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Collaborative data analysis between FERHRI and ILTS on the Okhotsk Sea Data

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Collaboration between FERHRI and ILTS

- Research cruises with FERHRI
 - 8 cruises in the Sea of Okhotsk since 1998
 - The most recent cruise was conducted in Jul and Aug in 2011
- Analysis of historical datasets

Data analysis between FERHRI and ILTS

- Temperature, salinity and oxygen in the Sea of Okhotsk from 2008
- Nutrients from 2009
- Temperature, salinity and oxygen in the Bering Sea from 2011

Issues

- Raw data of temperature and salinity in the Sea of Okhotsk cannot be accessed by researchers except for Russian researchers
- Analyzed data is allowed to be treated by foreign researchers.

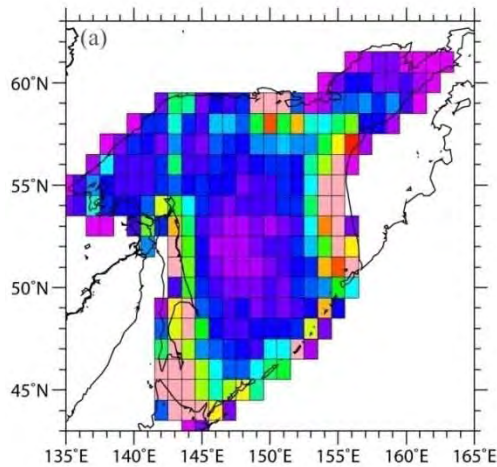
Collaborative data analysis

- Raw data of T & S is treated by FERHRI

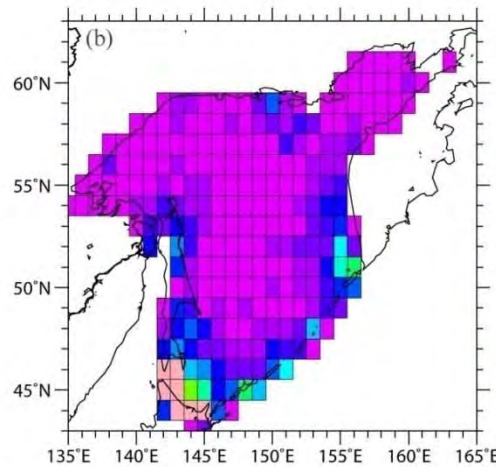
FERHRI datasets

- Hydrographic data collected in Russia + WOD05 + JODC
- Temperature, salinity and oxygen
- Duration 1930~2008

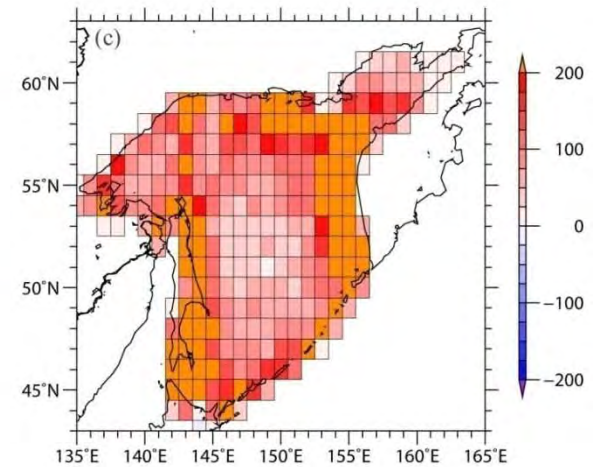
Number of data 1x1° box



FERHRI



WOD05+
JODC

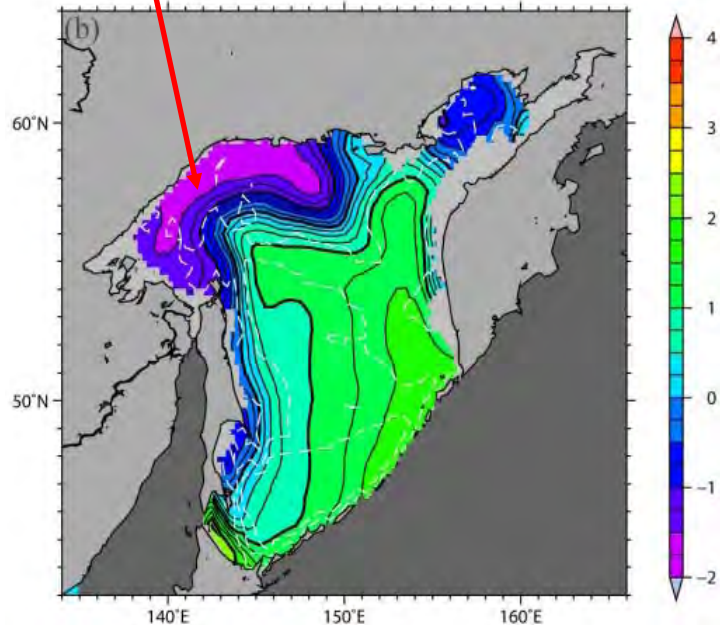


Increments

Example of data analysis: intermediate layer (depth of ~300m)

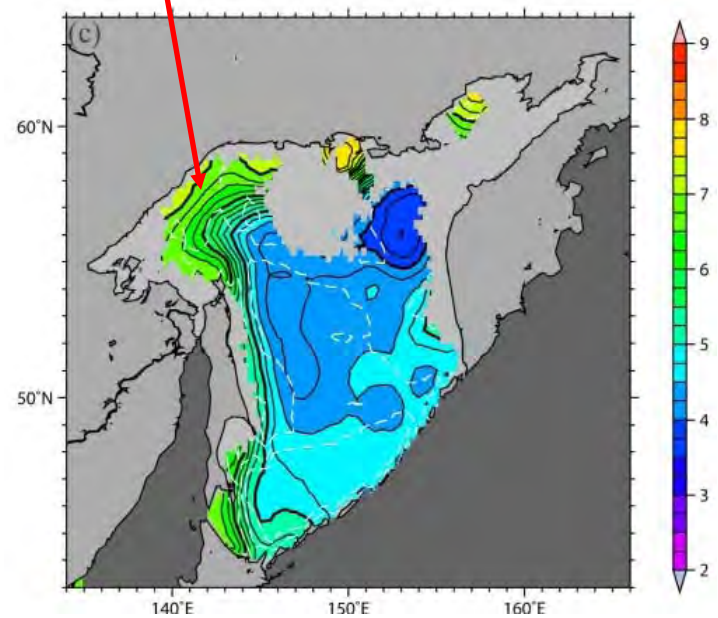
Dense shelf water (DSW)

Temperature



High oxygen = new

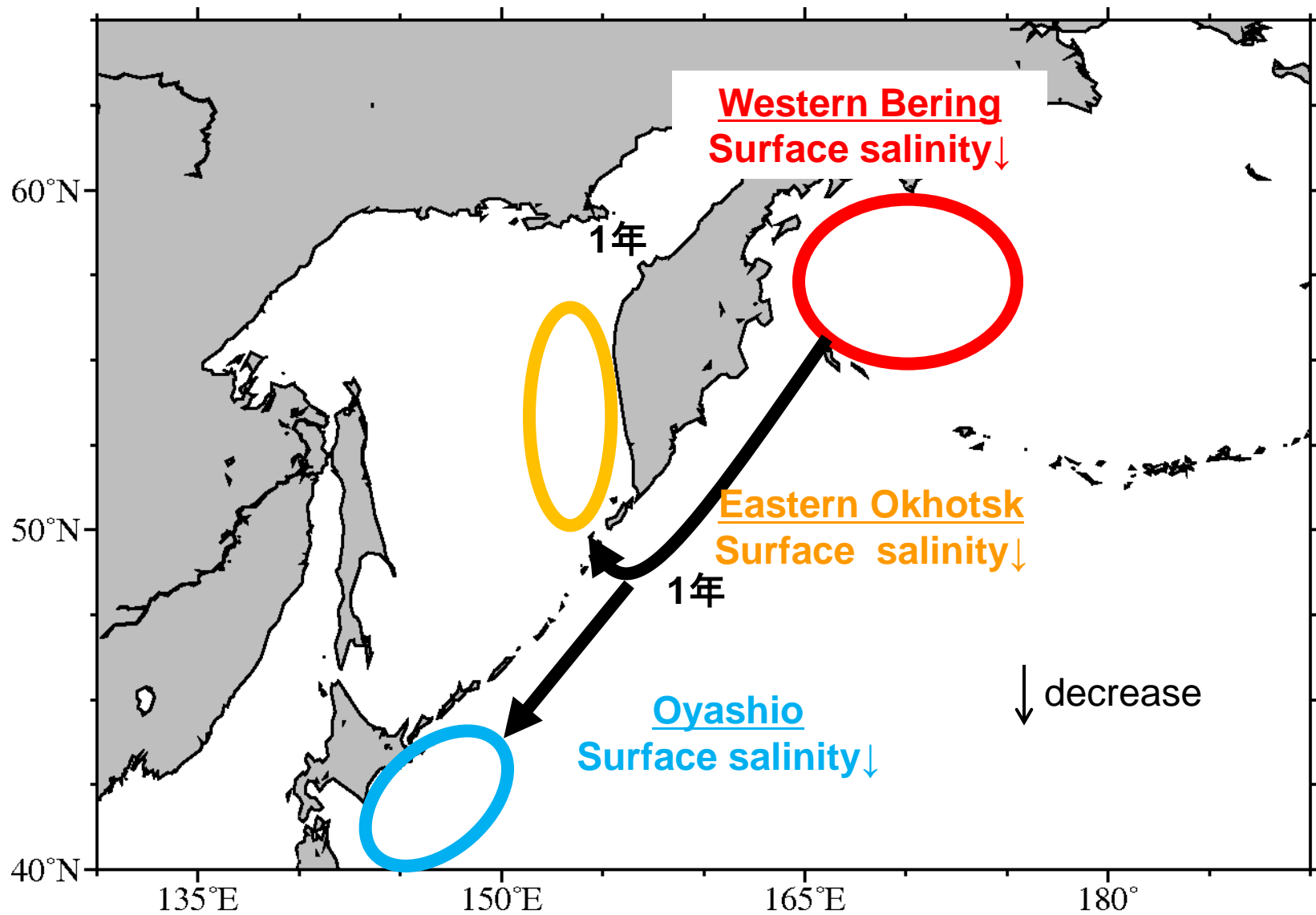
Oxygen



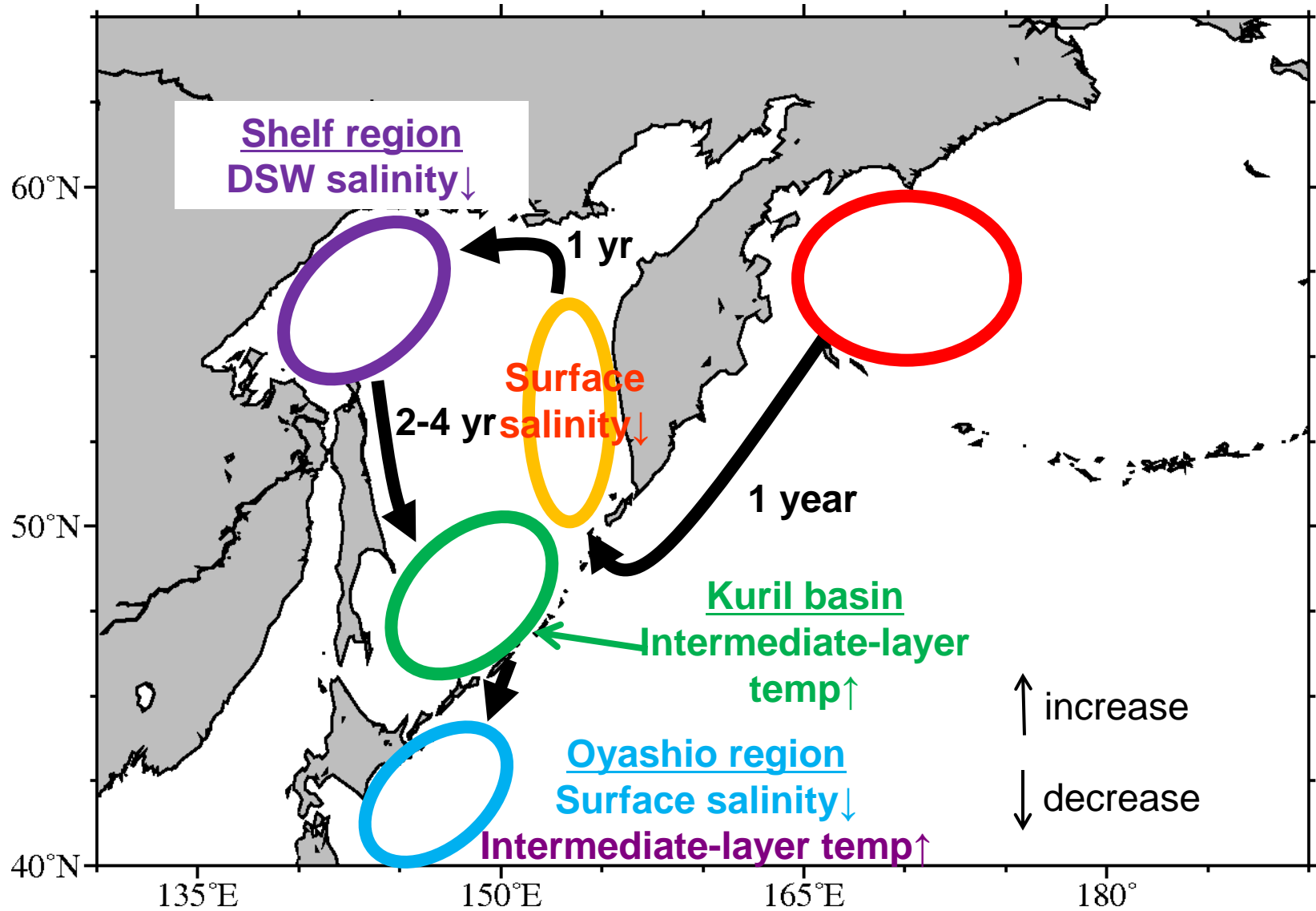
Uehara et al. (submitted)

Newly formed dense shelf water (DSW) flows southward, and transports iron.

Analysis results: Path for surface freshening



Analysis results: Path for warming of intermediate layer



Summary

- Raw data of temperature and salinity in the Sea of Okhotsk cannot be accessed by researchers except for Russian researchers
 - Collaborative analysis between FERHRI and ILTS. Results are shared.
- Analyzed data is allowed to be treated by foreign researchers
 - Gridded climatologies ($1^{\circ} \times 1^{\circ}$)