



*Supplement of*

## **Arctic regional changes revealed by clustering of sea-ice observations**

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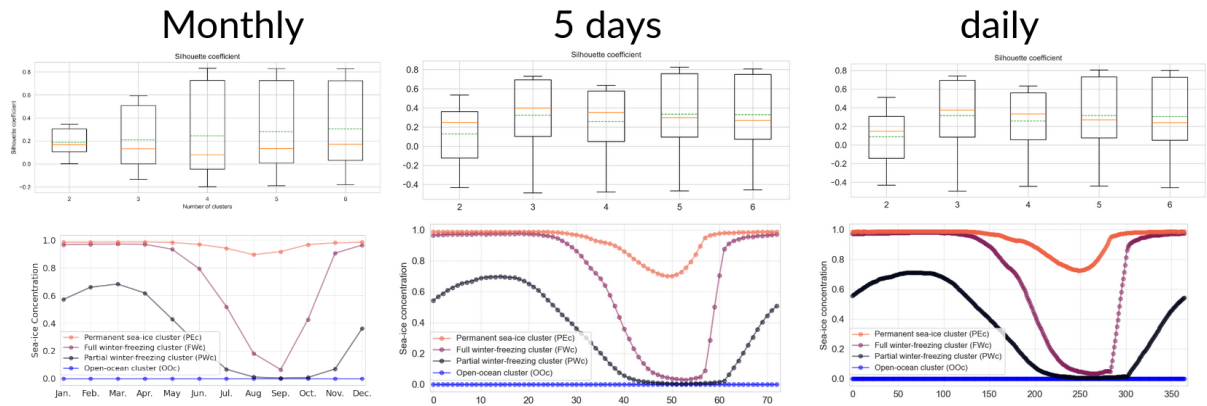


Figure S1: Comparison between monthly (left), 5-day (middle) and daily temporal resolution (right) based on the Silhouette coefficient for a number of clusters from 2 to 6 (top row) and the four types of seasonal cycles (bottom row). In the top row, the box extends from the first quartile (0.25) to the third quartile (0.75) of the Silhouette coefficient. The whiskers indicate the 1st and 99th percentiles. The green-dashed and orange-solid lines indicate the mean and median values, respectively.

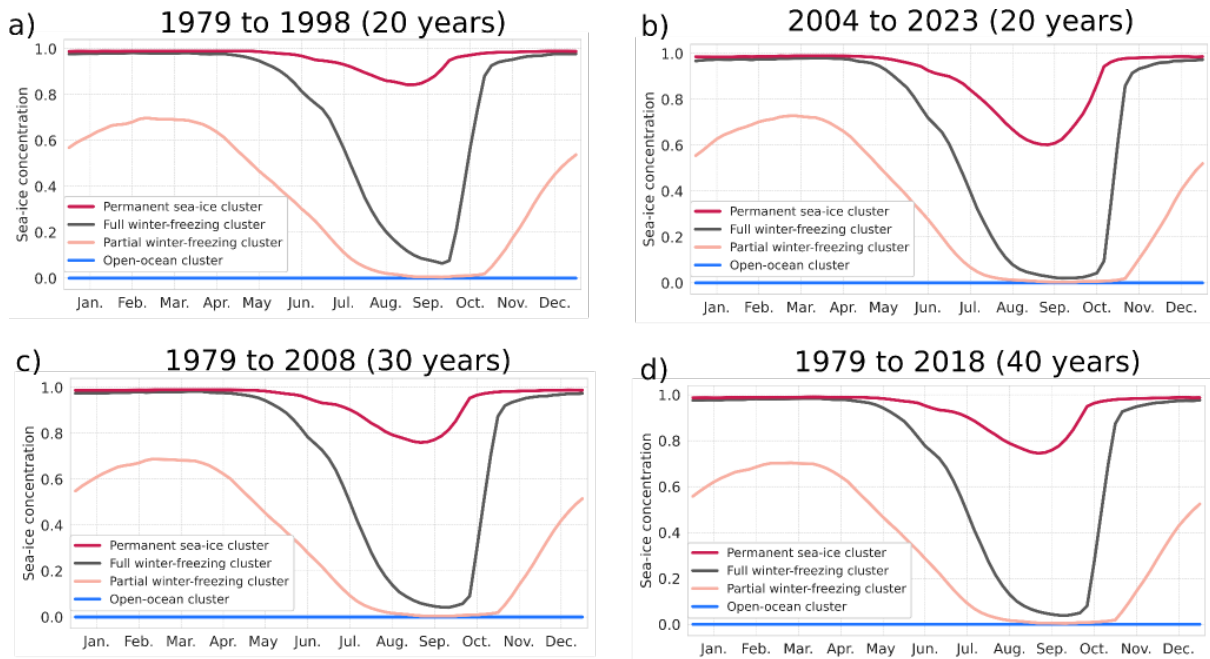


Figure S2: Same as Fig. 4b but for different time periods: 20 years (1979 to 1998, panel a; 2004 to 2023, panel b), 30 years (1979 to 2008, panel c), and 40 years (1979 to 2018, panel d)

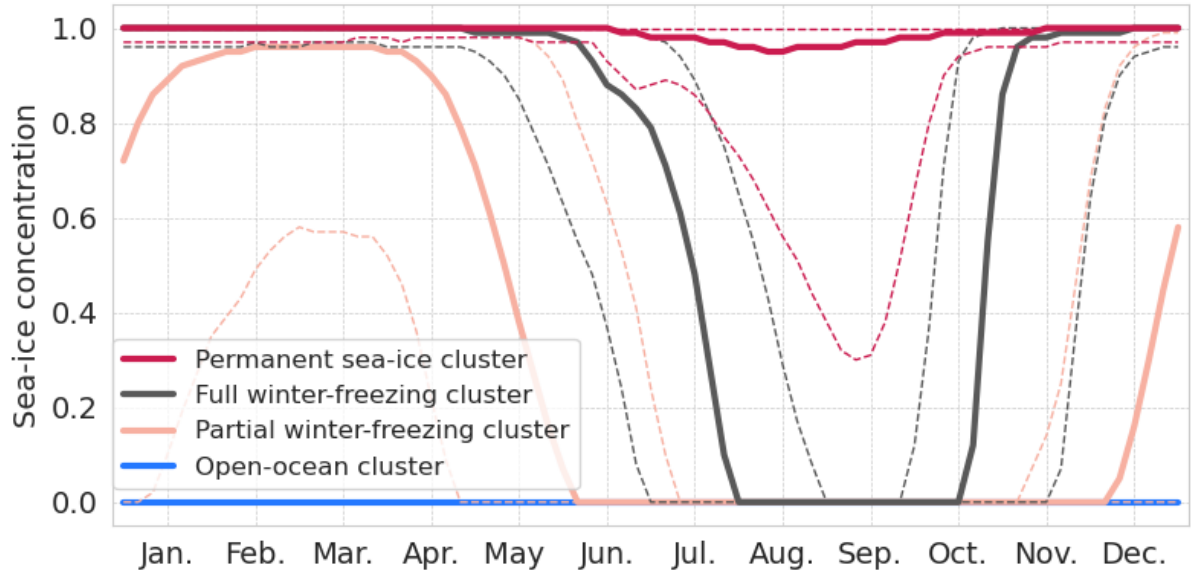


Figure S3: Same as Fig. 4b, but for the median (solid line) and quantiles 0.9 and 0.1 (dashed line)

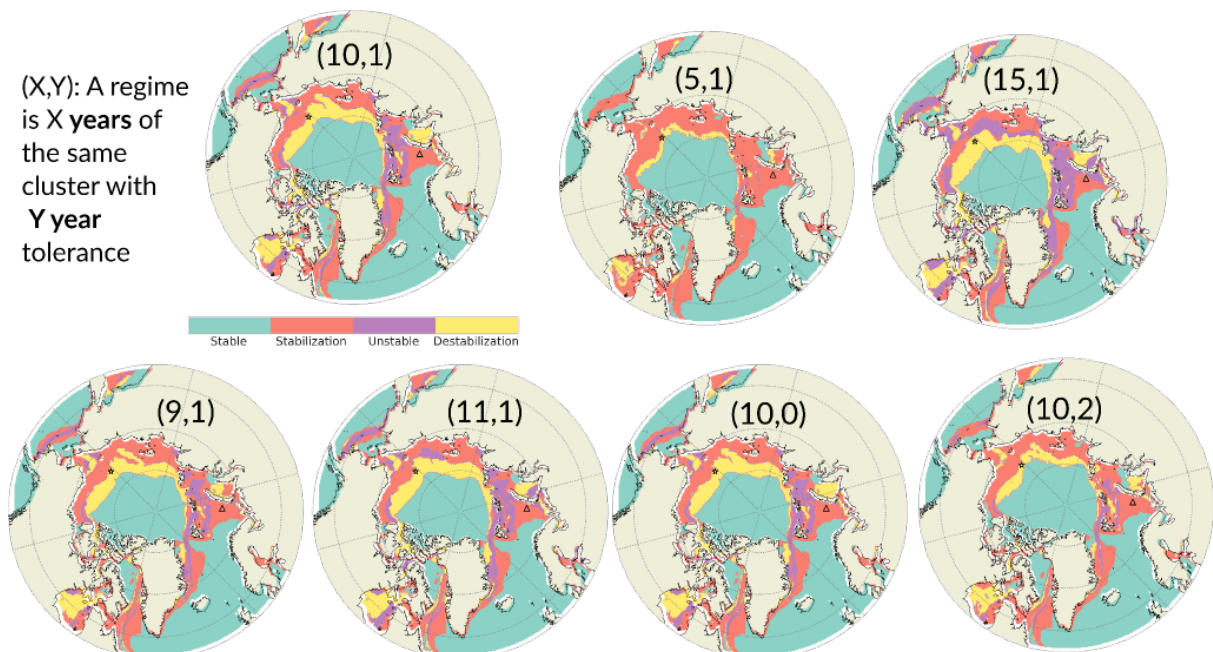


Figure S4: Sensitivity tests on our definition of regime. Same as Figure 11 but with a different set of values for the minimum number of consecutive years and tolerance.