

Supporting Information for Marine Heatwaves and their Depth Structures on the Northeast U.S. Continental Shelf

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Contents

1. Figures S1-S5

Introduction

This supporting information contains five additional figures which are not included in the manuscript. All figures show data from the VIKING20X simulations, which are introduced in the main text.

Supplementary Figures

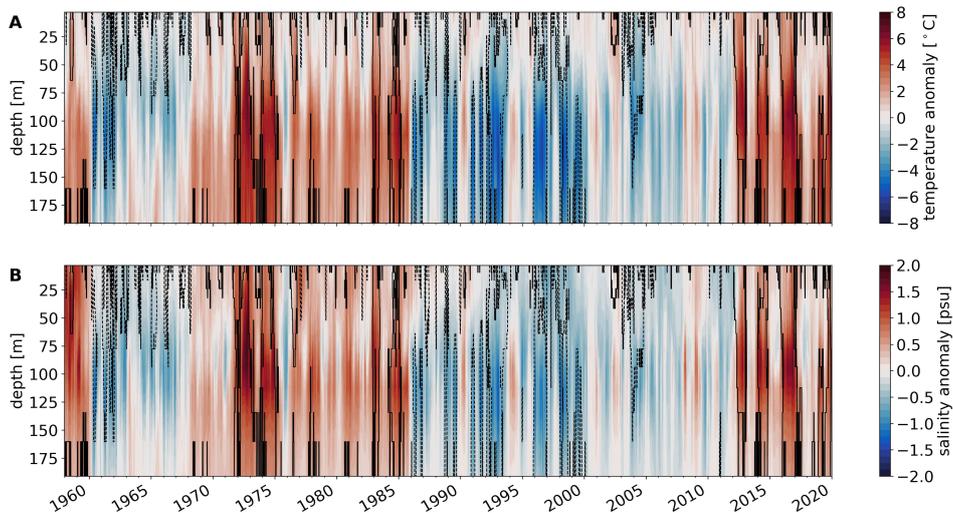


Figure S1. MHW and MCS Detection with depth; spatial mean temperature (A) and salinity anomalies (B) over depth and time for the whole shelf region; solid black contour lines indicate MHW state, dashed lines MCS.

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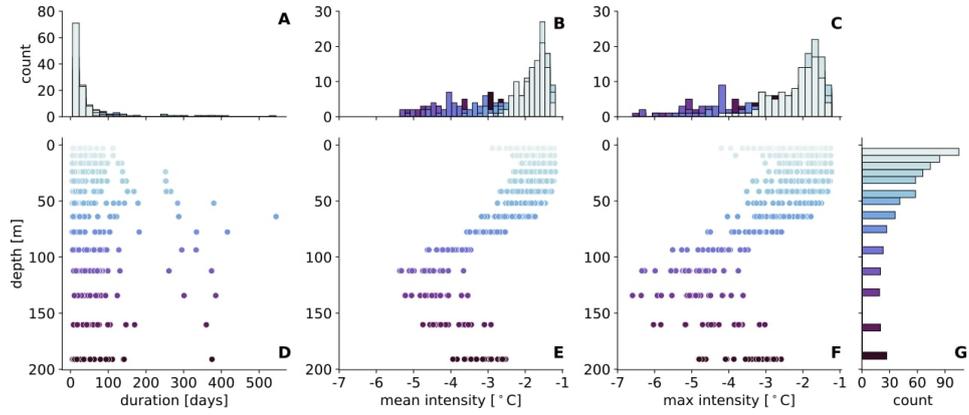


Figure S2. MCS metrics with depth; distribution of MCS duration (D), mean intensity (E) and maximum intensity (F) with depth for each detected MCS during 1960-2019; A-C show the distribution for each metric in the color for each depth as in D-F; G shows the total count of MCSs for each depth.

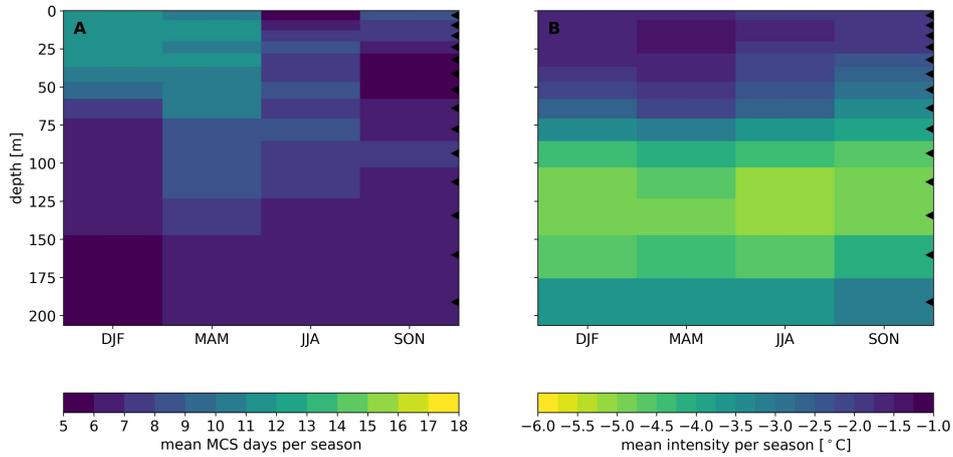


Figure S3. Seasonal distribution of mean MCS days (A) and mean intensity per season (B) with depth; markers on the right indicate depth levels of the model. Acronyms for seasons are: December/January/February (DJF), March/April/May (MAM), June/July/August (JJA), September/October/November (SON).

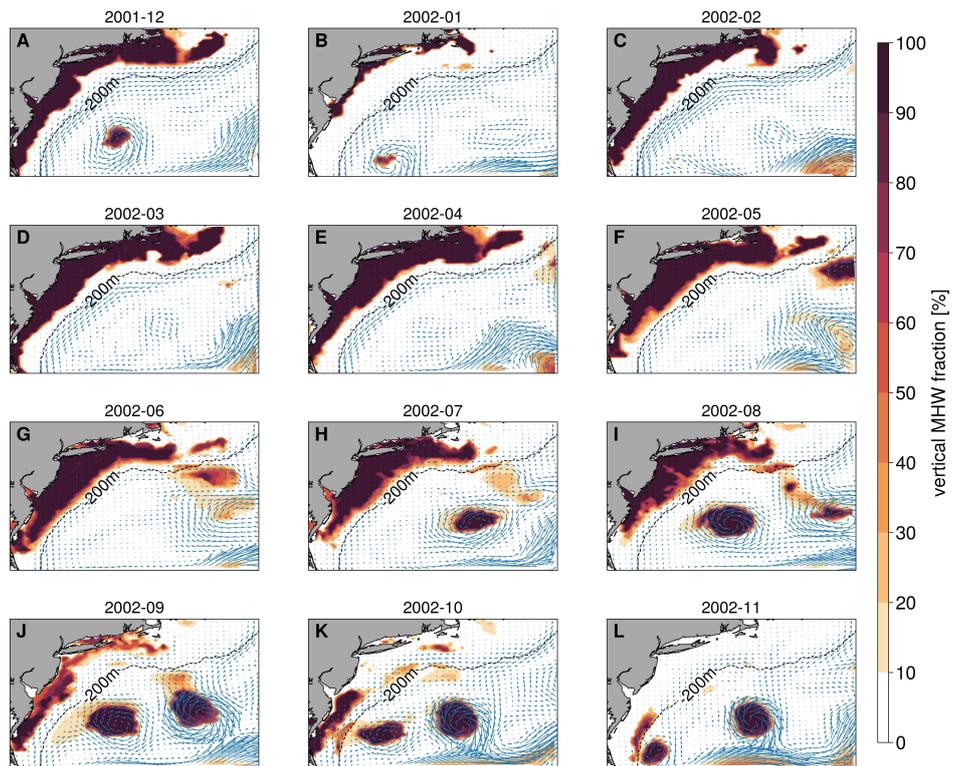


Figure S4. Monthly mean modeled surface velocities and vertical MHW fraction for the upper 500m for each month during the MHW in 2002, the black line indicates the 200m isobath.

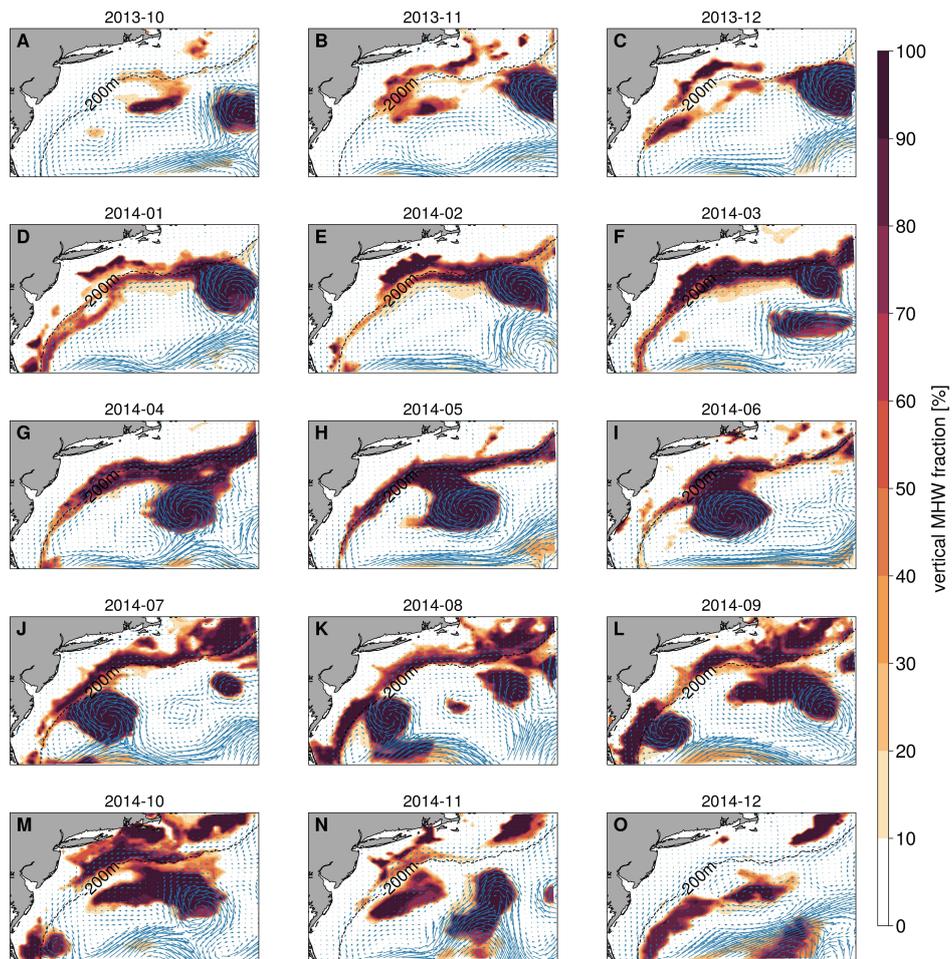


Figure S5. Monthly mean modeled surface velocities and vertical MHW fraction for the upper 500m for each month during the MHW in 2014, the black line indicates the 200m isobath.