



True polar wander due to surface mass loading: Interaction between rotation and deformation through pole tide

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Time variation of a pole location is calculated regarding a case of large-scale true polar wander due to surface mass loading on a terrestrial planet. In this calculation, both cases with and without effect of pole tide are investigated. Through comparison between them, the effect of pole tide on the time variation of the pole location is discussed. As a conclusion, this calculation quantitatively indicates that the pole tide stabilizes the pole location over much longer time scale than that of relaxation. On the other hand, it also implies that the effect of the pole tide is negligibly small in a case of longer term variation than the delay by this stabilization.