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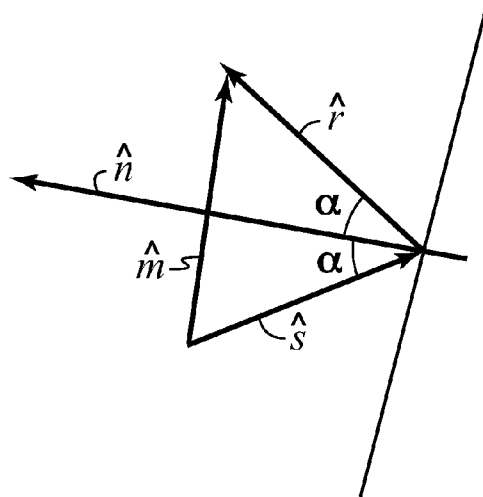
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(54) Title: EFFICIENT COMPUTATION OF WAVE EQUATION MIGRATION ANGLE GATHERS

**FIG. 1**

(57) Abstract: Method for efficient computation of wave equation migration angle gathers by using multiple imaging conditions. Common reflection angle or common azimuth gathers or gathers including both common reflection angles and common azimuth angles are produced as the data are migrated. In the course of either wave equation migration or reverse time migration, the pressures and particle motion velocities that need to be computed are sufficient to also compute the Poynting vector pointing in the direction of source-side (35) or receiver-side (37) wavefield propagation. From that, the reflection and azimuth angles can be computed (38). The seismic images can then be stored in the appropriate angle bins, from which common reflection angle or azimuth data volumes can be assembled (39).



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