

A link of ocean heat transport variability and interannual surface temperature predictability in the North Atlantic

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Surface Temperature Predictability

Pohlmann et al, 2009















Predictability

• Assimilation Experiment with MPI-ESM-LR for 1901-2010 (Müller et al., 2015)













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- By year of HindCast ("Lead Year")













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- The higher the Lead Time, the lower the ACCs

































Subsampling by OHT strength at 50°N















Subsampling by OHT strength at 50°N



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Composite Means: UOHC/SST pattern following strong/weak OHT phases







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Composite Means: UOHC/SST pattern following strong/weak OHT phases



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Predictability in the North Atlantic

UOHC



















Predictability in the North Atlantic

UOHC







SST











30N

0



30W

0

60W

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60W



0

30W

Predictability for SSTs persists longer following strong OHT phases



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Predictability for SSTs persists longer following strong OHT phases



für Meteorologie

Predictability for SSTs persists longer following strong OHT phases















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 OHT at 50°N and SSTs in the North-East Atlantic are connected through ocean heat convergence and UOHC



















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This indicates that variations in North Atlantic OHT have to be taken into account when evaluating interannual SST predictability in the North Atlantic.

Thank you! Questions? Here or leonard.borchert@uni-hamburg.de















