



Material and Volume Transport through a Tidal Inlet in the East Frisian Wadden Sea (German Bight)

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Tides have a profound influence on the ecosystem structure in the shallow coastal regions of the southern North Sea. As part of the research programme “BioGeoChemistry of tidal flats”, the University of Oldenburg set up a time-series station at a tidal inlet between two East Frisian islands in summer 2002. The station provides continuous data on physical, biological and chemical parameters all year round (e.g. temperature, salinity, water level, currents, radiometer, and meteorological data). We combined real time measurements obtained at the station, data obtained from several research cruises in 2005 and numerical modeling approaches in order to understand and quantify the material transport by tidal currents. We will present calculations of volume transport through the tidal inlet and the distribution of the water masses into the North Sea.

The real time data are available on the internet: <http://las.physik.uni-oldenburg.de/wattstation>.