of the $Q$'s of toroidal modes, we find that this mechanism of dissipation is unimportant.

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**Deformation of a Non-Gravitating Elastic Sphere by a Finite Internal Dislocation**

Ari Ben-Menahem

An explicit tractable representation is obtained for the deformation of a non-gravitating stratified elastic sphere by a shear dislocation of arbitrary orientation and depth. The Papkovich solution of the elastostatic equilibrium equation is expanded into series of vector spherical harmonics and the Haskell–Gilbert matrix method is shown to be applicable. A close form solution is obtained for the test case of a homogeneous sphere. It is shown that this solution can be derived alternatively from the dynamic analogue at the limit of zero frequency.

Green's function is obtained from which the solution for finite dipolar sources is derived. Properties of the displacement field are discussed.

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**Dynamic Edge Conditions in Elastic Wedges**

M. Papadopoulos

One of the difficulties to be overcome in examining the propagation of elastic waves in a wedge is that the geometrical singularity at the vertex may be associated with singularities of the displacement field. In simple problems which involve diffraction of acoustic waves by a wedge with perfectly hard or perfectly soft walls we know that the velocity field is singular, with the degree of the singularity depending on the wedge angle. For the case of the homogeneous elastic wedge with two free surfaces, no correct analysis has been given, and it is my purpose to state that