

DOC, DISSOLVED OXYGEN AND NUTRIENT TRENDS IN THE SOUTHERN TYRRHENIAN SEA

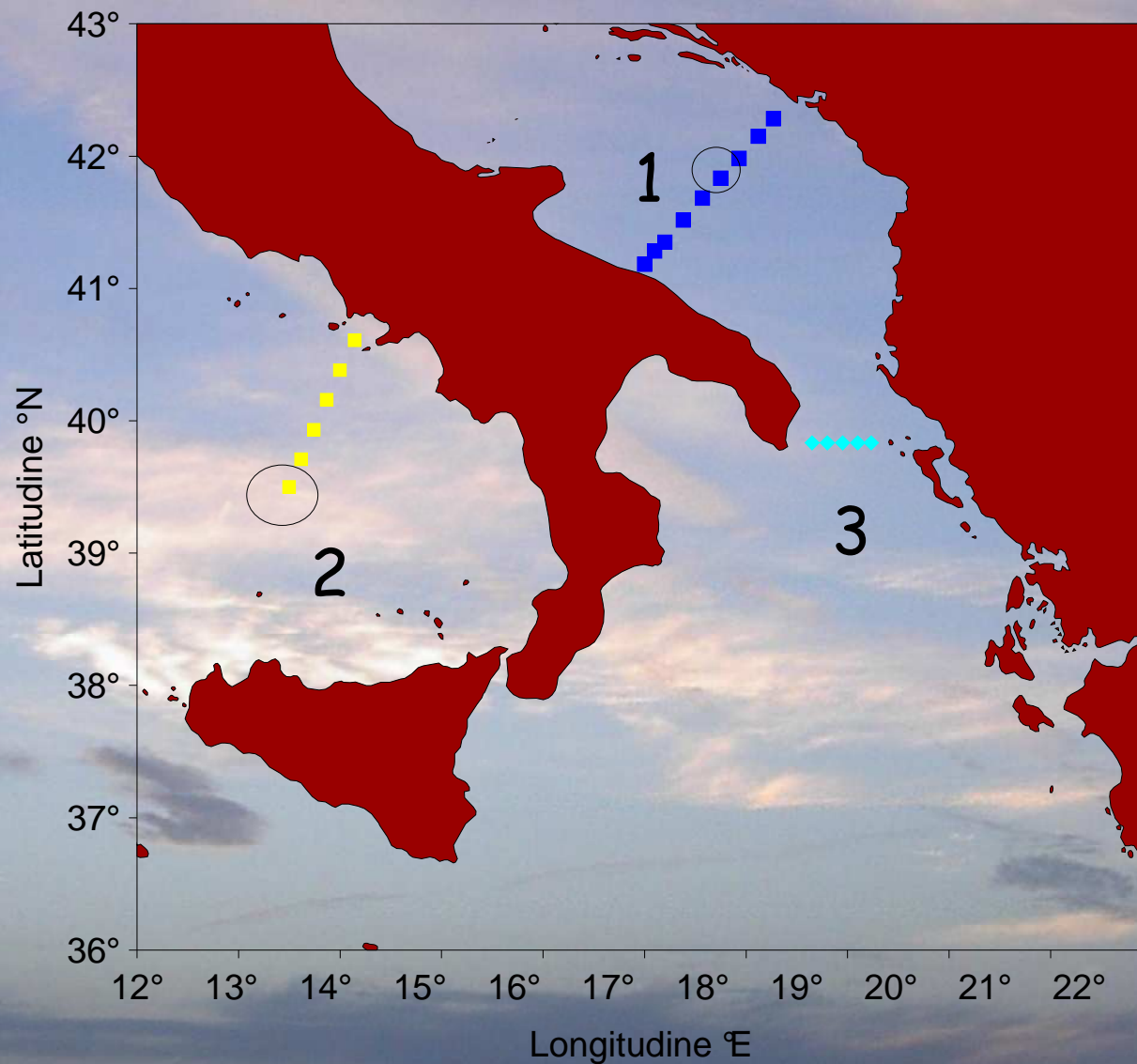
SANTINELLI C., CONVERSANO F., LAVEZZA R., NANNICINI L., RIBERA D'ALCALÀ M.,
SERITTI A.
IBF-CNR Pisa; SZN

DOC DISTRIBUTION AND DOM STOICHIOMETRY IN THE ADRIATIC SEA

SANTINELLI C., IBELLO V., CIVITARESE G., NANNICINI L.,
SERITTI A.
IBF-CNR Pisa; ISMAR-CNR Trieste

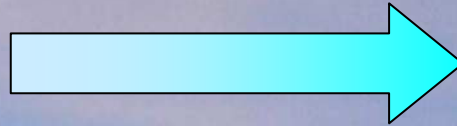
Linea 8

Attività 1, 2, 3



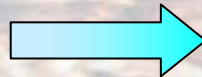
Perchè DOC?

E' la principale riserva di carbonio organico reattivo della Terra (97%)

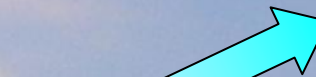


Gioca un ruolo chiave nel ciclo globale del Carbonio

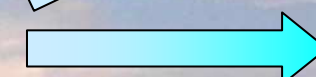
Rappresenta la fonte di cibo per i batteri eterotrofi



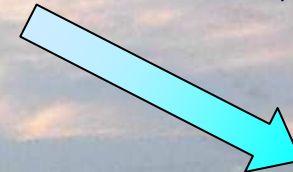
Frazione Labile e semi-labile



Transformata in biomassa

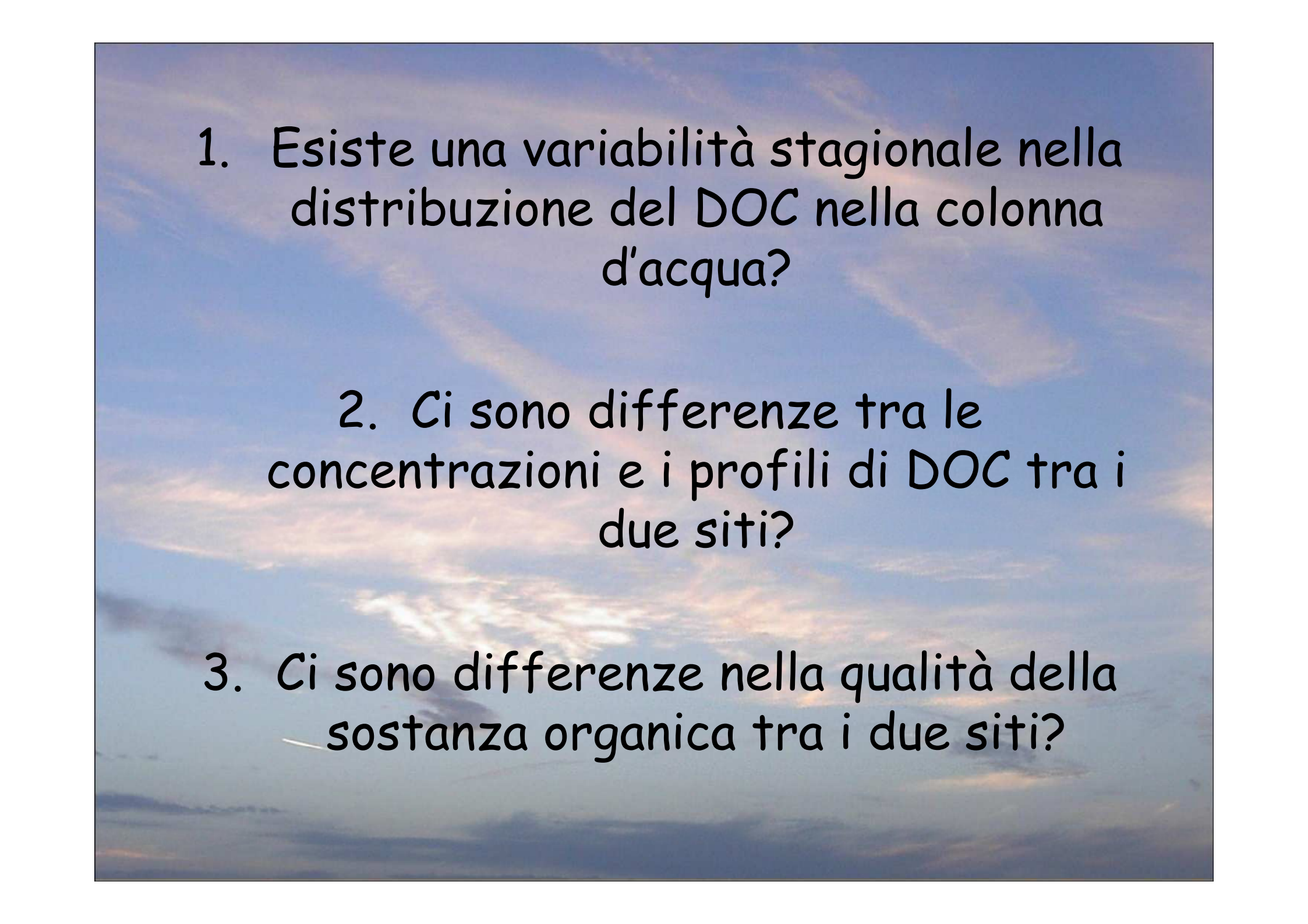


Respirata a CO₂



Transformata e rilasciata come DOM

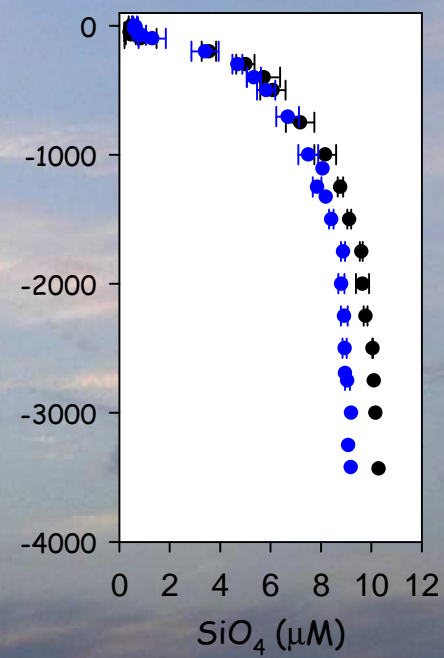
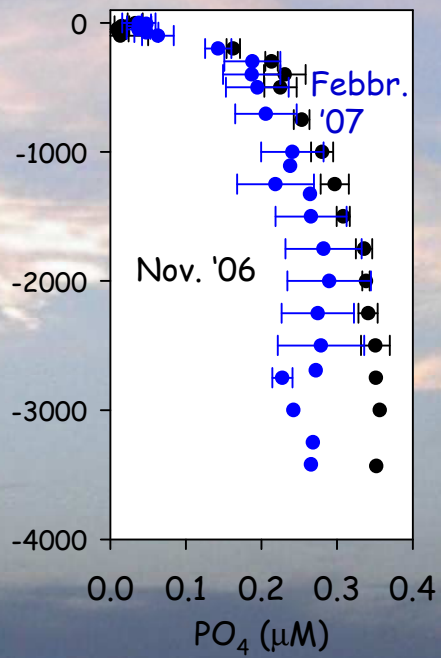
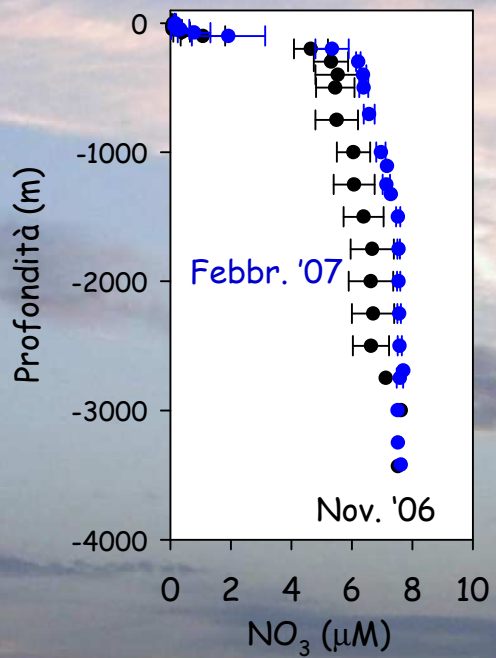
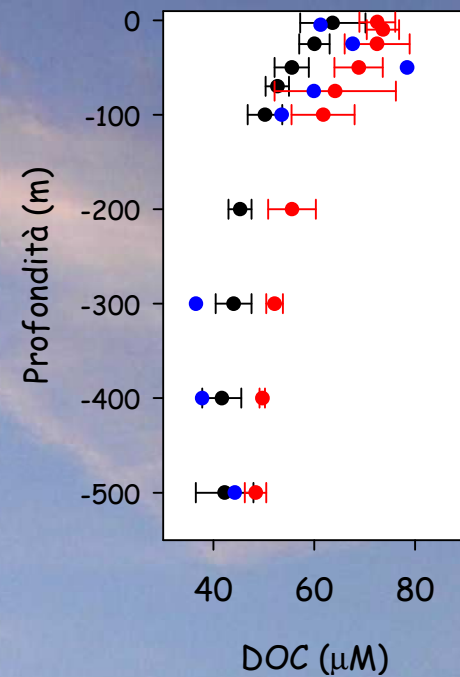
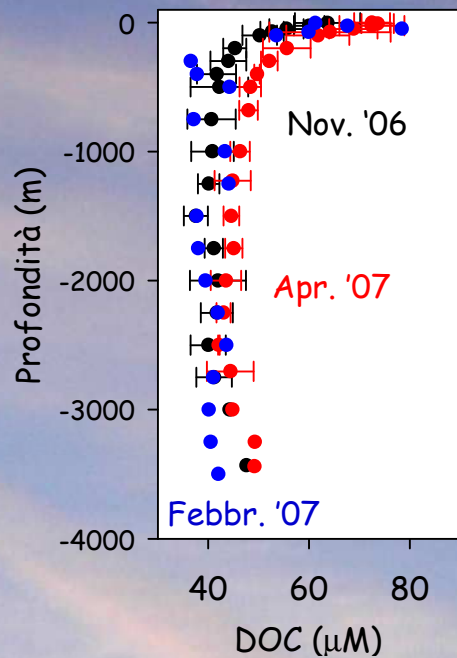
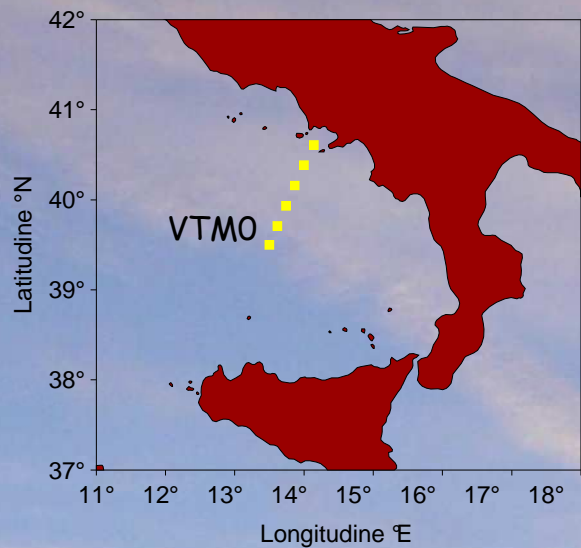
Frazione Refrattaria



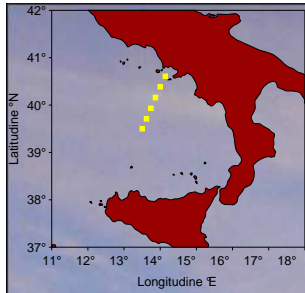
1. Esiste una variabilità stagionale nella distribuzione del DOC nella colonna d'acqua?

2. Ci sono differenze tra le concentrazioni e i profili di DOC tra i due siti?

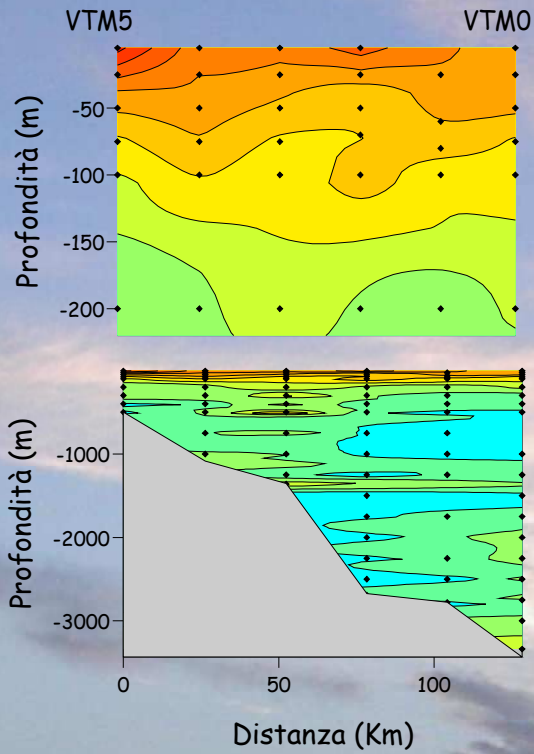
3. Ci sono differenze nella qualità della sostanza organica tra i due siti?



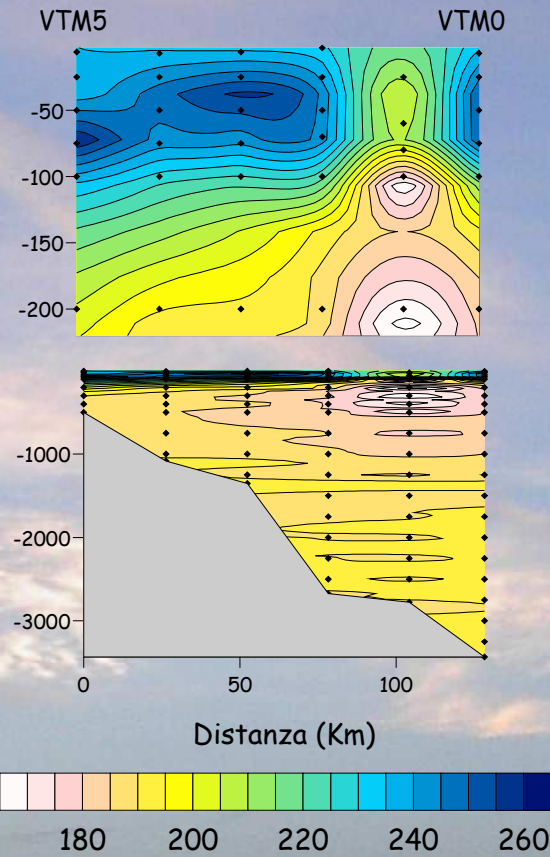
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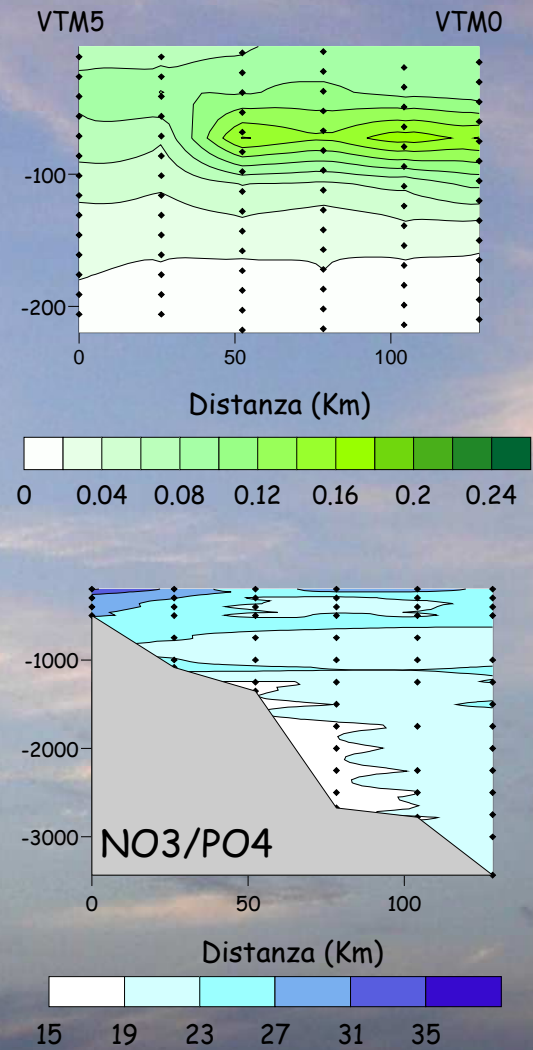
DOC (μM)



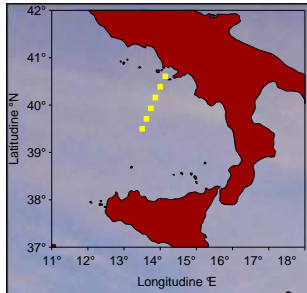
DO (μM)



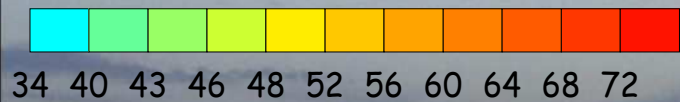
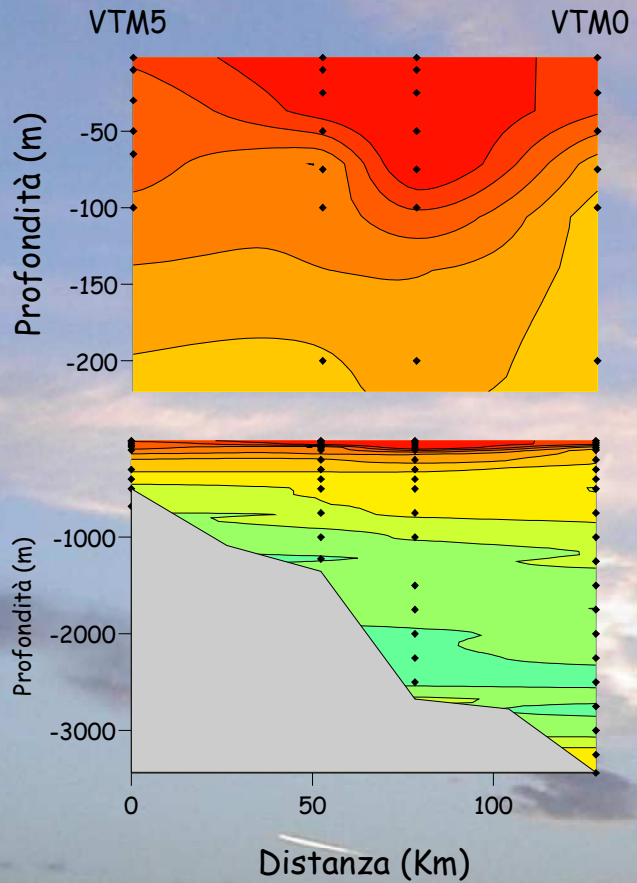
Chl a (U.F.I.A.)



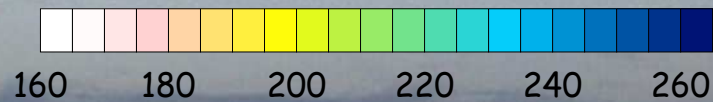
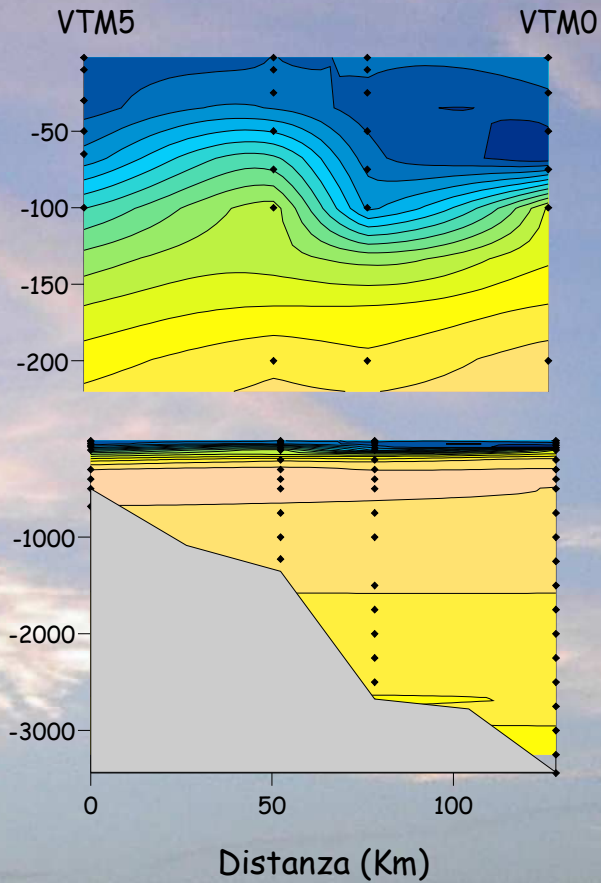
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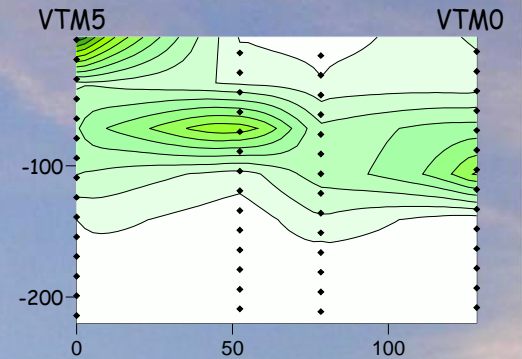
DOC (μM)



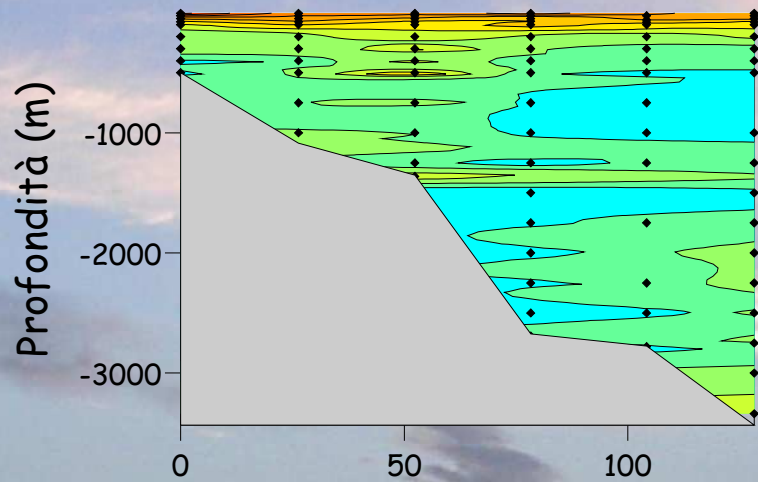
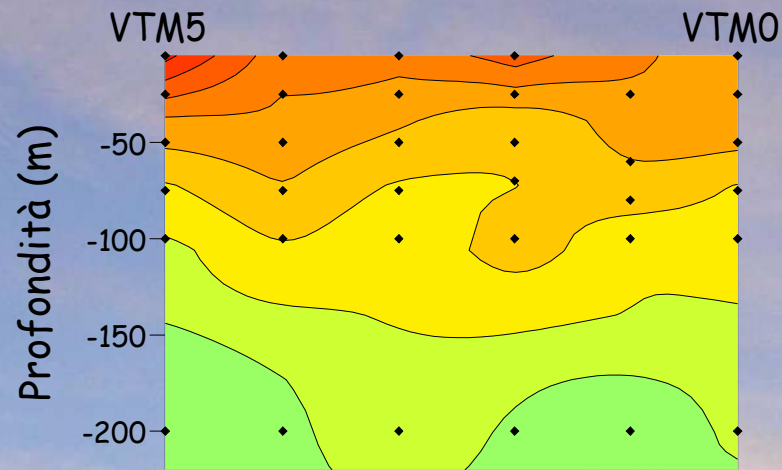
DO (μM)



Chl a (U.F.I.A.)

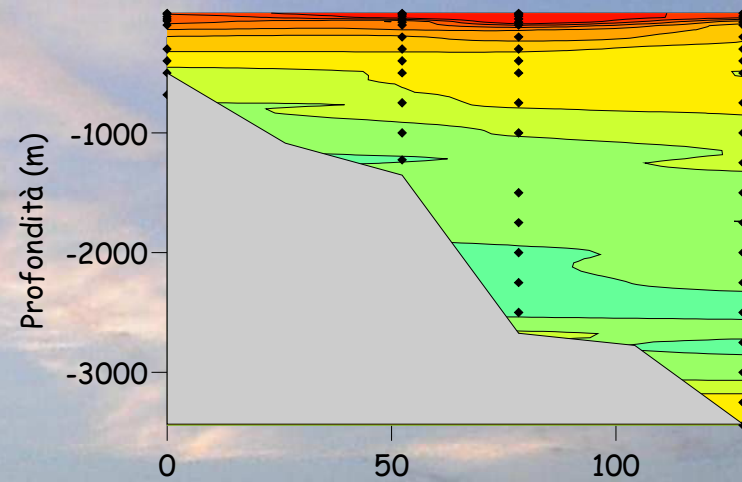
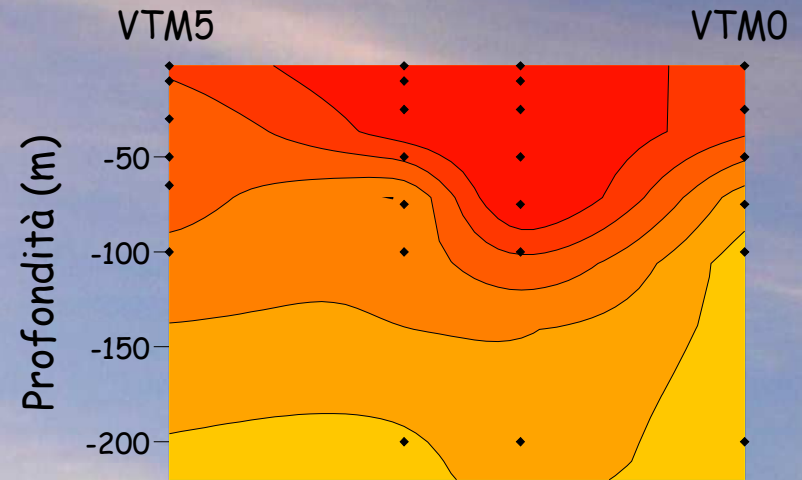


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Distanza (Km)

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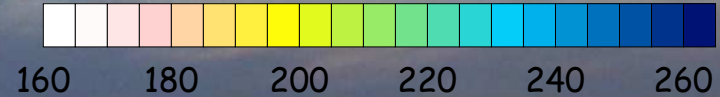
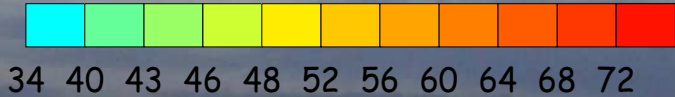
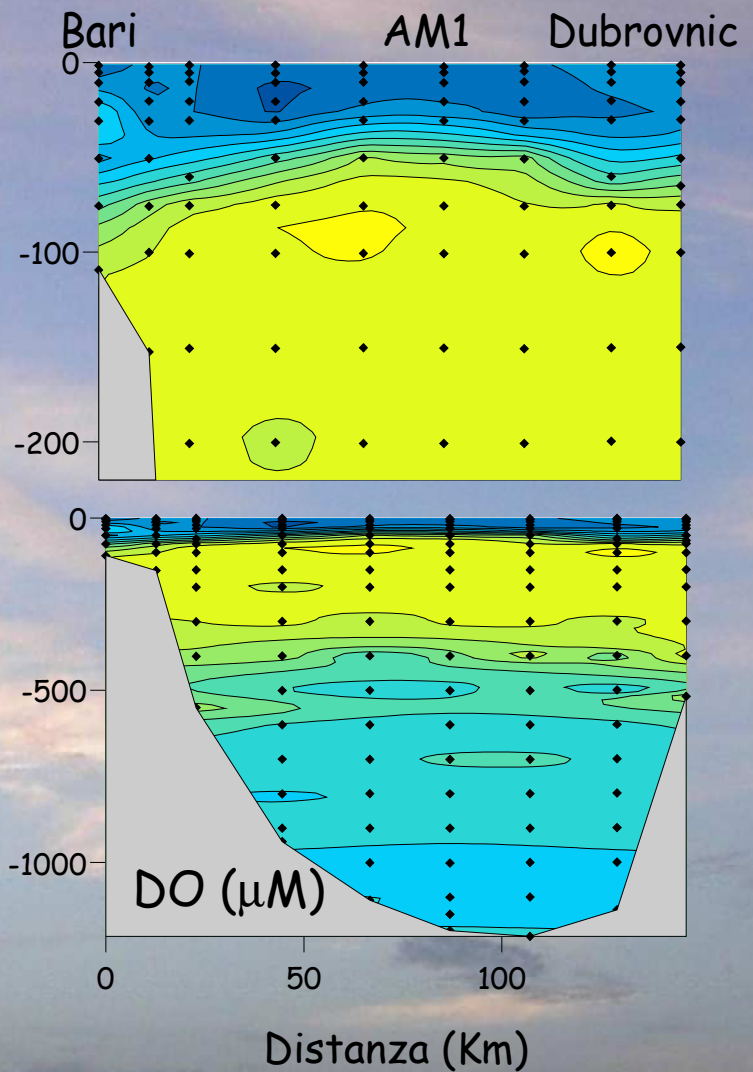
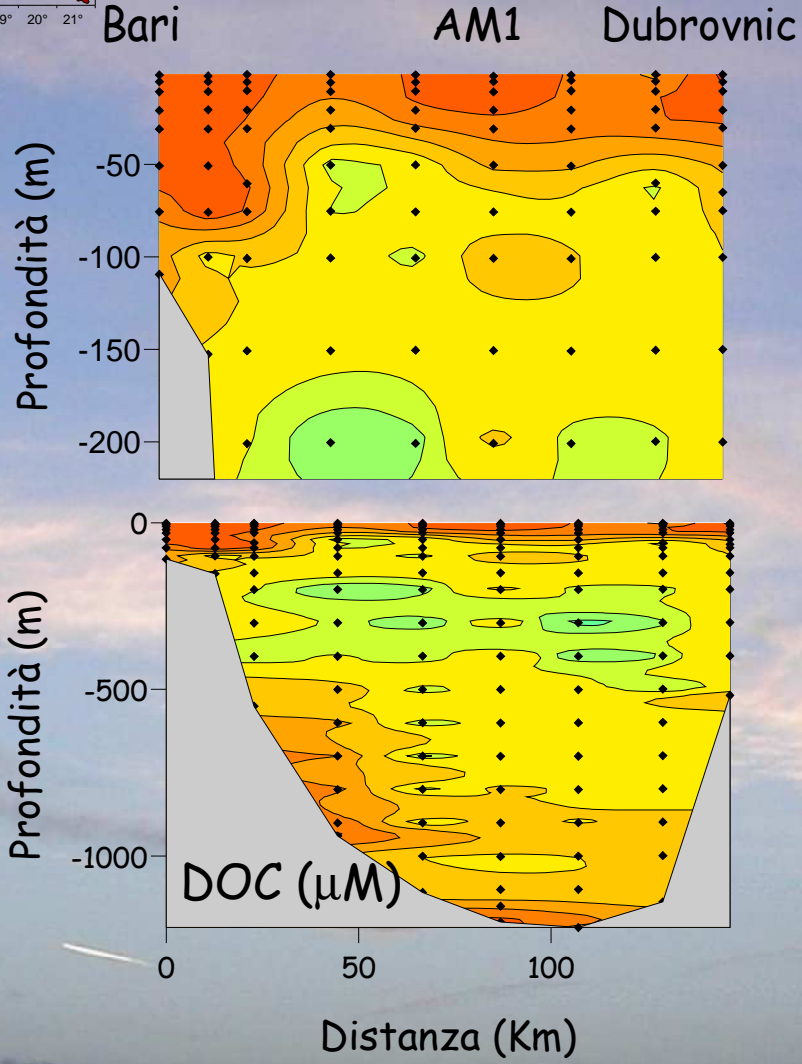
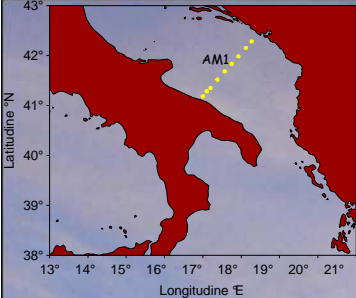


Distanza (Km)

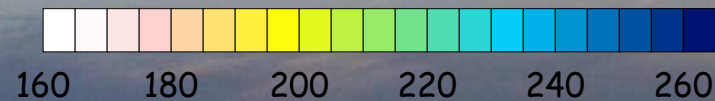
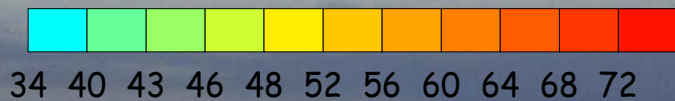
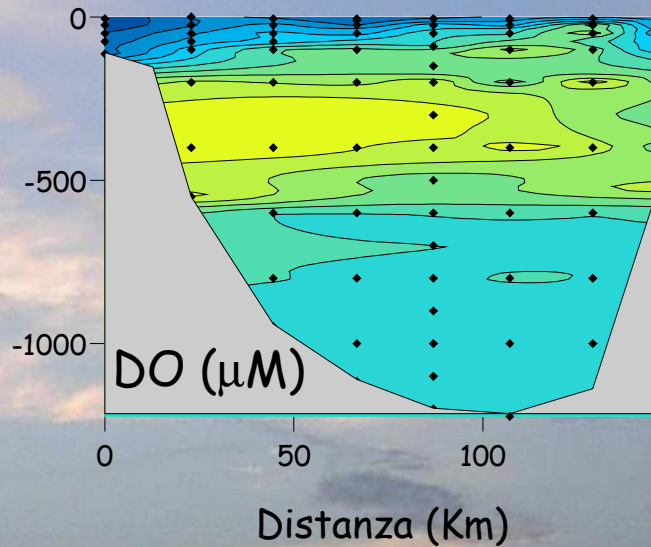
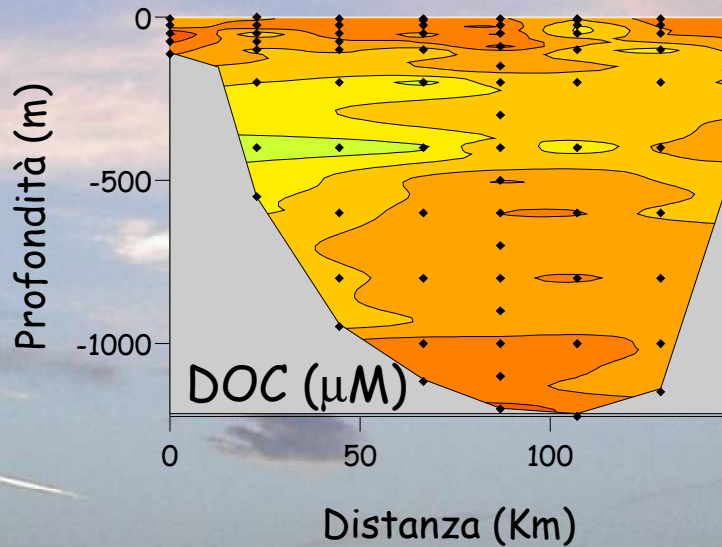
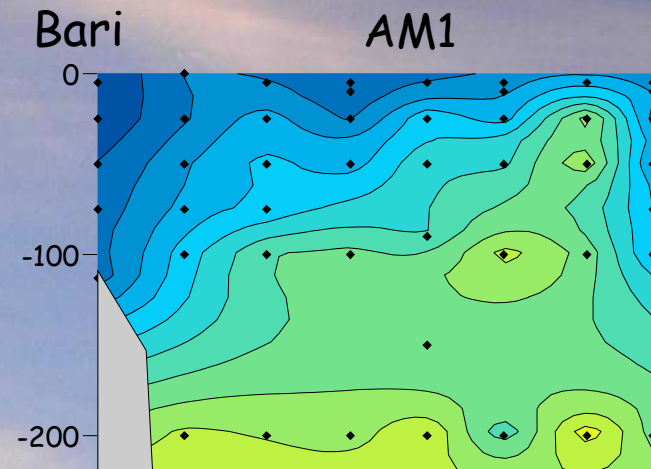
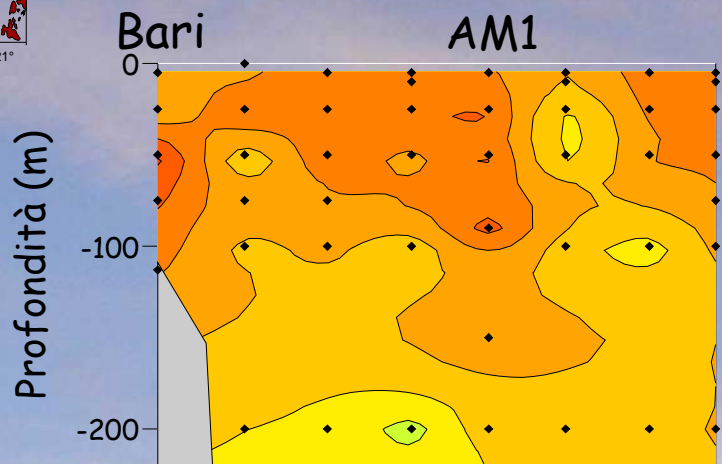
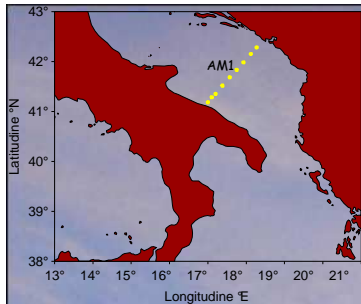


34 40 43 46 48 52 56 60 64 68 72
DOC (μM)

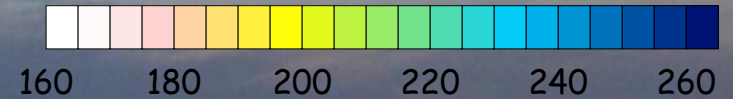
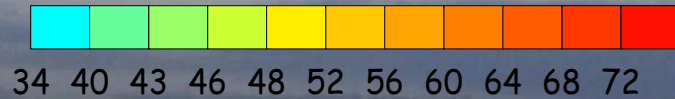
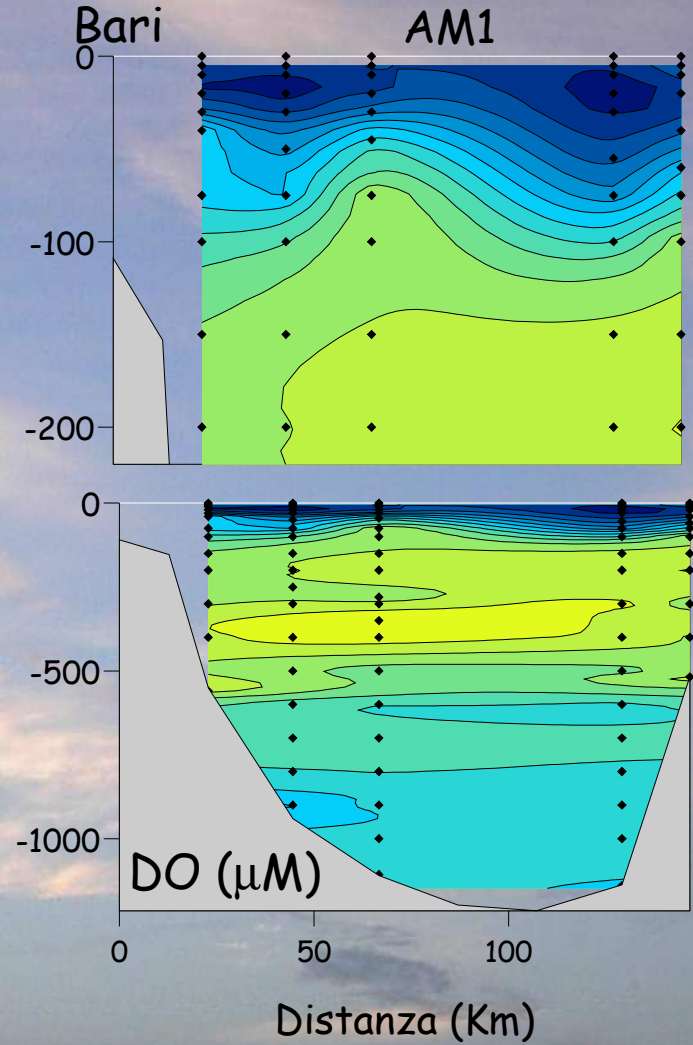
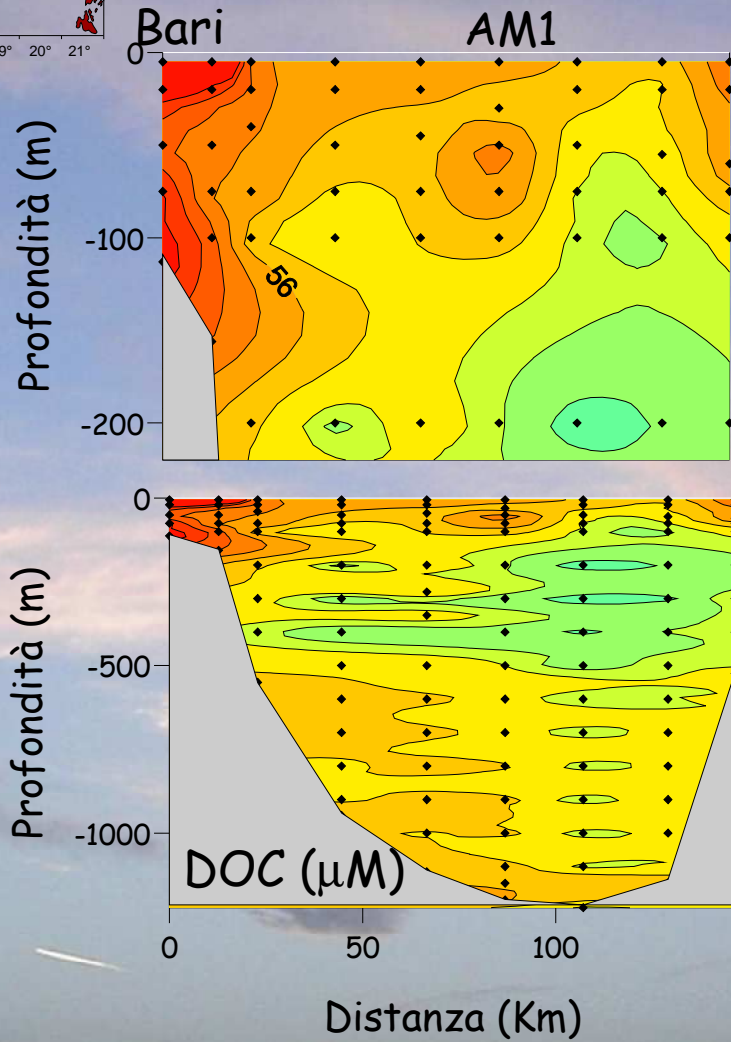
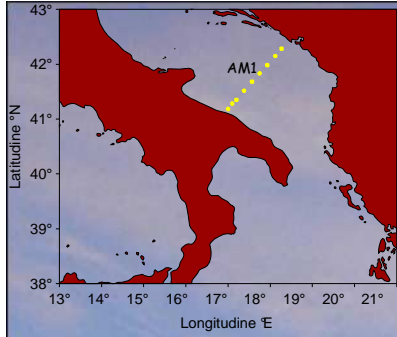
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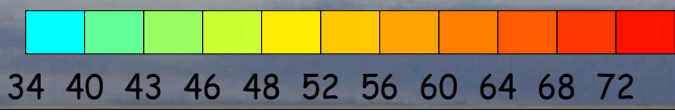
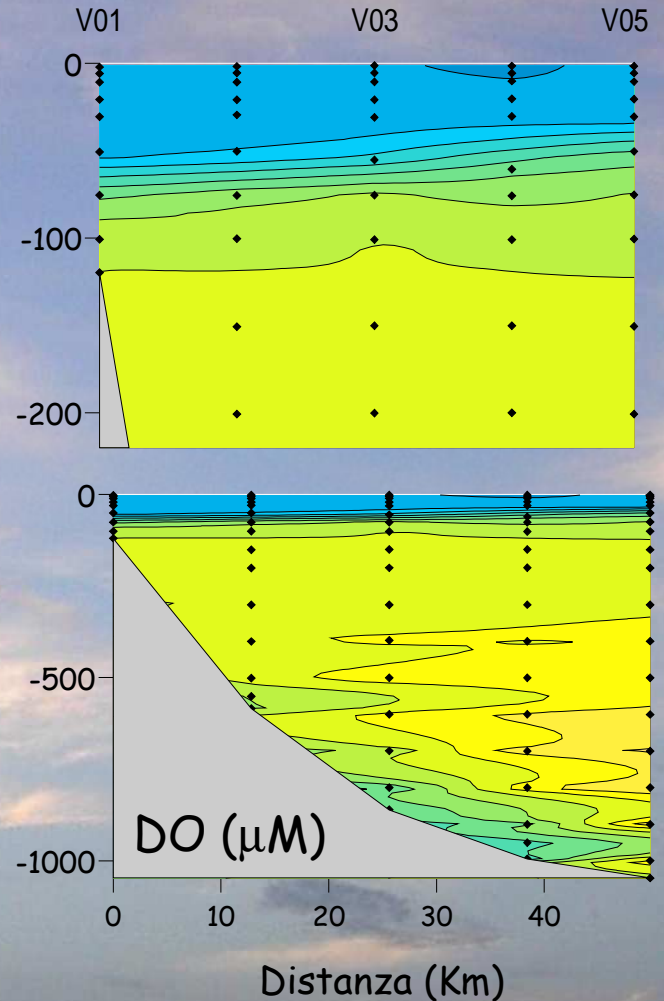
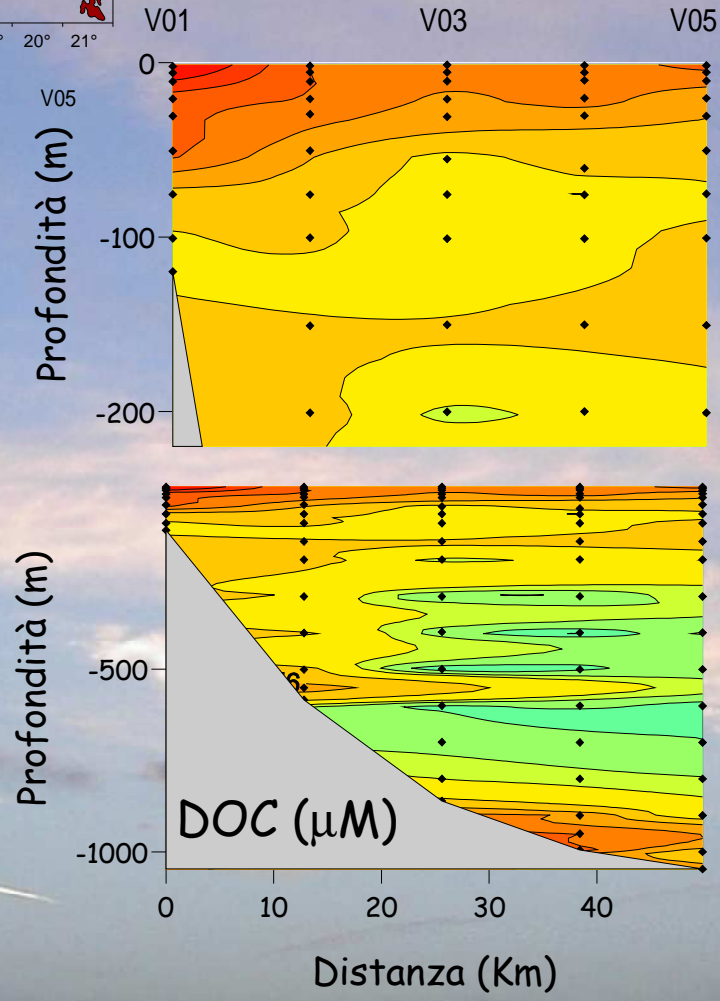
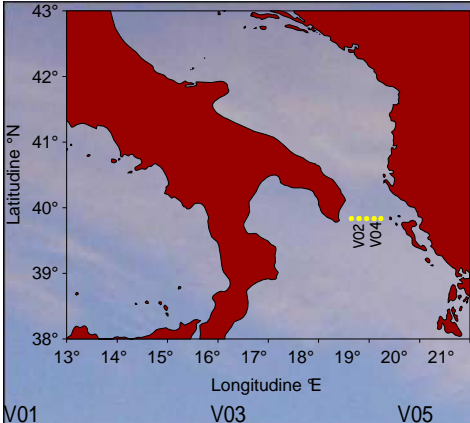
Febbraio 2007



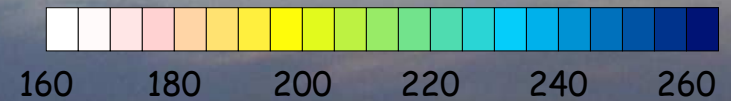
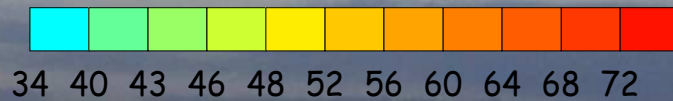
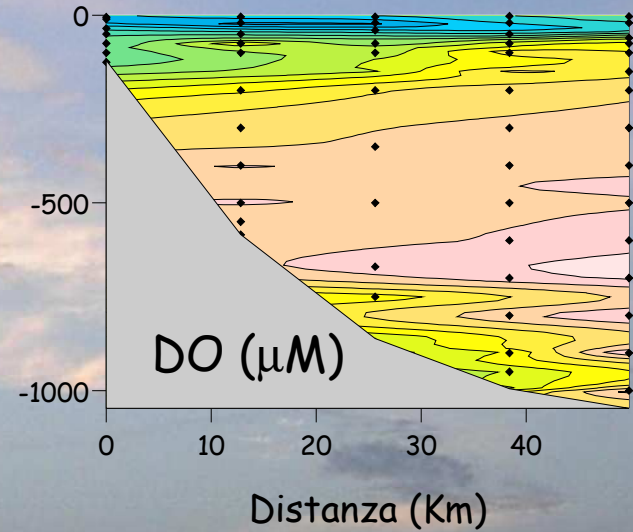
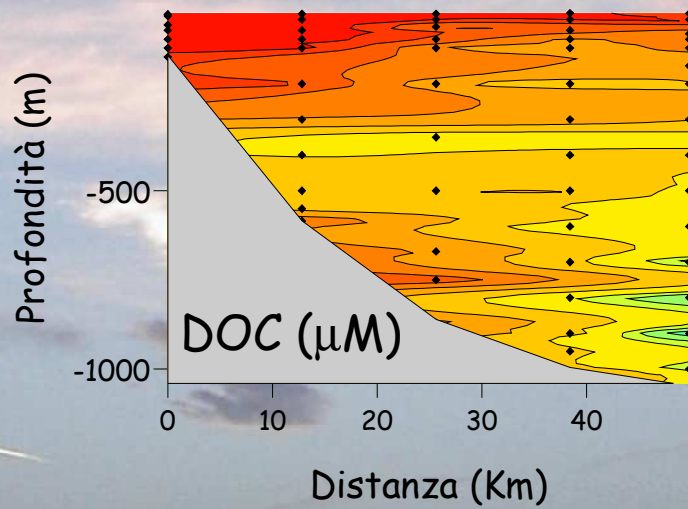
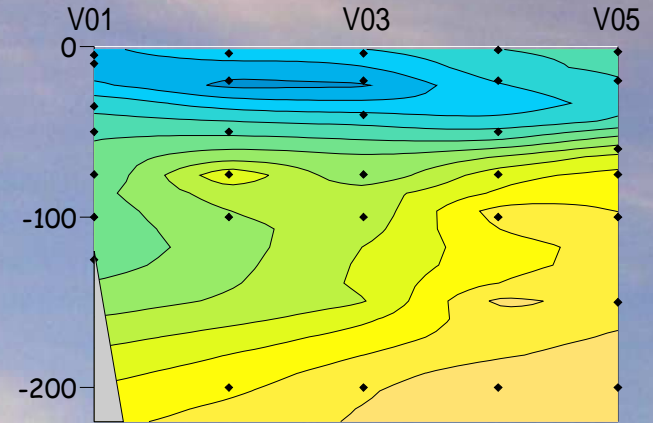
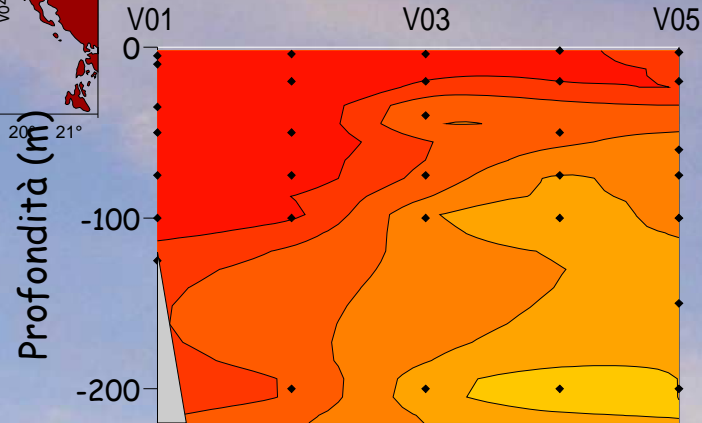
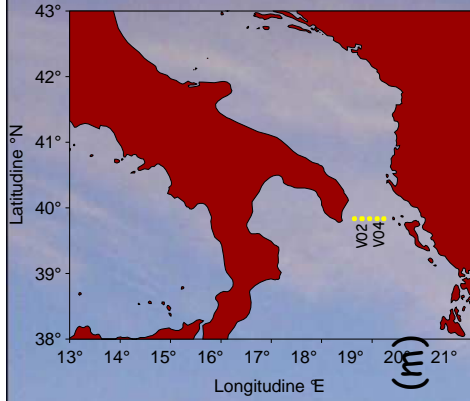
Aprile 2007



NOVEMBRE 2006

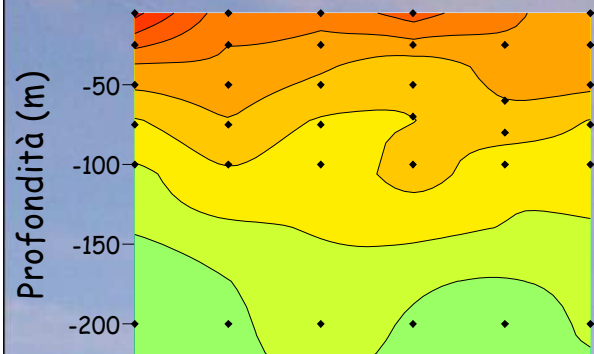


Aprile 2007

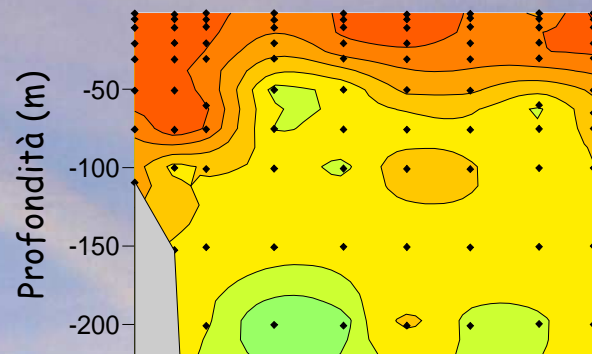


Ci sono differenze tra i diversi siti a Novembre?

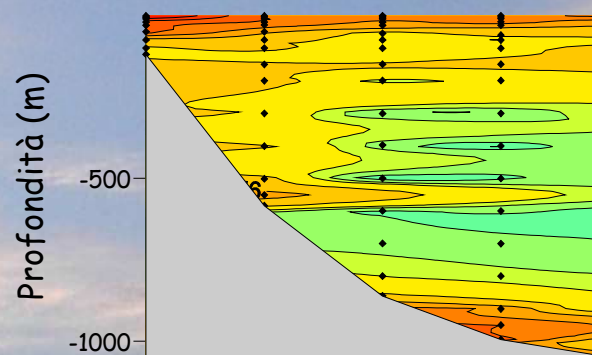
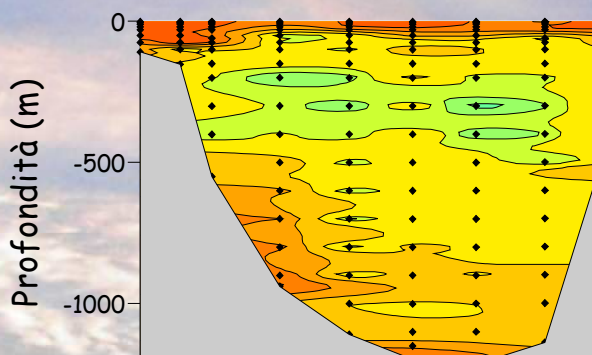
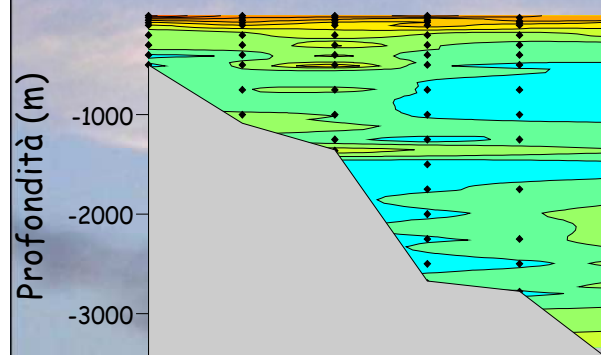
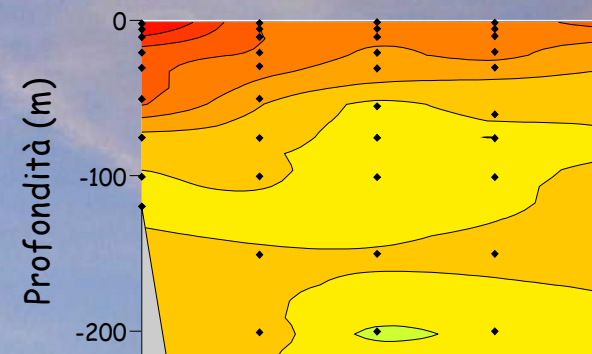
Tirreno



Bari-Dubrovnic



Otranto



Distanza (Km)

Distanza (Km)

Distanza (Km)

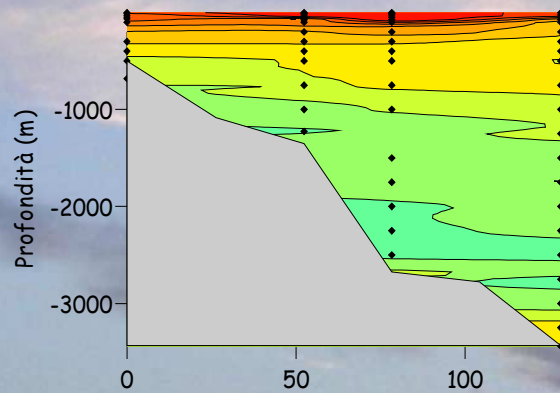
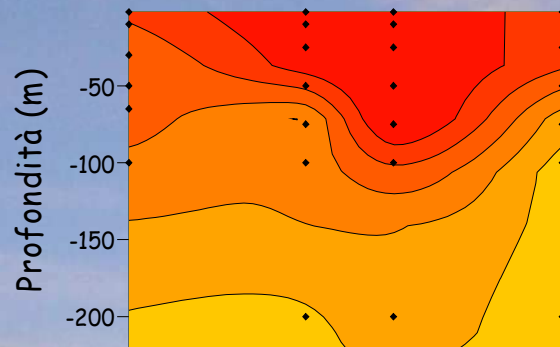
DOC (μM)



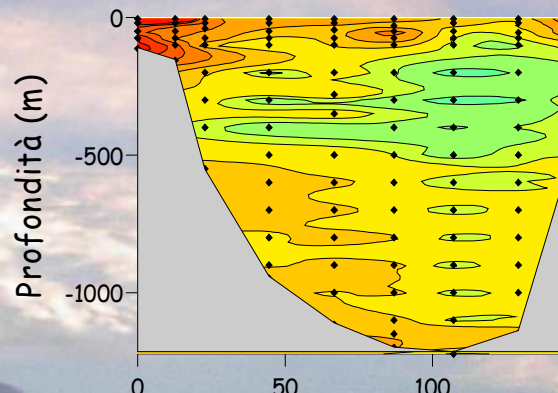
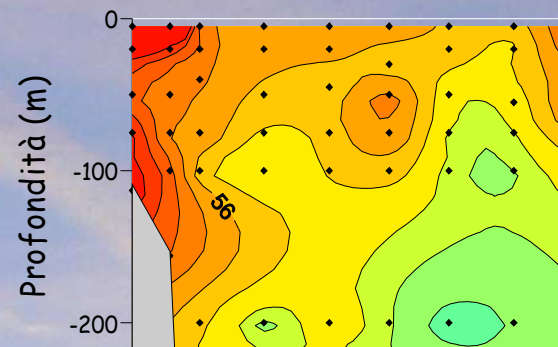
34 40 43 46 48 52 56 60 64 68 72

Ci sono differenze tra i diversi siti ad Aprile?

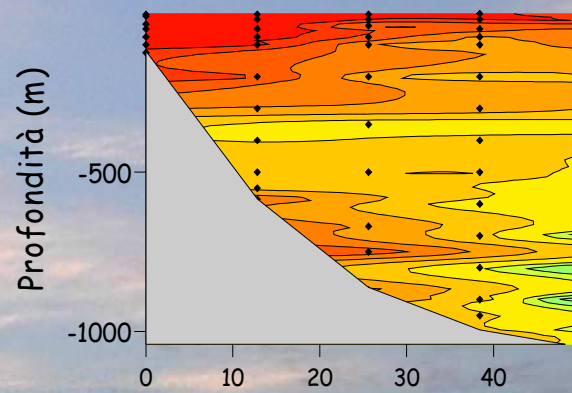
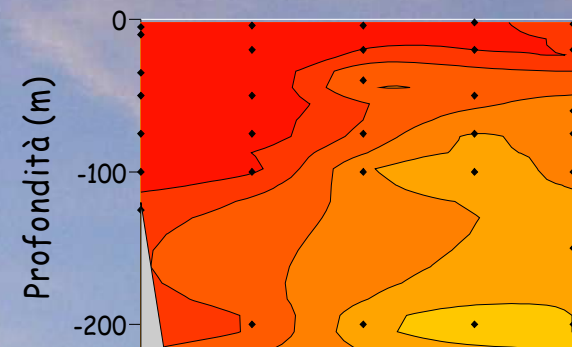
Tirreno



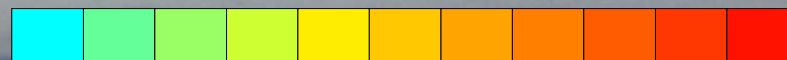
Bari-Dubrovnic




Otranto



DOC (μM)

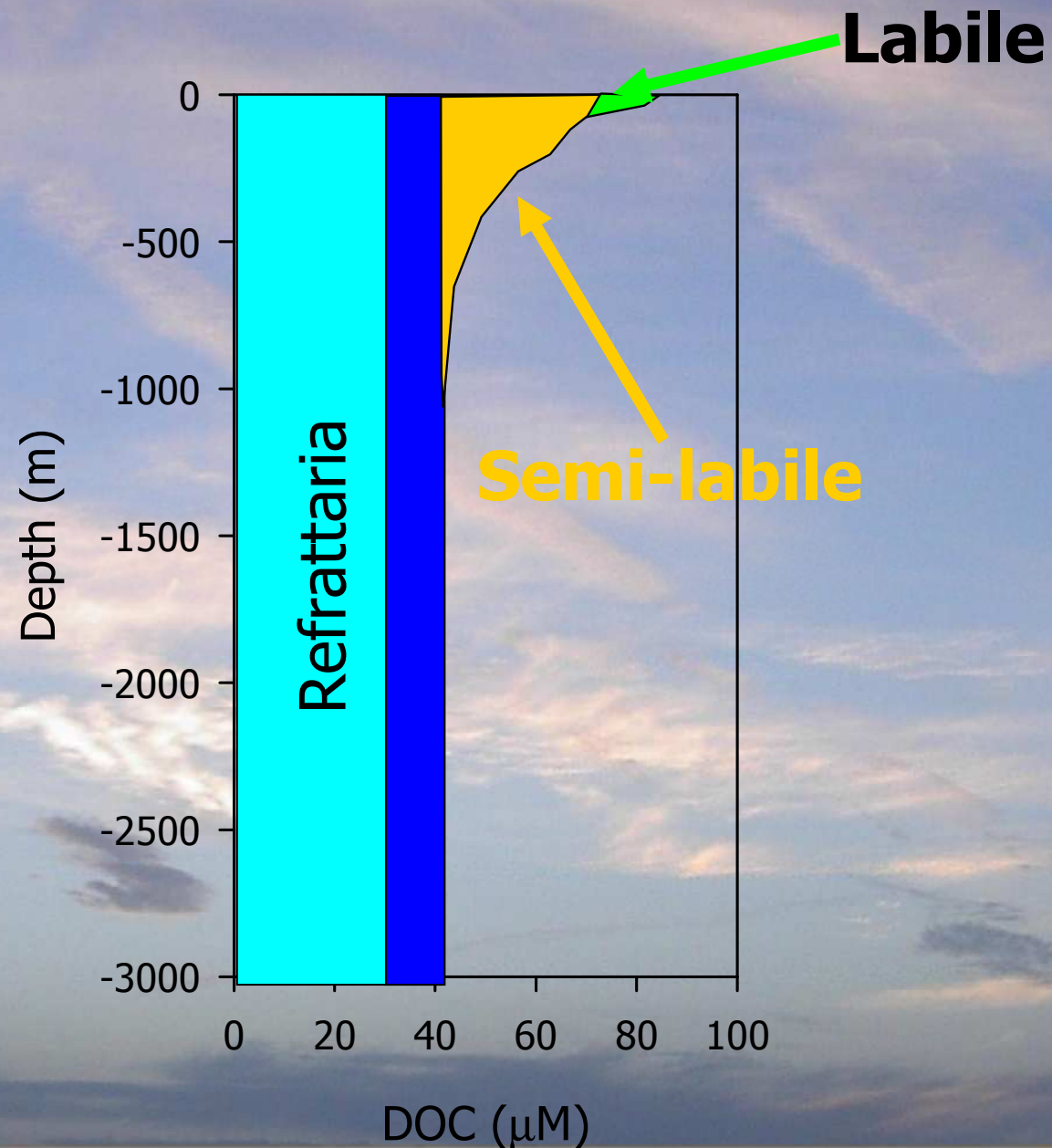


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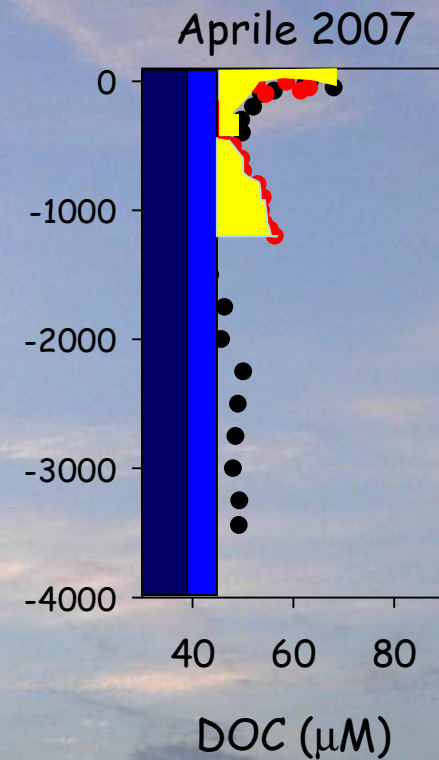
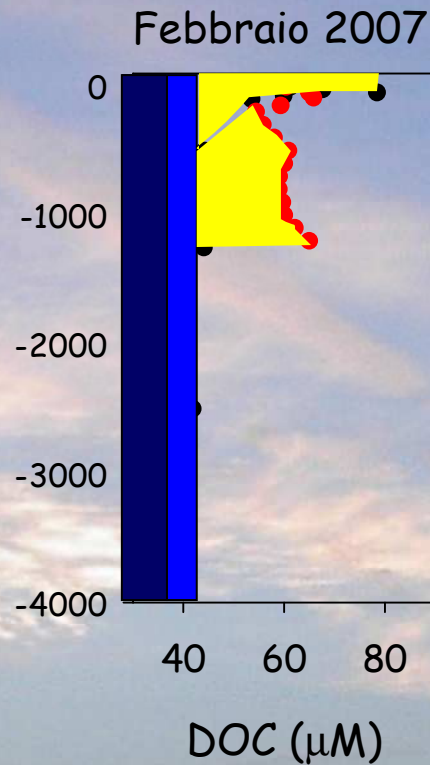
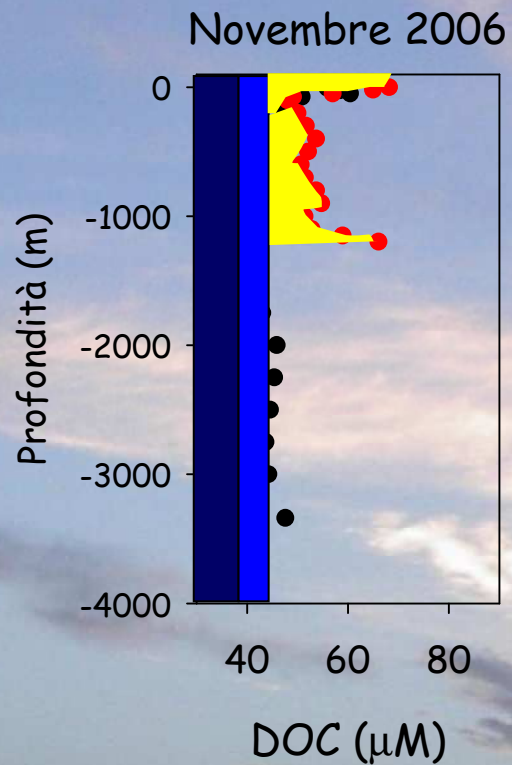


Ci sono differenze nella
qualità della sostanza
organica disciolta tra i
due siti?

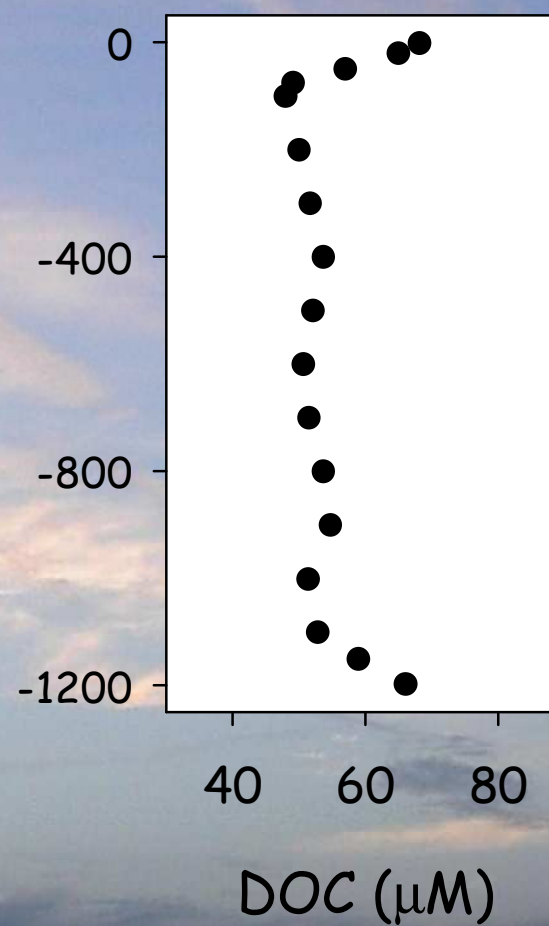
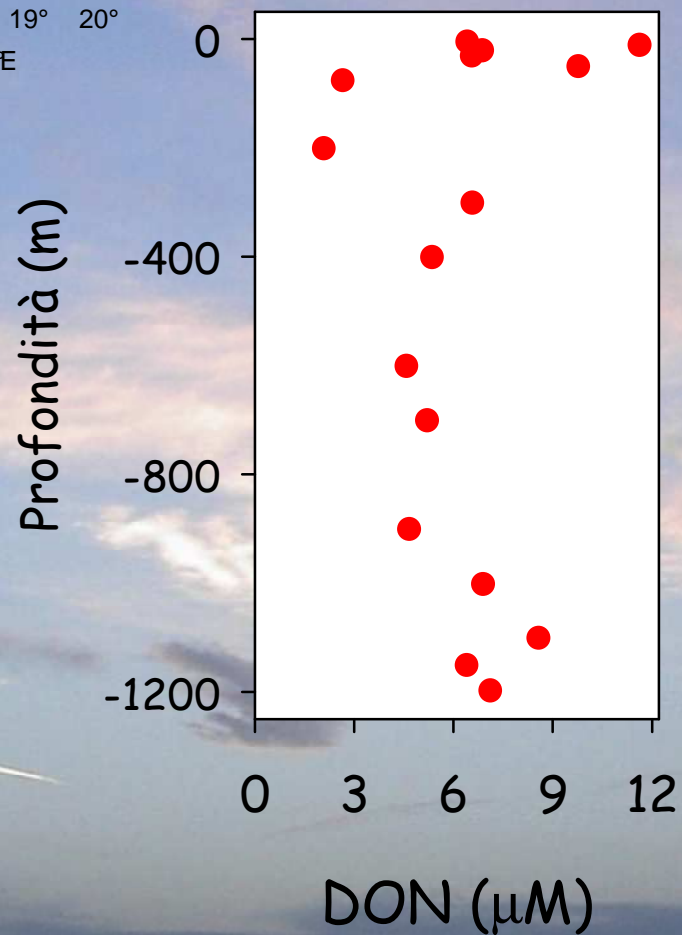
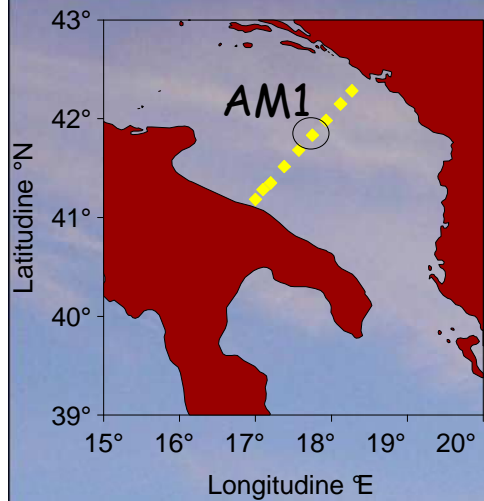
Modello della distribuzione verticale delle diverse frazioni di DOC nell'Oceano



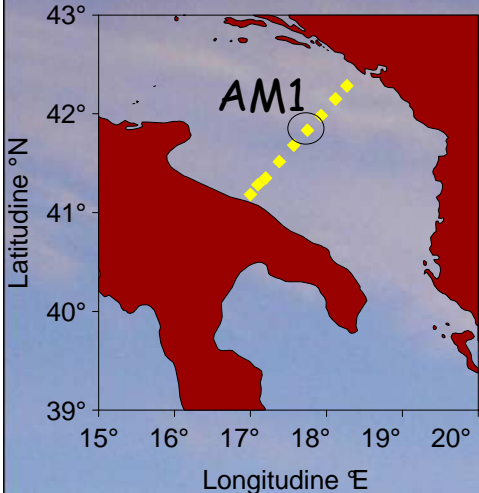
Distribuzione verticale del DOC nel Tirreno e nell'Adriatico



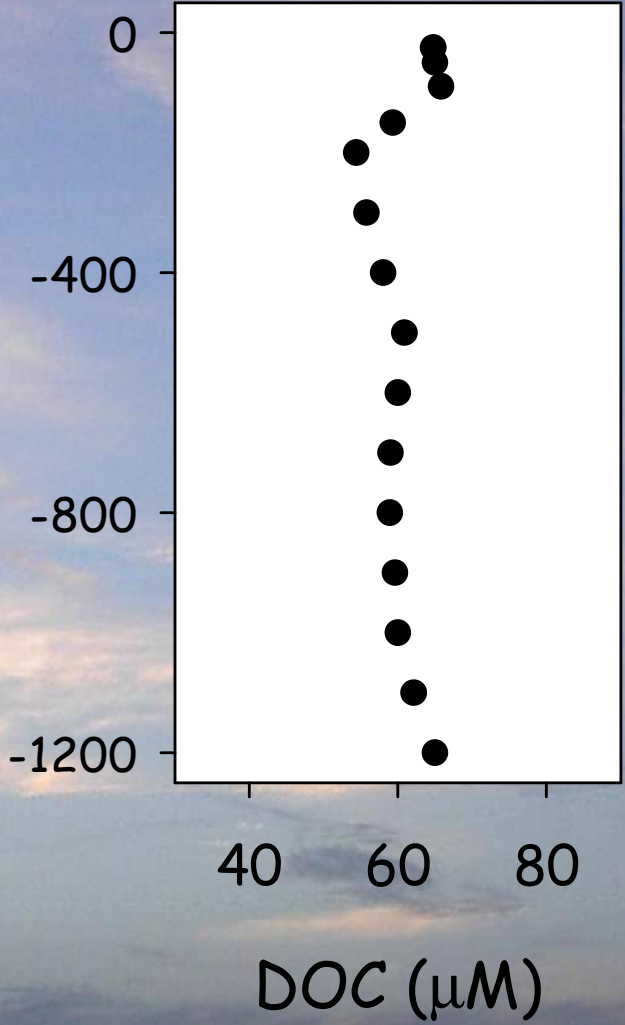
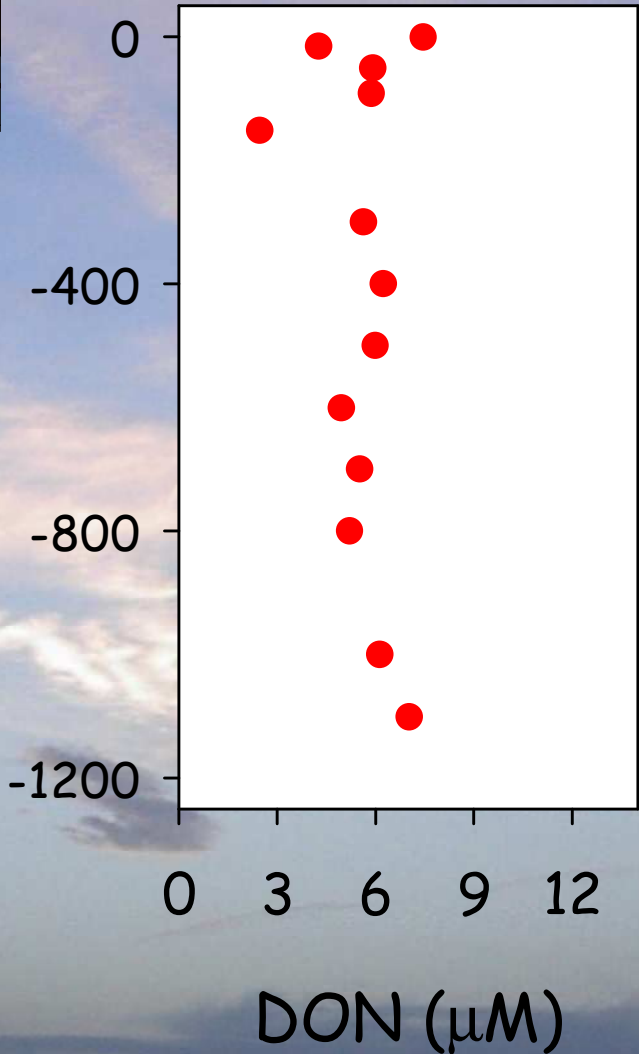
NOVEMBRE 2006



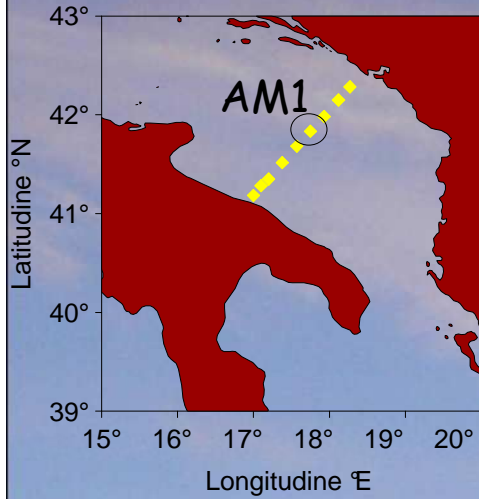
Febbraio 2007



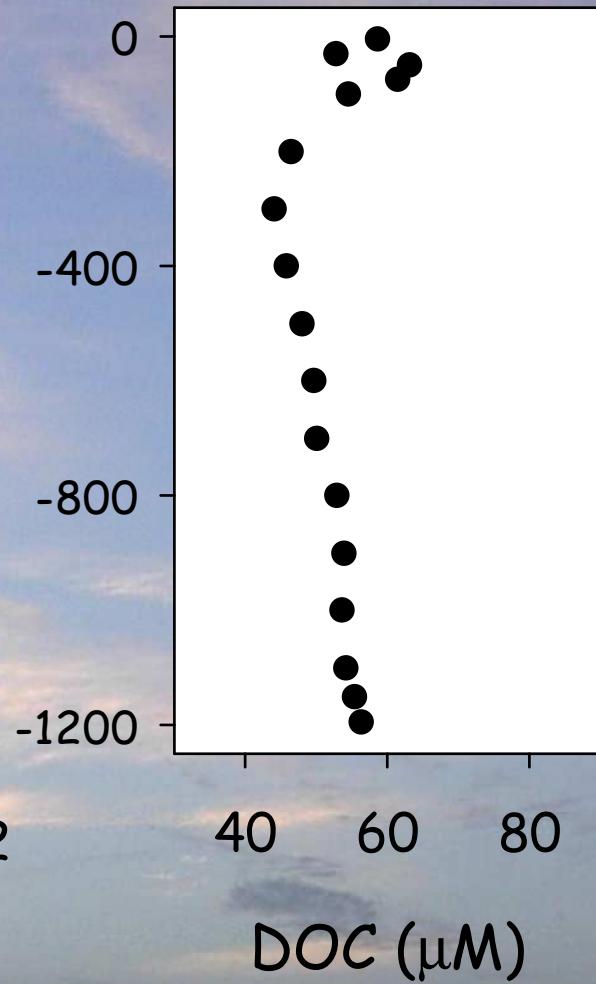
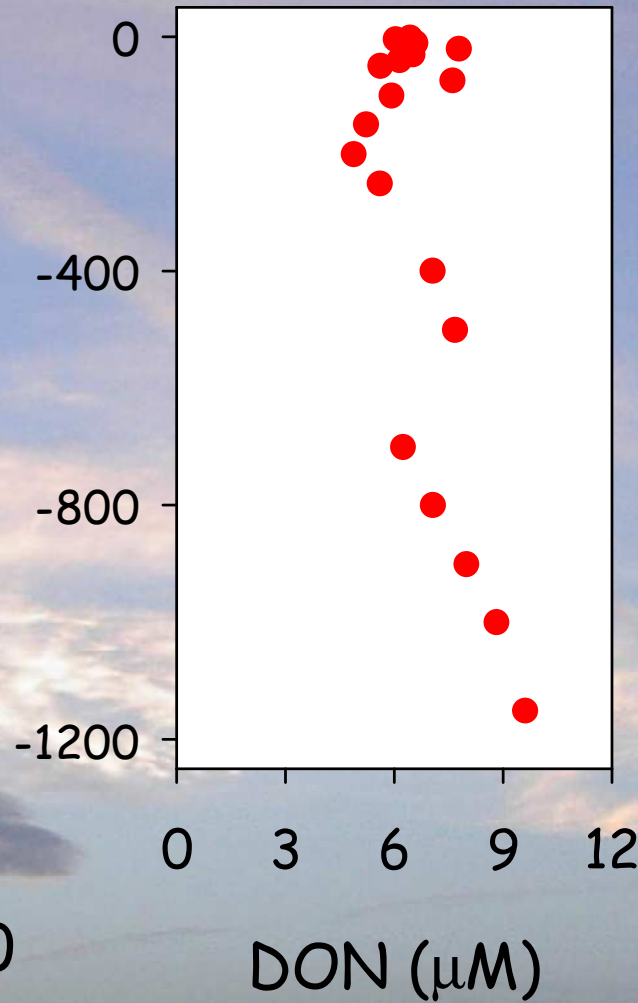
Profondità (m)



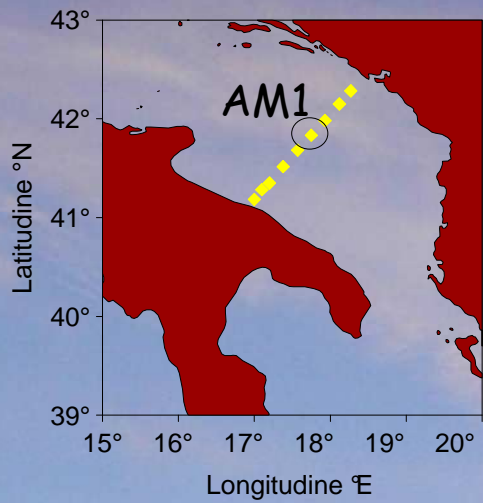
Aprile 2007



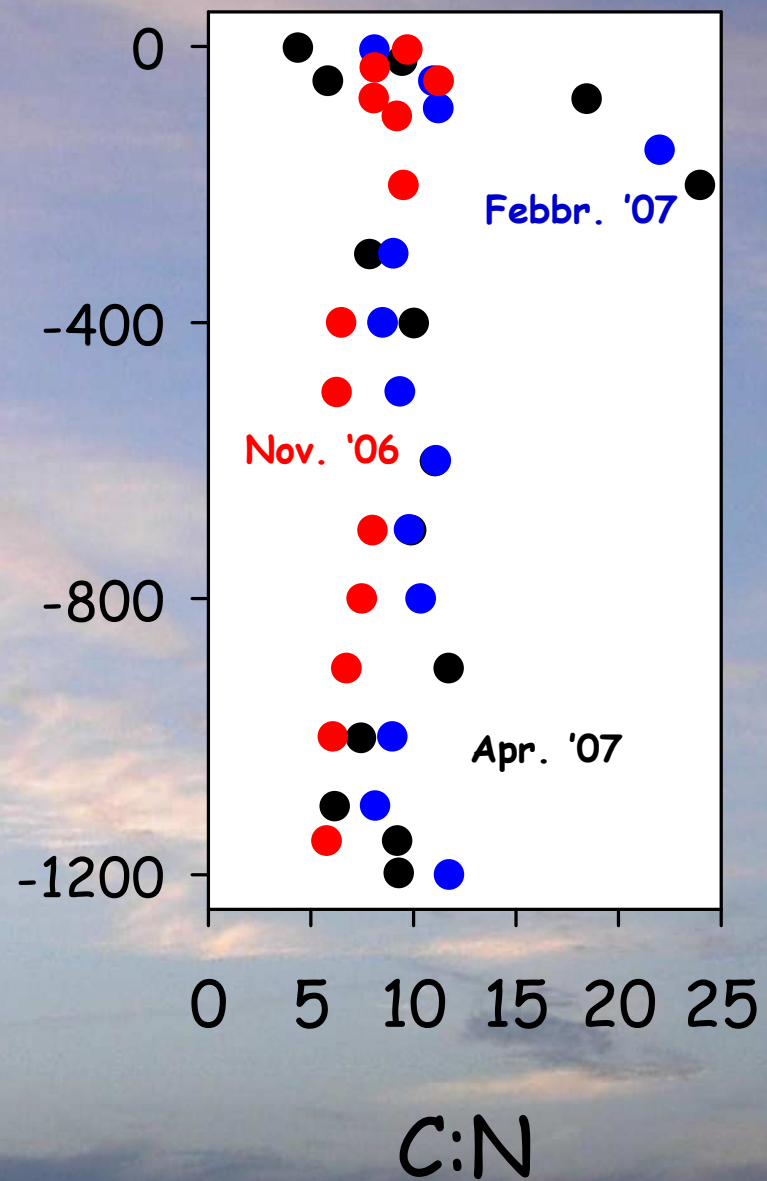
Profondità (m)



I valori di DON nell'oceano sono di 3.5-7.5 μM in superficie e 1.5-3.0 μM in profondità



Profondità (m)



	C:N		C:P		N:P	
	Med	Oc	Med	Oc	Med	Oc
0-100	8.5	13.6	1122	300	131	22
150-500	7.8		603		77	
600-fnd	8.0	17.8	916	444	113	25

- Le principali differenze stagionali si osservano nel mixed layer dove si ha un arricchimento di DOC in Aprile sia nel Tirreno che ad Otranto
- I valori superficiali sono confrontabili tra i tre siti e mostrano la stessa stagionalità
- Al di sotto dei 200 m il DOC presenta nel Tirreno concentrazioni molto basse e costanti nei tre periodi
- In Adriatico si osserva un arricchimento nelle acque profonde dove sembra essere presente una consistente porzione di DOC semi-labile.
- In Adriatico la distribuzione di DOC cambia anche a livello intermedio e profondo



I dati di nutrienti nel Tirreno supportano
la distribuzione del DOC

I dati di DON sembrano confermare
l'export di DOC semi-labile in
profondità, lo studio della stechiometria
della DOM rappresenta uno degli
aspetti da approfondire