

1 **Figure S1. Property – property plots showing the M84/3 data from the Levantine basin**
2 **deeper than 500 dbars.** Each plot is self-explanatory. Red lines correspond to stations 291,
3 294 and 296 east of the East Mediterranean Ridge showing the potential temperature –
4 salinity inversion due to Aegean Sea EMDW (Aeg-EMDW) produced during the EMT. Black
5 line corresponds to station 290 and the cyan line to 298. In these stations the former inversion
6 is eroded and deep waters from the Ionian Sea with a lower Aeg-EMDW signature occupy
7 these layers.

8

9 **Figure S2. Property – property plots showing the M84/3 data from the Ionian Sea**
10 **deeper than 600 dbars.** Each plot is self-explanatory. The following stations are highlighted:
11 302 (red line), 303 (cyan line), 305 (green line) and 314 (black line). Station 302 (red line)
12 present the post-EMT situation. Station 314 (black line) in the northern Ionian Sea showing
13 the deepest layers occupied by a saltier overflow from the Adriatic Sea. Stations 302 and 303
14 (cyan and green lines) in the southern Ionian Sea showing the temperature – salinity hook due
15 to the recent input of the saltier overflow from the Adriatic Sea.

16

17 **Figure S3. Property – property plots showing the M84/3 data from the Tyrrhenian Sea**
18 **between 100 and 900 dbars.** Each plot is self-explanatory. The following stations are
19 highlighted: 316 (red line), 319 (cyan line) and 321 (magenta line). Station 319 (cyan line) in
20 the centre of the Tyrrhenian Sea and station 321 (magenta line) in the Sardinia Channel
21 present an aged (high AOU) Levantine Intermediate Water (LIW) associated with its maxima
22 in salinity. Station 316 (red line), the nearest one to Sicily presents a fresher LIW with high
23 AOU and DIC values.

24

25 **Figure S4. Property – property plots showing the M84/3 data from the Tyrrhenian Sea**
26 **deeper than 500 dbars.** Each plot is self-explanatory. The red dots correspond to data deeper
27 than 900 dbars showing the influence of the overflow of Western Mediterranean Deep Water
28 from the western basin.

29

1 **Figure S5. Property – property plots showing the M84/3 data from the Western basin**
2 **deeper than 500 dbars.** Each plot is self-explanatory. The red dots correspond to data deeper
3 than 1500 dbars showing the influence recently formed Western Mediterranean Deep Water.

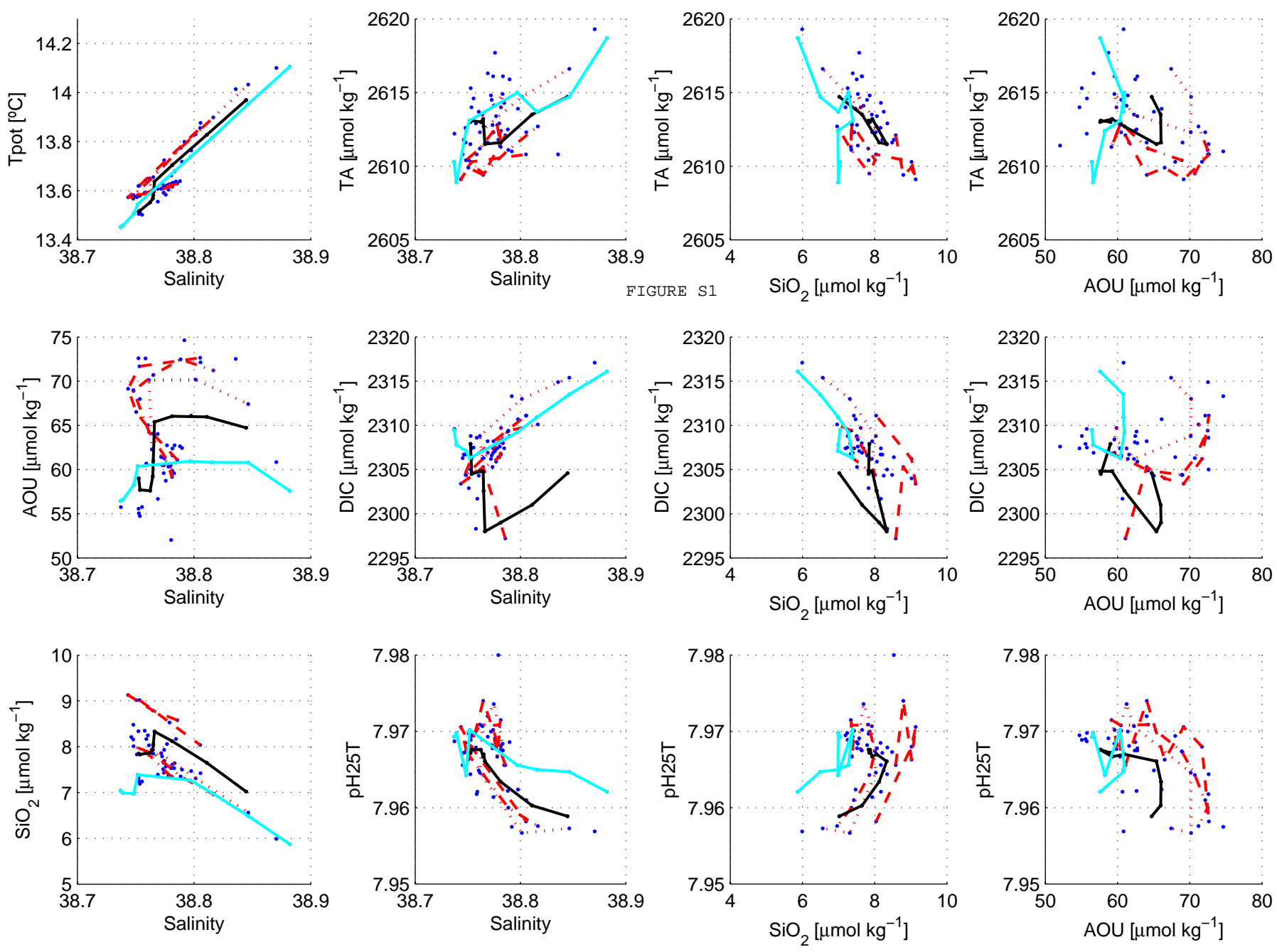
4

5 **Figure S6. Property – property plots showing the M84/3 data in the Strait of Gibraltar**
6 **and Gulf of Cadiz.** Each plot is self-explanatory.

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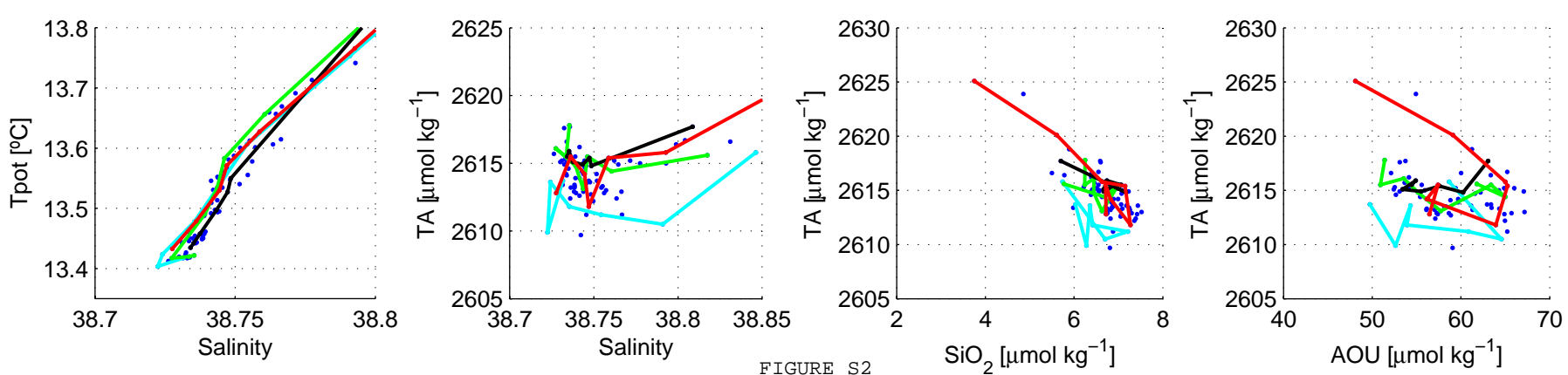
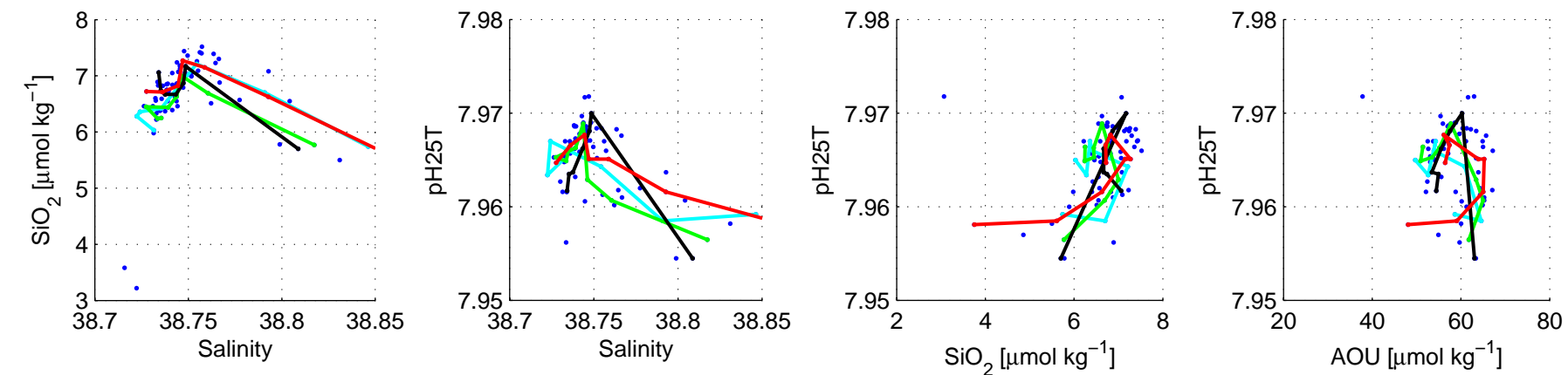
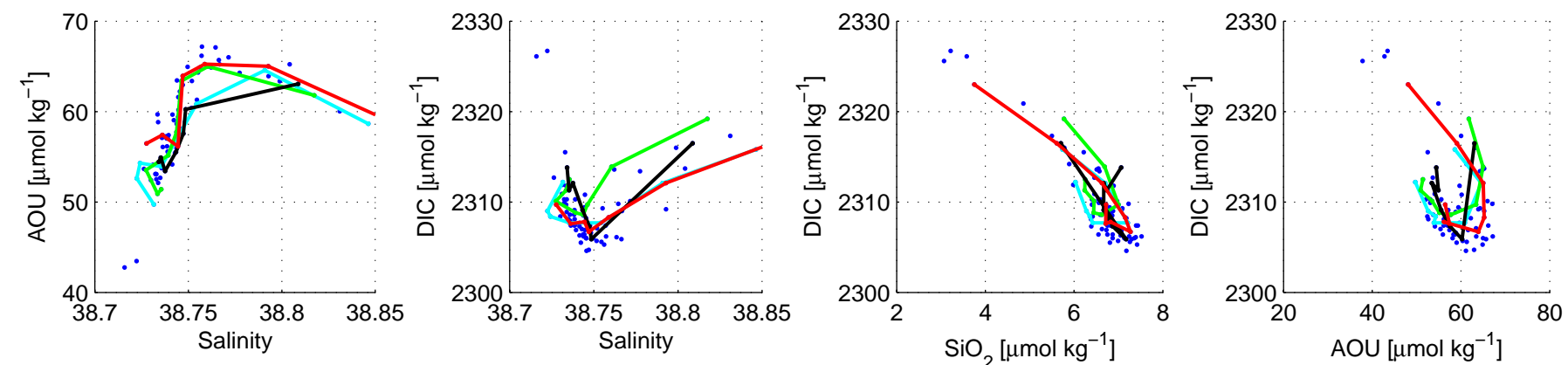


FIGURE S2



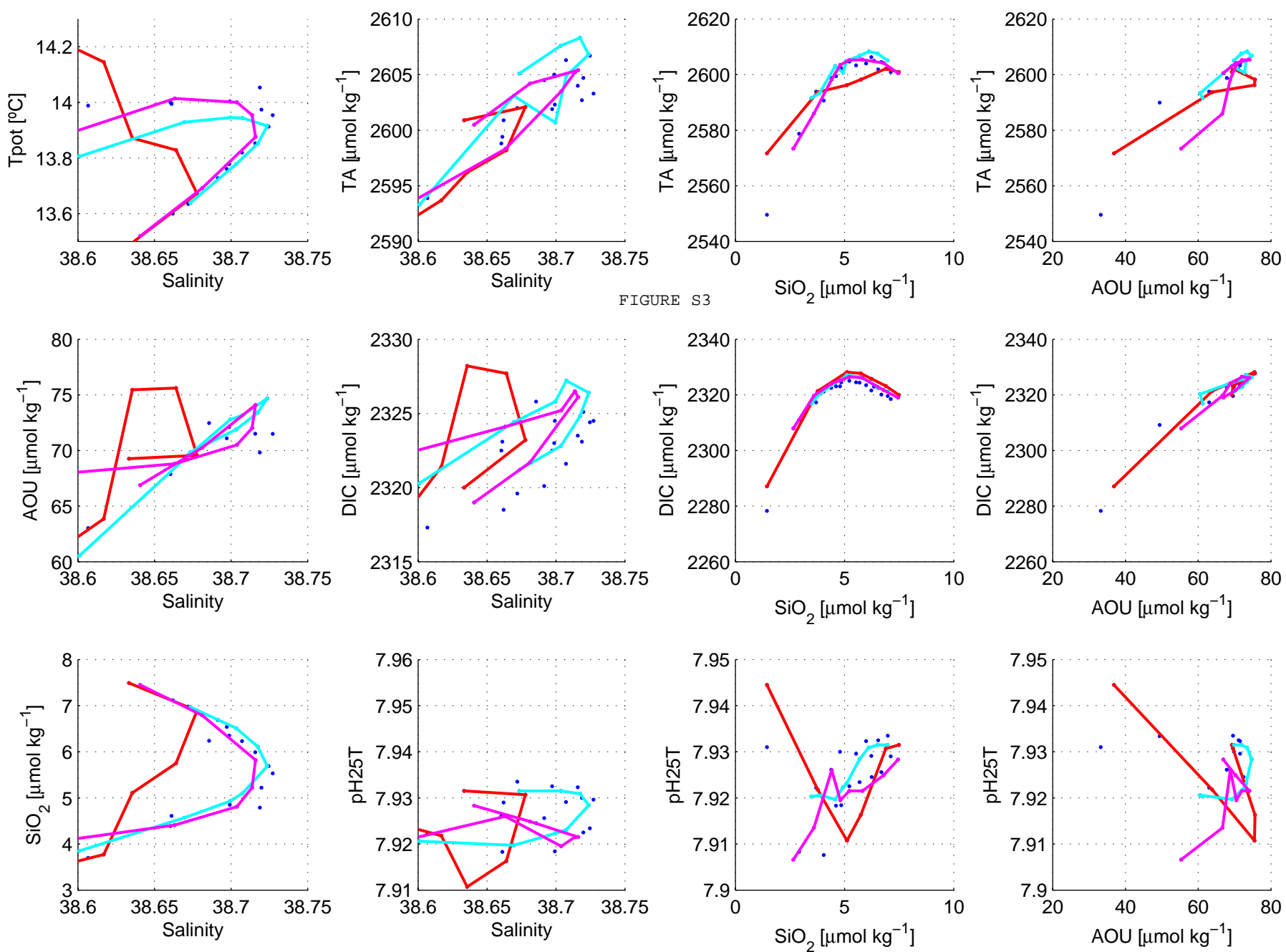


FIGURE S3

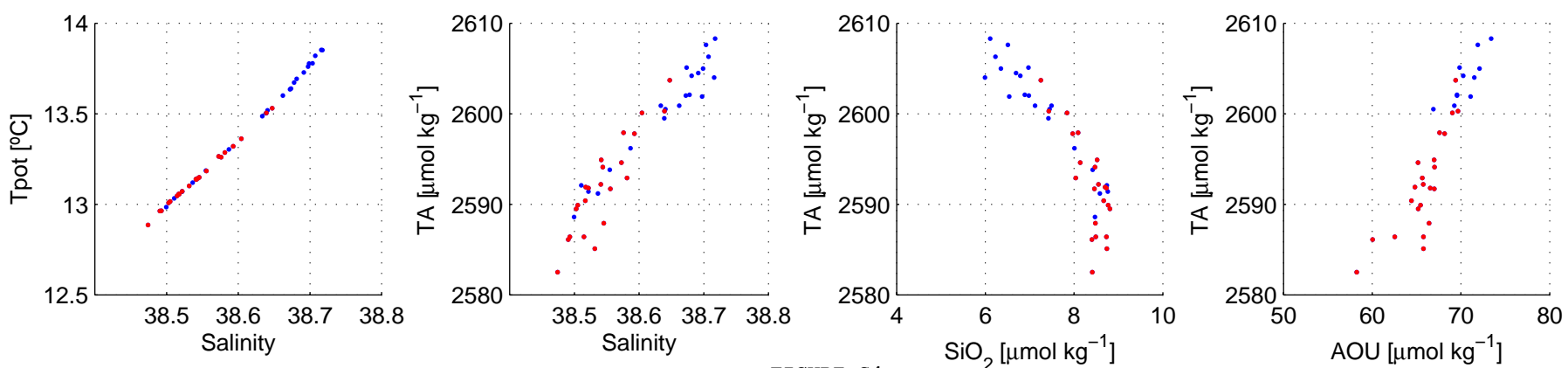
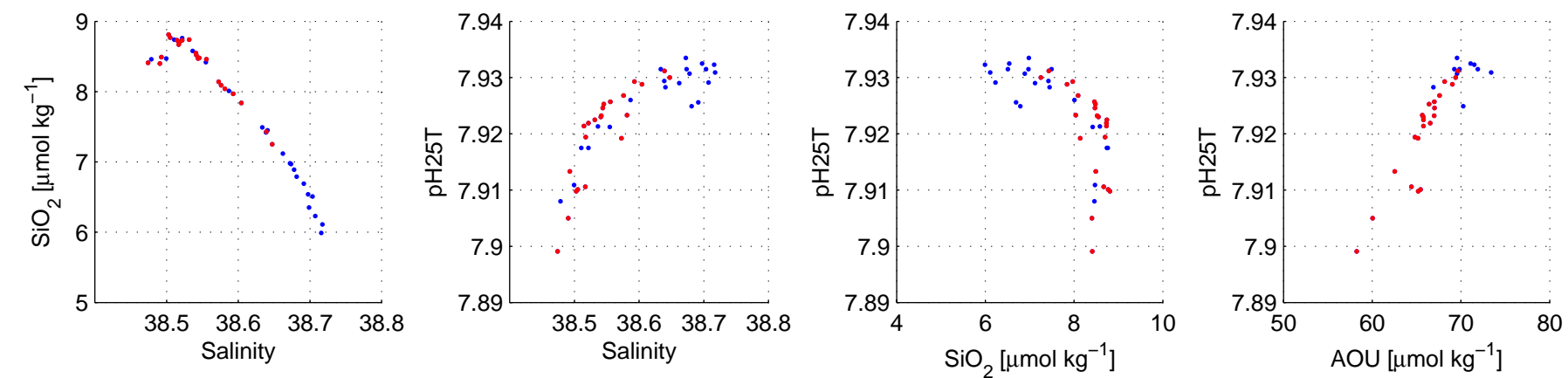
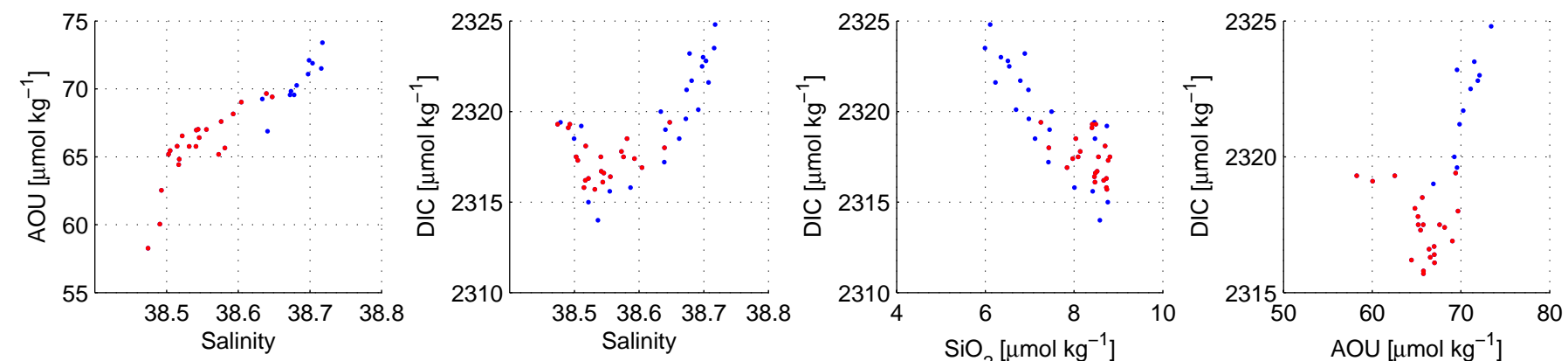
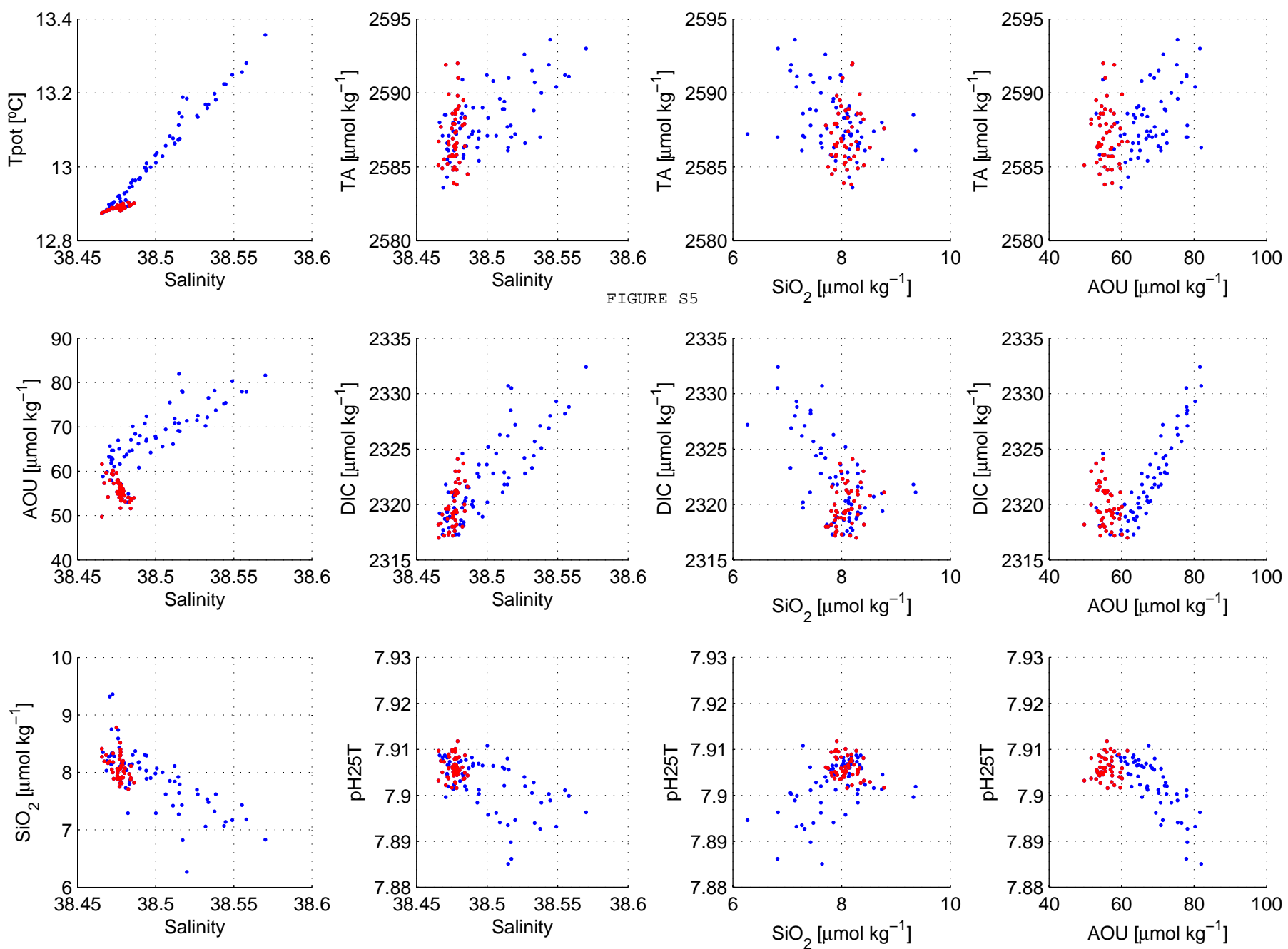


FIGURE S4





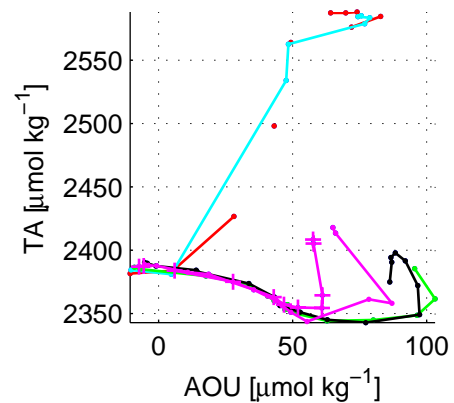
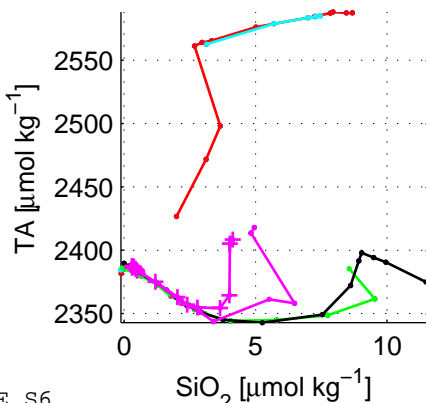
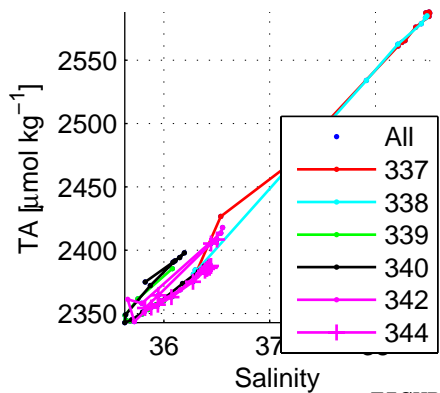
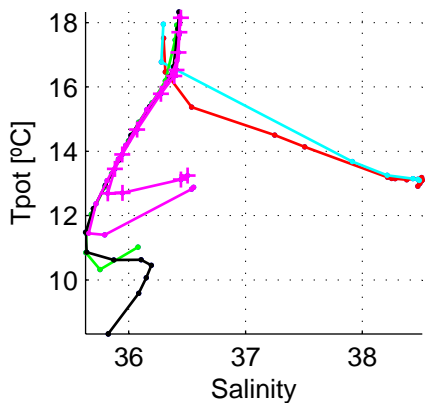


FIGURE S6

