



The Sakhalin Research Institute Of Fisheries And Oceanography

MONITORING OF TSUSHIMA WARM CURRENT IN THE NORTHERN JAPAN SEA IN SPRING 2003

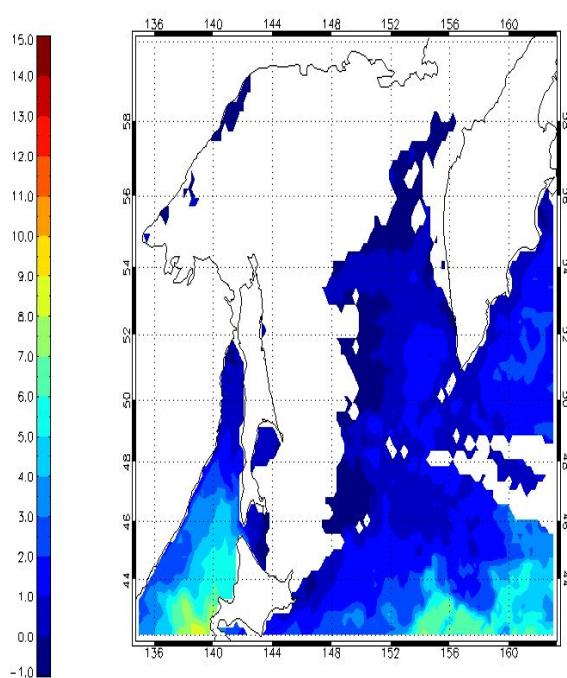
George Shevchenko,
Constantine Puzankov
Valery Chastikov

Monitoring of Tsushima Warm Current

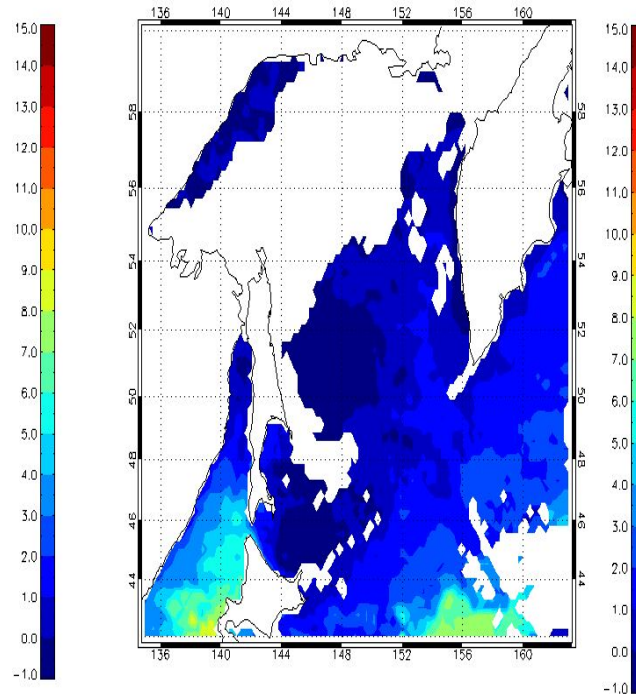
- 1. Satellite SST measurements in the northern Japan Sea
- 2. CTD measurements at standard section cape Slepikovsky – cape Zolotoy
- Installation of mooring in southern part of Tartary Strait in winter 2003

Decadal SST maps, April 2003

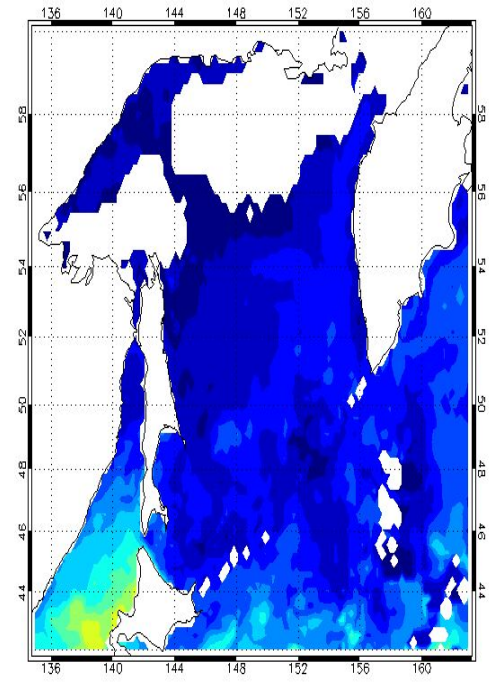
1-10 April



11-20 April

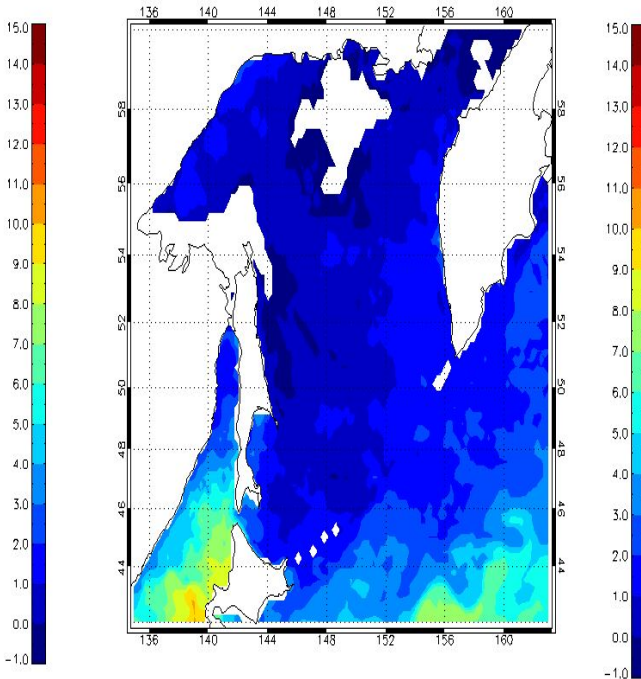


21-31 April

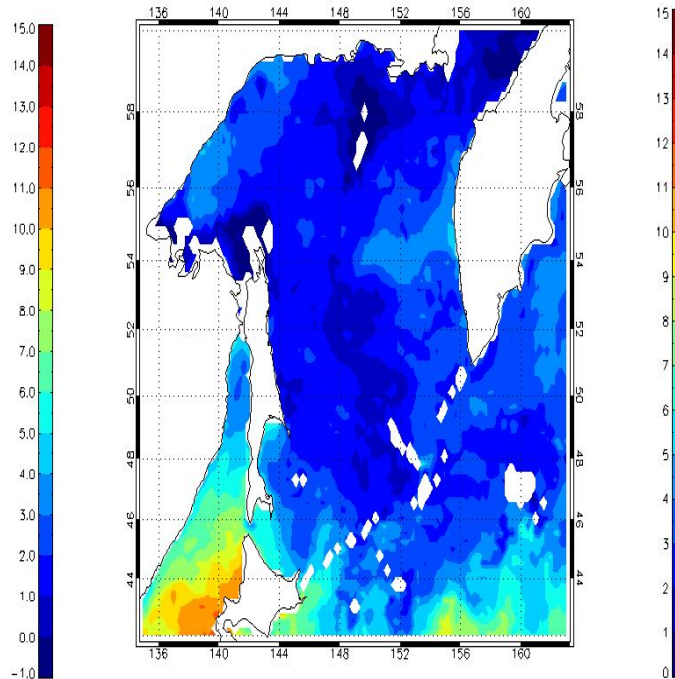


Decadal SST maps, May 2003

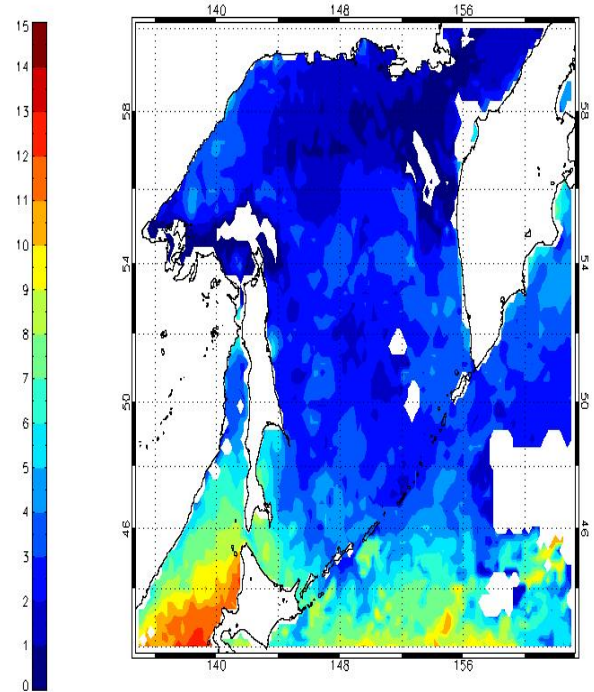
1-10 May



11-20 May

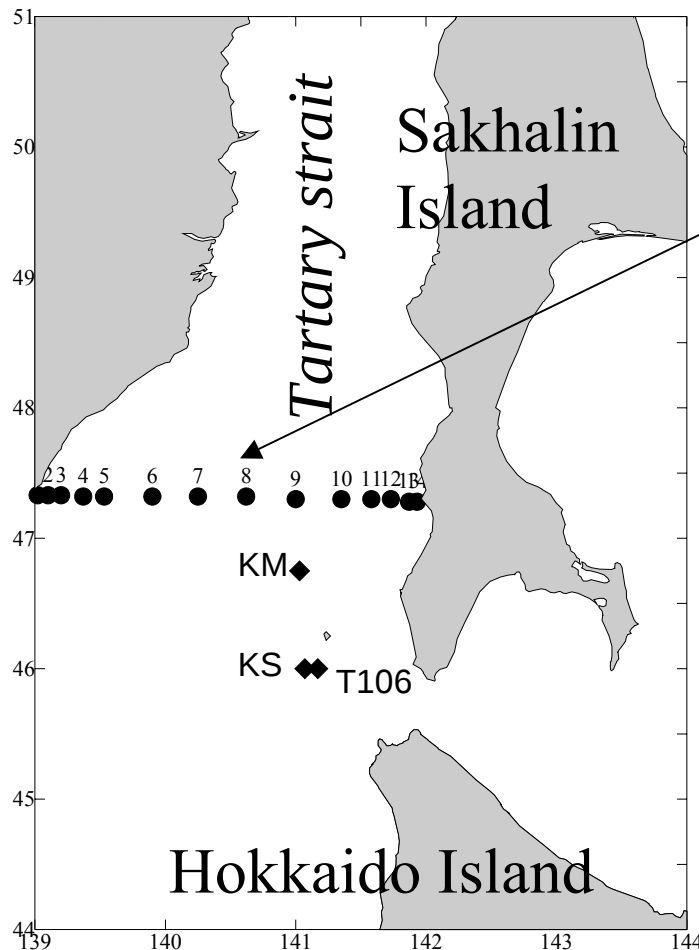


21-31 May



Weak warm water flux of Tsushima and Soya Warm Currents in May 2003

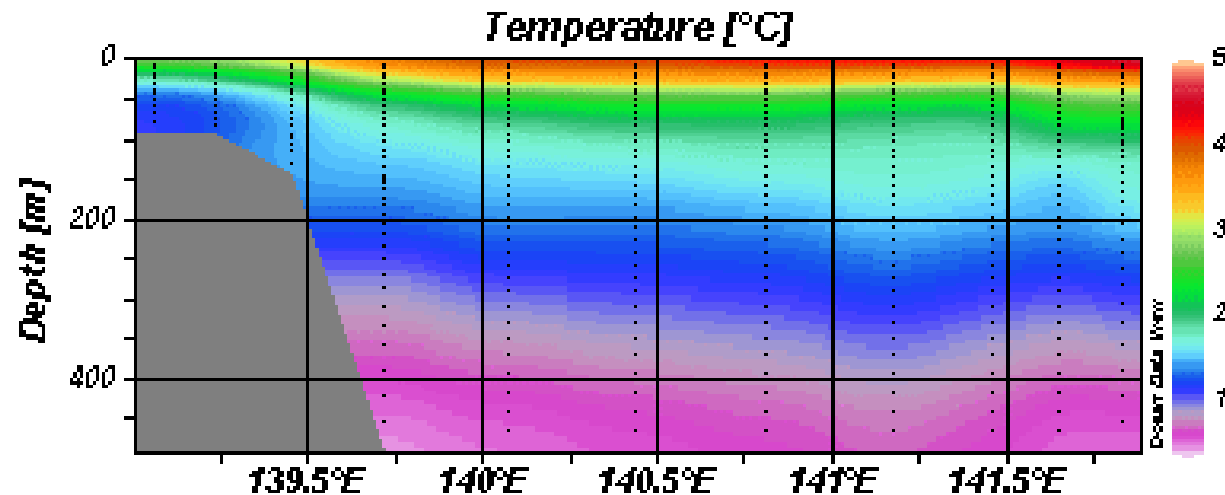
CTD surveying and moorings installation in the southern part of Tartary Strait



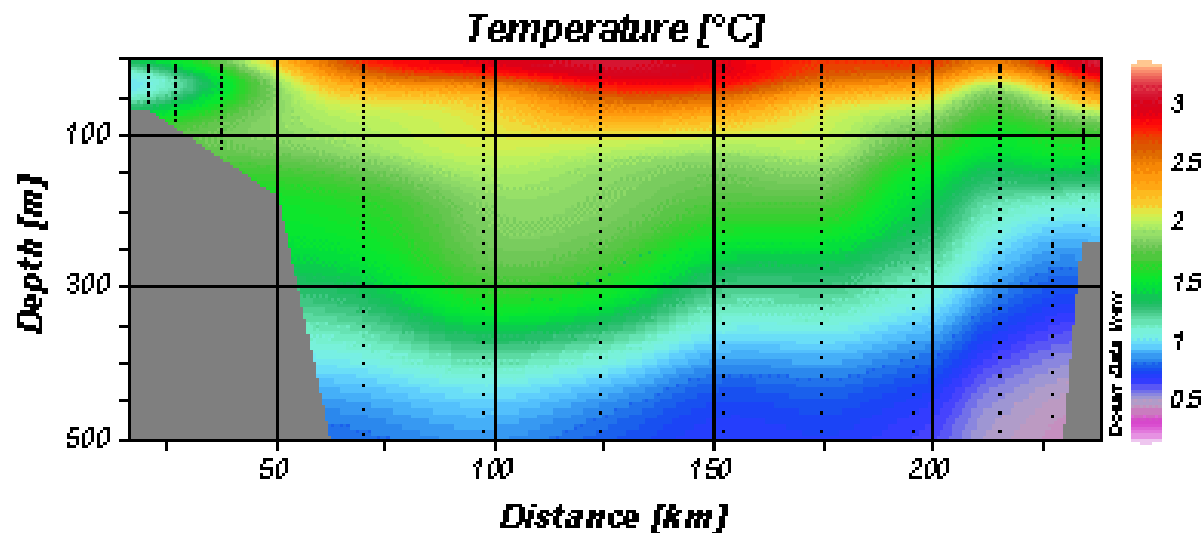
c. Slepikovsky – c. Zolotoy
(SZ) standard section

Mooring	period	depth
T106	18.12.1997-16.03.1998	20 m
KS	25.01. – 28.05.2003	30 m
KM	24.01 – 28.05.2003	30 m

Temperature distribution, SZ section

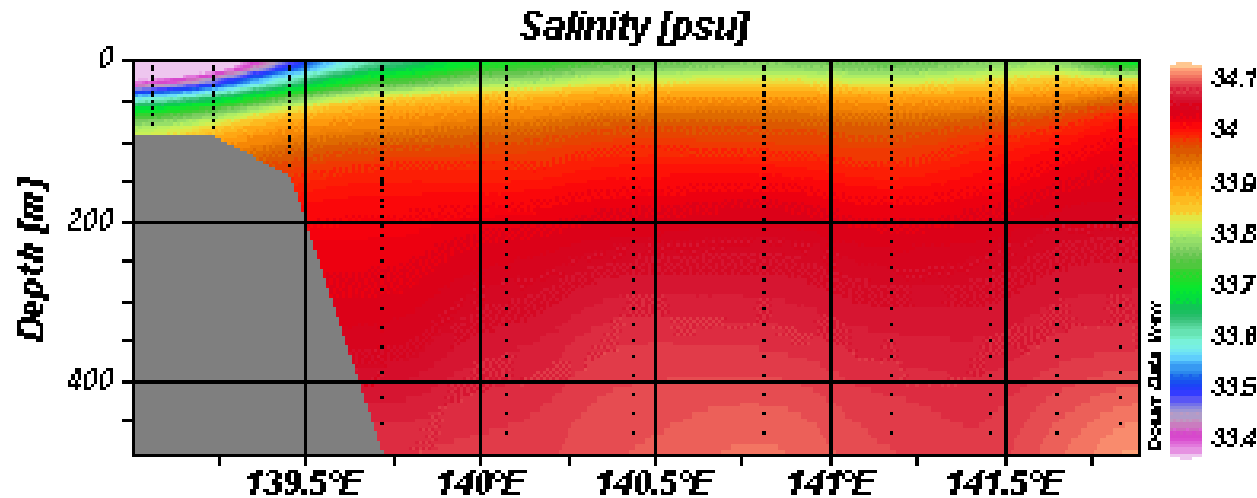


Multiyear
mean

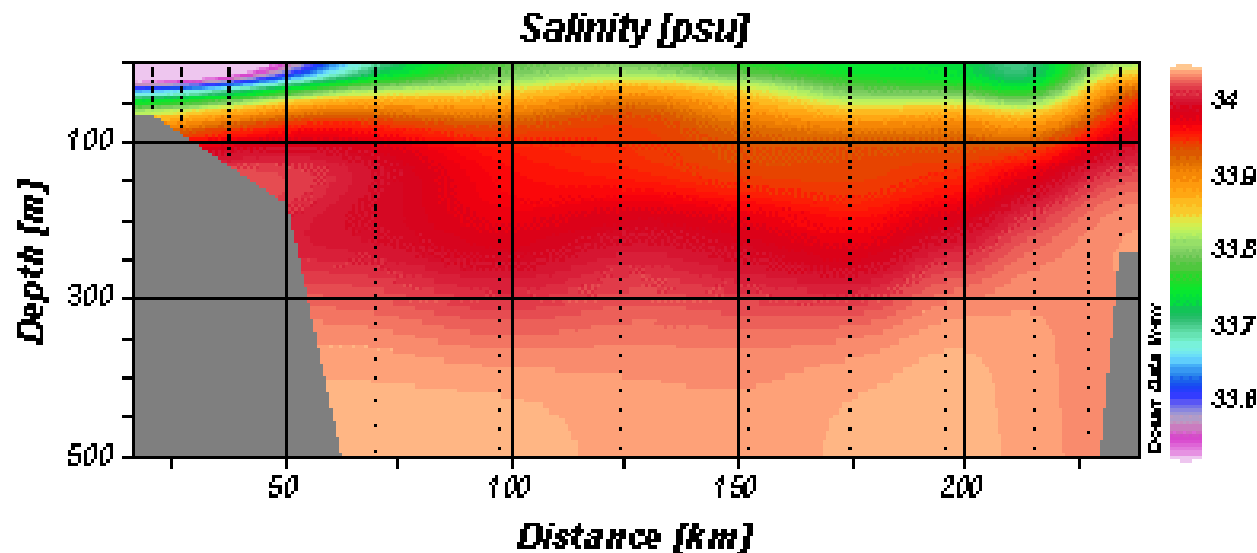


April 25,
2003

Salinity distribution, SZ section

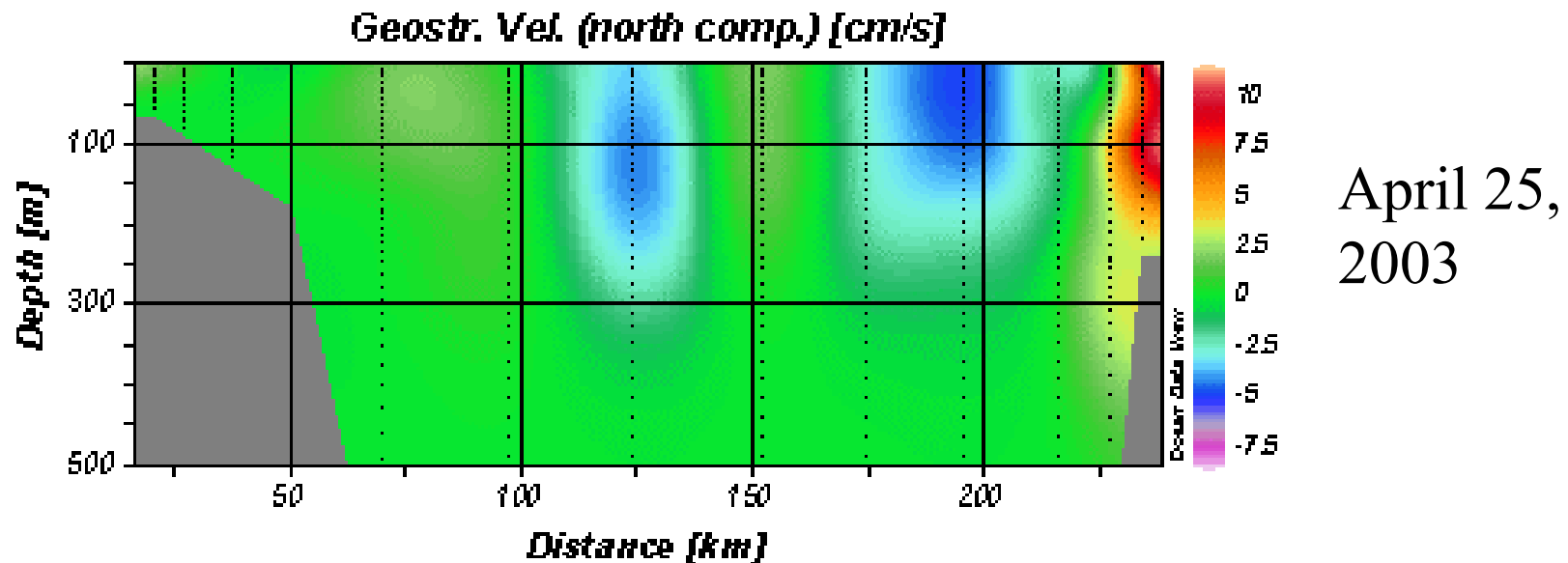
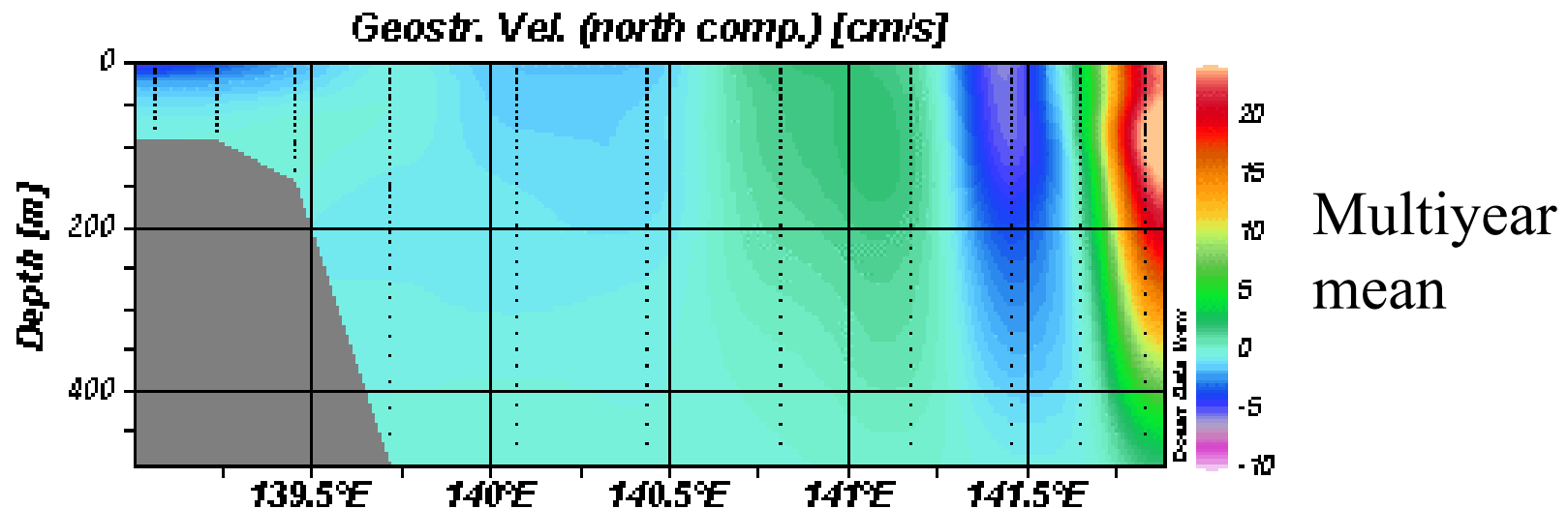


Multiyear
mean



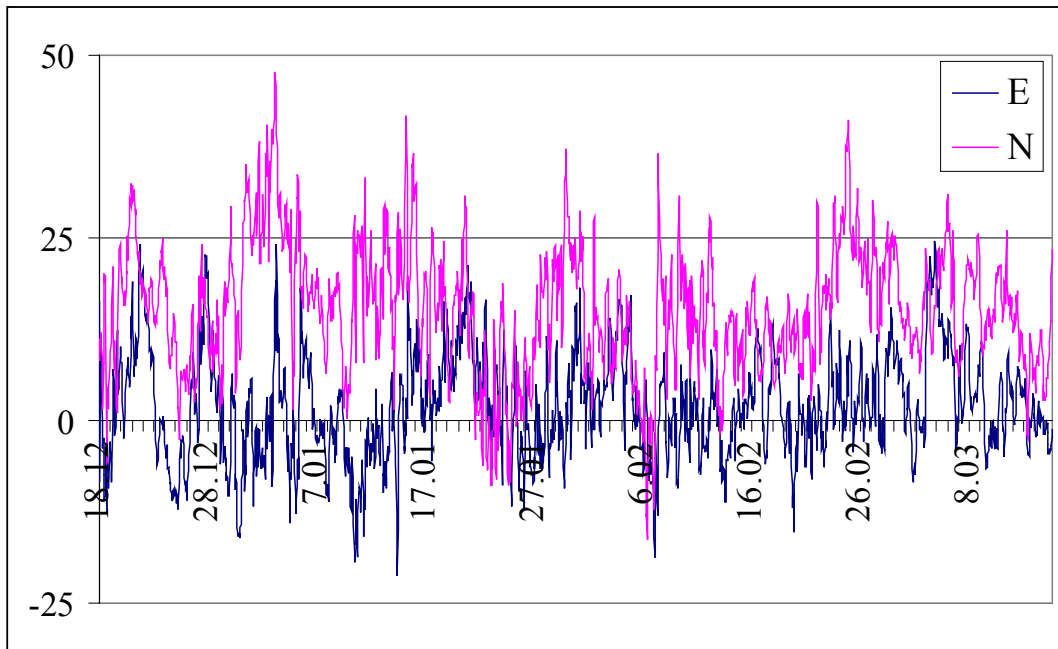
April 25,
2003

Geostrophic velocity, SZ section



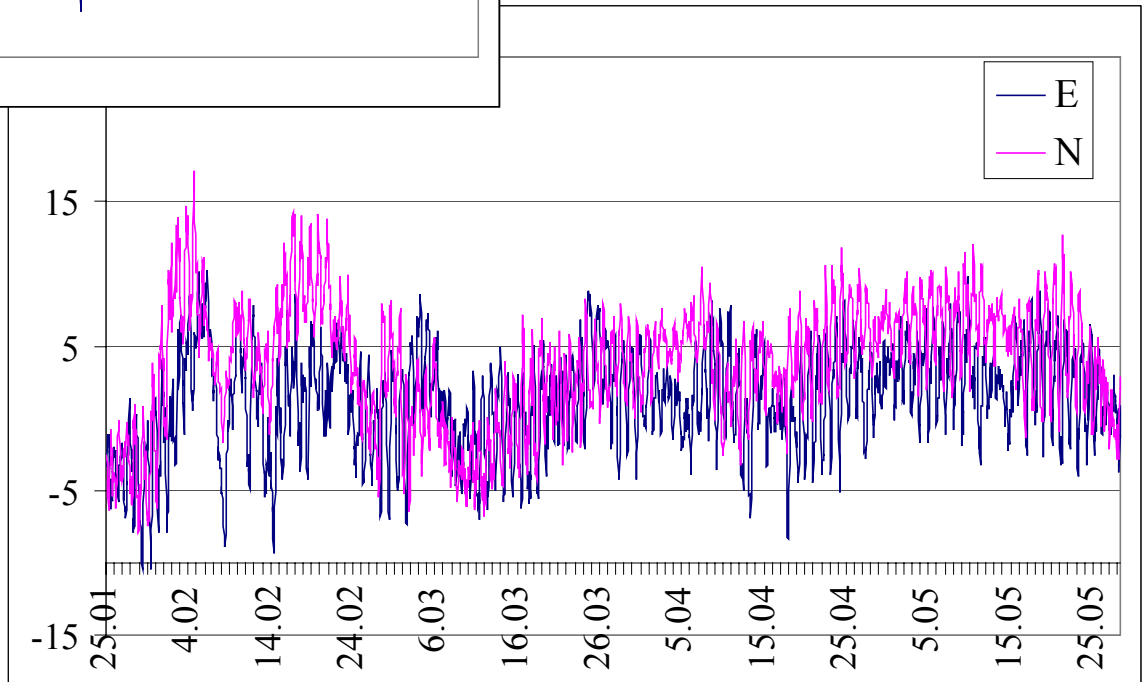
Temperature and salinity anomalies in the western (Primorie) and eastern (Sakhalin) parts of SZ standard section and standard deviation calculated from multiyear observations (in denominator).

Layer / parameter	0-20	0-30	0-50	0-100	20-100	30-100	50 - 100	100-200	0-200
c. Slepikovsky – c. Zolotoy (western part, stations 1 – 7) 25.04.2003									
Temperature, °C.	<u>+0,65</u> 0,89	<u>+0,64</u> 0,89	<u>+0,59</u> 0,87	<u>+0,54</u> 0,82	<u>+0,52</u> 0,8	<u>+0,5</u> 0,79	<u>+0,49</u> 0,77	<u>+0,49</u> 0,57	<u>+0,52</u> 0,72
Salinity, ‰.	<u>+0,13</u> 0,2	<u>+0,12</u> 0,2	<u>+0,1</u> 0,18	<u>+0,07</u> 0,15	<u>+0,05</u> 0,14	<u>+0,04</u> 0,13	<u>+0,03</u> 0,12	<u>-0,01</u> 0,08	<u>+0,03</u> 0,13
c. Slepikovsky – c. Zolotoy (eastern part, stations 8 – 14) 25.04.2003									
Temperature, °C.	<u>-0,13</u> 1,25	<u>-0,1</u> 1,23	<u>-0,12</u> 1,18	<u>-0,21</u> 1,07	<u>-0,23</u> 1,02	<u>-0,25</u> 1,0	<u>-0,29</u> 0,95	<u>-0,1</u> 0,66	<u>-0,16</u> 0,87
Salinity, ‰.	<u>-0,13</u> 0,17	<u>-0,13</u> 0,16	<u>-0,13</u> 0,15	<u>-0,1</u> 0,12	<u>-0,1</u> 0,11	<u>-0,09</u> 0,1	<u>-0,08</u> 0,09	<u>-0,07</u> 0,06	<u>-0,09</u> 0,09



Current velocity
near Moneron
Island,
T106 mooring
winter 1998

Current velocity
near Moneron
Island, KS mooring
winter –spring 2003



CONCLUSION

- 1. We found weakening of Tsushima and Soya warm currents from satellite SST maps
- 2. Temperature and salinity negative anomalies were revealed in the eastern part of SZ section
- 3. Relatively small depth of Tsushima current and weakening of West Sakhalin current too
- 4. North-directed current in 2003 2-3 times less than in 1998