



## **Improving the anomaly initialisation for decadal predictions**

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A set of decadal prediction experiments using the EC-Earth model is analysed. A 10-member ensemble was started every year in the period 1960-2005 from initial conditions based on observed anomalies of ocean and sea-ice. Slow-flow perturbations of the anomalies are generated for the ocean (time-lagged analysis) and ice (perturbed climatology) initial states.

Our analysis of the results indicates a sensitivity of the decadal prediction to the representation of the main coupled modes of variability at initial time. A new initialisation method has been developed aiming to improve the representation of observed modes' phase at initial time.

This is a spectral method focused on process initialisation through selection of the initialised modes and projection in model's space.

Five members of each startdate were redone with the improved anomaly initialisation which resulted in increased predictive skills.