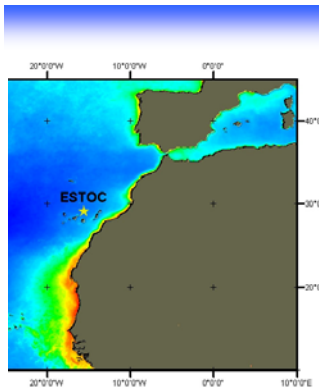




# ESTOC

## 16 years operating

A. Cianca, andres@iccm.recanaria.es; www.estoc.es



The European Station for Time Series in the Ocean, Canary Islands ESTOC, pertaining to the European EuroSITES deep ocean observatories network, is the first European station of its characteristics. It is located about 100 Km north of Gran Canaria Island (29°10'N, 15°30'W), in deep oligotrophic waters (3670 m) that include the main water masses encountered in the Eastern North Atlantic

### INVOLVED INSTITUTIONS

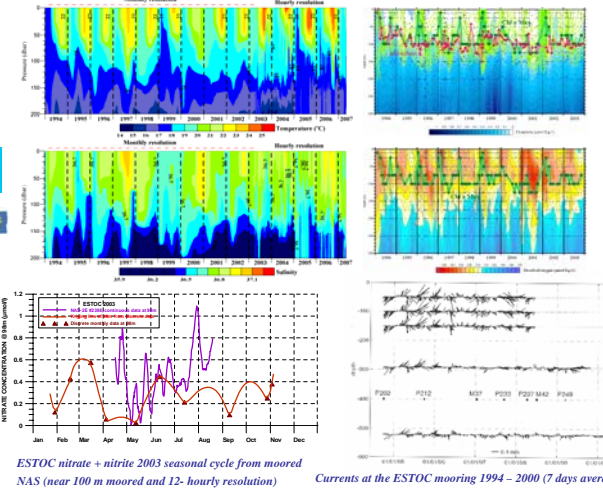


### SOME PROGRAMS



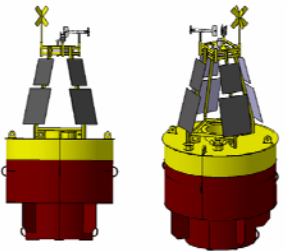
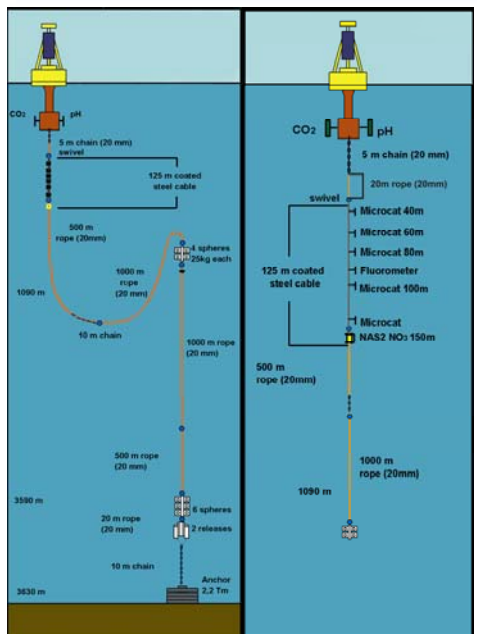
Parameter	Methodology	Responsible Institutions	Temporal Range of the observations	References
Salinity	Revolving salinometer	ICCM	1994-1999	Laribi et al., 1997, 1999
Sea level	Pressure sensor (Mettler Toledo) + Auto-Transducer	ICCM	1994-1999	Laribi et al., 1997, 1999
Dissolved Oxygen	Optical DO sensor (Mettler Toledo)	ICCM	1994-1999	Laribi et al., 1997, 1999
Chlorophyll a	Fluorometer (Turner Designs)	ICCM	1994-1999	Laribi et al., 1997, 1999
Chlorophyll b	Fluorometer (Turner Designs)	ICCM	1994-1999	Laribi et al., 1997, 1999
Chlorophyll c	Fluorometer (Turner Designs)	ICCM	1994-1999	Laribi et al., 1997, 1999
Chlorophyll total	Fluorometer (Turner Designs)	ICCM	1994-1999	Laribi et al., 1997, 1999
Par	Quantum sensor (Turner Designs)	ICCM	1994-1999	Laribi et al., 1997, 1999
Temperature	Revolving thermometer	ICCM	1994-1999	Laribi et al., 1997, 1999
Pressure	Pressure sensor (Mettler Toledo)	ICCM	1994-1999	Laribi et al., 1997, 1999
Currents	Acoustic Doppler Current Profiler (ADCP)	ICCM	1994-1999	Laribi et al., 1997, 1999
Water CO <sub>2</sub>	Automatic continuous analysis (SCT/SEA system)	ICCM	1998-1999	Laribi et al., 2007
Salinity	Conductivity, Temperature and Pressure (CTDP)	ICCM	1998-1999	Laribi et al., 2007
Seawater	High Pressure Liquid Chromatography (HPLC-DAD)	ICCM	2000-1999	Wright et al., 1997
Water	High Pressure Liquid Chromatography (HPLC-DAD)	ICCM	1997-1999	Wright et al., 1997
Water	High Pressure Liquid Chromatography (HPLC-DAD)	ICCM	1997-1999	Wright et al., 1997

### REGULAR SAMPLING PROGRAM- 1994 TO PRESENT

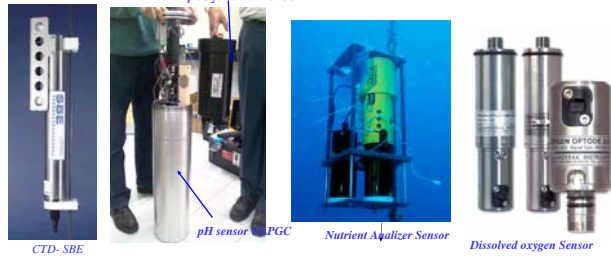
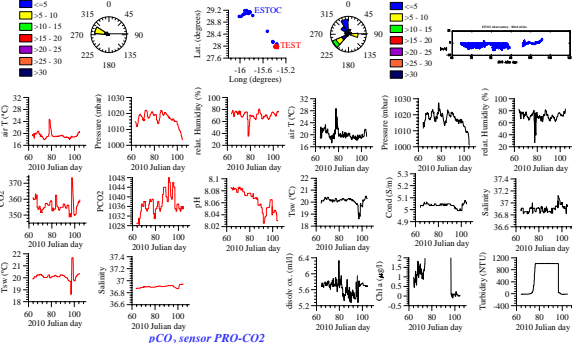


ESTOC nitrate + nitrite 2003 seasonal cycle from moored NAS (near 100 m moored and 12-hourly resolution) Currents at the ESTOC mooring 1994 - 2000 (7 days averages)

## PRESENT



### TIME REAL DATA FROM THE OBSERVATORY



## FUTURE

### Flings "GLIDER"



### AUTONOMOUS VEHICLES "GLIDER"

**Multiple Wave Energy Converter (WELCOME project)**  
APC-PISYS is an innovative concept for converting ocean wave energy, based on the multiple capture of the potential, kinetic and pressure energy present in sea waves. Therefore, it can be defined as a system of multiple capture and supplemented transformation of ocean wave energy. At a scale of 1:5 with an intermediate swell like that found in the Canary Islands, the APC-PISYS system can reach a power of between 100 y 150 kW.



Pressure Acoustic Coupled Tsunameter, PACT OPTIMARE

### TSUNAMI DETECTION

### PACT Short time test November 2007

