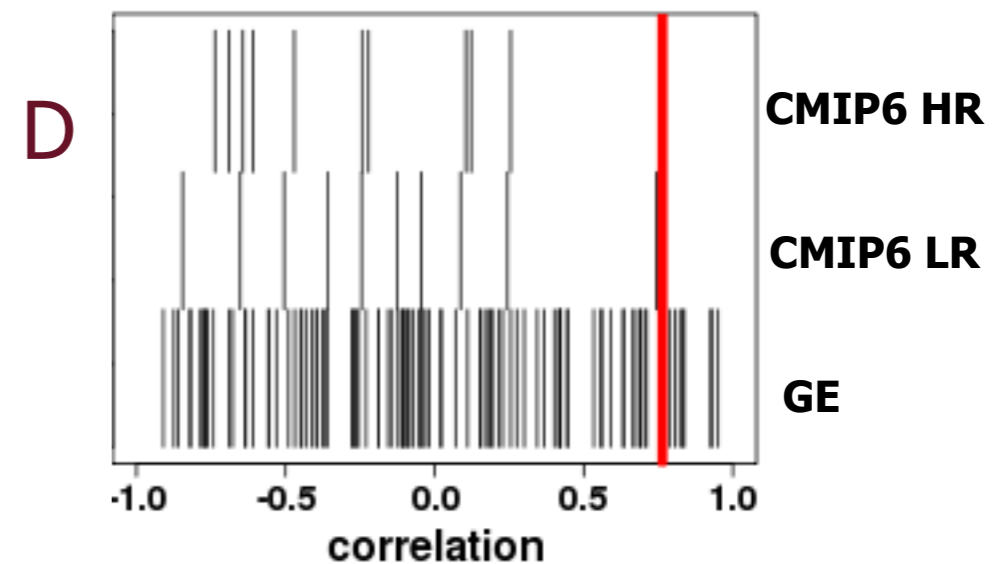
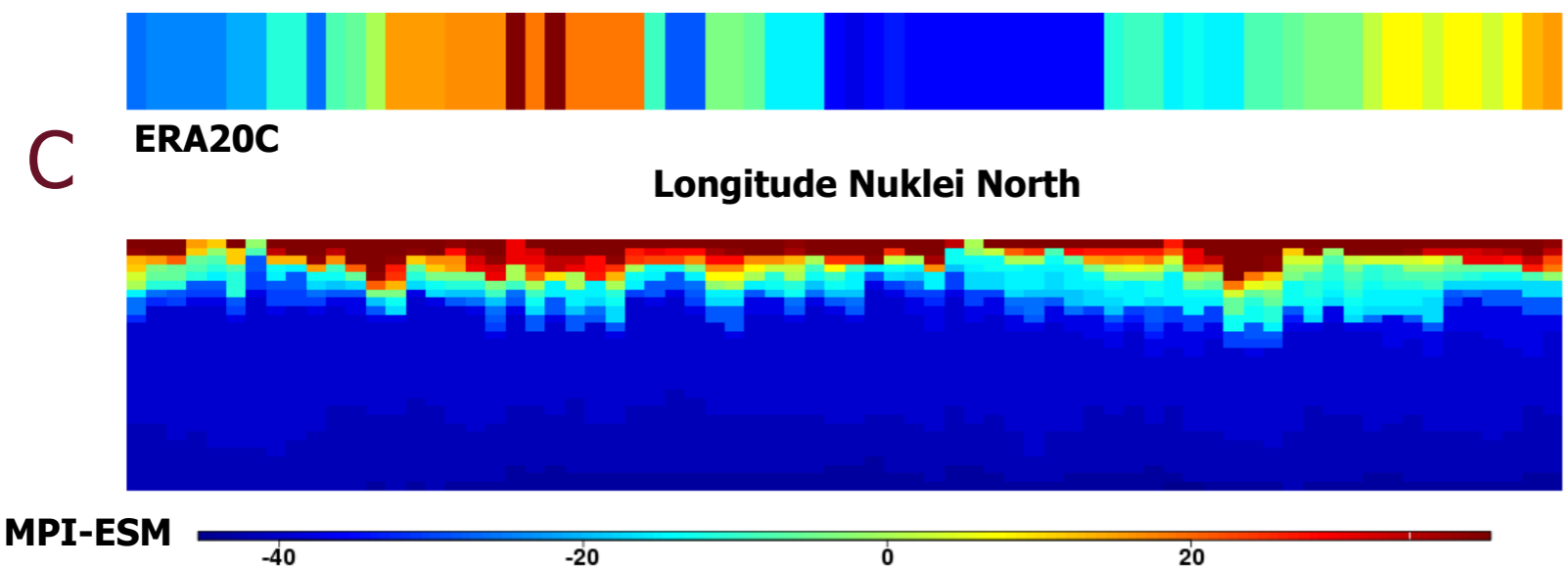
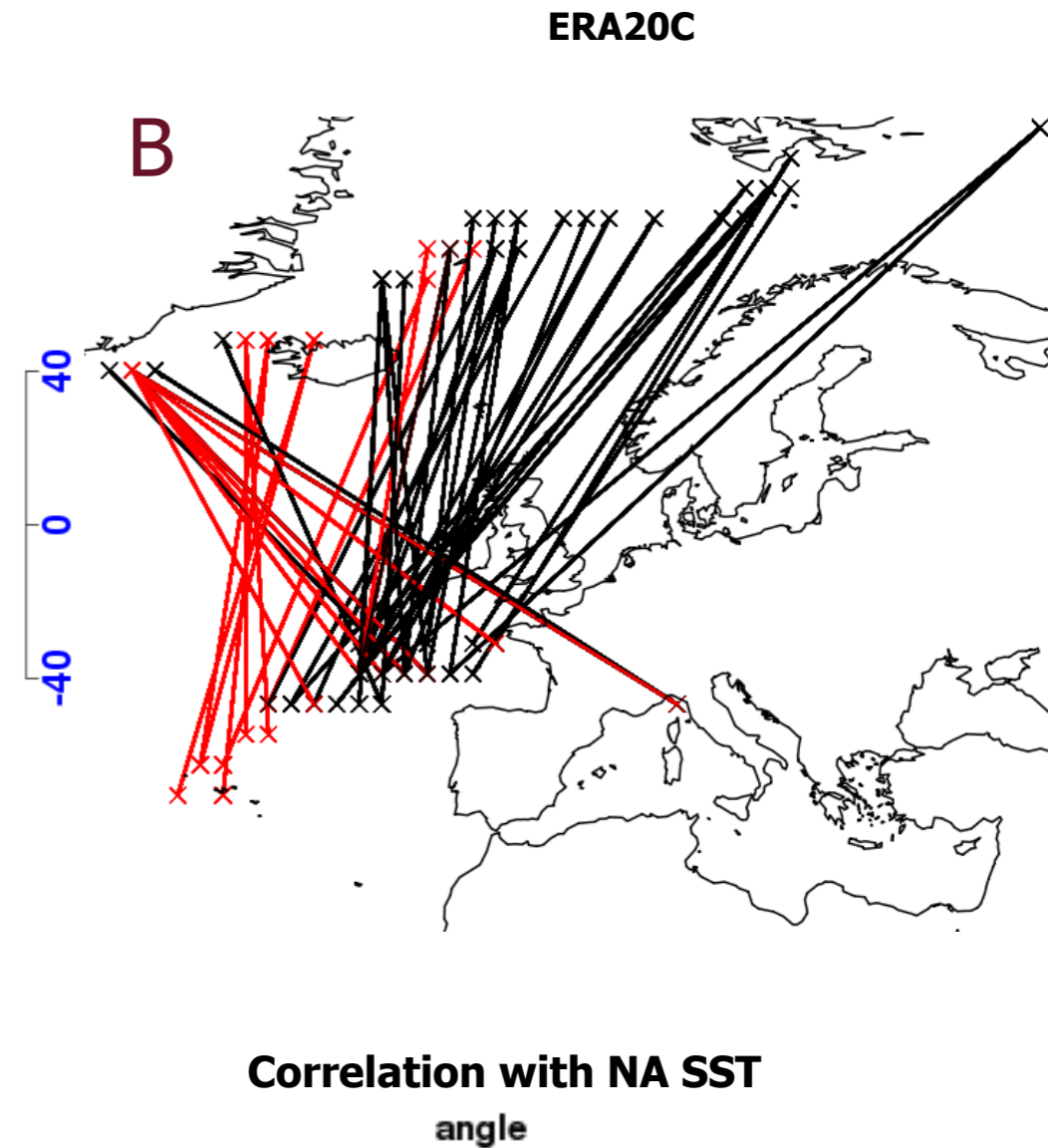
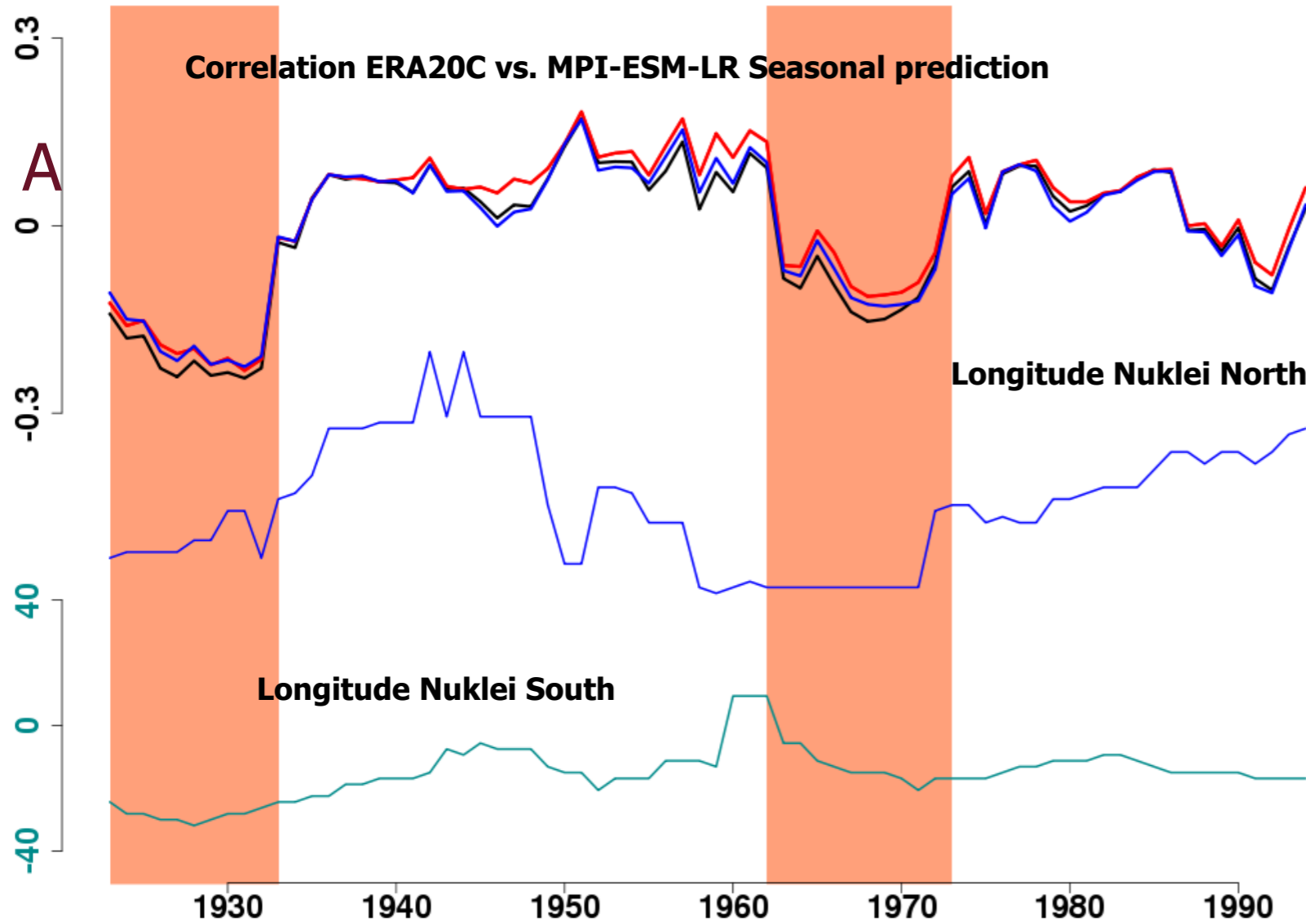


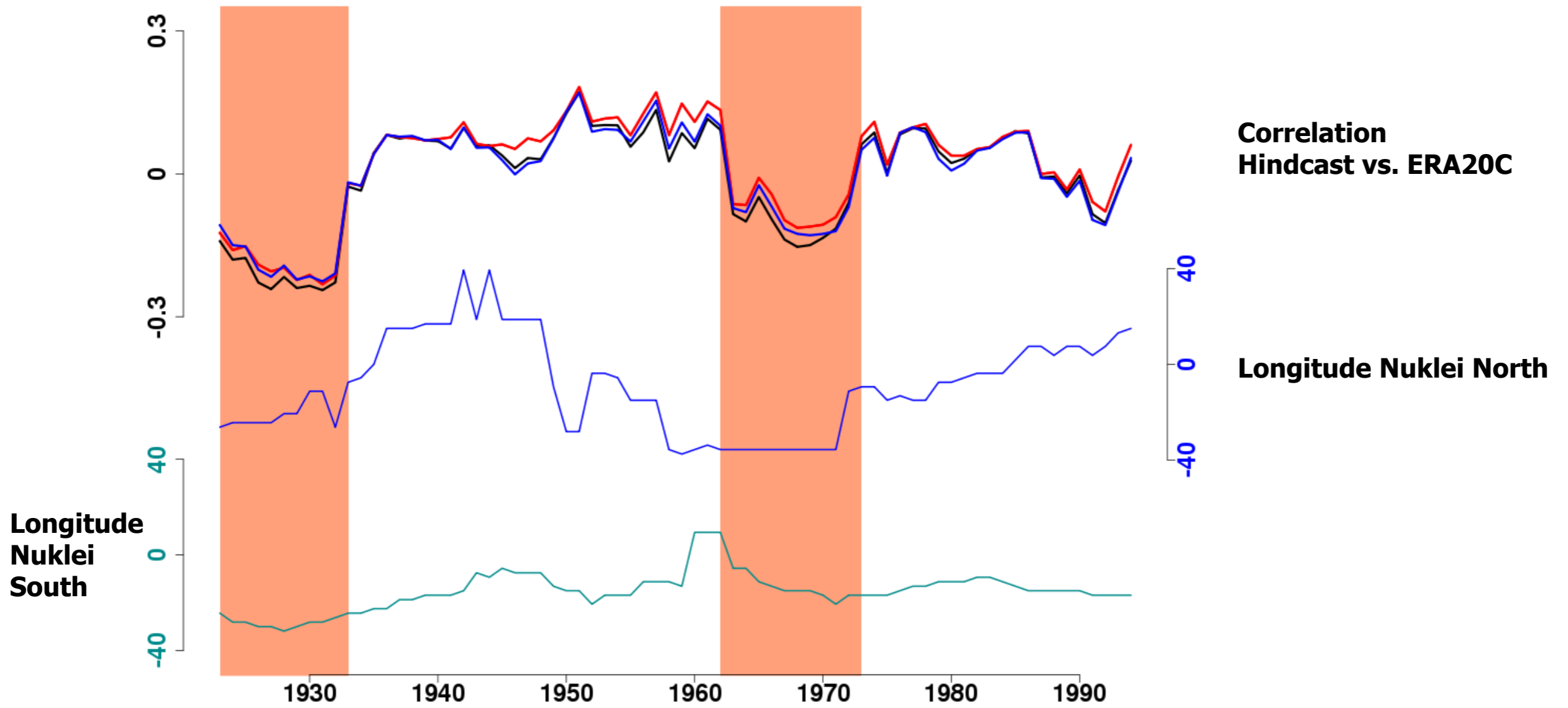
**Variability of the North Atlantic  
Oscillation in the 20th century**  
**André Düsterhus, Leonard Borchert, Vimal Koul, Holger  
Pohlmann, Sebastian Brune**

**[andre.duesterhus@mu.ie](mailto:andre.duesterhus@mu.ie)**

**vEGU 2021  
Virtual, 30th April 2021**

André Düsterhus, Leonard Borchert, Vimal Koul, Holger Pohlmann, Sebastian Brune



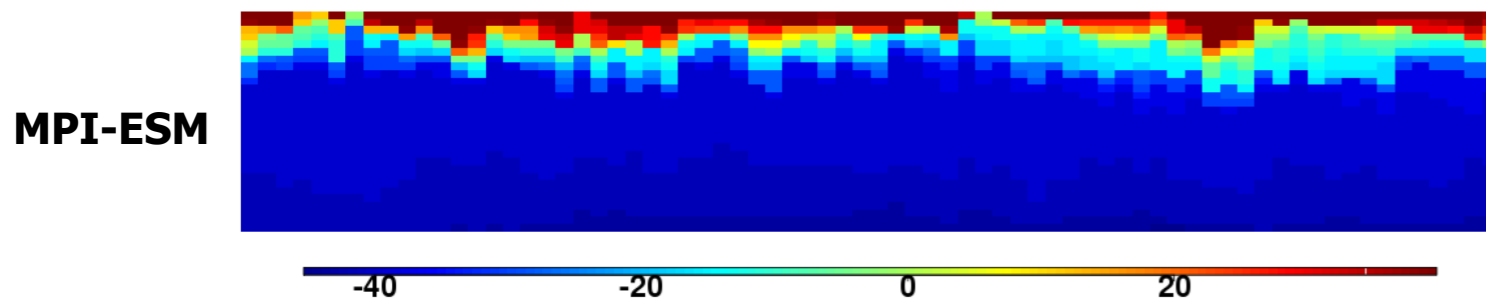
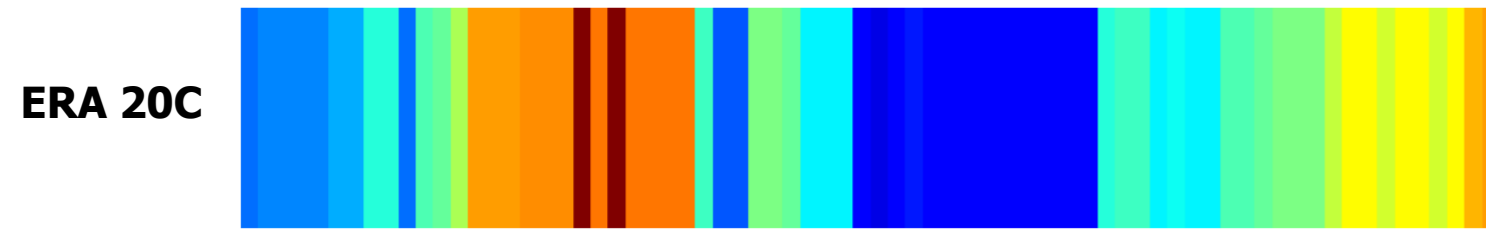


### Seasonal prediction of NAO and nuklei shift

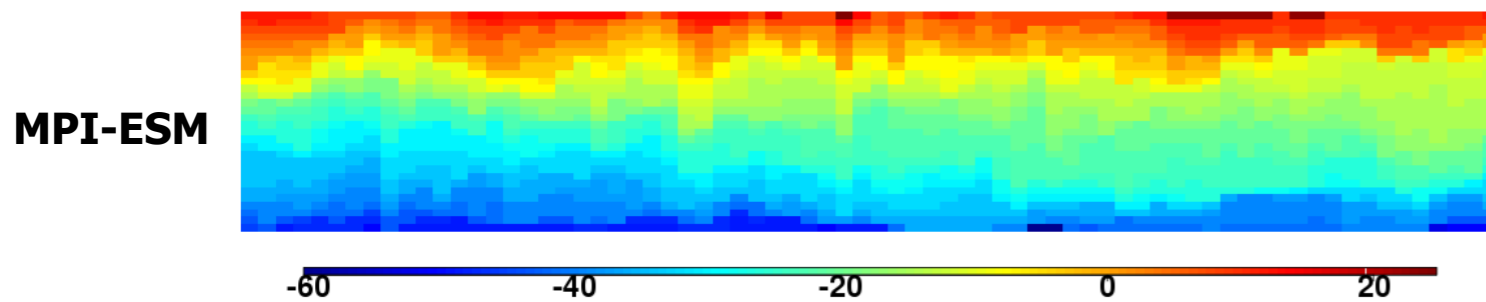
The ensemble mean itself has no prediction skill of the NAO, but the time spans identified by Weisheimer et al (2017) show also in the MPI-ESM setting a lower prediction skill. Those coincide with a western setting of the maxima and minima of the 1st SLP EOF.



### Longitude Nuklei North

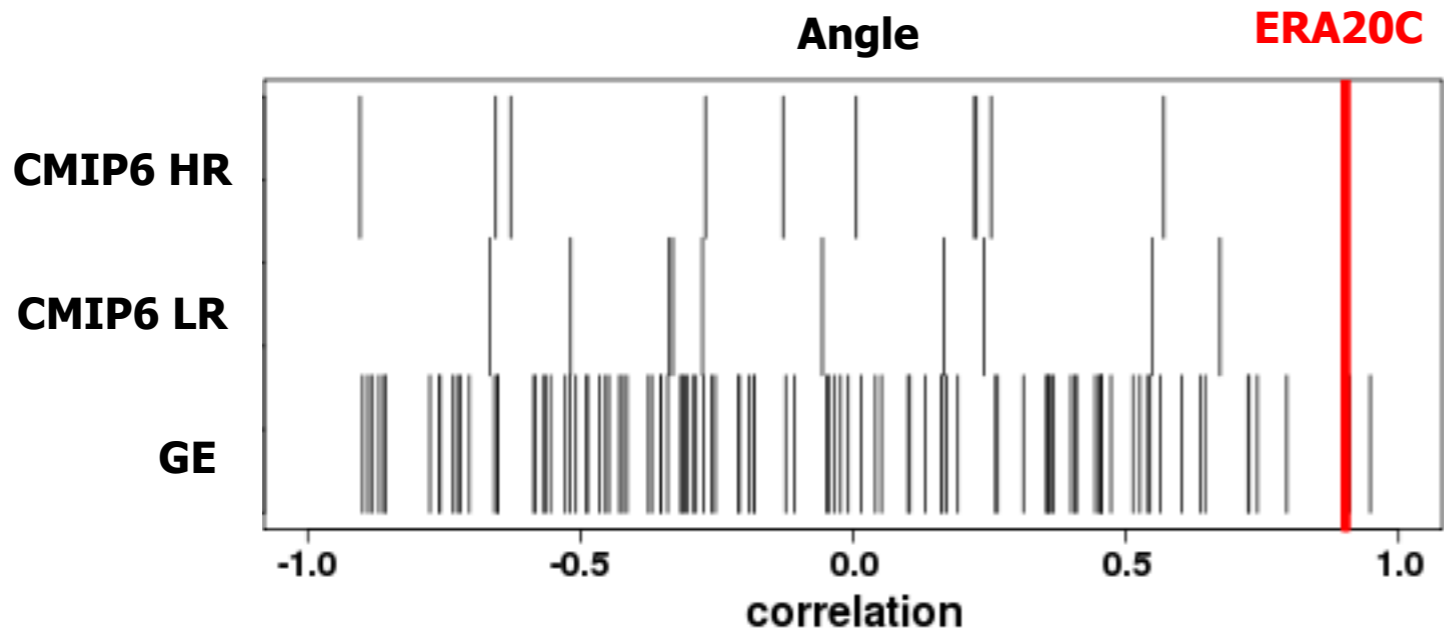


### Longitude Nuklei South

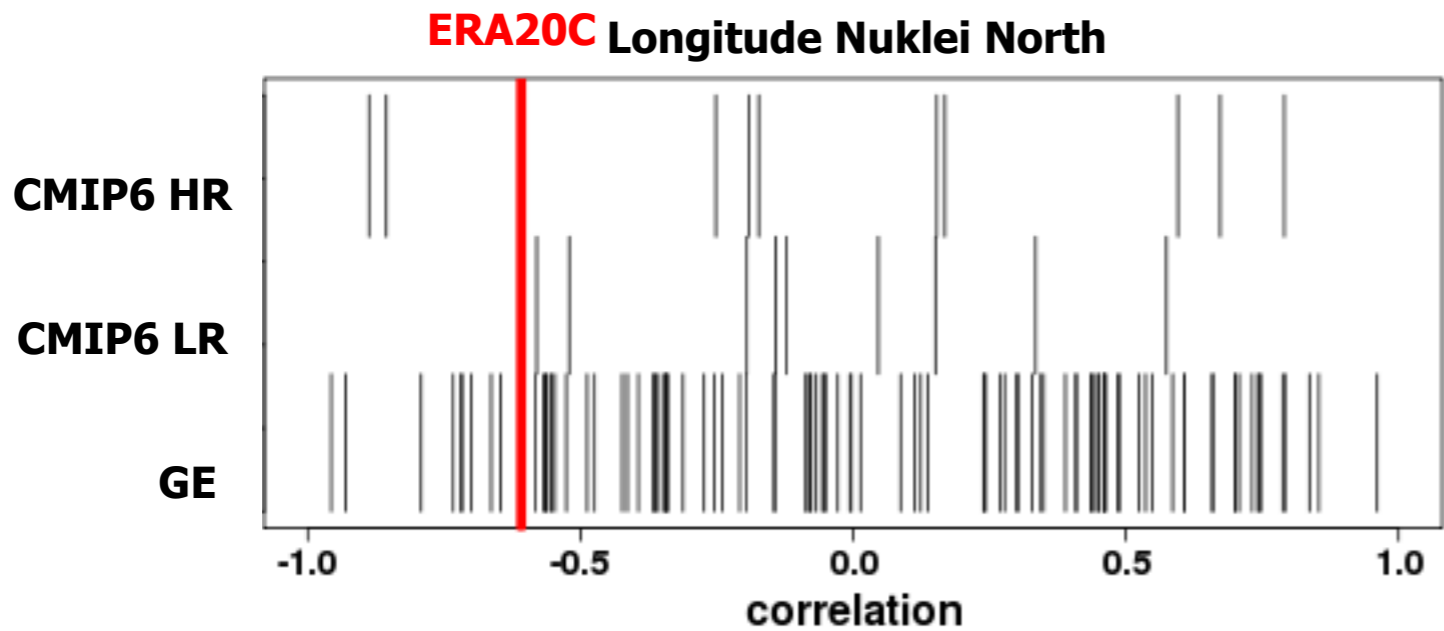


### Seasonal prediction of nuklei shift

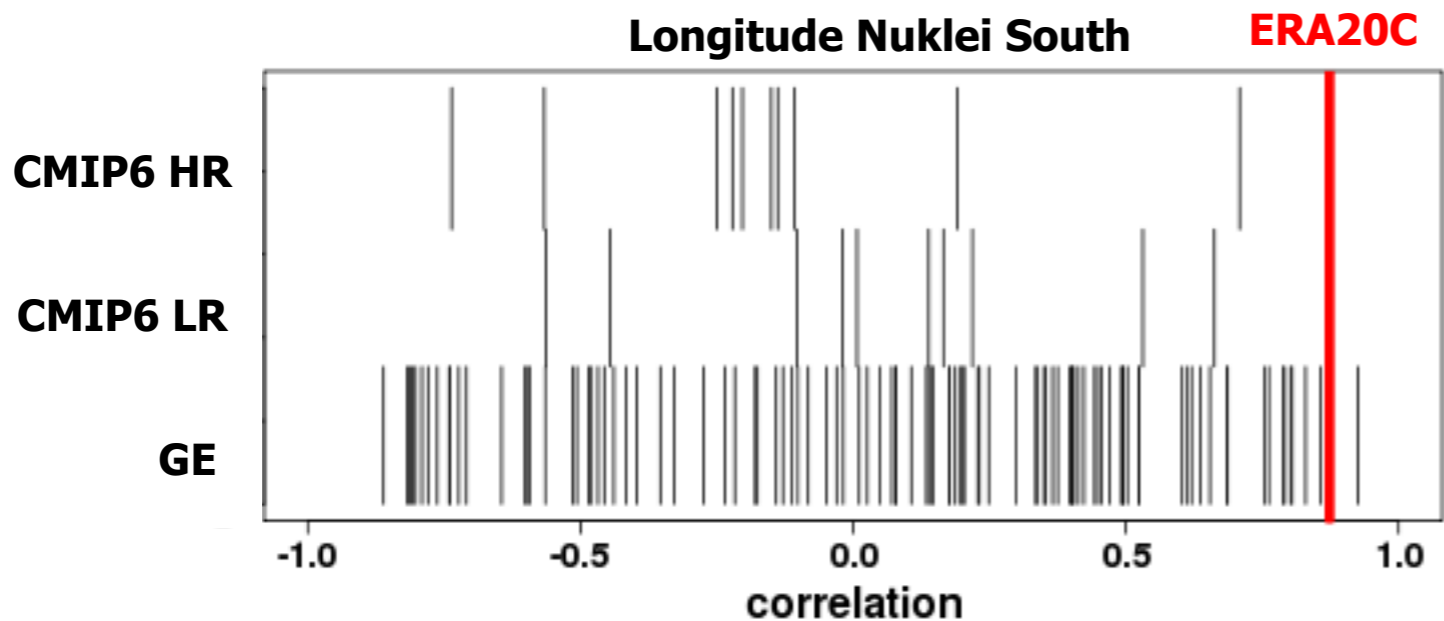
**With 30 ensemble members we predict the DJF-NAO with an initialisation at 1st November. Looking at the nuklei positions of 30 randomly selected ensembles shows that the patterns in ERA 20C cannot be reproduced.**



**15 year mean correlation with NA SST**



**While ERA20C shows clear correlations of the movement of the Nuklei with NA SST (HadISST), multiple versions of the MPI-ESM make with their different ensemble members no clear statements on these connections with their NAO and NA SST.**



The A4 project (Grant-Aid Agreement No. PBA/CC/18/01) is carried out with the support of the Marine Institute under the Marine Research Programme funded by the Irish Government.



*Foras na Mara*  
*Marine Institute*