

## Kondo theory for spherical shells tectonics

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Buckling phenomenon in spherical shells of the lithosphere in subduction zone is studied by spherical shell tectonics. We show a similar relationship between Batdorf parameter for length of the slab and normalized hydrostatic pressure (Kikuchi and Nagahama, 2015). Length of the slab is approximately proportional to the length of the arc and thickness of the lithosphere. However, spherical shells tectonics cannot give us the curvature with high order strain of buckling equation for the lithosphere. On the other hand, Kondo (1955) used the concept of Riemannian geometry in yield and buckling of the curved material. So, by Kondo theory, we derive a buckling equation of spherical shells for the curvature in the lithosphere.

Kikuchi, K. and H. Nagahama (2015) Batdorf parameter for the spherical shells tectonics, EGU General Assembly Conference Geophysical Research Abstracts Vol. 17.

Kondo, K. (1955) Theory of Metaphorical Plates and Shells, RAAG Memoirs, Vol. I, (ed). K. Kondo, pp. 47- 60.

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