



The pole tide correction

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The deformation of the earth and oceans caused by polar motion is called the pole tide. It affects various types of geodetic observations, including GPS, VLBI, and SLR measurements of crustal motion, satellite and gravimeter observations of the Earth's gravity field, and altimeter measurements of sea surface heights. The pole tide is usually removed from these measurements prior to their interpretation, using observed polar motion together with a model of how the Earth and oceans deform when subjected to a change in centrifugal force. Here, I review the standard pole tide correction, focusing on a few outstanding issues including the effects of mantle anelasticity, and whether a slowly-varying term should first be removed from the observed polar motion.