



*Biologische Anstalt Helgoland*  
*Alfred-Wegener-Institut*



## **The Helgoland biological-oceanographical time-series**

**Helgoland Reede Station**

**(54° 11.3'N, 7° 54.0'E)**

**water depth 6 - 8.5 m (tidal)**

**Helgoland Transects**

**(Central German Bight)**

Location of Helgoland and  
“Helgoland Reede“ sampling  
site in the German Bight of the  
North Sea





**AWI-BAH**



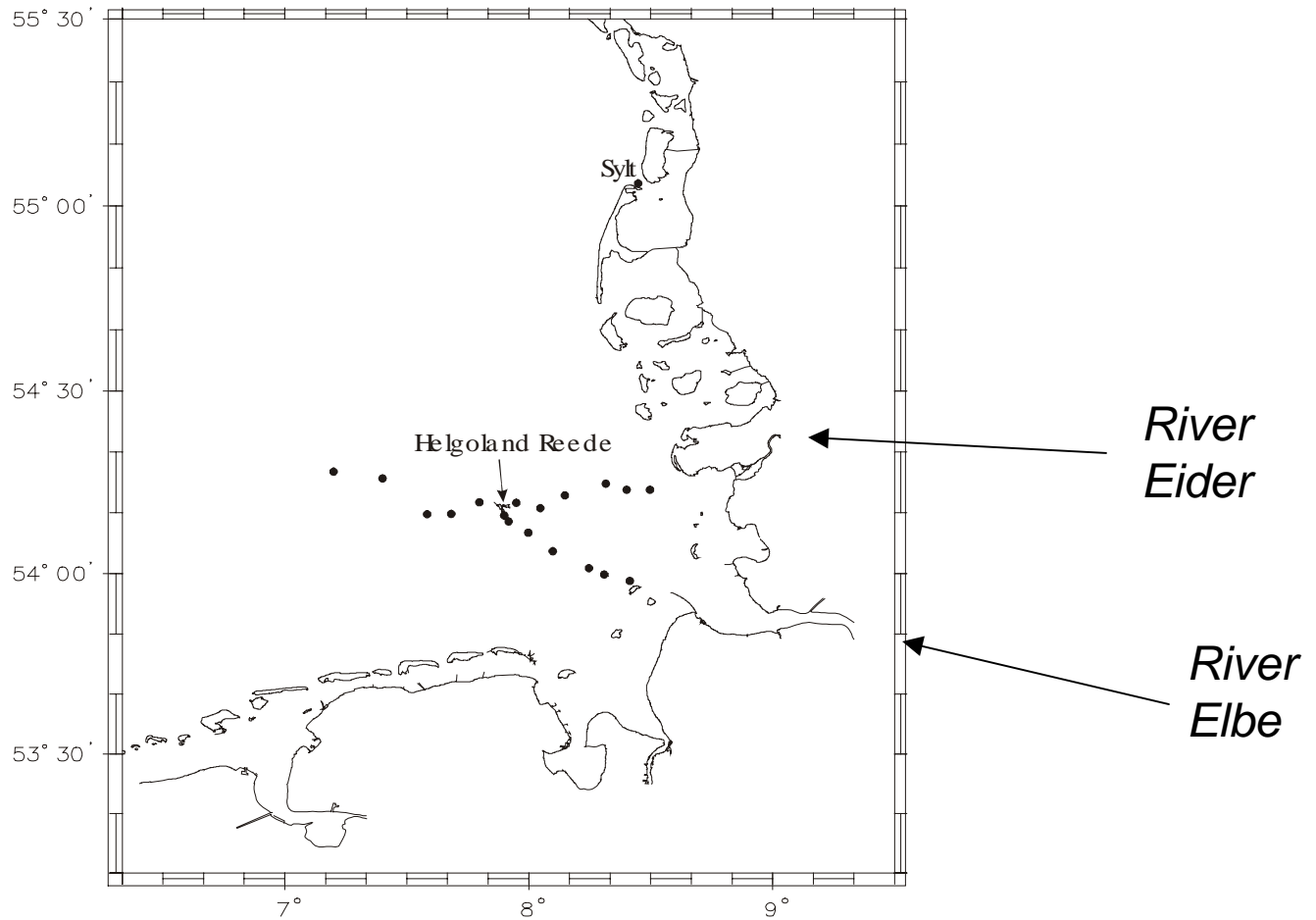
**goland Reede Station**



**Aerial view**

# Compilation

Helgoland biological-oceanographical time-series				
timeseries	parameters	frequency	period	depth
Helgoland Reede phytoplankton series	Phytoplankton species composition (>2.5 µm) nutrients, S, T	workdaily	1962 - future	surface
Helgoland Reede bacterioplankton series	bacterial numbers colony-forming bacteria DGGE	weekly	1961 - future 1996 - future	surface
Helgoland Reede <i>Noctiluca</i> series	abundance	workdaily (summer) 3/week (winter)	1970 - future	surface and 5 m
Helgoland Reede zooplankton series	zooplankton composition	3/week	1974 - future	bottom - 0 (150 µm)
Helgoland phytoplankton transects	Phytoplankton species composition (>2.5 µm) nutrients, S, T	monthly	1962-1970, 1980 - future	1m + two depths



The three Helgoland Phytoplankton Transects consist of six stations each

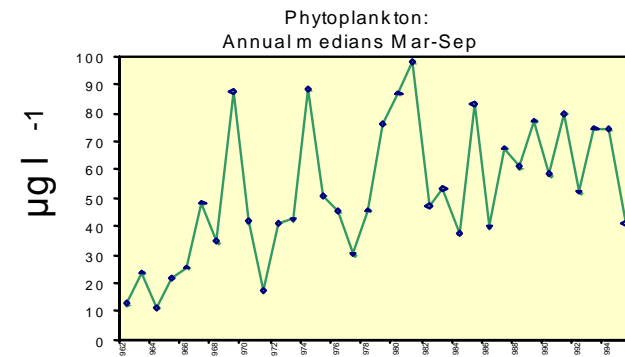
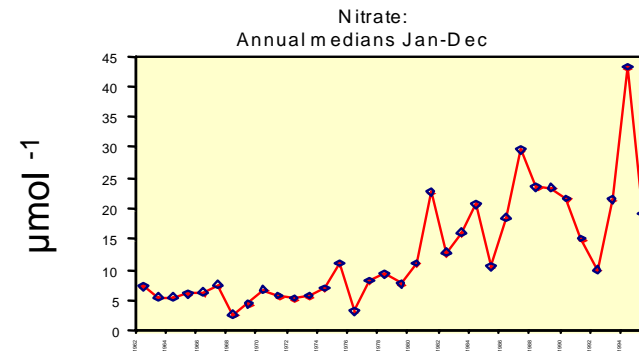
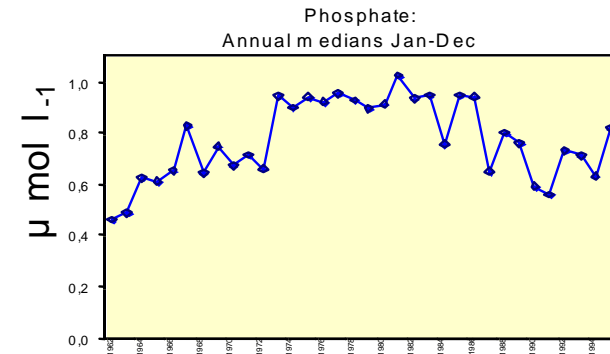
Vessels serving the “Helgoland Reede” and  
the “Helgoland transects” time-series

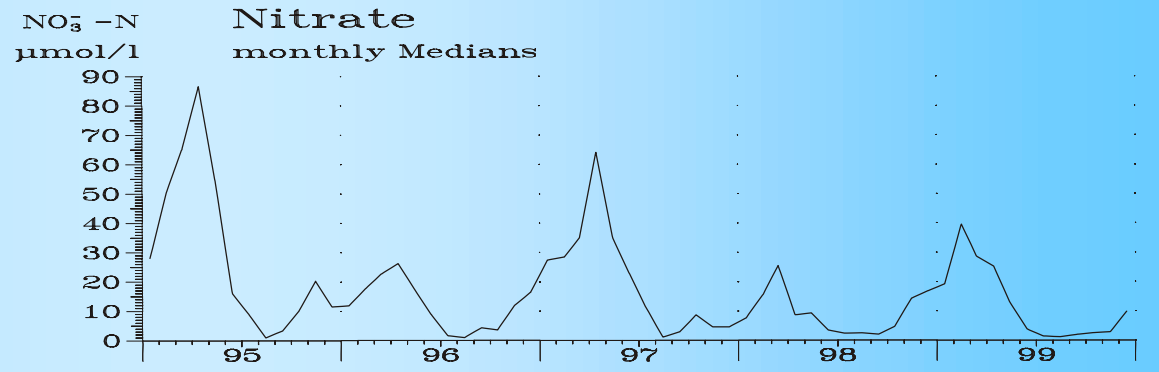
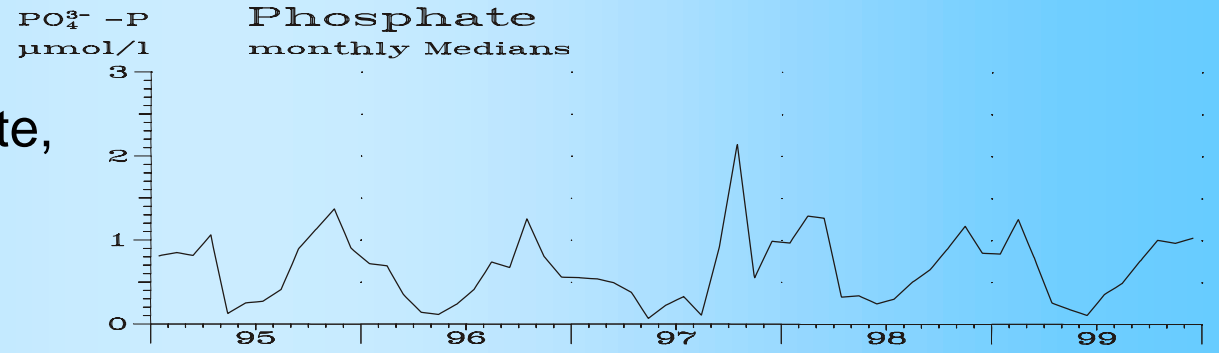
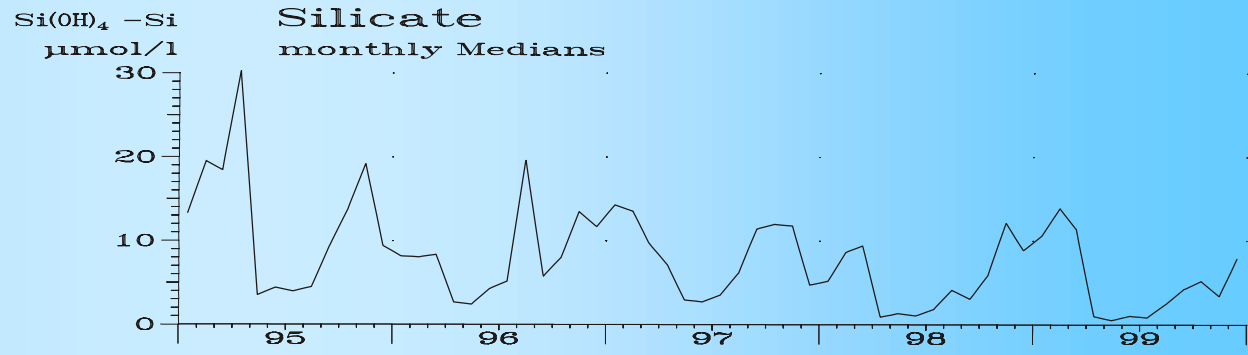


“Aade“

“Uthörn”

Annual medians of concentrations of phosphate, nitrate and phytoplankton carbon on “Helgoland Reede“ from 1962 to 1994

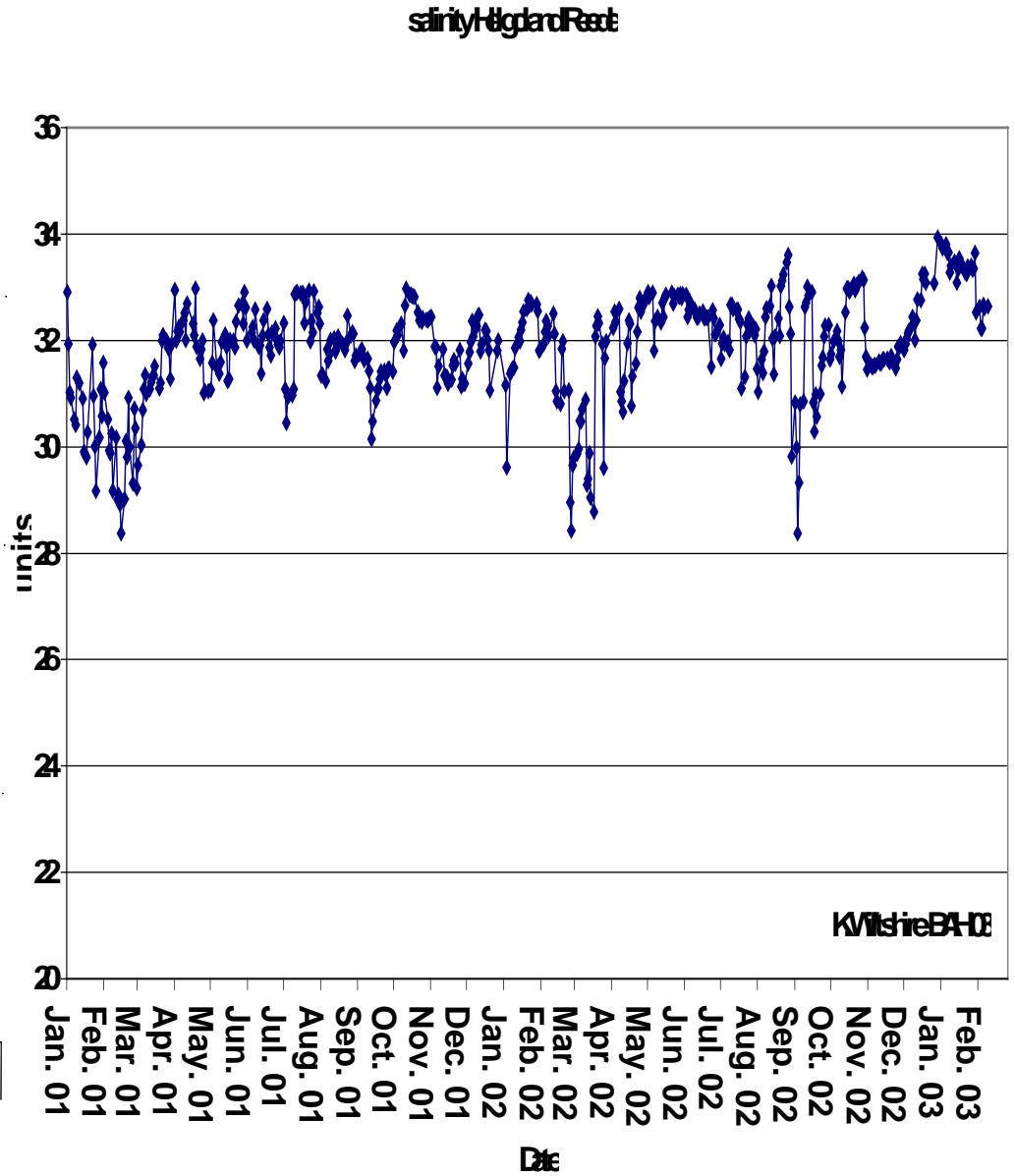
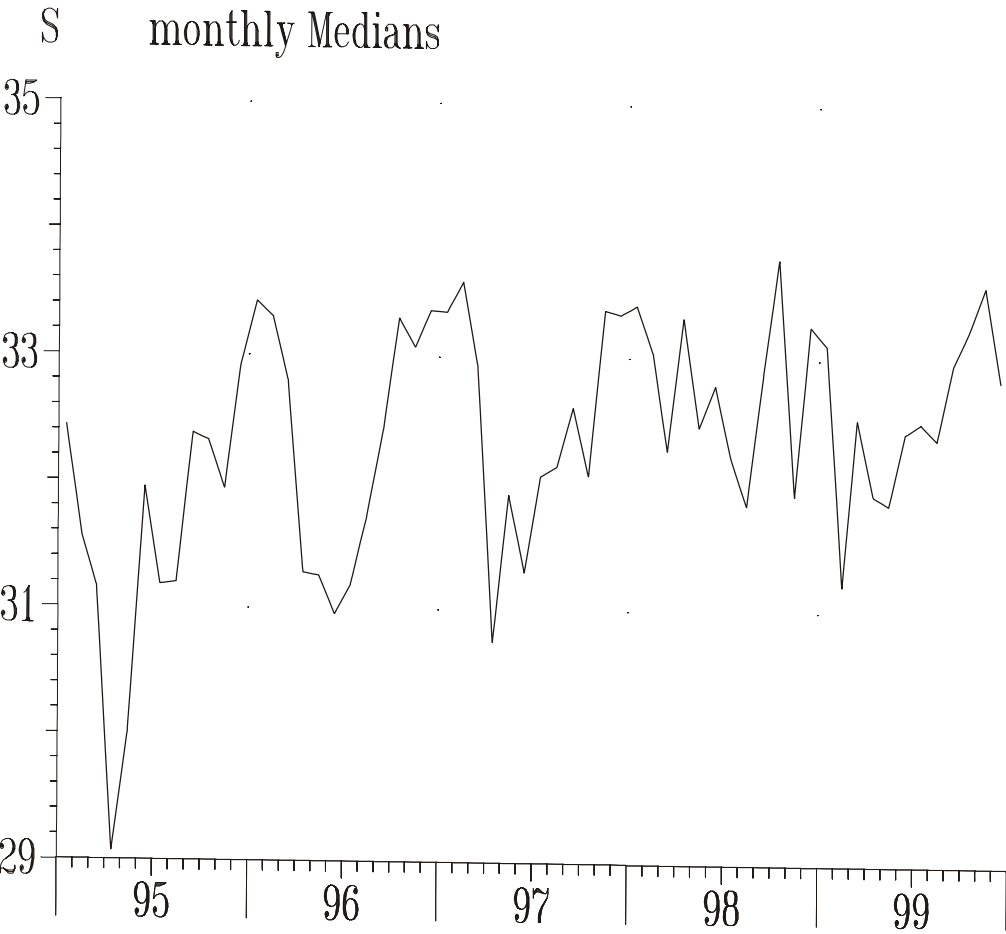


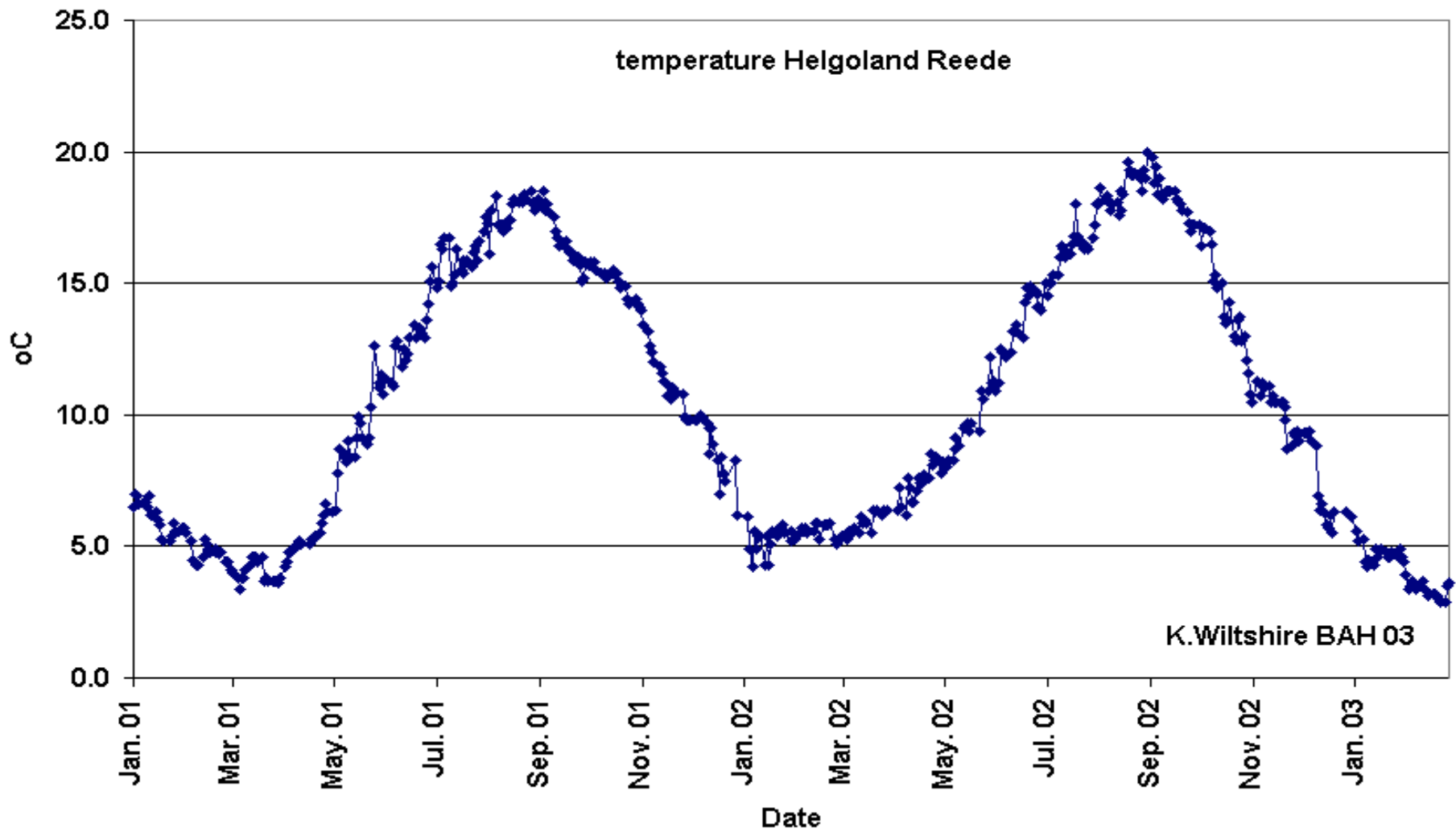


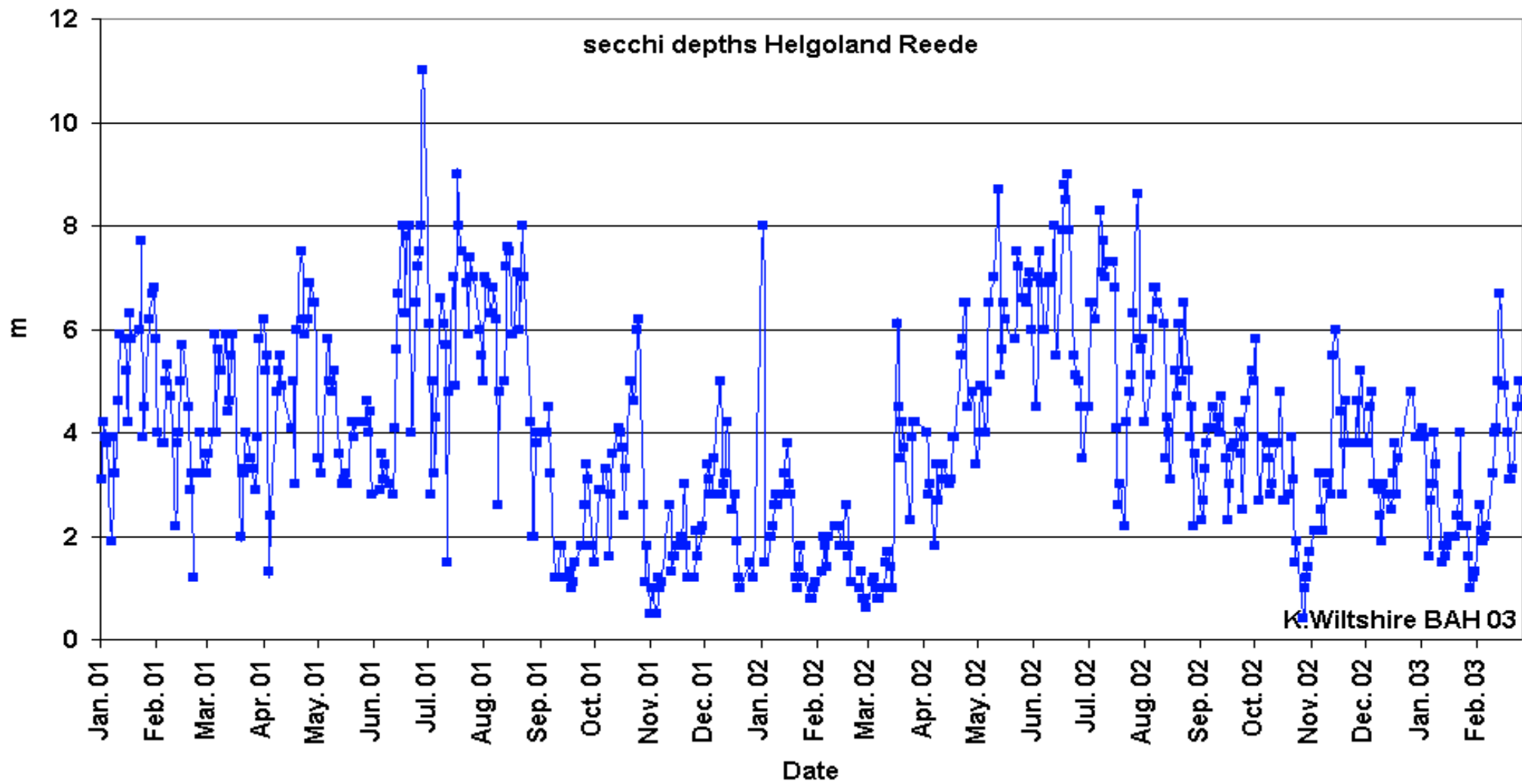
Monthly concentrations of silicate, phosphate and nitrate on “Helgoland Reede“ from 1995 to 1999

# Salinity

monthly Medians









On “Helgoland Reede” a clear seasonality can be observed in temperature, salinity, nutrient concentrations, phytoplankton stocks and species composition.

The year to year variability seems great but in the sampling years 2002 seems hydrographically to be similar to 2001. We must await the phytoplankton counts for full comparison but as the Helgoland site does not examine the less than 3  $\mu\text{m}$  fraction we may be only able to compare broad trends in the two fractions