

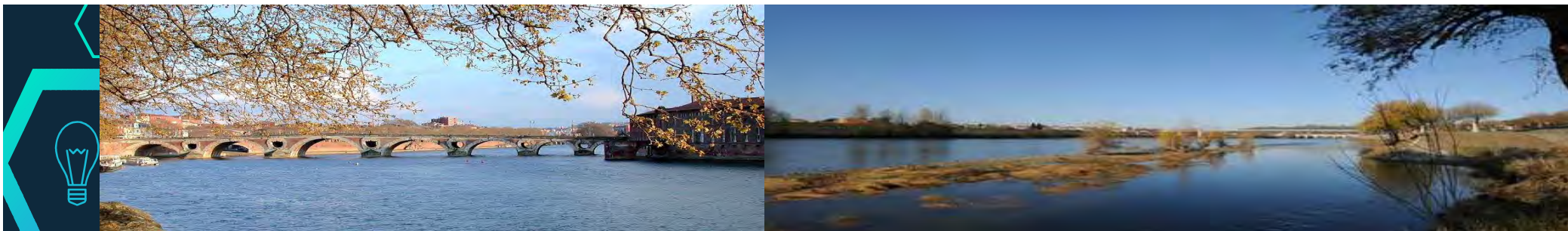
Experimental monitoring of the water quality of the river Garonne

OSTST

La Rochelle (France)

November 4, 2016





1


Presentation



Study different parameters to determine water quality

- conceive a tool able to make various measurements and record data
- compare our measurements to scientists' results





Which parameters are monitored ?

Buo
y

Temperature 

pH 

Conductivity 



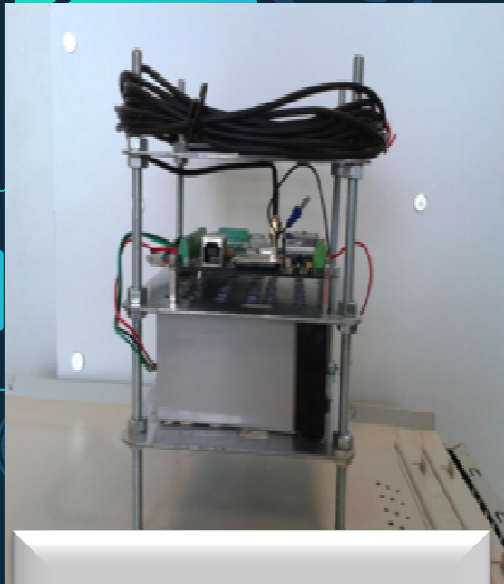


2

Buoy and sensors



Buoy

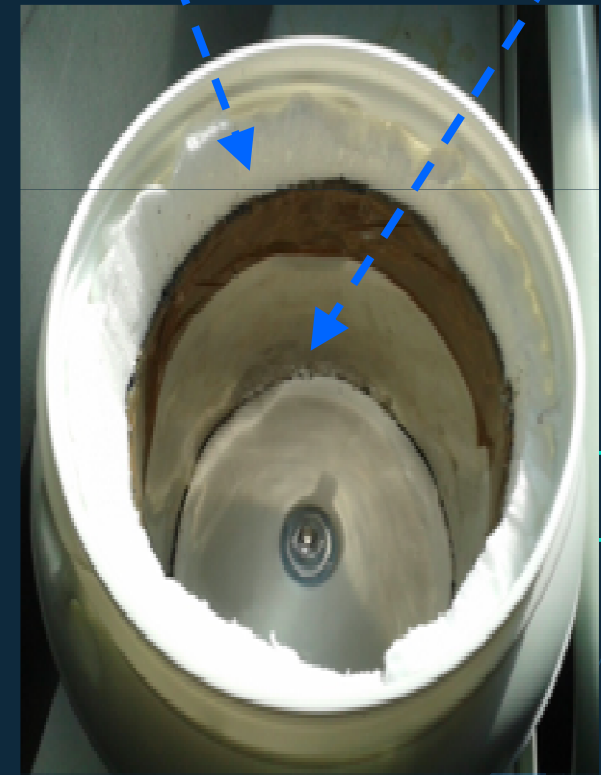


Internal structure



Expanding foam

Flue pipe

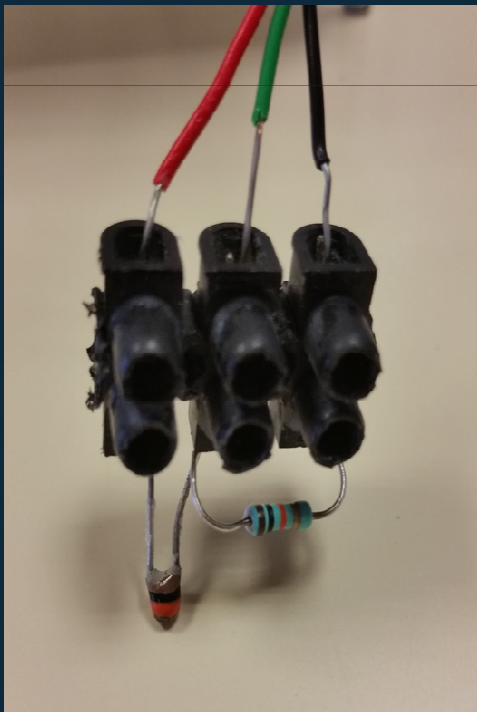


Mango card

Sensors



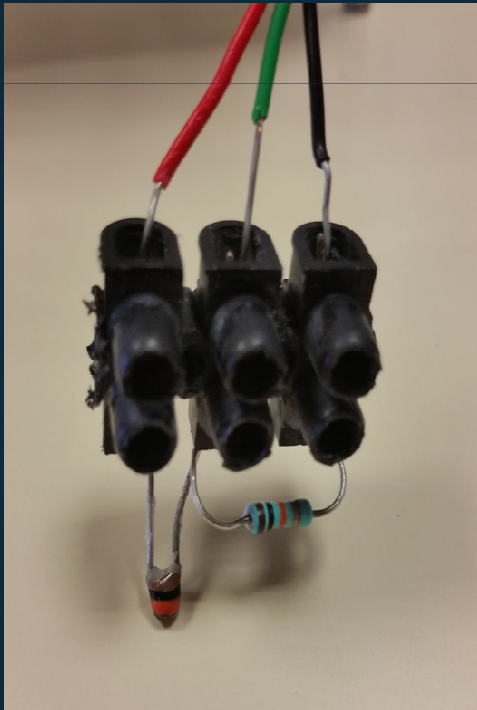
Thermometer (°C)



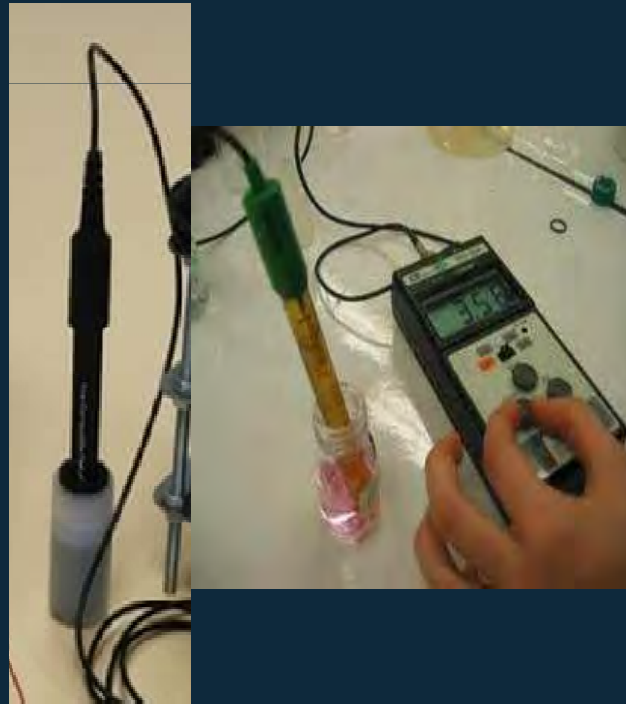
Sensors



Thermometer (°C)



pH-meter



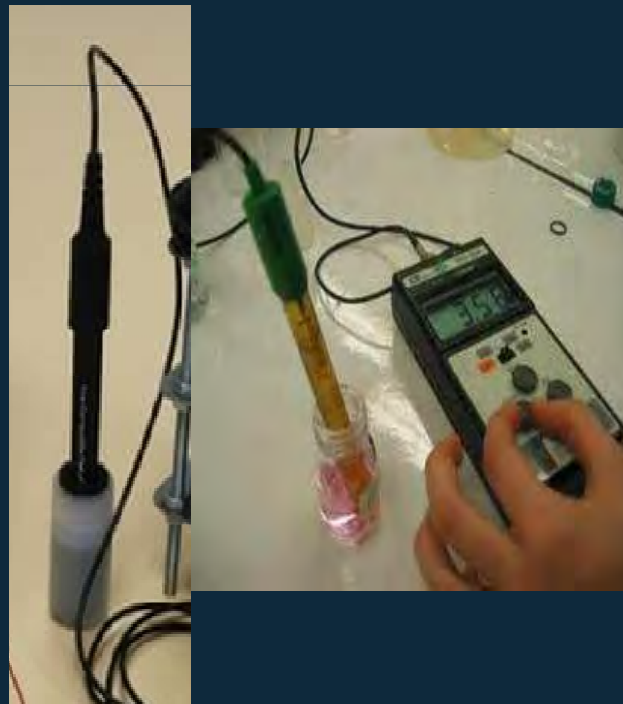
Sensors



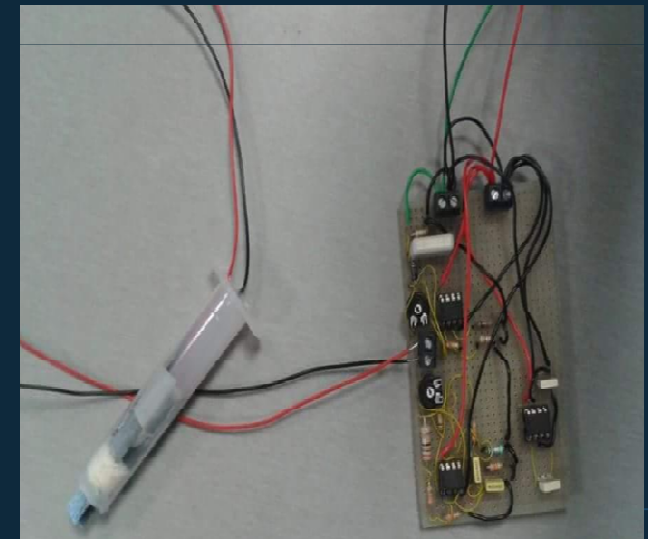
Thermometer ($^{\circ}\text{C}$)



pH-meter



Conductivity sensor



Electrodes :
Anode and
Cathode

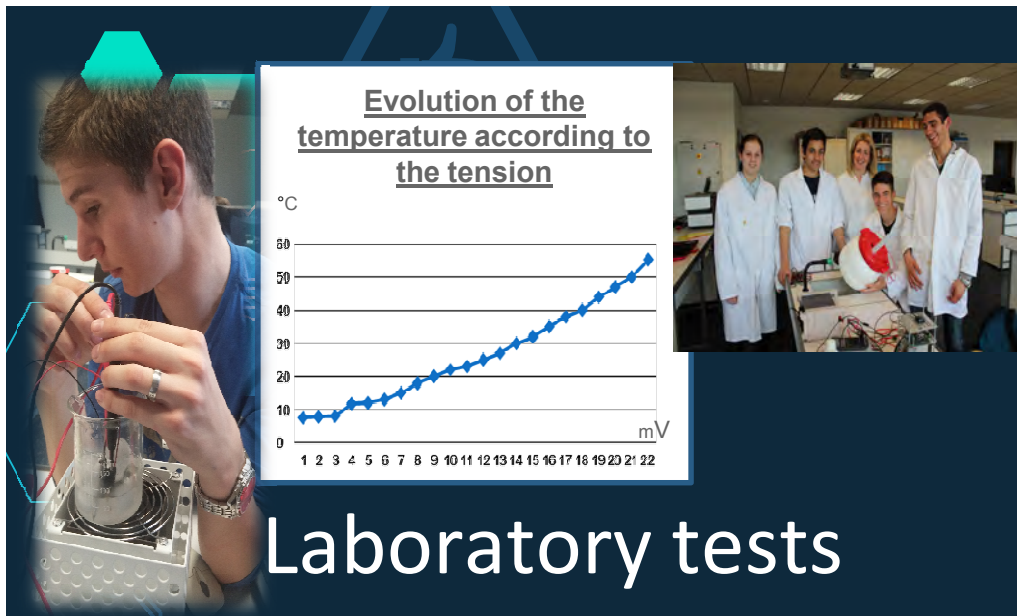
Board with
various
components



3

Tests





Watertight
Buoyancy
Shock resistance



Field tests

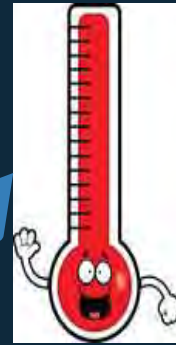
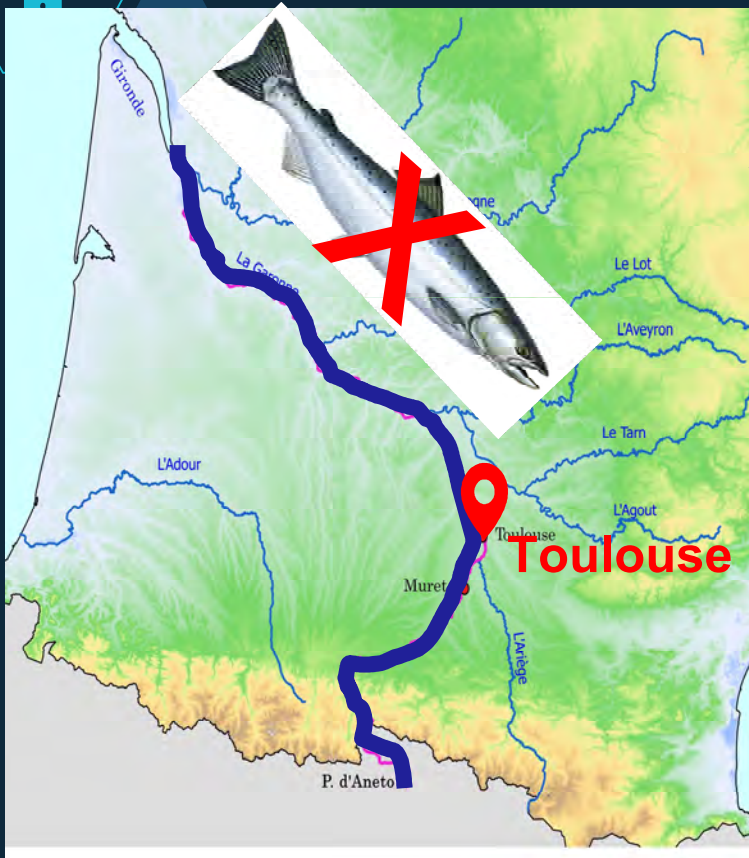




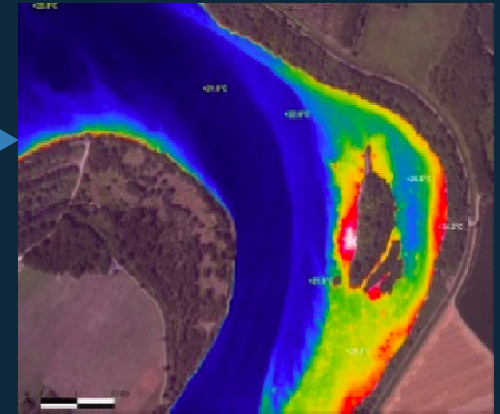
4

Buoy in the context of a scientific study

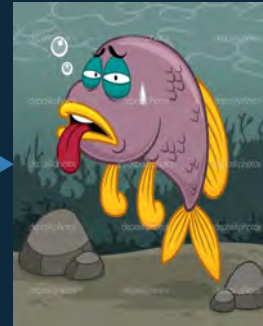
SALMON STUDY



Temperature



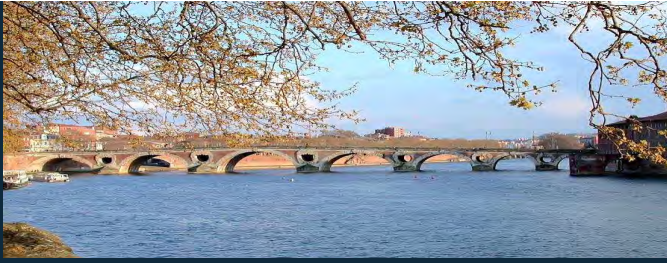
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Water quality



Destruction of habitats



5

Use of satellite in the future

Measurement of streamflow by satellite possible application ?

Evaluation of the use of satellite sensors for the most important hydrological applications requiring RIVER DISCHARGE

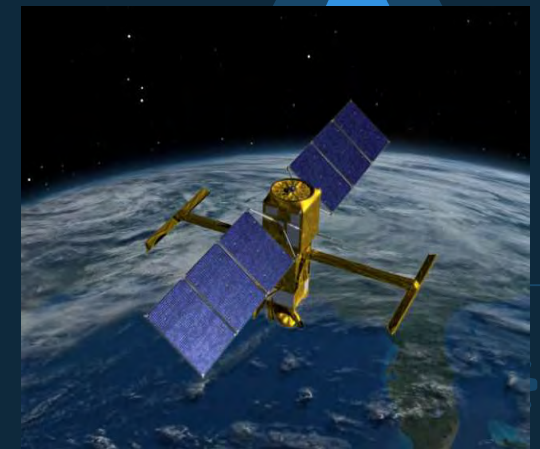
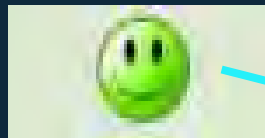
While the temporal resolution of radar altimetry prevents its use on the forecasting activities and for water resources management for small basins, the optical sensors could give a better support for the evaluation of extreme events.

Altimetry can be used for the climate change evaluations, whereas actually less studies have addressed this topic for optical sensors.



Jason

	ALTIMETRY		
	FORECASTING OF EXTREME EVENTS	WATER RESOURCES MANAGEMENT	CLIMATE CHANGE
Small-medium basins			



SWOT



6

Communication



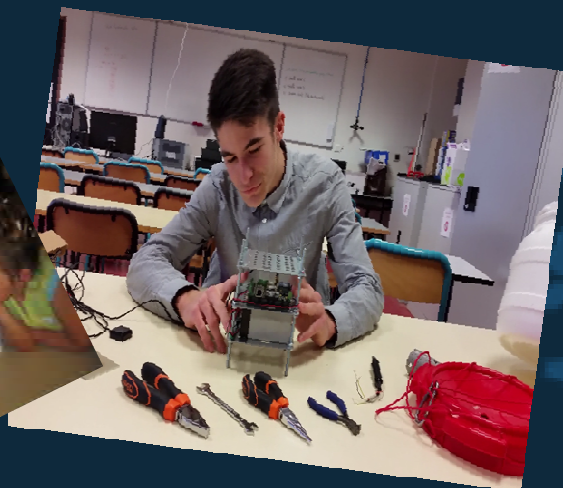
- Newspaper articles
- Movies in french and english
- Explain our project to younger students in primary schools





7

Conclusion



Thank you



E.S.I.



Argonautica



**Experiences
with children**

