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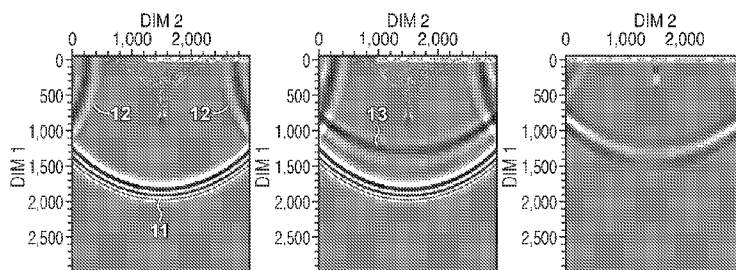
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(54) Title: EFFICIENT AND STABLE ABSORBING BOUNDARY CONDITION IN FINITE-DIFFERENCE CALCULATIONS

**FIG. 1**

(57) **Abstract:** Method for generating an effective, efficient, and stable absorbing boundary condition in finite-difference calculations, such as model-simulation of predicted seismic data. The top surface and optionally the bottom surface of the computational domain or grid are treated with one or more layers of PML (51), preferably ID PML, assuming an orthorhombic medium in the PML implementation (52). The side surfaces are handled with one or more ABC layers (53). Further advantages may be realized by tapering earth model symmetry axis on the top and bottom of the model toward the vertical (54). The invention provides a beneficial compromise between reducing artifacts in the image or physical property model and computational efficiency and stability.

