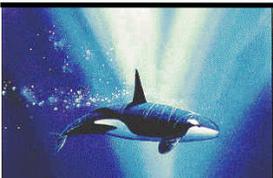


Ocean color and sea surface temperature observations in the Labrador Sea

**Glenn F. Cota, W.G. Harrison,
T. Platt & S. Sathyendranath**

Sponsored by NASA and NASDA



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Issues

1) Chlorophyll Algorithm Performance

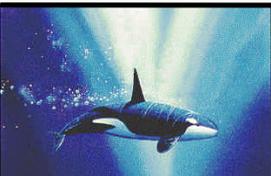
- a) Operational OCTS & SeaWiFS vs. tuned
- b) Lab Sea data set characteristics

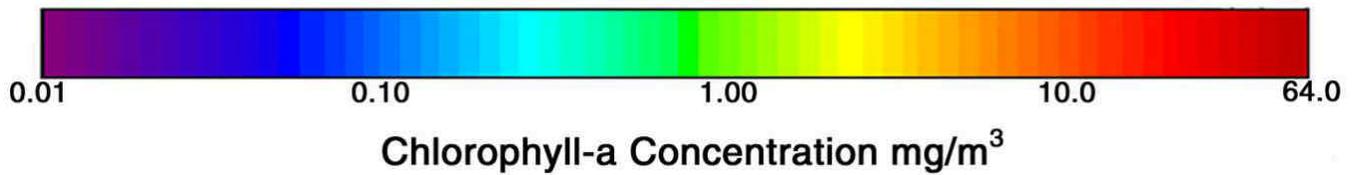
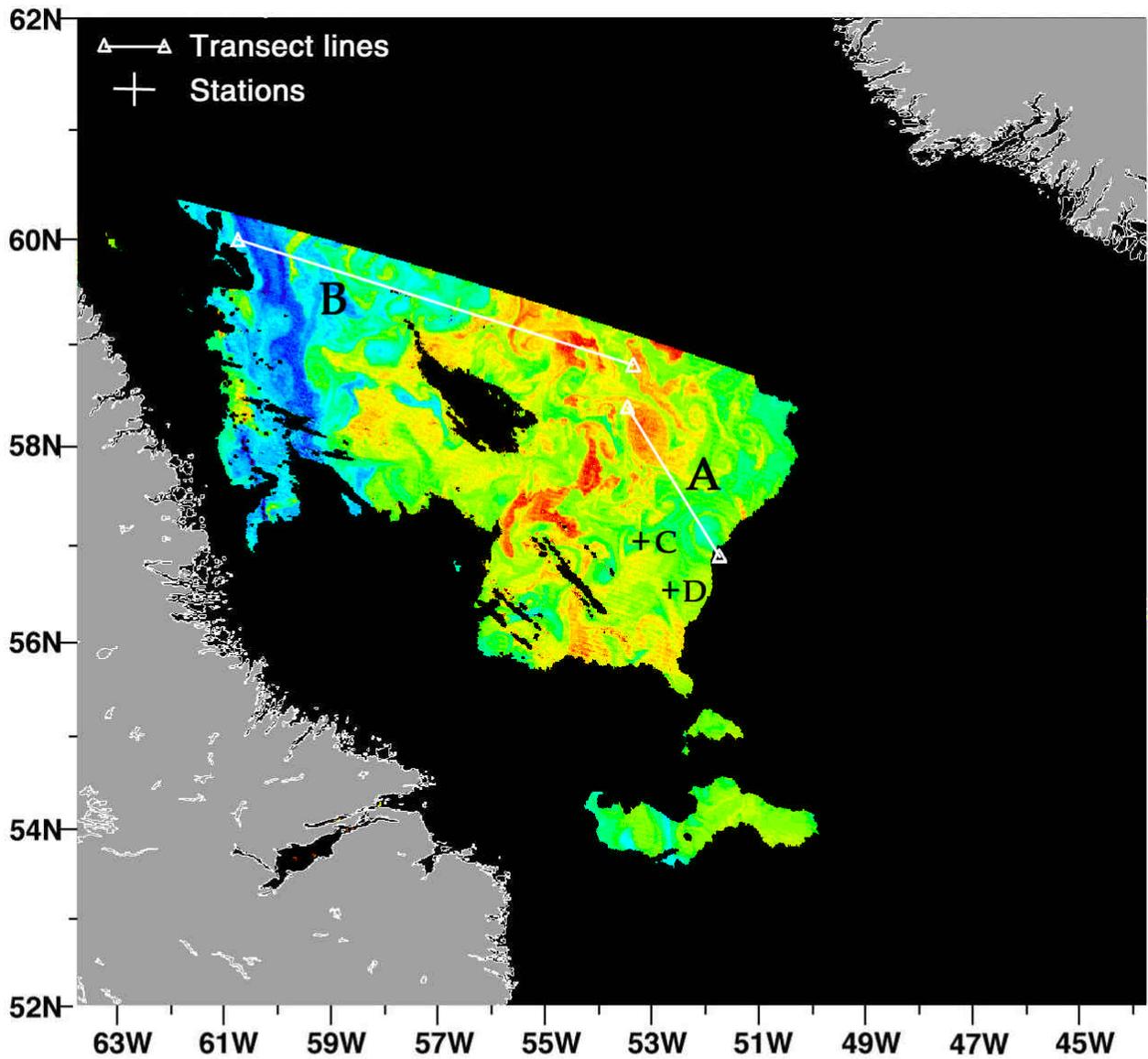
2) Relative Absorption by Constituents

- a) compare a_p and a_s with low latitudes
- b) compare chl-spec a_a^* with low latitudes
- c) model results with HydroLight

3) T_{ship} or SST vs [Nutrient] or [Chl]

- a) predict [Nutrient] from SST
- b) predict [Chl] from SST
- c) predict new production from SST



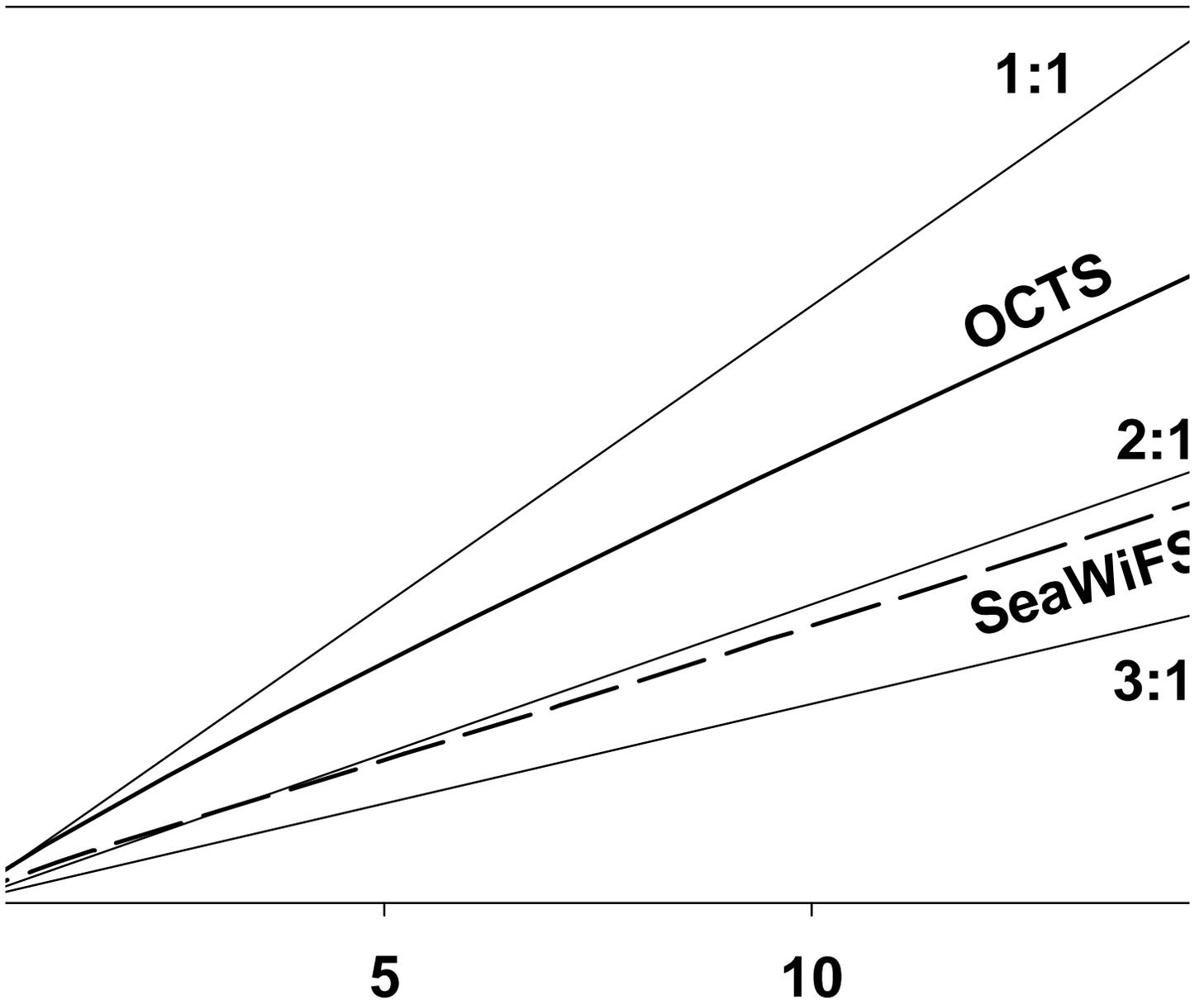


05 June 1997

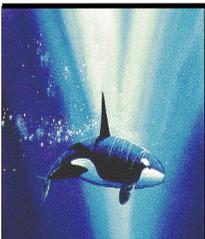
Chlorophyll map of our study area on June 5, 1997



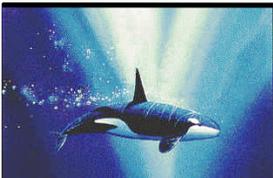
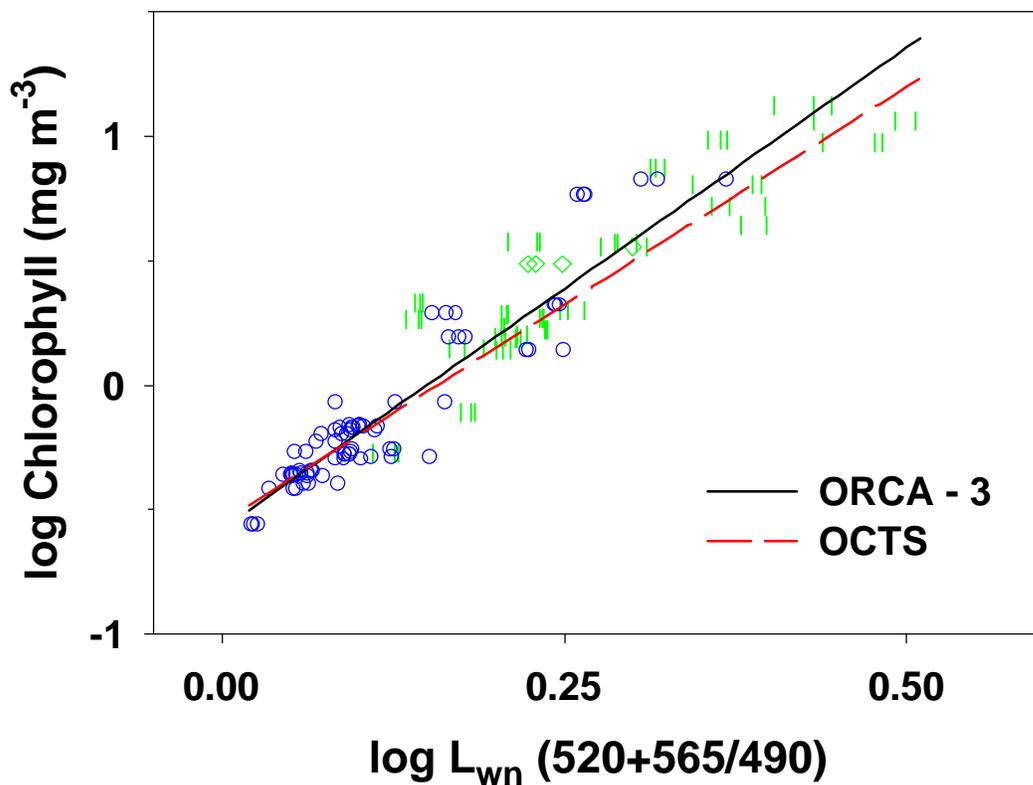
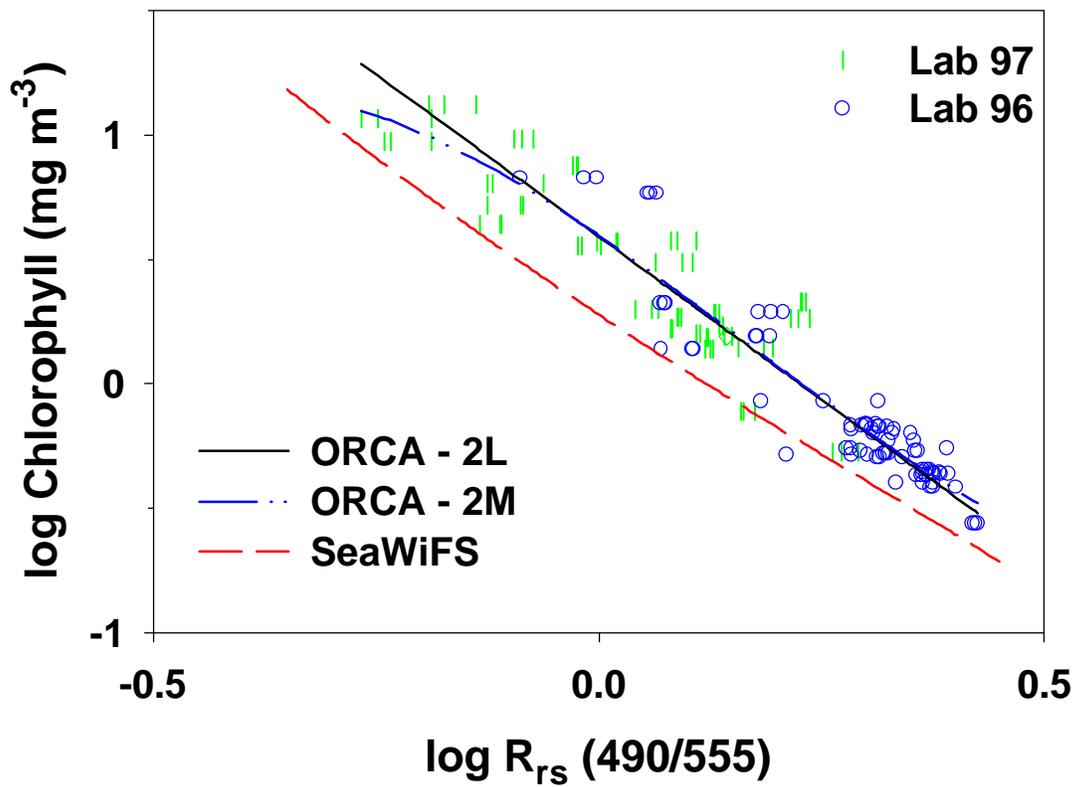
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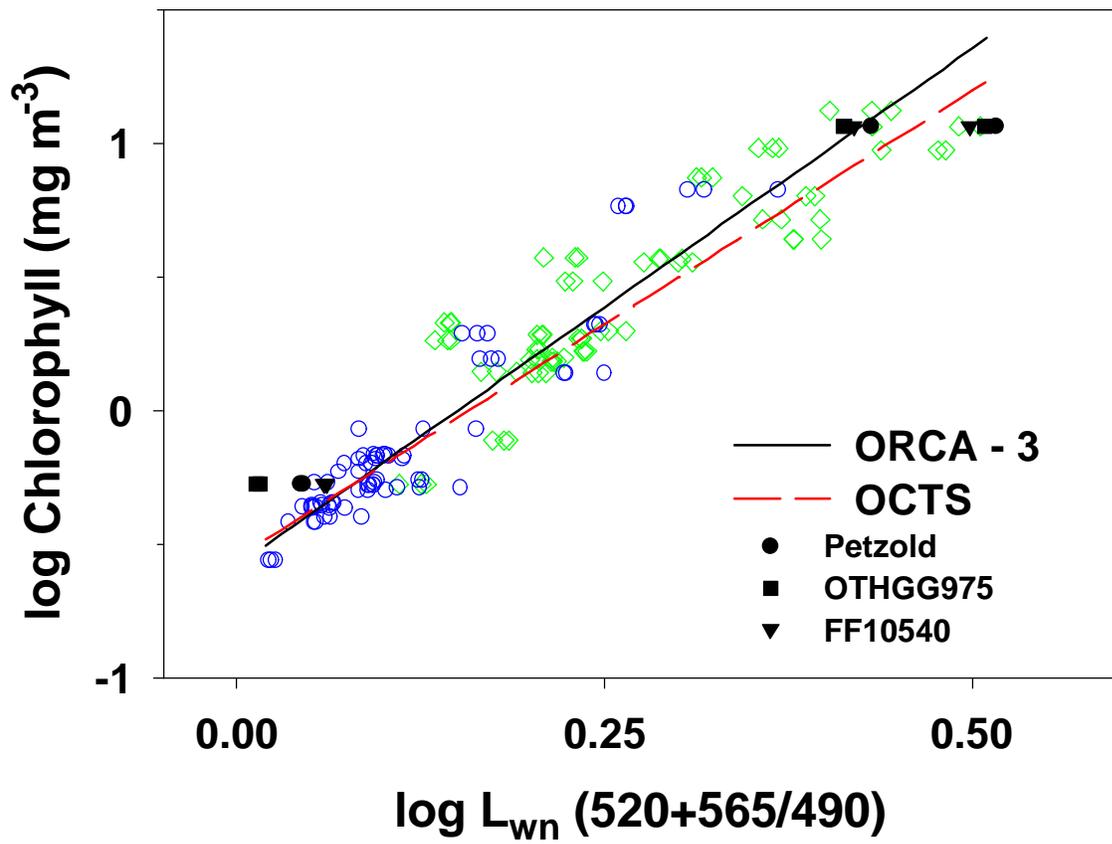
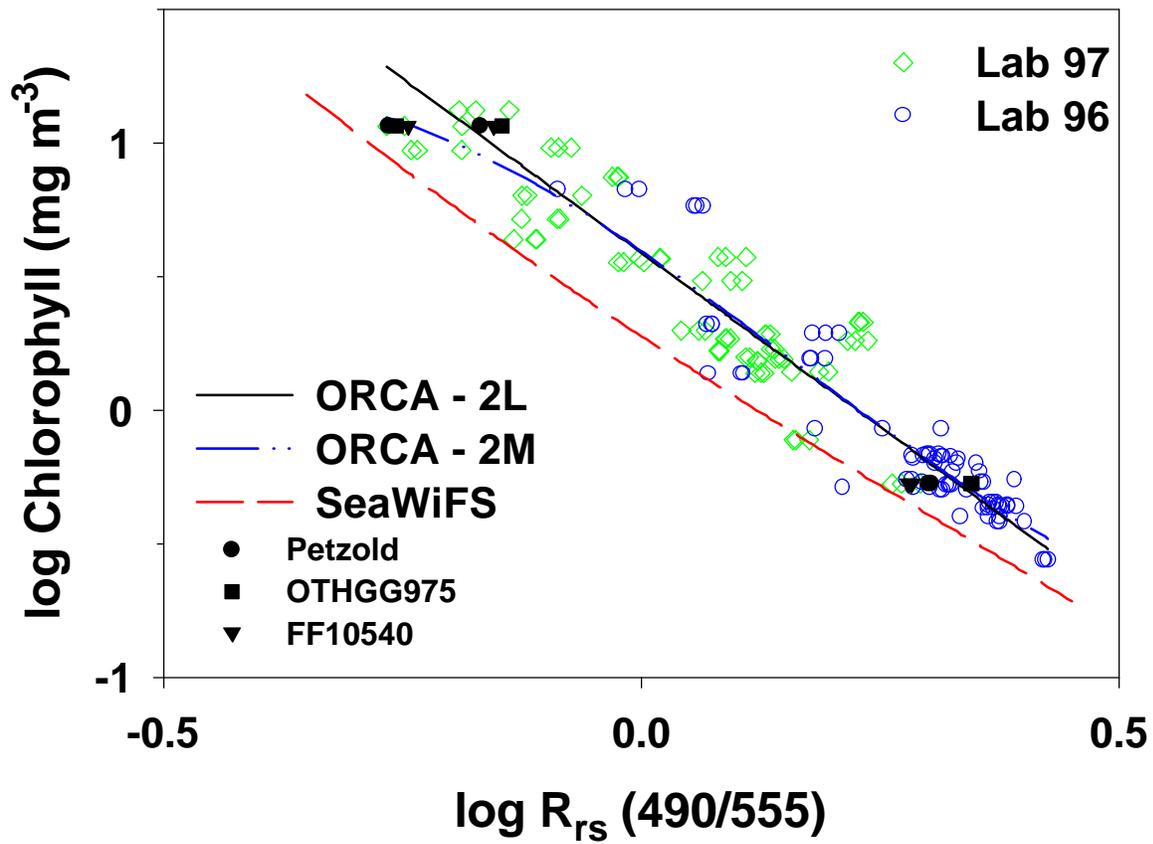
ORCA Predicted Chlorophyll (mg m^{-3})



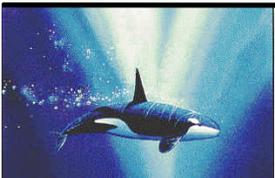
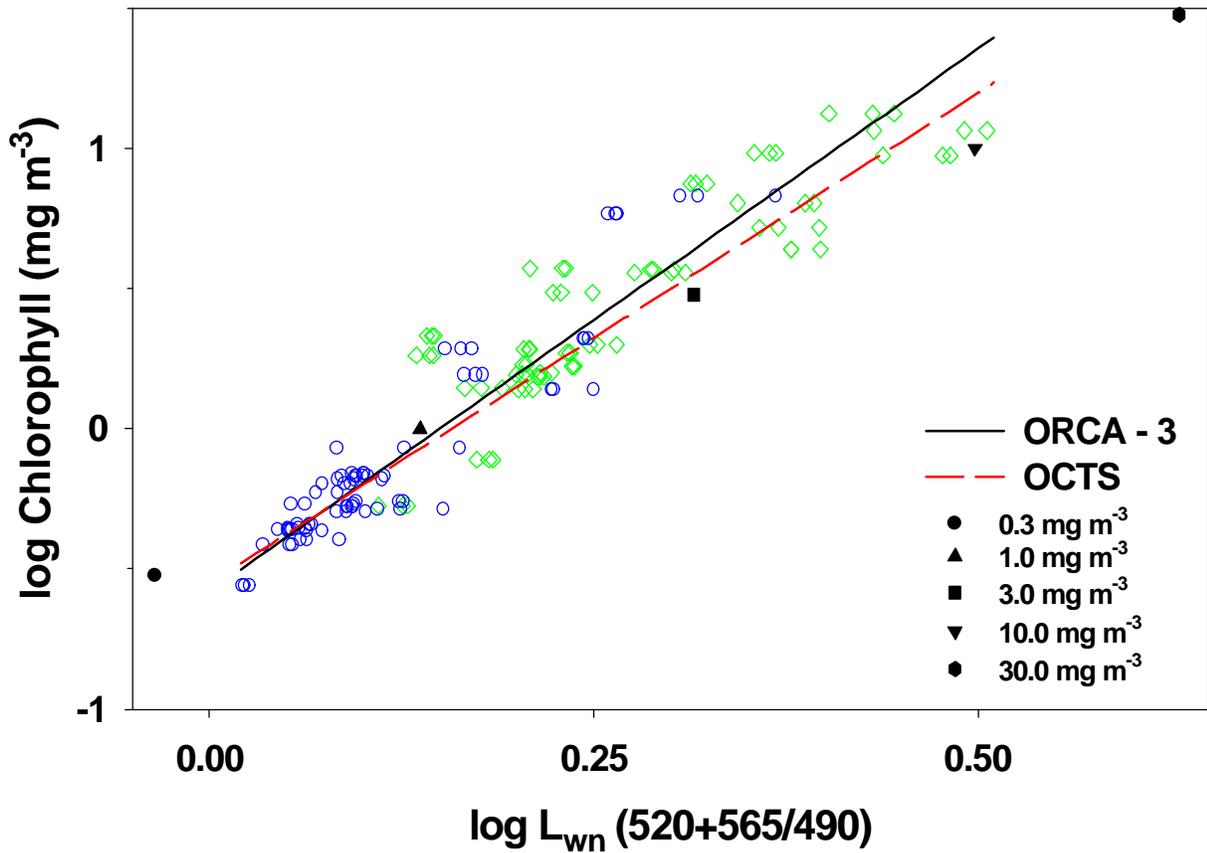
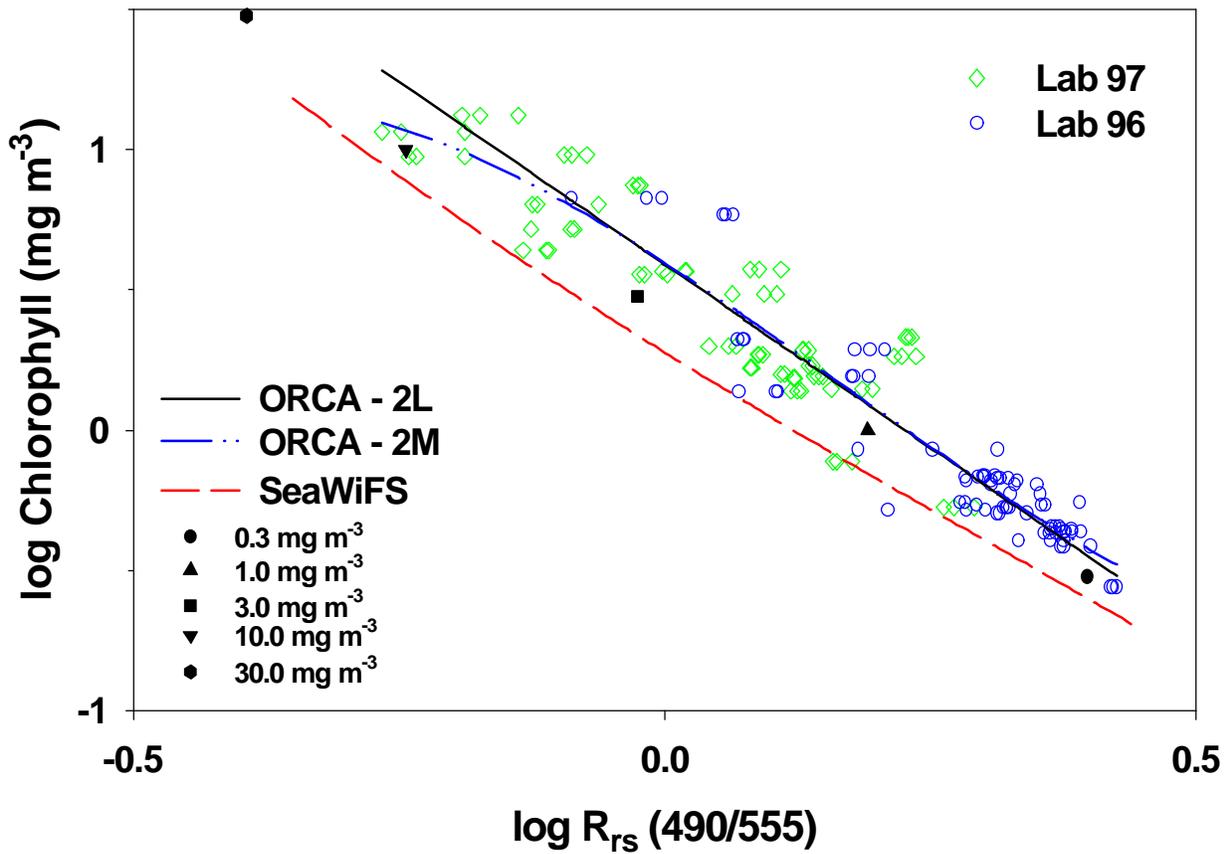
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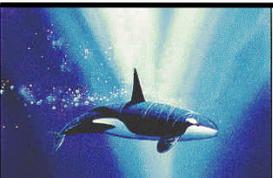
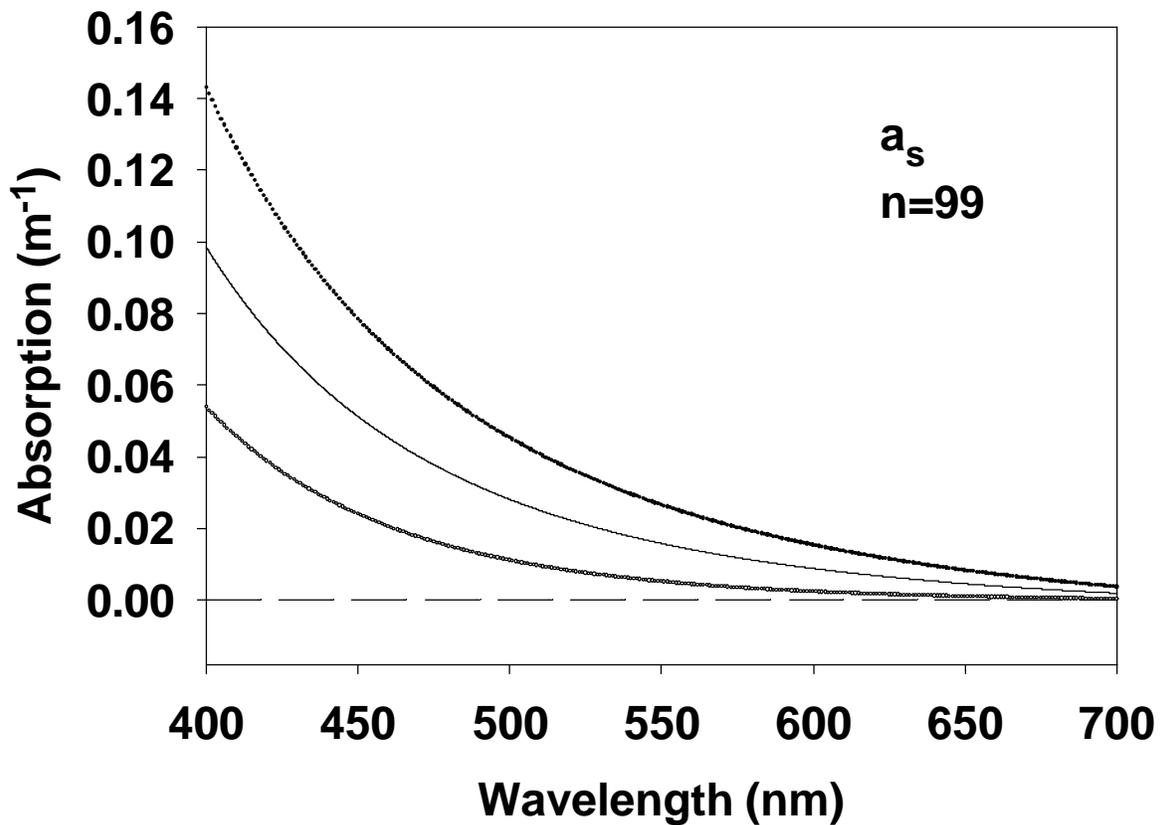
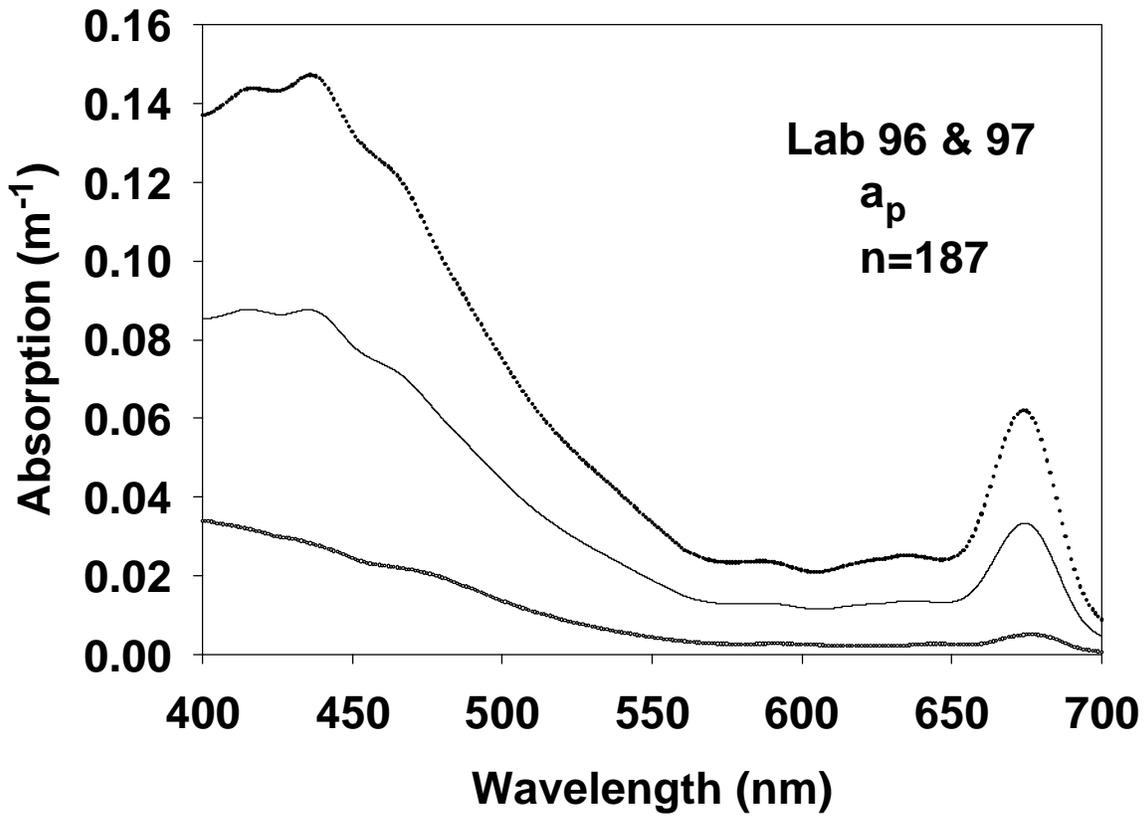
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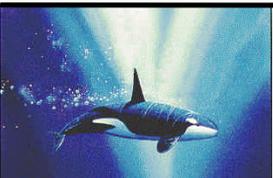
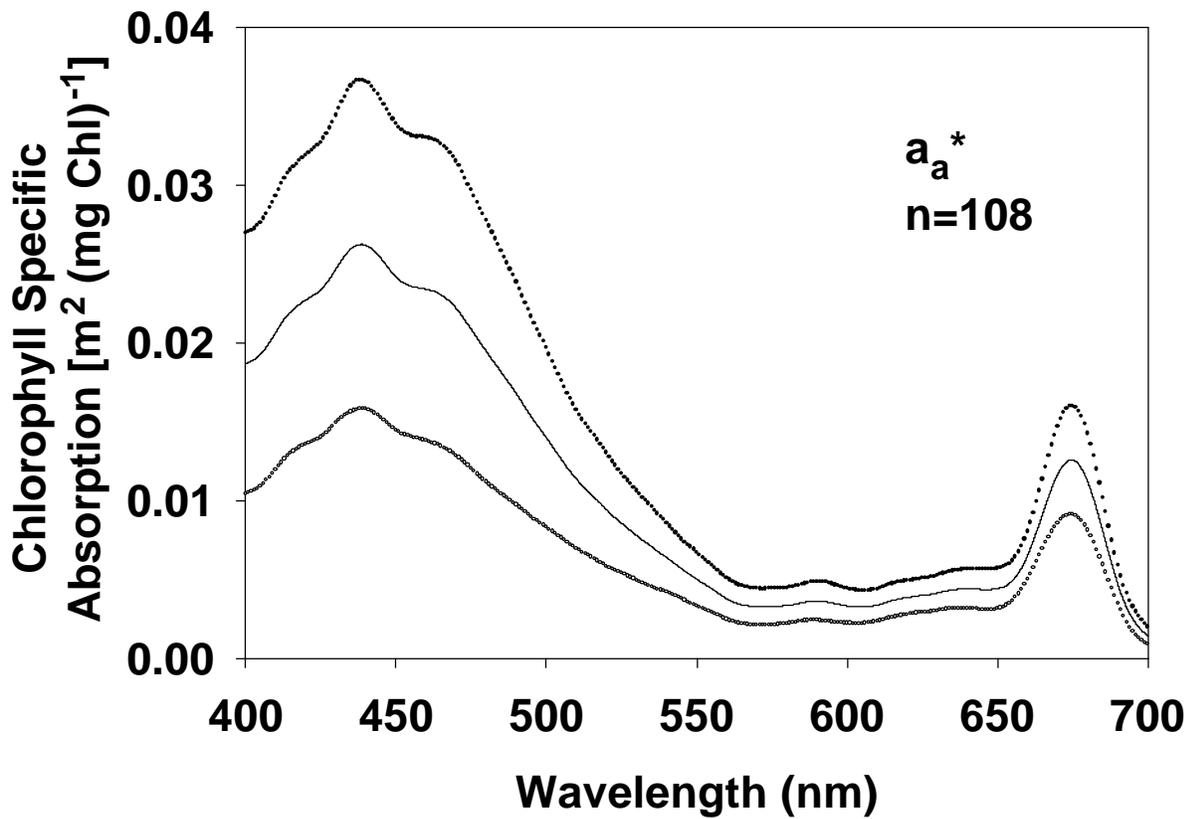
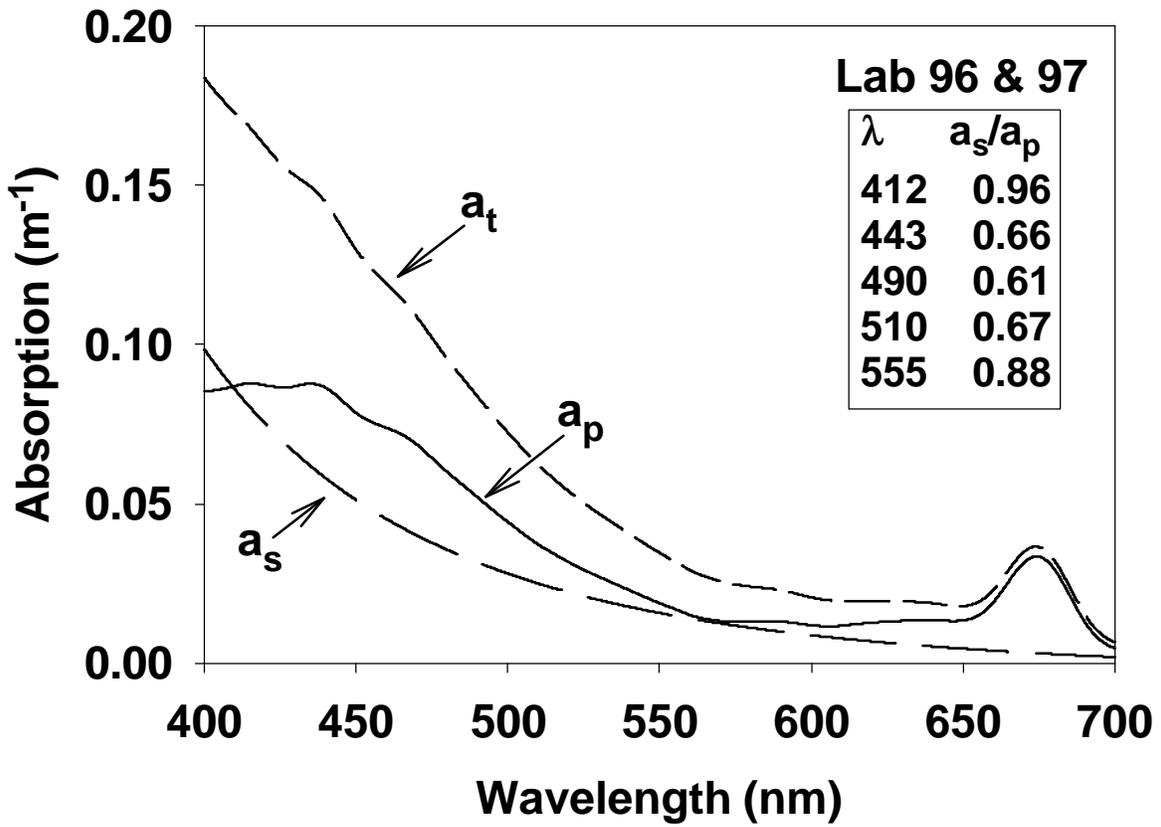


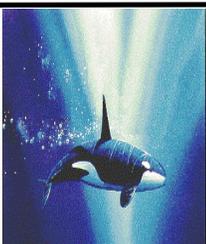
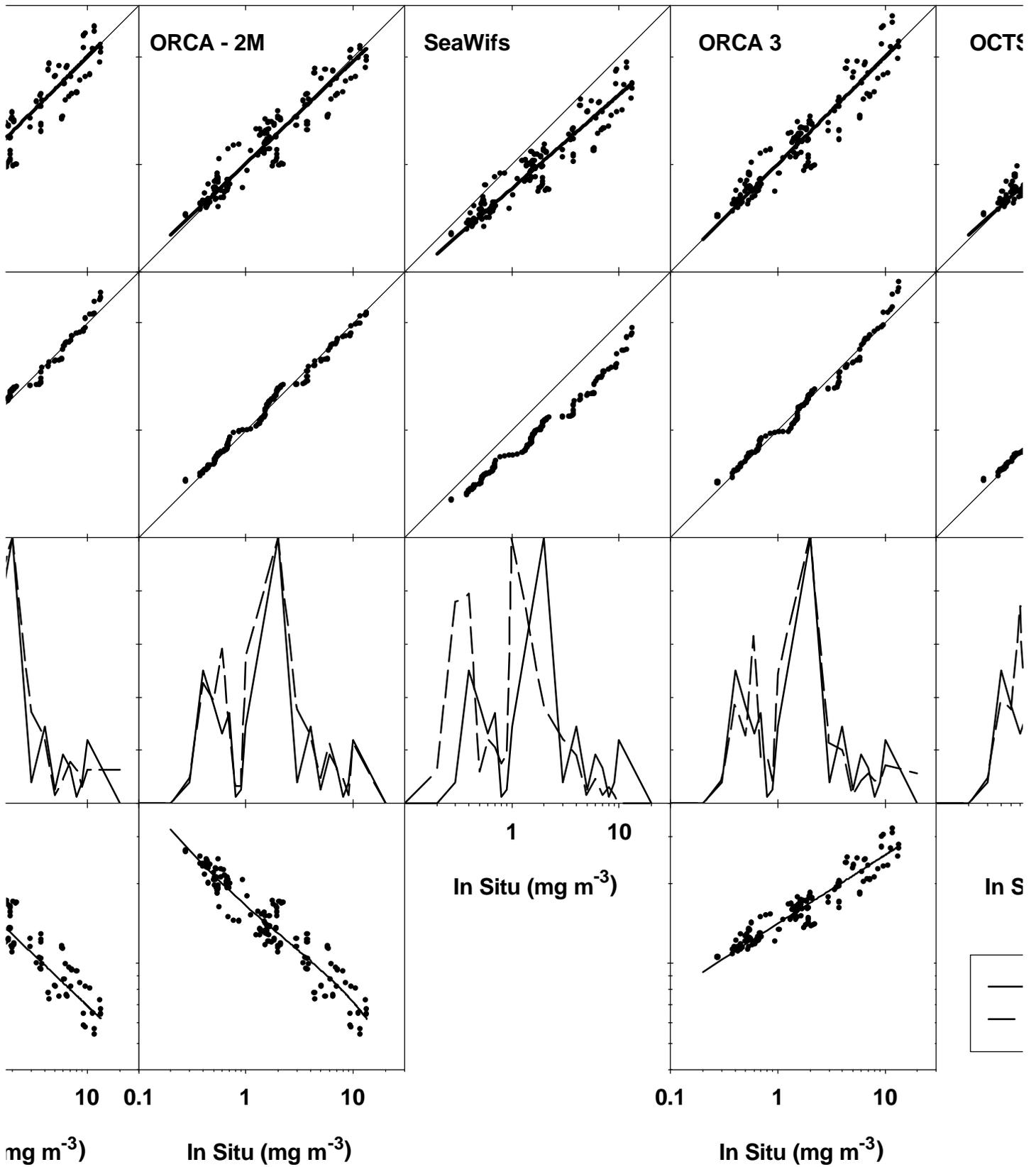
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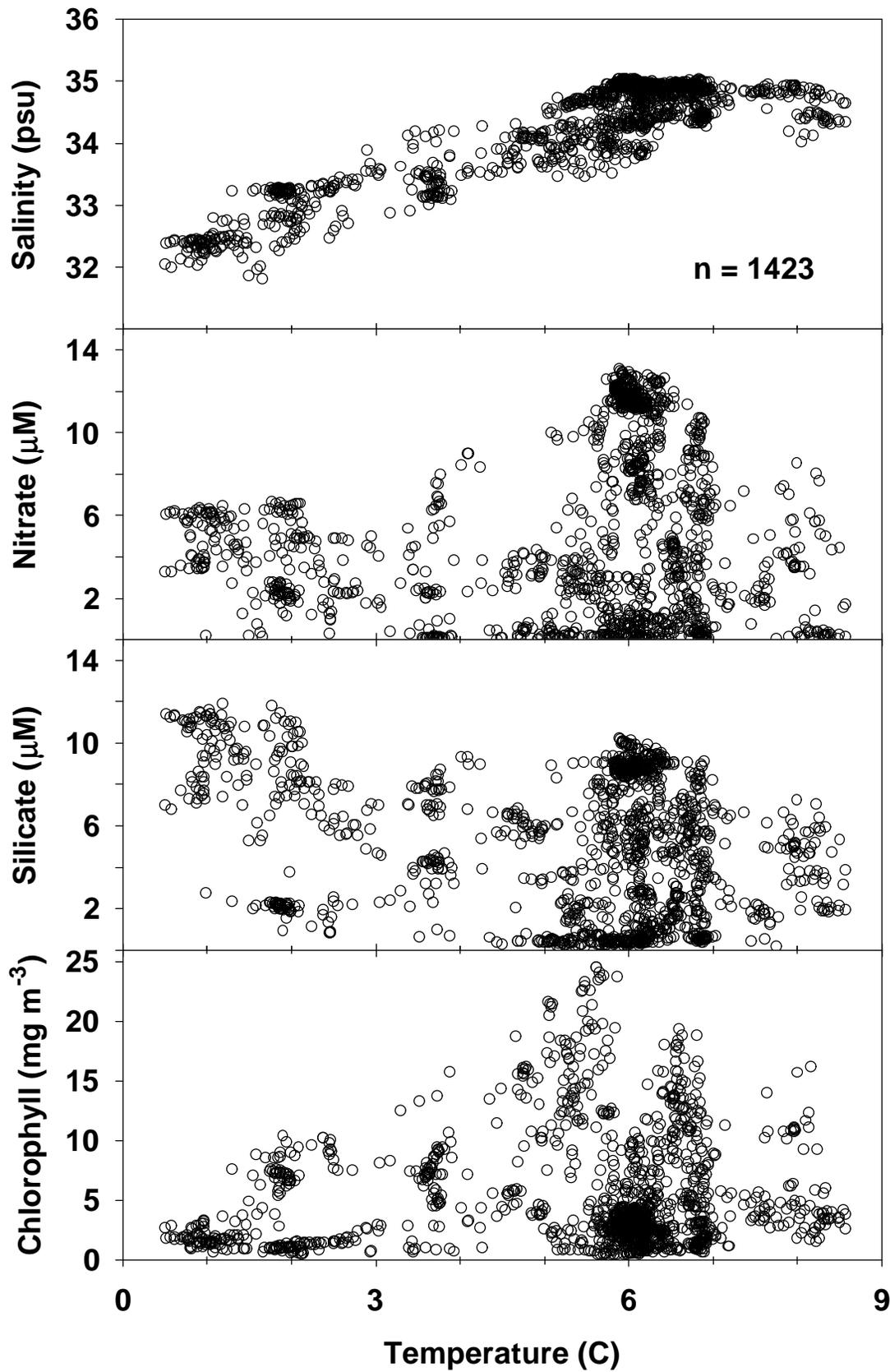
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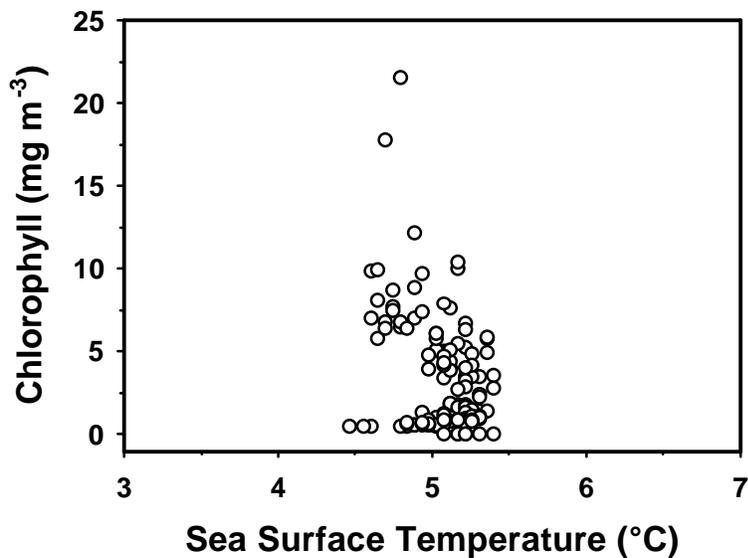
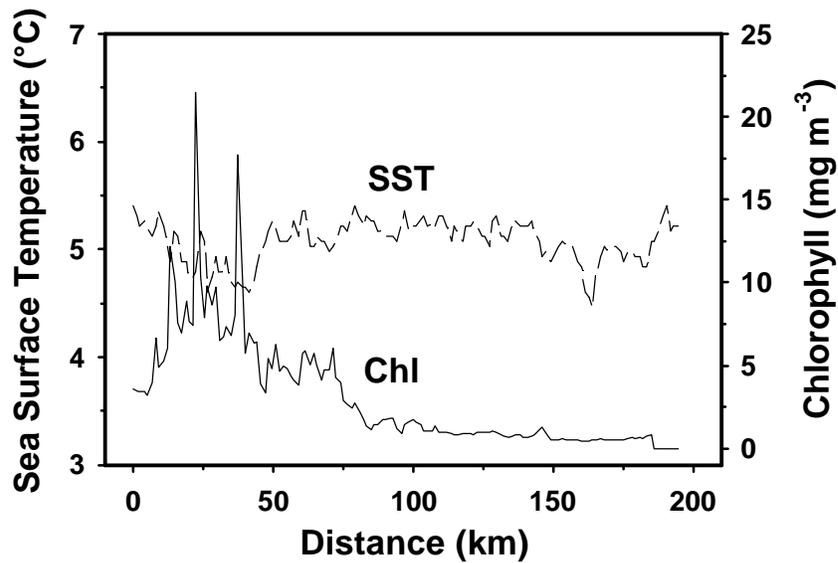




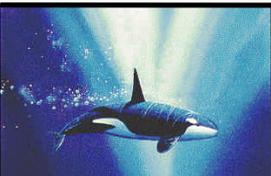
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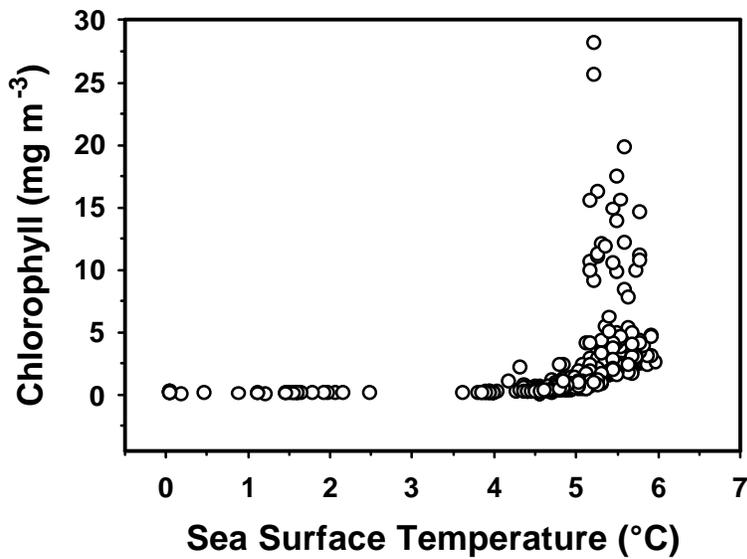
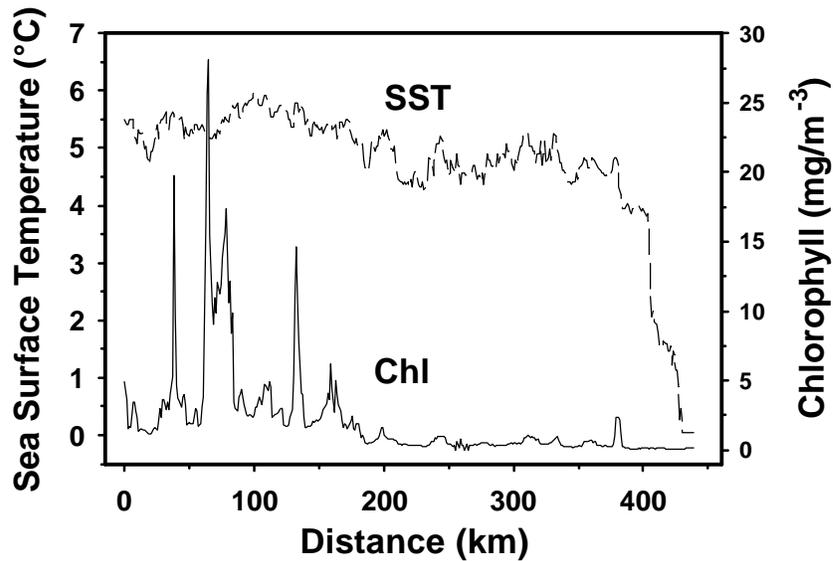
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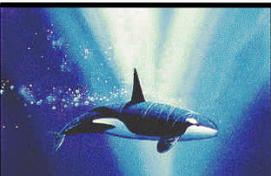
SST and chlorophyll vs. distance (left to right) along Transect A and the relationship between chlorophyll and SST.



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SST and chlorophyll vs. distance (left to right) along transect B and the relationship between chlorophyll and SST.



Summary

1) OCTS & SeaWiFS Algorithms & Retrievals

- a) Lab Sea data encompasses most variability
- b) SeaWiFS chlorophyll retrievals >2X low
- c) OCTS underestimates at high [Chl]
- d) Tuned algorithms provide good retrievals
- e) ORCA-2L > ORCA-2M > ORCA-3

2) Relative Absorption by Constituents

- a) for BG λ $a_p > a_s$ with $a_s \sim 61-96\%$
- b) a_a^* is $\sim 2X$ lower than low latitudes
- c) modeling results further w HydroLight

3) SST vs. Nutrients or Chlorophyll

- a) T is not related only to SiO_3 or NO_3
- b) T is not related to Chlorophyll (ship – 3 m)
- c) SST is not related Chlorophyll (satellite).

