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# Modeling and Mitigating Loading Effects on Geodetic Sites

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This presentation is an overview of several issues encountered when modeling and mitigating loading effects on geodetic sites. It also presents deformation and ocean models and modeling enhancements developped at GRGS. Different point of views and methodological elements cover the following topics: reference and site-dependent Love numbers, reference constraints on the solid Earth applied by atmospheric oceanic and hydrological loadings, use of geodetic coordinates, extrapolation below orography and impacts of topography in meteorological models, degree 1 related issues, ray-traced tropospheric delays and mapping functions, oceanic loading in coastal areas, time series sampling and interpolation issues, atmospheric and oceanic thermal tides, hydrological loading. These models, aimed to be experimented in the repro2 IGS campaign by the CNES/CLS Analysis Center for IGS, illustrate these conceptual elements.