

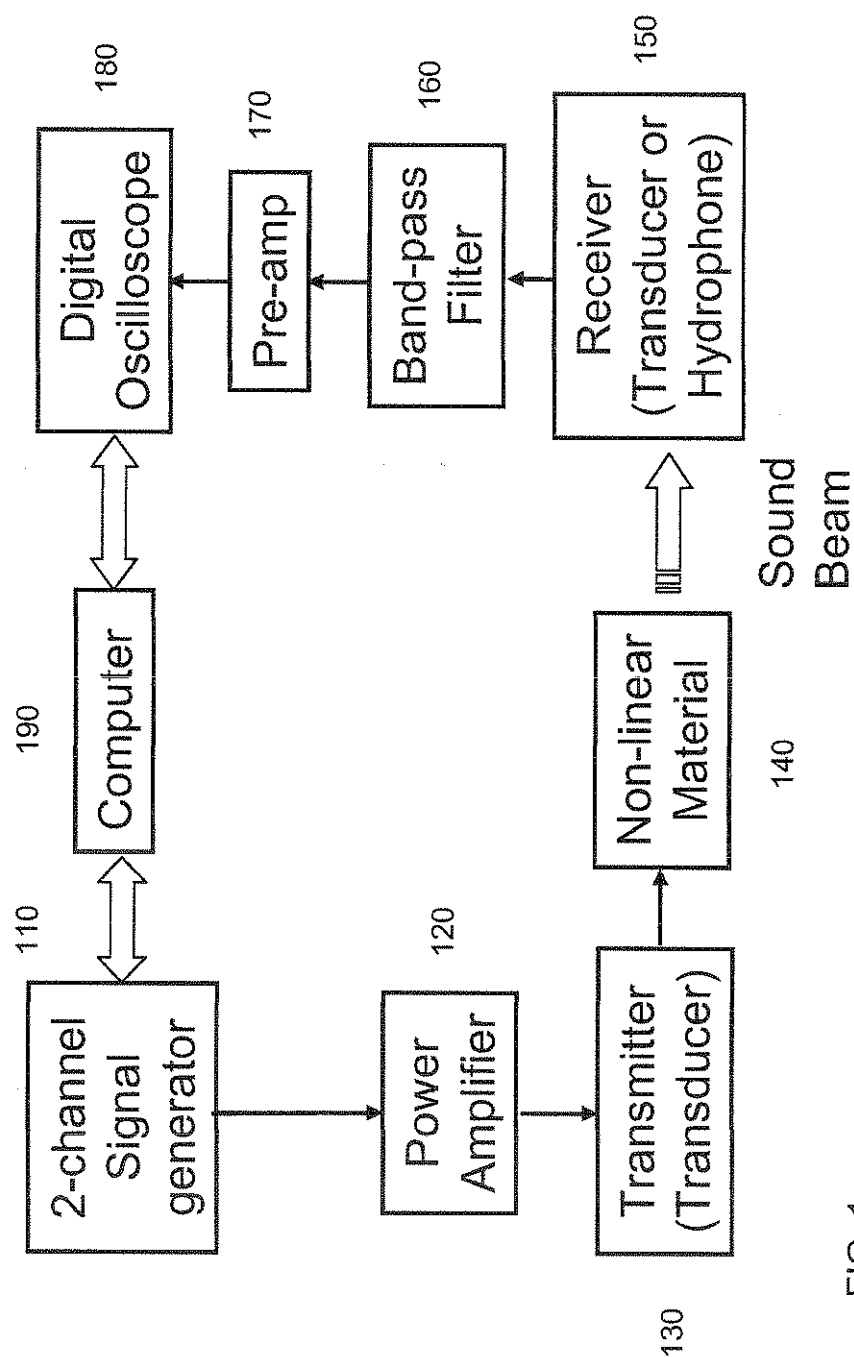


FIG. 1

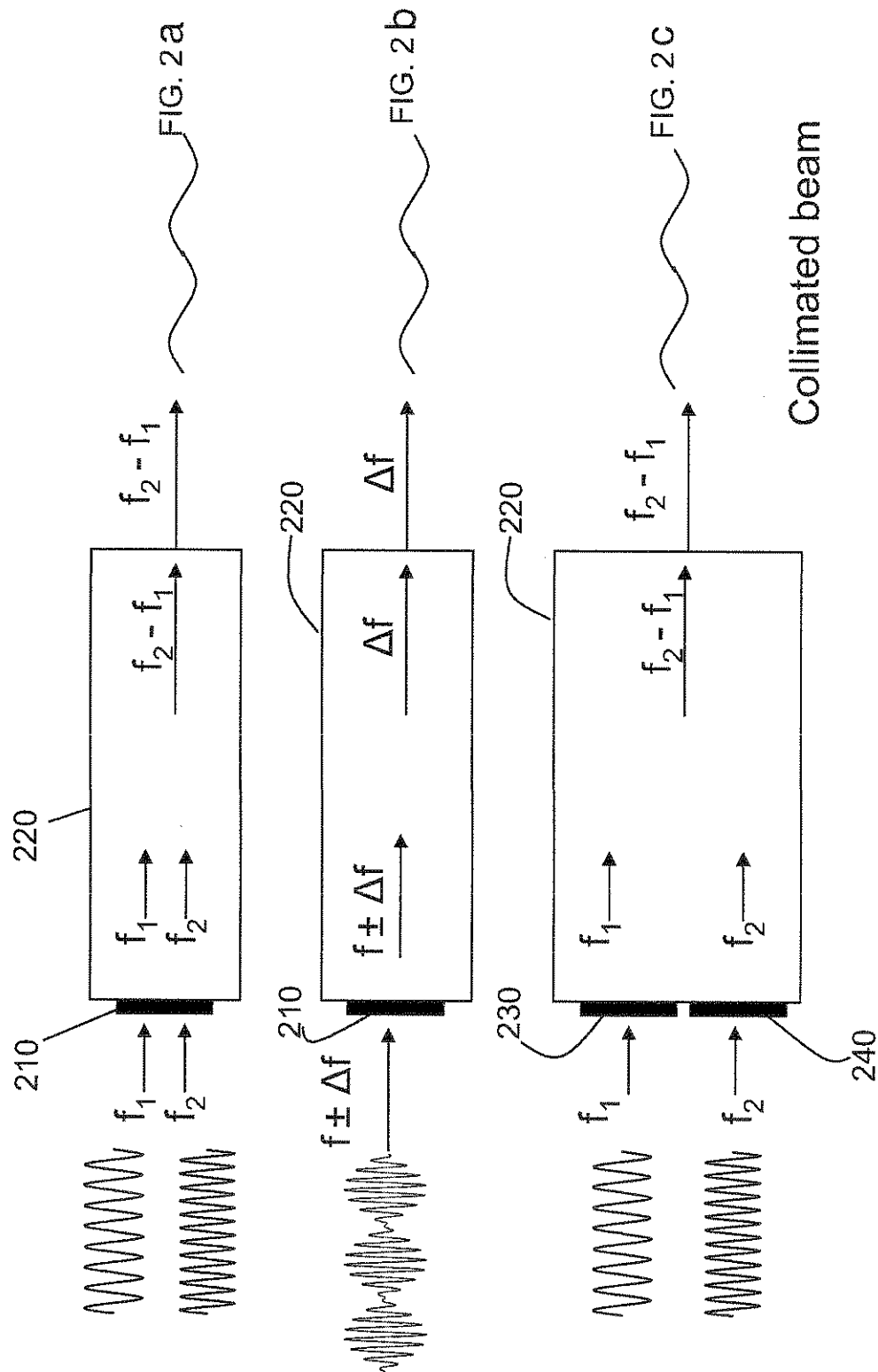
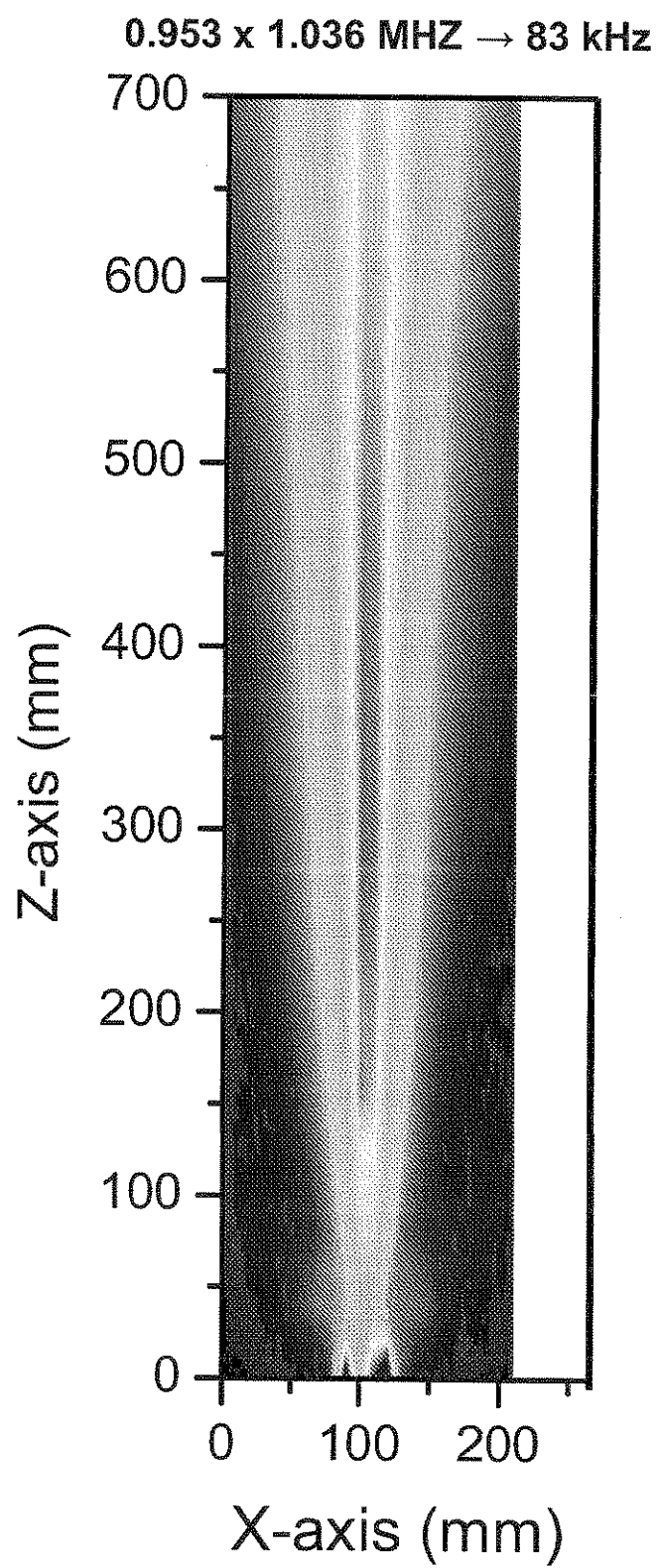
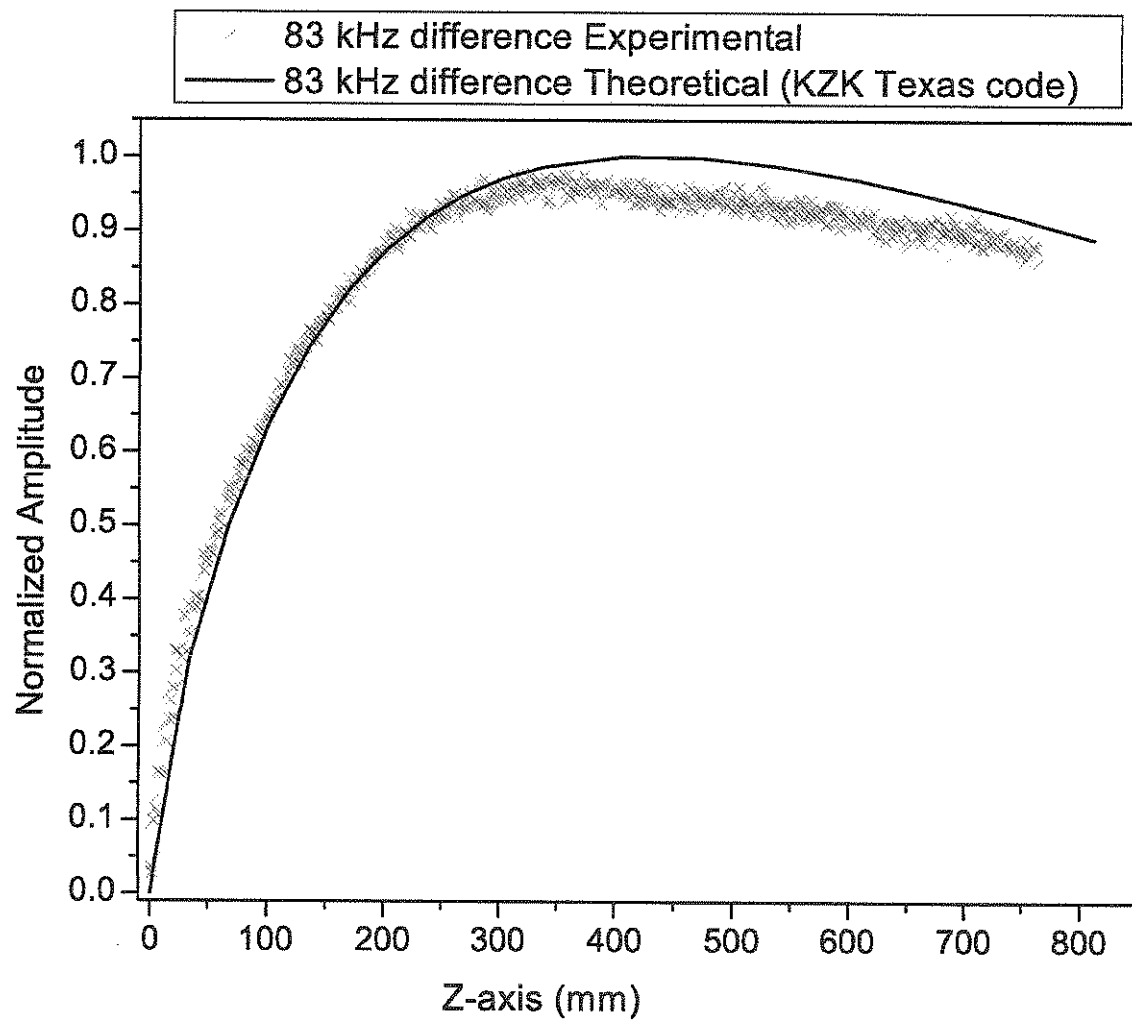


Fig. 3a



**Fig. 3B**

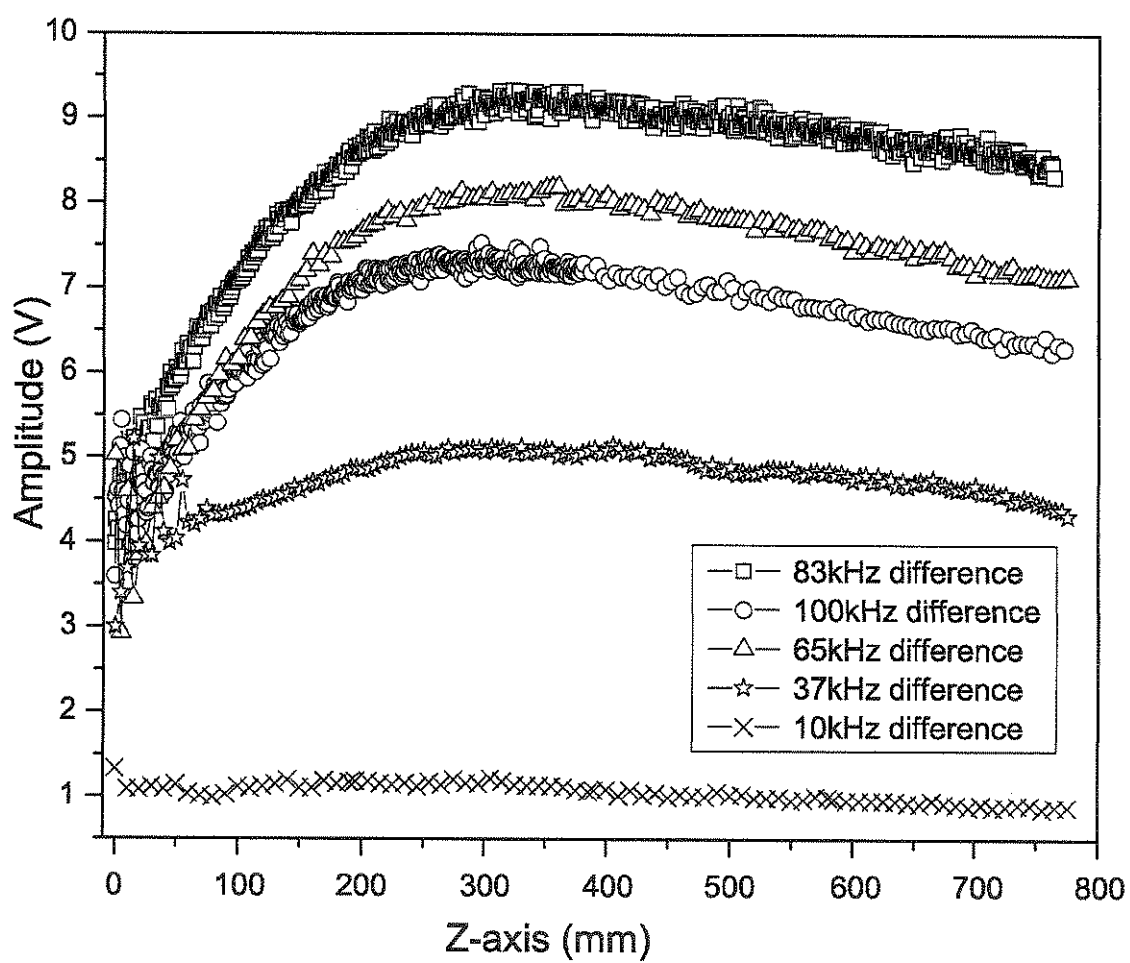


Fig. 4A

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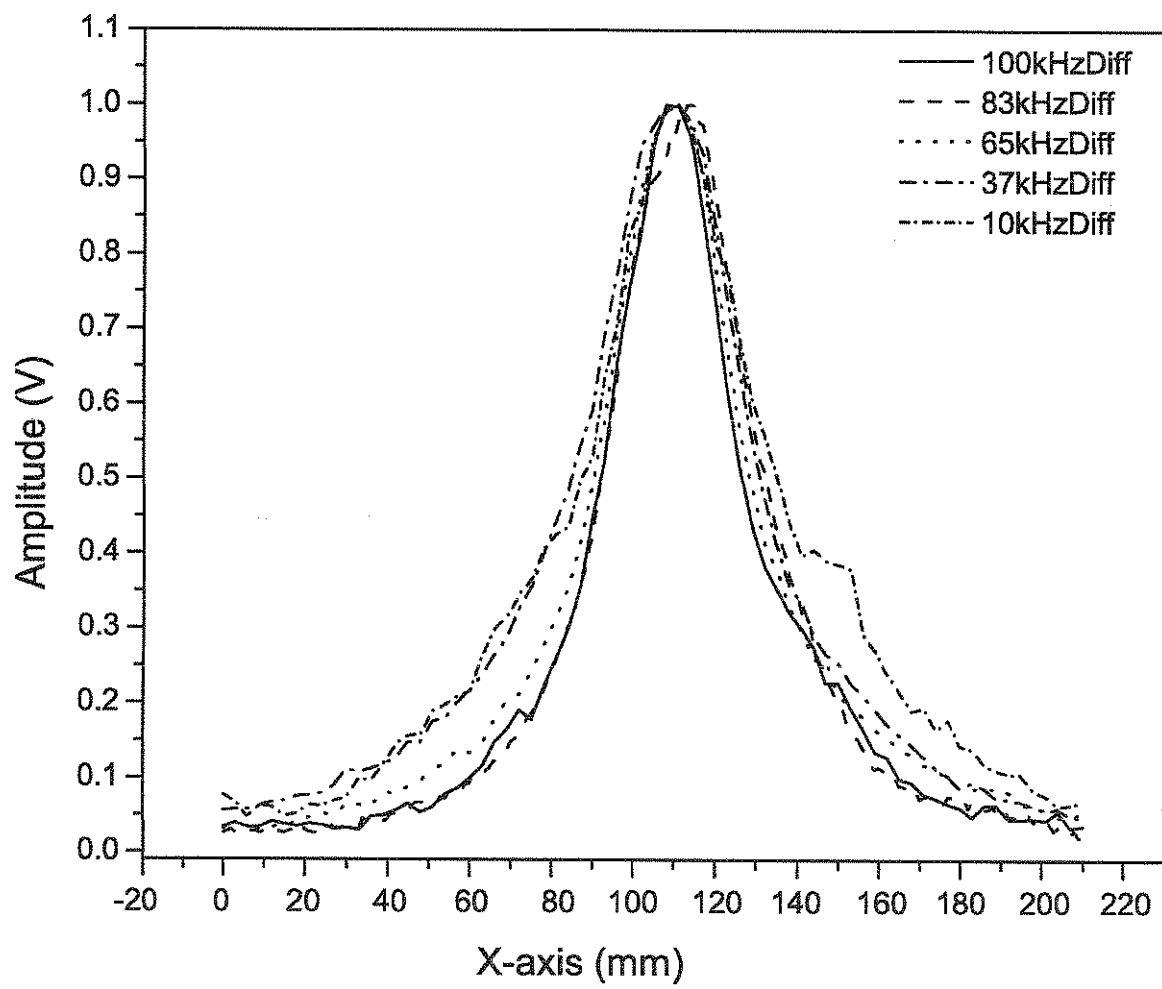
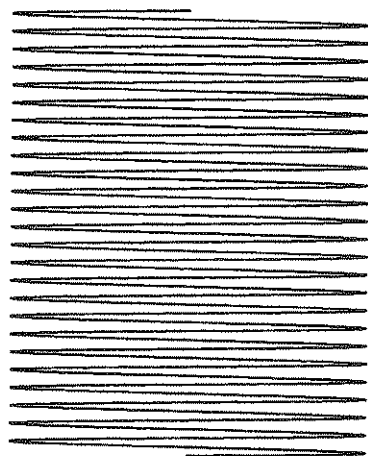


Fig. 4B

Fig. 5a

Single frequency burst



Frequency chirp (broadband)

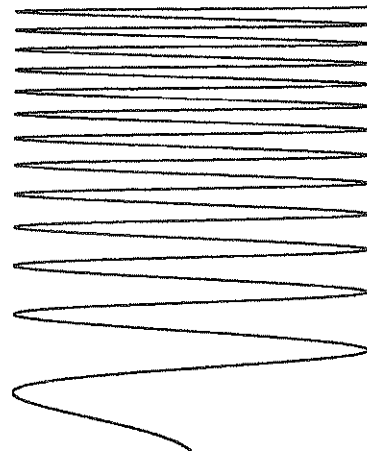


Fig. 5b

Combined signal to transducer

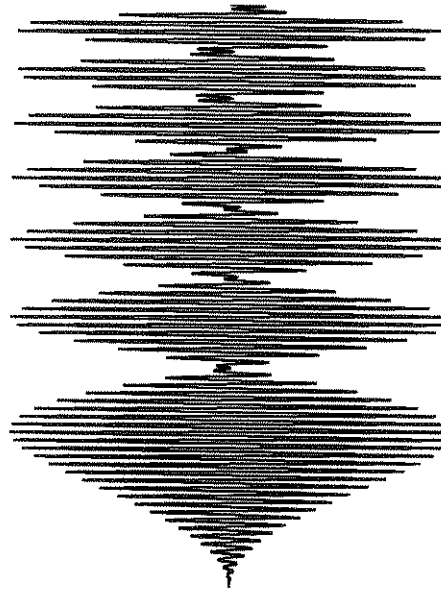
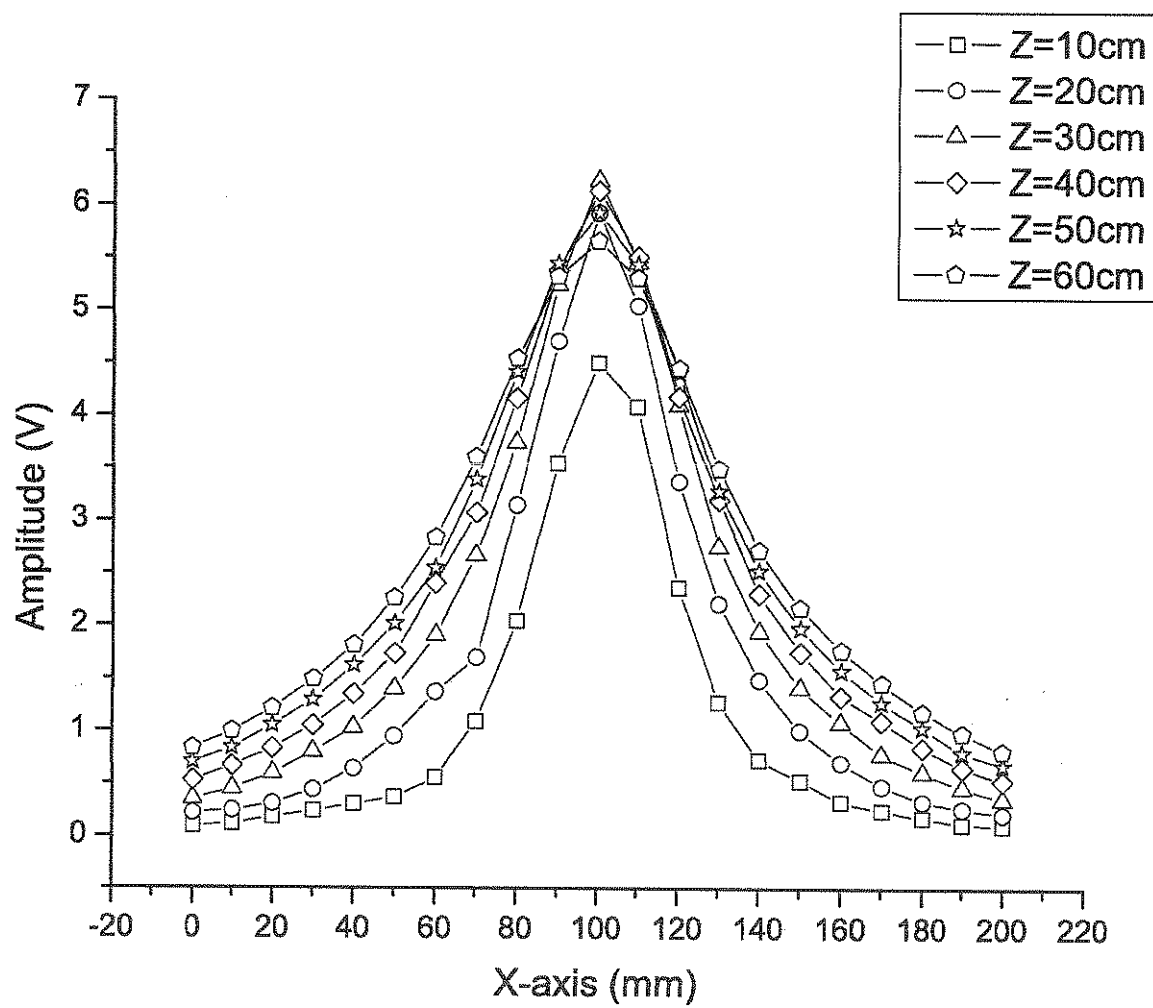
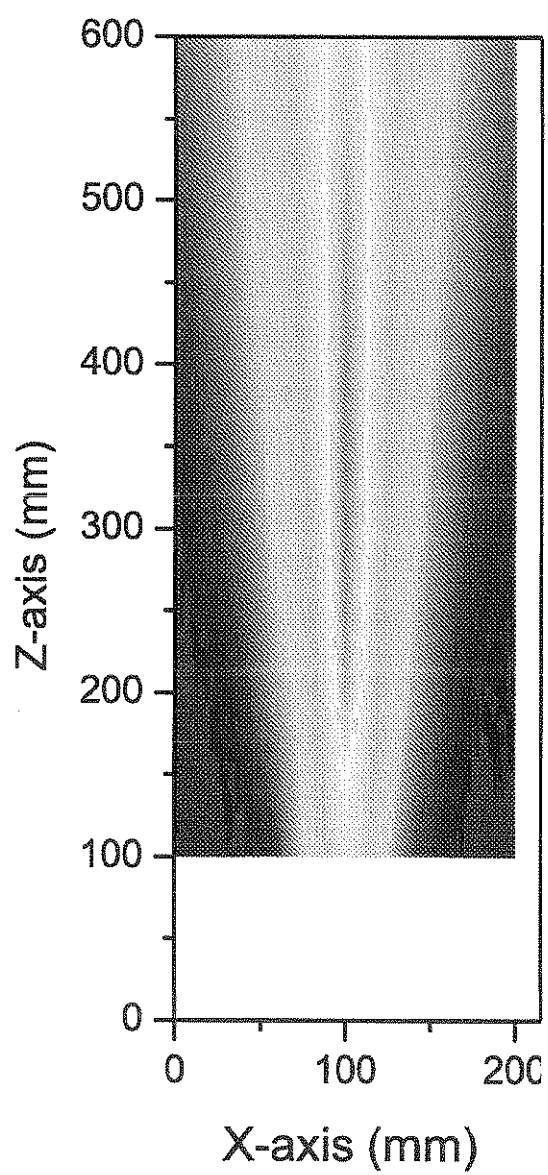


Fig. 6A



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Fig. 6B



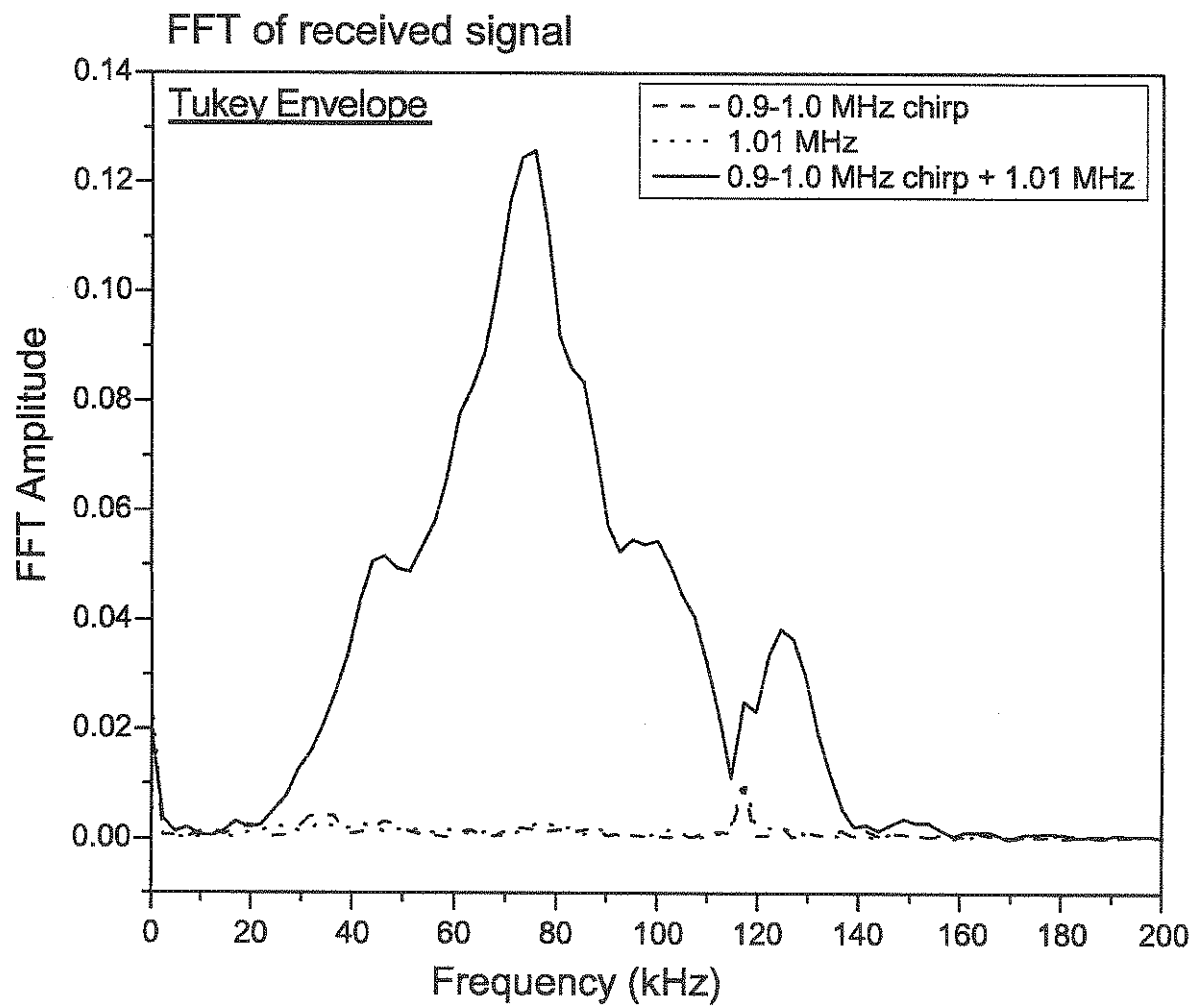
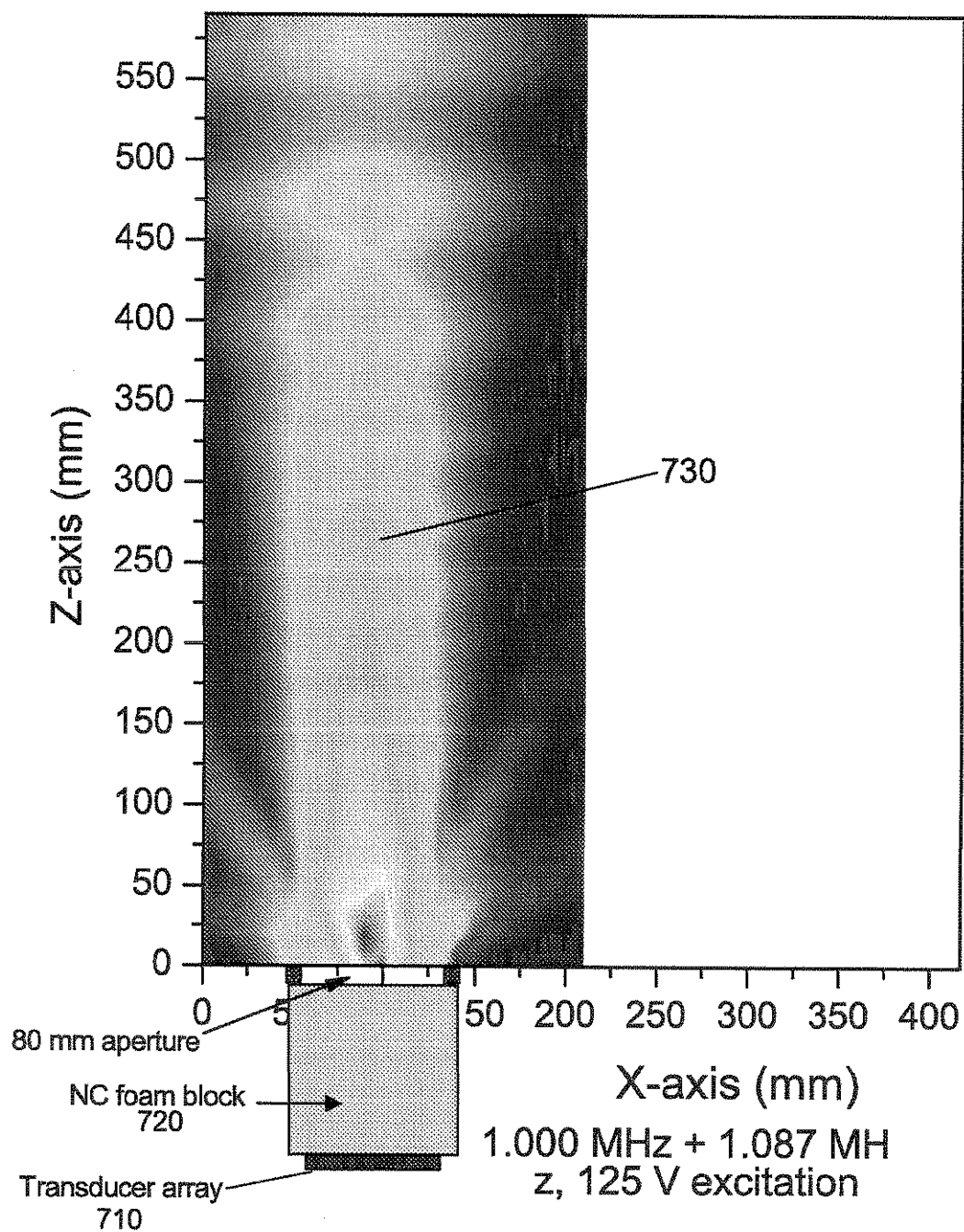


Fig. 6C

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Fig. 7A



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Fig. 7B
Difference signal

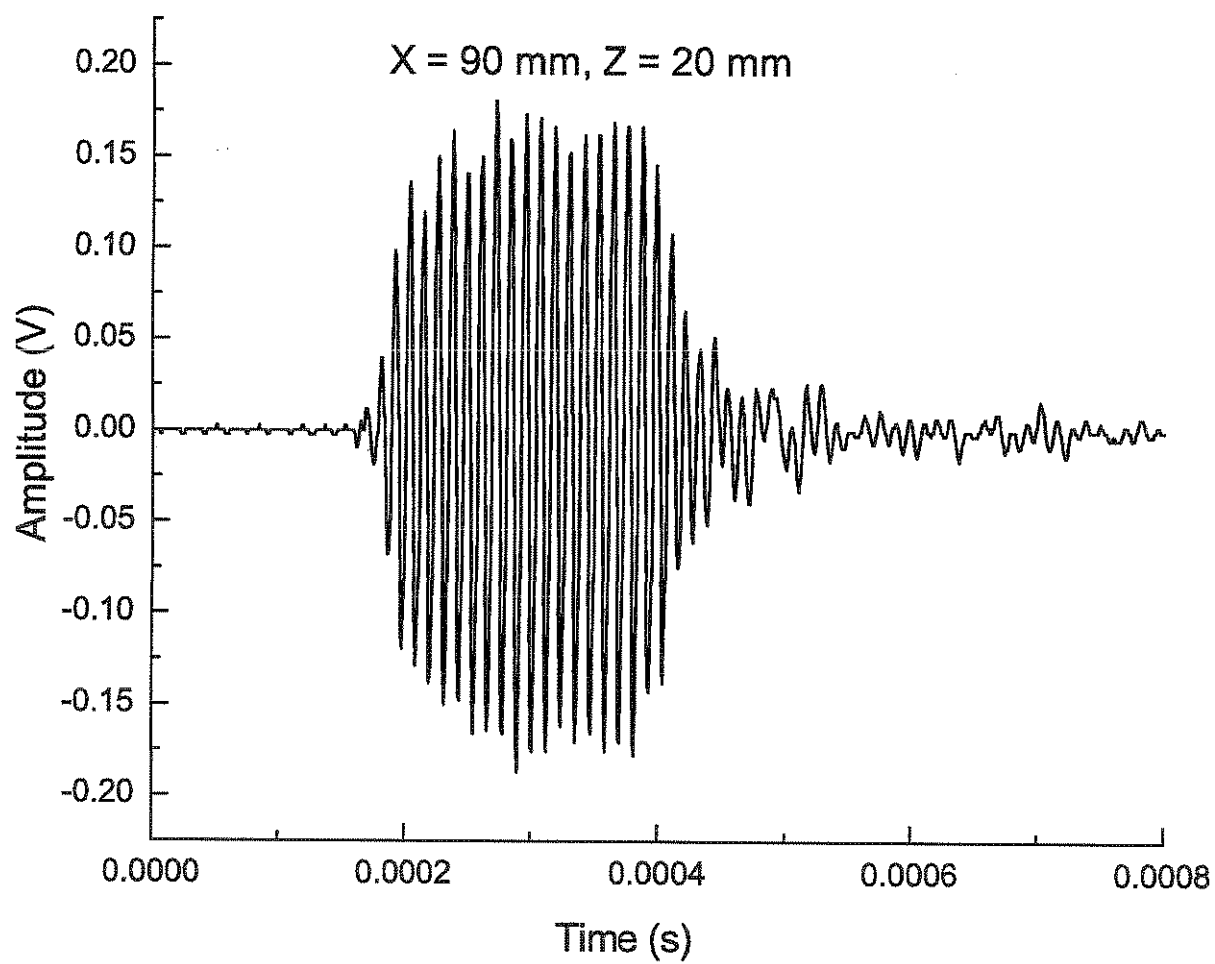
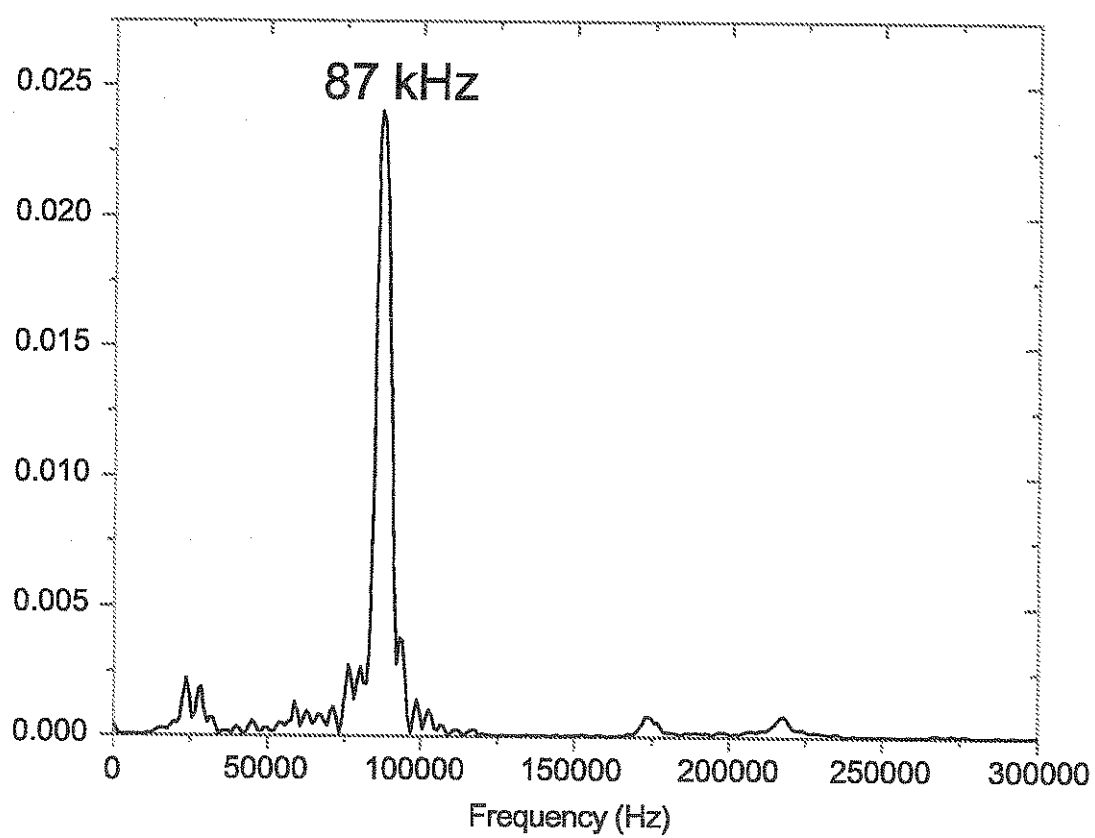


Fig. 7C
FFT of difference signal



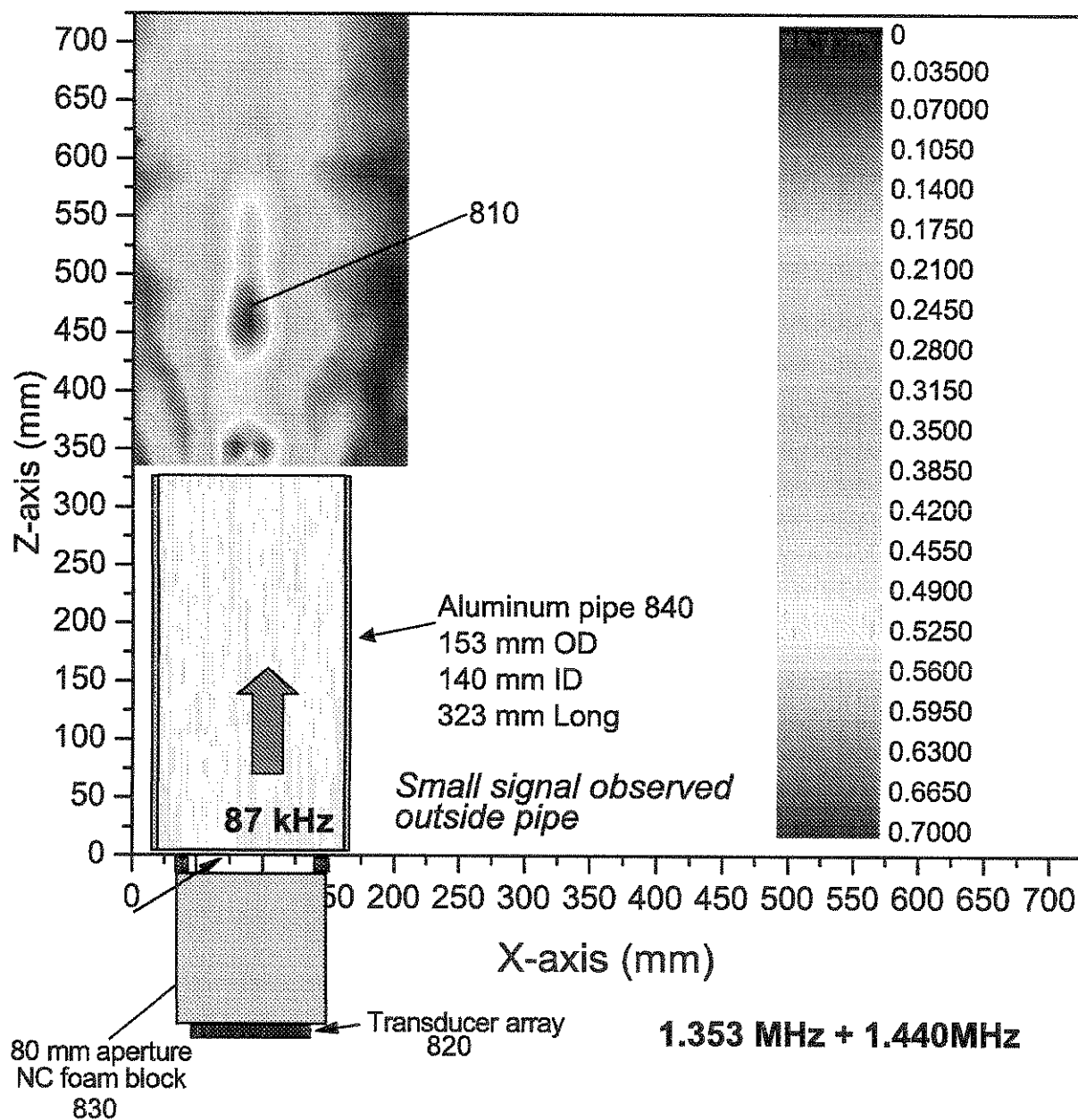
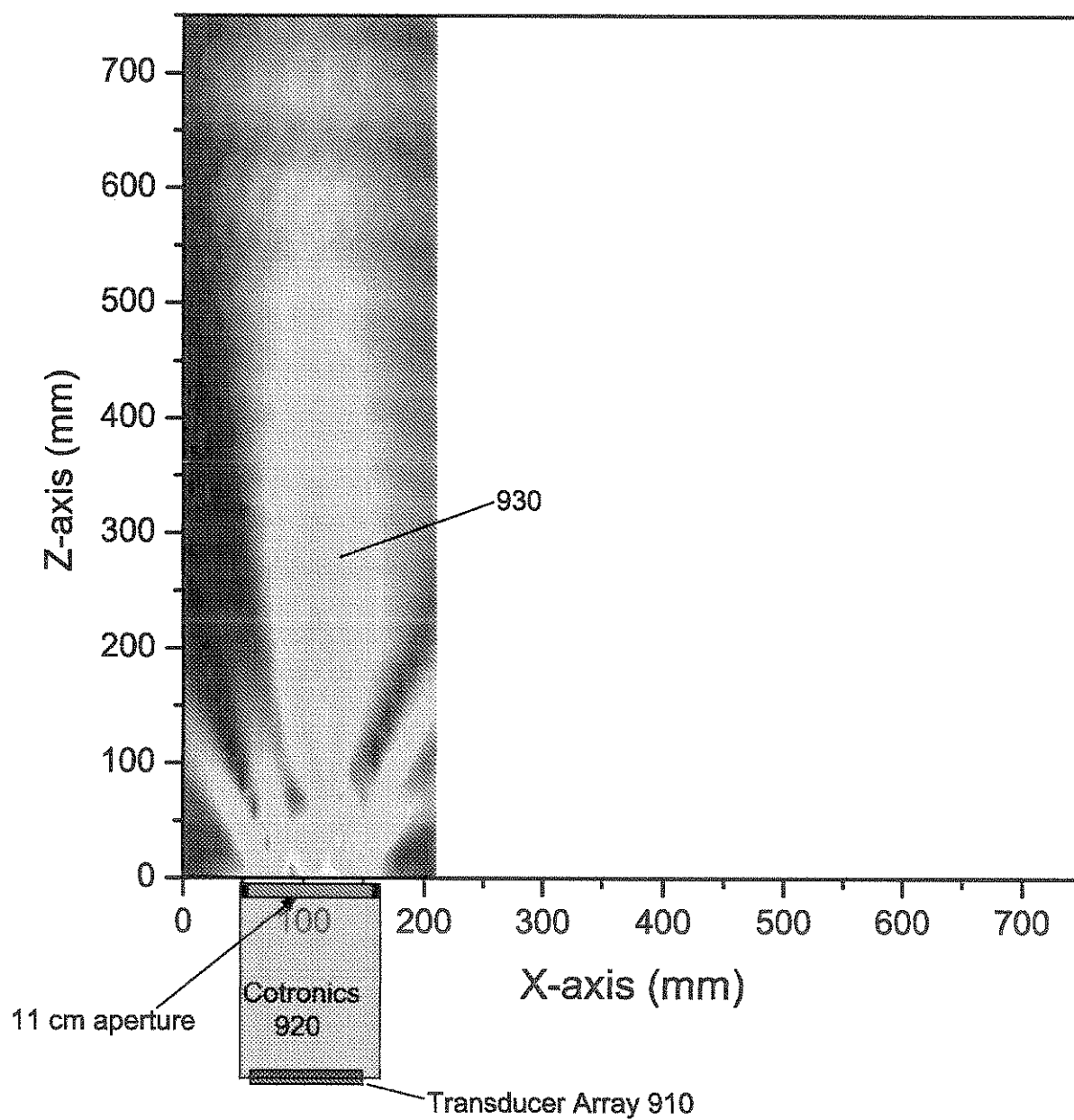
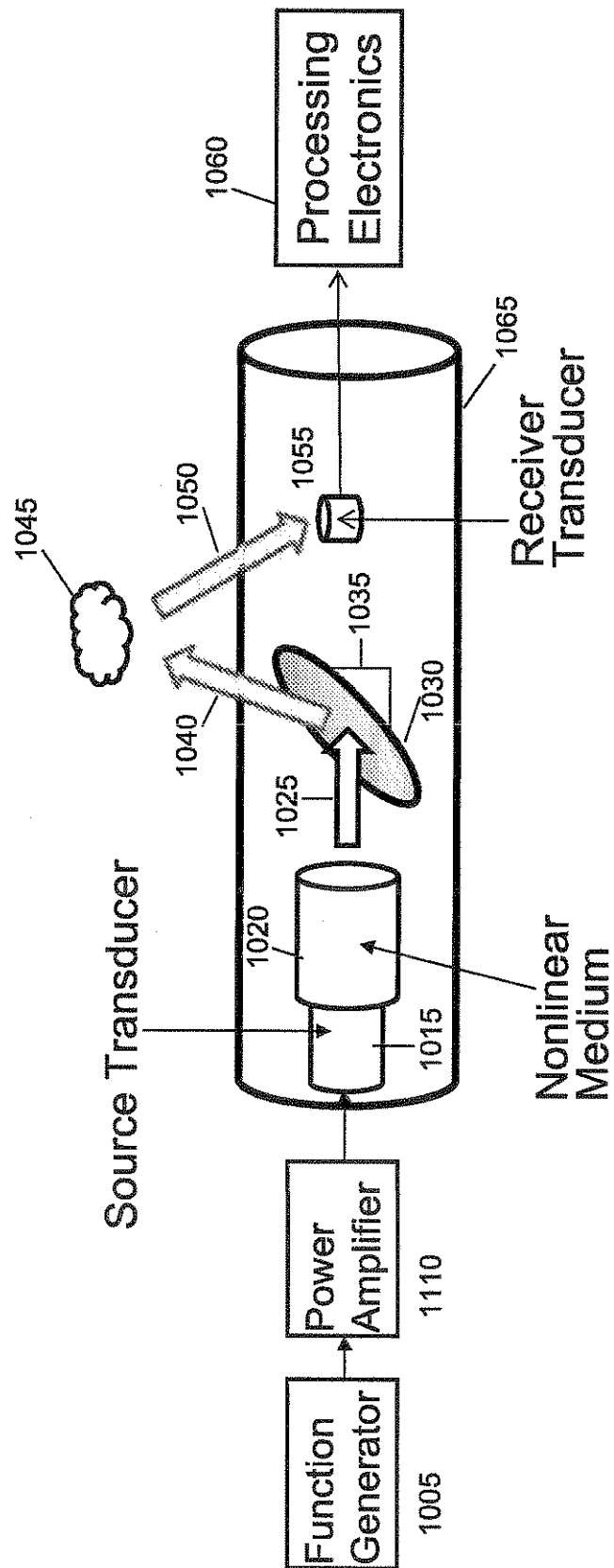


Fig. 8

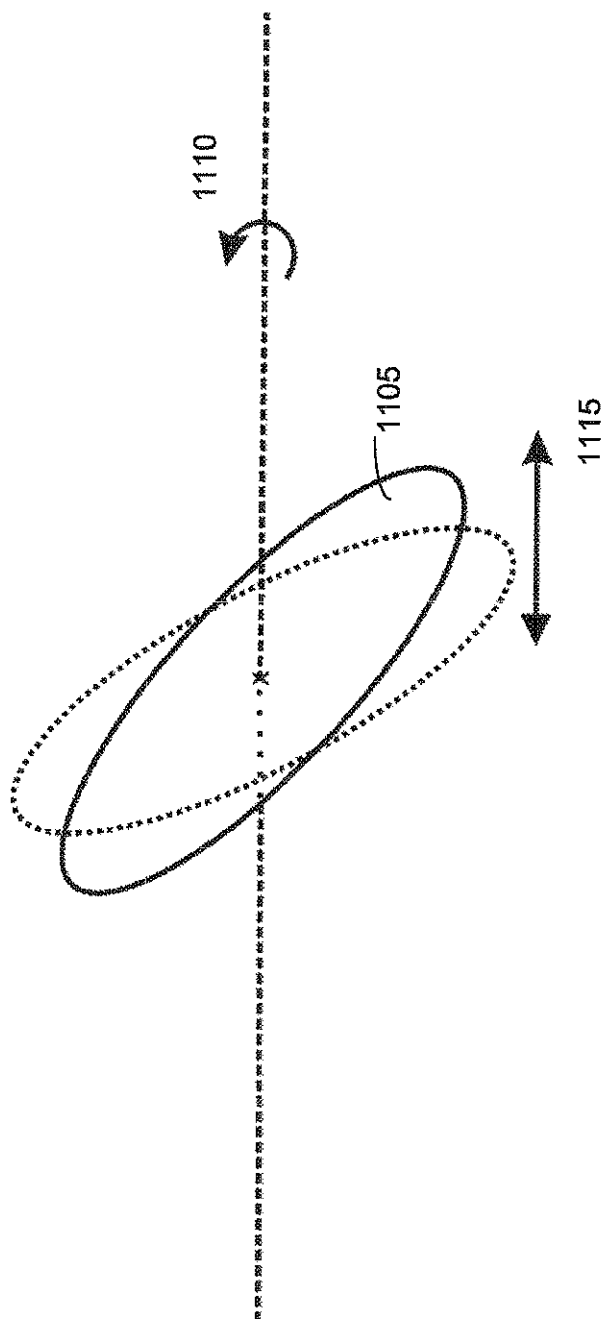
Fig. 9





10
11
12

Fig. 11



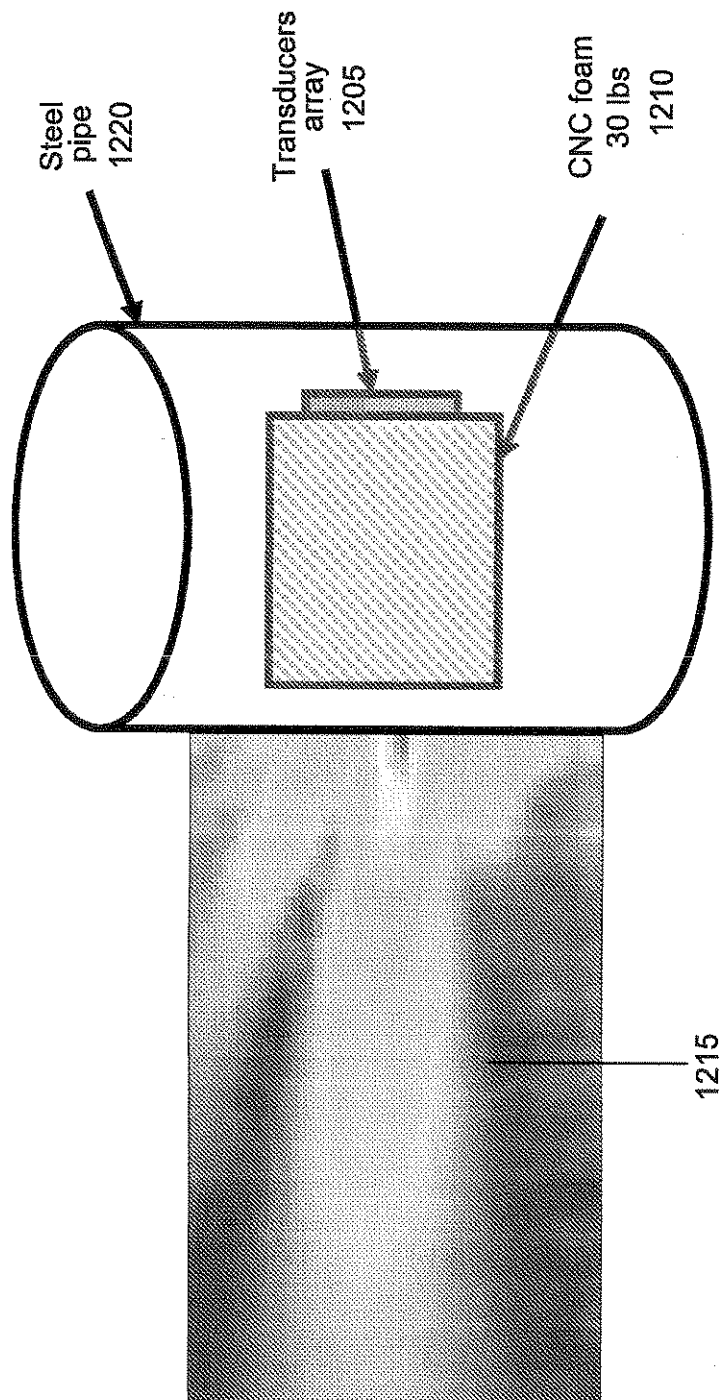


Fig. 12

Fig. 13B

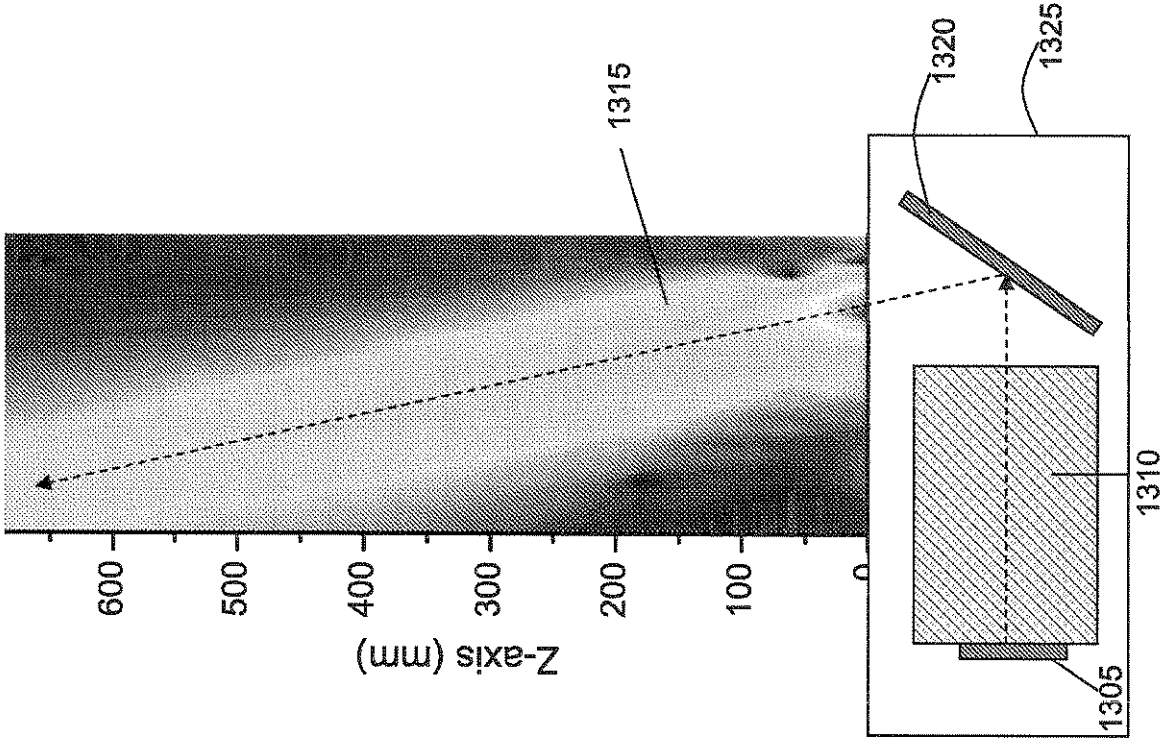


Fig. 13A

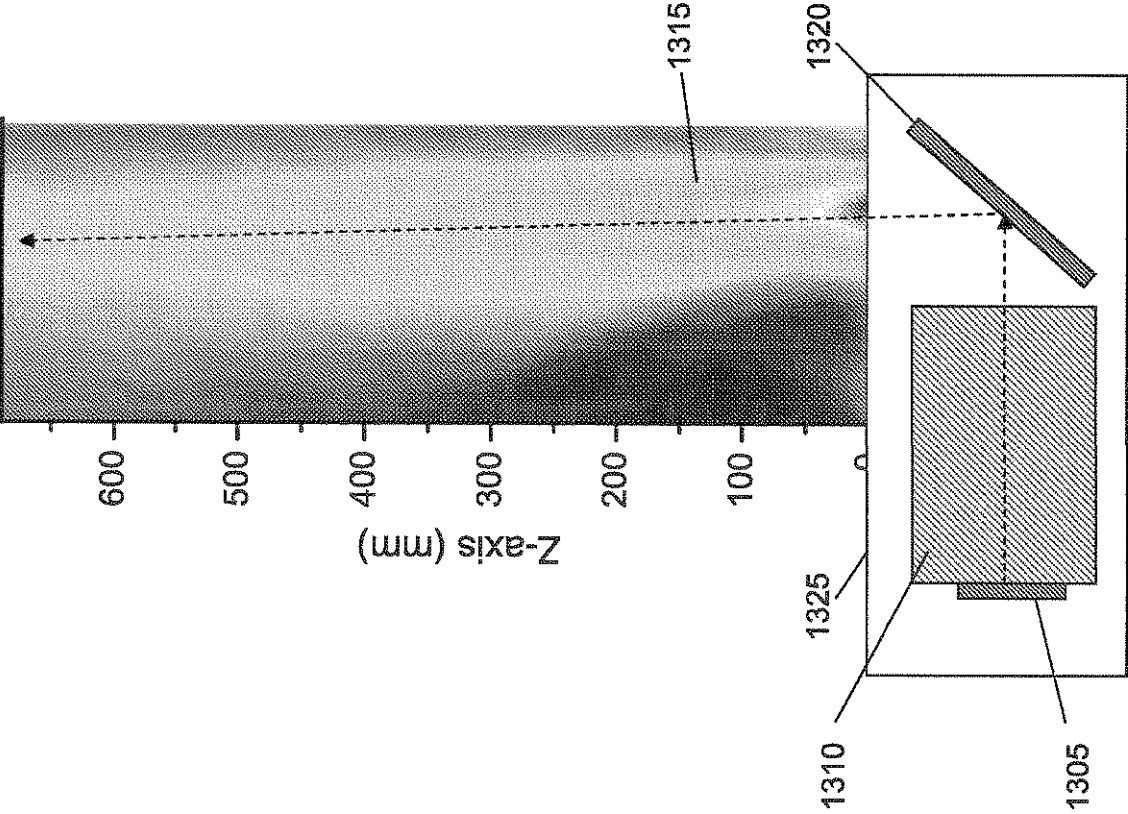
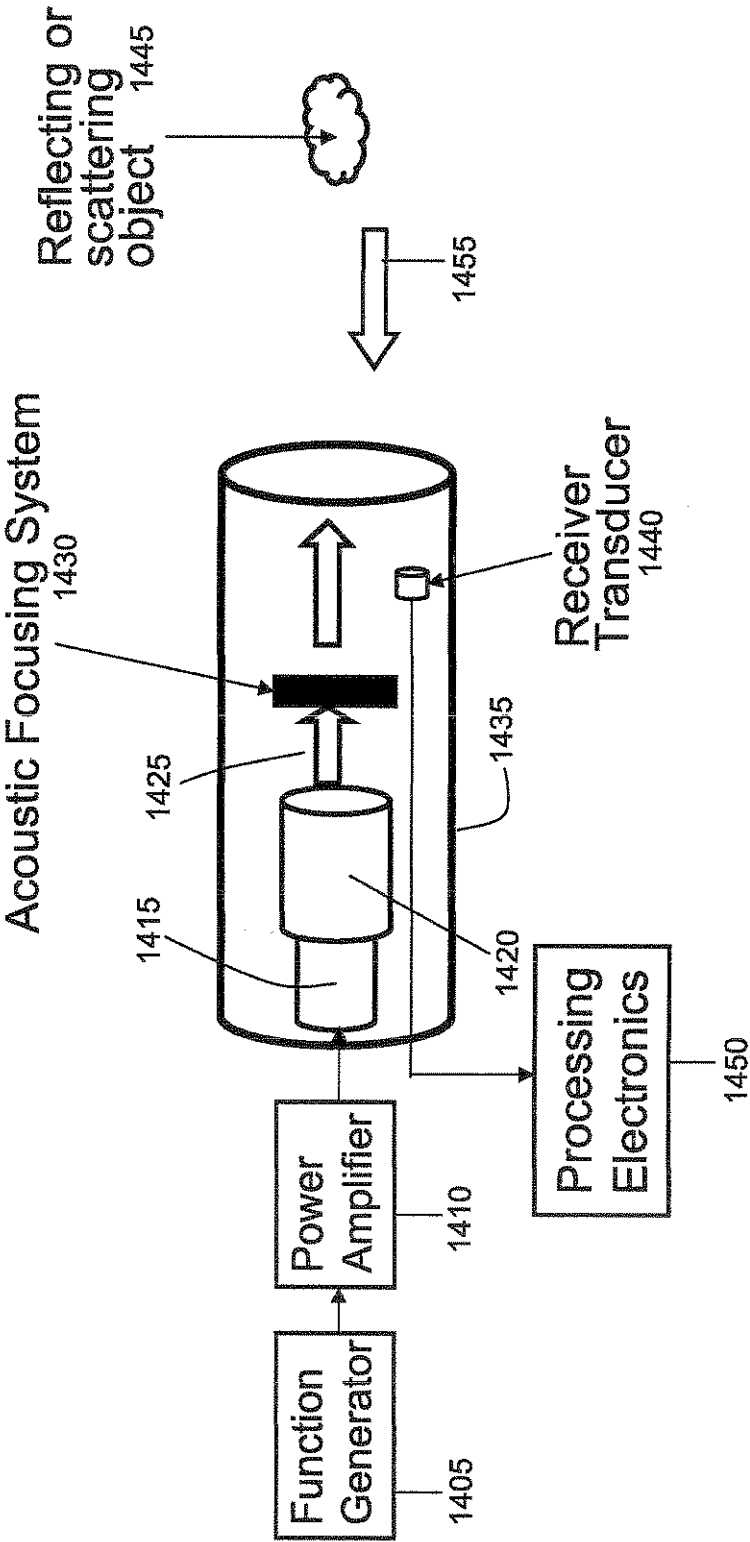


Fig. 14



Imaging of Object Outside Pipe

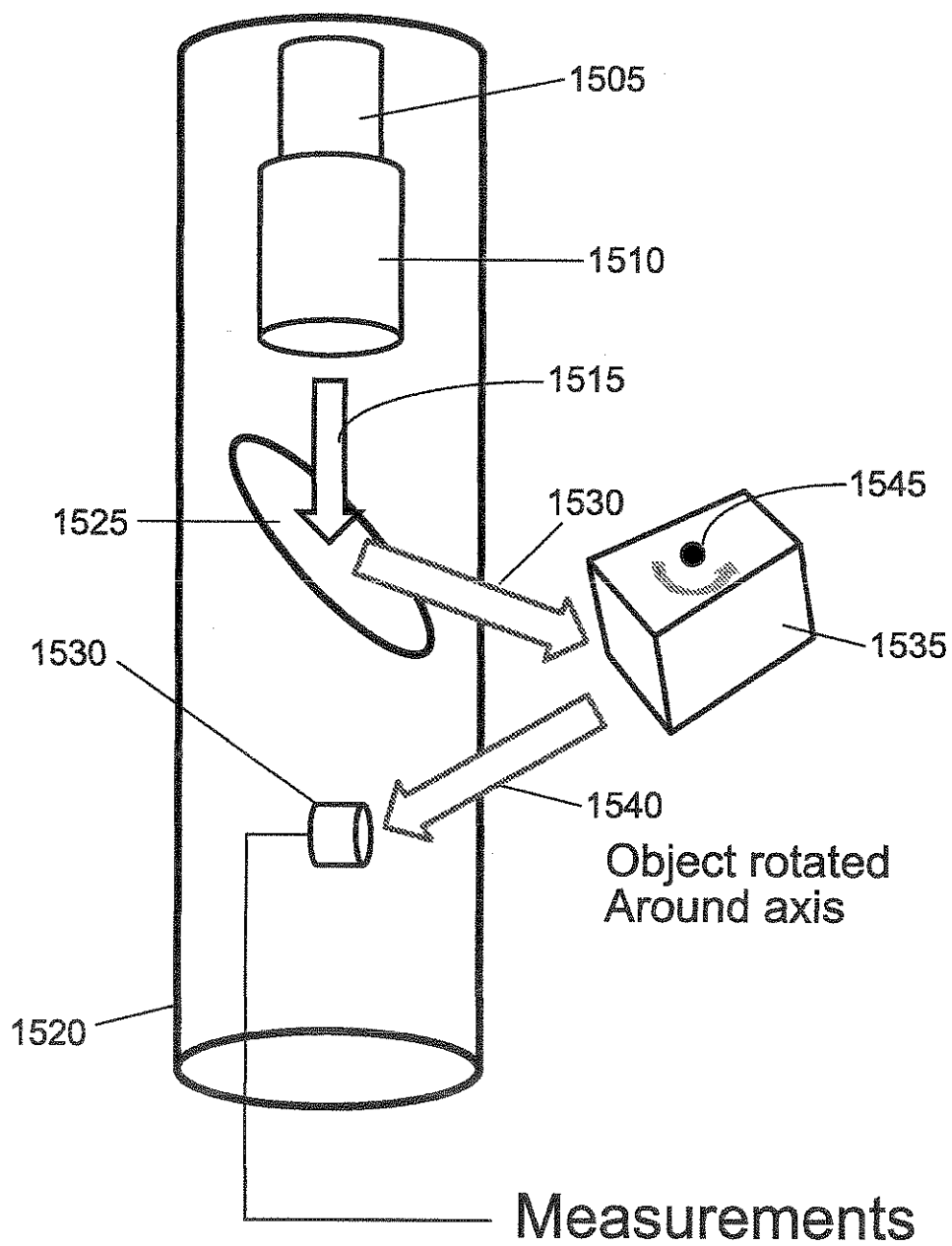
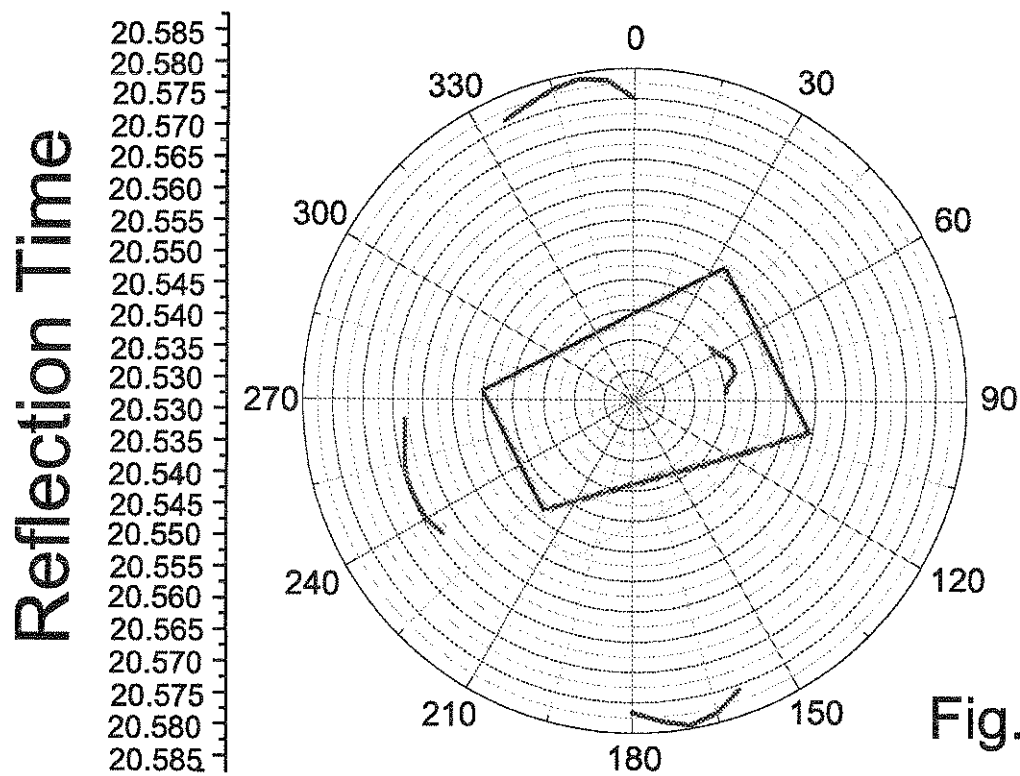
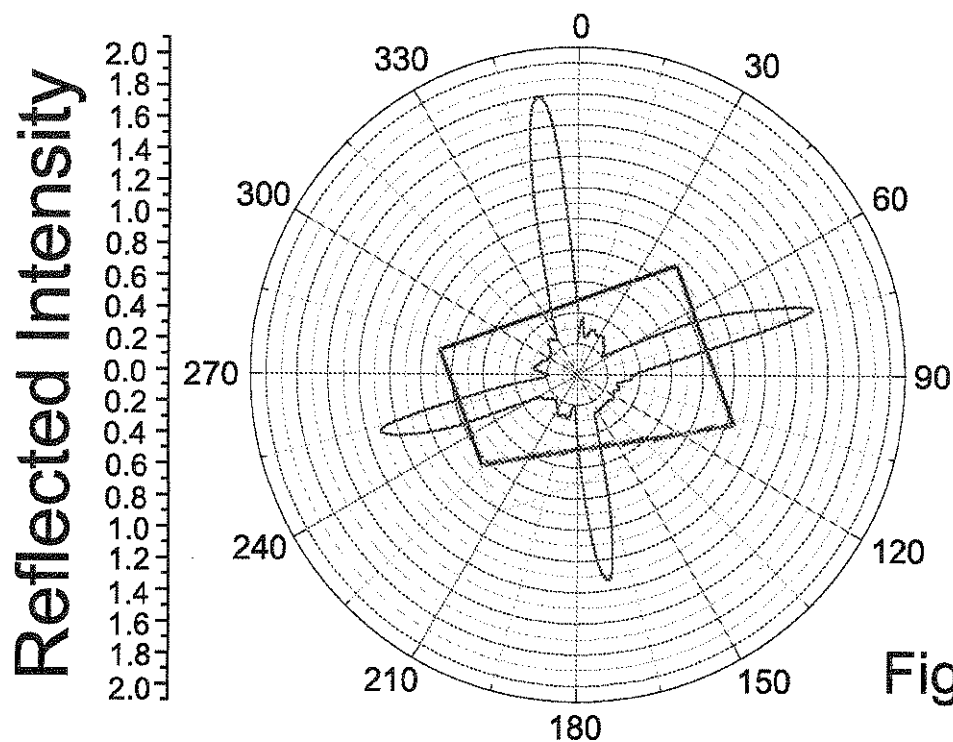


Fig. 15A



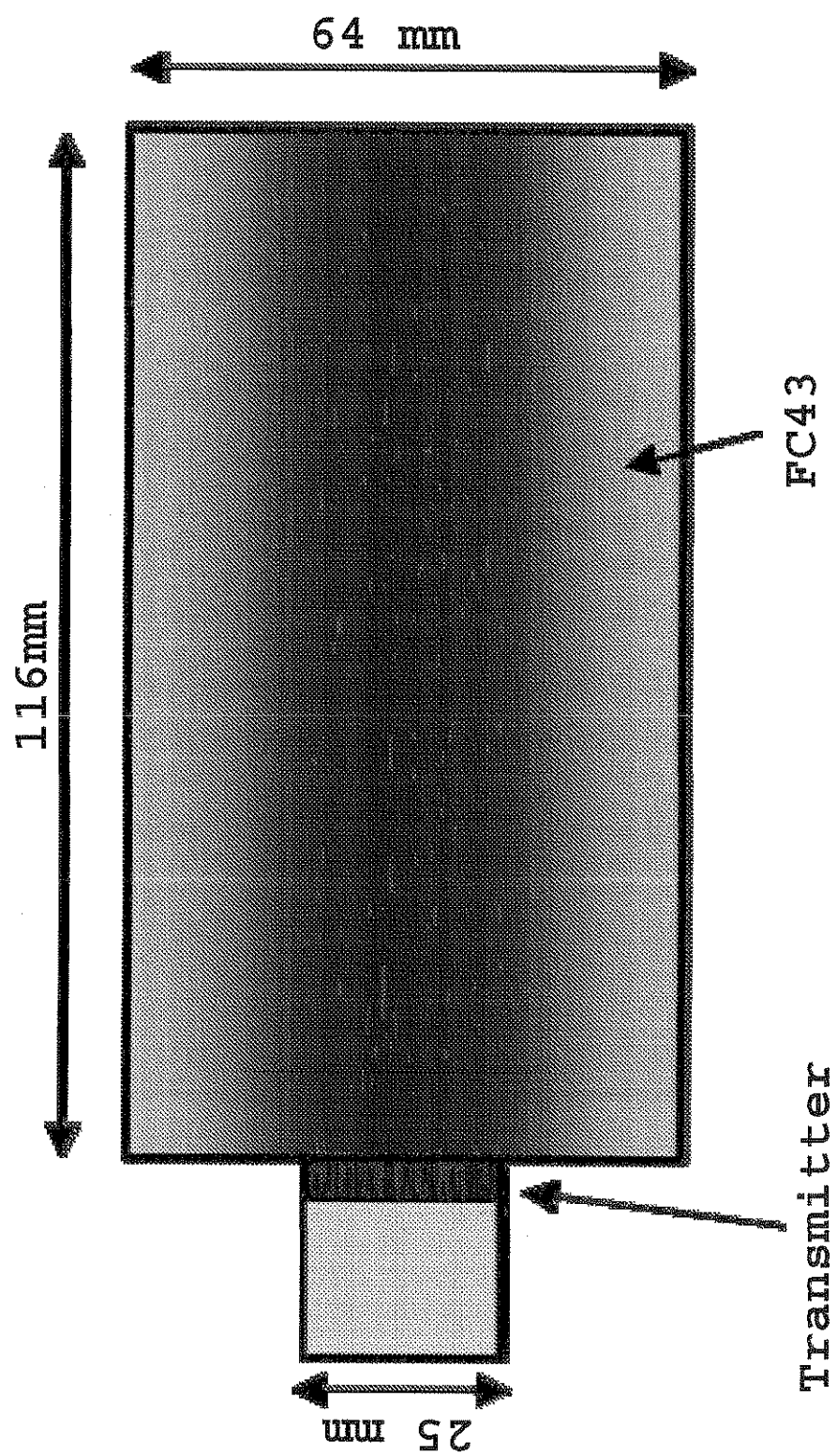


Figure 16

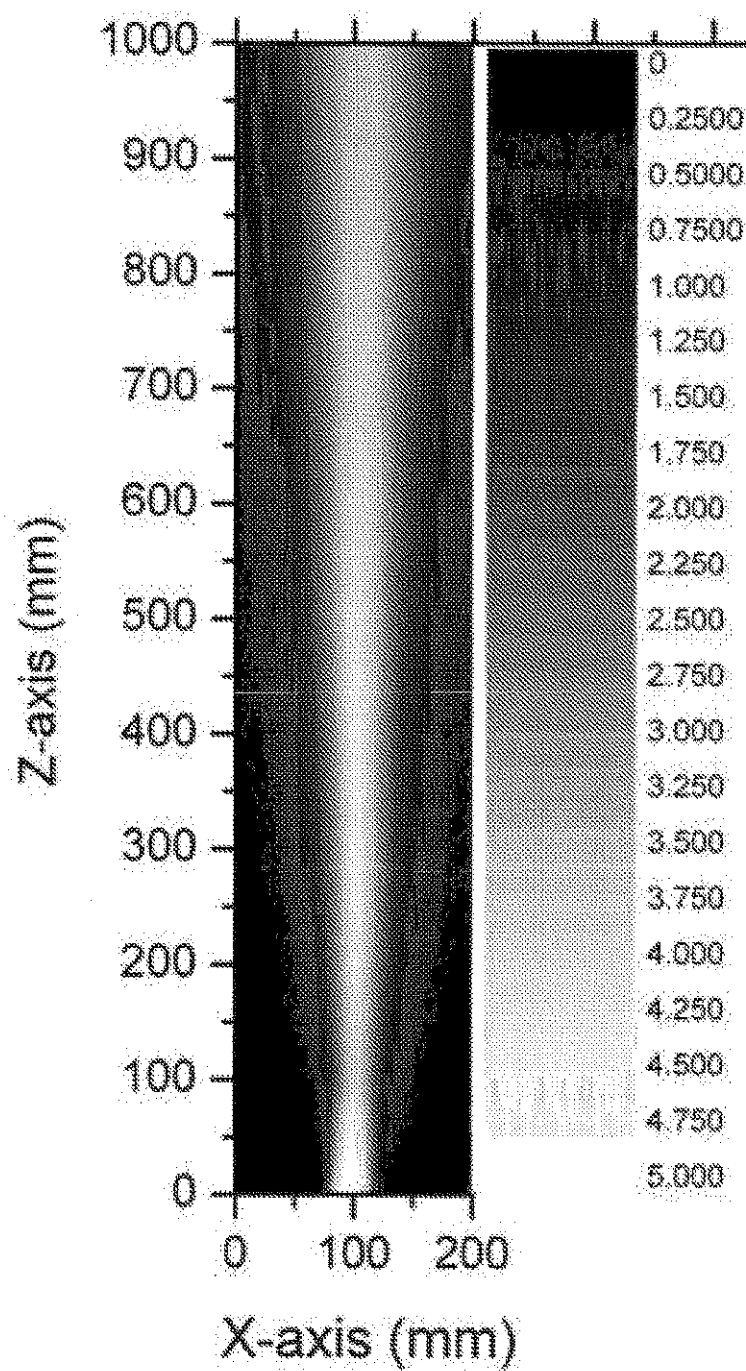


Figure 17

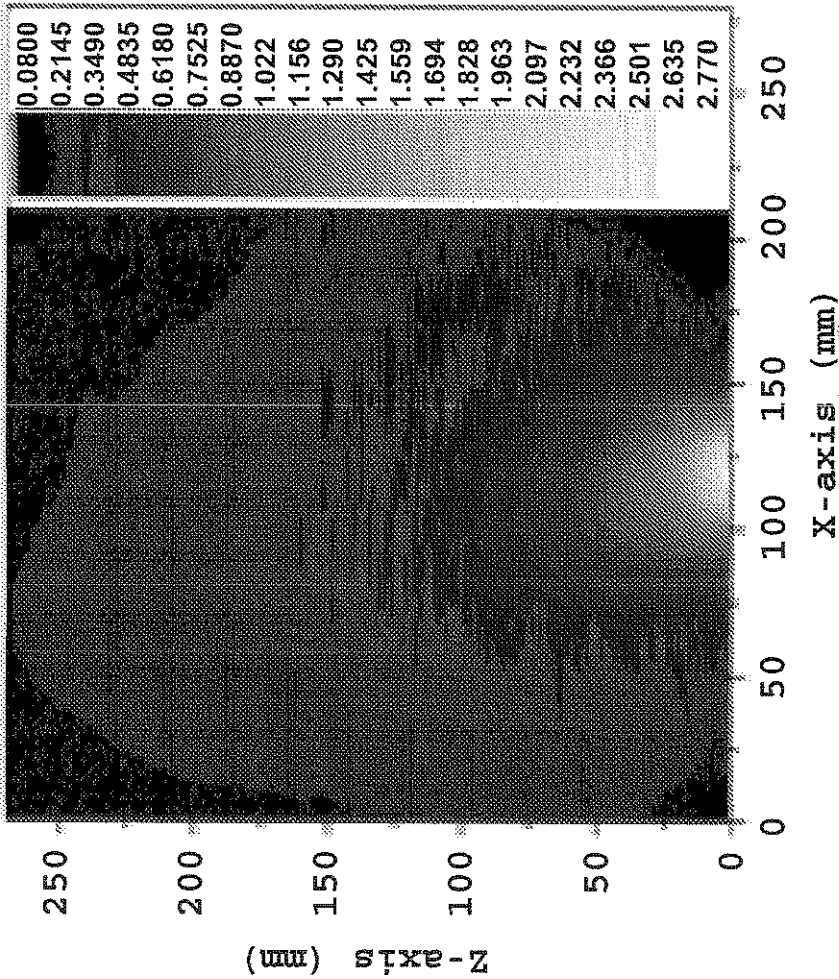


Figure 17 cont'd

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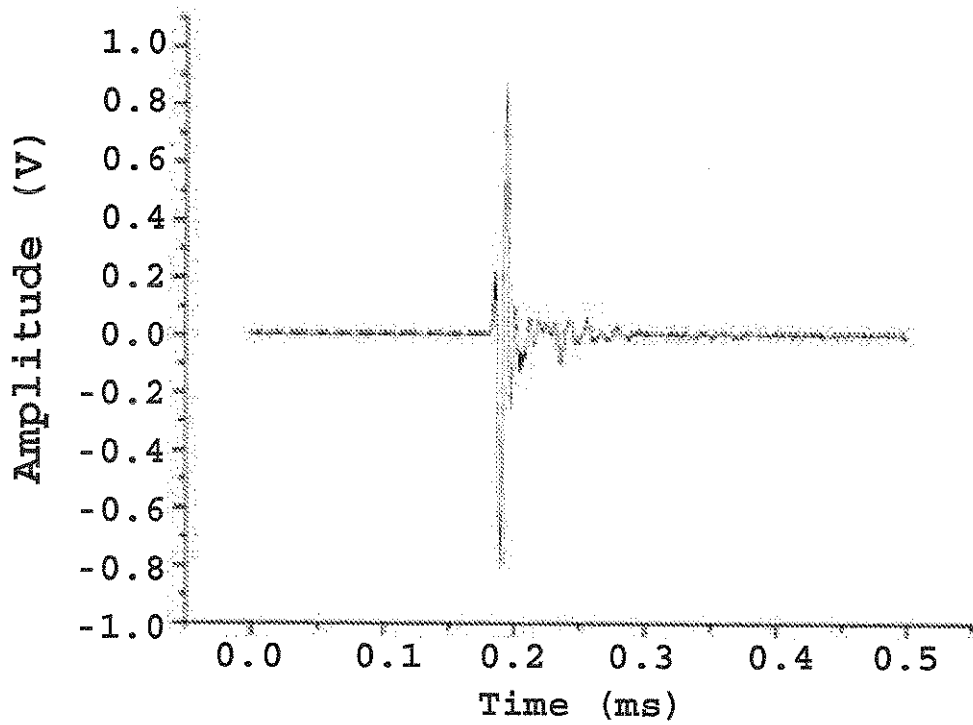
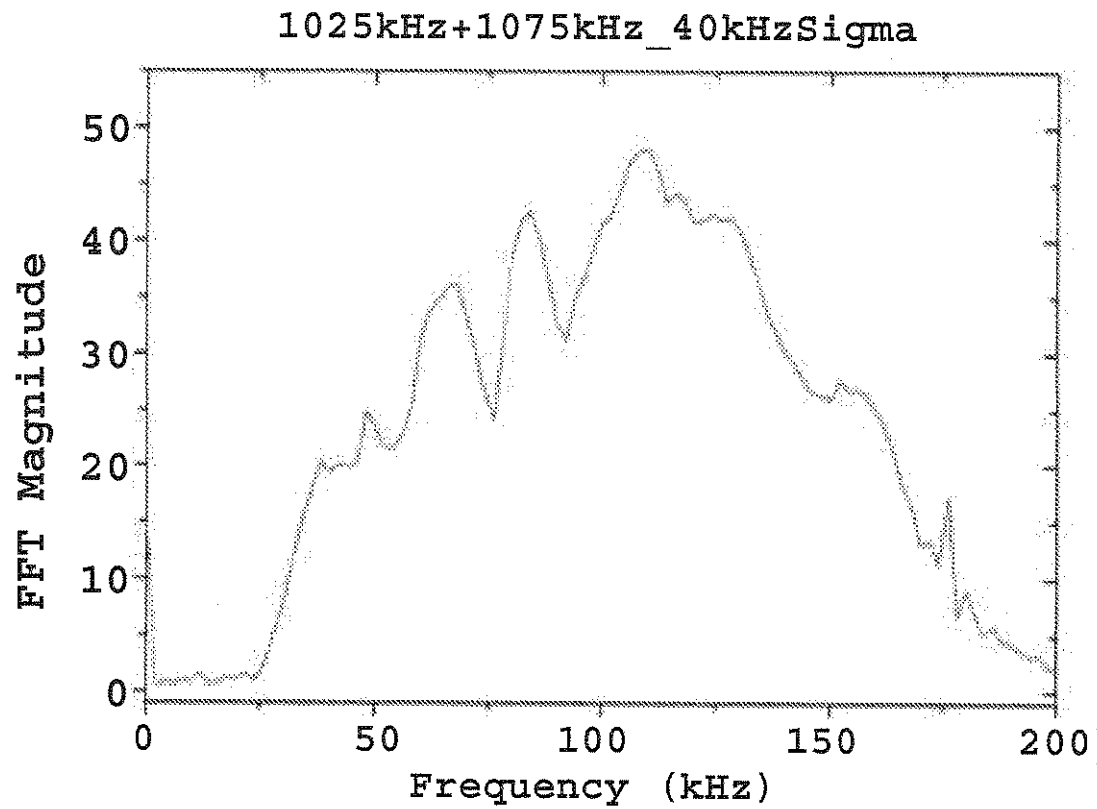


Figure 18

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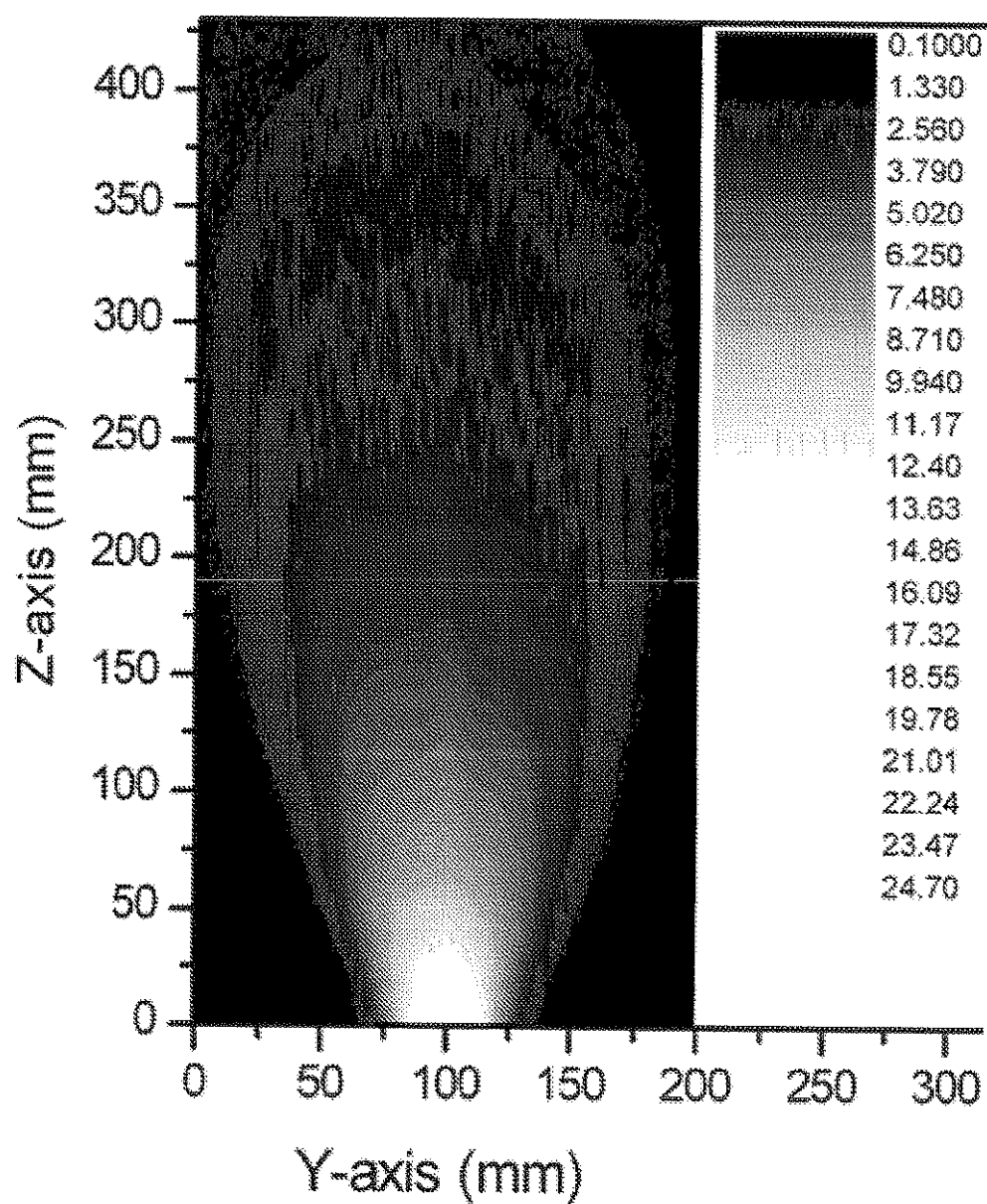


Figure 18 cont'd

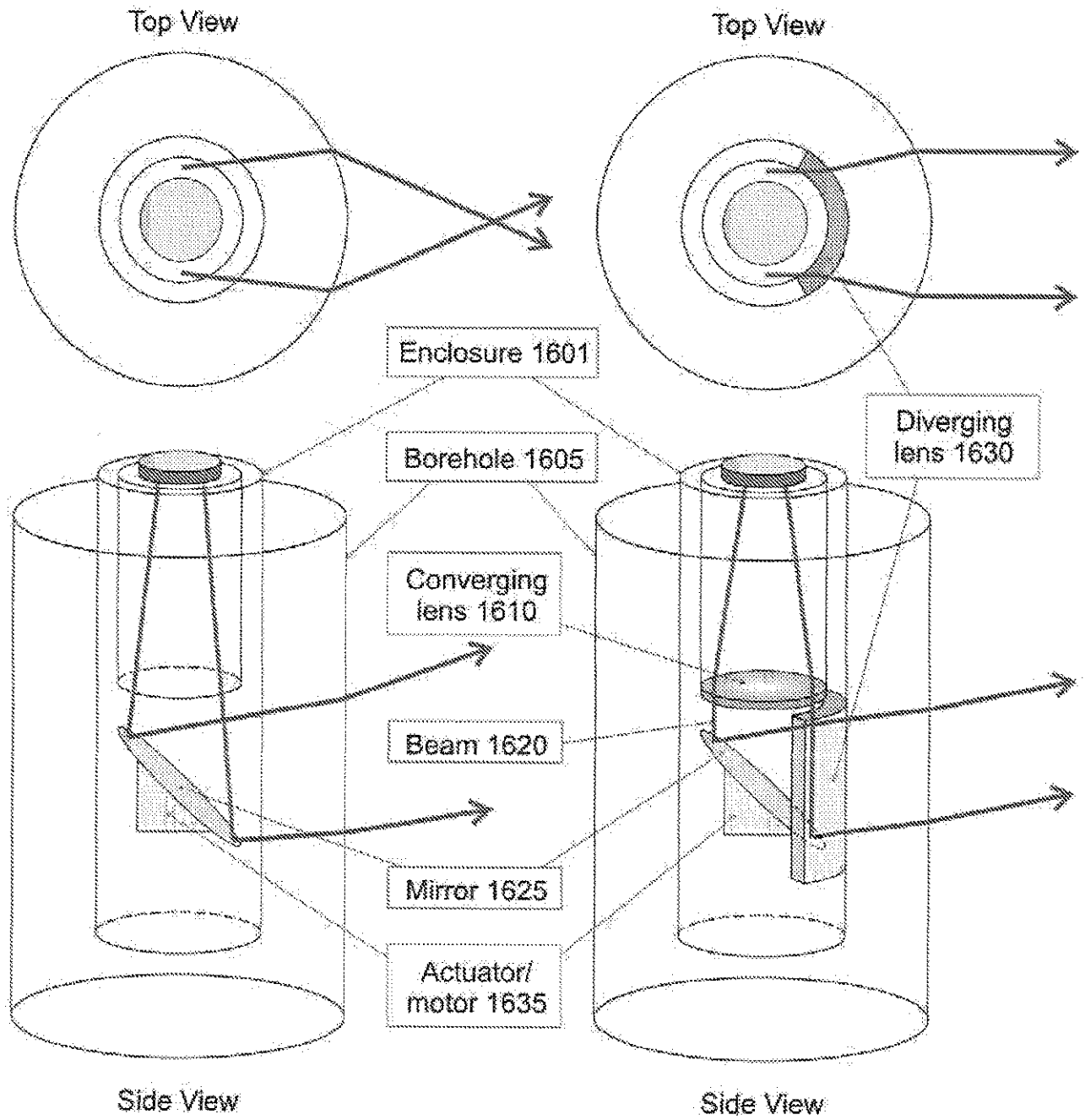


Figure 19a

Figure 19b

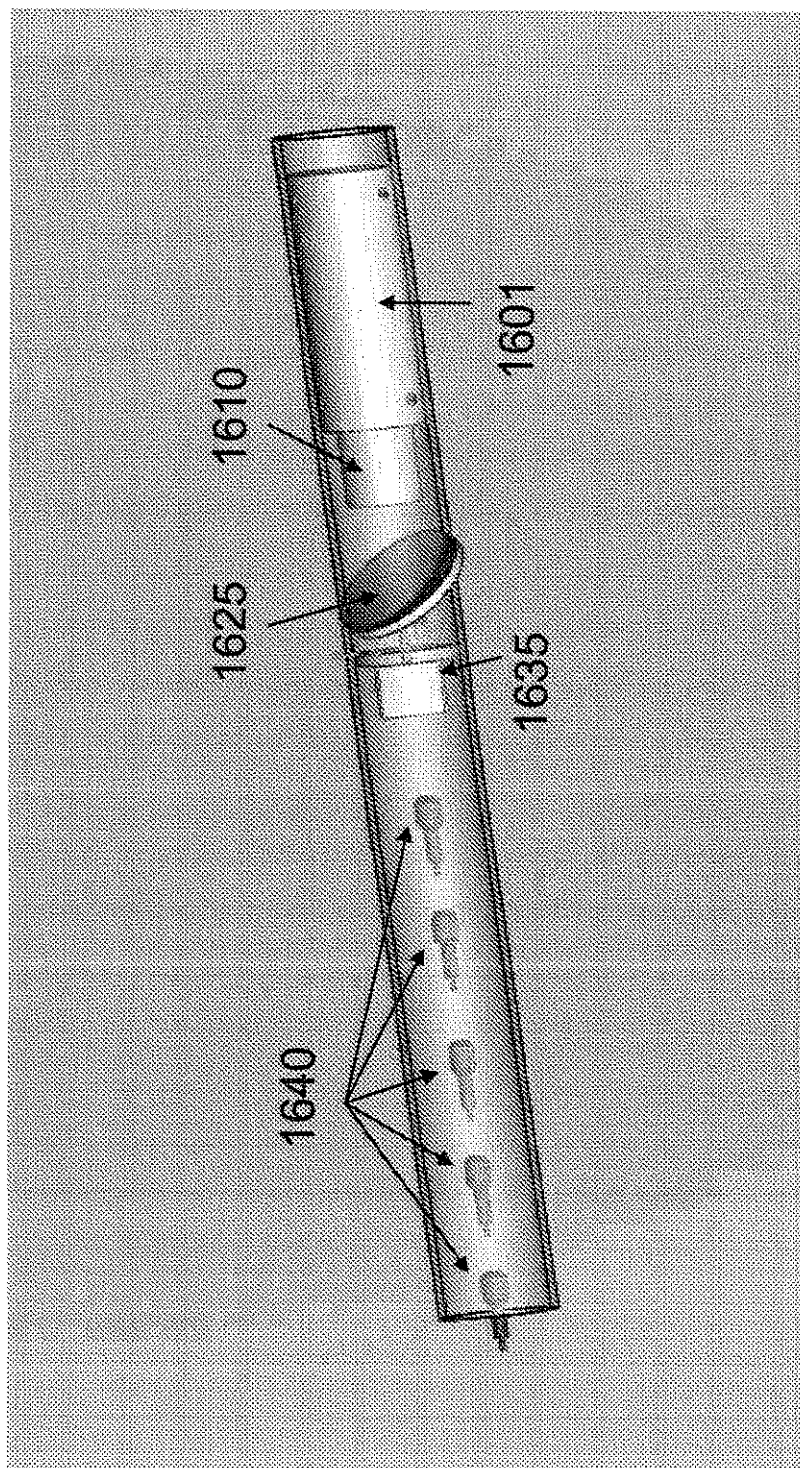
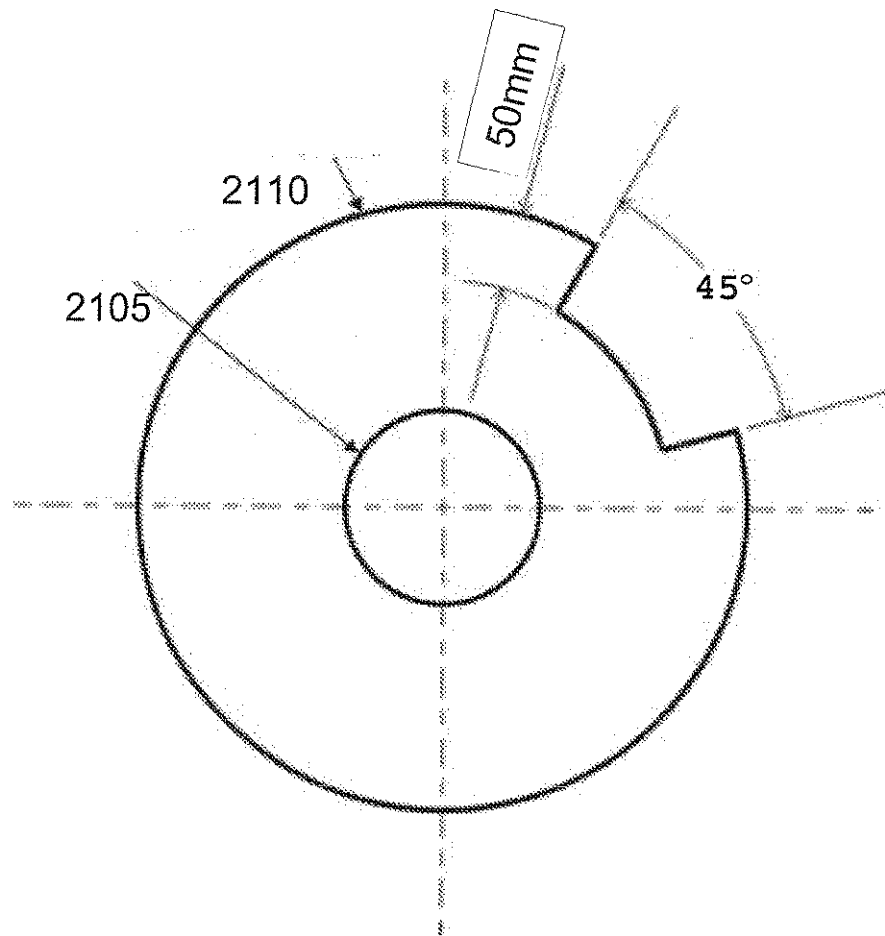


Figure 20



Plan view of proposed vertical cut in barrel

Figure 21a

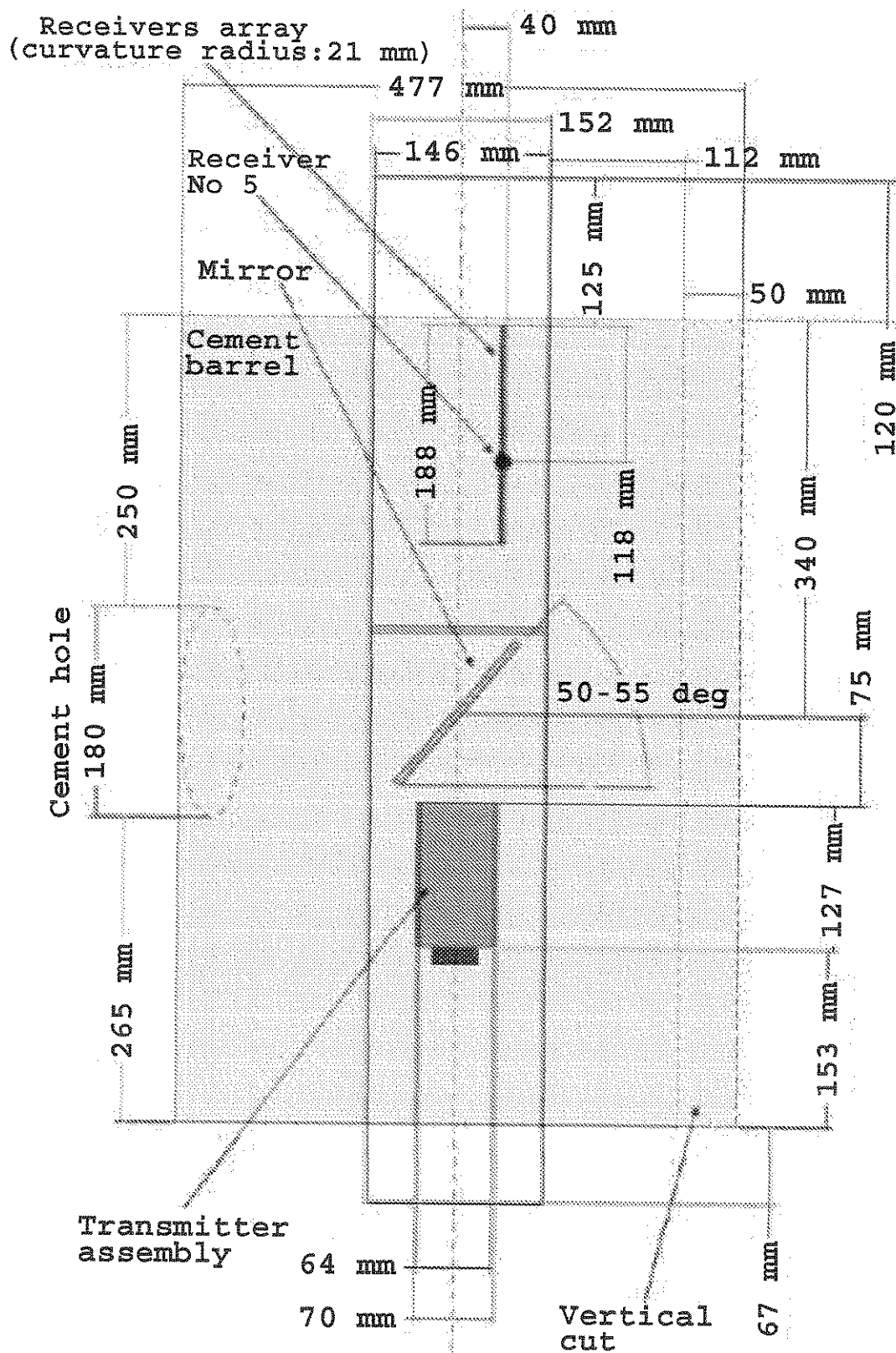


Figure 21b

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Linear Arrivals

Reflection Arrivals
from outer walls

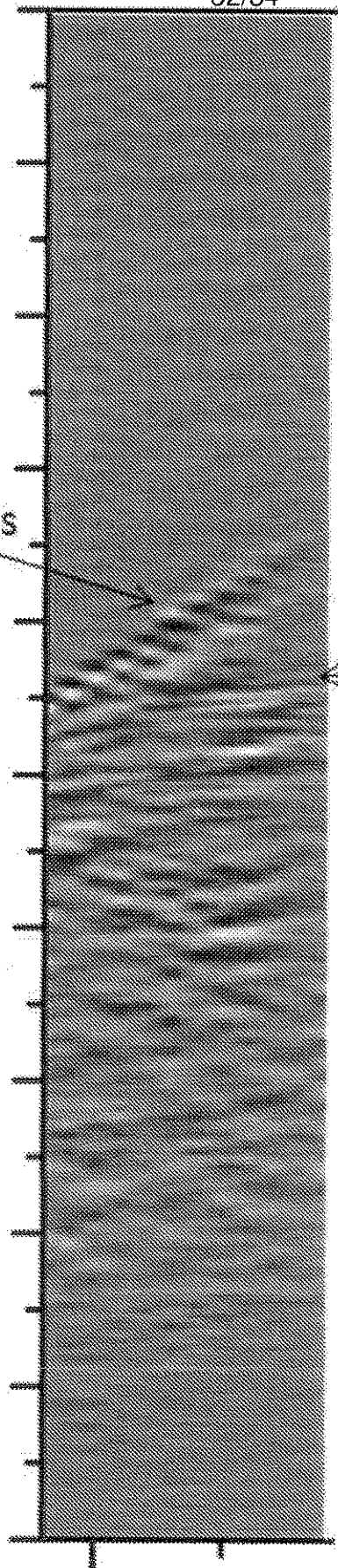


Figure 22

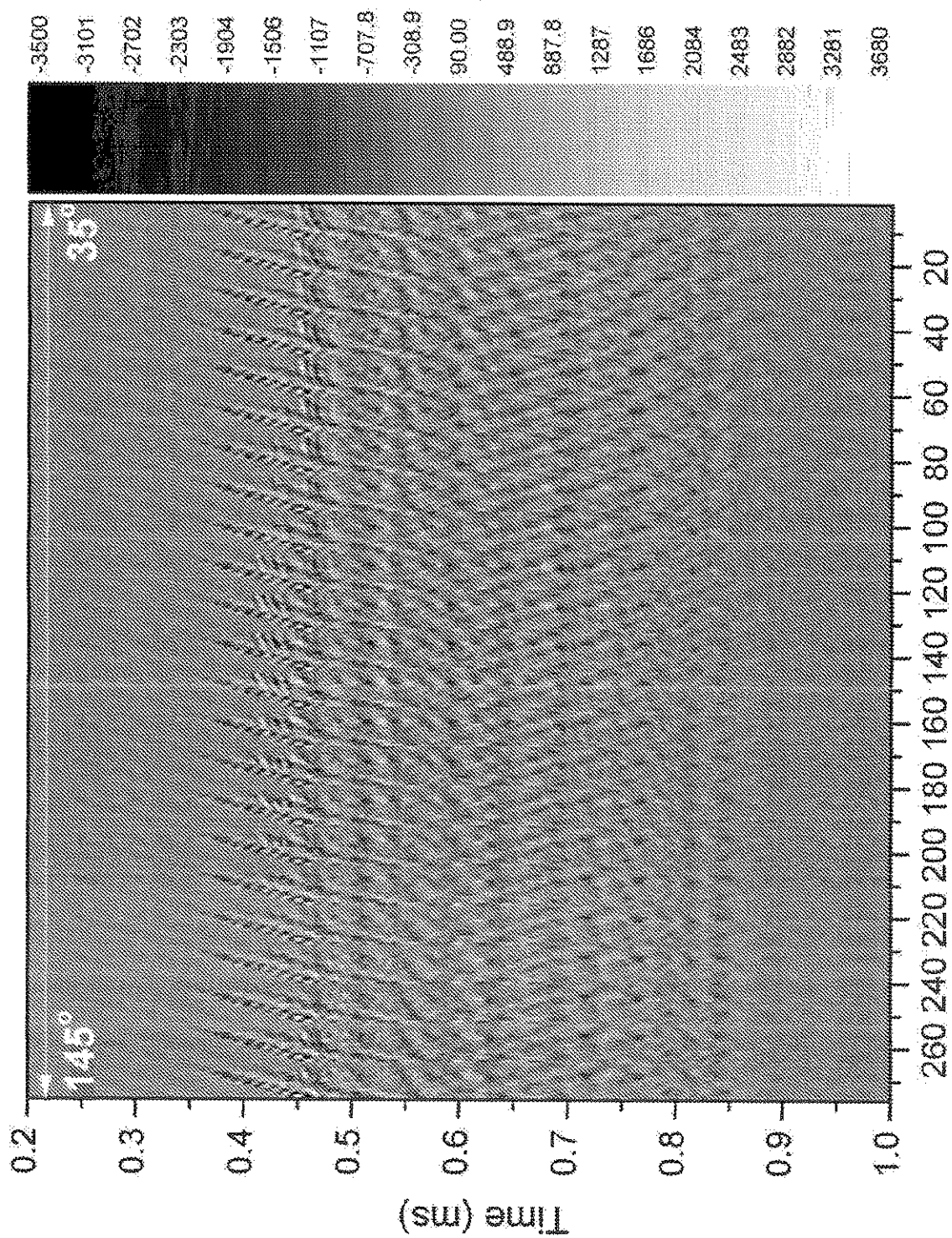


Figure 23
Waveform No.

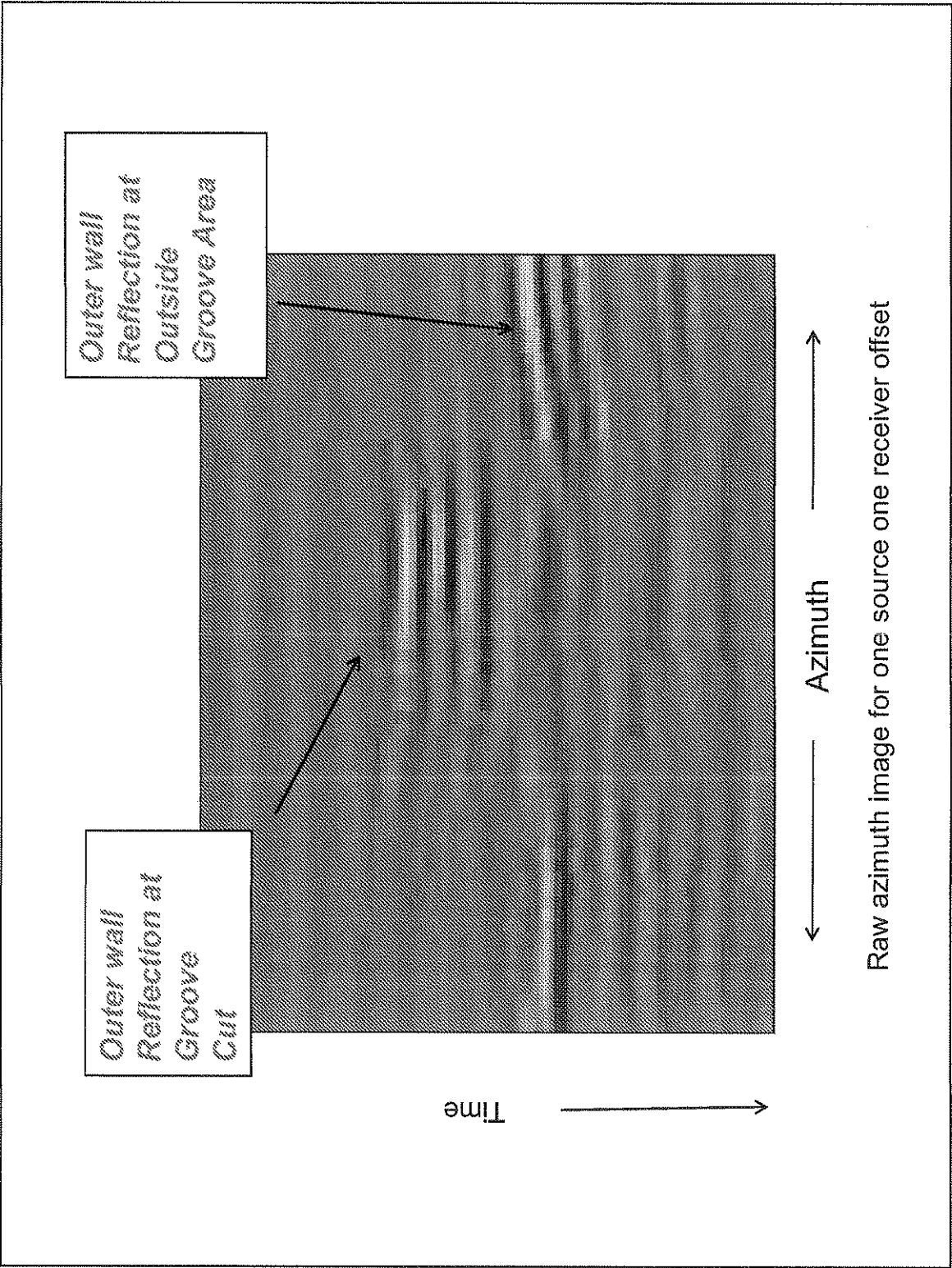


Figure 24