

TEMPORAL FOCUSING OF COMPOSITE X-WAVES TRANSMITTED THROUGH A PLANAR SURFACE OF DISCONTINUITY

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ABSTRACT A scheme is introduced for focusing pulses generated in one medium at a position in a second medium. The analysis is carried out for the general case of oblique incidence on a planar interface separating the two media. This method depends on constructing a composite pulse from a train of X-waves traveling at different speeds. The initial temporal separation between the individual X-waves is chosen such that the resulting field is focused underneath a surface of discontinuity separating two different media..

KEYWORDS Localized waves; X waves; temporal focusing.

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