ASL | Autonomous Systems Lab

Iver AUV Results

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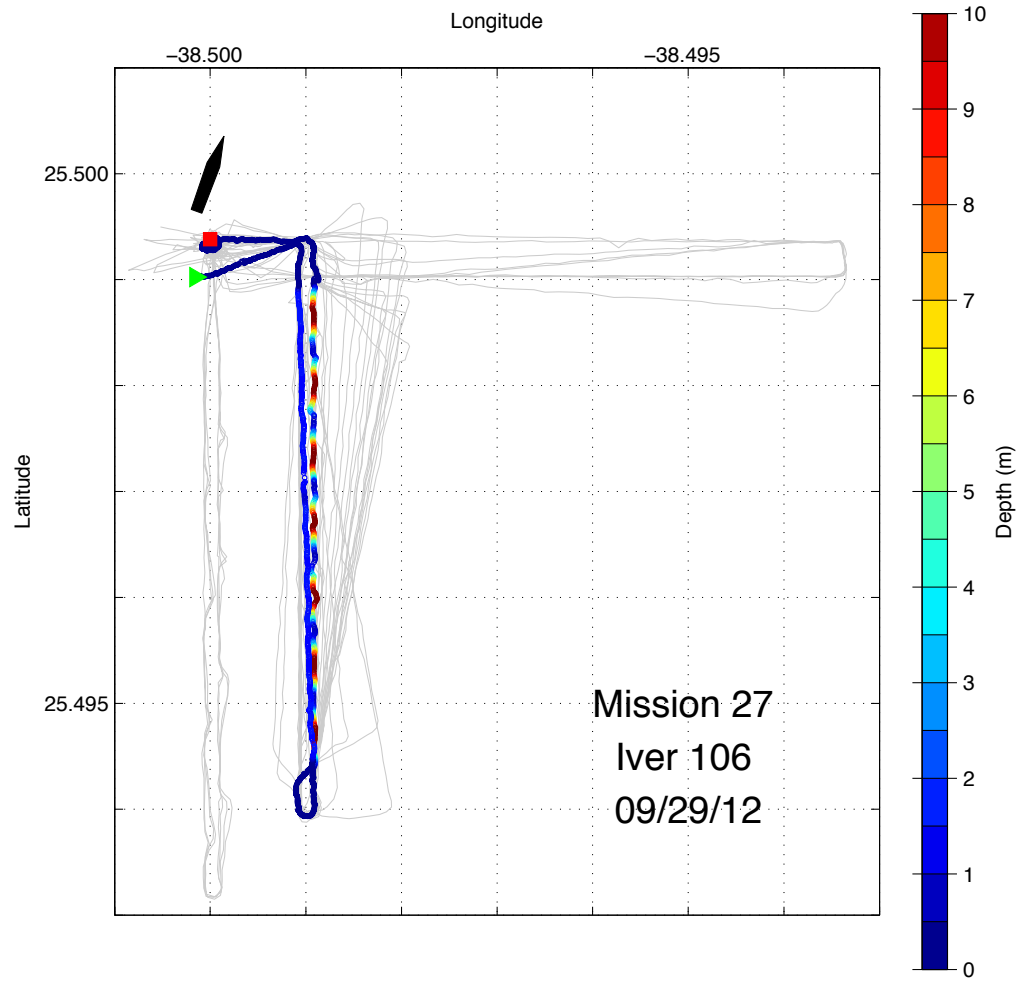
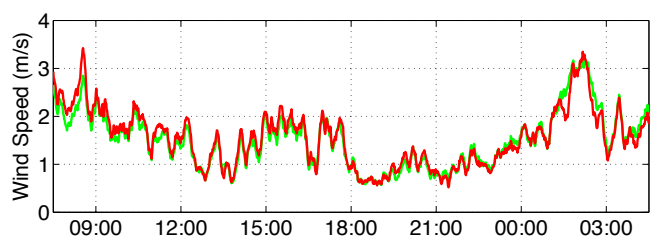
Miami SPURS Meeting

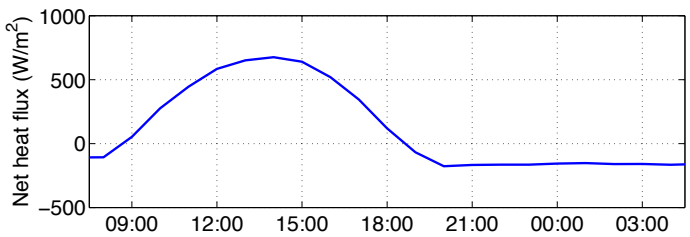
17 January, 2013

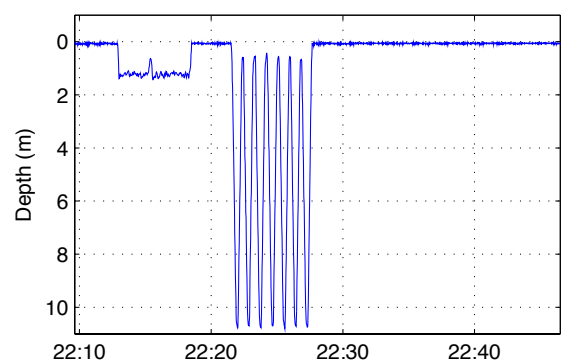
Diurnal Stratification Experiment
29-30 September, 2012

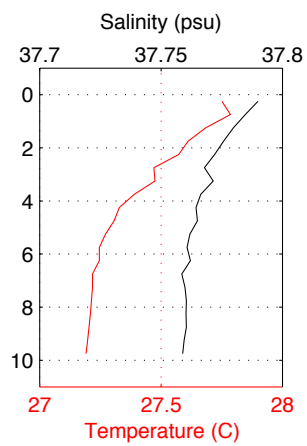
33 undulating/constant depth missions spanning 19 hours of calm weather, 60 miles NNE of WHOI mooring

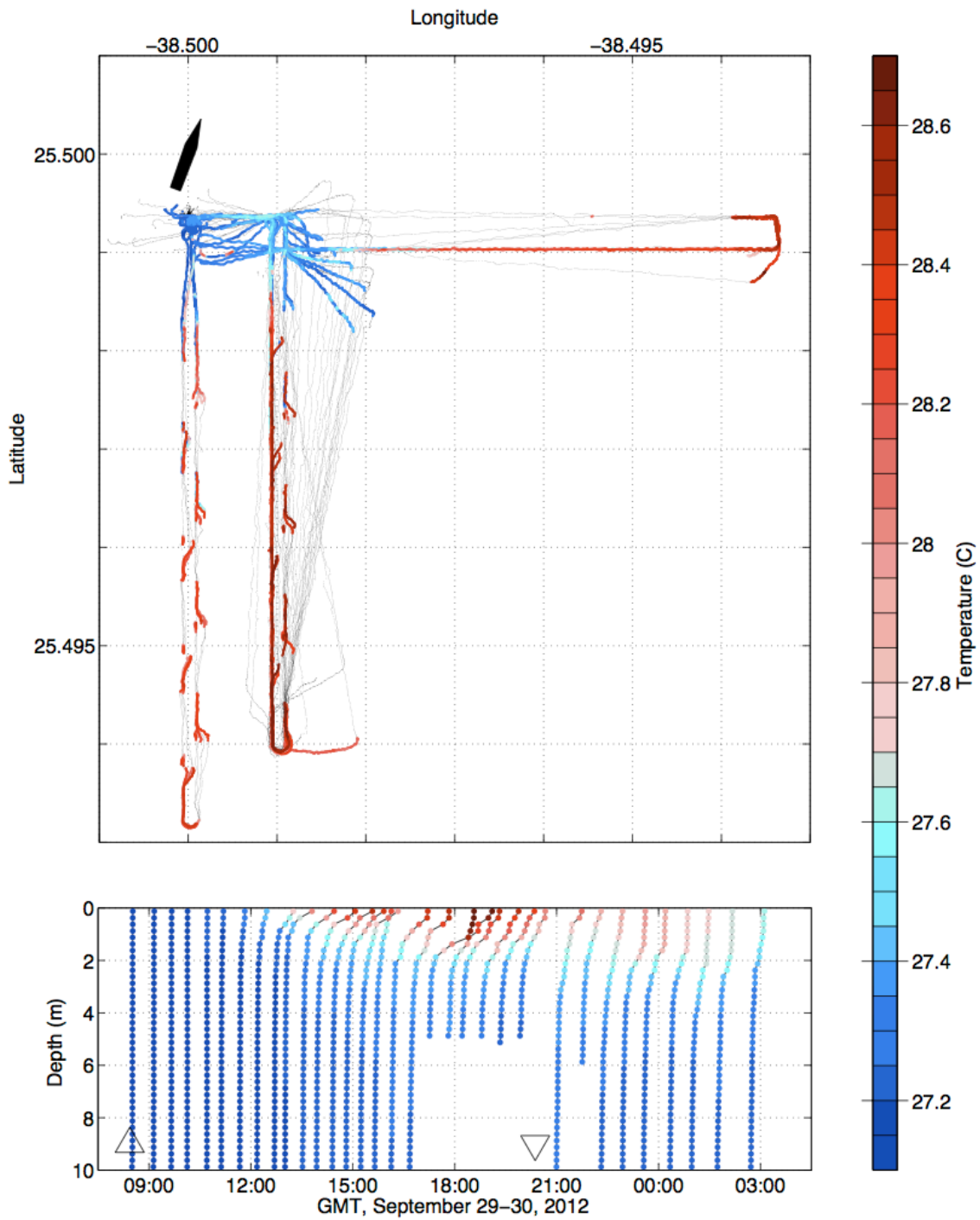






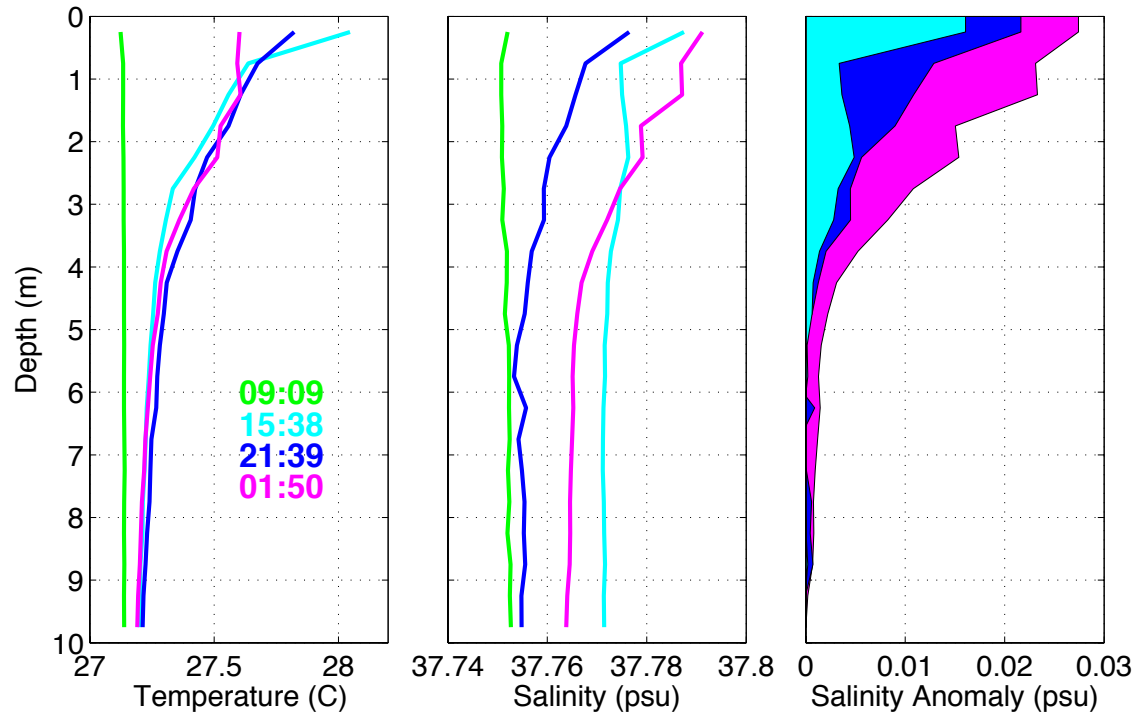


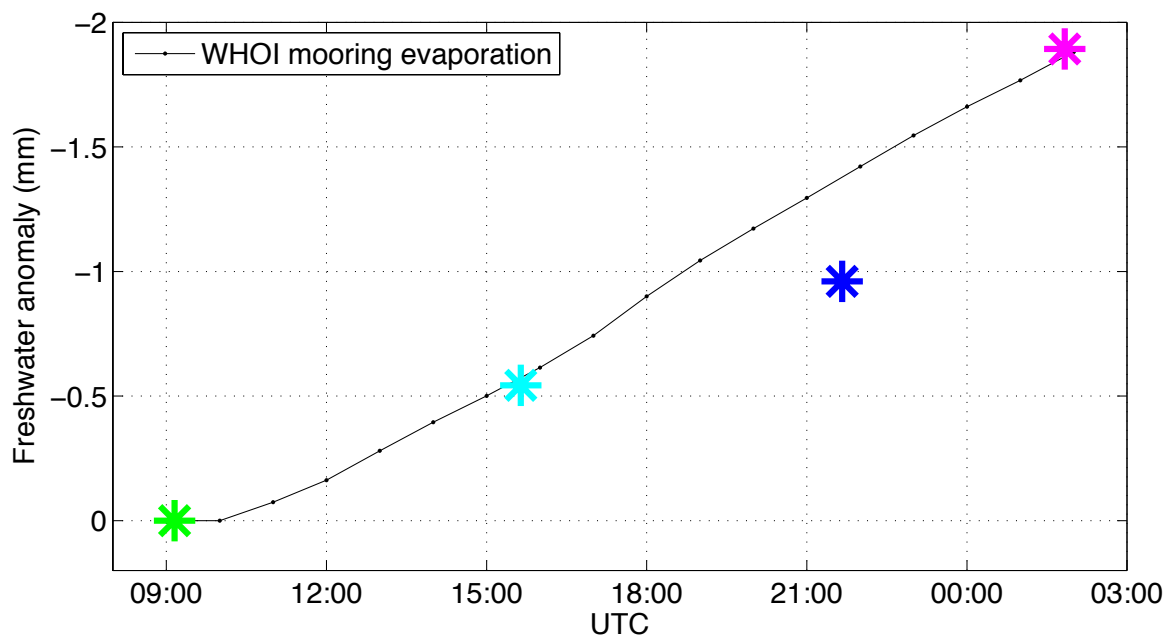



Longitude
−38.500
−38.495
25.500
25.495
Latitude
28.6
28.4
28.2
28
27.8
27.6
27.4
27.2
Temperature (C)
0
2
4
6
8
10
Depth (m)
09:00
12:00
15:00
18:00
21:00
00:00
03:00
GMT, September 29−30, 2012

Average profiles from 4 sets of 3 consecutive missions

Salinity anomaly time series consistent with buoy freshwater flux estimates

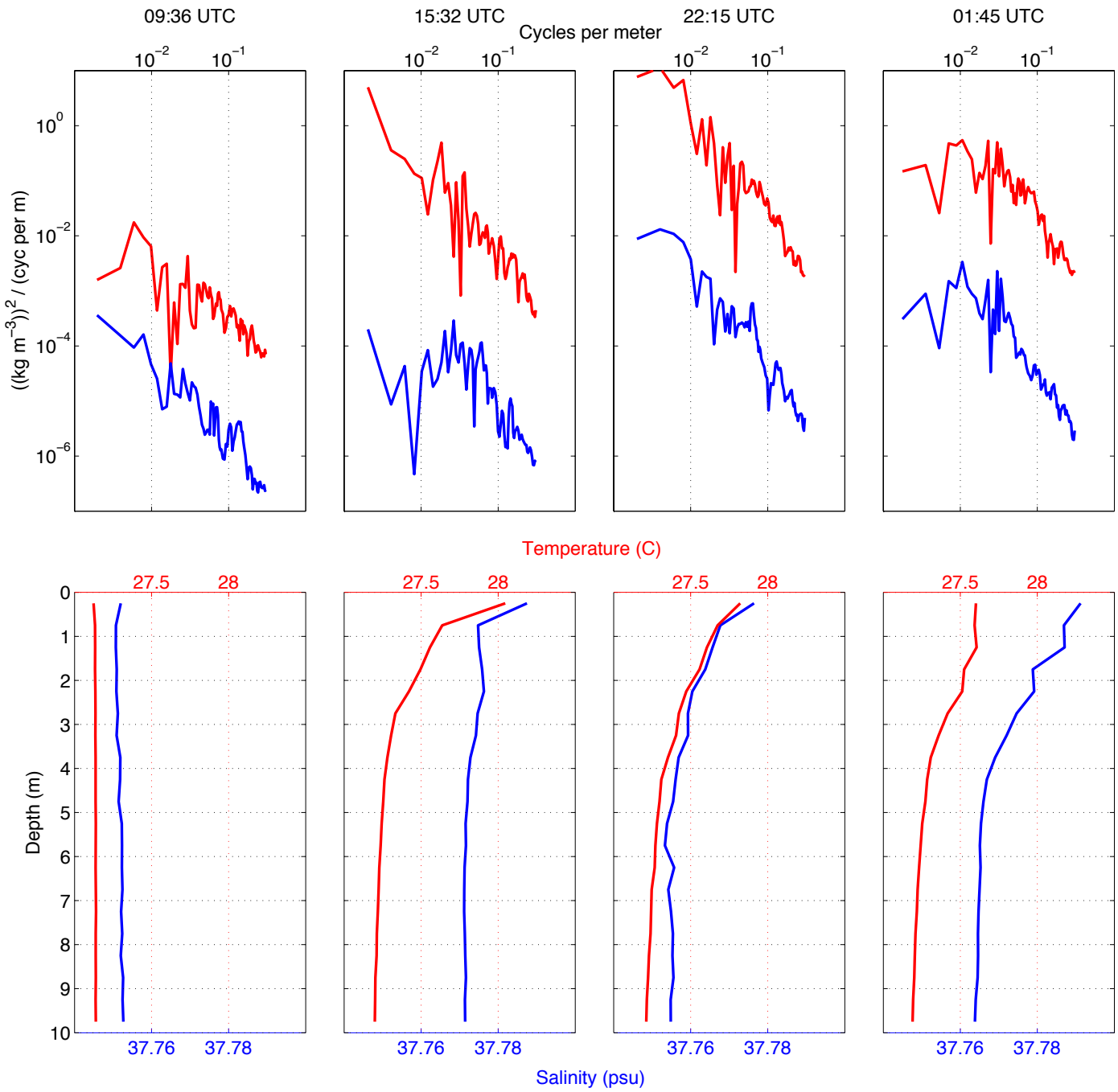


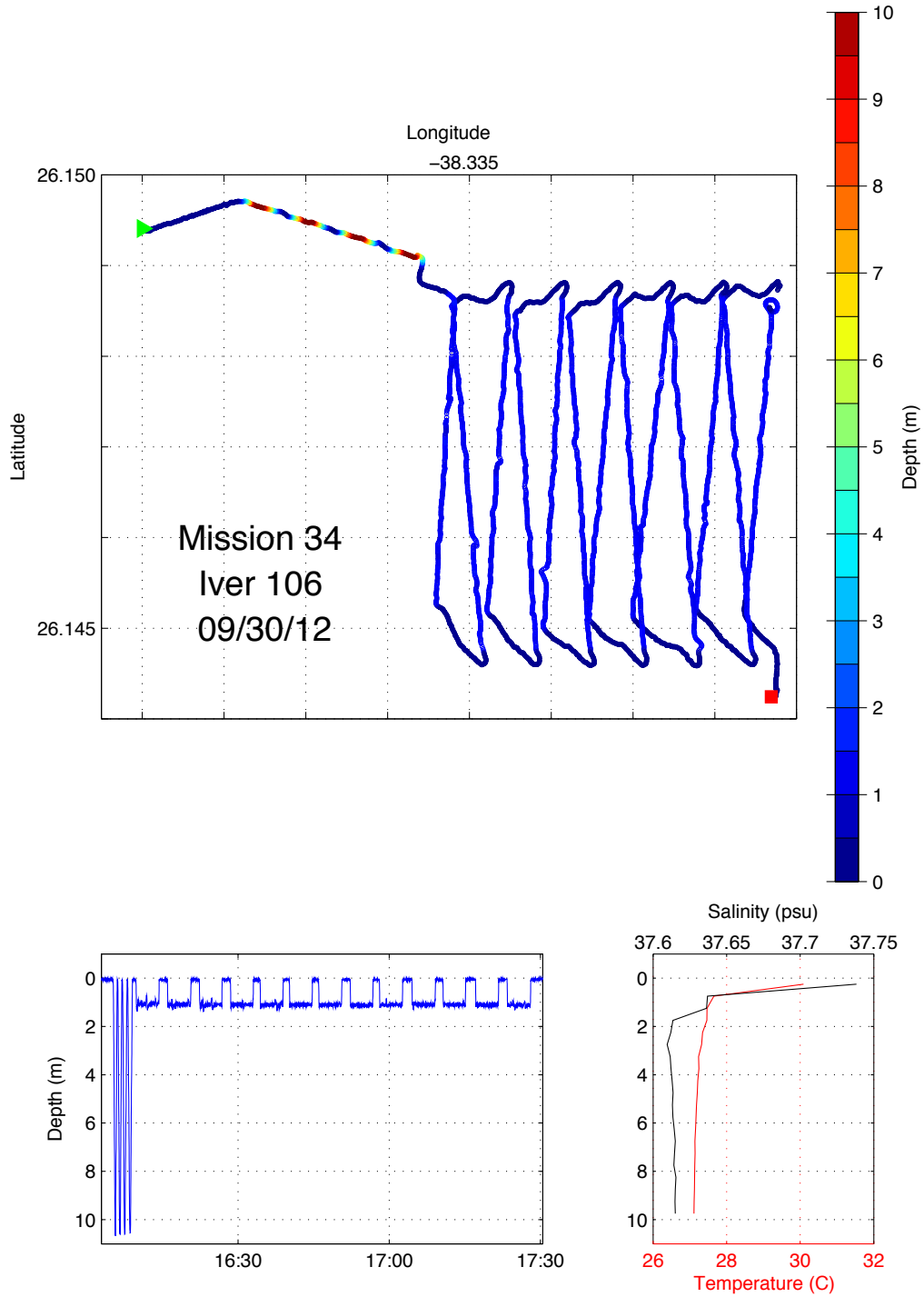


Horizontal Structure

Density at 1 meter controlled by temperature

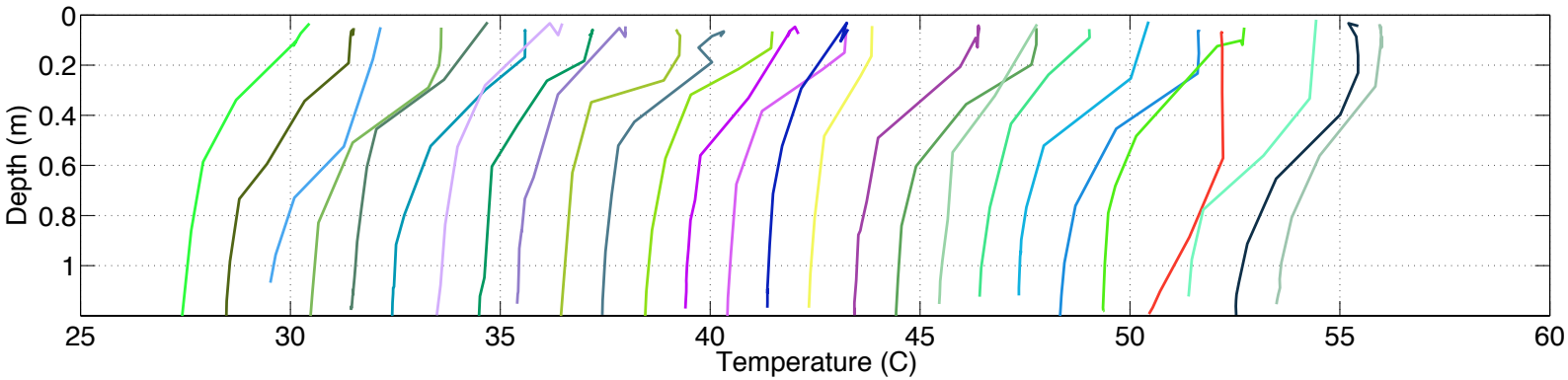
Horizontal variance scales with vertical gradient

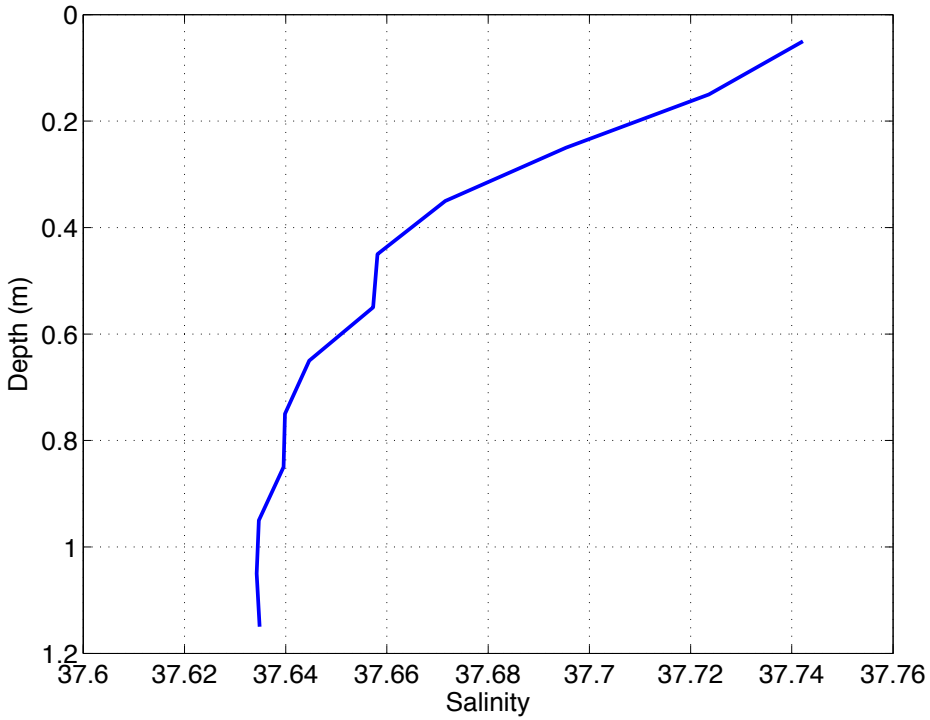




Lawnmower Survey Experiment
30 September, 2012

13 1-meter-deep transects
spanning a 450-m square

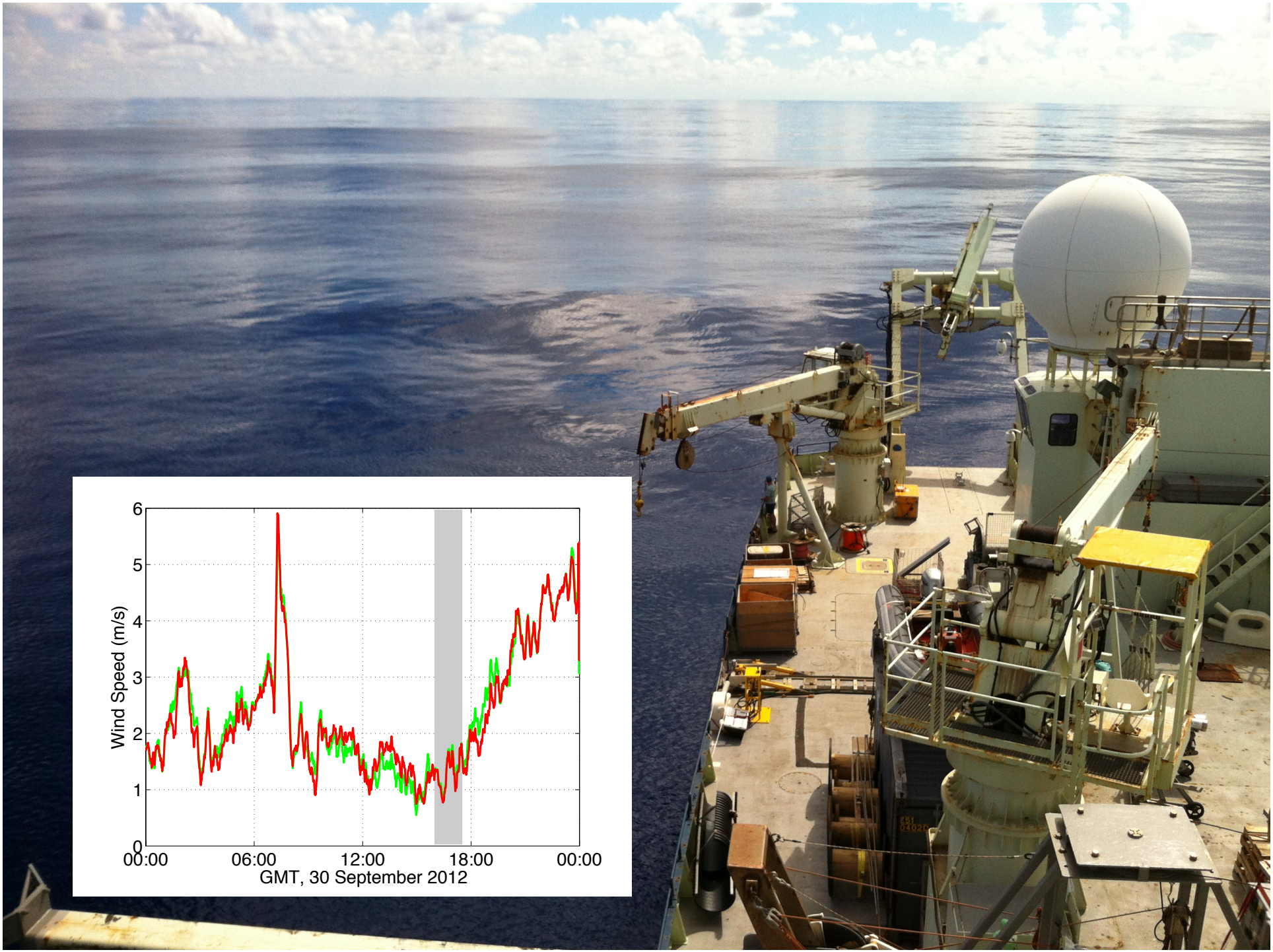




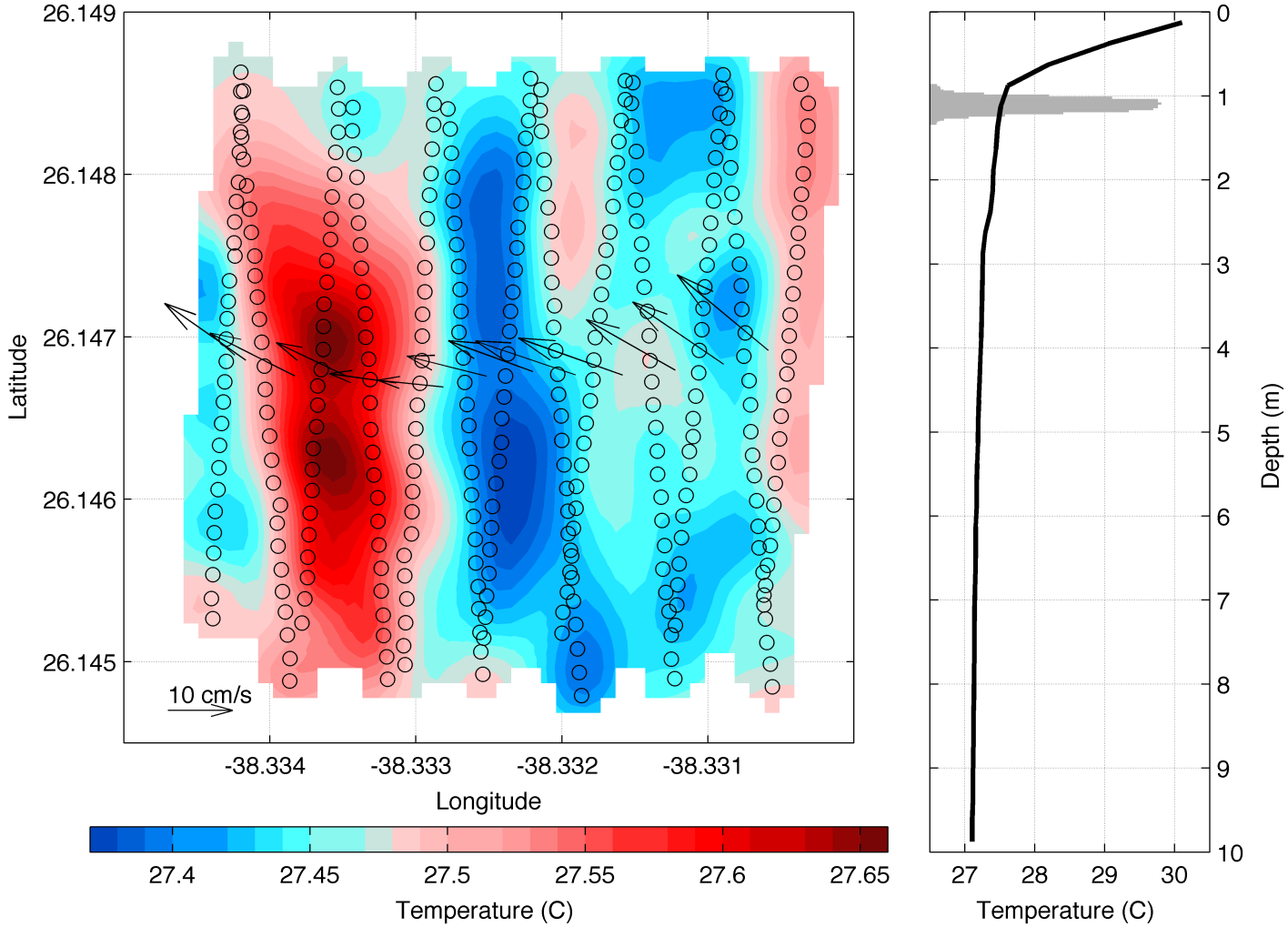
Upper meter stratification

Temperature: 3°C
Salinity: 0.1 psu

Lucky…


Wind Speed (m/s)
0
1
2
3
4
5
6
00:00
06:00
12:00
18:00
00:00
GMT, 30 September 2012

Internal waves in 1-meter temperature map



Next time…

- Hardware tweaks
  - Towfloat
  - Argos tag
- Dive angle