



FUMSECK - Résultats

CNES, MIO, 08/04/2021

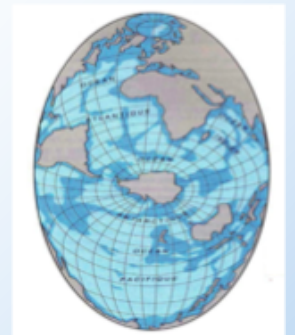
*Stéphanie Barrillon (MIO), Jean-Luc Fuda, Andrea Doglioli, Anne Petrenko,
Melilotus Thyssen, Gérald Grégori, Francesco d'Ovidio, Anthony Bosse,
Christophe Yohia, Léo Berline*

Caroline Comby, Roxane Tzortzis, Lloyd Izard, Robin Fuchs

Hubert Bataille, Nagib Bhairy, Michel Lafont

Pierre Agius, Charlotte Cunci

and the BIOSWOT collaboration

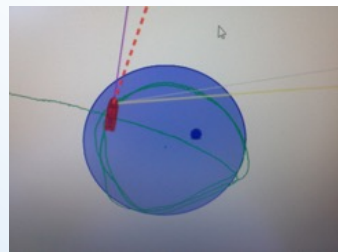
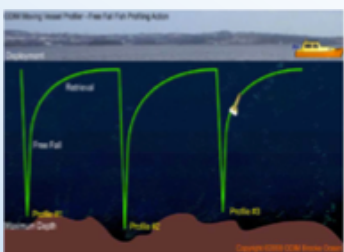
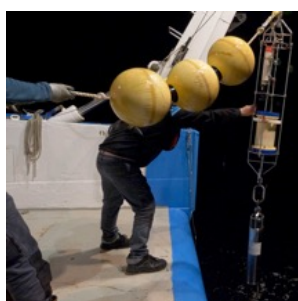
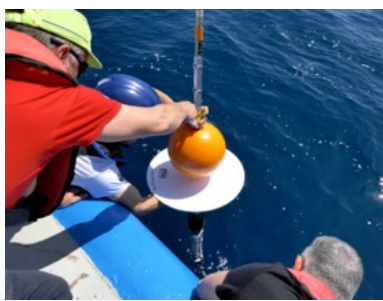


⚓ **FUMSECK** (*Facilities for Updating the Mediterranean Submesoscale - Ecosystem Coupling Knowledge*), 30 avr - 07 mai 2019, mer Ligure. R/V Téthys II (S. Barrillon)

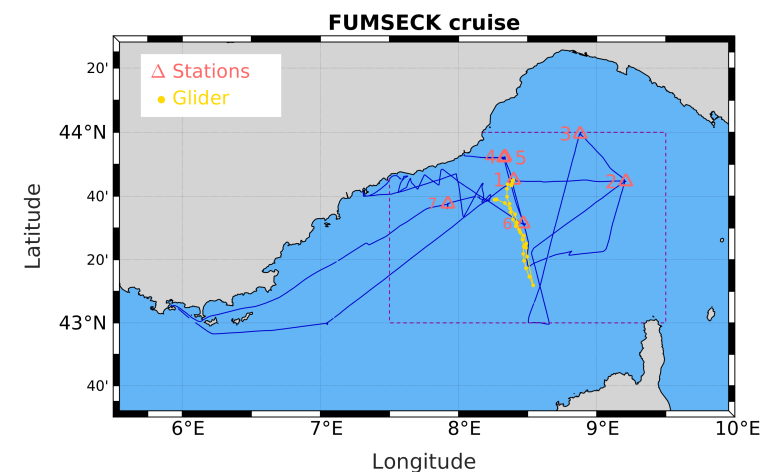
💬 Préparation SWOT. Couplage Phys/bio

💬 Résultats :

- Mesures vitesses verticales
- Couplage phys-bio



💬 Stratégie lagrangienne avec SPASSO

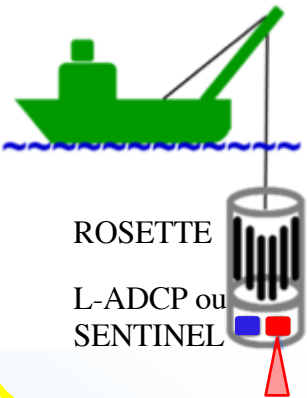




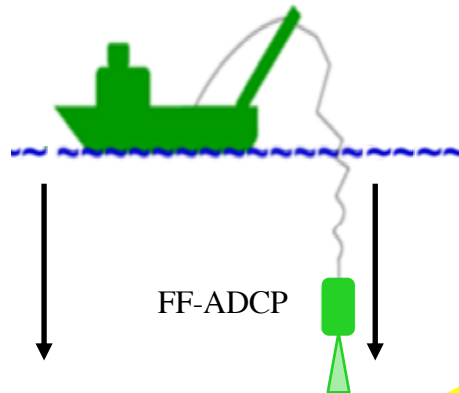
Vitesses verticales océaniques

Mesures *in situ* directes

Bathysonde



Free Fall

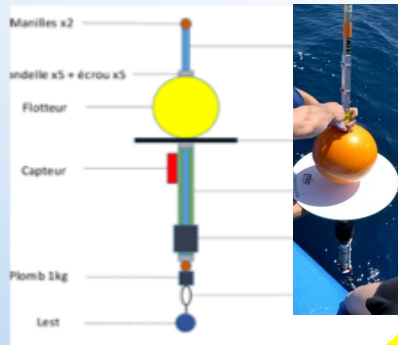


+ ADCP de coque

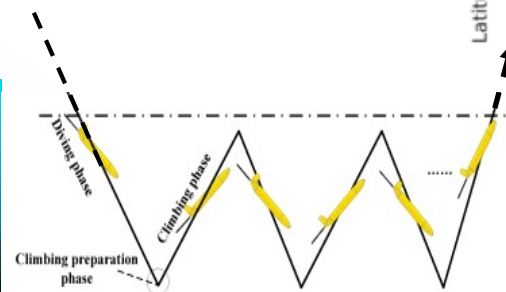
Mesures *in situ* modèle de vol

VVP

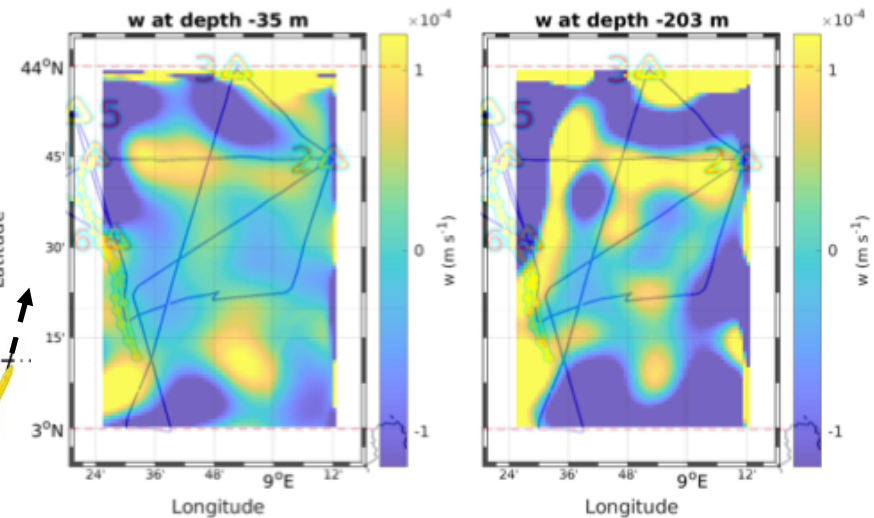
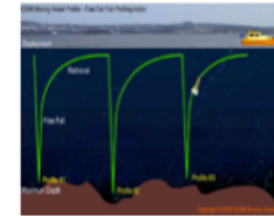
(Vertical Velocity Profiler)



Glider SeaExplorer



Mesures *in situ* indirectes : équation ω





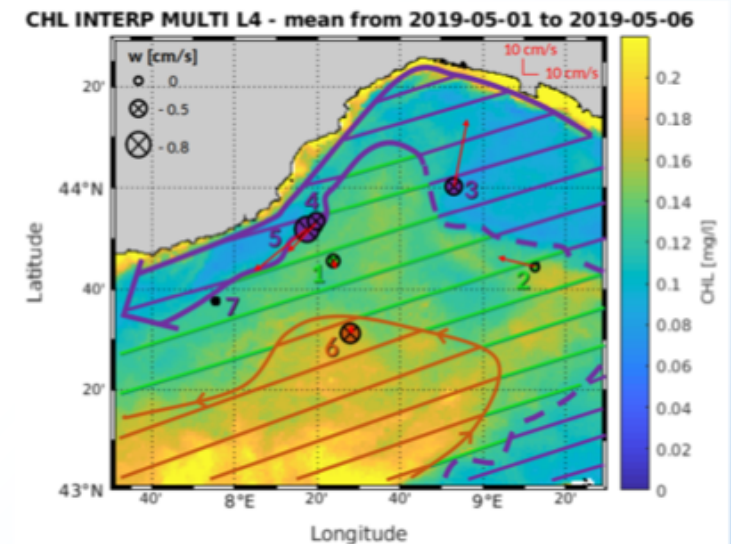
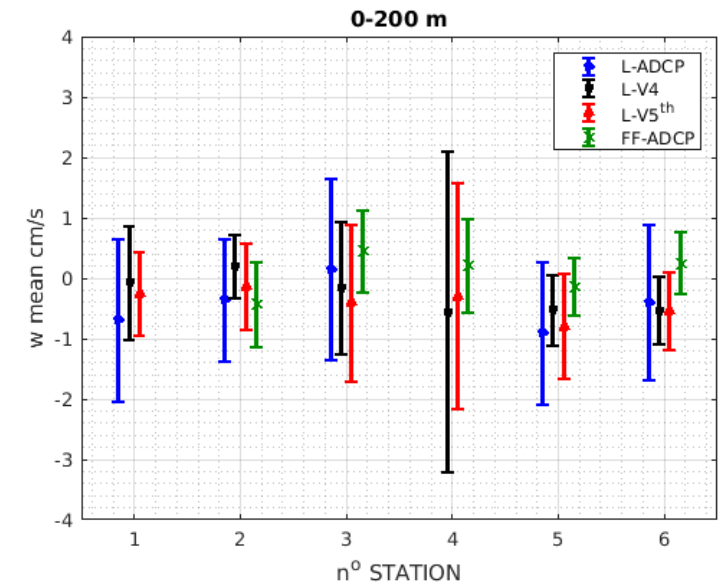
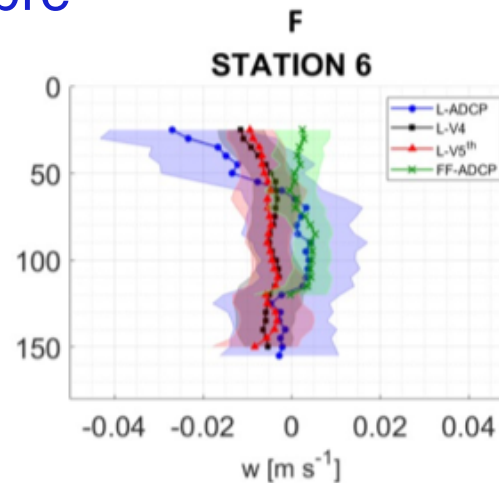
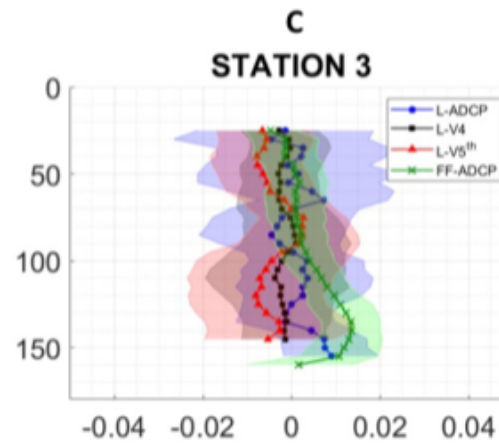
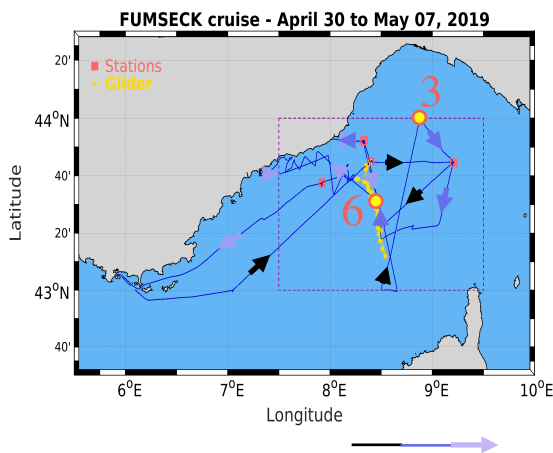
Comby *et al.* (prép. pour resub.)

6 stations

4 méthodes

- L-ADCP
- Sentinel
4 beams et 5^{ème} vert.
- FF-ADCP

→ Sentinel en chute libre





Fuda *et al.* (EGU)



2^{ème} prototype



RBR Concerto

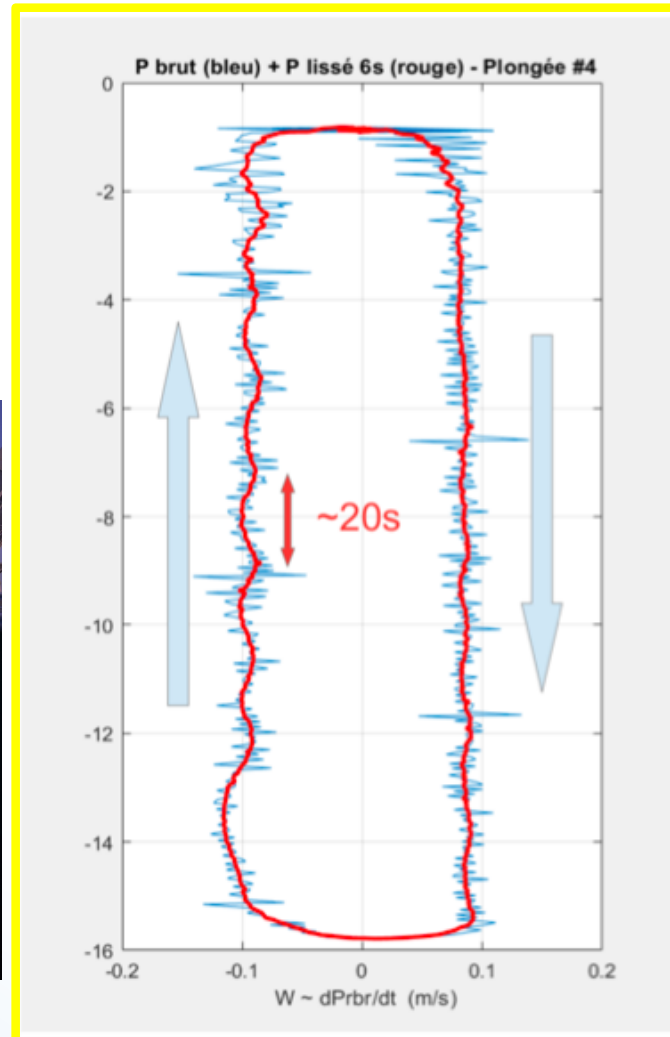


Profileur à hélice



Tests en mer

Vitesse verticale mesurée



Effets de sillage probable



17^{ème} Congrès Français de Mécanique
Septembre 2005

Troyes, -

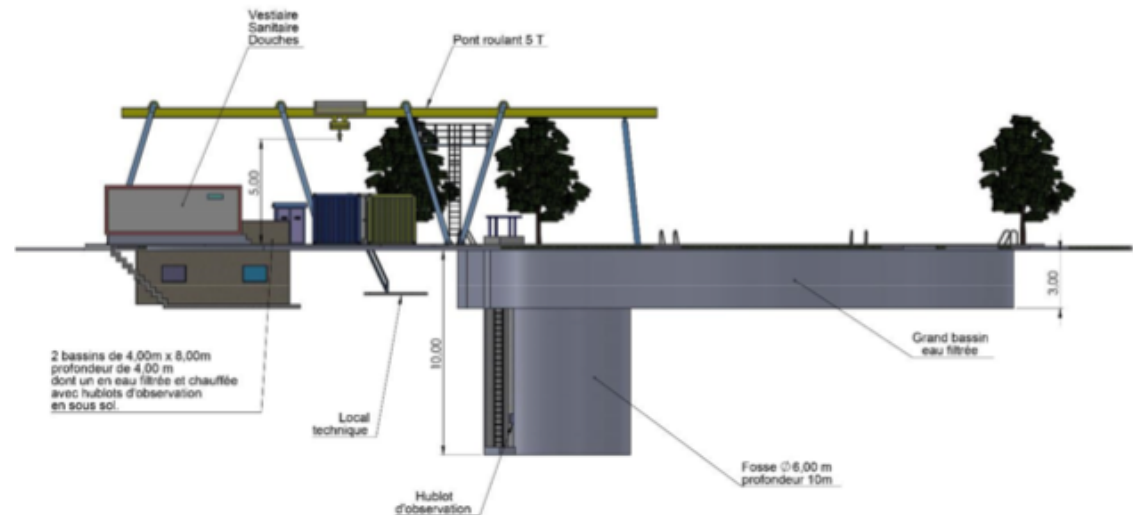


Perspectives

- développement d'une carène



Tests en environnement contrôlé (fosse Comex)

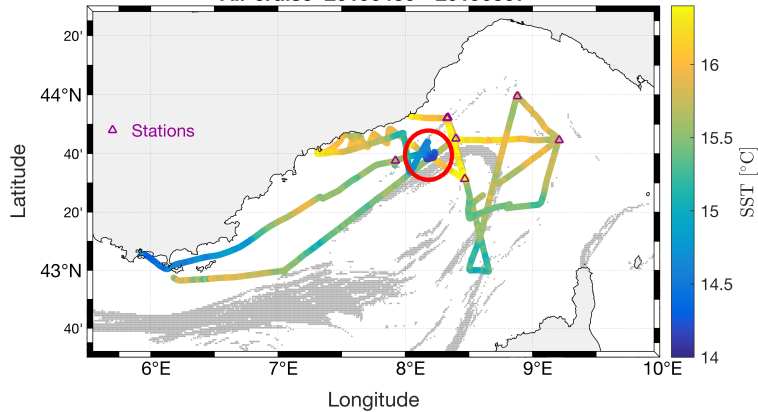




Caractérisation masses d'eau

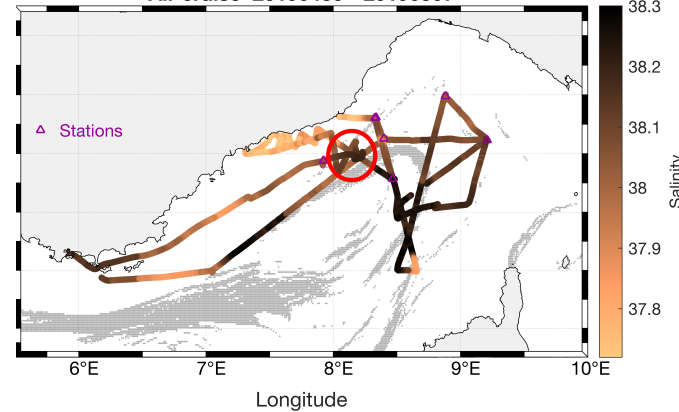
Température

All-cruise 20190430 - 20190507



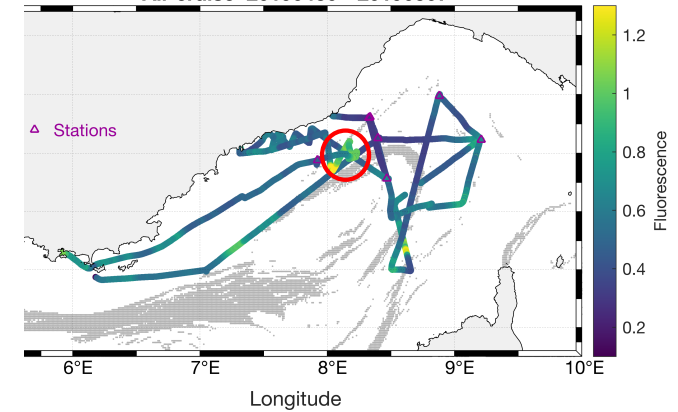
Salinité

All-cruise 20190430 - 20190507

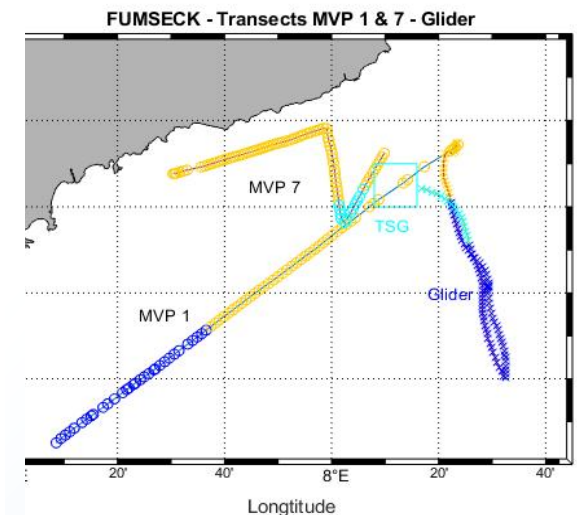
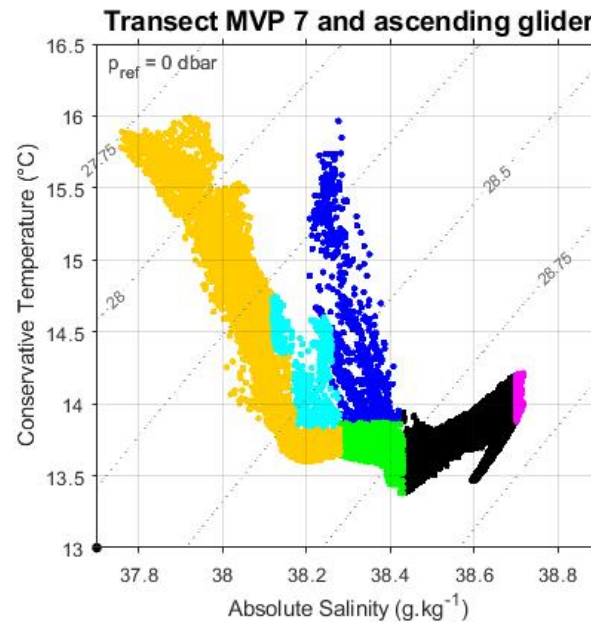


Fluorescence

All-cruise 20190430 - 20190507



Événement impulsif, localisé : eau froide et salée, plus profonde





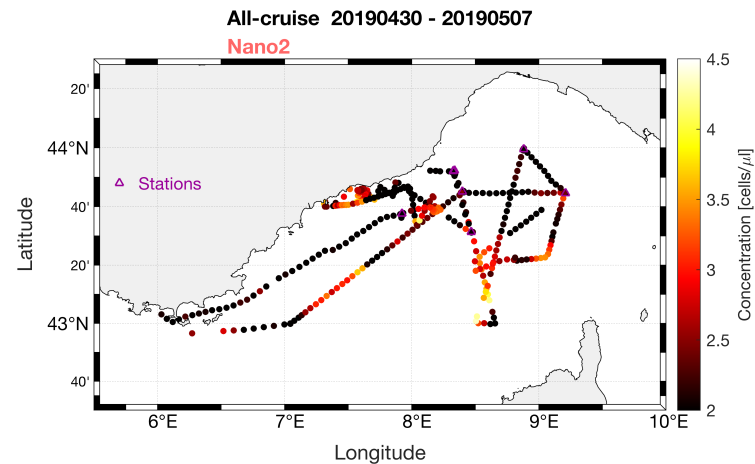
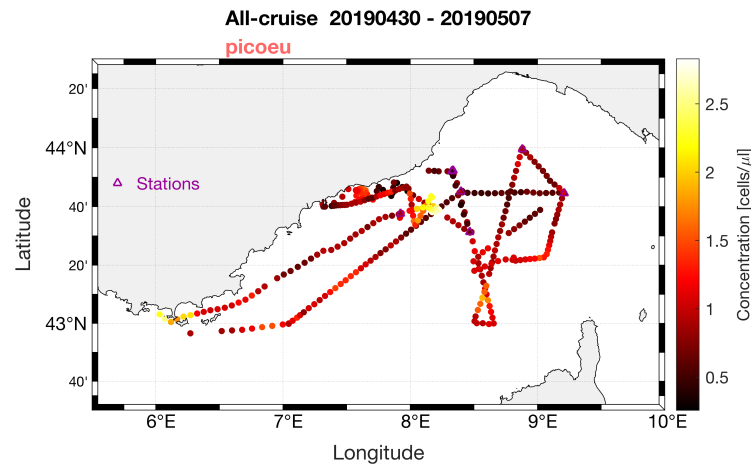
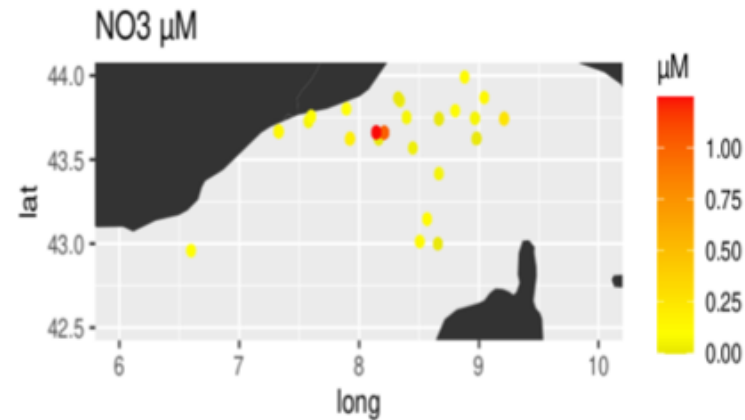
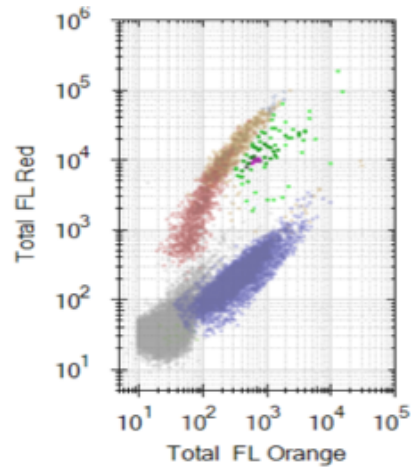
Couplage Physique-Biologie



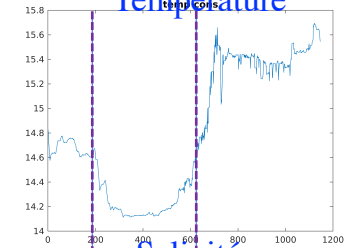
Cytomètre : groupes fonctionnels phytoplanctoniques



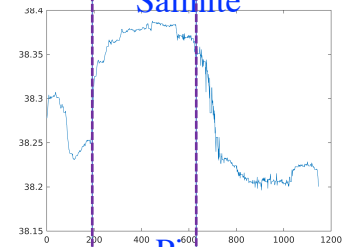
Événement associé à biogéochimie particulière



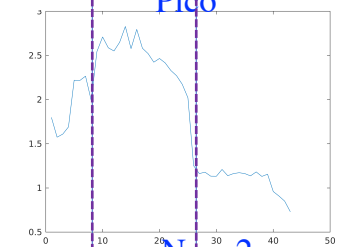
Température



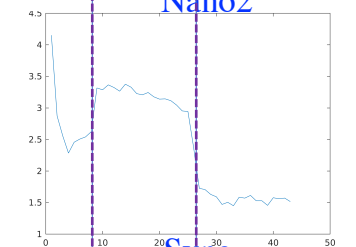
Salinite



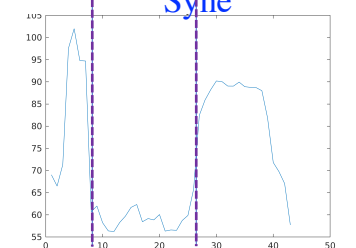
Pico



Nano2



Syne

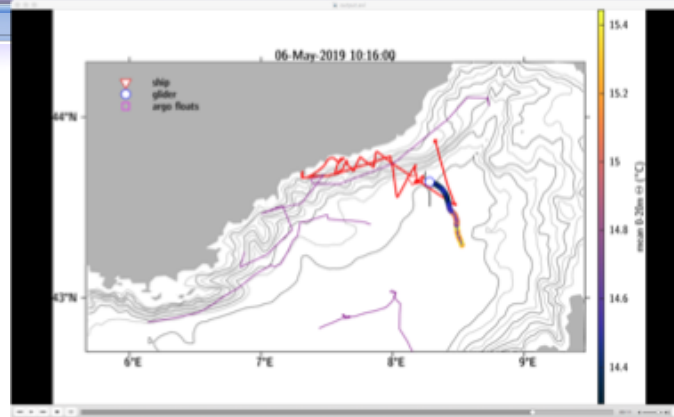
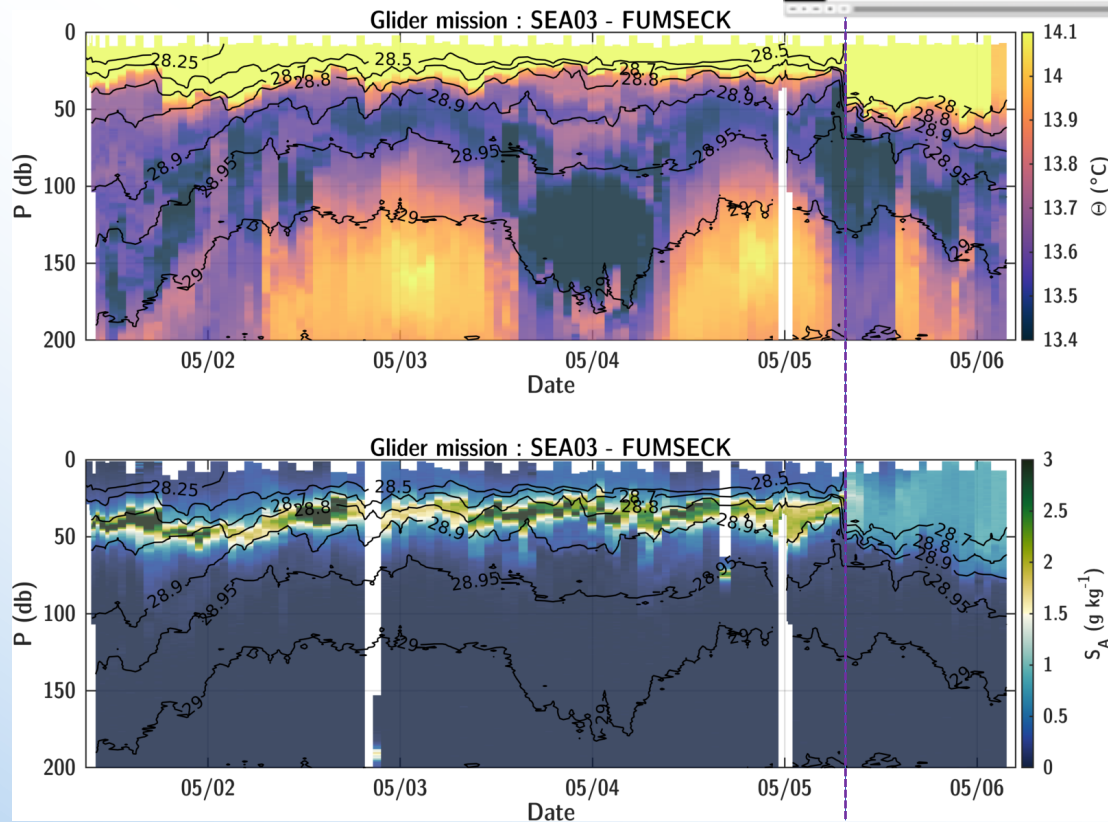


Lien avec données satellite, voir présentation M. Thyssen



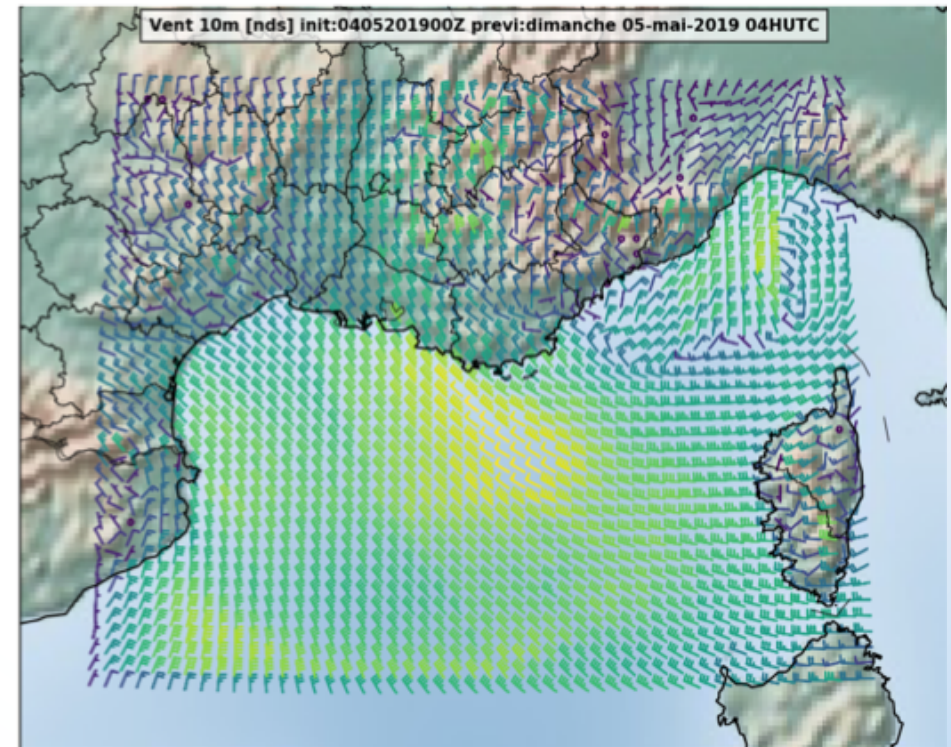
Glider

- Masse d'eau rencontrée en surface à la remontée



Vent

- Événement directement post-tempête



Conclusions

Campagne FUMSECK : avancées

- Développement instrumental et méthodologique physique et biologique dans le cadre des fines échelles océaniques
- Mesures *in situ* des vitesses verticales
- Couplage physique / biologie et mise en lumière d'un événement impulsif au large lié à une tempête
- Préparation BioSWOT-Med



08/04/2021