

Improvements of oil spill boom contingency plan by a numerical modeling and an exercise in the La Rochelle Harbor

The main objective of this oil-boom exercise is to compare the numerical results with the in-situ observations. The boom is 100m long having 3 intermediary mooring lines. The boom plan is located south of the La Rochelle terminal viaduct.

The Instrumentation measures the:

- boom skirt heel (EIGSI)
- boom line geometry using terrestrial theodolite and a GPS onboard pneumatic boat (LNHE)
- sea current profile using ADCP and current meter onboard pneumatic boat (LNHE)

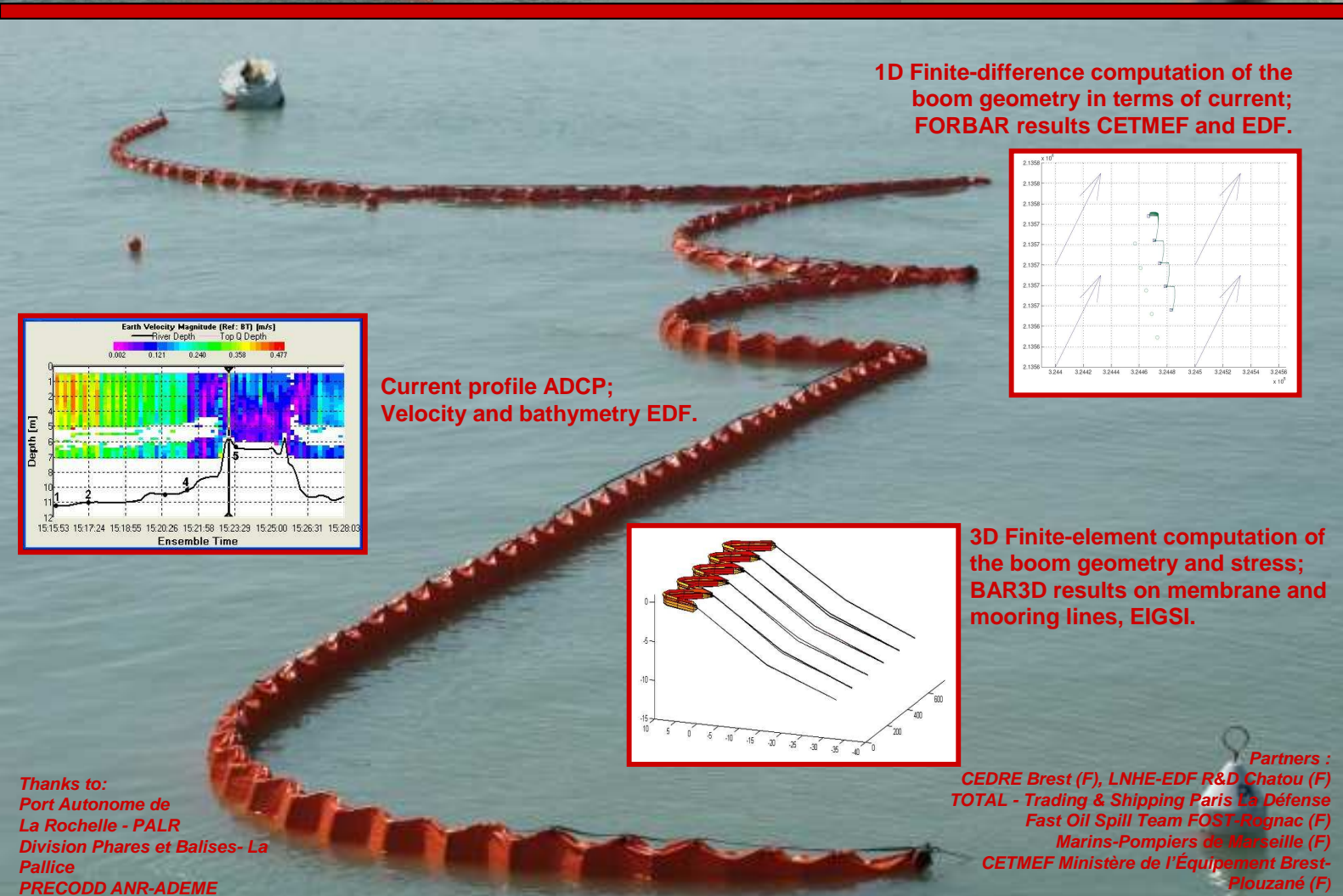


- boom tension with a dynamometer on the south buoyancy coffer (CETMEF)
- natural conditions with an instrumented buoy near the boom : courantometer, wind velocity, water height, GPS (CETMEF)
- photos and videos of the boom, and procedures (EIGSI)

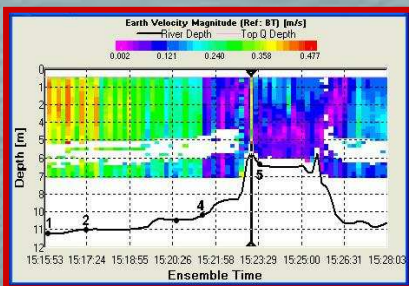
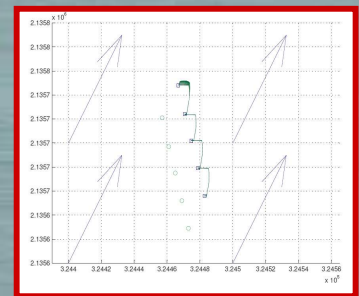
EIGSI Ecole d'ingénieurs La Rochelle
PRECODD Programme de recherche ECTechnologies et Développement Durable
 Financé par **ANR**
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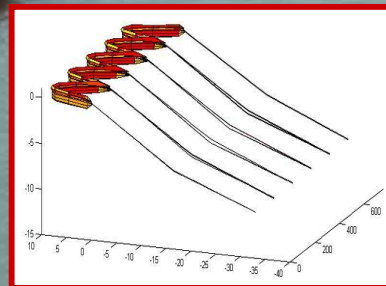
Photos EIGSI and CEDRE



1D Finite-difference computation of the boom geometry in terms of current; FORBAR results CETMEF and EDF.



Current profile ADCP; Velocity and bathymetry EDF.



3D Finite-element computation of the boom geometry and stress; BAR3D results on membrane and mooring lines, EIGSI.

Partners :

- CEDRE Brest (F), LNHE-EDF R&D Chatou (F)
- TOTAL - Trading & Shipping Paris La Défense
- Fast Oil Spill Team FOST-Rognac (F)
- Marins-Pompiers de Marseille (F)
- CETMEF Ministère de l'Équipement Brest-Plouzané (F)

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