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Connecting the North Atlantic subpolar gyre and the northern European shelf seas: a satellite-based Lagrangian perspective

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Why?

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Why?

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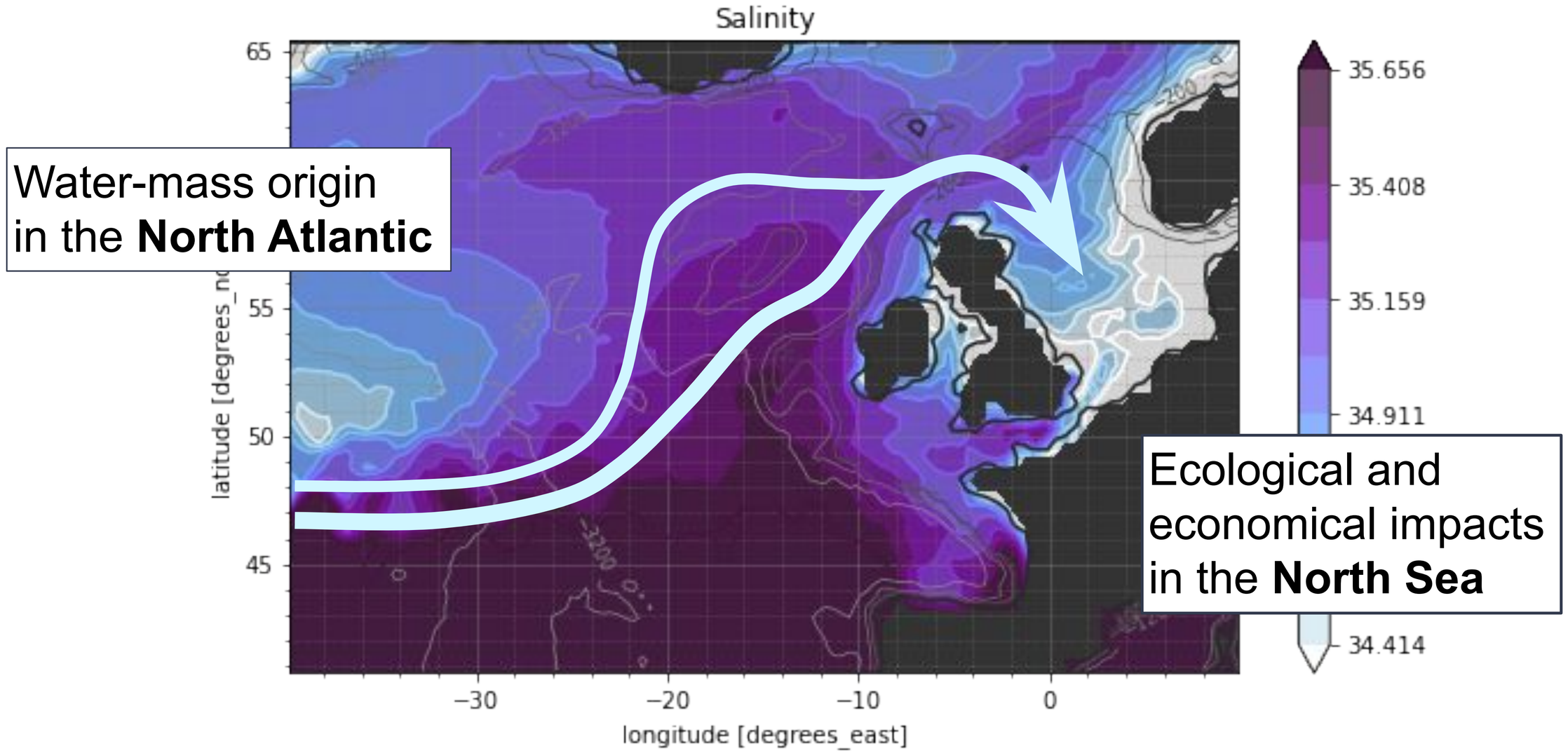

Water-mass origin in the **North Atlantic**

Ecological and economical impacts in the **North Sea**

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How?

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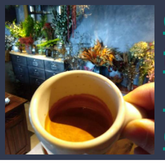
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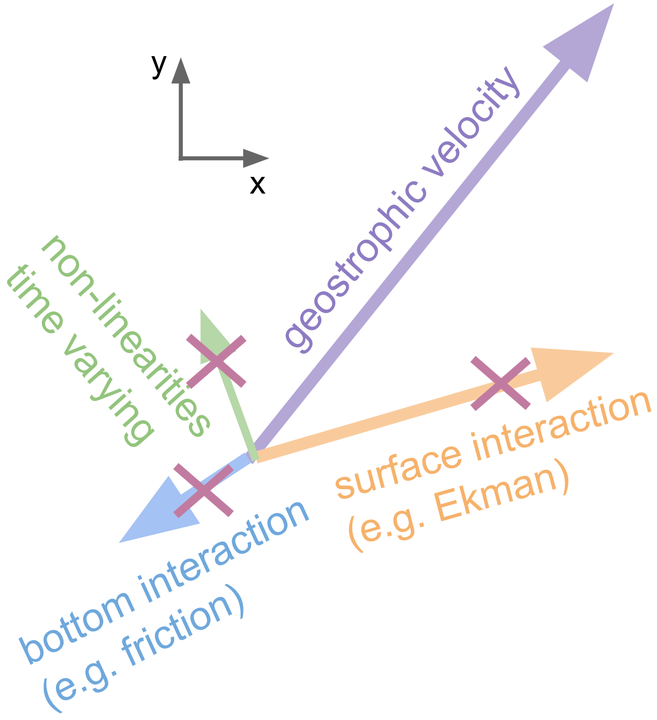
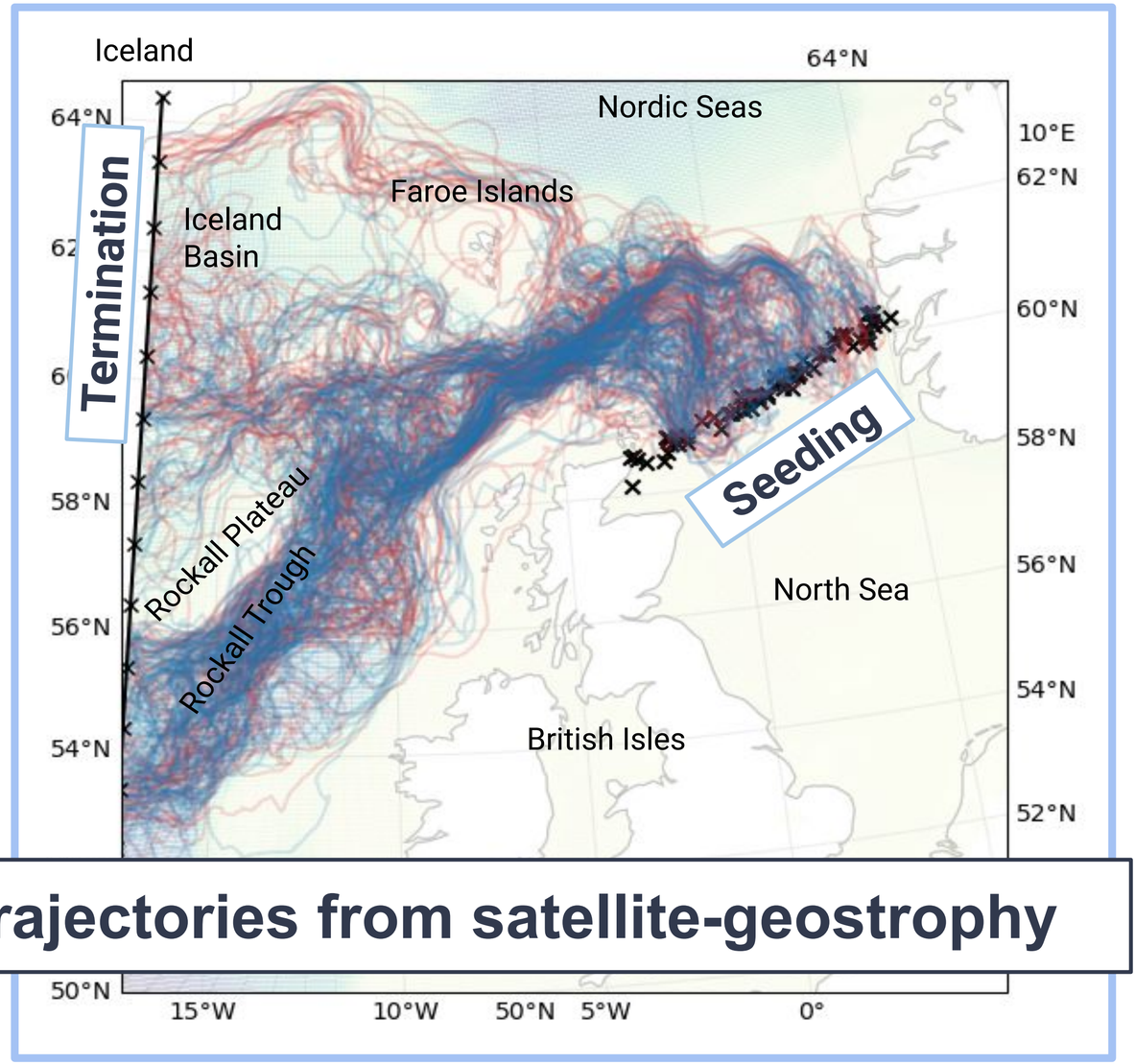
$$\rho\frac{D\mathbf{v}}{Dt} + \rho f\hat{\mathbf{e}}\times\mathbf{v} = -\rho\mathbf{g} - \nabla p + \mu\nabla^2\mathbf{v}$$



Dropped terms
but not on basis of scale analysis



trajectories from satellite-geostrophy

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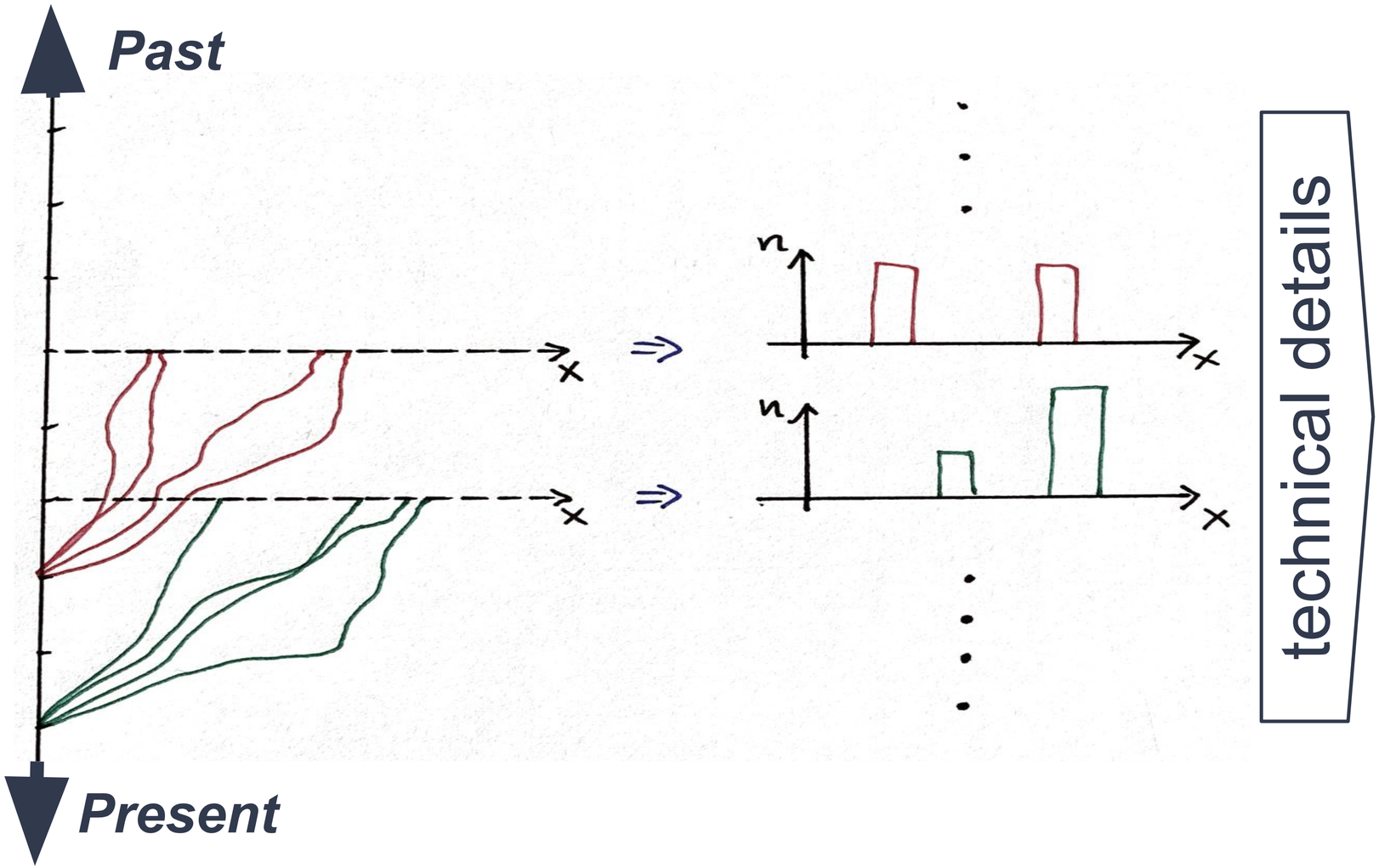
How?



technical details

time series
=> X(*t*,*y*,*x*)

Principal
Component
Analysis

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And?

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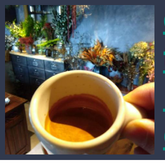

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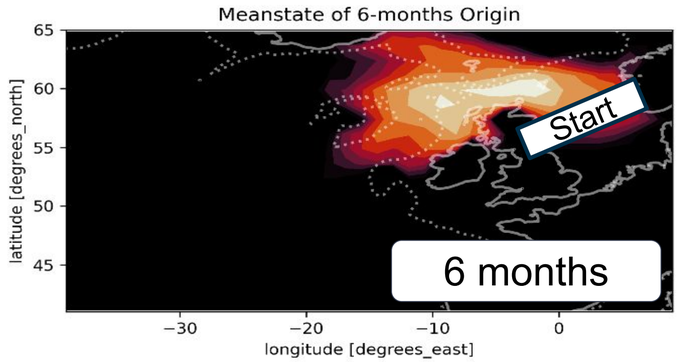
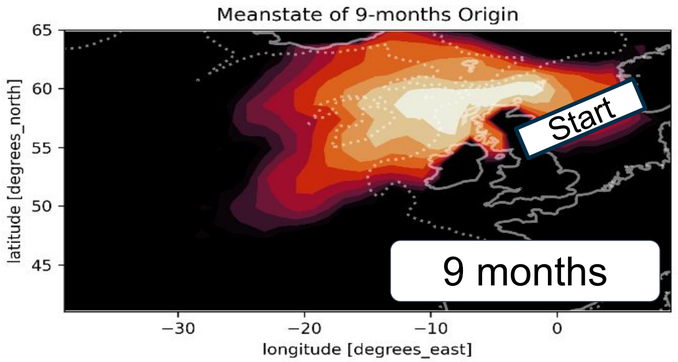
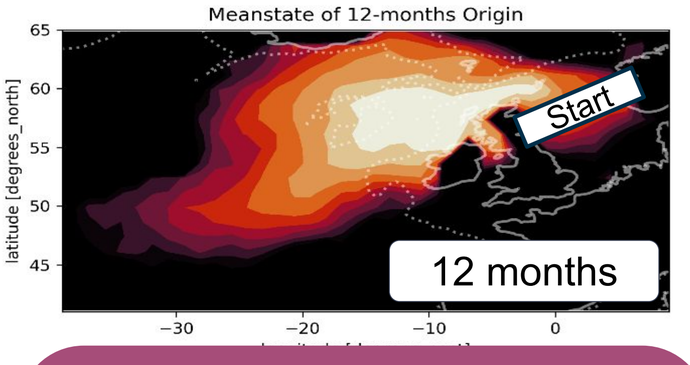
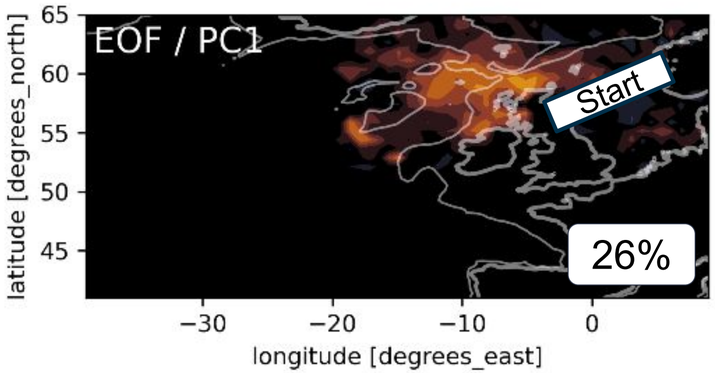
log(mean)

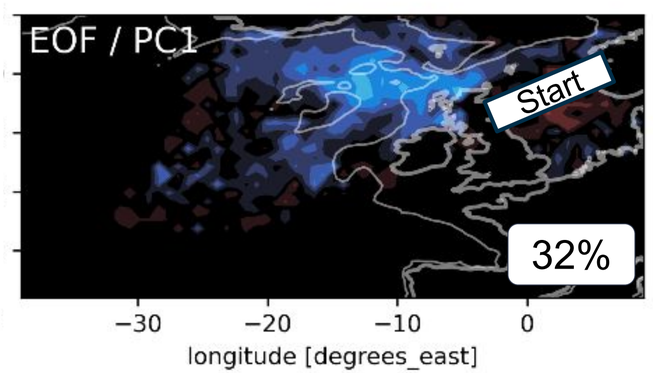


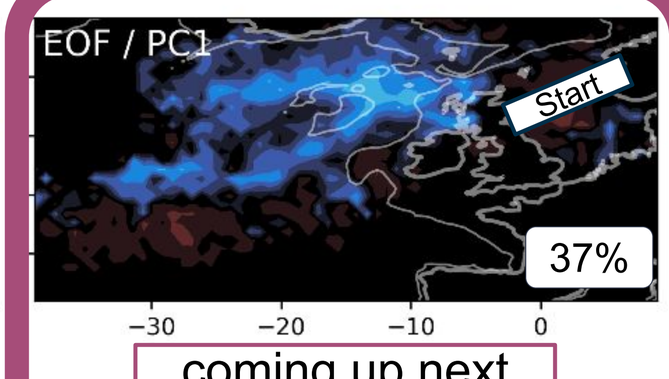




EOF1

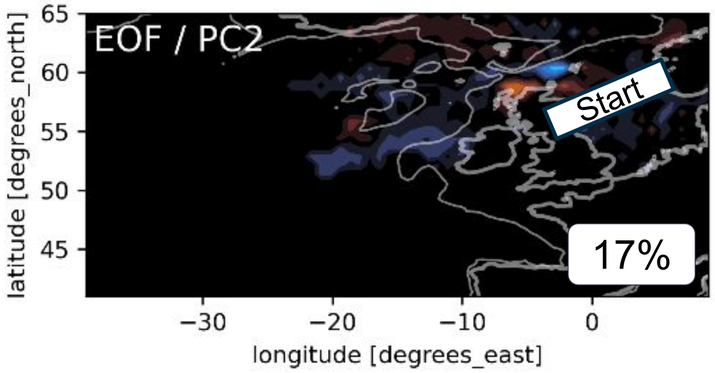


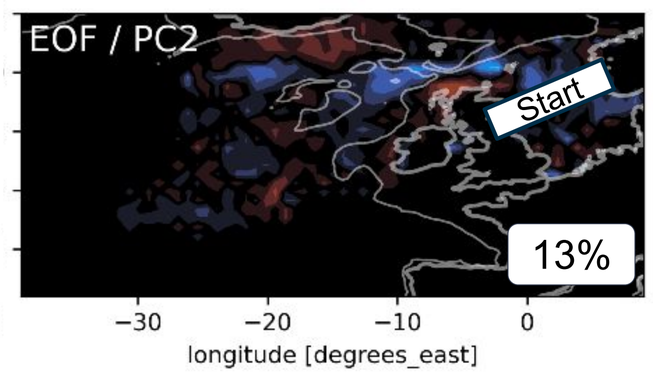


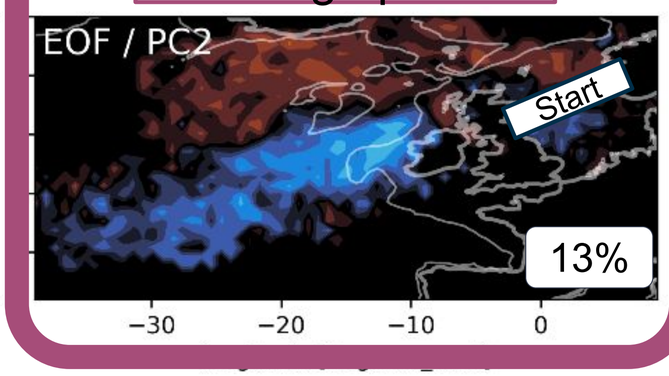


coming up next

EOF2







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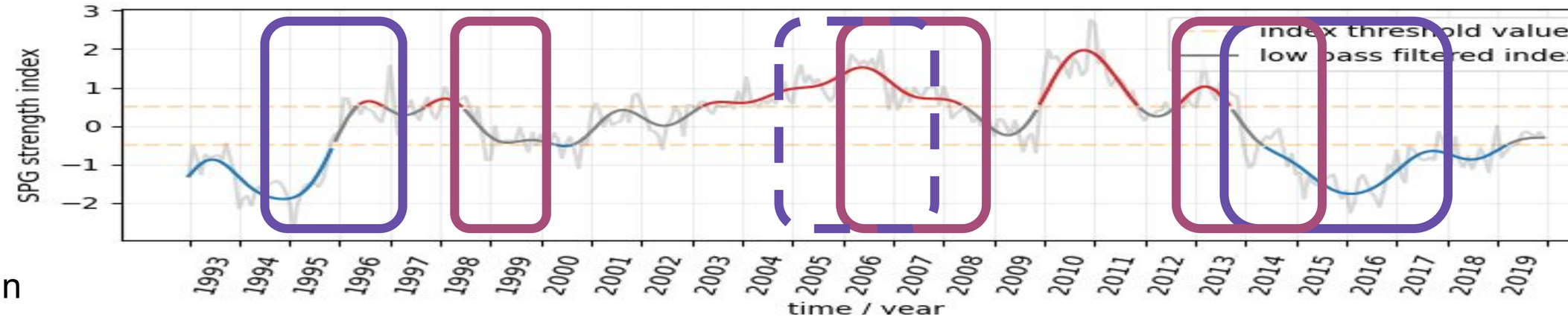
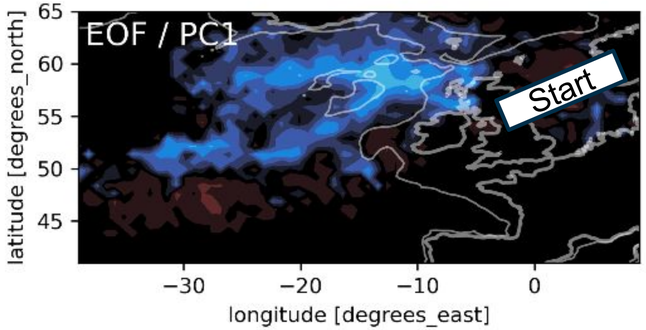
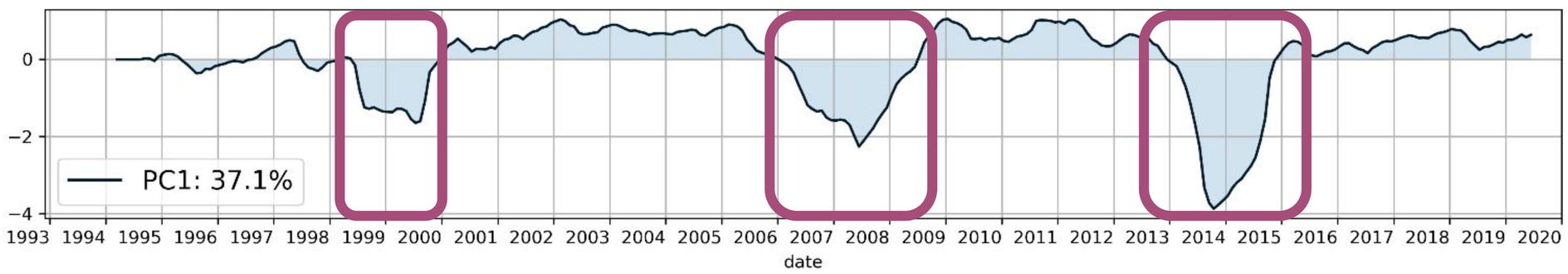
weak SPG

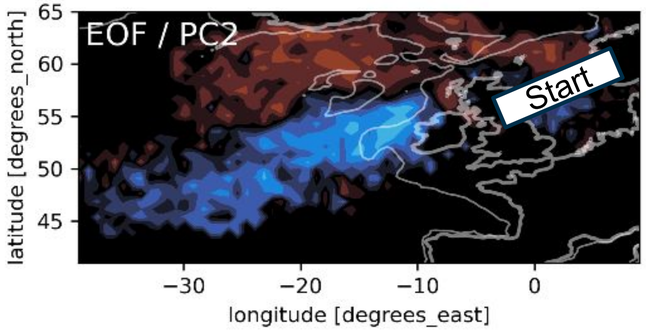
strong SPG

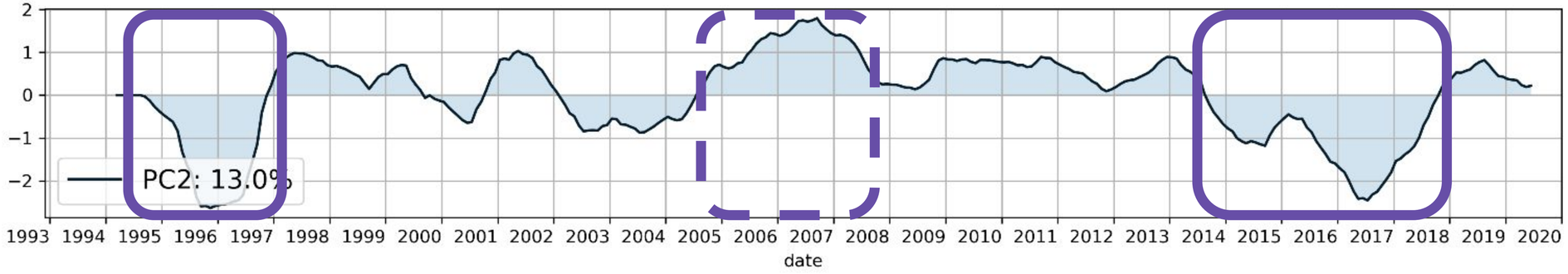


12 month origin









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Well...

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Well…

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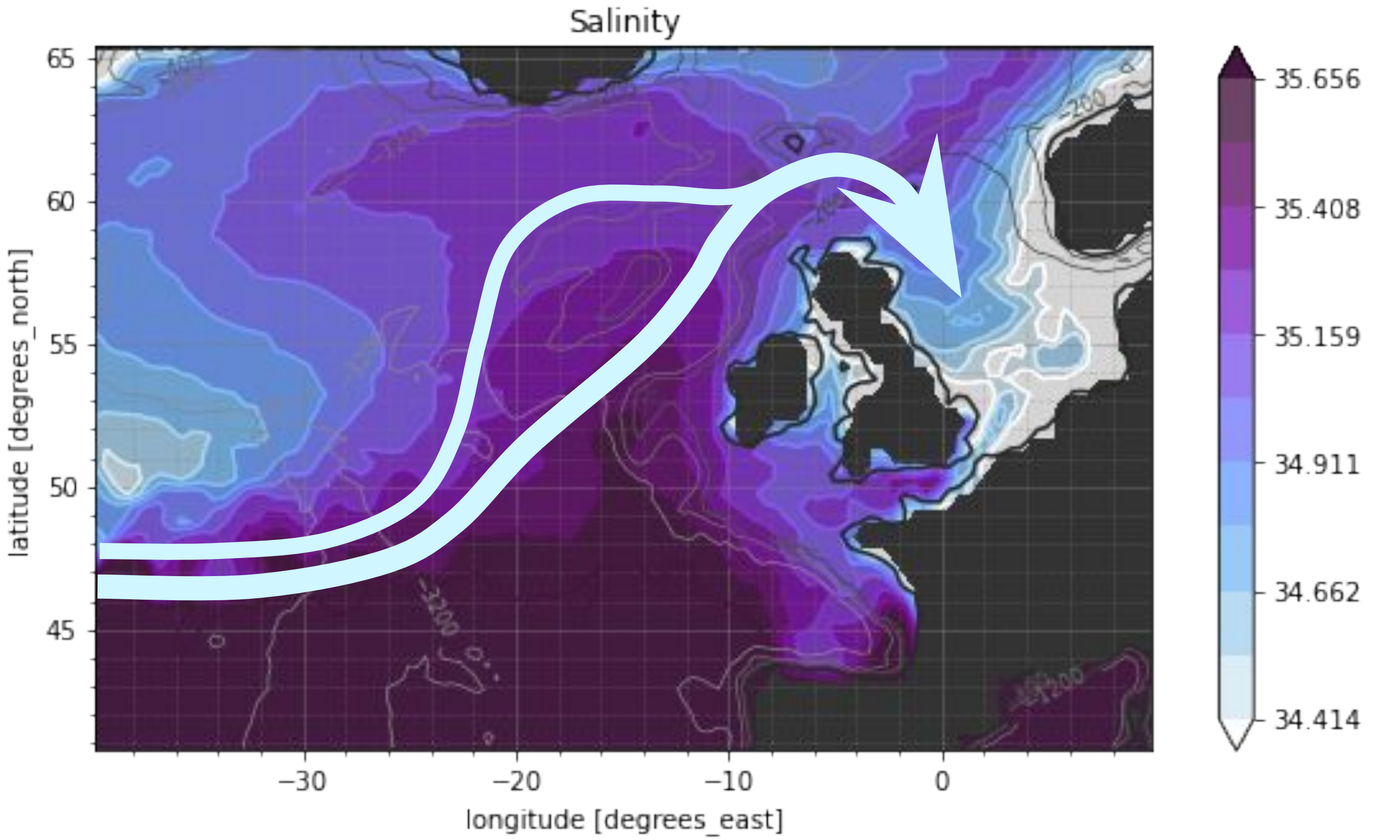
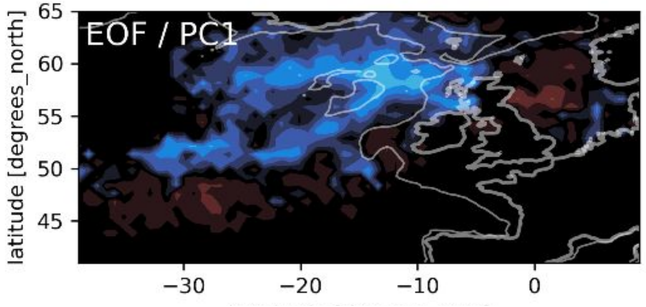
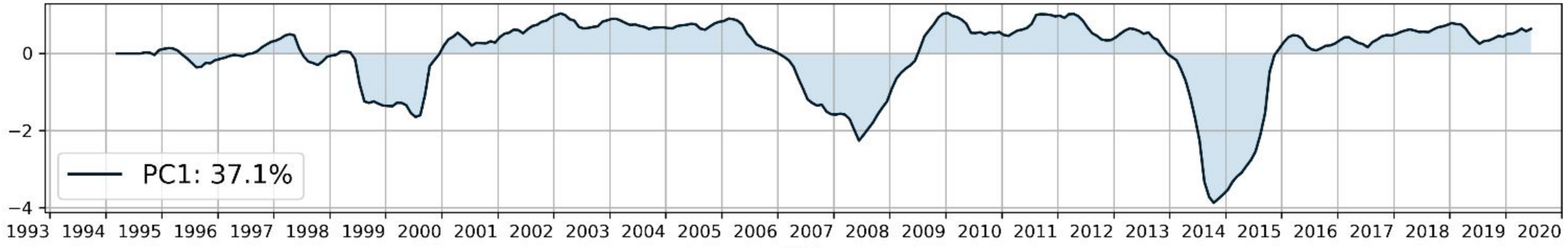
Planned next step

(Actually) **linking geostrophy to water-mass properties**

Decorrelation-time between origin and seeding for T and S







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