

Experience with Seaglider in the Norwegian Atlantic Current

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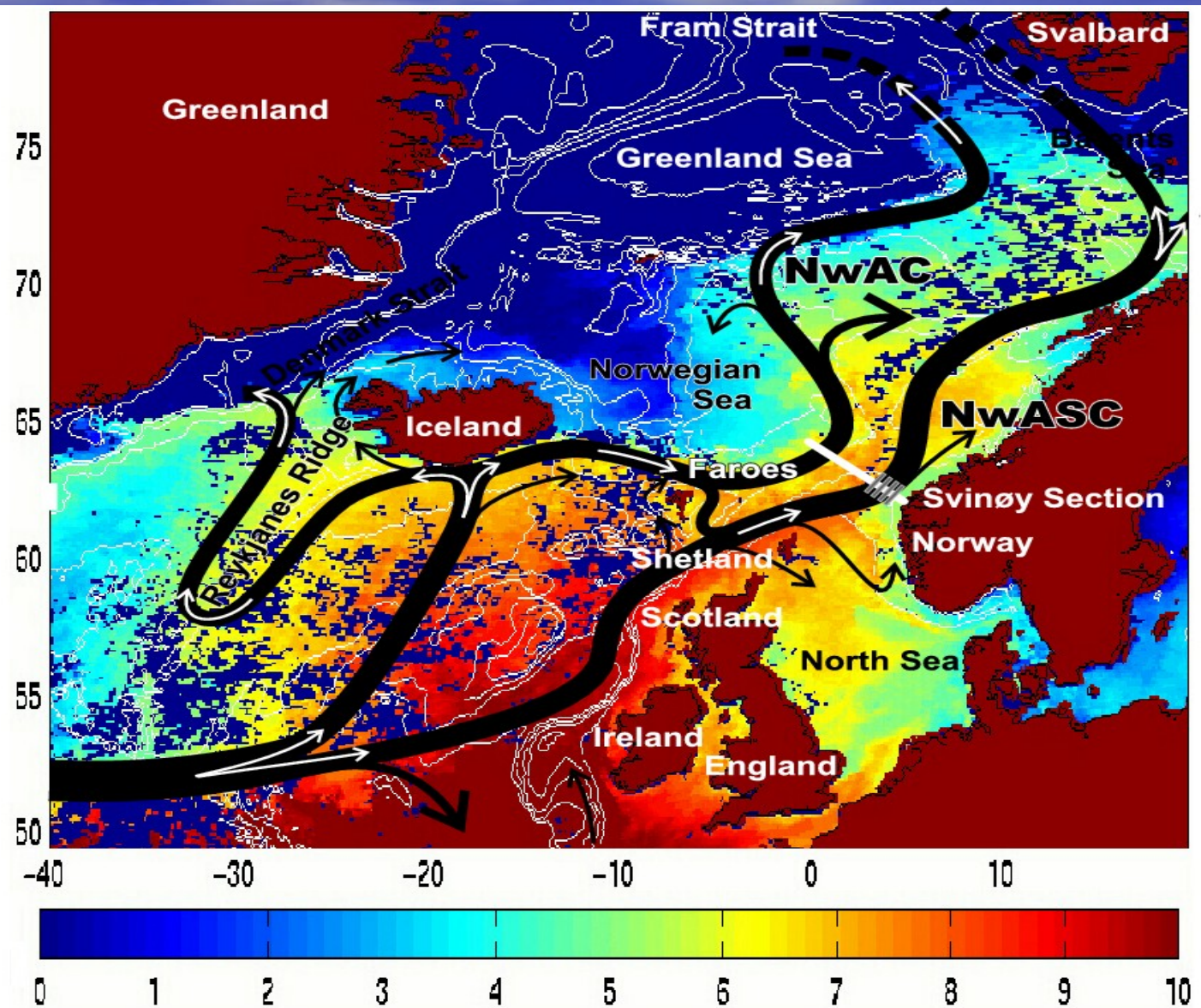
Geophysical Institute, University of Bergen, Norway

Applied Physics Laboratory, University of Washington

Major Pathways of
Atlantic Water and
extension of
Atlantic Water in
The North Atlantic
& Norwegian Sea,

Orvik & Niiler,
GRL 2002

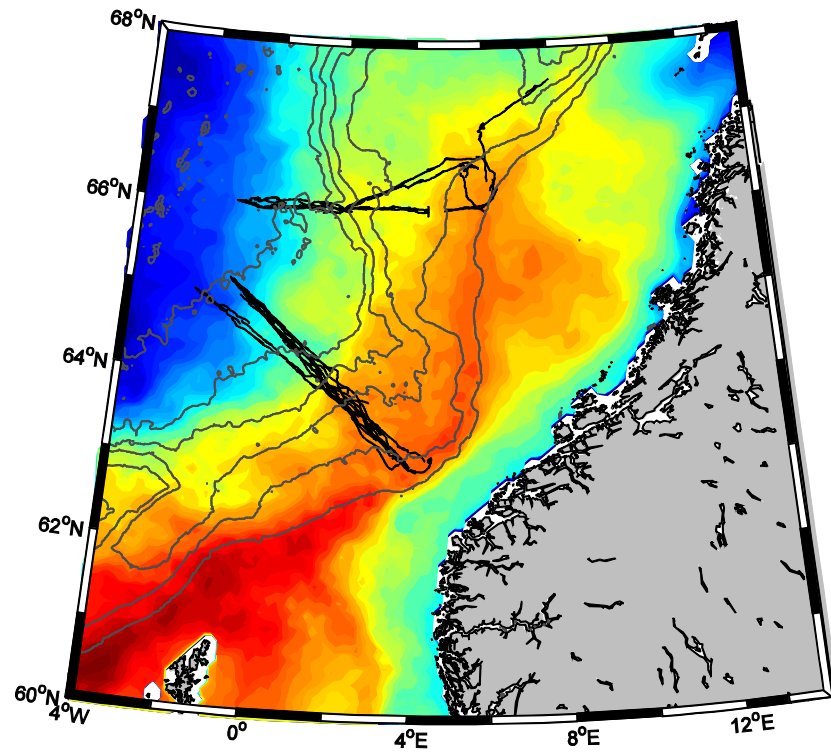
Contributions
Fratatoni (2001),
Reverdin (2003)



Seaglider sections in the iAOOS program

3 Mike transects fall 2008

9 Svinøy transects January-August 2009



Svinøy section
Mooring array
during VEINS

Comparison of
Std CTD-section
and
SeaSoar CTD
VM-ADCP

August 1997

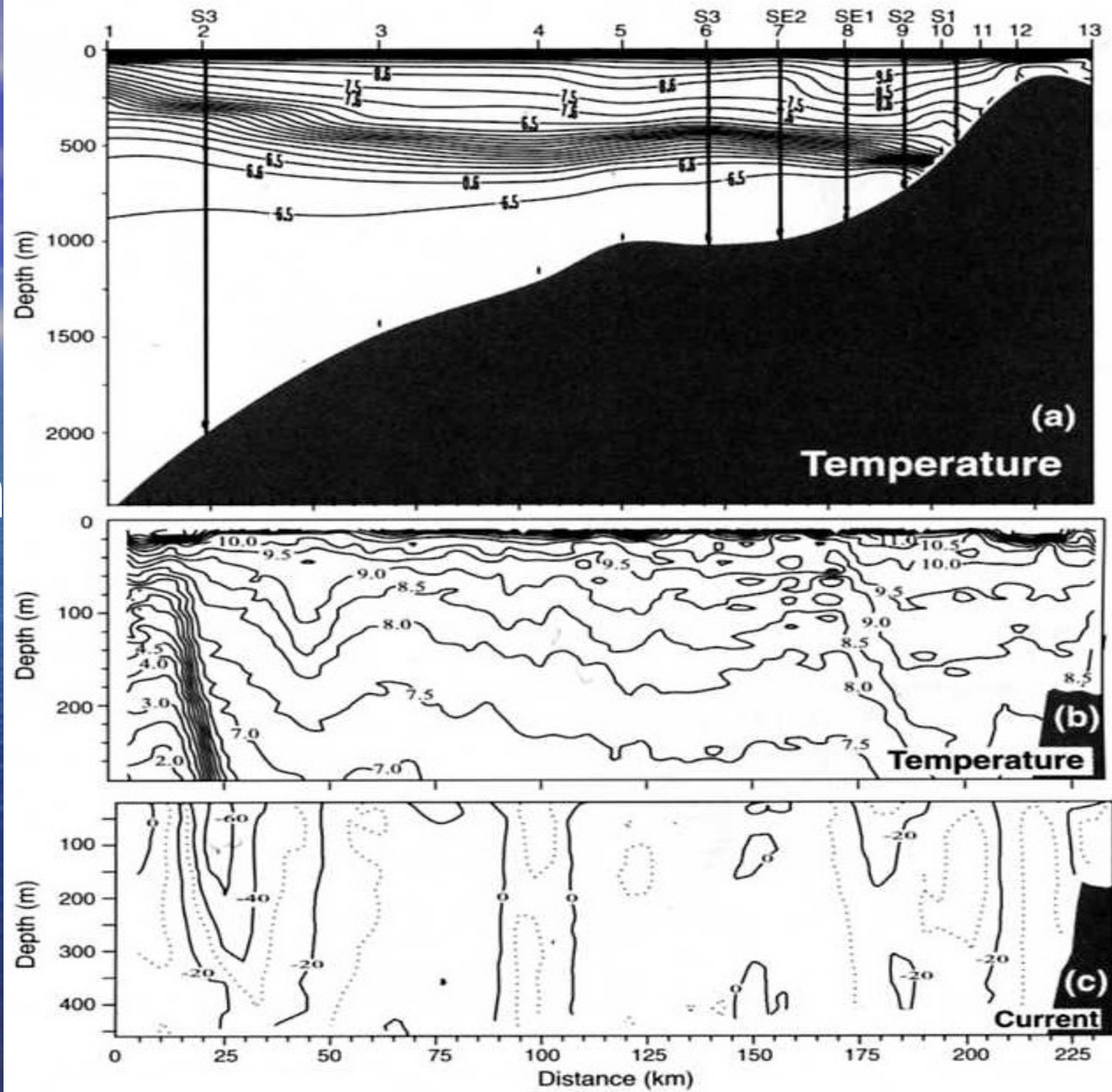


Figure 2. (a) CTD, (b) SeaSoar-CTD, and (c) ADCP section along the Svinøy section, August 1997. Mooring lines and current meter depths are indicated.

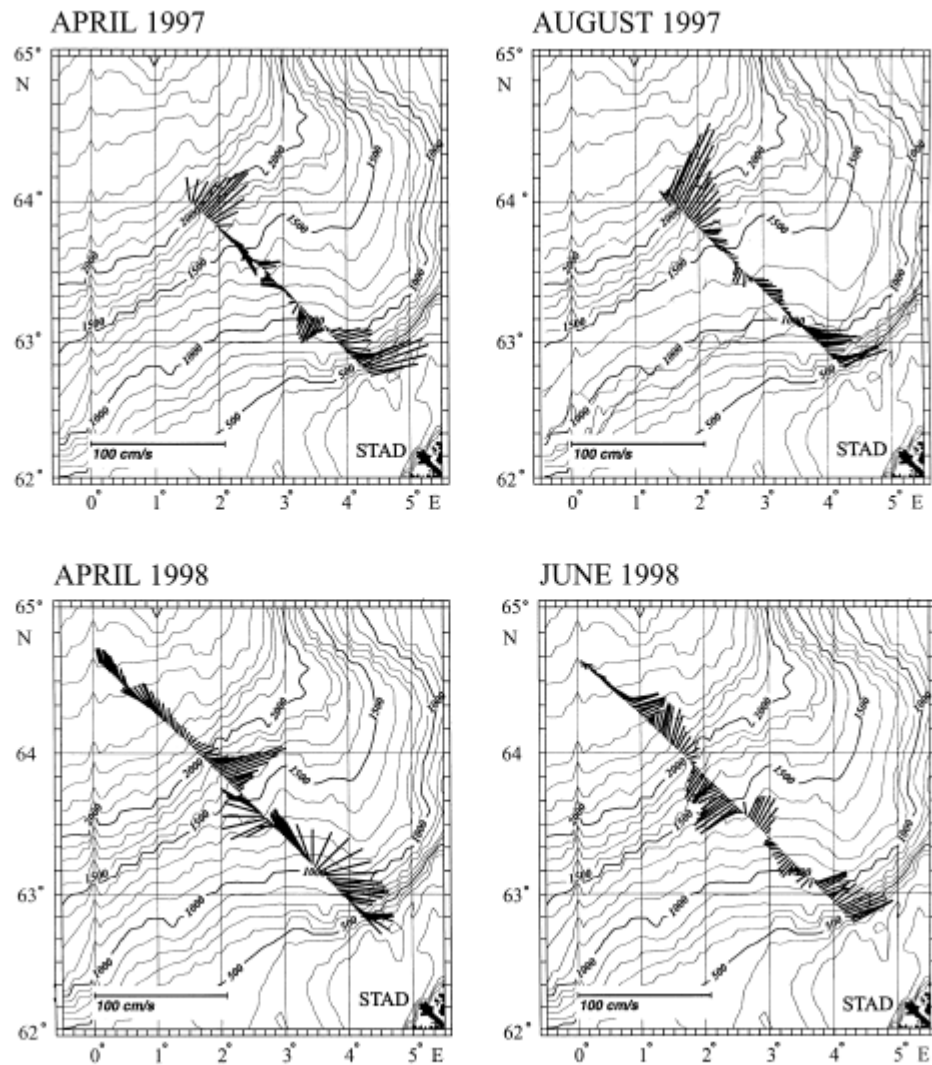
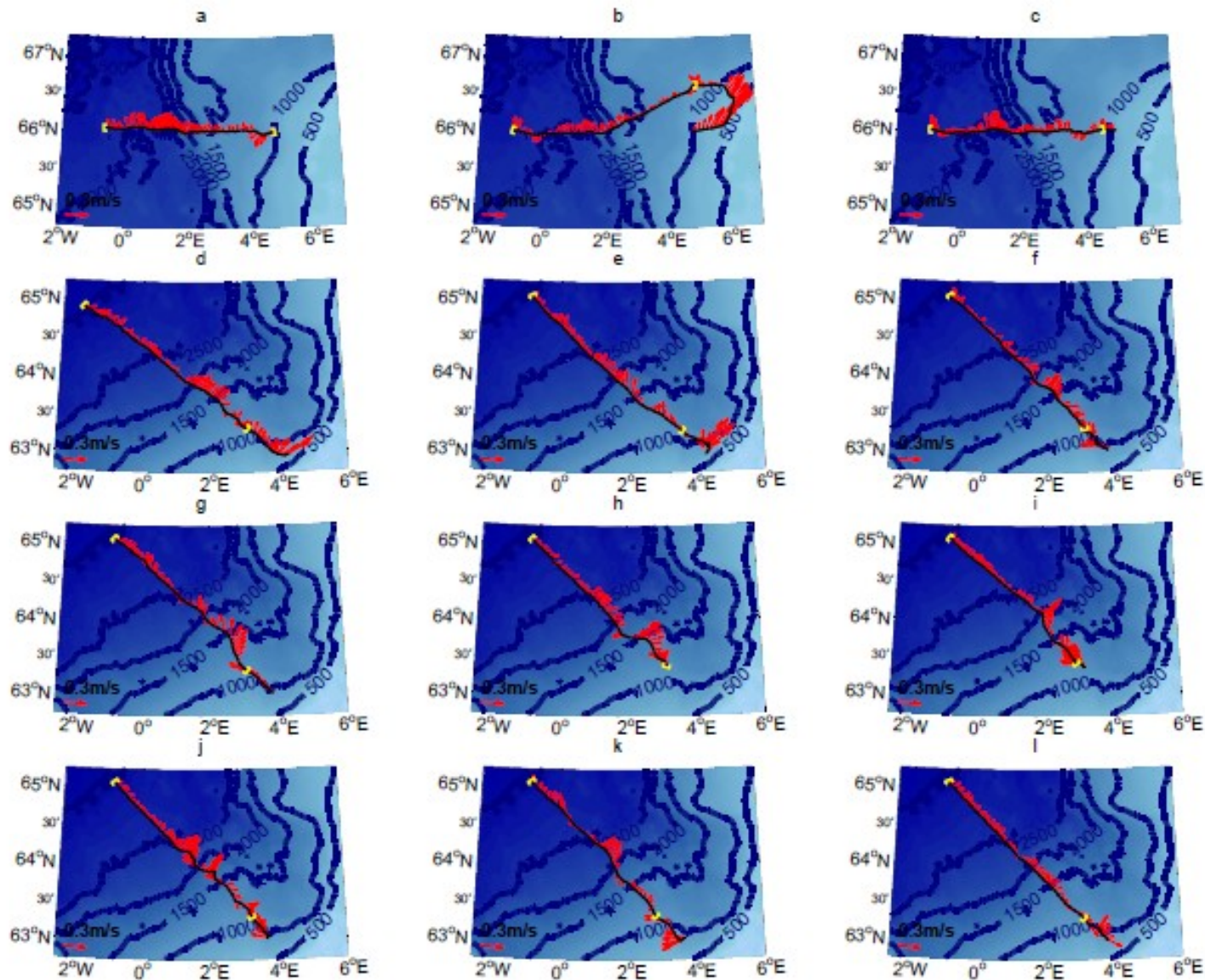
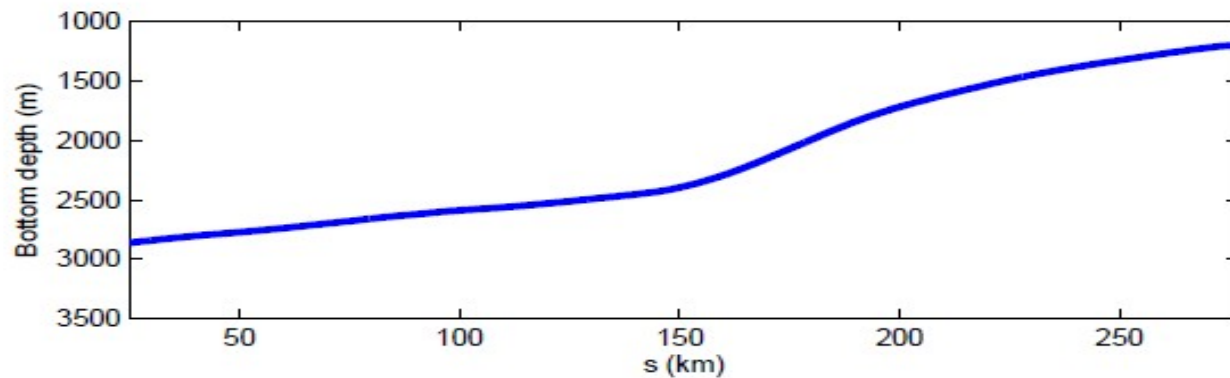
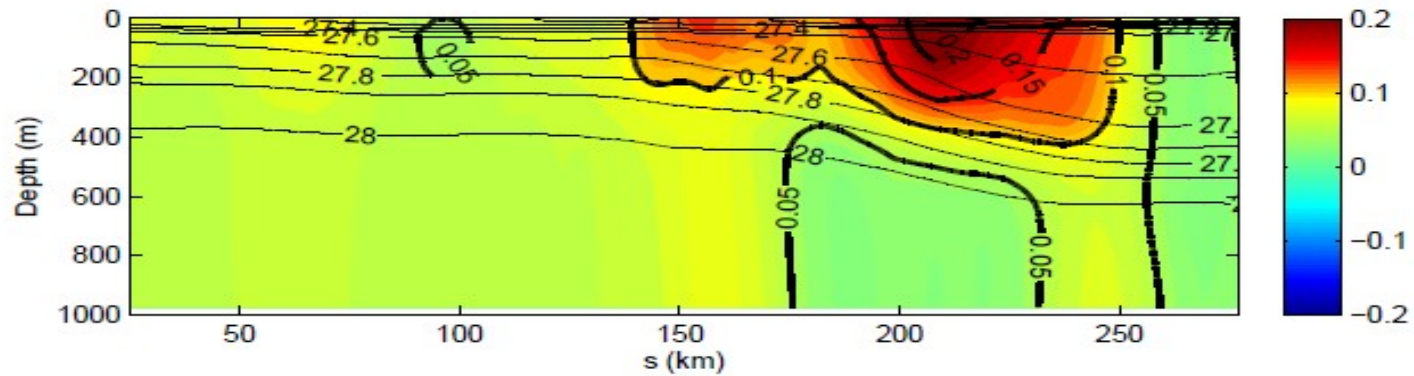


Fig. 4. ADCP current stick plots (5 min means) along the Svinøy section at 100 m depth from April and August 1997 and April and June 1998. Bottom contours are also indicated.

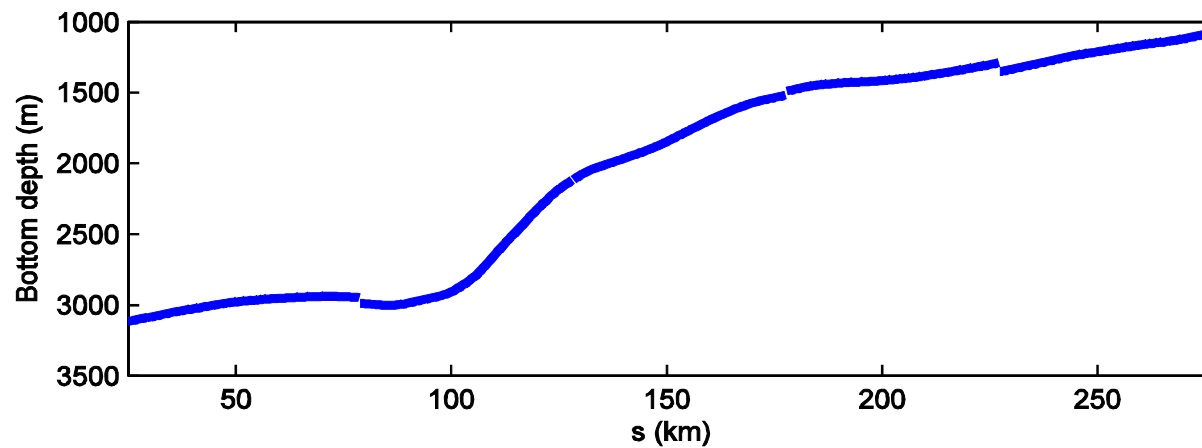
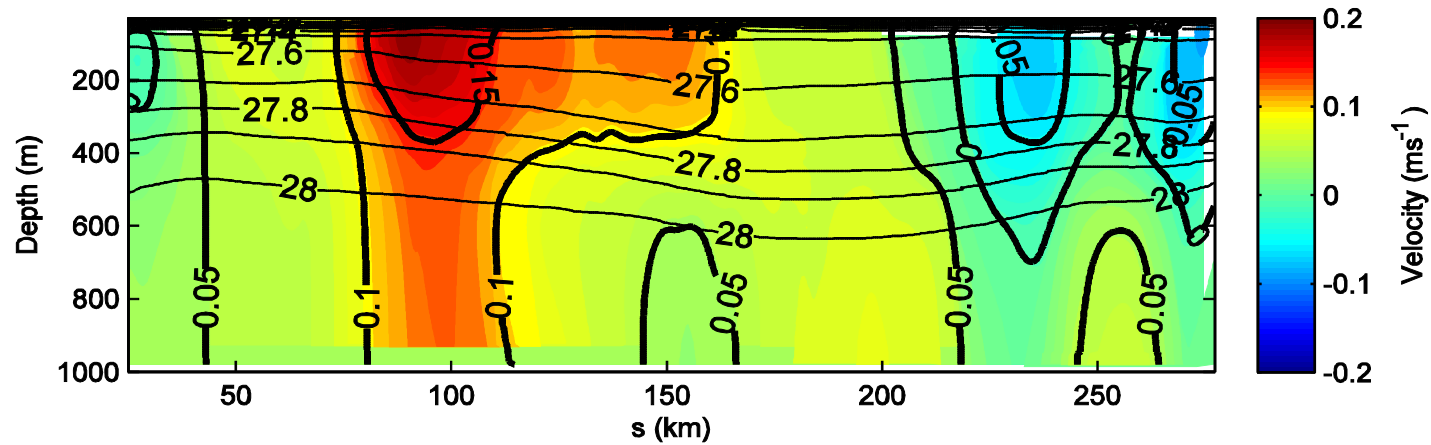
VM-ADCP legs along the Svinøy section (Orvik et al 2001)



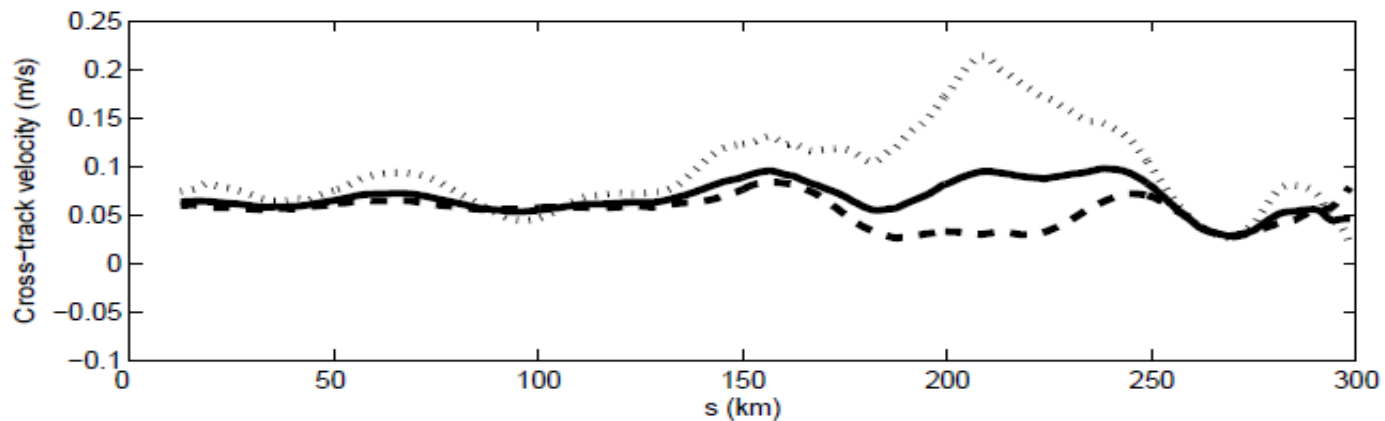
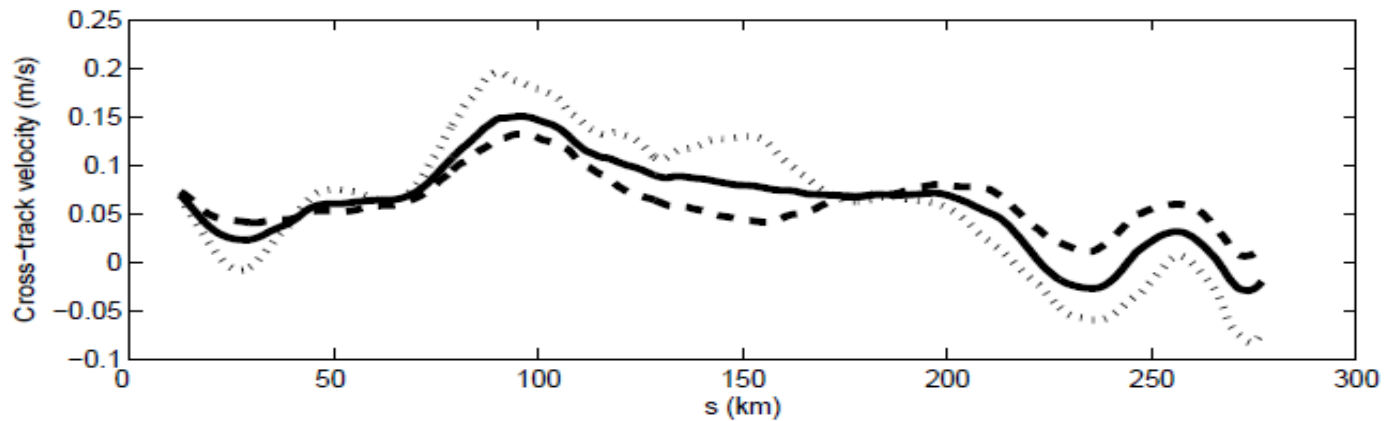
Vertical mean velocities from 3Mike/ 9 Svinøy transects



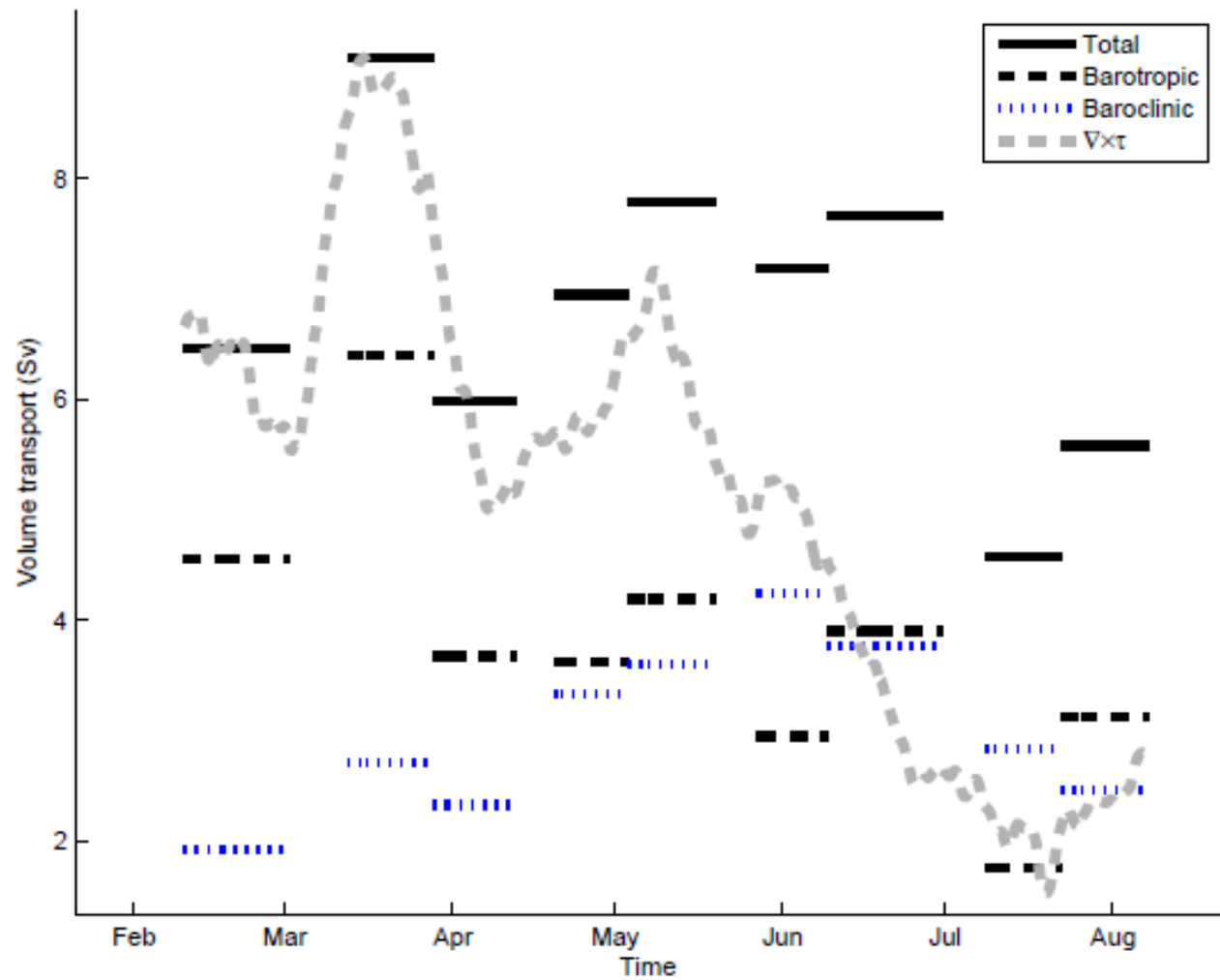
Baroclinic current in the Svinøy section - from hydrography



Baroclinic current in the Mike section - from hydrography



Absolute geostrophic currents at 100m/800m and average current
Station Mike and Svinøy transects



Total, Baroclinic and Barotropic Atlantic water transport ($S > 35$)

Summary

- Seaglider monitoring
- Western branch of the Norwegian Atlantic Current
- Topographic steered deep flow
- Mirrors the location of the polar front
- Volume flux of Atlantic water