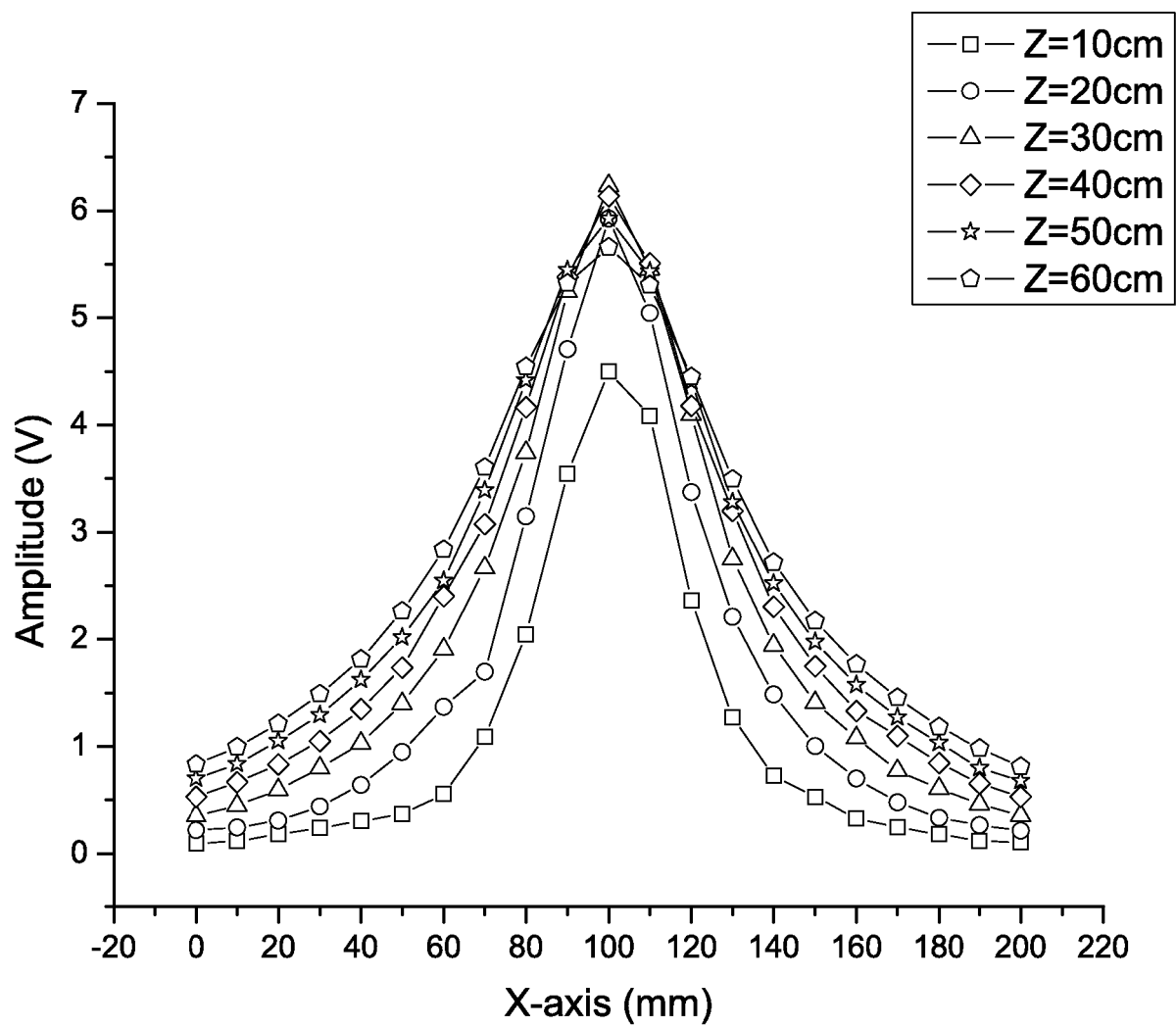
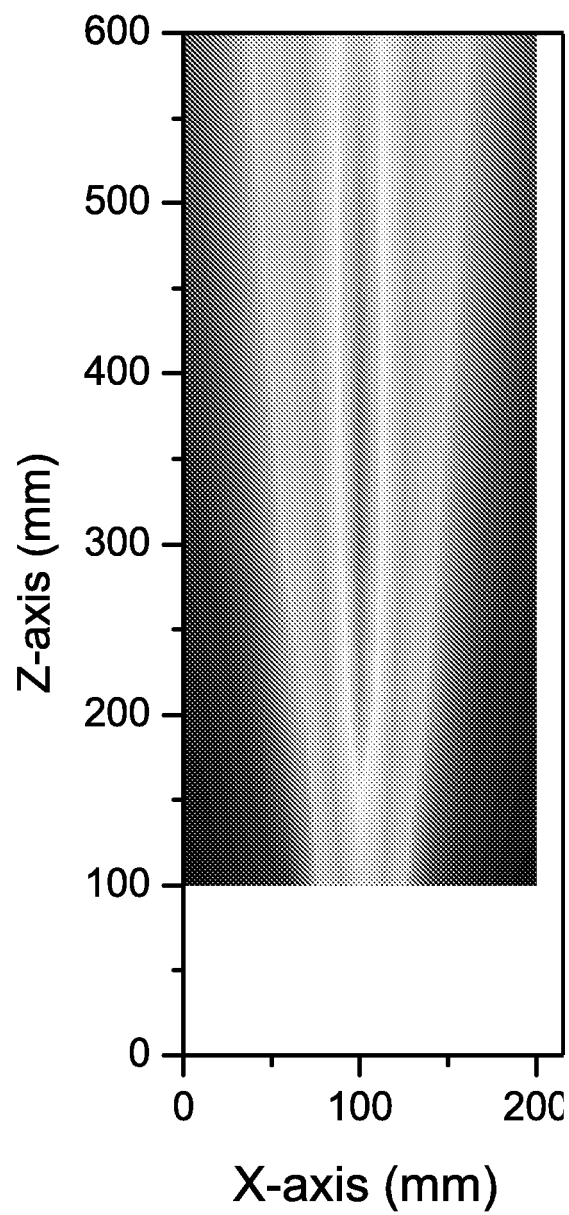


Fig. 6B



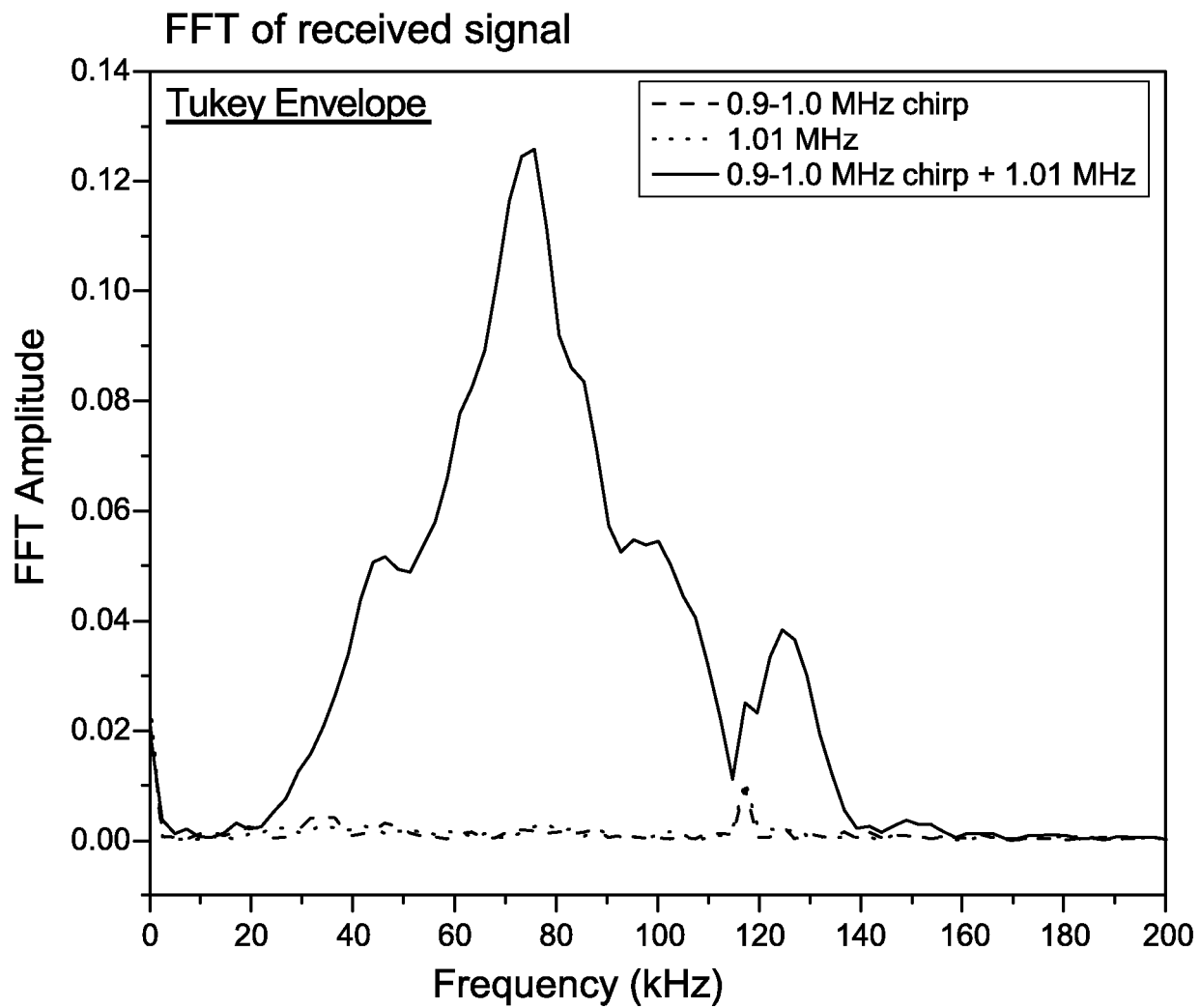


Fig. 6C

Fig. 7A

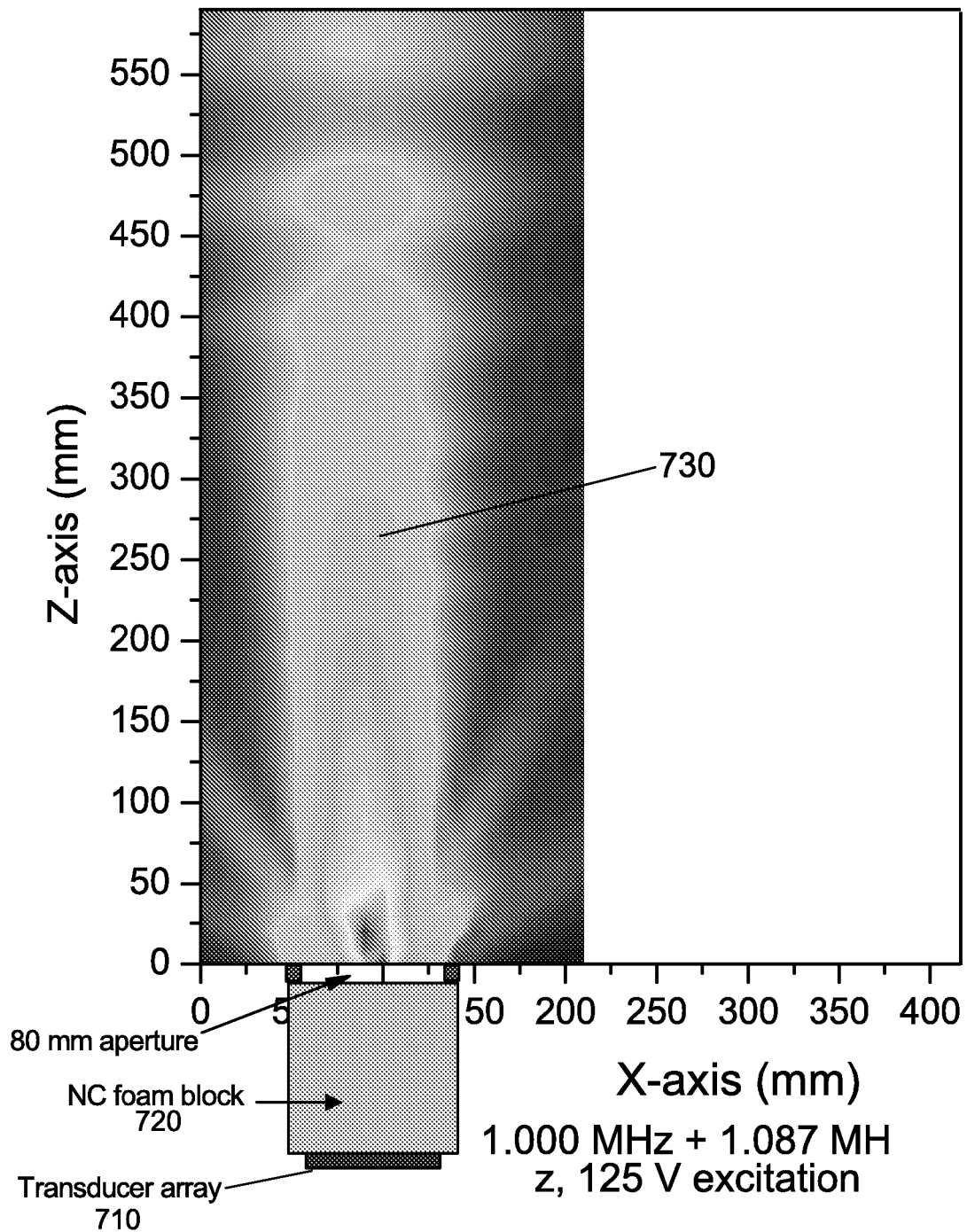


Fig. 7B
Difference signal

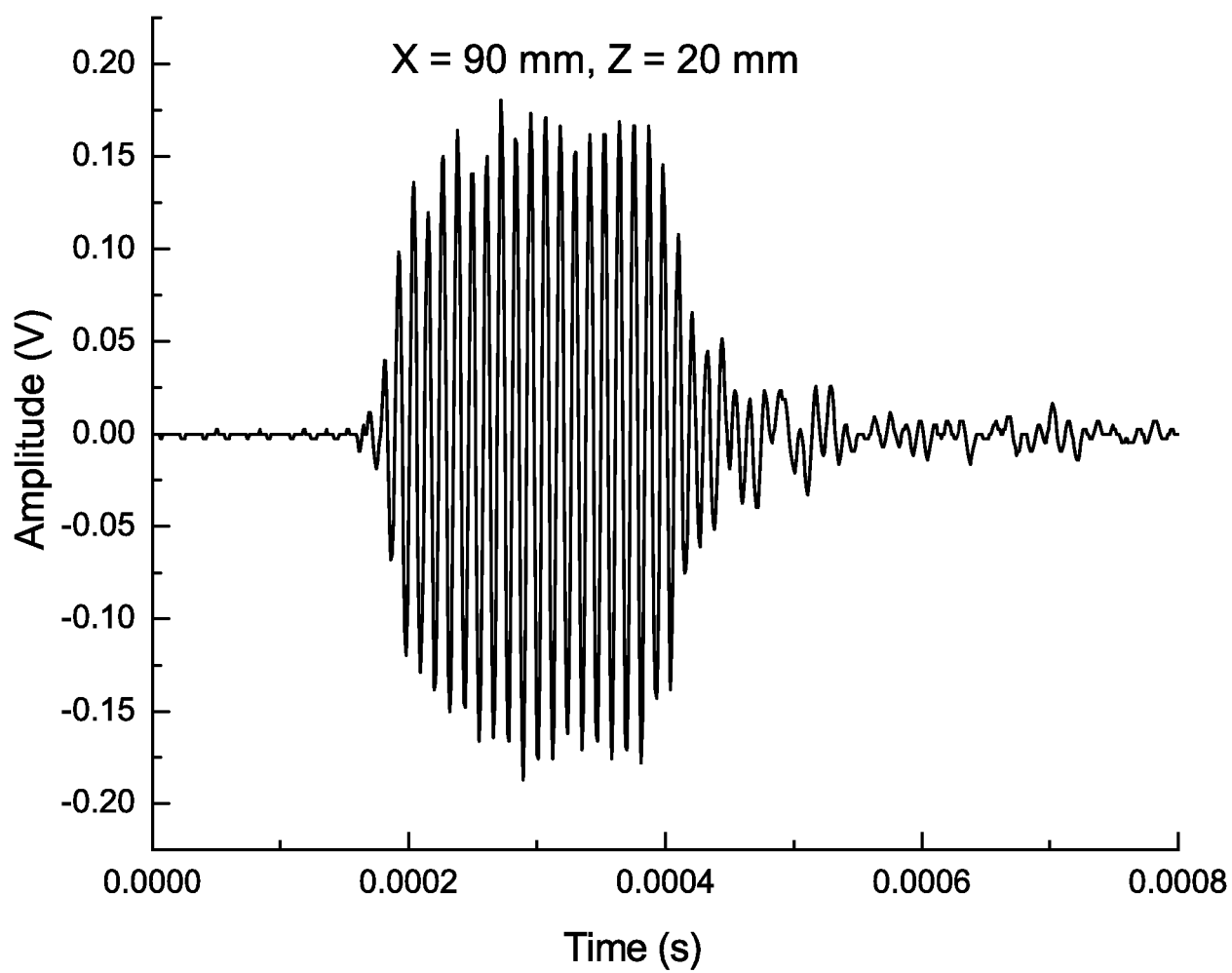
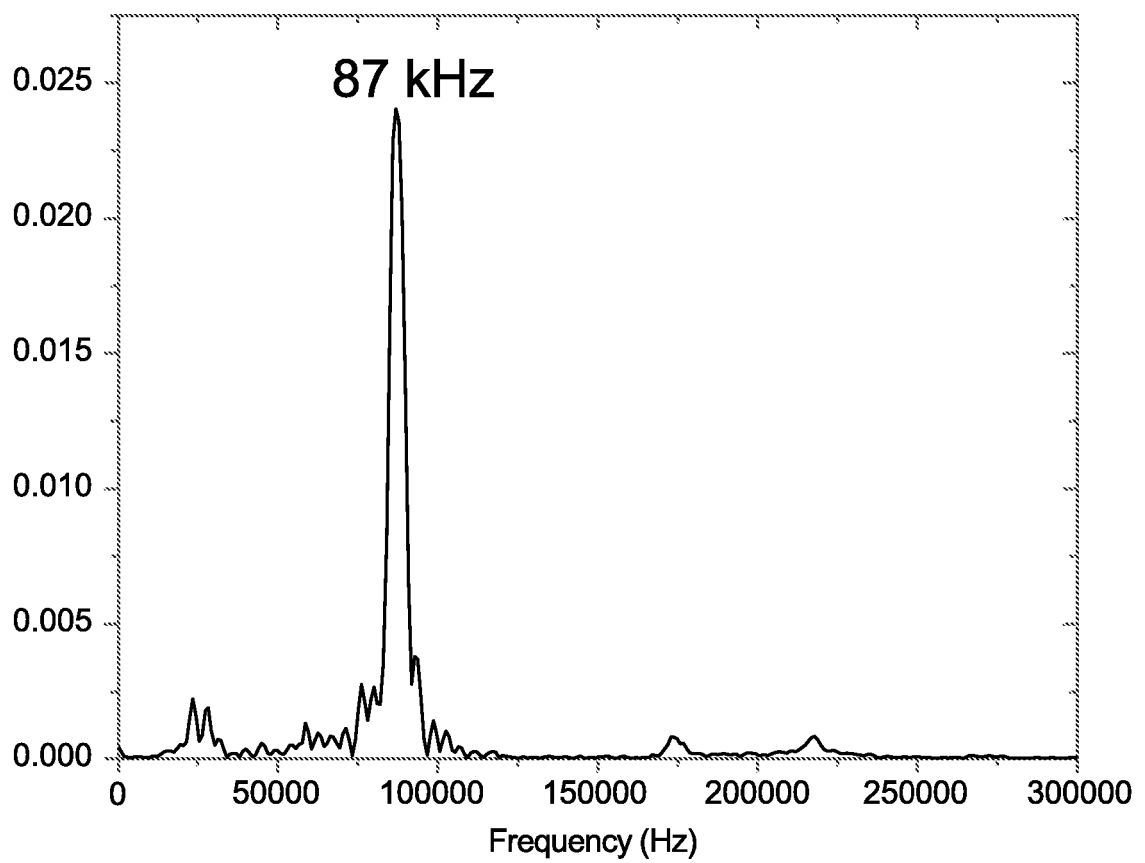


Fig. 7C
FFT of difference signal



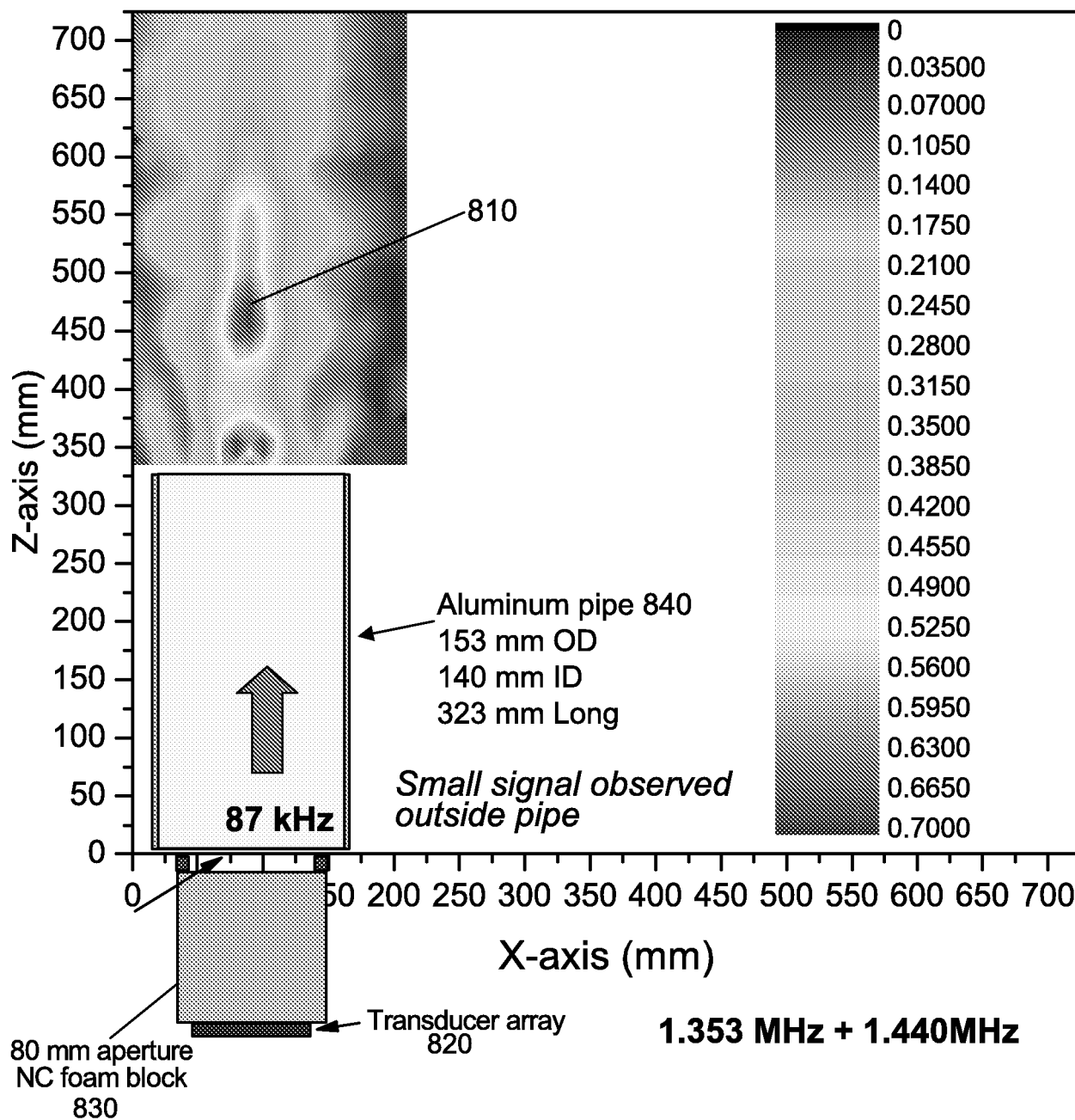
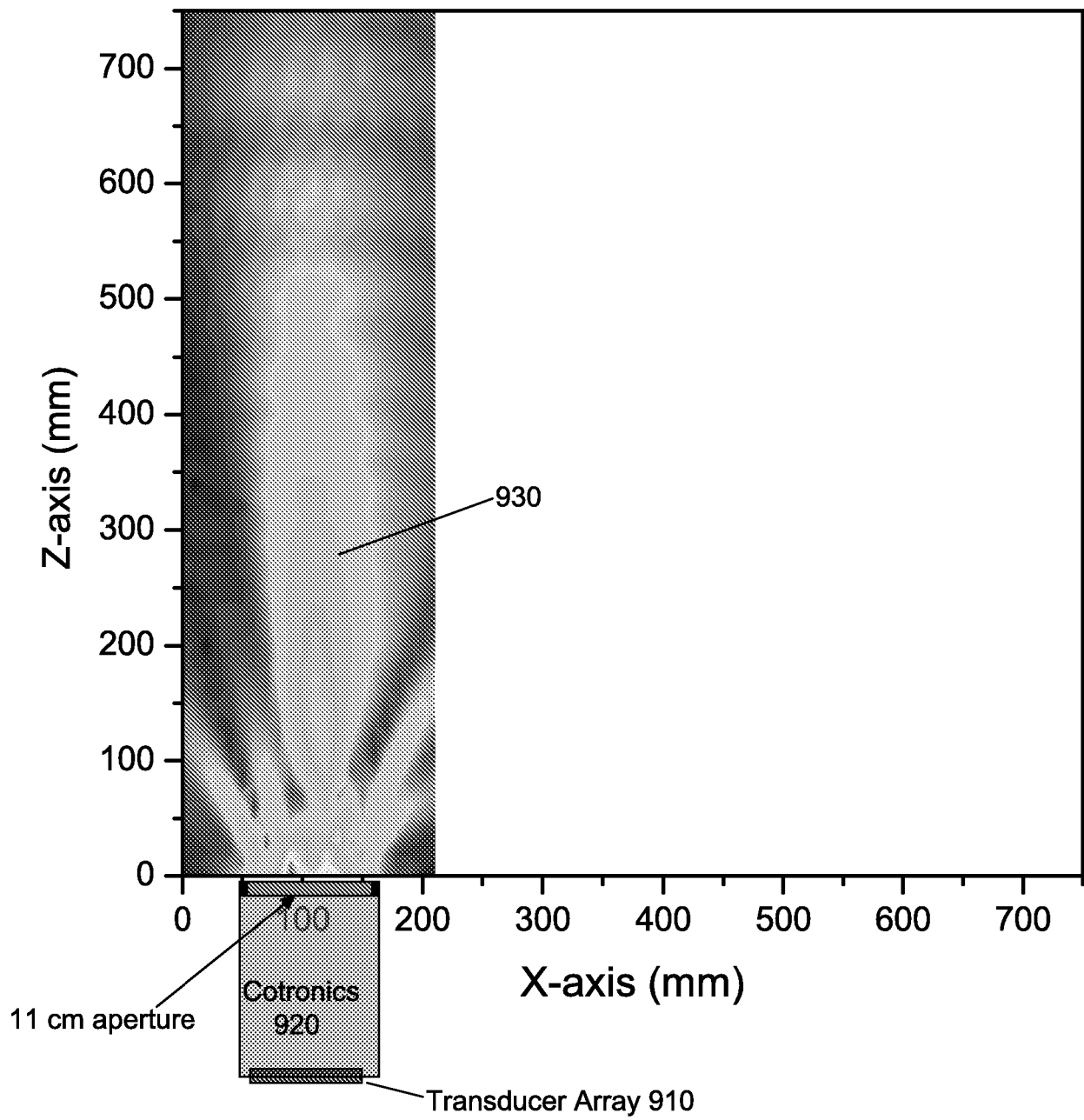


Fig. 8

Fig. 9



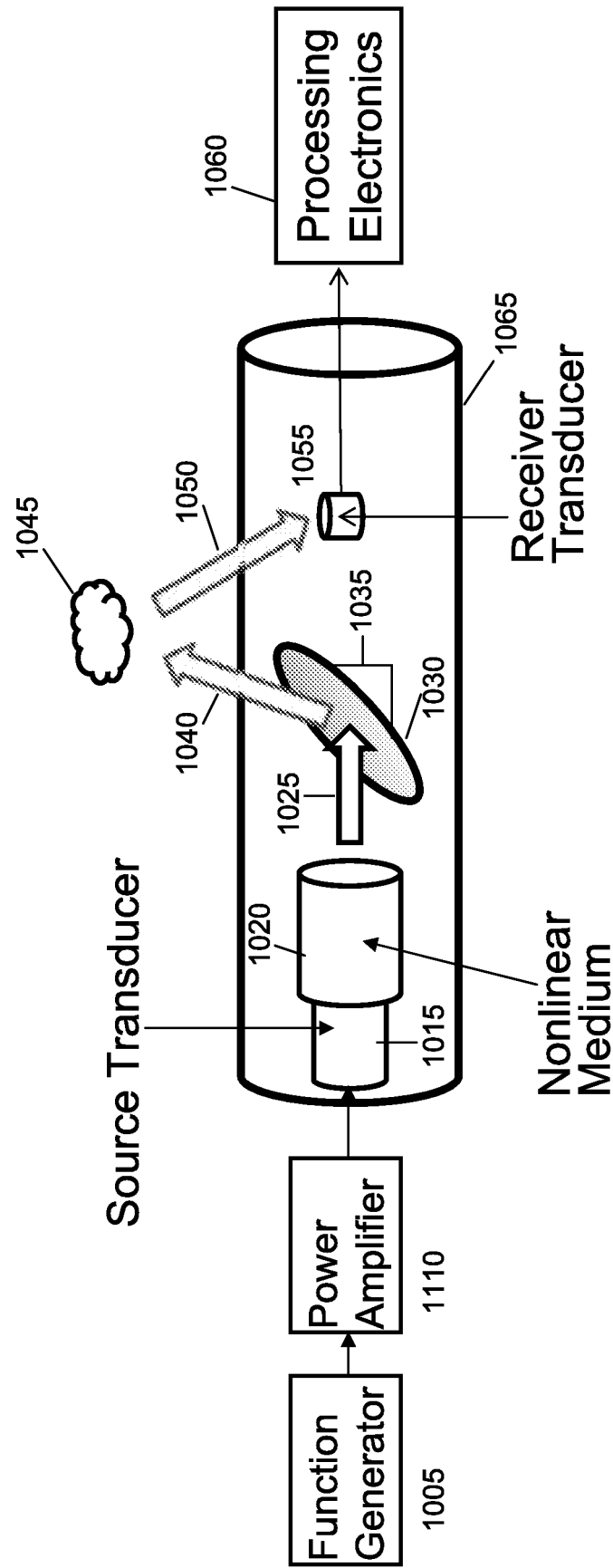
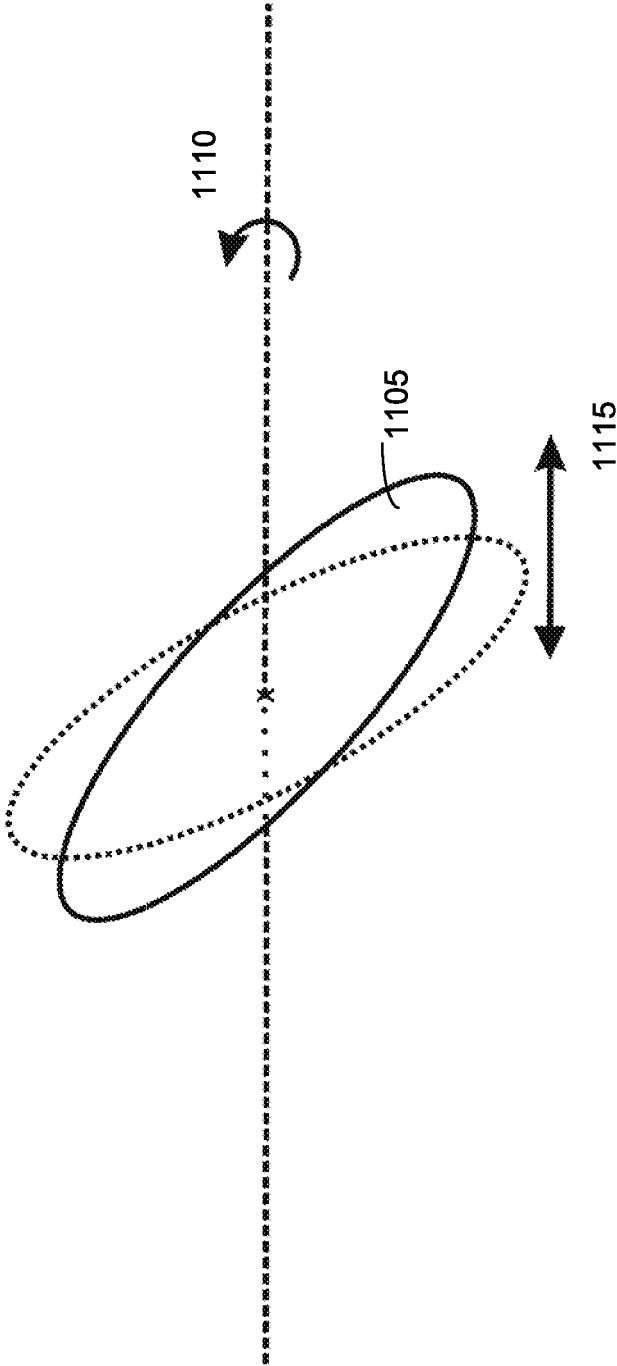


Fig. 10

Fig. 11



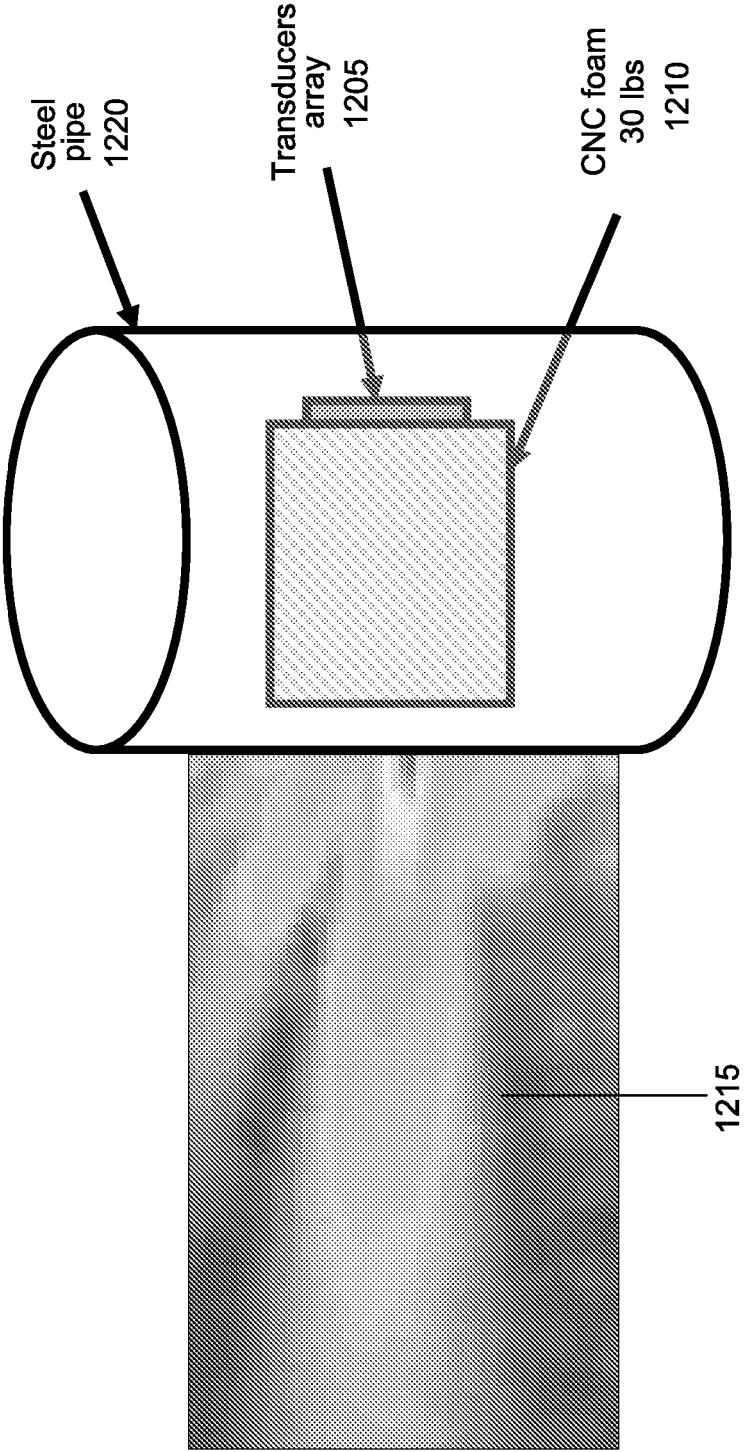


Fig. 12

Fig. 13A

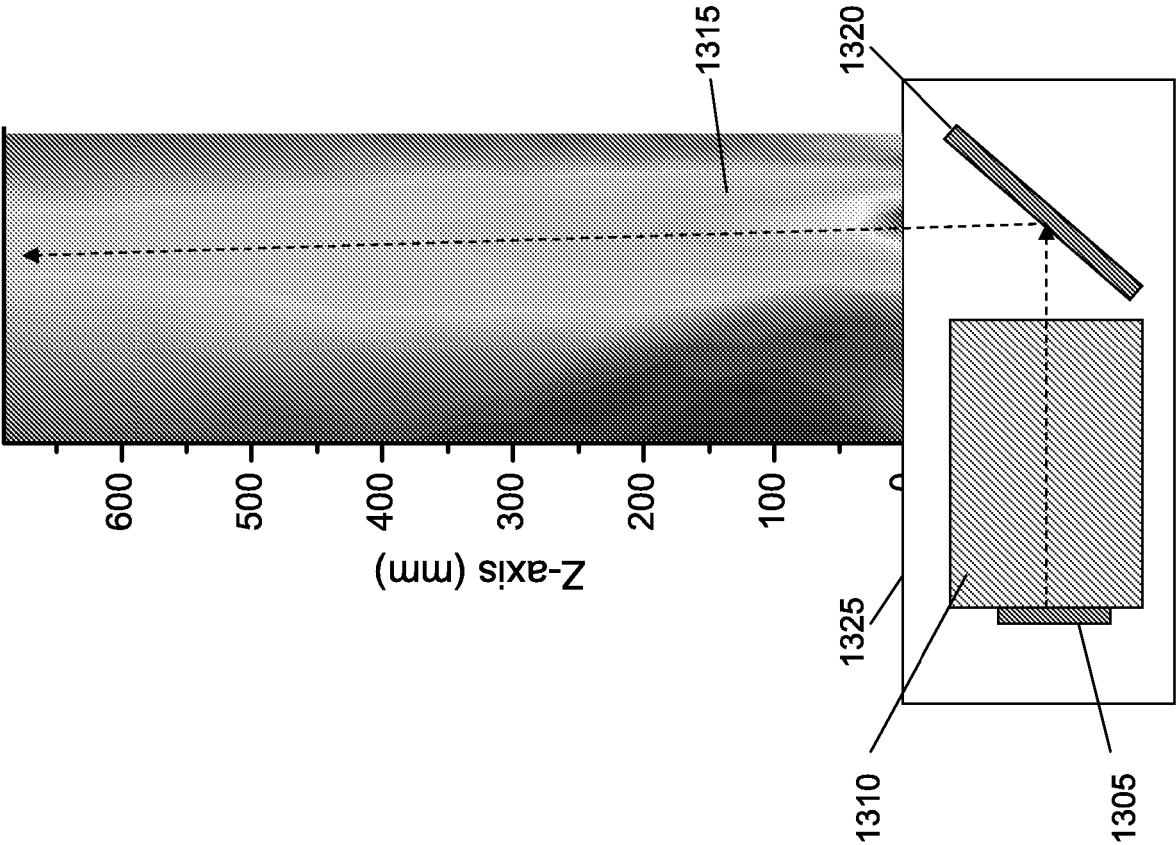


Fig. 13B

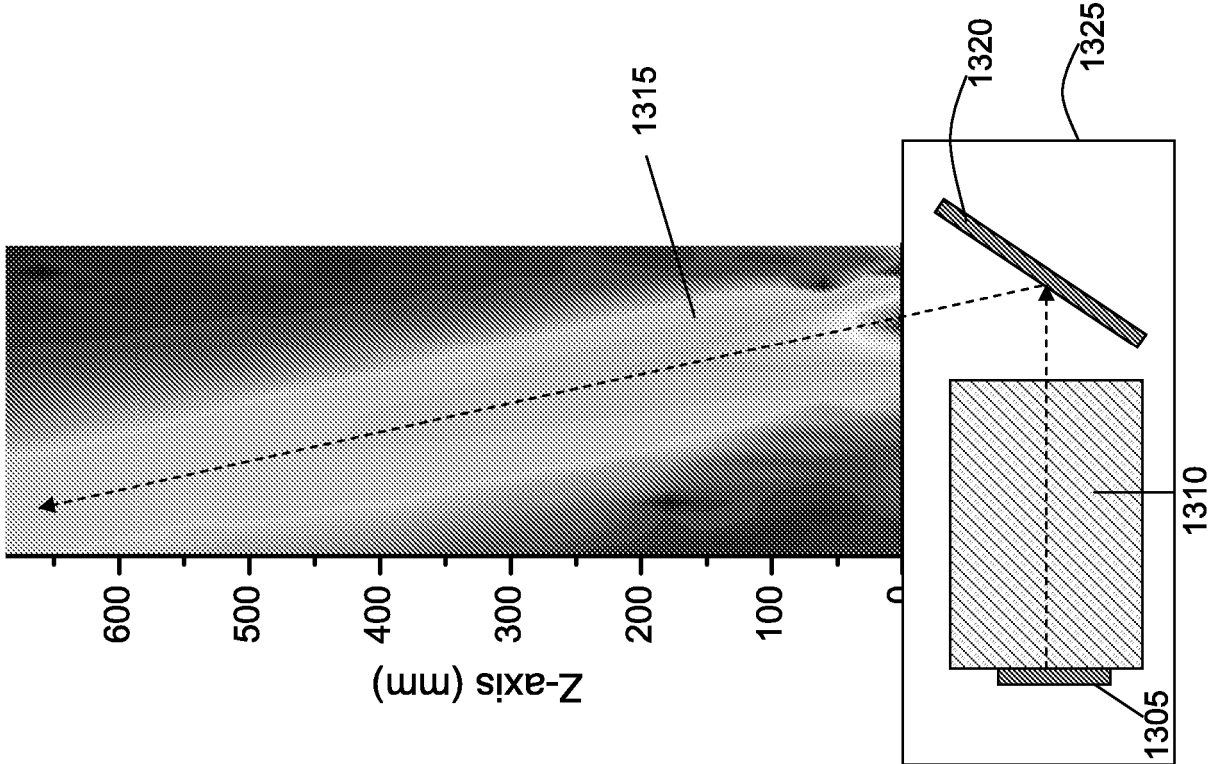
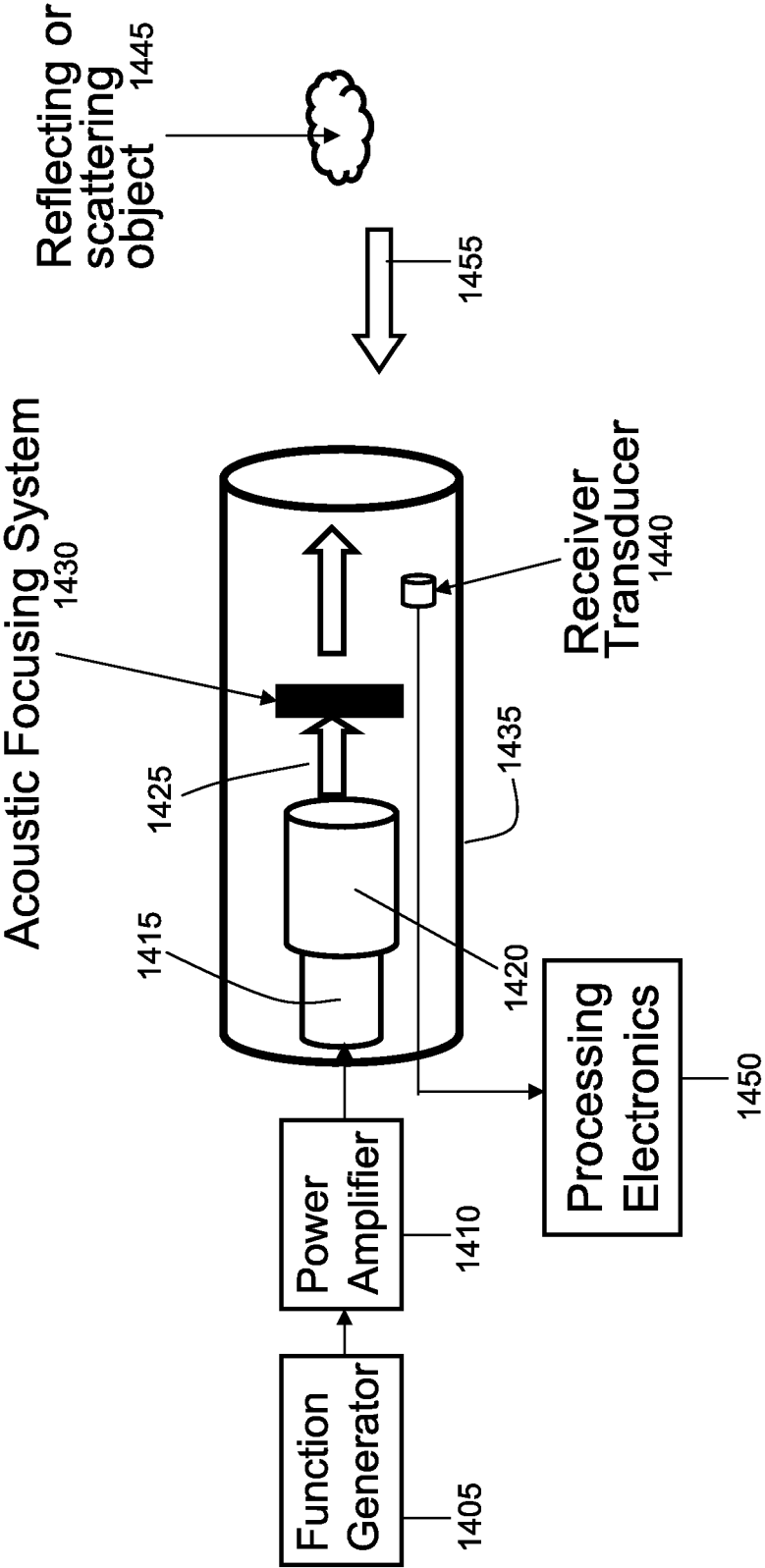


Fig. 14



Imaging of Object Outside Pipe

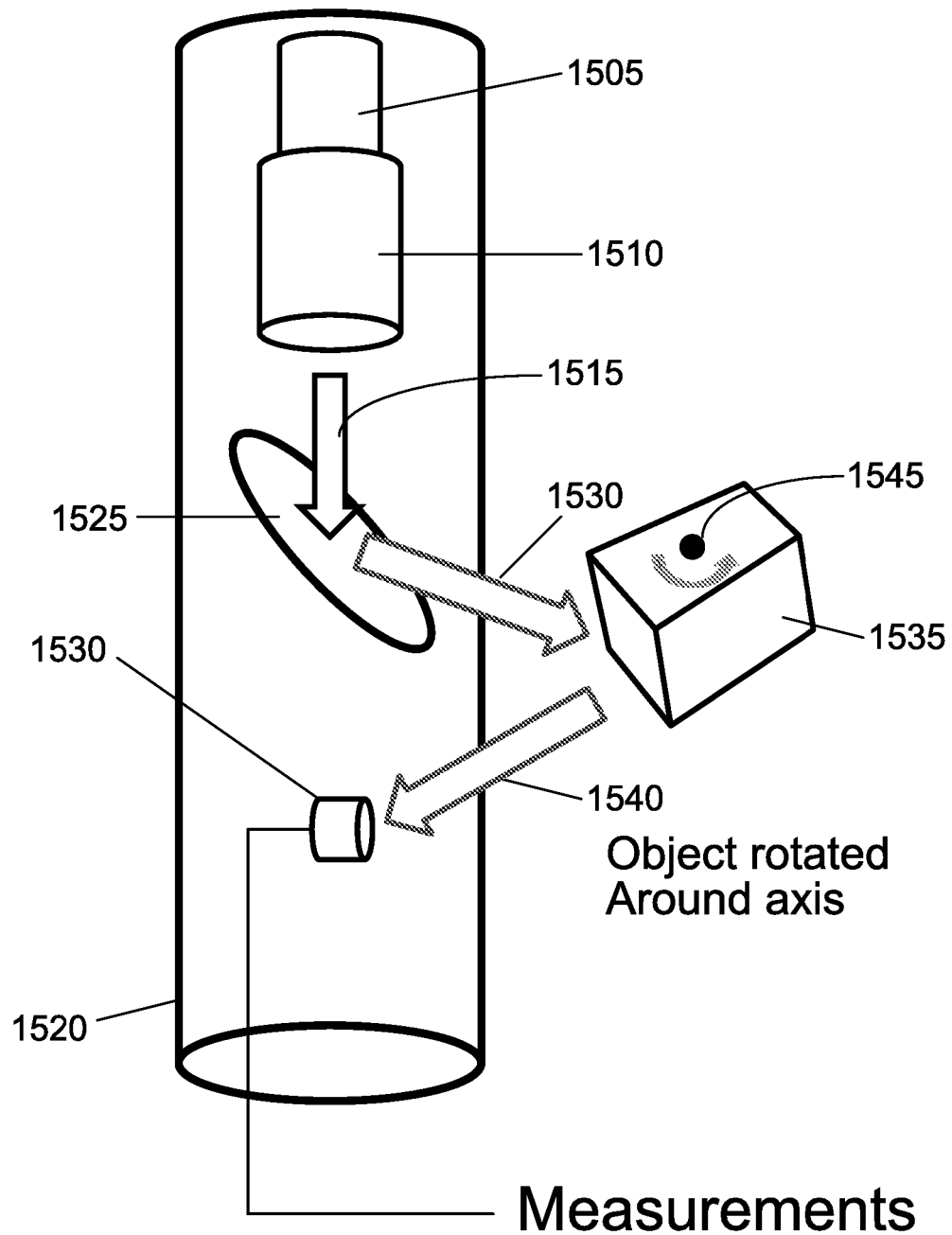
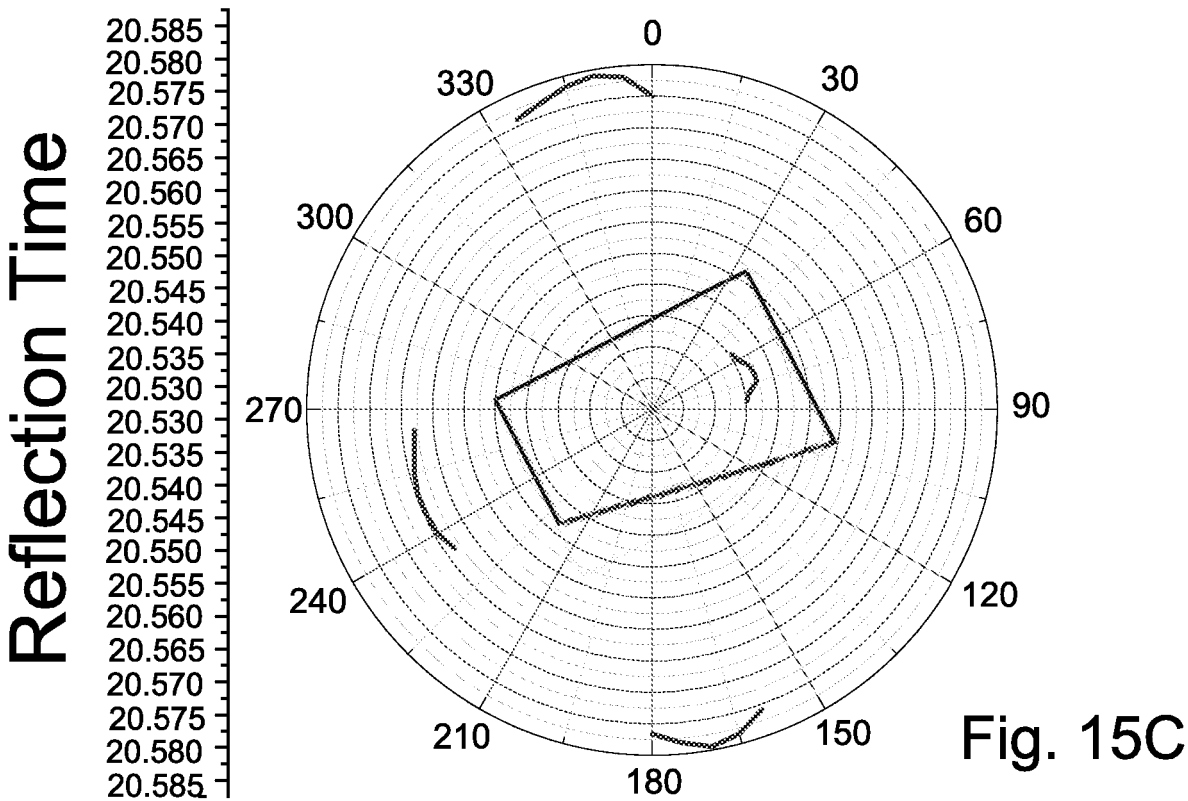
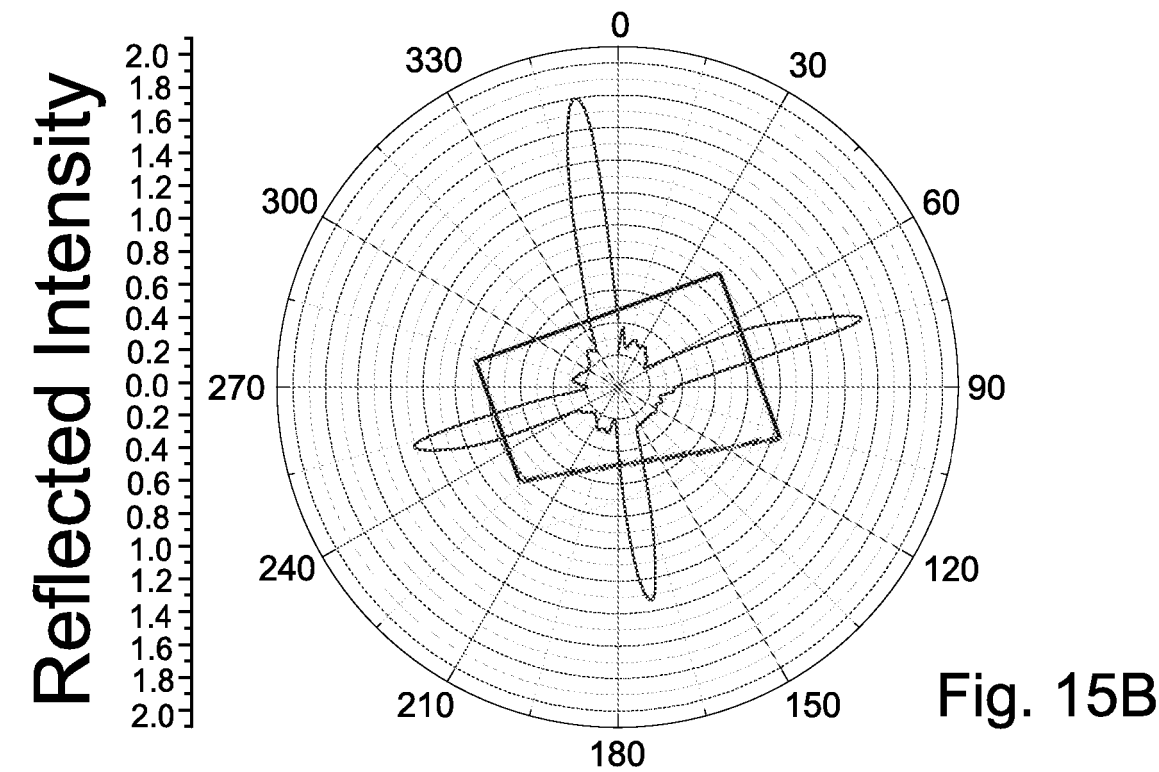


Fig. 15A



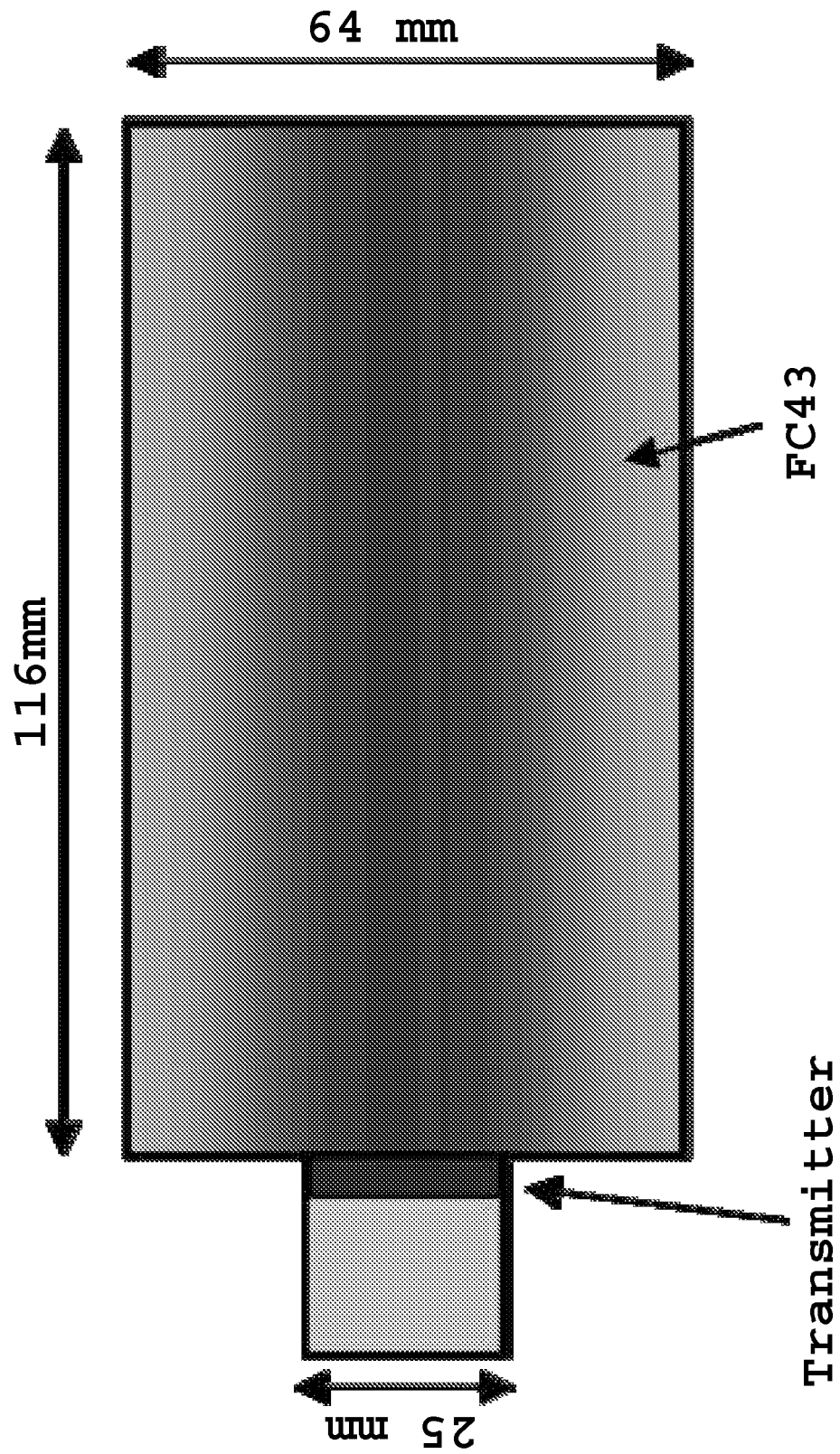
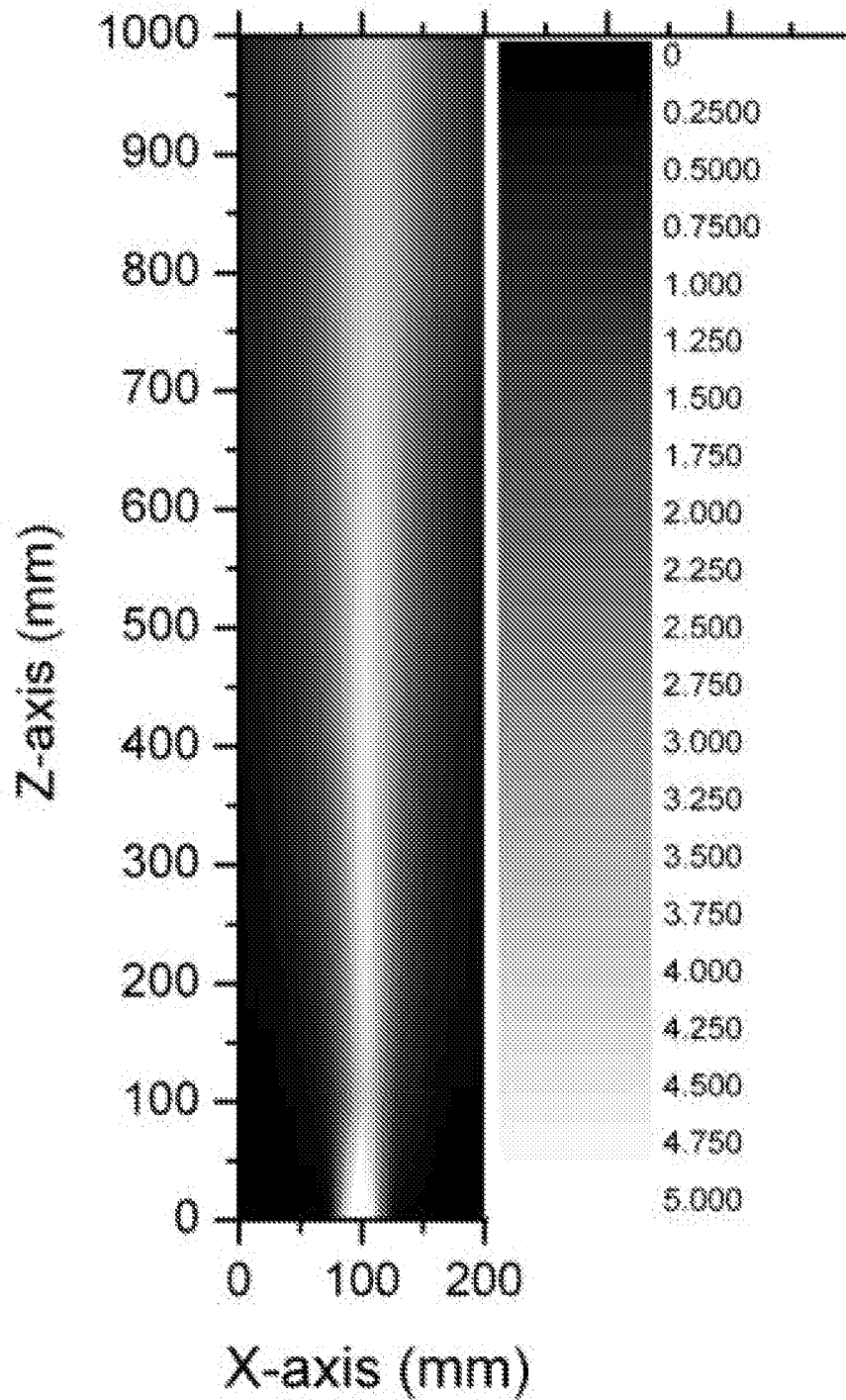


Figure 16

**Figure 17**

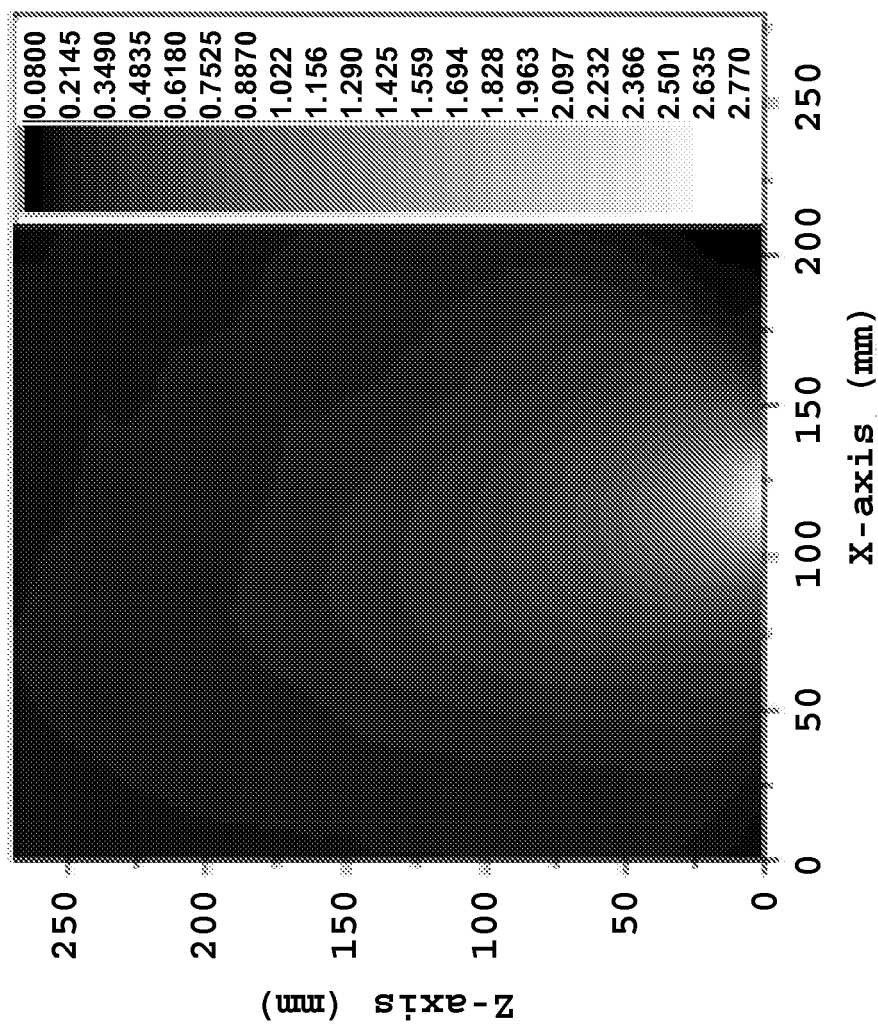


Figure 17 cont'd

26/34

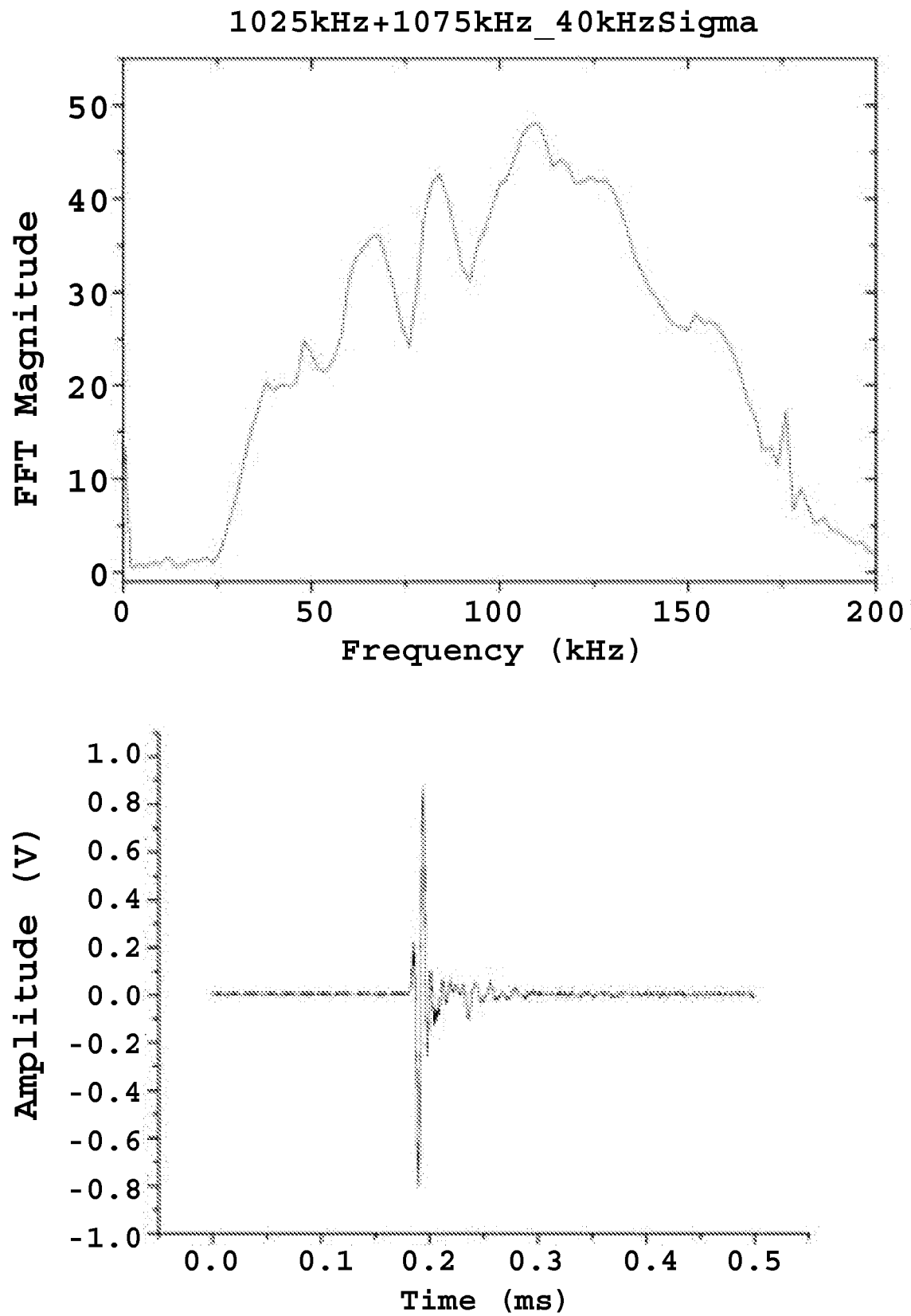


Figure 18

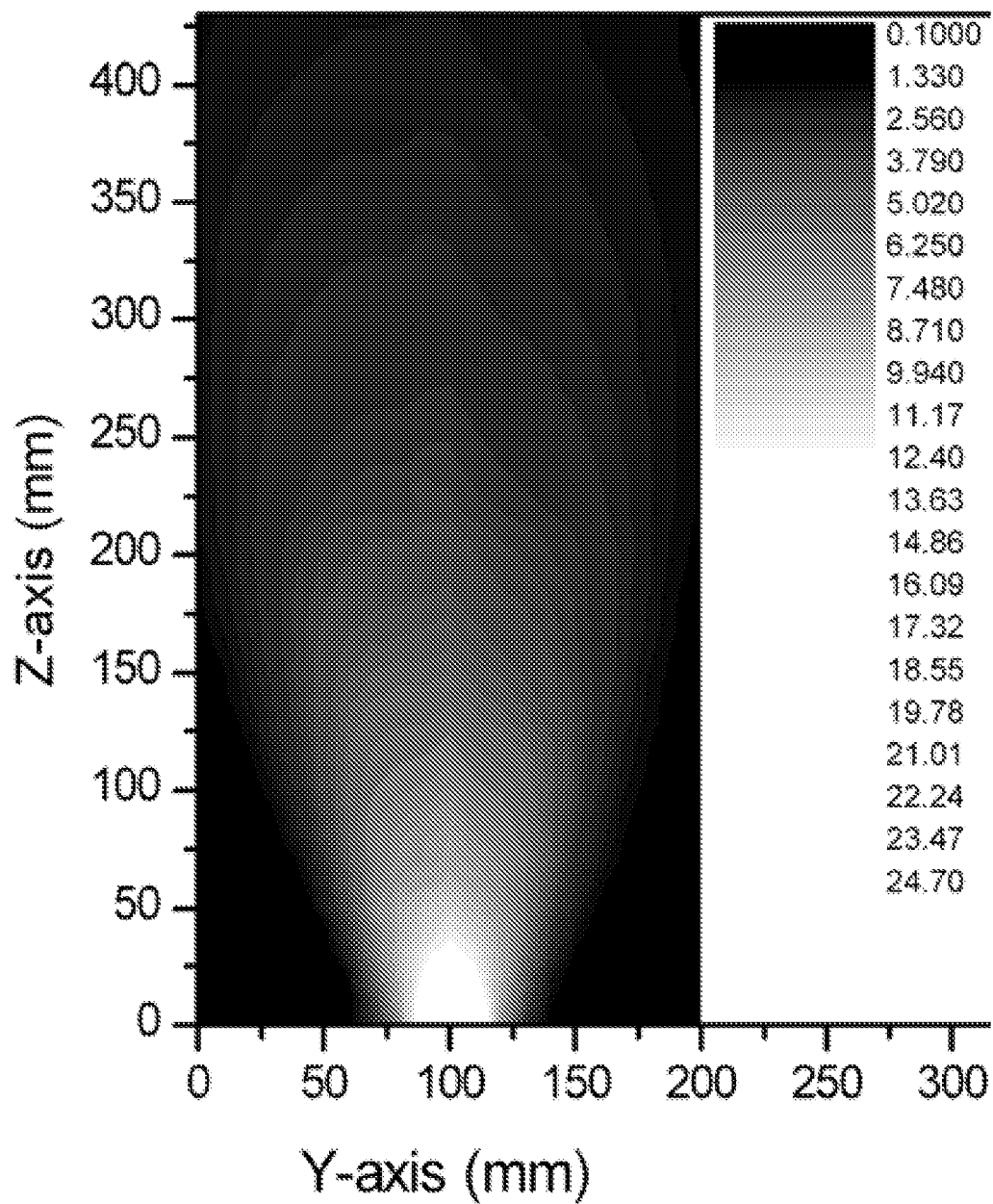


Figure 18 cont'd

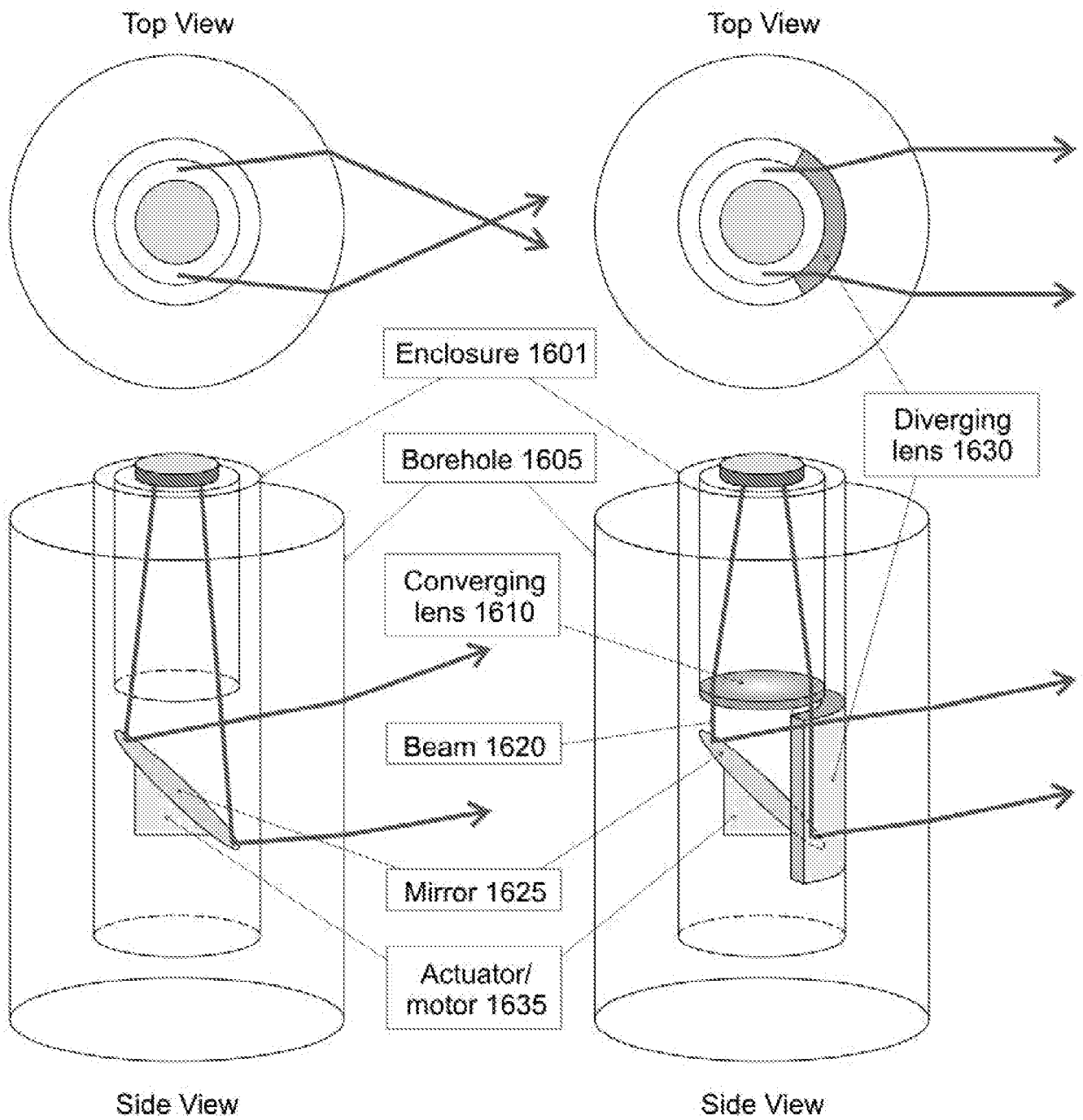


Figure 19a

Figure 19b

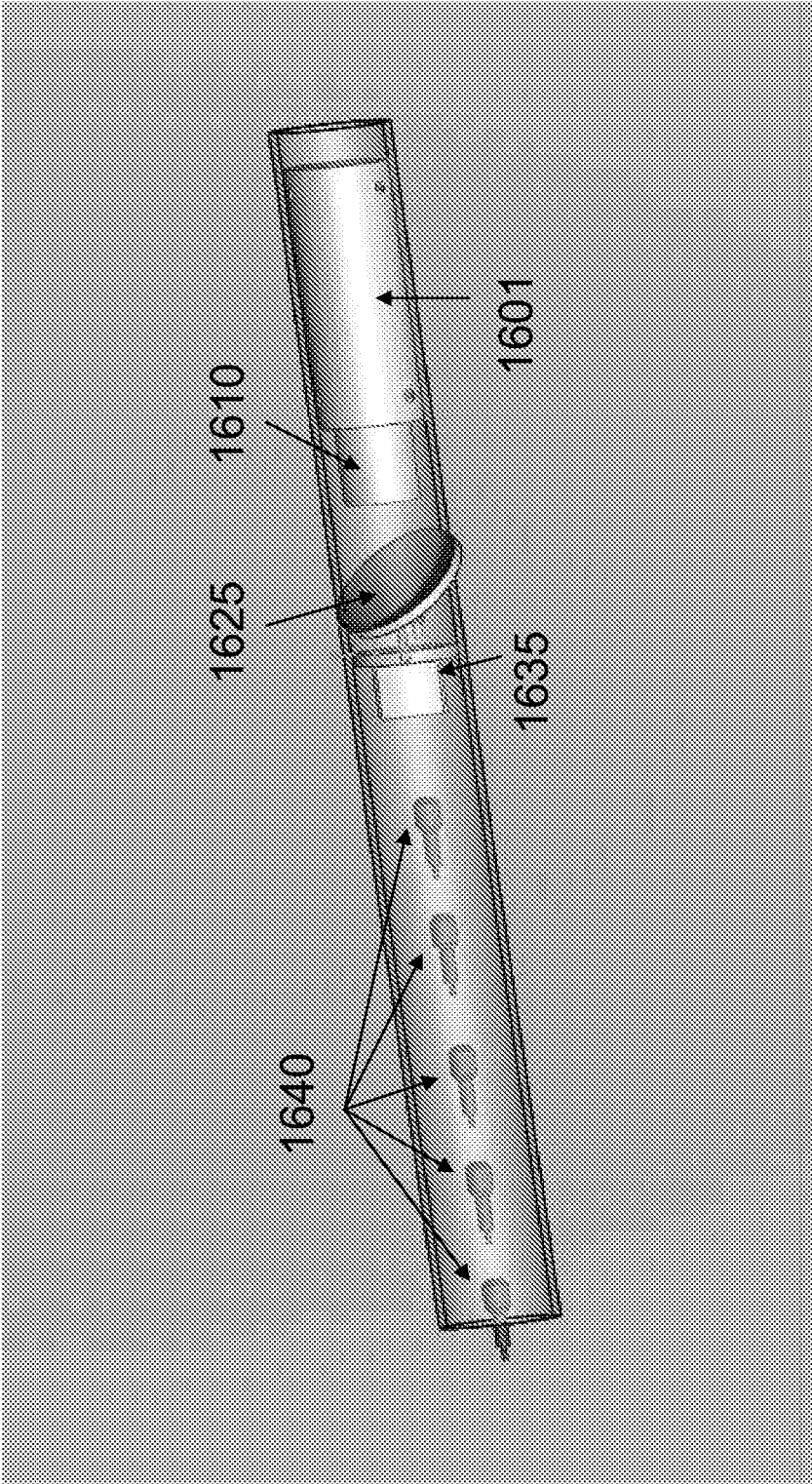
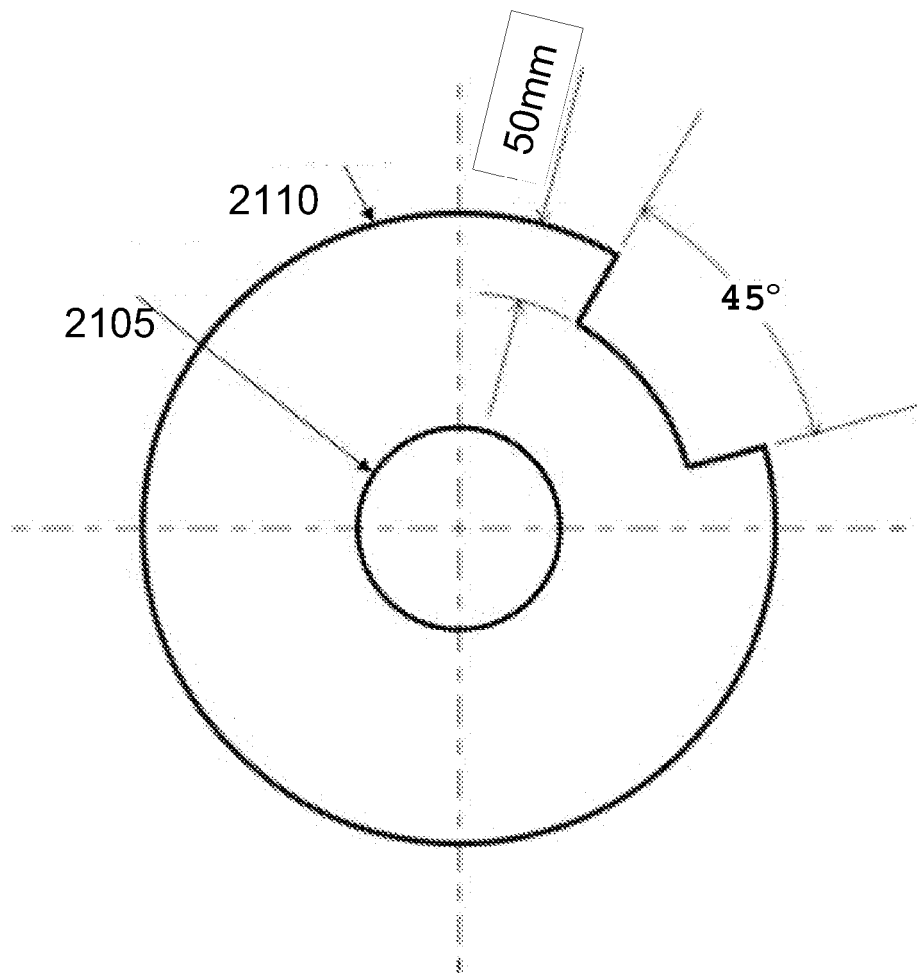


Figure 20



Plan view of proposed vertical cut in barrel

Figure 21a

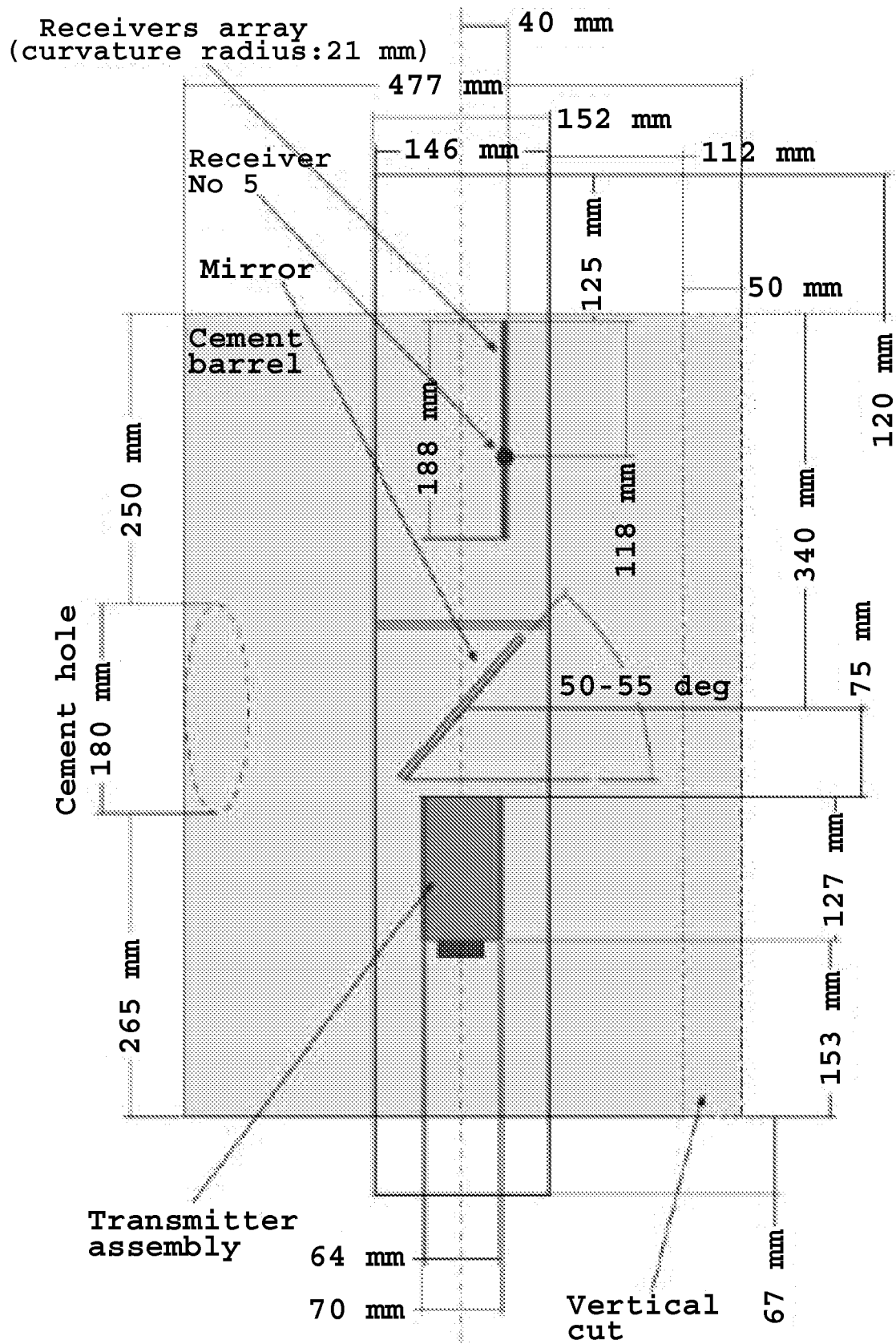


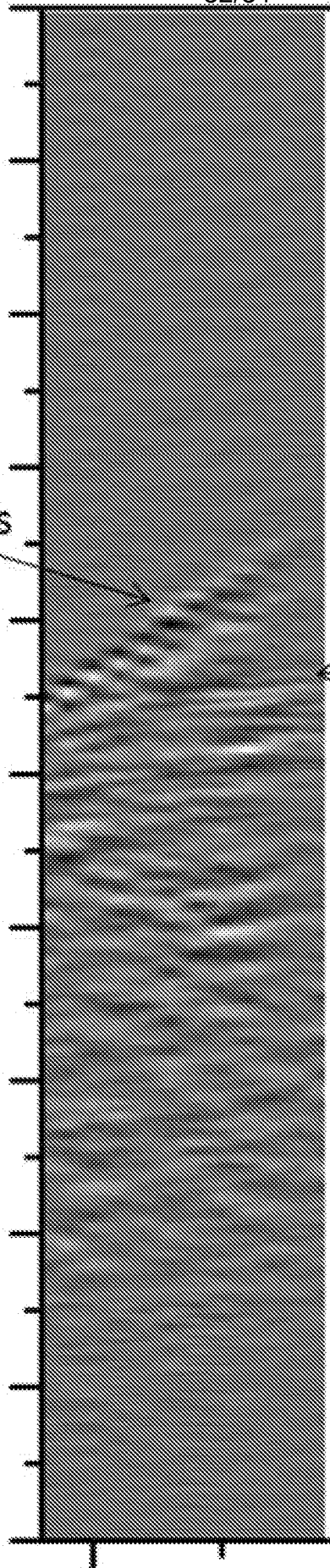
Figure 21b

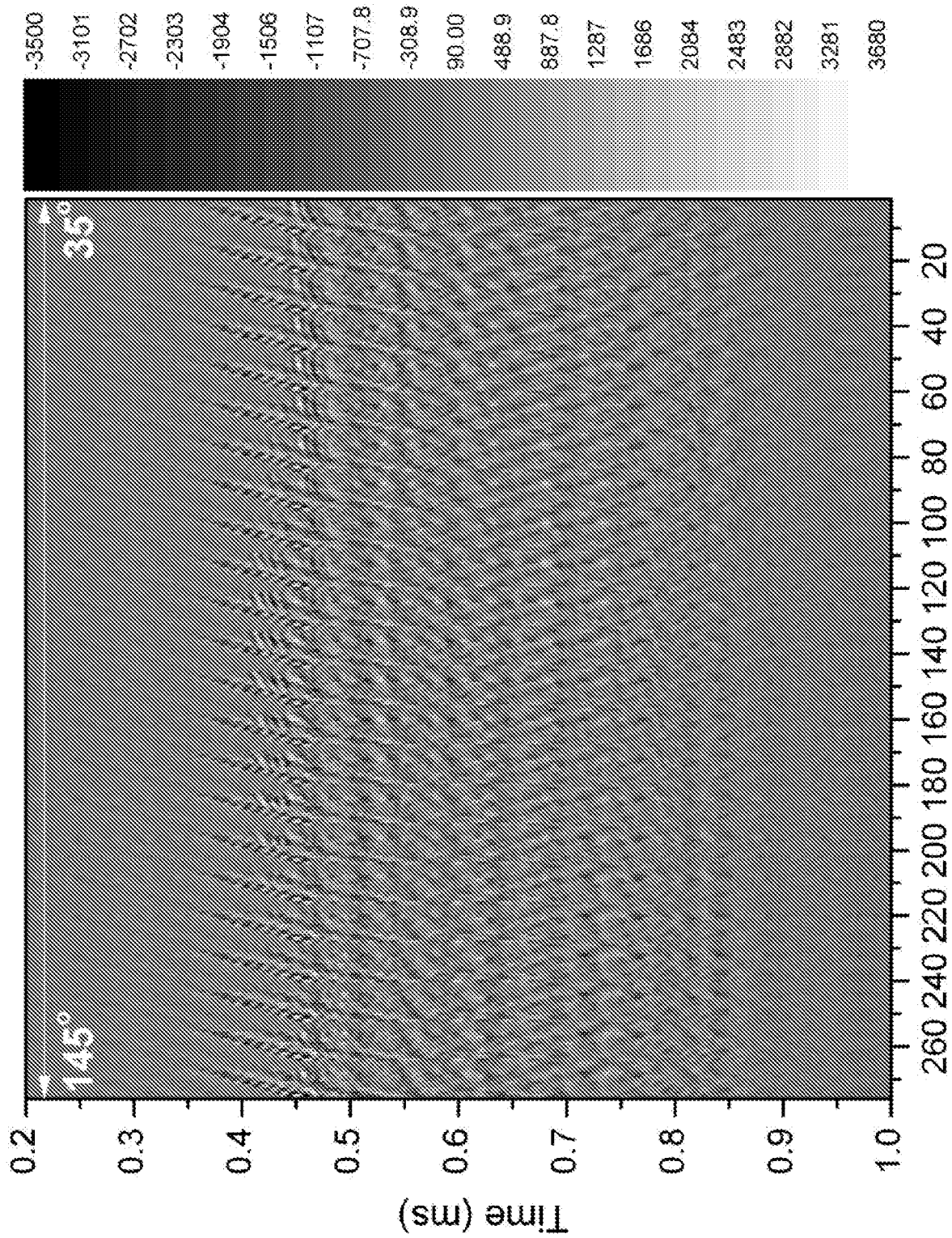
32/34

Linear Arrivals

Reflection Arrivals
from outer walls

Figure 22





Waveform No. **Figure 23**

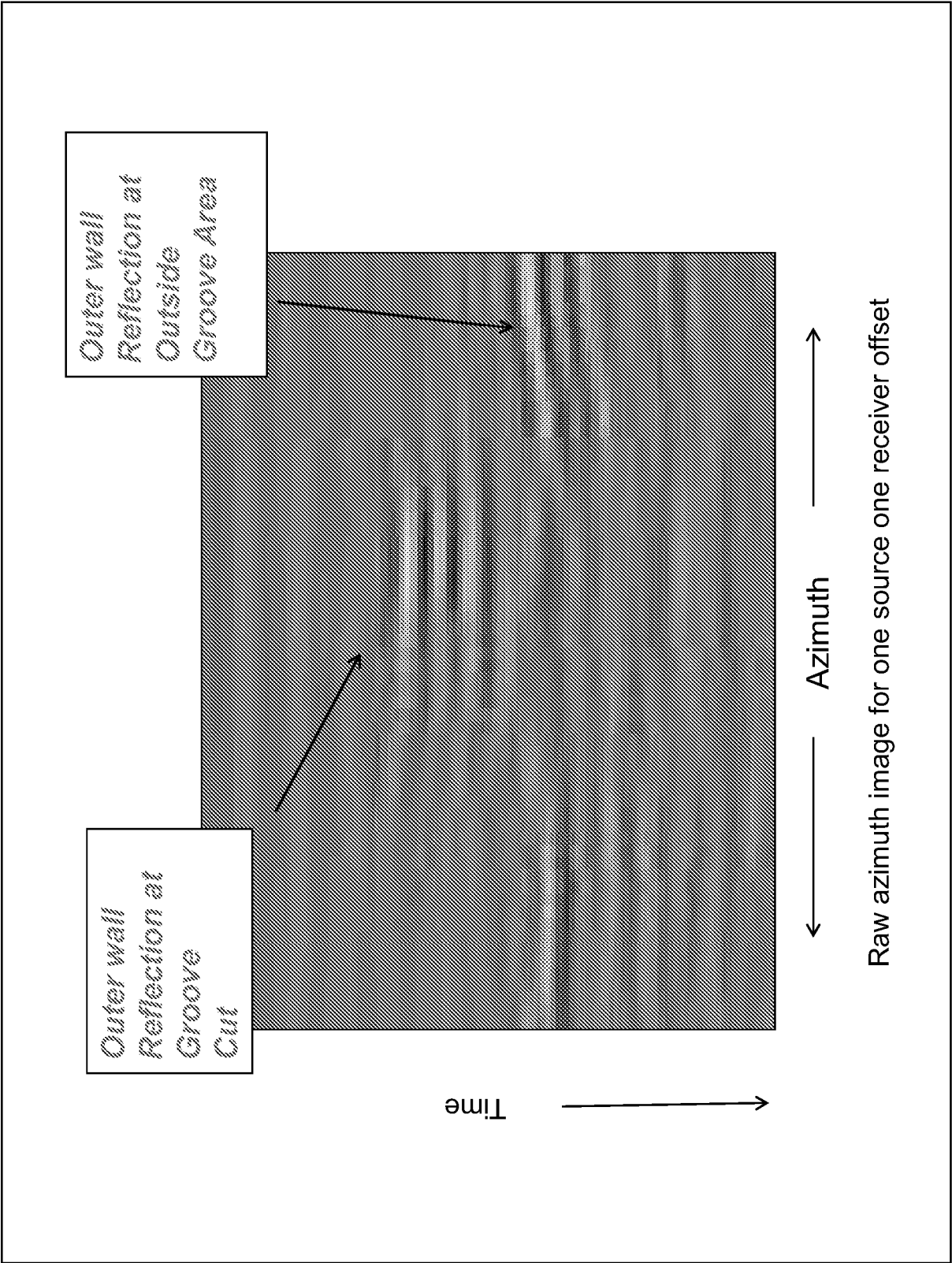


Figure 24