Assessment of Initialization and Forecast strategies with coupled models

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Systematic model error has been and still is a difficult problem for seasonal forecasting and climate predictions. If a state close to the observed state (analysis) is used to initialise the model, the result will drift towards the model climate. The time scale of the drift is different in different parts of the climate system, from a few days for fast atmospheric processes to multi-decadal time scale in the deep ocean. In this presentation we will assess three different forecast strategies applied for seasonal and decadal forecasts in order to deal with the model drift. Full initialisation start the model from the analysed state and the model drift is afterwards removed by a lead-time dependent bias correction. Anomaly initialisation uses observed anomalies that are added to the model climatology in order to initialise the model close to its climatology. The results are post-processed by using a bias correction in order to apply flux correction in order to avoid model drift. In the presentation we will compare the results both in terms of variability and predictability.