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Solving for the source

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ABSTRACT

Multi-component source and receiver data can be turned into a vector product field only if the source and receiver responses are reducible to a uniform, isotropic model. Careful design is sufficient in the case of seismometers. Sources are another matter, since they interact in an unknown, variable, and non-linear manner with the earth's surface. We discuss a technique and requirements for reducing the responses of multi-component sources to a uniform isotropy. We explain the problem structure and find a pre-stack formulation which minimizes the differences in a reciprocal trace pair.

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