

# Mesoscale activity in Eastern Mediterranean: Blending Lagrangian drifters with altimetry

Baaklini G.<sup>1,3</sup>, Leila Issa<sup>2</sup>, Julien Brajard<sup>1,6</sup>, Milad Fakhri<sup>3</sup>, Milena Menna<sup>4</sup>,  
Isabelle Taupier-Letage<sup>5</sup>, and Laurent Mortier<sup>1</sup>

(1) Sorbonne Université, LOCEAN, France

(2) Lebanese American University, Beirut, Lebanon

(3) National Center for Marine Sciences, National Council for Scientific Research (CNRS-L), Batroun, Lebanon

(4) OGS, National Institute of Oceanography and Experimental Geophysics, Trieste, Italy

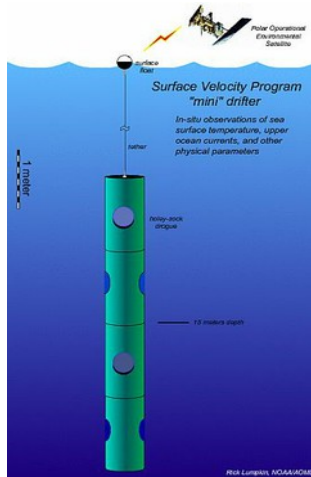
(5) MIO, Institut Méditerranéen d'Océanologie, France

(6) NERSC, Nansen Environmental and Remote Sensing Center, Bergen, Norway

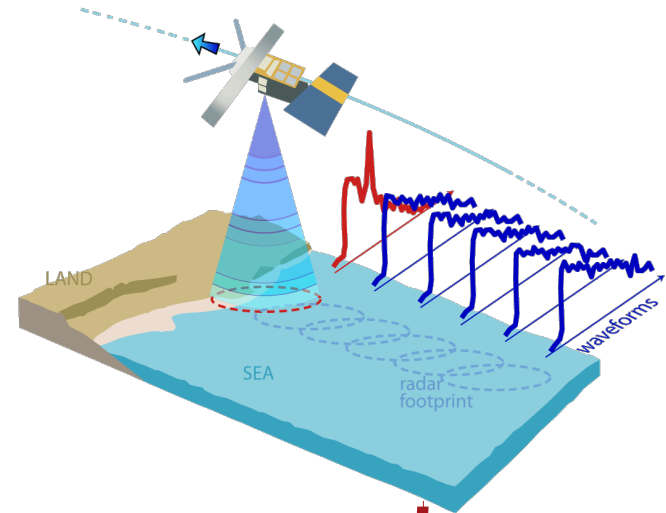
Work to be submitted soon

# Target

## Variational assimilation



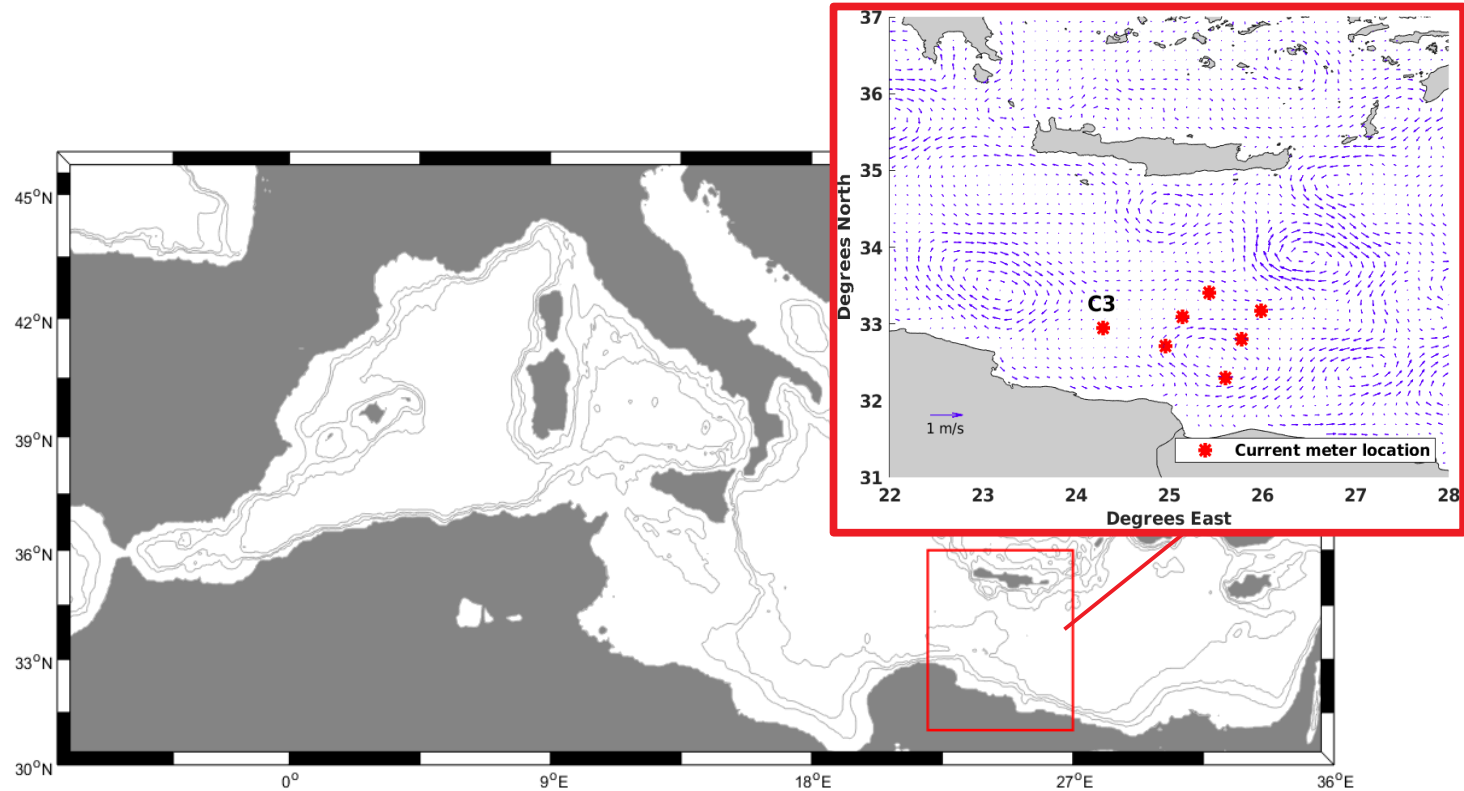
+



Issa *et al.* (2016)

# Studied area

Comparison of  
assimilation  
results with the  
deployed current  
meter data

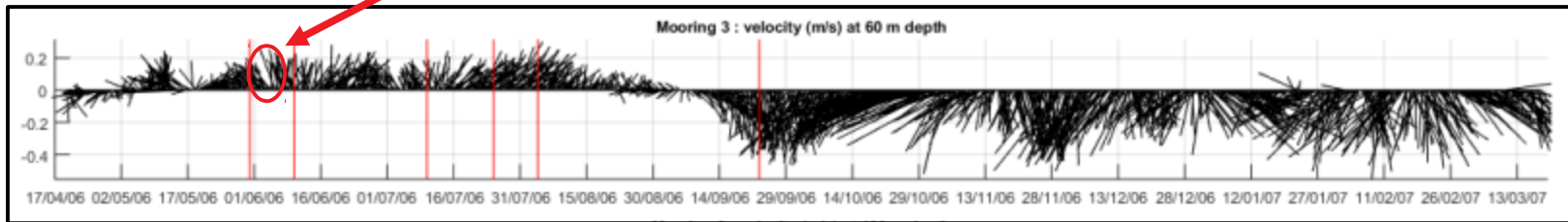


# Case study

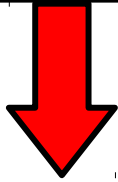
**1-11 June 2006**

Drifter passage near a current meter at 60 m depth

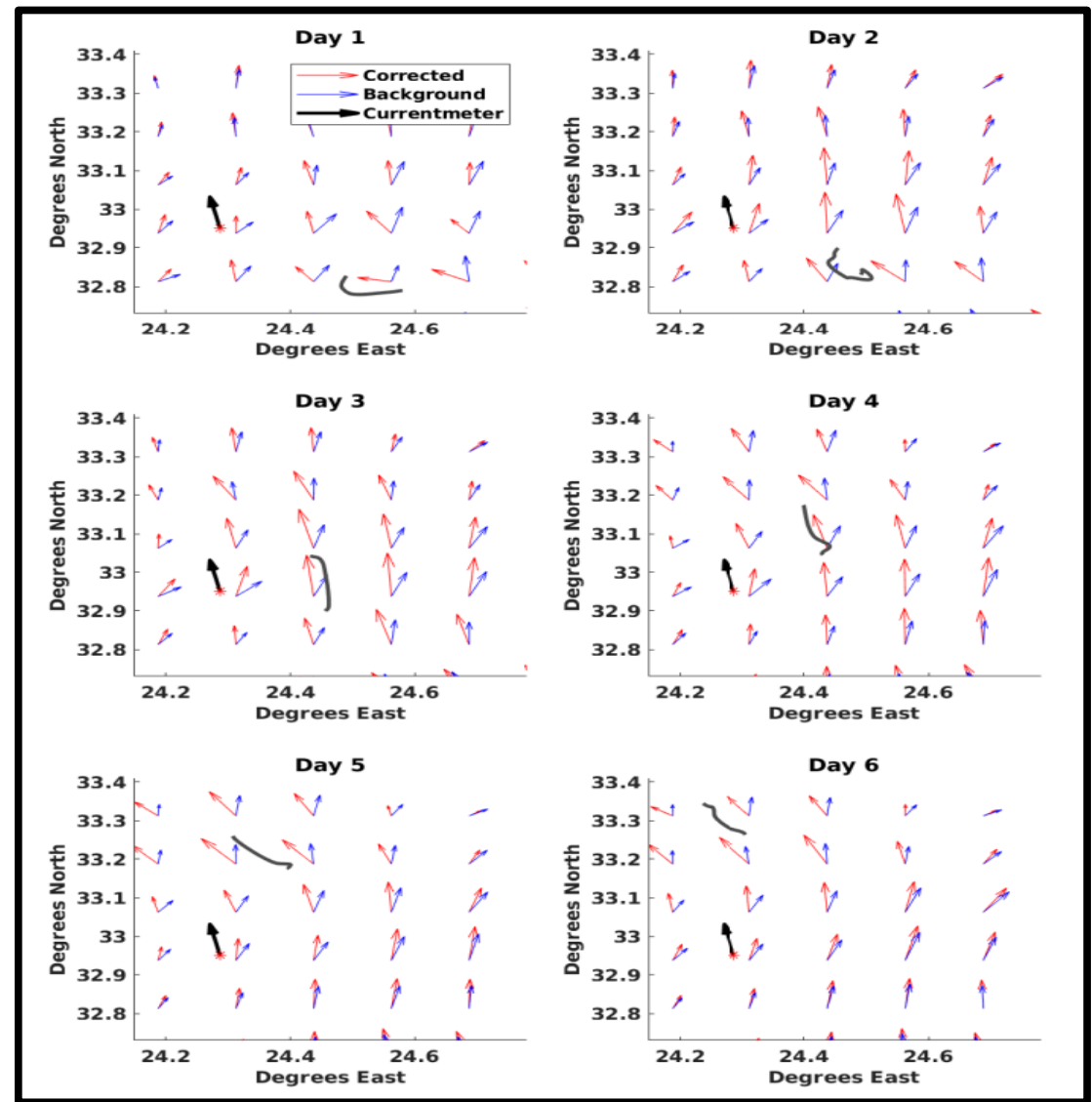
Velocity variation of  
current meter during  
drifter passage



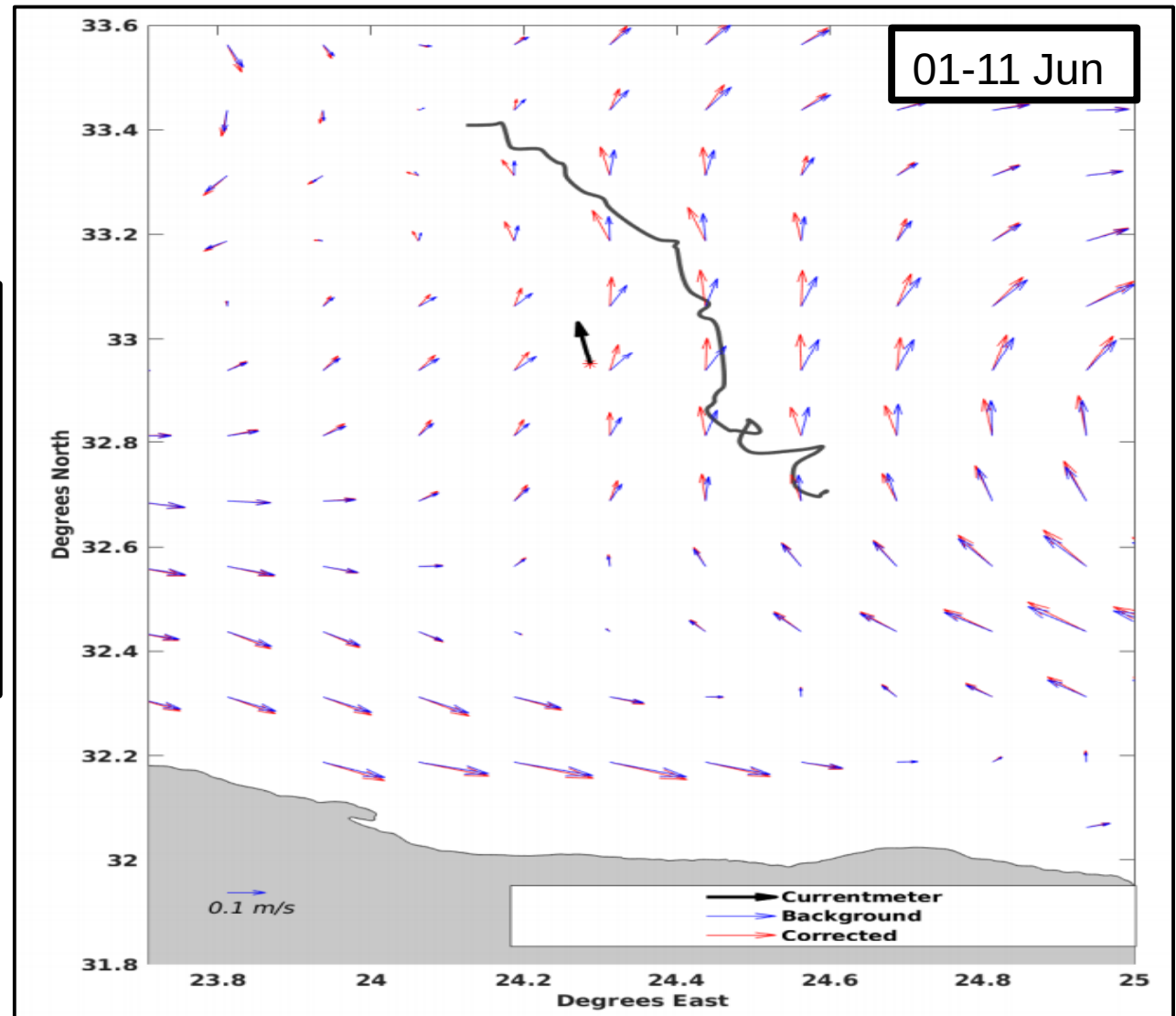
## Comparison of daily average velocities (from D1 to D6)



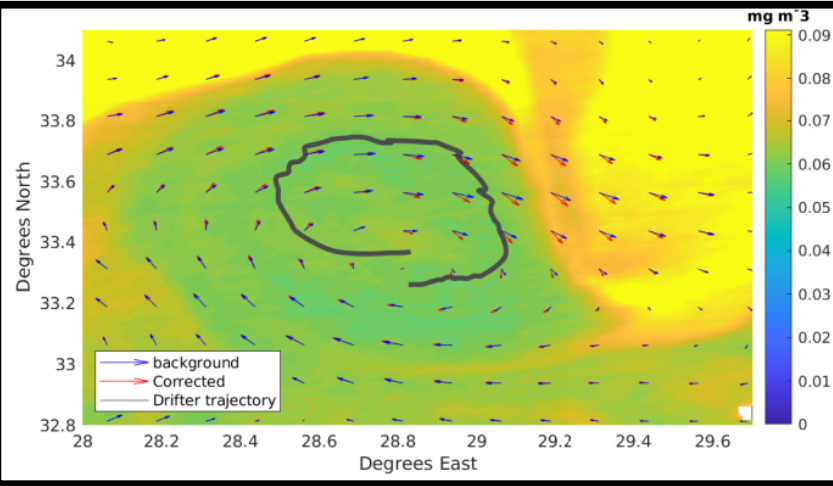
All days are more  
consistent after  
correction with  
current meter



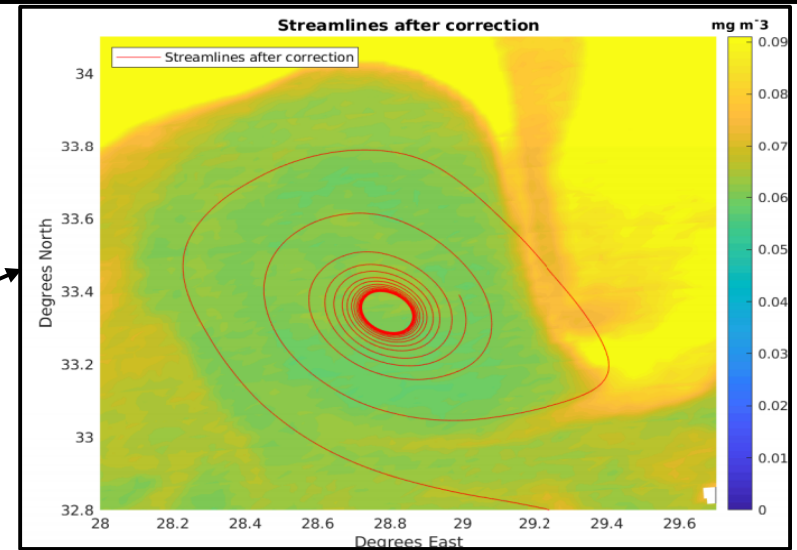
10 days average  
current meter  
velocity looks more  
similar to the  
corrections



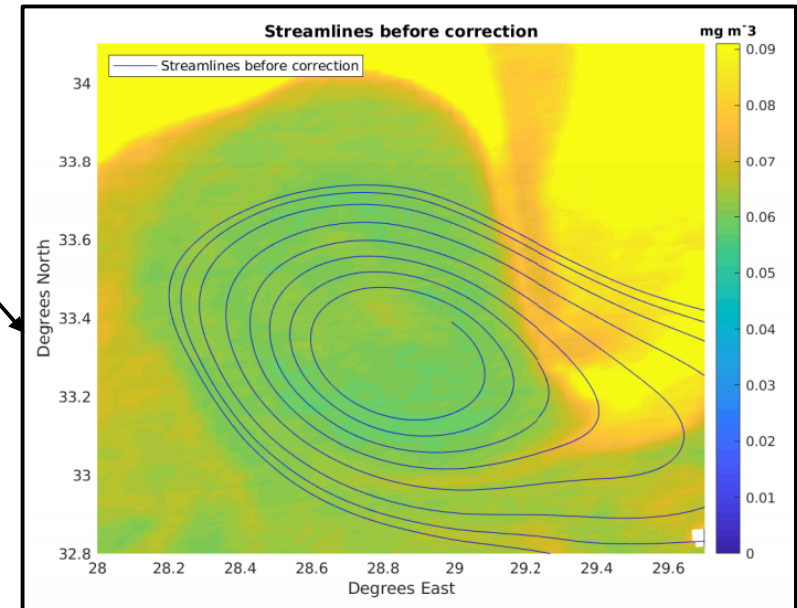
# Comparison with ocean colors: Surface chlorophyll



After  
correction



Before  
correction



- In high vorticity cases, velocity streamlines after correction are more consistent with the chlorophyll images