Dislocation theory and effects of the spherical curvature and the radial heterogeneity - point dislocation

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So far, half-space dislocation theories are often used to calculate or interpret the displacements and gravity changes caused by an earthquake, or to inverse a corresponding seismic fault model. However, for a far field, effects of the spherical curvature and the radial heterogeneity have to be considered. In this research, Sun and Okubo (1993,1996) theory is used to calculate the surface displacements and gravity changes. Comparing the results with those caused by dislocations in halfspace and homogeneous models, the effects of the spherical curvature and the radial heterogeneity are investigated.