translates into a maximum of ±1.5 mm in deformations. The largest interdecadal trends over the full 40 years are of the order of ±6 HPa with the maximum found mainly over the ocean off Antarctica. As a result of these studies, it is concluded that for a given meteorological data set, a reference pressure field can be computed as a decadal average. However, recent comparisons show that differences in mean pressure at topographic height for different meteorological data sets exceed the acceptable limit by far. Therefore, reference pressure fields have to be determined specifically for each data set. An issue still to be studied is how frequent changes in the meteorological models affect the mean pressure field.

Perspective

The computation of the surface pressure anomaly for loading predictions has to use pressure at topographic height, where a spatial resolution of 5 minutes appears to be sufficient. An appropriate procedure for the computation of pressure at topographic height can be based on geopotential heights of isobars. The reference pressure field has to be computed specifically for each meteorological data set in order to keep biases in the loading predictions below the 1 mm level. Based on these criteria, the SBL will recompute all operational products.

Open questions are the impact of temporal inhomogeneities in the meteorological models on the loading predictions, the error associated with the current approach to modeling the ocean response to atmospheric loading, and the spatial resolution required for the computation of loading signal from the (high-resolution) air pressure anomaly. These questions have been addressed in 2007 and will be further resolved in 2008.

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