



## **GPS, sea level and air pressure time series during the surge “BRITTA” (October, 30 - November, 2, 2006) in the German Bight**

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During transition seasons usually a series of low-pressure systems moves over the north of Europe and the North Sea. In 2006, number 8 (“BRITTA”, <http://www.unwetterzentrale.de/uwz/spezial/sturm06/britta.html>) of these lows was a very intense one inducing a surge at the German coast which was more powerful than the disastrous storm of February 1962.

In this presentation we analyse GPS time series including time intervals before, during and after the noted surge covering the North Sea in the time period October, 30 - November, 2, 2006. We also take into consideration tide gauges and the air pressure field taken from the German Weather Service database.

The observed deformation in the vertical component of the GPS time series is in the order of a few centimetres. This is the sum of the downward component due to water loading and the upward component due to atmospheric unloading. Together with tide gauge and air pressure data, detailed GPS analyses possibly could be used to improve regional models for atmospheric and ocean loading.