

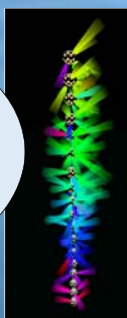
# EMSO Western Ligurian node

## A Unique Cabled Observatory for Environmental Sea Science and Astroparticle Physics

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### ORCA

Oscillation Research with Cosmics in the Abyss.  
Study of fundamental Neutrino properties  
Neutrino astronomy  
Neutrino tomography



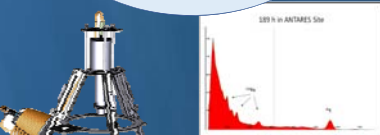
### SEISMOLOGY

Network of real time sensors. Monitoring earth seismic activity.



### RADIOACTIVITY

Proxy for Oceanic chemistry  
Track event at the earth scale  
Ocean dynamics and sediment erosion.



### CRAWLER

Monitoring biodiversity dynamics  
Time-lapse monitoring on biodiversity temporal dynamics  
In situ experiments on benthopelagic coupling.  
In-situ measurements on ecosystem functioning measuring seabed carbon fluxes



### BIOLUMINESCENCE

Macro-organisms  
Bacterial bioluminescence triggered by fertilisation from particles originated from primary production and/or hydrological event.



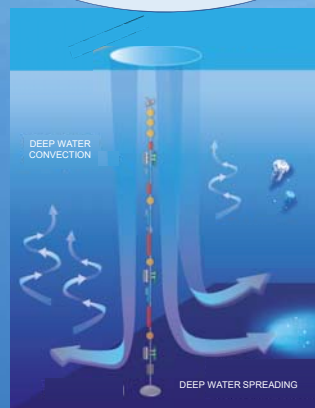
### BIOCAM

Single photon detection  
Bioluminescence trigger for imaging.

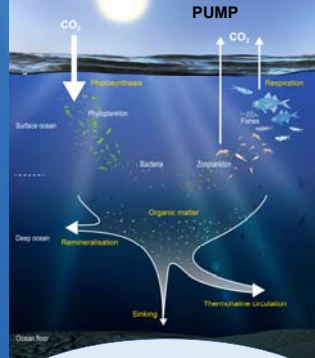


### HYDROLOGY

Temporal evolution of hydrological properties of the water column.  
Spreading of newly formed water.



### BIOLOGICAL PUMP



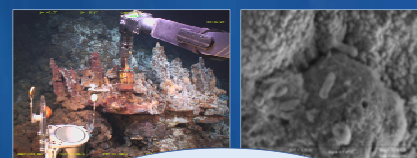
### BIOGEOCHEMISTRY

Carbon cycle  
Trophic network dynamics



### BIOACOUSTICS

MARINE MAMMALS  
Monitoring species diversity  
Monitoring stock and behaviour



### DEEP SEA MICROBIAL DYNAMICS

In-Situ colonisation experiment.  
Micronutrients limitation.

