

Decadal variability of torsional motion of the Earth

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Decadal variability of the LOD indicates increase in 1988. The N-S component of the tilt at the Esashi Earth Tides Station, however, tends to decrease toward the north in 1990. We can show the same trend in decadal variability in the ocean. Analysis of recent observational results of the GPS (Larson et al., 1997) shows an asymmetric zonal displacement relative to the equator with the magnitude of 1mm/yr. We derive torsional oscillation of a decadal variability of an elastic earth model and we can derive the meridional flow of a thin ocean at the high latitude zone.