

Abstract Submitted
for the DFD10 Meeting of
The American Physical Society

Investigation of internal wave amplitude estimates through phase-space ray-tracing JULIE VANDERHOFF, Brigham Young University — An effective way to track the propagation and refraction of internal waves is by applying the ray, or WKBJ, approximation and performing numerical ray-tracing. Wave amplitudes are easily obtained in a phase-space formulation of the ray-tracing, which also avoids the caustics that are typically present in both the spatial and spectral formulations. However, the resulting phase-space solution must be projected onto the spatial and spectral domains to obtain solutions in those domains. Initial estimates are made to assess the accuracy of these projections using a simple background that varies in one spatial dimension and time. Implications for the short oceanic internal waves, and for cases of higher dimensions, are discussed.

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Date submitted: 06 Aug 2010

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