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**What is the spatial volume involved for wave reflection from flat  
and curved interfaces ?**

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The spatial region in the vicinity of the interface which actually affects the interface response, and hence the reflected wavefield, is of particular interest for the characterization of reflectors. This region represents a volume of integration of properties above and beyond the interface whose maximum lateral extent corresponds to the lateral extent of the Interface Fresnel Zone (IFZ), and whose maximum vertical extent is equal to a thickness we evaluate approximately for subcritical incidence angles and for the case of a plane homogeneous interface. The maximum vertical extent may be greater than the seismic wavelengths for subcritical incidence angles close to the critical angle and for strong impedance contrast at the interface. The whole part of reflector which actually affects the reflected wavefield is then larger than described by previous estimates which considered only the spatial region beyond the interface. In addition to the case of a flat interface, we also discuss the change in the characteristics of this part of the reflector as a function of the interface curvature.